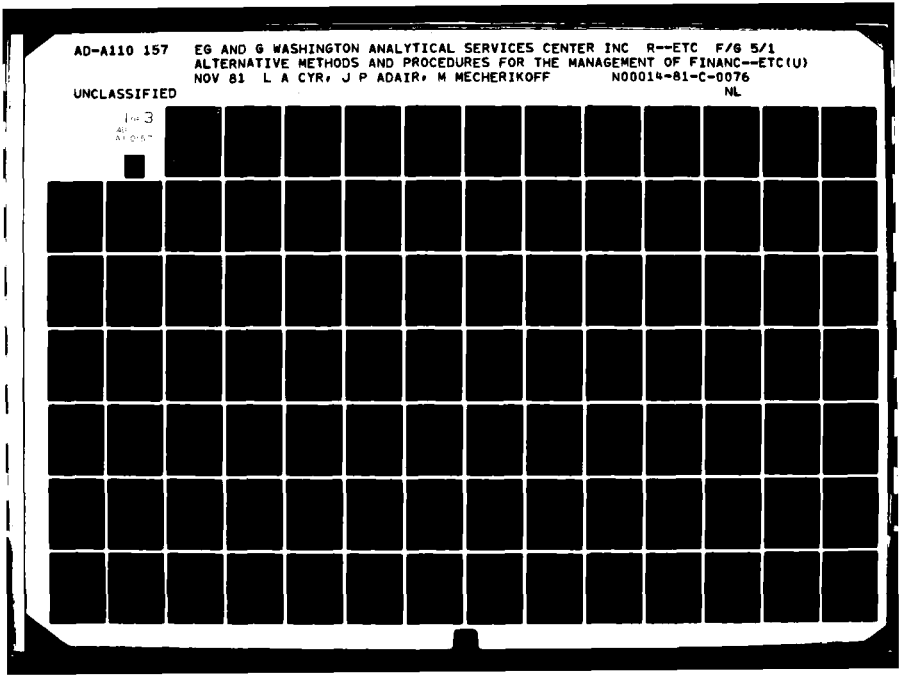
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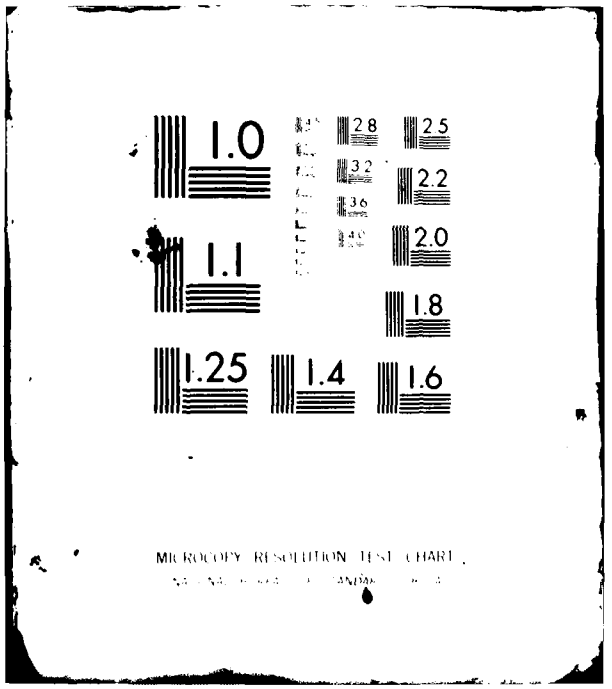
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REPORT N00014-81-C-0076

ALTERNATIVE METHODS AND PROCEDURES FOR THE MANAGEMENT OF FINANCIAL INFORMATION TO NAVAL ACTIVITIES

LEVEL II

PREPARED BY:

LOUIS A. CYR, PROJECT MANAGER

JAMES P. ADAIR RODGER H. EDMONDS

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JAN 27 1982

NOVEMBER 1981

TECHNICAL REPORT FOR PERIOD
17 NOVEMBER 1980-30 NOVEMBER 1981

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PREPARED FOR

OFFICE OF NAVAL RESEARCH
ARLINGTON, VIRIGINIA 22217
ATTENTION: CODE 434

COMPTROLLER OF THE NAVY
WASHINGTON, D.C. 20376
ATTENTION: NCFA-13

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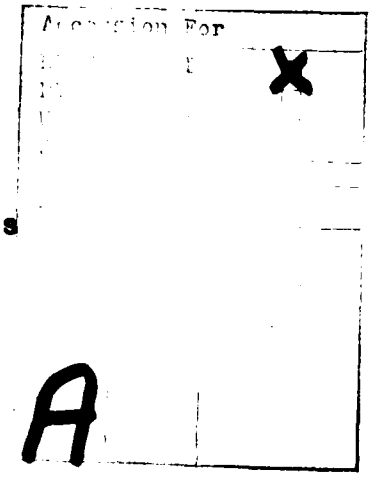

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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Explanation of Block 13. The main body of the report consists of 106 pages. The appendix consists of 98 pages.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

NAVCOMPT Manual and related Handbooks; NTI; JTR; PAYPERSMAN; SECNAV Instructions; NAVCOMPT Instructions; NAVCOMPT Notices; Use of Modern Computer Related technology for the updating, storage, retrieval, and dissemination of NAVCOMPT publications; NAVCOMPT, NAFC.

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

This report presents the results of a research effort to determine (1) the benefits that can be gained from the use of modern computer related technology for the updating, storage, retrieval, and dissemination of financial management policies and procedures published by NAVCOMPT to DON users worldwide and (2) the opinions of a limited sample of Navy users of NAVCOMPT publications as to (a) timeliness of changes (b) readability and comprehensibility (c) extent to which these publications should be distributed and

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Block 20: Abstract (Continued)

(d) organization of material and the manner in which the information is presented, updated, and distributed.

Four alternative preliminary system design concepts are presented in the report to present both short term and long term alternatives. The concepts include varying degrees of automation, type and structure of processing activities, system costs, and flow. Hardware, software, telecommunications, and distribution media are presented for each concept.

Information provided by users of the NAVCOMPT Manual and related publications, and their suggestions for improvement, are summarized and presented.

EXECUTIVE SUMMARY

The Department of Navy (DON) financial management policies and procedures are currently promulgated in the Navy Comptroller (NAVCOMPT) Manual, related Handbooks and other publications. Changes to these publications are issued by NAVCOMPT initially in the form of Numbered Instructions, or in the form of Notices, letters and teletype messages. Their contents are subsequently incorporated into the NAVCOMPT Manual or other NAVCOMPT publications. There are approximately 17,500 pages of text in the NAVCOMPT Financial Management (FM) publications which were considered in the scope of this study.

This research effort was authorized to investigate, analyze and assess the present Navy system to update, store, retrieve, and disseminate these policies and procedures. The effort also included on site interviews with a limited number of Navy users of these publications to obtain their opinion as to (1) timeliness of updates, (2) readability and comprehensibility, (3) extent to which these publications should be distributed, and (4) organization of material and the manner in which the information is presented, updated, and distributed.

The Editorial Branch of the Navy Accounting and Finance Center (NAFC-232) is responsible for publishing and maintaining the Navy Comptroller Manual by processing changes. This entails editing for content, references, composition, copy preparation, clearance when required, and historical records maintenance. NAFC-232 has similar responsibilities with respect to processing changes to the Navy Travel Instructions, Navy Pay and Personnel Procedures Manual, and Volumes I and II of the Joint Travel Regulations. These publications consist of approximately 6,600 pages of text and illustrations; changes thereto are prepared and issued on a scheduled basis. There are 66 other NAVCOMPT FM publications, which consist of approximately 10,900 pages, which are maintained and issued by NAFC offices other than NAFC-232. These 66 publications are prepared, maintained, and issued on an unscheduled basis.

The automated equipment which NAFC-232 utilizes to perform its functions has very limited capability and is labor intensive. The IBM Composer and 3M Lettering System are obsolete. Neither have communications capability or the capacity to handle digitized text. The IBM Selectric typewriters are also obsolete and labor intensive for the type of publications processing work being done by NAFC-232. GPO services are utilized by NAFC-232 to compose camera ready copy; printing is accomplished by use of contract services.

Research was conducted with 34 vendors, service organizations, or users, to determine the state-of-the-art of modern computer related technology applicable to the updating, storage, retrieval, and dissemination of the NAVCOMPT Manual and related FM publications. This research included hardware and software for optical character recognition, word processing, photocomposition, phototypesetting, and integrated publishing systems.

Seventy-five on site interviews were conducted with ONR, Navy and Marine Corps users of the NAVCOMPT Manual and related FM publications. These users represented an excellent cross section of Navy organizations and the functions performed by personnel in those organizations. The major conclusions based upon the information provided during these interviews are as follows:

- There is an urgent DON need for a master index and cross references covering all volumes of the NAVCOMPT Manual and other FM publications including Handbooks, Instructions, Notices, and Letters. No overall master index and cross reference system exists which places in broad perspective the financial management policies and procedures of the DON.

- Users of the NAVCOMPT Manual, Handbooks, and related publications desire more current and faster updating of changes.

- Readability and comprehensibility of NAVCOMPT FM publications need to be improved.

- Some NAVCOMPT Handbooks are out of date and in need of updating.

- Navy and Marine Corps organizations worldwide are receiving a plethora of changes to JTR Volumes I and/or II each month. Most changes are initially issued by teletype. They are later consolidated and published in hard copy form by NAFC-232 for distribution by NPFC throughout the DON. Keeping up with the substance as well as the mechanics of the numerous changes is frustrating, labor intensive, and archaic in view of the existing state-of-the-art technology. This is a major problem for users of this publication worldwide.

- There is strong and enthusiastic support among those interviewed for NAVCOMPT to establish an automated data base and provide online query access to the data now published in the NAVCOMPT Manual and other related publications.

Four alternative preliminary system design concepts were developed by EG&G which would utilize modern computer-related technology to update, store, retrieve and disseminate FM policies to Navy activities. Both short term and long term alternatives are presented in this report. These concepts include varying degrees of automation, type and structure of processing activities, system costs, and flow. Hardware, software, telecommunications, and distribution media are presented for each concept. The four concepts are categorized as Concepts A, B, C, and D. A brief description of each follows:

- Concept A - Envisions the processing of publications changes and preparation of camera-ready copy within NAFC-232. Outside composition services of the GPO would not be utilized. Printing would continue to be performed by contract and the present system of distribution would remain unchanged. The concept also visualizes that all text now contained in NAFC-232 controlled publications would be electronically transferred on a one-time basis from the present master hard copy to a magnetic media.

This would eliminate repetitive keyboarding of text in the future.

- Concept B - envisions an automated data base centrally maintained by NAFC-232 from which text and graphics can be produced in hard copy or microfiche form on demand by using a Xerox 9700 printer and a Xerox 817 microfiche producer. Two versions of Concept B are presented, i.e., Concept Alternative B-1 and Concept Alternative B-2. Concept Alternative B-1 would centralize publishing and worldwide distribution of text and graphics under NAFC-232 control. Concept Alternative B-2 would be an extension of Concept Alternative B-1 by electronically transmitting data stored in the centralized NAFC-232 controlled data base to one or more Navy Command Headquarters overseas (such as NAVEUR) and/or selected major ships at sea via microwave/satellite or other media. The receiving activities would have automated equipment compatible with the NAFC-232 host computer, Xerox 9700 printer, and Xerox 817 microfiche producer. This would enable the receiving activities to produce their own text and graphics in hard copy or microfiche form on demand. Implementation of Concept B would eliminate the need to produce CRC. It would also eliminate outside contract printing, and storage/distribution by NPFC.

- Concept C - envisions an automated data base centrally maintained by NAFC-232 from which text and graphics can be produced in hard copy or microfiche form on demand at one or more Navy regional sites to be determined by NAVCOMPT. This concept differs from Concept B in that the creation of hard copy or microfiche is accomplished at one or more regional sites rather than at NAFC-232, thereby placing the Xerox 9700 printer and the Xerox 817 microfiche producer at the selected site(s).

  Two versions of Concept C are presented i.e., Concept Alternative C-1 and Concept Alternative C-2. Concept Alternative C-1 would regionalize the printing and worldwide distribution of the NAFC-232 controlled text and graphics. Concept Alternative C-2 would be an extension of Concept Alternative C-1 but would give NAVCOMPT the option of having a regional site electronically transmit publications data to overseas facilities and/or ships or having this function performed directly by NAFC-232. Implementation of Concept C would eliminate the need to produce CRC, and also eliminate outside contract printing, and storage/distribution by NPFC.

- Concept D - envisions an automated data base centrally maintained by NAFC-232 which could be accessed by CONUS users who have a high volume need for selected parts of the FM publications or by overseas Navy Command Headquarters facilities. Text, or text and graphics, would be presented to the user via a video display. The user would have the capability to select that portion of the information he requires and obtain a hard copy, if desired, using the printer associated with the video display. To assist the user in locating the subject matter present in the data base,

an index would be provided which the user could query by title. Two versions of Concept D are presented, i.e., Concept Alternative D-1 (Short Term) and Concept Alternative D-2 (Long Term). Concept Alternative D-1 would utilize the NAFC-232 text data base created under Concept A. Selected parts of this text data base could be queried on line by those CONUS users/Command Headquarters facilities addressed above with selection tailored to the specific needs of the user. Concept Alternative D-2 would also utilize a central NAFC-232 data base which would include graphics as well as text. This data base would be created under Concepts B or C. If NAVCOMPT elects, copies of this data base could be provided to one or more regional facilities. CONUS users/Command Headquarters facilities could access the NAFC-232 data base directly or through a regional facility designated by NAVCOMPT, whichever is least costly in terms of communications. Under either Concept D-1 or D-2, those portions of FM publications not accessed on line by the user would need to be provided through the Navy-wide distribution system.

Recommendations:

- Develop and publish a master index and cross references covering all volumes of the NAVCOMPT Manual and other FM publications including Handbooks, Instructions, Notices, and Letters.

- Determine which NAVCOMPT Handbooks require updating; establish a Plan of Action and Milestones (POA&M) to accomplish the updating; and publish the updated Handbooks.

- Provide as a test to a limited number of users, on line access to an NAFC-232 centrally controlled automated data base. This data base will contain the information now published in hard copy form in JTR Volumes I and II. Conduct a feasibility test for a 6 to 12 month period while continuing the parallel publication and distribution of hard copy under the present system. Maintain records of man hours expended, costs, and operational effectiveness of both systems during the test. Compare the results and proceed from those results.

- Establish and implement a long term project to improve the readability and comprehensibility of NAVCOMPT FM publications.

- Review the graphics now contained in the NAVCOMPT Manual; identify and update those which are out of date; solicit suggestions from selected users as to worthy additions or modifications; and incorporate the additions decided upon by the approving official.

- Consider additional guides and training aids which would provide significant help to users and implement a program to provide those which are approved.

- Implement Alternative Preliminary System Design Concept A to achieve immediate time and cost savings in processing the updates to NAFC-232 controlled publications.

- Provide on line access to an NAFC-232 controlled text data base to a limited number of CONUS users who have a high volume need for selected parts of the NAVCOMPT publications (Alternative Preliminary Design Concept D-1). This would serve as a basis for evaluating the operational effectiveness of on line access and for determining its application to more DON users.

- For the long term, establish a text and graphics integrated publishing system. The automated data base for this system would be established and maintained by NAFC-232. Publications would be printed or microfiched on demand and distributed from one or more regional facilities except for those portions which users continually access on-line (Alternative Preliminary Design Concepts C-1 and D-2).

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SECTION I
INTRODUCTION

1.1 BACKGROUND

The Department of Navy (DON) financial management policies and procedures are currently promulgated in the Navy Comptroller (NAVCOMPT) Manual, related Handbooks and other publications. Changes to these publications are usually issued by NAVCOMPT initially in the form of Numbered Instructions, or in the form of Notices, letters and teletype messages. Their contents are subsequently incorporated into the NAVCOMPT Manual or other NAVCOMPT publications. There are approximately 17,500 pages of text in the NAVCOMPT Manual, related Handbooks, and other Financial Management (FM) publications issued by NAVCOMPT. Hard copy changes to these publications are issued by NAVCOMPT on a scheduled or unscheduled basis throughout the year. Printing of scheduled publications is done by contract; printing of other publications may be done by the Defense Printing Service (DPS), Government Printing Office (GPO) in house, or by GPO contracting out. Distribution of NAVCOMPT publications is done primarily by the Navy Publications and Forms Center (NPFC) Philadelphia, Pennsylvania.

1.2 OBJECTIVE

NAVCOMPT's objective is to provide quality and timely Financial Management publications to Navy users, world-wide. It is NAVCOMPT's desire to accomplish this in a cost effective manner utilizing modern state-of-the-art equipment. This research effort was authorized to: (1) investigate the benefits that can be gained from the use of modern computer related technology for the updating, storage, retrieval, and dissemination of FM policies and procedures to all Navy users and (2) sample a limited number of Navy users to obtain their opinion of NAVCOMPT FM publications as to:

a. Timeliness of changes;

b. Readability and comprehensibility;

c. Extent to which these publications should be distributed; and

d. Organization of material and the manner in which the information is presented, updated, and distributed.

1.3 DEFINITION OF EFFORT

This effort pertains to the updating, storage, retrieval, and dissemination of the following publications:

a. Volumes I, II, III, IV, VI and VII of the NAVCOMPT Manual

b. Navy Travel Instructions (NTI)

c. Volumes I and II, Joint Travel Regulations (JTR)

d. Navy Pay and Personnel Procedures Manual (PAYPERSMAN)

e. Other related NAVCOMPT Handbooks and Publications (see Appendix C).

The Handbooks pertaining to Navy Industrial Funds were excluded from the scope of this effort by verbal agreement with the Navy Project Director.

1.4 RESEARCH TASKS

This research effort was conducted in accordance with specifications contained in Office of Naval Research (ONR) contract number N00014-81-C-0076, dated 17 November 1980. The project was subdivided into the following tasks:

a. Task I - Participate in briefings of present Navy system

b. Task II - Develop a structured questionnaire for use in conducting interviews with users of NAVCOMPT FM publications

c. Task III - Conduct interviews with a representative mix of Navy and Marine Corps users of NAVCOMPT FM publications

d. Task IV - Review the findings, conclusions, and recommendations derived from the Navy Technical Information Presentation Program (NTIPP) for applicability to this NAVCOMPT effort

e. Task V - Research state-of-the-art information processing and dissemination technology related to this project

f. Task VI - Analyses of data collected

g. Task VII - Develop alternative preliminary design concepts for automating NAVCOMPT publications processes and prepare related cost/benefit analyses

h. Task VIII - Prepare and deliver final report.

1.5 PERIOD OF PERFORMANCE

Efforts presented in this reort were performed within the dates specified in the contract, as modified, i.e., 17 November 1980 to 31 January 1982.

1.6 THE EG&G PROJECT TEAM

The EG&G Project Team which performed this research project included the following members:

Mr. Louis A. Cyr, EG&G Project Manager

Mr. James P. Adair, Team Member

Mr. Rodger Edmonds, Team Member

Dr. Michael Mecherikoff, Team Member

Mr. Paul A. Willis, Team Member

1.7 PERSONS AND ORGANIZATIONS CONTACTED

During the accomplishment of this research effort, 147 personnel were contacted, visited, or interviewed, in 42 separate organizations of the U.S. Navy, Marine Corps, Army, Air Force, or other U.S. Government organizations. Appendix A provides the detailed listing.

SECTION II
DISCUSSION OF STUDY EFFORTS

2.1 INTRODUCTION

A project "kick-off" meeting was held on 26 November 1980 attended by the following Navy and EG&G personnel:

Dr. Thomas C. Varley, ONR Scientific Officer

Mr. J. Randolph Simpson, ONR

Mr. Ronald J. Golden, NCF Project Director

Mr. Robert N. Strain, NAFC-124

Ms. Joanne C. Dula, NAFC-132

Mr. Lisle C. Updike, NAFC-23

Mr. Marvin P. Balding, NAFC-232

Lt. Nick Anderson, NAFC-2P

Mr. Louis A. Cyr, EG&G Project Manager

The purpose of the meeting was to discuss the EG&G Plan of Action and Milestones (POA&M) for the project; to schedule EG&G Project Team orientation briefings by NAVCOMPT which would describe the present Navy system to update, store, retrieve, and disseminate NAVCOMPT Financial publications; and to discuss EG&G recommendations as to other topics and information to be included in the NAVCOMPT orientation briefings to the EG&G Project Team. The following guidance and instructions were provided to EG&G by the NCF Project Director during the 26 November 1980 meeting:

a. NAVCOMPT representatives would provide orientation briefings to the EG&G Project Team during the period recommended by EG&G, i.e., 9 through 12 December 1980.

b. The EG&G POA&M was generally acceptable and EG&G should proceed accordingly except for the time schedule for field visits.

c. Field visits should be scheduled to begin in late March or early April 1981 after accomplishing coordinating discussions with NAVCOMPT personnel and other Navy Headquarters organizations having a direct interest in the project.

The following paragraphs describe and discuss the essential details of the research, investigative, and other efforts performed by EG&G for each of the Tasks specified in paragraph 1.4, Section I, of this report. Conclusions and recommendations are in Section III.

2.2 TASK I - PARTICIPATE IN BRIEFINGS OF PRESENT NAVY SYSTEM

The EG&G Project Team attended orientation briefings given by NAVCOMPT functional managers during the period 9, 10, 11 and 12 December 1980. The subjects covered during these briefings were as follows:

a. Organization of:

   (1) The Department of Defense (DoD)

   (2) The Department of the Navy (DON)

   (3) The Office of the Navy Comptroller (NAVCOMPT)

   (4) The Navy Accounting and Finance Center (NAFC)

b. Functions of the following NAFC offices:

   (1) Financial Systems Policy and Planning Operations (NAFC-1)

   (2) Resource Management Operations (NAFC-2)

   (3) Career Management (NAFC-3)

   (4) Pay, Travel, and Disbursing Systems (NAFC-4)

   (5) Industrial, Inventory and Fund Accounting Systems Operations (NAFC-5)

   (6) Financial Management Systems Operations (NAFC-6)

c. System flow and steps to update the NAVCOMPT Manual, PAYPERSMAN, NTI, and JTR Volumes I and II from originator of change material to printing and distribution.

d. Schedule of planned changes to the NAVCOMPT Manual for 1980.

e. Summary of Editorial Branch (NAFC-232) workload in 1979.

f. Equipment utilized by NAFC-232 to process changes to NAVCOMPT FM publications.

To supplement the information provided during the initial orientation briefings, EG&G representatives did the following:

a. Visited a representative of the NAVCOMPT Publications Branch (NCD-63) on 7 January 1981; discussed the distribution of NAVCOMPT FM publications; and obtained a recent copy of the distribution list for NAVCOMPT publications.

b. Met with Editorial Branch (NAFC-232) representatives to obtain more complete information of that office's automated equipment utilized to process and update NAVCOMPT FM publications and to determine whether formal specifications exist which stipulate requirements to be met for preparation of NAVCOMPT FM publications.

c. Contacted NCF-122 (Mr. Goodwin) and NCD-612 (Ms. Nangle) and arranged a meeting to discuss the Navy's automated locator system pertaining to NAVCOMPT reports and forms; met with Ms. Nangle and was briefed on the system. Discussed another automated systems project (almost completed at time of the EG&G visit) which indexes all Navy Instructions and Directives, by subject. This latter system is accessed by use of key words and is part of the DoD Information Requirements Control Automated System (IRCAS).

d. Visited an office of the Navy Military Personnel Command (Code 1645C) for a brief discussion and a demonstration of the automated military payroll processing system now in development. The acronym for this system is PASS (Pay and Personnel Administrative Support System).

e. Met with Mr. William O. Ottendorfer, ADP Management Office, NAS, Pensacola, Florida and discussed automated equipment and techniques used by the Naval Education and Training Command (CNET) to process and print documents similar to the NAVCOMPT Manual. EG&G representatives also met with Mr. Merle L. Fisher, Director of Production Services, Naval Education and Training Program Development Center, Saufley Field, Florida, and discussed the publication process for items such as Navy Rate Training Manuals, Officer Text, and various other training publications. Last year, Publication Services, Composition, and Graphics Sections of Mr. Fisher's office prepared approximately 69,000 page units for printing. Mr. Fisher discussed the types of automated equipment being utilized and capabilities while conducting a "walk through" of his operations.

f. Visited the Navy Publications and Forms Center (NPFC), Philadelphia, PA, and discussed the receipt, stockage, and distribution of NAVCOMPT publications at the activity.

g. Visited GPO, Washington, D.C., where certain NAVCOMPT FM publications are processed. Each work station involved in the process was visited; equipment utilized by GPO was viewed; every step in the process was explained; and finished samples of each work step were viewed. During this visit, EG&G was advised that GPO was in the process of acquiring a Compugraphics MCS 8400 automated Photocomposition/ Phototypesetting system.

2.3 TASK II - DEVELOP A STRUCTURED QUESTIONNAIRE

A structured questionnaire was developed by EG&G for use in conducting on-site interviews with a representative mix of Navy and Marine Corps users of NAVCOMPT FM publications. The questionnaire was designed to obtain user

opinion of the NAVCOMPT Manual and related publications as to readability; comprehensibility; adequacy of indexes and cross references; timeliness of changes; and ideas for improving the manner in which the information is presented, updated, and distributed.

The questionnaire developed by EG&G was presented in draft form to the NCF Project Director, and to representatives of ONR, CNO, NAVMAT, CMC and NAVSEA. Changes were made to incorporate their suggestions and the resulting structured questionnaire is the one utilized by EG&G for on-site interviews. A copy is included in this report as Appendix B.

2.4 TASK III - CONDUCT INTERVIEWS WITH A REPRESENTATIVE MIX OF NAVY AND MARINE CORPS USERS OF NAVCOMPT FINANCIAL MANAGEMENT PUBLICATIONS

Seventy-five (75) on-site interviews were conducted by EG&G with ONR, Navy, and Marine Corps users of the NAVCOMPT Manual and related FM publications. A summary of date(s) of interviews, organizations visited, and the number of interviews conducted at each location, is presented in Table 1.

TABLE 1. SUMMARY OF INTERVIEWS

Interview Date(s) (1981)	Organization(s) Visited	Location or Area	Number of On-site Interviews Conducted
30 March	ONR	Arlington, VA	2
27 April thru 1 May	CINCLANTFLT, SURFLANT, FAADCLANT, AIRLANT, PSA, TRALANT, and Navy Supply Center	Norfolk, VA	19
3 June	Navy Supply Corps School	Athens, GA	5
4-5 June	CNET	Pensacola, FL	3
10 June	HQ USMC	Arlington, VA	1
15-19 June	Marine Corps Recruit Depot, FAADCPAC, Navy Supply Center, AIRPAC, PSA, Navy Training Center, Marine Corps Base, Camp Pendleton	San Diego, CA	33
24 June	NRL	Washington, DC	1
13 July	Navy Supply Center	San Diego, CA	2
13 July	NAVCOMSTA	San Diego, CA	1
25 August	U.S.S. RANGER		2
27 August	U.S.S. PRAIRIE		6
		TOTAL	75

Summaries of information provided by the interviewees and an analysis of the data provided are contained in paragraph 2.7.

2.5 TASK IV - REVIEW THE FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS DERIVED FROM NTIPP FOR APPLICABILITY TO THIS NAVCOMPT EFFORT

2.5.1 GENERAL. The findings, conclusions and recommendations contained in available reports or papers pertaining to NTIPP were reviewed by EG&G. The NTIPP has been dealing with the application of systems analysis and modern computer technologies to the evolution of technical manuals of all sorts for six years. The program is now in the detailed design phase in the development of the Navy Technical Information Presentation System (NTIPS). The program has scrutinized all the current processes and problems involved in providing accurate and timely technical data to widely differing user groups. Some of the issues being dealt with are:

a. Automated authoring;

b. Nature and maintenance of technical information data bases;

c. User-data match (usability/comprehensibility/readability) of text and graphics;

d. Presentation media (e.g., paper, microform, video disk, direct CRT terminal access to data base);

e. Mastering, replication, and distribution; and

f. User feedback and revision cycle.

Although the subject matter of technical manuals of concern to NTIPP relates largely to the use and maintenance of hardware systems and components, it was felt that the research and design efforts carried out by NTIPP might be translated to the design of an optimum system for the NAVCOMPT Manual and handbooks.

2.5.2 STATUS AND CHARACTERISTICS OF NTIPP. The approach of the NTIPP in the detailed design phase has been to produce a large set of "specifications" which, taken together, reflect the philosophy, policies, procedures, and products to be in effect if and when the system is implemented Navy-wide. At the time this material was reviewed for this report, the specifications were in varying degrees of completion. Some appeared to be nearly in final form, while others were barely more than outlines and indications of general direction and approach. All were (and still are) subject to further development and refinement.

From the beginning the NTIPP was intended to be futuristic in concept. As a result there has been a heavy emphasis on state-of-the-art technology both in aiding the development and preparation of technical information and in the dipslay of information to the end user at the maintenance or operator site. This includes digital storage (local and remote), centrally maintained and updated, of information accessible interactively to the user by means of portable or stationary display devices (terminals). Specialized authoring and formatting procedures (processes which are themselves to be heavily

computer-aided) are being developed to generate the proper linkages to support an intelligent and responsive query system to direct the user to the information he needs.

2.5.3 ANALYSIS OF NTIPP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS. EG&G's analysis of the applicability of the findings, conclusions, and recommendations derived from the NTIPP reports and papers now available are presented in paragraph 2.7.4.

2.6 TASK V - RESEARCH STATE-OF-THE-ART INFORMATION PROCESSING AND DISSEMINATION TECHNOLOGY

Research was conducted by EG&G to determine the state-of-the-art of modern computer related technology applicable to the updating, storage, retrieval, and dissemination of the NAVCOMPT Manual and related FM publications. This research included hardware and software for optical character recognition, word processing, photocomposition, phototypesetting, and integrated publishing systems.

EG&G met with or contacted representatives of twenty-three (23) different commercial vendors of automated office equipment or publishing/printing organizations. EG&G also met with, or contacted, representatives of four organizations which provide publishing services and one commercial user who has an integrated publishing system. EG&G had product knowledge of certain equipments applicable to this research effort. In such instances it was not necessary to contact the vendors but information relative to their equipment capabilities have been included in our analyses. Table 2, Computer Publishing Technology Survey, lists the vendors, service organizations, the commercial user, and the types of equipments EG&G discussed with each.

Summaries of information derived during this part of the research effort and our analyses of the data provided are contained in paragraph 2.7.5.

2.7 TASK VI - ANALYSES OF DATA COLLECTED

Data collected during this research and investigative effort has been grouped into five categories for purposes of presenting our analyses:

a. Initiating, processing, and distribution of changes to NAVCOMPT FM publications

b. Responses from users of NAVCOMPT FM publications and their suggestions for improvement

c. Technology used by others to update, store, retrieve, and disseminate publications similar to the NAVCOMPT Manual

d. Applicability of findings, conclusions and recommendations derived from the NTIPP to this NAVCOMPT effort

e. State-of-the-Art information processing and dissemination technology applicable to NAVCOMPT FM publications

TABLE 2. COMPUTER PUBLISHING TECHNOLOGY SURVEY

Vendor, Service Organization or User	Types of Equipment Considerations[1]
Addressograph Multigraph (AM)	PC, PT, WP, OCR
Alphatype Corporation	PC, PT
Compugraphics	PC, PT
Mergenthaler	PT
Itek	PC, PT
Harris	PC, PT
CPT[2]	WP
A B Dick[2]	WP
DEC	WP
IBM	WP, PC, EP
Lexitron	WP, PC
Lanier	WP
NBI	WP
Radio Shack	WP
WANG	WP, PC, EP, CAR
Xerox	WP, PC, FA, EP, COM, CAR
Micom[2]	WP
Hendrix	OCR
Compuscan	OCR
Burroughs	OCR
Dest Data	OCR
Kurzweil (International Development Corporation)	OCR
Kodak[2]	COM
Planning Research Corporation[2]	MG, CAR
Datagraphix	MG, COM, PC, EP, CAR
3M[2]	MG, FA
Realist[2]	MG
Honeywell	WP, PC, EP, CAR
Hewlett Packard	WP, PC, EP, CAR
Comarco	OCR, WP, PC, PT, CAR
Mitel (User Only)	OCR, WP, PC, EP, CAR
Allen Wayne (Service Organization)	WP, PC, PT, EP
Computer Data Systems, Inc. (Service Organization)	WP, PC, PT, CAR
American Management Systems (Service Organization)	WP, PC, EP, COM, CAR

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[1] PC - Photocomposition
PT - Phototypesetting
WP - Word Processing
OCR - Optical Character Recognition/Scanning
FA - Facsimile
COM - Computer Output Microfilm
EP - Electronic Publishing
CAR - Computer Assisted Retrieval
MG - Micrographics

[2] Not directly contacted; included in this survey based upon EG&G product knowledge.

The subparagraphs which follow present the analysis of data collected pertaining to each of these categories.

2.7.1 INITIATING, PROCESSING, AND DISTRIBUTION OF CHANGES TO NAVCOMPT FM PUBLICATIONS

2.7.1.1 Source of Changes and Responsibilities. Changes to the NAVCOMPT Manual, Handbooks, and other NAVCOMPT publications may originate either within or outside the Office of the Comptroller of the Navy. Most changes originate within NAVCOMPT to implement, or revise, policies, procedures, guidance and instructions prescribed by the Secretary of the Navy, or higher authorities. NAVCOMPT Internal Instruction 7000.3D, dated 18 March 1981 states that proposed revisions to the NAVCOMPT Manual will be routed to the appropriate volume director for approval and prescribes the procedure for revisions. It specifies that the Editorial Branch (NAFC-232) "is responsible for publishing and maintaining the Navy Comptroller Manual by processing changes. This task entails editing for content, references, composition, copy preparation, clearance when required, and historical records maintenance." NAFC-232 has similar responsibilities with respect to processing changes to the NTI, PAYPERSMAN, and the JTR, Volumes I and II. These publications consist of approximately 6,600 pages of text and illustrations; changes thereto are prepared and issued on a scheduled basis.

In addition, there are 66 other NAVCOMPT FM publications, consisting of approximately 10,900 pages, which are issued and maintained by NAFC-1, 2, 3, 4, 5, and 6. Changes to these publications are prepared and issued on an unscheduled basis. A list is provided in Appendix C.

2.7.1.2 System Description. Changes to the six (6) currently active volumes of the NAVCOMPT Manual, the NTI, the PAYPERSMAN, and the two (2) volumes of the JTR, are submitted to the Editorial Branch of the Navy Accounting and Finance Center (NAFC-232).

NAFC-232 reviews the proposed change and supporting documentation; edits the material; makes minor changes/corrections; coordinates actions taken; insures that an appropriate NAVCOMPT official has approved the proposed change; sends change material to GPO for composition; and upon receipt of composed camera ready copy from GPO, reviews, corrects, and assembles the composed material. Printing of the approved material is accomplished by contract.

The printed material is shipped to NPFC, Philadelphia, Pennsylvania, or others as designated by NAVCOMPT. Distribution of NAVCOMPT FM publications is performed primarily by NPFC to users worldwide in accordance with the NAVCOMPT approved Distribution List. NPFC maintains appropriate stock levels of NAVCOMPT FM publications. Figure 1 depicts the flow of change material from an originator to publication.

The steps taken by NAFC-232 in processing a change to the NAVCOMPT Manual (and the other publications for which NAFC-232 has responsibility) are as follows:

a. Editorial

(1) Change is entered in log book.

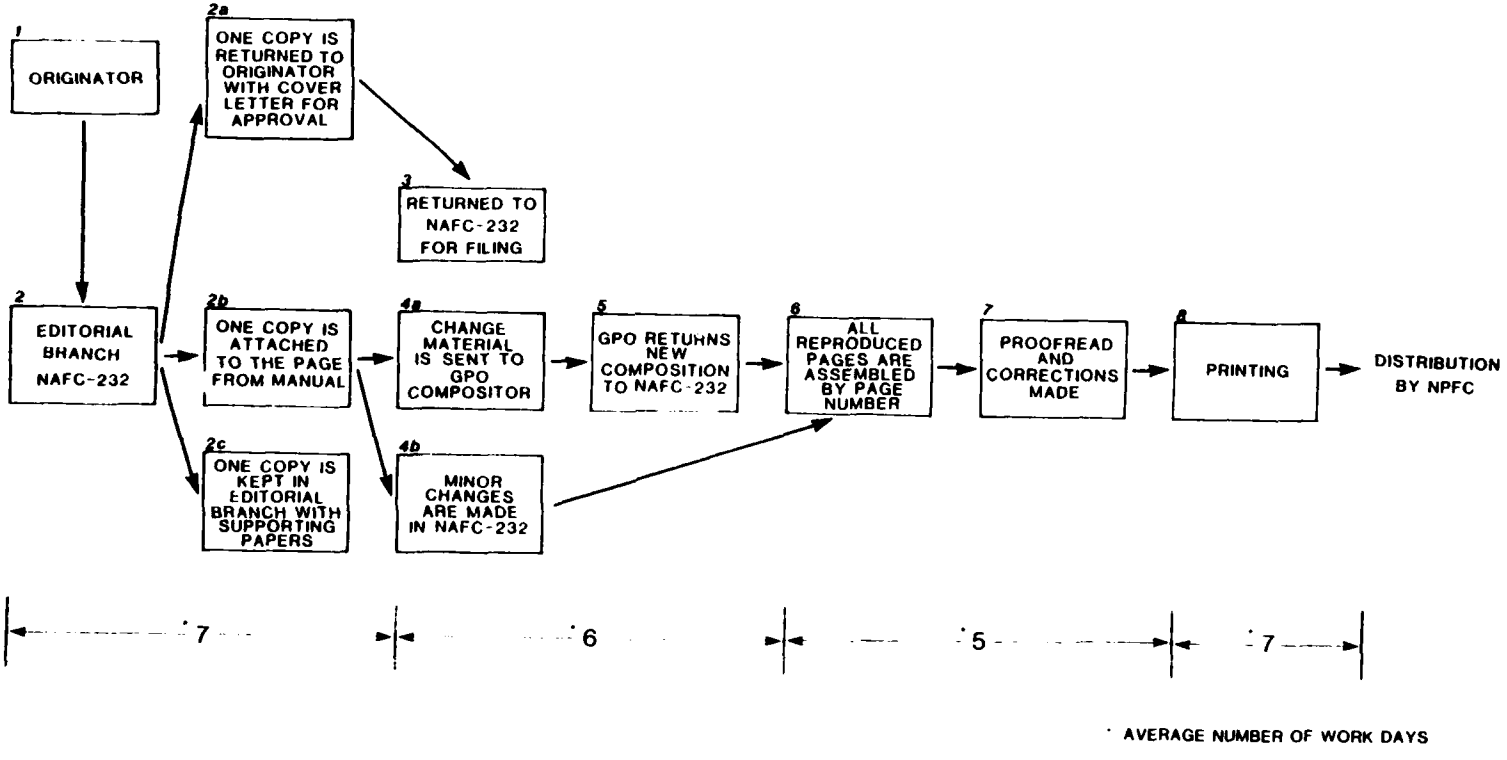

Figure 1. Flow of Change Material From Originator Through NAFC-232 to Publication

(2) Cross-reference check is made, using cross-reference card files.

(a) Resultant changes are entered in master volume.

(b) If cross-reference change affects other volumes, the appropriate editor is notified.

(3) Assure that paragraph organization conforms to manual format. Check forms and titles for currency.

(4) Mark in the master volume to indicate where the change will be made. Enter the log number and change number opposite the affected paragraph.

(5) Assure that the change is accompanied by a cover letter signed by the appropriate official.

(6) Make appropriate changes to tables of contents as required.

(7) Review page where change occurred for other required changes.

(8) Changes are typed, proofread, and necessary corrections made.

b. Copy Preparation

(1) Three copies of each change are prepared -- original for composition, second for review by the submitting office, and the third to be attached to supporting papers and cover letter for filing by paragraph number.

(2) Original master copy affected by the changes are taken from the files.

(3) Printed pages are taken from the files, and are marked with instructions to the printer to make up a new page to include the new material.

(4) These marked-up pages are checked against the manual and the file copy of the change.

(5) A typed copy of each change is prepared with a cover letter and routing sheet, and is sent to each originating office for approval. This material is then sent to the Commander of the Navy Accounting and Finance Center for signature on the cover letter. This signature is the authority for the Editorial Branch to publish the change.

c. Composition

(1) Marked-up pages are attached to the original master copies (camera-ready copies). Pages with minor changes are retained in the office for correction. All other pages, properly

marked with inserts and folioed, are forwarded to the GPO compositor on the scheduled dates.

(2) Returned copy is proofread, and necessary corrections are made in-house on the IBM composer. Corrections are cut into the camera-ready copy with the use of a light table.

(3) A list of sheets in force is typed or revised to show the appropriate change number for each page in the manual. This list assists users in keeping the manual current. The list is printed with the change.

d. Printing

(1) The original master copies (camera-ready copies) are assembled in order and folioed for the convenience of the printer. Pages requiring no change but necessary to print since they back up sheets which are revised are included in the material going to the printer.

(2) A list of odd and even pages is made in duplicate on the form prepared for that purpose. One copy is retained for checking the returned masters; the other is sent to the Publications Branch for maintaining a card file recording remaining pages in all changes.

(3) Original master copies sent back by the printer after printing are checked against the odd and even sheet and filed for use in future changes. Superseded master copies are destroyed.

e. Records Maintenance

(1) Typed copy of individual changes, together with supporting papers and cover letter, is placed in historical file by paragraph number.

(2) When printed change is returned from printer, a copy is inserted in the master volume and another in the cross-reference volume. Loose copies of sheets printed are filed for use in preparing subsequent changes.

The system to publish and maintain certain other FM publications (see paragraph 2.7.1.1) is different from that followed for publications which are processed through NAFC-232. Specifically, for the publications listed in Appendix C, NAFC-1, 2, 3, 4, 5, and 6 do not go to the GPO with draft text material and have GPO prepare camera-ready copy for use as a master for printing. They keyboard the text material into an NAFC owned or leased word processor; do their own editing and correction of text as necessary; and prepare the finished output (typewritten copy) which is utilized as the master for printing by DPS, by GPO in house, or by GPO contracting out.

2.7.1.3 Specifications For Preparation Of Camera-Ready Copy. Changes to NAVCOMPT FM publications controlled by NAFC-232 must be composed in accordance with specifications for preparation of camera-ready copy. These specifications provide instructions essential to production of uniform publications. A copy of NAFC-232 specifications is included in Appendix D.

2.7.1.4 Workload And Composition/Printing Cost Summary, 1979 And 1980. Table 3 provides a summary of the workload performed during 1979 and 1980 by NAFC-232. It also reflects composition and printing costs for the publications listed. Changes to JTR Volumes I and II account for a significant portion of total NAFC-232 workload and costs as highlighted in the following analysis:

	1979	1980
Pages to Composition:		
Total, all NAFC-232 publications	2537	2677
JTR, Volumes I and II	890	1074
Percent that JTR is to total	35%	40%
Pages to Printing:		
Total, all NAFC-232 publications	5168	4974
JTR, Volumes I and II	1958	2050
Percent that JTR is to total	38%	41%
Cost of Composition:		
Total, All NAFC-232 publications	$145,020	$154,539
JTR, Volumes I and II	53,400	62,440
Percent that JTR is to total	37%	40%
Cost of Printing:		
Total, all NAFC-232 publications	$124,032	$119,336
JTR Volumes I and II	46,992	49,200
Percent that JTR is to total	38%	41%

2.7.1.5 Personnel Utilized By NAFC To Process And Update Changes To NAVCOMPT Publications. The Editorial Branch, NAFC-232 has seven civil service personnel who perform the functions previously described in paragraph 2.7.1.1 and 2.7.1.2 with respect to processing changes to specified NAVCOMPT publications, i.e., all volumes of the NAVCOMPT Manual, the NTI, PAYPERSMAN, and Volumes I and II of the JTR. The preparation of the substantive matter for changes to these publications is prepared in draft form by NAFC offices other than NAFC-232.

Detailed statistics are not maintained as to the number of personnel in NAFC-1, 2 (other than 232), 3, 4, 5, and 6 devoting their efforts to initiating, or updating, NAVCOMPT FM publications. In addition to providing NAFC-232 with the draft substantive change material for the NAVCOMPT Manual, the NTI, the PAYPERSMAN, and the two volumes of the JTR, these NAFC offices update and maintain 66 other NAVCOMPT FM publications consisting of approximately 10,900 pages. They perform all functions required to prepare print ready master copy (i.e., preparation of draft substantive material; editing; composing; and preparation of the print ready master). The number of NAFC-1, 2, 3, 4, 5, and 6 personnel and the percentage of their time devoted to

TABLE 3. NAFC-232 WORKLOAD AND COST SUMMARY, 1979-1980

Publication	Total No. Pages in Volume	No. of Changes		No. of Impressions of Each Change Printed	Pages				Cost			
					To Composition		Prepared for Printing		Composition @ $60.00 Per Page		Printing @ $24.00 Per Page[1]	
		1979	1980	1980	1979	1980	1979	1980	1979	1980	1979	1980
NAVCOMPT MANUAL:												
Vol I	164	0	0	0	0	0	0	0	--	--	--	--
Vol II	1,088	6	10	9,500	285	380	484	724	$ 17,100	$ 22,800	$ 11,616	$ 17,376
Vol III	1,250	8	9	7,500	266	360	550	592	15,960	21,600	13,200	14,168
Vol IV	670	5	4	8,700	240	180	530	314	14,400	10,800	12,720	7,536
Vol VI	360	0	1	475	--	138	--	138	--	8,280	--	3,312
Vol VII	386	3	5	3,200	191	120	356	278	11,460	7,200	8,544	6,672
NTI	410	3	3	6,000	120	40	152	52	7,200	2,400	3,648	1,248
PAYPERSMAN	1,056	7	6	16,000	425	302[2] 77[3]	1,138	826	25,740	18,480 539	27,312	19,824
JTR Vol I	770	24	12	26,000	890	844	1,958	1,750	53,400	50,640	46,992	42,000
JIR Vol II	424		12	23,000		230		300		13,800		7,200
Totals	6,578	56	62	99,875	2,537	2,677	5,168	4,974	$145,020	$156,539	$124,032	$119,336

[1] Contract Printing (includes labor, materials, and preparation for shipping).

[2] Text.

[3] Illustrations at $7.00 each.

Note: Cost per page for composition and printing are an average derived from total pages processed.

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processing and updating changes to NAVCOMPT FM publications, (based upon informal best judgement estimates) is as follows:

	Total No. Personnel	Percent of Total Time Utilized for Updating FM Publications
NAFC-1	35	20%
NAFC-2 (other than 232)	25	15%
NAFC-3	7	20%
NAFC-4	43	20%
NAFC-5	27	15%
NAFC-6	81	15%

2.7.1.6 Automated Equipment Utilized By NAFC To Process And Update Changes To NAVCOMPT FM Publications. Part A of Table 4 lists the inventory of automated equipment currently utilized by NAFC-232 to process and update NAVCOMPT FM publications. It indicates the vendor model, type, and whether the equipment is owned or rented. Similar equipment owned or rented by other NAFC offices is shown on Part B but its utilization is primarily for purposes other than to update and process changes to NAVCOMPT FM publications (best estimate: 15 to 20 percent utilization for updating FM publications).

For most work, NAFC-232 uses IBM Selectric typewriters (non-automated equipment) to initially create change material into text as typewritten pages. The Lexitron 1102 and 1202 word processors are used by NAFC-232 to create/update selected tables which are frequently changed. The IBM Selectric Composer and 3M Lettering System are used to make minor corrections to existing camera-ready copy. Except for relatively few changes to existing CRC which NAFC-232 can accomplish directly, all other change material which NAFC-232 processes is submitted to GPO for photocomposition and phototypesetting with the end product being CRC which is returned to NAFC-232. Figure 2 titled "NAFC-232 Baseline" depicts the publication process and equipment used by that office. This figure is limited to NAFC-232 because automated equipment listed in Part B, Table 4, is utilized by other NAFC offices primarily for purposes other than for updating changes to NAVCOMPT FM publications.

2.7.1.7 Capabilities Evaluation of Automated Equipment Utilized By NAFC-232 To Process Changes To NAVCOMPT FM Publications. The current baseline uses very little automated equipment and is labor intensive. The IBM Composer and 3M Lettering System (both government owned) are obsolete. Neither have communications capability or the capacity to handle digitized text. The IBM Selectric typewriters (non-automated equipment) are also obsolete and labor intensive for the type of publications processing work being done by NAFC-232. The Lexitron 1102 (government owned) should be upgraded to be compatible with the Lexitron 1202 so the diskettes between the two systems could be interchangeable. Upgrading the Lexitron 1102 to a 1202 model could be done for a one-time cost of $2,150.

TABLE 4. AUTOMATED EQUIPMENT UTILIZED BY NAFC TO PROCESS AND UPDATE CHANGES TO NAVCOMPT FM PUBLICATIONS

Dept	Function	Vendor Model	Type	Own(O) Rent (R)
Part A:				
NAFC-2	Resource Management	Lexitron 1102 (Printer)	WP w/CRT, Tape Cassette	O
		Lexitron 1202 (Printer)	WP w/CRT, Sm Diskette	R
		IBM Composer	Standalone Composer	O
		3M Lettering System	Headliner	O
Part B:				
NAFC	Accounting Policies and Procedures	Lexitron 1202E	WP w/CRT, Sm Diskette	O
NAFC-1	Policy and Planning	Lexitron 1202 (Printer)		R
		Lexitron 1202E	WP w/CRT, Sm Diskette	R
		IBM 5651	Memory Typewriter	O
		IBM 5651	Memory Typewriter	O
NAFC-3	Career Management	Lexitron 1202 (Printer)	WP w/CRT, Sm Diskette	R
NAFC-4	Pay, Travel, and Disbursing	Xerox 800[1]	WP w/o CRT, Tape Cassette	R
		Xerox 800[1]	WP w/o CRT, Tape Cassette	R
		CPT 4200[1,2]	WP w/CRT, Lg Diskette	O
		CPT 8000	WP w/CRT, Lg Diskette	O
NAFC-5	Industrial, Inventory and Fund Accounting	Lexitron 1202 (Printer)		O
		Lexitron 1202E	WP w/CRT, Sm Diskette	O
NAFC-6	Financial Management Systems	Lexitron 1202 (Printer)		R
		Lexitron 1202E	WP w/CRT, Sm Diskette	R
		Lexitron 1202E	WP w/CRT, Sm Diskette	O
		Lexitron 1303 (Printer)		O
		IBM 100	Memory Typewriter	O
		IBM 100	Memory Typewriter	O
		IBM 100	Memory Typewriter	O

[1] Will be replaced with five A.B. Dick Magna III work stations and three printers.

[2] Will go to NAFCO when replaced.

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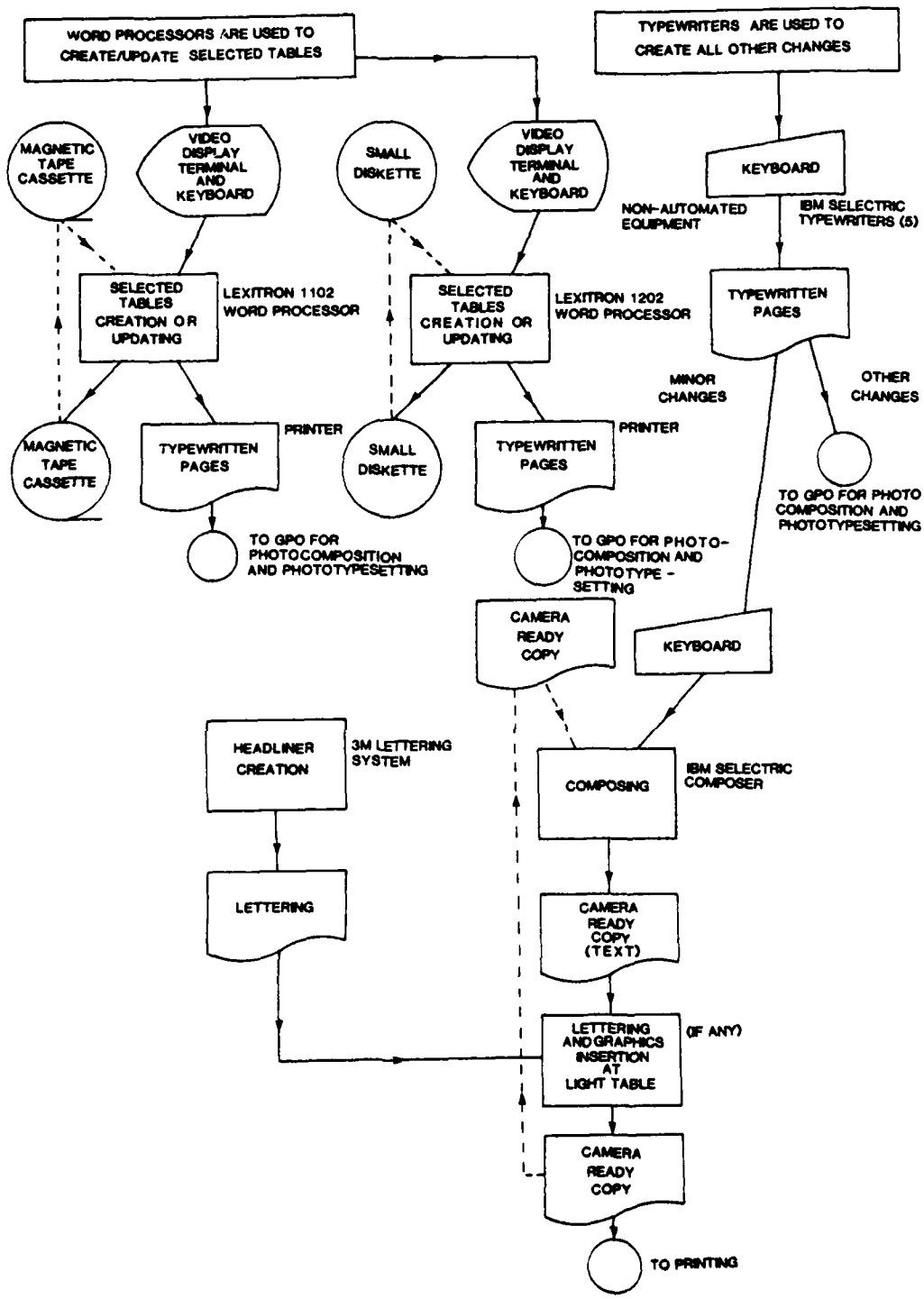


Figure 2. NAFC-232 Baseline

To perform the assigned functions more efficiently, and at less cost, all presently owned or leased equipments should be replaced or upgraded with the exception of the Lexitron 1202 word processor.

2.7.1.8 NAFC-232 Basline Costs. Annual costs of the NAFC-232 baseline, excluding shipping costs from contract printers, and further excluding costs associated with handling, storage and distribution/shipping by NPFC, are $477,857 consisting of the following:

a.	In-house equipment costs	$ 7,815
b.	In-house personnel costs	196,242
c.	Outside services	273,800
	TOTAL	$477,857

The details supporting each of these cost summaries follow:

2.7.1.8.1 In-House Equipment Costs.

Equipment	Annual Rental and/ or Maintenance
Lexitron 1102 Word Processor w/Printer (Gov't owned; 1 year old; initial acquisition cost $11,000)	$1,600
Lexitron 1202 Word Processor w/Printer	5,988
IBM Selectric Composer (Gov't owned; 9 years old; initial acquisition cost $7,000)	180
3M Lettering System (Gov't owned; 1 year old; initial acquisition cost $800)	-0-
(5) IBM Selectric Typewriters (Gov't owned; initial acquisition cost $700 each)	47
TOTAL	$7,815

2.7.1.8.2 In-House Personnel Costs.[1]

Personnel	Annual Cost
1 GS-5	14,566
1 GS-6	16,240
3 GS-9	66,219
1 GS-11	26,710
1 GS-12	32,013
Sub-Total	$155,748
Add: 26% factor for fringe benefits[2]	40,494
TOTAL	$196,242

[1] Based on 1 Oct 81 rates and assumes Step 5 for each GS grade.

[2] Per Supplement No. 1, OMB Circular A-76, p. 24.

2.7.1.8.3 Outside Services (1980 Rates).

Composition Costs (GPO)	$154,500
Contract Printing, scheduled publications	119,300
*TOTAL	$273,800

* Excludes handling, storage, distribution, and shipping costs at NPFC.

2.7.1.9 The NPFC Role. Distribution of most NAVCOMPT FM publications is made to users world wide by NPFC.[1] Distribution lists maintained by NPFC for NAVCOMPT are the guides utilized. The number of copies distributed to Navy users ranges from less than 2,000 for some publications (such as NAVCOMPT Volume I) to over 8,000 for others (such as JTR Volume I). The normal cycle of events which takes place from the time a NAVCOMPT publication arrives at NPFC to distribution is depicted on Figure 3. An EG&G representative visited NPFC on 1 May 1981 and discussed the receipt, stockage, and distribution of NAVCOMPT publications at that activity. During this visit, NPFC advised that they are currently carrying 1828 line items in stock for NAVCOMPT. These items consist of the basic publication, changes, tabs, and indices. Each line item is listed in NAVSUP Publication 2002. NPFC advised that whenever 25 percent of the basic publication plus changes are superseded, or whenever 18 changes

[1] Some are distributed directly by NAVCOMPT or as authorized by NAVCOMPT.

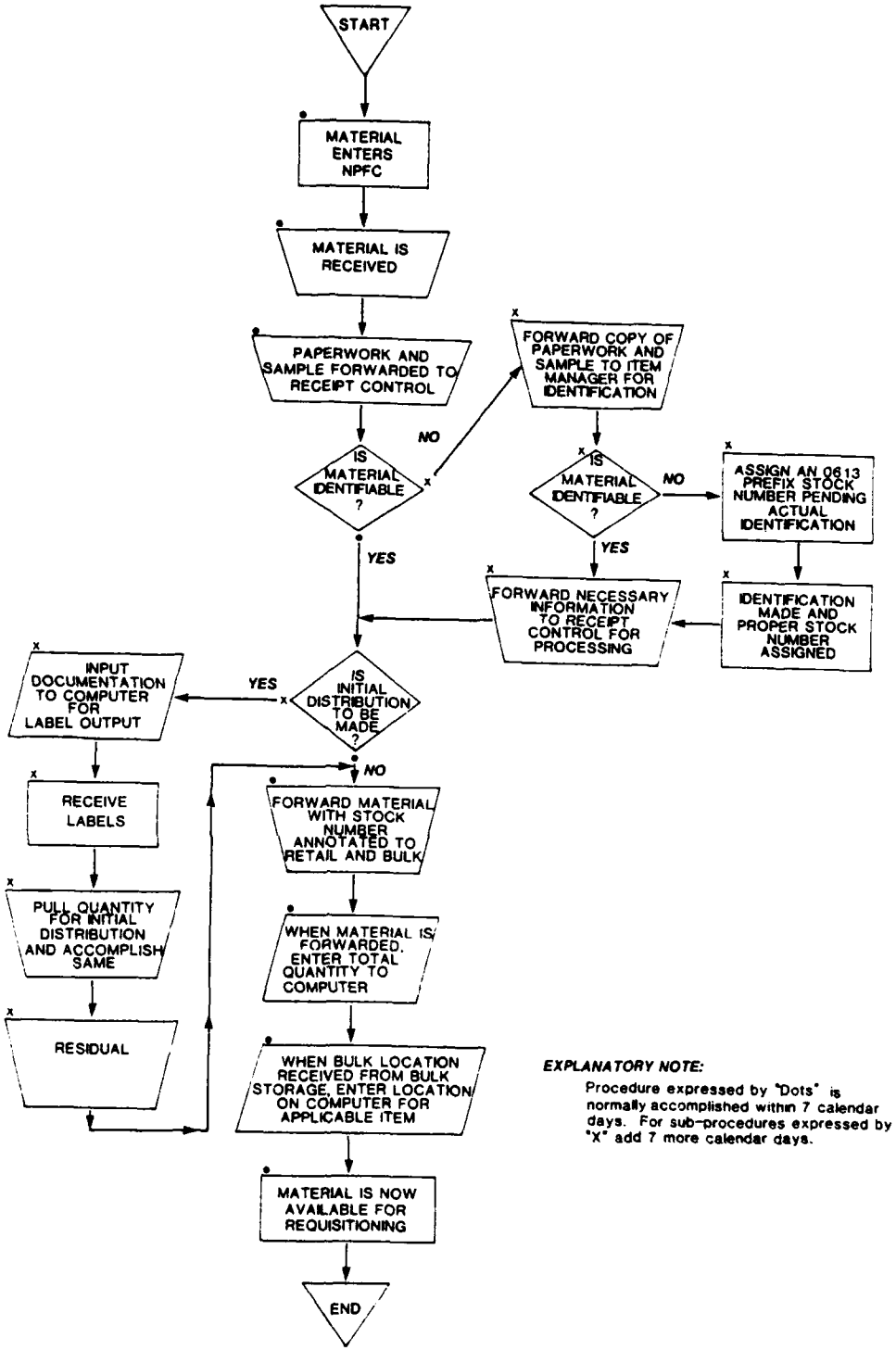


Figure 3. Steps Taken by NPFC In Processing NAVCOMPT Publications

occur to a line item, the item should be reprinted with all changes incorporated into a new publication. NPFC stated that the maximum supply of publications on hand should not exceed 3.5 years and if there is no activity on a line item for two (2) years, NPFC can reduce the stock level to 50 for such a line item.

2.7.1.9.1 Some NAVCOMPT FM Publications In Long Supply Status. Based on data provided to EG&G by NPFC at the time of the visit, several NAVCOMPT publications on hand exceed NPFC stockage guidelines. Specific examples were provided of hard copy changes to NAVCOMPT Manual Volumes II, III, and IV where stocks being carried at NPFC exceed seven (7) or more years' supply. In some areas the basic item has been deleted but ensuing changes remain in the system. This leads to a breakdown in the distribution system because changes no longer correlate to a basic document. NPFC recommended that NAVCOMPT sponsors initiate action to review and reduce stockage levels of the many line items which far exceed expected needs. When a superseded publication is replaced by a reprint, NPFC advised that NAVCOMPT should take action to remove the superseded line item from stock and from NAVSUP Publication 2002. In numerous instances, this is not now being done.

2.7.2 RESPONSES FROM USERS OF NAVCOMPT FM PUBLICATIONS AND THEIR SUGGESTIONS FOR IMPROVEMENT. The following subparagraphs provide summaries of the information or responses provided by the users of NAVCOMPT FM publications who were interviewed by EG&G. Some of the subparagraphs include selected excerpts, or the full unedited version, of comments made by the interviewees to provide NAVCOMPT personnel a better understanding of the user's responses. The summaries are as follows:

2.7.2.1 Principal Function(s) Performed By Interviewee:

Function	Number	Percent
Programming	6	7.7
Budget Preparation	17	21.8
Budget Execution/Appropriated Fund Administration	18	23.1
Accounting	32	41
Financial Management Reporting (Manual)	19	24.4
Financial Management Reporting (Mechanized)	24	30.8
Disbursing	28	35.9

Function	Number	Percent
Data Processing	3	3.8
Other (Civilian payroll, travel claims, training, financial systems and procedures)	22	28.2

Note: Some interviewees perform two or more functions.

2.7.2.2 Interviewee Work Experience. Each interviewee provided information as to (1) total years working experience, and (2) number of years experience in performing financial management functions. The following summarizes their experience, by category:

Category (Years)	Total Experience		Financial Management Experience	
	Number	Percent	Number	Percent
30+	22	28	13	17
20 - 29	20	26	14	18
10 - 19	28	36	30	38
5 - 9	6	8	9	12
0 - 4	2	3	12	15

2.7.2.3 How Are The Manuals/Handbooks Used?

Response	Number	Percent
Basic reference and guide, when needed	62	79.5
Constant day-to-day operations	43	55.1

Note: Categories are not mutually exclusive. Some interviewees advised that both categories applied.

2.7.2.4 If The NAVCOMPT Manual Was Tailored To Your Uses, Which Would You Require?

Response	Number	Percent
All volumes now being distributed	63	81
Selected chapters would suffice	15	19

Note: "Tailored" was explained during the interview to mean publishing chapters as individual modules.

Several who responded "all volumes now being distributed" remarked that they did so because many areas in the NAVCOMPT Manual interface within or between volumes or information on the same subject is scattered throughout several volumes.

2.7.2.5 Adequacy Of Index/Cross References.

Response	Number	Percent
Excellent	5	6
Needs Improvement	73	94

The almost unanimous opinion of those interviewed is that the present index and cross references to the NAVCOMPT Manual and related publications are inadequate. The majority of the interviewees advised that there is an urgent need for a master index and cross references covering all volumes of the NAVCOMPT Manual, related Handbooks, Instructions, Notices, and Letters. A few of the interviewees have independently developed a limited index/cross references tailored to meet their needs.

Excerpts from the responses to this question are as follows:

a. A master index and cross reference is badly needed.

b. Incredible amount of time is spent finding something.

c. Very seldom can find an answer to what one is looking for without extensive search.

d. Table of Contents is not always a good indicator of actual content.

e. Not worth a damn!

f. Need by topic or theme, especially where information is spread through the books.

g. A real need for a good cross reference system, by subject/key words.

h. Need an overall index; there is no overall index.

i. You can spend days if you don't know what you're looking for.

j. Put index in alpha order.

k. Incomplete/inadequate -- needs expansion.

l. Worthless.

m. Never in chapter you think it is in.

n. Index needs to include section on forms contained in each volume.

o. Lot of time fumbling.

p. Students and enlisted personnel on station without background have great difficulty.

q. Grossly inadequate -- would encourage NAVCOMPT to develop a comprehensive index.

r. Would like an index by functional area that covers all of NAVCOMPT publications covered in this study.

s. Master index would be terrific.

A complete unedited listing of all the comments made by all the interviewees concerning the adequacy of the present index is provided in Part A of Appendix E.

2.7.2.6 What Would You Like To See Done To Improve How The Information In The Manual Or Handbooks Is Presented? The responses to this question have been summarized into seven categories as follows:

a. General approval of current status

b. Organization of material

c. Readability/Comprehensibility

d. Conflicts in or duplication of information

e. Omissions or desired additions

f. Physical characteristics

g. General comments

The largest number of interviewee responses related to the organization of the material. Since there is a specific question on "organization of material" in the questionnaire, discussion of this portion of the responses is included in paragraph 2.7.2.21. Another group of responses to this question related to readability and comprehensibility. These have been included in paragraph 2.7.2.19.

2.7.2.6.1 General Approval of Current Status. Seven interviewees responded similarly advising that the presentation of material in the Manual or Handbooks is "adequate", "reasonably OK now," "overall seems to be a pretty good job," or "no problems." Five additional interviewees had no comment, which if interpreted as approval adds to twelve approvals or 15.4 percent of the total number of interviewees.

2.7.2.6.2 Conflicts In Or Duplication Of Information. Some examples were cited by interviewees of conflicts in, or duplication of, information in different parts of the same publication or in other FM publications which discussed the same subject. These were as follows:

a. The Handbook "Afloat OPTAR Record Keeper's Guide", NAVSO P-3073 duplicates Handbook "Financial Management of Resources" NAVSO P-3013 in many areas.

b. Conflicting intructions in NAVCOMPT Handbook NAVSO P-3013-2 "Financial Management of Resources--Operating Procedures (Operating Forces)" include the following:

(1) Table IV, page A-II-12 authorizes OFC 50 expenditures for fuel at organizational level but Table XV, page A-II-47 does not.

(2) Table IX and Table XVI - same comment as above.

(3) Table XV and Table XVI state that squadron plaques are authorized OFC 01 purchases for squadron CO's and XO's only. SECNAV Instr 3590.4A states that these are authorized for individuals as well.

c. Examples of duplication in Handbook P-3013-2 are as follows:

(1) Table IV, page A-II-12 and Table XV on page A-II-39.

(2) Table IX and Table XVI.

d. Example of inconsistency in Handbook P-3013-2:

(1) Table XV lists OFC 2K but Table XVI does not.

e. Example of out-of-date information in Handbook P-3013-2:

(1) Paragraph 7, page 4-61 states that reports are to be submitted up to six months after end of fiscal year. NSCS has a message change which states that reports are to be submitted up to 36 months after beginning of fiscal year.

f. NAVCOMPT Manual Volume III, Chapter 3, and NAVCOMPT Manual, Volume IV, Chapter 5, pertaining to policy, procedures, and disbursement of civilian pay are similar in subject matter and are cross referenced extensively. The text in certain parts has not been revised for many years and needs extensive revision. Specific examples of areas needing revision are:

(1) Volume III, Chapter 3:

(a) Part A, Sections I, II, III, and IV.

(2) Volume IV, Chapter 5:

(a) Part B, Section III

g. The appropriate volume of the NAVCOMPT Manual does not provide current information regarding certain civilian pay procedures or entitlements, e.g., merit pay, Senior Executive Service bonuses, elimination of charges for union dues, leave and earnings statements, processing civilian retirement records, unemployment compensation, religious compensatory time, federal employees Group Life Insurance, alimony and child support allotments, and military leave taken by civil service employees.

h. Part A, Section VI, Chapter 3, of Volume III, and Part D, Chapter 5 of Volume IV both have the same title "Evacuated Civilian Employees and their Dependents" but cover different aspects of the subject matter. The question raised is why not address the subject in one, rather than two places in the NAVCOMPT Manual.

2.7.2.6.3 Omissions Or Desired Additions. Interviewee comments related to omissions or desired additions were as follows:

a. Comptroller General discussions which affect many should be published in the Manual.

b. Graphics now in Volume IV of the Manual depict shore activities only--need afloat examples badly.

c. Put zip codes in Unit Identification Code (UIC) book; spend a lot of time trying to find them.

d. Need more illustrations using current documents and standard formats.

e. NAVCOMPT Manual, Volume IV, Chapter 6, is inadequate--no coverage of GSA contracts and conditions for payment.

f. Need more examples of unusual/uncommon transactions, e.g., how to compute travel pay when crossing International Date Line.

g. Cost account code data is incomplete for Marine Corps activities (Volume II, Chapter 4)--would like Marine Corps cost account data included in complete form.

h. Add glossary of terms and definitions for each NAVCOMPT Manual.

i. Should have one section of Manual devoted to funding documents and the text should include:

(1) Who is authorized to issue what type document and to whom;

(2) What circumstances each may be used for, i.e., work or services for other Navy activities, other DOD activities, other government, private individuals; and

(3) Period of time funds are available for obligation/expense.

j. Appropriations listed in Volume II of Manual should be identified to length of obligation authority.

k. Some symbol or "flag" denoting what's changed would be a big help when changes to publications are issued.

l. Reference Manual, Volume III, Chapter 4---MILS BILL'S should be in Manual or should be sent special to NSC, Norfolk.

2.7.2.6.4 Physical Characteristics. Seven interviewees commented as follows with respect to the NAVCOMPT Manual:

a. Binder too full--volumes too big.

b. Come up with one standard binder; since pages are xeroxed, should have ability (loose leaf) to get pages in and out.

c. Would like to see the contents broken down into subject matter in smaller volumes.

d. Size of type in text is too small; need bigger size.

2.7.2.6.5 General Comments. General comments made by interviewees regarding how material is presented in the NAVCOMPT Manual and related FM publications were:

a. Need to support the guy who is filling out the documents--then higher levels and recipients will get good data too.

b. That's where (afloat) they need the help--that's the purpose of the Manual.

2.7.2.7 What Would You Like To See Done To Improve How The Information In The Manual Or Handbooks Is Updated? The responses were sorted into the following categories:

a. General approval of current status.

b. General comments about delays, faster updating, lack of timeliness.

c. Getting hard copy changes, delay between notices and hard copy.

d. Comments on specific content.

e. Need for advance notice.

f. Comments reflecting some special need.

g. Incorporation of changes.

h. General and miscellaneous.

2.7.2.7.1 General Approval Of Current Status. Nine interviewees commented to the effect that they were satisfied with how the information is updated. Eleven interviewees had no comment and are interpreted as general approval.

2.7.2.7.2 General Comments About Delays, Faster Updating, And Lack Of Timeliness. The responses in this category overlap those which are discussed in subsequent paragraphs. The general theme of their response is that they would like to see more current and faster updating of changes.

2.7.2.7.3 Getting Hard Copy Changes, Delay Between Notices And Hard Copy. The comment in the preceding subparagraph applies here also. Twenty interviewees said essentially the same thing, i.e., in their opinion, it takes too long for changes to be issued. Selected excerpts from interviewee comments are as follows:

a. Certain changes have been published via Notices or Instructions that have never been incorporated into the Manual to date. Certain reports required by NAVCOMPT are based on these Notices or Instructions---some that date back to 1976 or earlier.

b. Maybe 6-12 months between initial notification and final change.

c. Changes to Volumes I and II of JTR are time consuming and in many cases come in so late that they are out of date, i.e., per diem rates, high cost areas, overseas rates.

d. Six months to 2 years between Notice and Change; sometimes never.

e. Manuals are not kept up to date--changes received in many cases a year after effective.

f. Takes forever to get direction into Manual--e.g., Comptroller General decision dated 27 November 1979 (fraud, waste, abuse)--finally got into Manual many months later.

g. NAVCOMPT Notice 7000, 6 December 1978, Cash Management, Change 254, didn't get published until 26 August 1980; almost 2 years to get into Volume IV.

h. The 7300 series NAVCOMPT Notices--long lead time before reflected in Manuals.

i. Within 30 days after message or Notice published, information should be incorporated into Manuals. Currently, information loses its credibility.

2.7.2.7.4 Comments On Specific Content: Most of the interviewee comments in this category pertained to NAVCOMPT Handbooks. Excerpts from interviewee comments are as follows:

a. The inaccuracies in the handbooks are so extensive it hurts NAVCOMPT's credibility. Change notices have been put out but lack of incorporation into the Handbooks causes the instructors agony to provide the many changes to the students for course accuracy.

b. Several areas of NAVSO P-3006 are out of date and should be updated.

c. NAVSO P-3006-1 and P-3014-1 are out of date:

(1) Both issued in March 1976 but never had any formal change.

(2) Inputs to update were requested by NAVCOMPT about a year ago but formal changes/updates are not yet published.

(3) We have received the notices or letter changes but we feel this is an inefficient, ineffective and difficult way to keep abreast of directives behind the procedures.

d. NAVSO P-3013/3073--so outdated they are unusable.

e. NAVSO P-3013-2 is not updated but it is outdated--date is now December 1974.

f. Received interim changes to NAVSO P-3013-2 in 1980 which should have been published into a revised edition for student use, e.g., Thresholds (page 4-209); Aged Unfilled Order Listing (page 4-83); Summary Filled Orders Expenditures Difference Listing (page 4-117).

g. NAVSO P-3073 (August 1971) is obsolete in part---NSCS does not get changes.

Specific comments pertaining to the NAVCOMPT Manual were as follows:

a. Volume VI is very old and needs complete review and updating--some pages are dated 1953!

b. Paragraph 039511 Volume III re ARPA is 1962 example and way out of date.

c. Most of the Navy has been doing expense accounting since 1968 but manual refers to allotment accounting.

d. Need to update language, e.g., manual procedure (old) in manual--current procedure is computer match (Volume III-34426.3).

2.7.2.7.5 Need For Advance Notice. One interviewee responded that more advance notice of changes by message is needed with respect to changes affecting civilian payroll policies and procedures. Most responses regarding need for advance notice of changes are addressed in a subsequent subparagraph in answer to another part of the structured interview.

2.7.2.7.6 Comments Reflecting Some Special Need. The Navy Supply Corps School (NSCS) provided a special dimension to the user survey. The school uses the NAVCOMPT Manual and Handbooks to educate and train approximately 2800 students per year (about 600 per year enrolled in the 6-month basic qualifications course and about 2200 in short courses). NSCS uses parts of the NAVCOMPT Manual, NTI, JTR Volume I, and certain Handbooks (e.g., 3006, 3013, 3073, 6048) as textbooks and training aids. Most students are officers whose next assignment upon completion of courses is an afloat tour. Instructors at the NSCS who were interviewed stated: "One cannot effectively teach from Messages, Instructions and Notices. The Manuals are the day-to-day ready references. Exams are open book and the Manuals are the source references. NAVCOMPT should provide the changes in a format that could be incorporated into the Manuals ahead of fleet distribution, so NSCS can teach based on an effective date of change."

Interviewees at other Navy training centers and aboard ship commented that the NAVCOMPT Manual and certain related handbooks are used by a significant number of Navy enlisted personnel who have serious difficulty in reading and understanding the English language, i.e., English is their second language. They commented that the Manuals and Handbooks should be written in plain language so that the average supply clerk or disbursing clerk can understand what NAVCOMPT specifies.

2.7.2.7.7 Incorporation Of Changes. The interviewee comments in this category primarily focused on changes to JTR Volumes I and II. Based upon discussions EG&G conducted with the interviewees who are users of JTR Volumes I and II, and others, EG&G has determined that Navy and Marine Corps organizations worldwide are receiving a barrage of changes to the JTR each month. Most changes are initially issued by teletype. They are later consolidated and published in hard copy form by NAVCOMPT for distribution throughout the Department of Navy.

The JTR is the authority and basis for payment of per diem rates; foreign currency exchange rates; monetary allowances in lieu of transportation; overseas station allowances; and other entitlements affecting pay and travel claims (PCS/TAD) of both military and civilian personnel. Due to constant fluctuations, AIG teletype messages are issued about every ten (10) days. A single message often includes numerous individual changes. Timeliness of receipt of these changes to the JTR are critical to providing proper payments. Navy activities advised that although in most instances the teletype messages serve the purpose of timely notification, they often change many different parts/paragraphs of the JTR. It is awkward to record changes on the page(s) because of limited blank space on the top, bottom, or side of the page affected. People resort to making notations on the page that a change has been received, citing the message date/time group, thus providing a cross reference to the item on file. Because of cut off dates for accumulation, printing, and distribution of changes in hard copy form, lag times of two, three, or more months are experienced from teletype notification to receipt of the hard copy change. Because of the many changes "in process" in the system at any given time, Navy operating activities worldwide must maintain the numerous "interim notifications" and cross reference postings; make the hard copy paragraph or page substitutions later when received; and delete prior cross reference notations on pages not totally reprinted.

Keeping up with the substance as well as the mechanics of making the numerous and continuing changes to the JTR is frustrating and a problem for users of this publication worldwide.

2.7.2.7.8 General And Miscellaneous. Part B, Appendix E, provides a complete unedited listing of all the comments made by all the interviewees concerning what they would like to see done to improve how the information in the Manual or Handbooks is updated including those in the General and Miscellaneous category.

2.7.2.8 What Would You Like To See Done To Improve How The Information In The Manual Or Handbooks Is Distributed? Five interviewees indicated general approval of current status; 36 interviewees had no comment (interpreted as general approval). This accounts for 58.6 percent of all interviewed. Suggestions offered by a few interviewees included the following:

a. Copies (of changes) should go directly to organizations involved, e.g., Comptroller vice a central receiving activity in the field activity.

b. Need a simple form that would allow one to change the distribution to this station.

c. Many times (we) don't receive messages which are pertinent to this station (i.e., MCRD, San Diego, pertaining to travel and pay entitlements).

2.7.2.9 Changes To The NAVCOMPT Manual And Handbooks Are Issued In Various Forms, i.e., Electrical Message, NAVCOMPT Notice/Instruction/Letter, Or By Formal Hard Copy Numbered Change To The Manual Or Handbooks. Do You Experience Problems With One Or More Of These Forms Of Issuances?

Response	Number	Percent
No	48	62
Yes	30	38

Comments which explained the "yes" responses included the following:

a. Electrical messages occasionally garbled; in a lot of cases leave too much to interpretation (too brief).

b. Messages cause problems because pen/ink changes directed in message; inadequate space on pages affected to make the changes; administratively difficult.

c. Notices/Instructions/Letters should have a clear "Action" paragraph to tell recipient what is wanted action-wise.

d. Advance Notices not referenced to formal changes--hard to track advance notice to final changes.

e. Messages are ambiguous and garbled as a general rule pertaining to JTR-1.

2.7.2.10 Using The Past Two Years As A Base Period, Whenever A Change Was Initially Issued To The NAVCOMPT Manual, Or Handbooks, Did You Find It Necessary To Telephone Higher Headquarters, Or NAVCOMPT (Or Both), For Clarification?

Response	Number	Percent
Not often -- only on occasion, or not at all	68	87
Often	10	13

Interviewee comments:

a. New laws create a lot of questions on entitlements.

b. Most problems with JTR.

c. Primarily DOD PM, i.e., Comptroller General decisions.

d. Intent is not always clear; have to ask specific questions.

2.7.2.11 Using The Last Two Changes To The NAVCOMPT Manual Or Handbooks You Received, Please Indicate The Publication, Change Number, Published Date Of Change, And Date You Received It. The majority of responses pertained to the NAVCOMPT Manual. The intent of the question in the structured interview is to obtain the number of days between the date of publication and the date of receipt by the user. The data was obtained from the formal log sheets maintained by the users. Tables 5, 6, 7, 8, and 9 which follow depict the data.

2.7.2.12 Have You Had Problems With "Missing" Changes?

Response	Number	Percent
No	47	60
Yes	31	40

Interviewee comments:

a. Problem may be with internal distribution (locally).

b. Don't know who to blame, local or system.

c. Only occasionally.

d. Especially Volume II, NAVCOMPT Manual.

e. Change 300, Volume III never received.

f. Several changes have not been received due to poor postal service.

2.7.2.13 Are Changes Being Received In A Timely Manner (i.e., Effective Date Of The Change vs. Actual Date Of Receipt By You)? This question applies to initial notifications as well as hard copy final changes.

Response	Number	Percent
Yes	32	41
No	46	59

Interviewee comments:

a. Big delay (5 months) between message and hard copy, e.g., tax tables.

b. Would like changes to be received sooner than 2 months after publication date of change.

c. Cost account code changes are not received timely.

TABLE 5. CHANGES TO NAVCOMPT MANUAL VOLUME II
NUMBER OF DAYS BETWEEN DATE OF PUBLICATION AND DATE OF RECEIPT BY USER

CHANGE	PUB DATE	REC DATE	DAYS	INTERVIEWEE	AVERAGE
271	04-23-80	07-02-80	70	[16]	70.0 DAYS
272	05-29-80	08-15-80	78	[16]	78.0 DAYS
276	11-26-80	01-26-81	61	[32]	
276	11-26-80	01-28-81	63	[12]	
276	11-26-80	01-30-81	65	[66]	63.0 DAYS
277	01-07-81	02-10-81	34	[30]	
277	01-07-81	02-10-81	34	[62]	
277	01-07-81	02-12-81	36	[48]	
277	01-07-81	02-17-81	41	[60]	
277	01-07-81	02-17-81	41	[64]	
277	01-07-81	02-18-81	42	[12]	
277	01-07-81	02-18-81	42	[32]	
277	01-07-81	03-30-81	82	[66]	44.0 DAYS
278	03-03-18	04-02-81	30	[62]	
278	03-03-81	04-02-81	30	[30]	
278	03-03-81	04-03-81	31	[04]	
278	03-03-81	04-15-81	43	[23]	
278	03-03-81	04-15-81	43	[64]	
278	03-03-81	04-18-81	46	[49]	
278	03-03-81	04-20-81	48	[56]	
278	03-03-81	04-21-81	49	[12]	
278	03-03-81	04-21-81	49	[50]	
278	03-03-81	04-23-81	51	[33]	
278	03-03-81	04-28-81	56	[68]	
278	03-03-81	05-04-81	62	[60]	
278	03-03-81	05-28-81	86	[53]	48.0 DAYS
279	03-26-81	04-22-81	27	[56]	
279	03-26-81	05-13-81	48	[49]	
279	03-26-81	05-15-81	50	[50]	
279	03-26-81	05-19-81	54	[07]	
279	03-26-81	05-20-81	55	[04]	
279	03-26-81	05-20-81	55	[18]	
279	03-26-81	05-20-81	55	[33]	
279	03-26-81	05-20-81	55	[48]	
279	03-26-81	05-28-81	63	[53]	
279	03-26-81	05-29-81	64	[01]	
279	03-26-81	05-30-81	65	[17]	
279	03-26-81	05-30-81	65	[54]	
279	03-26-81	05-30-81	65	[55]	
279	03-26-81	06-01-81	67	[59]	56.3 DAYS
280	04-27-81	06-24-81	58	[59]	58.0 DAYS

TABLE 6. CHANGES TO NAVCOMPT MANUAL VOLUME II, CHAPTER 5
NUMBER OF DAYS BETWEEN DATE OF PUBLICATION AND DATE OF RECEIPT BY USER

CHANGE	PUB DATE	REC DATE	DAYS	INTERVIEWEE	AVERAGE
42	02-24-81	05-26-81	91	[33]	
42	02-24-81	06-02-81	98	[40]	
42	02-24-81	06-10-81	106	[11]	98.3 DAYS
42-1	03-24-81	05-26-81	63	[33]	63.0 DAYS
	09-10-80	11-30-80	81	[68]	81.0 DAYS

TABLE 7. CHANGES TO NAVCOMPT MANUAL VOLUME III
NUMBER OF DAYS BETWEEN DATE OF PUBLICATION AND DATE OF RECEIPT BY USER

CHANGE	PUB DATE	REC DATE	DAYS	INTERVIEWEE	AVERAGE
299	09-23-80	11-12-80	50	[66]	
299	09-23-80	11-14-80	52	[70]	
299	09-23-80	11-17-80	55	[67]	52.3 DAYS
300	10-24-80	12-03-81	405	[16]	
300	10-24-80	12-15-80	52	[64]	
300	10-24-80	12-15-80	52	[66]	
300	10-24-80	12-22-80	59	[70]	142.0 DAYS
301	11-24-80	01-19-81	56	[23]	
301	11-24-80	01-19-81	56	[64]	
301	11-24-80	01-21-81	58	[12]	
301	11-24-80	01-26-81	63	[16]	
301	11-24-80	04-27-81	154	[20]	
301	11-24-80	05-31-81	97	[07]	80.7 DAYS
302	02-02-81	03-17-81	43	[12]	
302	02-02-81	03-17-81	43	[30]	
302	02-02-81	03-17-81	43	[62]	
302	02-02-81	03-24-81	50	[32]	
302	02-02-81	04-02-81	59	[57]	
302	02-03-81	04-14-81	70	[44]	51.3 DAYS
303	02-23-81	04-09-81	45	[51]	
303	02-23-81	04-16-81	52	[12]	
303	02-23-81	04-16-81	52	[30]	
303	02-23-81	04-16-81	52	[62]	
303	02-23-81	04-17-81	53	[48]	
303	02-23-81	04-20-81	56	[02]	
303	02-23-81	04-20-81	56	[33]	
303	02-23-81	04-20-81	56	[50]	
303	02-23-81	04-22-81	58	[57]	
303	02-23-81	04-27-81	63	[53]	54.3 DAYS
304	03-31-81	05-15-81	45	[51]	
304	03-31-81	05-15-81	46	[50]	
304	03-31-81	05-19-81	49	[33]	
304	03-31-81	05-20-81	50	[18]	
304	03-31-81	05-20-81	50	[48]	
304	03-31-81	05-25-81	55	[02]	
304	03-31-81	05-27-81	57	[53]	
304	03-31-81	06-01-81	62	[57]	
304	03-31-81	06-02-81	63	[05]	
304	03-31-81	06-10-81	71	[17]	
304	03-31-81	06-10-81	71	[54]	
304	03-31-81	06-10-81	71	[55]	
304	03-31-81	06-15-81	76	[59]	58.9 DAYS

TABLE 8. CHANGES TO NAVCOMPT MANUAL VOLUME IV
NUMBER OF DAYS BETWEEN DATE OF PUBLICATION AND DATE OF RECEIPT BY USER

CHANGE	PUB DATE	REC DATE	DAYS	INTERVIEWEE	AVERAGE
252	01-23-80	03-24-80	61	[08]	61.0 DAYS
255	07-24-80	10-10-80	78	[25]	78.0 DAYS
256	11-25-80	01-25-81	61	[16]	
256	11-25-80	01-26-81	62	[09]	
256	11-25-80	01-28-81	64	[06]	
256	11-25-80	01-28-81	64	[25]	62.8 DAYS
257	01-04-81	01-26-81	22	[06]	
257	01-06-81	01-31-81	25	[72]	
257	01-06-81	02-10-81	35	[09]	
257	01-06-81	02-18-81	43	[25]	
257	01-06-81	02-19-81	44	[16]	
257	01-06-81	05-07-81	121	[02]	48.3 DAYS
258	01-29-81	04-07-81	68	[08]	
258	01-29-81	04-07-81	68	[30]	
258	01-29-81	04-07-81	68	[31]	
258	01-29-81	04-08-81	69	[48]	
258	01-29-81	04-09-81	70	[33]	
258	01-29-81	04-13-81	74	[72]	
258	01-29-81	04-14-81	75	[53]	
258	01-29-81	04-14-81	75	[60]	
258	01-29-81	04-20-81	81	[02]	
258	01-29-81	08-18-81	201	[74]	84.9 DAYS
259	02-20-81	04-06-81	45	[18]	
259	02-20-81	04-07-81	46	[30]	
259	02-20-81	04-07-81	46	[31]	
259	02-20-81	04-08-81	47	[48]	
259	02-20-81	04-08-81	47	[74]	
259	02-20-81	04-09-81	48	[08]	
259	02-20-81	04-13-81	52	[53]	
259	02-20-81	04-13-81	52	[57]	
259	02-20-81	04-13-81	52	[72]	
259	02-20-81	04-14-81	53	[67]	
259	02-20-81	04-16-81	55	[59]	
259	02-20-81	04-16-81	55	[60]	
259	02-20-81	04-20-81	59	[02]	
259	02-20-81	04-20-81	59	[33]	51.1 DAYS

TABLE 9. CHANGES TO NAVCOMPT MANUAL VOLUME VII
NUMBER OF DAYS BETWEEN DATE OF PUBLICATION AND DATE OF RECEIPT BY USER

CHANGE	PUB DATE	REC DATE	DAYS	INTERVIEWEE	AVERAGE
30	10-30-78	02-09-79	102	[67]	102.0 DAYS
31	03-01-79	06-29-79	120	[67]	120.0 DAYS
33	01-22-80	02-10-81	385	[07]	385.0 DAYS
35	05-22-80	08-12-80	82	[20]	
35	05-22-80	10-09-80	140	[33]	111.0 DAYS
36	09-02-80	10-10-80	38	[53]	
36	09-02-80	10-15-80	43	[64]	
36	09-02-80	10-15-80	43	[66]	
36	09-02-80	10-21-80	49	[20]	
36	09-02-80	11-28-80	87	[33]	52.0 DAYS
37	11-25-80	01-19-81	55	[64]	
37	11-25-80	01-22-81	58	[53]	
37	11-25-80	03-15-81	110	[66]	74.3 DAYS
38	03-23-81	05-19-81	57	[40]	
38	03-23-81	06-15-81	84	[59]	70.5 DAYS

d. This has been a recurring problem over the last 6 years.

e. Two to three months delay seems excessive.

f. Should be faster than approximately 2 months average.

g. Changes to NAVCOMPT Manual Volume II, Chapter 5 have not been timely and have caused errors which could have been avoided; Volume II, Chapter 5 needed at start of fiscal year---not 2 months later.

h. Too much delay to time of publication, i.e., hear of changes in the works sometimes 6 months ahead of publication date.

2.7.2.14 Which Of The Following Types Of Changes To The Manual/Handbooks Do You Rely On As Your Basic Reference Source?

Response	Number	Percent
The "initial" types of notification, e.g., Electrical Message, NAVCOMPT Notice/Instruction/ Letter	2	3
The "Hard Copy" formal change to the Manual/ Handbooks	10	12
Both of the above, in turn, as required	66	85

Interviewee comments: None

2.7.2.15 When You Receive Changes To The NAVCOMPT Manual/Handbooks, Are You Able To Keep Them Posted On A Current Basis?

Response	Number	Percent
Yes	69	88
No	9	12

Interviewee comments regarding "No" answers:

a. Delays up to 30 days.

b. Changes are first copied and routed thru department, then entered into Manual.

c. Other work priorities take precedence.

d. Current on Volume IV; not on Volume II and Volume III.

e. May be a month or two sometimes--secretary staff volatile--"fire drills".

f. Peaks/valleys.

g. May get backlog of couple of months.

h. One copy routed to divisions not holding manual--then changes posted.

i. Low priority in making changes.

j. Peaks/valleys--delays of a week or two--"she" makes the changes.

2.7.2.16 What Is Your Rough Estimate As To The Percent Of NAVCOMPT Manual Or Handbook Changes Requiring Further Expansion Or Clarification By The Chain Of Command Or Locally?

Response	NAVCOMPT Manual		Handbooks	
	Number	Percent	Number	Percent
Less than 10%	58	74.3	37	47.4
10% to 25%	10	12.8	8	10.3
More than 25%	10	12.8	7	9.0
Not Applicable (Do not have Handbooks)			26	33.3

Interviewee comments explaining "more then 25 percent responses" were as follows:

Reason	Number
To prescribe command, or local management system requirements	5
Readability	4
Comprehensibility	13

Note: Some interviewees advised that two or more of the reasons cited above applied.

2.7.2.17 When NAVCOMPT Notices, Instructions, Or Changes To The NAVCOMPT Manual/Handbooks Arrive At Your Organization, Which Of The Following Circumstances Are Applicable?

Response	Number	Percent
Usually have reasonable time to implement and meet deadlines prescribed	47	60.3
Sometimes surprised	9	11.5
Often surprised	2	2.6

Almost always surprised and faced with an overdue compliance deadline, or it causes a "time bind" problem	7	9.0
Wish NAVCOMPT had put out some kind of advance "alert" or advice even though sketchy	23	29.5

Note: Categories are not mutually exclusive and more than one was given by some interviewees.

Interviewee comments:

a. Suggest NAVCOMPT provide an advance draft copy of NAVCOMPT Instructions and Notices in particular--also for Manual changes--even though they might be clearly marked "Subject to Change".

b. Postdate the change so we would have time to implement.

c. Notices regarding computer programs surprise sometimes--not enough time to implement.

d. Last two categories apply to fleet users as well as here at the school.

e. Adequate time not allowed for mechanized activities that require computer program changes in system.

f. Major policy changes/major issues should be preceded by advance alert by NAVCOMPT.

2.7.2.18 What Ideas Do You Have For Improving The Issuance Of Changes And Timeliness? Twenty-five of the 78 interviewees (32 percent) responded to this question. The remainder offered no suggestions. A complete unedited listing of the suggestions made by those who responded is provided in Part C of Annex E. The following suggestions, which are a part of the total list, are highlighted:

a. If (the) NAVCOMPT bulletin came out on a regularly scheduled basis and identified all changes issued including advance notices it would help tracking.

b. Would like NAVCOMPT to put out some advanced notice of pending change or issuance of new policy or guidance.

c. Tie format in Instructions/Notices to what will appear in Manual.

d. Get end-of-year material to users quicker--avoid last minute changes--provide the information to the user a month ahead.

e. Cut out middlemen (in the publication and distribution process).

f. Need a numbering system or log, so user knows what's been issued; need to reference paragraph/chapter in advance notices.

g. Notices/Instructions/Letters should have a clear "Action" paragraph to tell recipient what is wanted action-wise.

h. Use (current) state-of-the-art techniques.

i. Be timely and prepare information in a more collective, comprehensible manner.

j. Coordinate the effective data of the change with systems design agency.

k. Re: NAVCOMPT Manual Volume II, Chapter 5--put all UIC information together and put on fiche.

l. Manual changes being made should make reference to the Notice/Instruction that first announced the changes; make the changes monthly--and on time.

2.7.2.19 Rate The Overall Readability And Comprehensibility Of The NAVCOMPT Manual/Handbooks. The structured questionnaire offered a choice of three ratings for response but some interviewees requested two additional ratings. The following summary depicts all responses, by category:

Response	Readability		Comprehensibility	
	Number	Percent	Number	Percent
Superior	1	1.3	1	1.3
Excellent	13	16.7	6	7.7
Good	47	60.3	43	55.1
Fair	5	6.4	12	15.4
Poor	12	15.4	16	20.5

Selected excerpts from interviewee comments regarding readability or comprehensibility are as follows:

a. Section on expensing in Volume II or Volume III--definition is so broad, find it hard to relate to specific examples--OPN vs O&MN, etc.

b. Many Navy enlisted personnel assigned to perform clerical duties in disbursing or supply functions do not read or understand the English language very well--English is their second language---they are users of the NAVCOMPT Manual/Handbooks; the readability and comprehensibility of these publications are beyond their capabilities.

c. From a Fleet Training Center Instructor's viewpoint, the readability and comprehensibility of the Manual/Handbooks are poor--an SK3 or DK3 (enlisted personnel) cannot understand them.

d. The majority users at FAADCLANT have an 8th grade reading level--they cannot understand all of the professional accounting terminology.

e. The Manual should be completely restructured and rewritten so that subject matter could be found in one place wherever possible.

f. Normally too technical for the user at the field level.

g. NAVCOMPT Manual--daisy chain of references drives you nuts--i.e., reference A to B to C, etc.

h. It is now written at the college level and should be much simpler; sentences are too complex; the user needs to consult the dictionary to get meaning.

i. Readability/comprehensibility is "poor" for Manual Volume II and Volume IV; same for Handbook P-3013-1/2. P-1459 is rated good. P-3073 is rated excellent. P-6048 is vague and rated fair in both categories.

j. There are glaringly poor examples.

k. Manuals are poor--Handbooks are better (topical)

l. Rating of "good" applies to Manual; P-3073 reads well and is excellent except it is out of date; P-3013 is far below "poor"--just about incomprehensible--needs to be condensed and simplified completely--Example: Summary Filled Order/Expenditure Differences (SFOED) listing--whole section on how to process this is like a foreign language.

m. JTR--readability poor, comprehensibility fair--too many levels of paragraph subordination; NTI--readability good, comprehensibility excellent.

n. Cost accounts and work units Volume II--there are so many areas that don't fit--work units are vague in some cases.

o. Examples of poor readability/comprehensibility are as follows:

(1) NAVCOMPT Manual Volume III, paragraph 032511--Excise taxes on jet fuel, avgas, av lube oil; Volume II, paragraph 022072.2K(1)--NC140's issued to a NARF citing stock funds--do we adjust at year end?

(2) NAVCOMPT Manual Volume III needs more definitions; e.g., administrative charges (definition of revenue producing activities not given)--private party vs contractor--needs definitions on these and similar terms.

(3) 1080 billing and collection procedures.

(4) IDA bill paying and obligation procedures.

(5) Civilian payroll procedures.

2.7.2.20 Rate The Overall Readability And Comprehensibility Of The NAVCOMPT Instructions, Notices, and Directives. Responses, by category, are summarized as follows:

Response	Readability		Comprehensibility	
	Number	Percent	Number	Percent
Superior	1	1.3	0	-
Excellent	15	19.2	14	17.9
Good	47	60.3	47	60.3
Fair	4	5.1	7	9.0
Poor	6	7.7	5	6.4
Not Applicable	5	6.4	5	6.4

(Some interviewees do not receive these directives)

2.7.2.21 Comment On The Overall Organization Of Material, Or Point Out Instances Where The Organization Makes It Difficult to Find Information. The interviewee responses were sorted into the following categories:

a. General approval of current status.

b. Consolidation of material.

c. Comments on specific Volumes or Handbooks.

d. Miscellaneous suggestions.

e. General comments.

2.7.2.21.1 General Approval Of Current Status. Seventeen interviewees (22 percent) expressed general approval of the overall organization of material in the NAVCOMPT Manual, Handbooks, Directives, Instructions, and Notices.

2.7.2.21.2 Consolidation Of Material. There is strong support from a significant number of interviewees for consolidation of material now published in the NAVCOMPT Manual, or in other publications issued by NAVCOMPT. Selected excerpts from interviewee comments are as follows:

a. Much of the information in the Manual refers from one paragraph to another--vicious cycle of cross references--could be correlated and condensed.

b. Organize contents by subject area--eliminate chasing all over various parts of the Manual and save lots of user's time.

c. Have to go to several places in Manual to find all pertinent information on a given subject.

d. Scattered material throughout Manual on subject matter.

e. Material spread out on one subject.

f. Would be beneficial to cover subjects entirely within a chapter rather than separate chapters and referencing.

g. NAVCOMPT Manual--daisy chain of references drives you nuts--i.e., reference A to B to C, etc. Too much overlap by referring you back and forth.

h. Pull together material now scattered throughout various NAVCOMPT Manual Volumes/Handbooks.

i. PAYPERSMAN--some subjects in wrong places--too many internal cross-references.

j. JTR--flip flops back and forth without putting subject matter in basically one place.

k. JTR Volume I and Volume II too strung out; much information is repetitive.

l. Combine applicable portions (Navy/Marine) of JTR into NTI.

m. NAVSO P-3006-1---all this should be in NAVCOMPT Manual.

2.7.2.21.3 Comments On Specific Parts Of Publications. Some interviewee comments pertained to specific parts of NAVCOMPT publications. Selected excerpts from their comments are as follows:

a. JTR--Volume I, Chapter 4--scattered information and difficult to make a determination on entitlements.

b. JTR--station allowances, variable housing allowances--these are unrelated to travel--don't belong in JTR--should be separate or in PAYPERSMAN.

c. Referring to the NAVCOMPT Manual:

(1) Need better tie-in with NAVFAC requirements in Volume III, Chapter 7 for utilities reporting; Volume VII needs better tie-in with Volume III, Chapter 5.

(2) Information in Volume III, Chapter 5 and Chapter 9 should be updated and coordinated for funded and unfunded procedures.

(3) Collections are scattered between Volume III and Volume IV with some in NAVSUP Volume II--missing from NAVCOMPT.

(4) If appropriation data in Volume II could be arranged in numerical sequence first and then the subheads, uniformly, it would help--now sometimes mixed.

(5) If one took Volume VII and concentrated on making it subject comprehensive one could delete parts of Volume II and Volume III.

2.7.2.21.4 Miscellaneous Suggestions And General Comments. The suggestions and comments provided by the interviewees under these two categories are similar to those provided under preceding topics. Part D Appendix E provides the complete unedited listing of all the interviewee comments pertaining to organization of material in NAVCOMPT Manual Handbooks, and other publications.

2.7.2.22 Evaluate The Use Of Graphics In The NAVCOMPT Manual And Related Publications. Interviewee responses are summarized as follows:

Evaluation	Number	Percent
Good to Adequate	34	44
Fair to Bad	2	3
More Graphics Would be Helpful	42	54

Some interviewees commented that the graphics and forms now depicted in some of the publications are out of date; they need to be replaced with current graphics or forms. The following examples were cited:

a. Illustrations in NTI are out of date.

b. Collection voucher form has changed but graphic in Manual depicts the outdated form.

c. TYCOM/SUBCLAIMANT has been in existence for at least 12 years but they are not mentioned in text or depicted in graphics in discussing money flows or flow of requests coming up from field activities.

d. Instructor using Handbook P-3013-2 had to develop a number of supplementary illustrations for classroom use to relate to what the fleet is doing.

e. Need more graphics specifically addressing afloat procedures.

f. Illustrations depicting leave and earnings statement annotations are not accurate.

g. Need Table on AGS/SAGS/Functional and Subfunctional categories/ cost accounts.

h. Need Table listing all funding documents by Form number and title.

i. Need charts for funding of material acquisitions (plant and equipment).

j. Need charts for depreciation of plant equipment.

k. Need charts of dates for submission of various reports.

l. NAVCOMPT Form 2155--not enough columns to illustrate today's fund codes.

m. Narrative does not match illustrations--does not show proper accounting data--can't use the illustrations as a guide.

Specific comments and suggestions included the following:

a. Make cost account codes tabular instead of narrative.

b. Set up diagrams on the various aspects of labor acceleration to clarify--subject is not well explained now; also application of credits.

c. Show money flow to using activity.

d. Graphs on FIR codes, administrative/accessorial charges would be helpful.

e. NAVCOMPT Manual Volume IV should be the way it used to be--lots more forms and examples.

f. Would like more Tables/Matrices in JTR in the entitlement field (logic tables).

2.7.2.23 Is There Any Need That You See For Supplementary Material (Guides, Instructions For Use, Training, Etc.) To Improve The Usefulness Of The Manual Or The Handbooks? Responses are summarized as follows:

Answer	Number	Percent
No	45	58
Yes	33	42

Those who responded "No" were (1) satisfied as is, and (2) those who had no suggestions to offer. Comments following "yes" responses included the following:

a. Good visual guides on civilian time keeping practices and procedures are needed. Payroll is an area of tremendous turnover for less pressure, higher paying jobs--training is a big problem.

b. An explanation of content of the Manual and how to use it might be helpful.

c. "How to do it" guides would help--getting from transactions to reports.

d. User's guide would be helpful.

e. NAVCOMPT Manual is now aimed more at fiscal types but should also be written to cover program managers and financial management perspectives.

f. Visual aids of some kind would be very helpful, i.e., movies, slides, graphics. Example: Flow of funds. Use some imagination as to areas of interest to a basic recruit.

g. Training aids are needed across the board.

h. New specialized courses in financial management are needed for officers, enlisted personnel and civilians (shore community).

i. Self Training Courses might be considered (like JUMPS, NAVSO P-3545-3) for other areas such as PAYPERSMAN.

2.7.2.24 What Financial Systems Do You Operate Under? Responses of the interviewees are summarized as follows:

System	Number	Percent
O&M, N	45	58
NIF	5	6
RDT&E, N	11	14
Stock Fund	31	40
Procurement	13	17
Civilian Pay	28	36
Military Pay	12	15
Other (Includes plant property accounting; non-appropriated funds; family housing, Defense; Military pay, subsistence; wildlife; inventory accounting).	11	14

Note: Some interviewees advised they are operating under two or more systems in performing their functions.

2.7.2.25 Do You Perform Your Own Financial Accounting? Interviewee responses are summarized as follows:

	Number	Percent
Yes	35	45
No	28	36
Not Applicable	15	19

2.7.2.26 Use Of Microfiche Or Other Microform. The question asked was "Would it be advantageous, or at least not disadvantageous, to have some or all of this information (NAVCOMPT Manual and related publications) on microfiche or other microform?" A summary of interviewee responses follows:

Response	Number	Percent
In favor	14	18
Not in favor	59	76
Don't know/mixed feelings	5	6

Part E Appendix E provides a complete listing of the interviewee comments. The majority of those who commented in favor did so with qualification i.e., certain parts of the NAVCOMPT Manual might be considered as candidates for microfiche--Volume II, Chapter 5, was mentioned by five interviewees. In certain areas, prior issuances of NAVCOMPT publications must be kept for possible use. For example, disbursing offices receive late filed claims, or resubmitted claims (disputing prior payments) relating to military and civilian entitlements in matters such as housing allowances, or cost of living allowances. Such claims sometimes relate to points in time dating back one or more years. Policies and entitlements for the applicable dates must be utilized by disbursing officers in such cases to assure proper basis for payment. These "historical records", as one interviewee called them, were suggested as a candidate for microfiche.

As can be seen from the preceding statistics, and from reading all the interviewee comments, the majority of personnel interviewed feel strongly against use of microfiche or other microform as a substitute for hard copy issuance of the NAVCOMPT Manual or related publications.

2.7.2.27 Suppose The Manual Were Available As A Digital Data Base, So That Specific, Completely Up-To-Date Information Could Be Called Up On A Computer Terminal. Would You Be In Favor? Interviewee responses are summarized as follows:

Response	Number	Percent
In favor	54	71
Not in favor	20	26
Mixed feelings	2	3

Part F Appendix E provides a complete listing of the interviewee comments.

From a review of the statistics indicated above and the complete list of comments, it is clear that there is strong support and enthusiasm for establishing and operating an automated data base for selected volumes, or parts, of Manuals and Handbooks published by NAVCOMPT.

This support is based on the assumptions that NAVCOMPT would centrally establish and maintain an automated data base; that users would have on line

query access when needed; and that users would have a printer which would print in hard copy form that portion of policies/procedures needed for documentation locally if, and as, needed. Areas suggested by the interviewees as candidates for consideration by NAVCOMPT for inclusion in a centrally established and maintained automated data base included the following:

a. JTR Volume I and Volume II

b. NAVCOMPT MANUAL:

   Volume II (including Chapter 5)
   Chapter 3, Volume III
   Chapters 2, 3, 6, and 9, Volume IV

c. NAVCOMPT HANDBOOKS:

   P-3006
   P-3013

d. The DoD Personnel Manual

e. A master index/cross references covering all volumes of the NAVCOMPT Manual, Handbooks, and pertinent SECNAV/NAVCOMPT Instructions, Notices, or letters which could be accessed on a key word/subject matter basis.

2.7.3 TECHNOLOGY USED BY OTHERS TO UPDATE, STORE, RETRIEVE, AND DISSEMINATE PUBLICATIONS SIMILAR TO THE NAVCOMPT MANUAL.

2.7.3.1 Army Comptroller and Army Finance Center. EG&G contacted Mr. C. A. Olson, Deputy Director of Operations and Maintenance, Office of the Army Comptroller on 29 May 1981, to discuss automated equipment and techniques being utilized by Army Comptroller personnel to update, store, retrieve and disseminate manuals and handbooks comparable in scope and volume to the NAVCOMPT Manual and related Handbooks. Mr. Olson advised that the Army Finance Center, Indianapolis, Indiana, issues publications of this type and recommended direct contact with the Center.

Contact was made by telephone by EG&G with Mr. John W. Cooley, Deputy Director of the Army Finance Center, on 10 July 1981, and with a member of his staff (Mr. Childers) on 17 and 22 July 1981. During our discussions on these dates, EG&G was advised that the Army does not have a publication comparable to the NAVCOMPT Manual at the present time. The Army uses a series of the Army Regulations (37 Series) to publish financial management policies and procedures. However, the Army is currently considering a change to a new format which will publish financial management policy in one or more manuals and use handbooks to publish instructions, guidance, and procedures.

Army Finance Center representatives advised that they have utilized, or are currently utilizing, computer assisted automated office equipment to perform work in the following areas:

a. Storing, retrieving, and updating all the Army accounting codes. These are printed in hard copy form from a camera ready copy produced by automated equipment. The accounting codes are published in a 700-800 page document titled "Army Management Structure Code." The Army Finance Center (in Indiana) utilizes a central computer located in the Pentagon, Washington, D.C. linked to equipment located in Indianapolis. The Pentagon based computer is primarily used by various Army Headquarters staff offices in performing the entire cycle of Planning, Programming and Budgeting System (PPBS) functions. The Army Finance Center has responsibility to update, maintain, and publish the Army Management Structure Code. The automated equipment located in Indianapolis produces camera ready copy and microfiche. The Army Finance Center previously used typesetters (compositors) to prepare print ready copy.

b. Conversion of Army pay records to micrographic form, "eliminating miles and miles of files."

c. Preparing Army Regulations and converting hard copy to micrographics.

The Army Finance Center hopes to have an automated system in the future that will integrate fiscal accounting stations into a world wide accounting network.

2.7.3.2 Air Force Comptroller. EG&G contacted Mr. Joseph P. Popple, Deputy Comptroller, Department of the Air Force, on 1 June 1981, to discuss automated equipment and techniques being utilized by Air Force Comptroller personnel to update, store, retrieve, and disseminate manuals and handbooks comparable in scope and volume to the NAVCOMPT Manual and related handbooks. Mr. Popple recommended that EG&G contact the Directorate of Administration (Code: AF/DAYS), located at Bolling Air Force Base, Washington, D.C., because that office was currently conducting a research effort for Headquarters, USAF, which is pertinent to our inquiry.

EG&G personnel met with Major Joseph A. Tusinski, Bolling Air Force Base, Directorate of Administration, on 10 June 1981. During this meeting, EG&G was advised that the USAF is currently developing an automated Publication Information Processing and Printing System (PIPPS) which includes USAF directives, regulations and manuals. Personnel and budgeting are two of the many areas which are a part of this large system which presently goes down to the USAF base level. The intent of the system is to provide video display terminals (VDTs) wherever possible to reduce paperwork. The user, with his VDT, has at his fingertips access to needed documentation and messages supplied via electronic mail. In addition to these capabilities PIPPS includes production of camera ready copy demand printing, on line editing, reading comprehension level, checking of possible misspelled words and automated indexing. A formal test of this system is just beginning (i.e., November 1981).

Four USAF sites have been selected for developing and testing the prototype system. The sites are:

a. Wright-Patterson AFB - (USAF Logistics Command)

b. Keesler AFB - (Training Command Station)

c. Gunter AFB - (On the Job Training)

d. Randolph AFB - (Headquarters, Air Training Command)

Major components of the PIPPS hardware (H/W) suite are:

a. DEC PDP 11/70 computer systems (maximum number of users is 43);

b. Kurzweil text OCR devices (USAF uses OCR B type of font);

c. Photocomp 500 Photocomposer;

d. Mergenthaler Linotron 202 Phototypesetters;

e. TEKTRONIX graphics terminals for proofing documentation;

f. Camera Ready Copy (CRC) produced on 9-track magnetic tapes (Times Roman font);

g. 48 X Computer Output Microfiche (COM);

h. HONEYWELL Page Processing Systems (PPS); and

i. XEROX 9700 Demand Printers.

The system is not capable of handling half-tones but can handle tables and charts.

The operating system software (S/W) which is used with the DEC PDP 11/70 computer is Bell Laboratories UNIX which along with many other features includes on-line editing and electronic mail. The USAF has modified the editor to allow for high usage editing processes without calling in the complete UNIX editor, thus saving both on-line computer memory storage and processing time. The UNIX S/W is available to government agencies for a $10K flat fee.

The USAF has developed S/W for this system which provides capabilities such as the following:

a. Handle up to eight paragraph levels;

b. Check the reading level of documentation down to a specific area;

c. Spell feature which flags potential misspellings and their location;

d. Provide information on-line to the user; and

e. Provide automatic indexing of a document.

From the preceding discussion, one can envision a large scale system with the flexibility to handle many varied requirements. Communications for the prototype system include the use of leased AUTOVON and WATTS lines. Plans for the future include expansion in the subject areas covered and a world-wide network of users. Microwave and satellite communications will be used where applicable.

2.7.3.3 Naval Education and Training Program Development Center (NETPDC), Saufly Field, Florida. During the same period that EG&G representatives visited CNET Headquarters at Pensacola, Florida, to conduct interviews with users of NAVCOMPT FM publications, EG&G also met with Mr. Merle L. Fisher, Director of Production Services, NETPDC, at nearby Saufly Field, Florida, and discussed the publication process for items such as Navy Rate Training Manuals, Officer Text, and various other training publications. Last year, Mr. Fisher's office prepared approximately 69,000 page units for printing. This facility has the capability of doing layout work, keyboard or electronic transfer input from CPT word processors, photocomposition, proofing, and phototypesetting with the output media being camera ready copy ready for submission to the printing facility. Mr. Fisher stated that digitized typesetting equipment is far superior to other typesetting equipments. The following is a listing of equipments used by this facility and related remarks:

Equipment	Remarks
Compugraphic 7200 Headliner	Produces 35mm filmstrip
Compugraphic Editwriter 2750	Used for input; has eight fonts available
Compugraphic Editwriter 2750 II	Used for input; has communications; captures keystrokes directly from CPT word processors
QUME Printer	Fifty-five (55) characters per second (cps) speed; produces rough draft for difficult copy (galley of type); saves photopaper
Compugraphic Editwriter 7500 II	Used for input/output (I/O); produces CRC
Compugraphic Editwriter 7900	Used for I/O; produces CRC; is three times as fast as the 7500 II

2.7.4 APPLICABILITY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS DERIVED FROM THE NTIPP TO THIS NAVCOMPT EFFORT.

2.7.4.1 General. The scope and resources of the NTIPP are vastly broader than those of this NAVCOMPT research effort in terms of the variety of technical tasks being supported and in the nature of the job tasks themselves. Yet there are great similarities in the fact that timely technical information must be provided to a variety of users to support their job tasks in a

number of different environments and at many levels. This similarly suggests that it would be worthwhile for NAVCOMPT to be aware of the NTIPP developments, approaches, and solutions as its own information distribution procedures evolve. It will require years to fully implement the NTIPP concepts. Thus the principal contribution of NTIPP to NAVCOMPT will not be in solving immediate problems in expediting delivery of hardcopy updated information to current users. The applicability instead will be in planning, both for the near future and long-term, to take advantage of advancing technology to provide the user quick access to exact, updated information he needs.

The specific topics briefly summarized below, which are subjects of the NTIPP's future specifications, have been selected as being most akin to NAVCOMPT's potential concerns, and should therefore be periodically evaluated for possible applicability in NAVCOMPT's planning for the future.

2.7.4.2 Specific Areas of Applicability.

2.7.4.2.1 User-TI (Technical Information) Match. The User-TI Match involves the process of relating TI requirements to the characteristics of the users, their work environments, and the nature of their assigned job tasks. It provides detailed requirements for matching specific users' TI needs in terms of content, level of detail, format, style, and presentation medium.

The step-by-step process for performing User-TI match is shown in a series of charts and flow diagrams. In the case of the NTIPP, the result is a package of specifications for acquiring the appropriate technical documentation. In a translation of this process to meet the NAVCOMPT situation, the output would be a less formal description of the characteristics of the needed documentation tailored to the needs of specific users.

2.7.4.2.2 General Content, Style, and Format Requirements. Consideration of general content, style, and format defines the general form and structure of content to be included. Format is the organization and arrangement of the information. Style is the manner of presenting the information related to usage, spelling, punctuation, and typography. Comprehensibility standards are also included in these considerations.

The NTIPS specifications in this area are designed to contribute to the improvement of technical information in the following ways:

a. Modules are prepared which combine text and graphics to ensure optimum comprehensibility and usability.

b. Lists are provided of standard, well-known words covering both basic and specialized vocabularies (effective use of these lists assumes that the text at some point is in digital form, so checking against the lists is done by computer); standardization and simplification of vocabulary is one of the primary means of promoting comprehensibility.

c. Use of computer-controlled authoring and editing for comprehensibility, spelling, use of familiar words, and elimination of awkward sentences and phrases is emphasized.

d. Step-by-step guidelines on how to meet requirements and a clear statement of measures of effectiveness and accept-reject criteria are provided.

As an example of a point of similarity between the needs of NAVCOMPT and an issue addressed by the NTIPS, the following item deals with a technique for meeting the needs of high-level and lower-level personnel simultaneously:

"Information shall be highlighted which will enable the highly-trained or experienced user to rapidly utilize essential information. The user for which highlighted information is intended is one who has performed the procedure recently and needs only the critical information so important actions or indications are not overlooked. The following techniques may be used to highlight information.

a. Underlining

b. Boxing

c. Italics

d. Boldface type

e. Separate columns

f. Coding

g. Color

h. Flashing boxes, circles, etc.

i. Voice

Highlighting allows the experienced user to quickly scan a procedure and pick out needed information without reading the entire procedure or looking at the illustrations." (Note: Some of these techniques apply to electronic display devices.)

The above example is one of many dealing with procedural text. Many other requirements deal with descriptive or explanatory text, such as keying text to illustrations, cross-referencing, and so forth.

2.7.4.2.3 Computer-Assisted Authoring. The essence of this issue is that subject-matter experts will be guided through the process of creating necessary information content (text and/or graphics) by interactive (author-prompting) computer programs. These will provide the following types of aiding:

a. Telling the author what information (e.g., procedures) to write, via a task assignment or "routing" program which ensures no duplication of effort;

b. Allowing author access to information;

c. Asking appropriate questions to solicit the needed information (which may subsequently be used in multiple output documents);

d. Presenting pre-stored standardized data items (e.g., illustrations, boilerplate, warnings) for review and/or modification;

e. Combining newly input data with appropriate pre-stored (data base) standard data items (as in d above);

f. Enabling on-line input of text and graphics;

g. Specifying a location and size for art to be inserted at a later time;

h. Accessing on-line help or explanatory routines;

i. Editing of data on the screen as it is initially written (before the author requests the computer to accept and judge it);

j. Ensuring that input data meets all appropriate readability/comprehensibility requirements by "judging" author inputs with respect to established specifications;

k. Placing the generated text and illustration information, appropriately indentified by generic content tags, in text and/or graphics files available for later quality control evaluations, editing, and formatting into output documents;

l. Providing access to the content data files through a file of indexing records;

m. Initiating automated updating of management information (indexing records) pertaining to each content element every time it is used or output; and

n. Supporting multiple authors simultaneously.

Portions of such a computer-assisted authoring system are under development; in particular, the Navy training community has been interested in such systems. It is not known to what extent currently available programming supports the functional requirements listed above, but eventually NAVCOMPT may be able to "piggyback" onto an already developed authoring system.

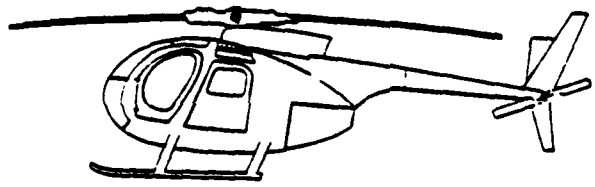
2.7.4.2.4 Numbering and Titles, Indexing, and How-to-Use-This-Document Informtion. The NTIPP work in this area does not appear to be significantly more advanced than current good practice. Standard format for headings at different levels of subordination is given. Under the topic of indexing, an idea worthy of consideration is what is referred to as "front frame index." Figure 4 is an example.

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE

OBSERVATION HELICOPTER

OH-6A



EQUIPMENT DESCRIPTION	1
TECHNICAL PRINCIPLES OF OPERATION	2
INTEGRATED SYSTEM MAINTENANCE	3
AIRFRAME AND ALIGHTING GEAR	4
POWER PLANT RELATED SYSTEMS	5
HYDRAULIC AND PNEUMATIC SYSTEMS	6
POWER TRAIN SYSTEMS	7
PROPELLERS	8
MAIN ROTOR GROUP	9
TAIL ROTOR GROUP	10
FLIGHT CONTROLS	11
INSTRUMENTS	12
UTILITY SYSTEMS	13
ELECTRICAL SYSTEMS	14
AVIONICS PHOTOGRAPHY AND ARMAMENT	15
AUXILIARY EQUIPMENT	16
APPENDICES	
CONDENSED INFORMATION	
INDEX	

Figure 4. Example of Front Frame Index

"How-to-use-this-document information" describes the document's content, format, features, use, and value to its user. Aspects of this topic covered in the following paragraphs include:

a. User prerequisites. Tells the user what he is expected to know to use the document effectively, both when he is new on the job (novice) and when he becomes experienced.

b. Document overview. Explains any unusual aspects of the document.

c. Examples of document use. Gives practice using the document to solve real-world problems and gets the user actively involved with the document.

How-to-use-this-document information is generally contained in a separate section at the beginning of a document. For very complex documents, it may be preferable to have how-to-use-this-document information at the beginning of each major division.

2.7.4.2.5 Mastering and Replication. Based upon the general NTIPS requirement that all technical data to be published be rendered into a form which is compatible with automated digital computer processing, Mastering and Replication subsystem will utilize automated techniques to process data into final TI. It is expected that much of the conversion of existing TI to a digital data base will be accomplished by OCR devices and Graphics Scanning devices.

Under the NTIPS concept, the output of the Authoring subsystem will consist of TI which is then incorporated directly into a master standardized data bank, instead of composing it into the more traditionally fully-imaged camera-ready copy. The required medium-specific mastering of the authored information is then performed automatically at a later processing stage. The electronic file itself and the associated data base management system are organized in a non-medium-specific manner. This concept will allow the same data base to be used to master information for communication to a user on any of the variety of delivery media expected to be utilized in the future. Thus, NTIPS will be able to prepare appropriate masters for a new medium or format without re-authoring the entire set of information. This architecture is expected to incorporate the emerging concept of generic coding of information which can be processed by automated publication systems.

2.7.4.2.6 Other Issues. A number of other issues, some of potential interest to NAVCOMPT, are listed as being under development, but at the time of review nothing was available in written form. The topics of potential interest to NAVCOMPT are listed for future review as the NTIPS specifications become firm.

a. Quality Assurance
b. Medium
c. TI Writer's Qualifications and Training
d. Electronic Transmission
e. Local Storage Unit
f. TI User's Handbook

2.7.5 STATE-OF-THE-ART INFORMATION PROCESSING AND DISSEMINATION TECHNOLOGY APPLICABLE TO NAVCOMPT FM PUBLICATIONS.

2.7.5.1 NAFC-232 Requirements Considered. EG&G discussions with the various vendors were based upon meeting the following current and future NAFC-232 equipment and capability requirements:

2.7.5.1.1 Current Needs.

a. OCR text processing equipments which can read applicable Navy documents and interface with word processing equipments.

b. Word processing equipments which can interface with photocomposition equipments.

c. Photocomposition equipments which can interface with phototypesetting equipments.

d. Phototypesetting equipments which can produce GPO camera ready copy consistent with NAFC-2 requirements.

2.7.5.1.2 Future Needs.

a. Systems/equipments which can read text or text and graphics from applicable Navy documents, perform text and graphics creation and updating, create photocomposed camera-ready copy and/or demand printing copy/microfiche at central/remote sites (including overseas).

b. Systems/equipments which can do everything stated in the previous paragraph and also have the following additional capabilities:

(1) Video display terminal presentation of Navy financial management information;

(2) Electronic mail;

(3) On-line documentation editing capability;

(4) Reading comprehension levels down to a specific area within a document;

(5) Potential misspelled words locator/identifier; and

(6) Automatic indexing.

2.7.5.2 OCR Devices.

2.7.5.2.1 Primary Criteria for Evaluation. The following criteria were established by EG&G to evaluate whether an Optical Character Recognition (OCR) device would satisfy NAFC-232 requirements:

a. Must be capable of reading clean "cut and pasted" typewritten or xeroxed copy in prestige type font, with a minimum skew of

3/8 character over one line and accuracy of one error in 150,000 characters.

b. Must be capable of interacting with itself (i.e., keyboard with CRT).

c. Upward hardware/software modularity to satisfy future requirements with a minimum amount of disruption (i.e., can handle digitized graphics, supply digitized information for a document data base).

d. Must have capability of interfacing with word processing equipment with minimum disruption to work flow.

e. Must be able to cost justify itself and be effective.

f. Equipment must be highly reliable with minimum downtime and shall be serviced within a minimum time period.

g. No special environmental or electrical requirements applicable, i.e., excessive power, air conditioning, or ventilation requirements.

2.7.5.2.2 Evaluation of Equipment Capabilities - Selected Vendors. Based on the primary criteria outlined in the preceding subparagraph, EG&G evaluated the equipment capabilities of the selected vendors. Table 10 presents the capabilities evaluation.

2.7.5.2.3 Price/Performance Score Derivation. Relative performance rankings and weighting factors were assigned by EG&G for each OCR requirement category. Table 11 presents this data.

2.7.5.2.4 Capabilities Evaluation Summary. Based upon the EG&G assigned price/performance factors, a price/performance score was developed for each selected OCR device. Under this system, the maximum theoretical price/performance score which could be attained is 175. Table 12 depicts the price/performance scores attained.

2.7.5.3 Word Processing Equipment.

2.7.5.3.1 Primary Criteria for Evaluation. The following criteria were established by EG&G to evaluate whether a word processor would satisfy NAFC-232 requirements:

a. Must have keyboard with CRT and be able to accept as input and store as output on flexible disk media.

b. System must be standalone with communications capability.

c. Must have sufficient on-line storage (minimum 50 pages of text or approximately 125,000 characters storage) with buffered memory (minimum 8,000 characters storage).

d. Must be capable of horizontal, vertical, and page scrolling up/down.

TABLE 10. CAPABILITIES EVALUATION OF SELECTED VENDORS OPTICAL CHARACTER RECOGNITION DEVICES

Vendor	Model	Readable Fonts	Accuracy Skew	Self Interacting	Word Proc Interface	Upward Modularity	Reliability	Environmental	Basic Purchase Price	Monthly Service	Monthly Rental	Monthly Lease	Installation Training Support
Burroughs[1]	Series 1240 (text only)	Y	N(A)	Y(Min)	Y	Y	Y	OK	20,900				
Compuscan	Alphaword III (text)	Y	Y(Max)	Y	Y(Max)	Y	Y	OK	29,500	238		1067(3S)	425
Dest Data	System 3 (w/CRT and text)	Y(Min)	Y	Y(Max)	Y(Max)	Y	Y	OK	31,900		1700(S)	1360(3S)	500
AM ECRM	Concept 3 (w/CRT and text)	Y	Y	Y	Y	Y	Y	OK	25,900		1296		
Hendrix	IR3 (w/CRT and text)	Y(Max)	Y	Y	Y	Y(Max)	Y	OK	22,400	150	1092		705
Kurzweil	KDEM (text)	Y(Max+) to 25	Y(Max+)	Y(Max)	Y(Min)	Y	Y	OK	89,800 (Multi fonts)	1,150		4300(3S)	N/C

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A - Accuracy Failure
OK/Y - Satisfies requirement
N - Does not satisfy requirement
Min - Satisfies requirement to minimum extent
Max - Satisfies requirement to maximum extent
Max+ - Satisfied requirement in a superior manner

(S) - Includes Service
(3S) - Lease Period, Includes Service

[1] Includes 1 Font Type and 1 Interface.

Note: All pricing information is as of August 1981.

TABLE 11. PRICE/PERFORMANCE SCORE DERIVATION
OPTICAL CHARACTER RECOGNITION DEVICES

Requirement Category	Performance Relative Ranging	Requirement Weighting Factors	Subcategory Weighting Factors	Subcategory Weighting Factors Purchase Price
Readable Fonts	1	7	Y/OK-3	OK-20K =5
Accuracy/Skew	2	6	Max+-5	21K-40K =4
Self Interacting	3	5	Max-4	41K-60K =3
Word Processing Interface	4	4	Min-2	61K-80K =2
			N-0	81K-100K=1
Upward Modularity	5	3		
Reliability	3	5		
Environmental	7	1		
Purchase Price		4		

Total Score = Sum of Subcategory Weighting Factor x Requirement Weighting Factor.

TABLE 12. CAPABILITIES EVALUATION SUMMARY
OPTICAL CHARACTER RECOGNITION DEVICES

Vendor	Model	Price/Performance Score[1]
Burroughs	Series 1240	Does Not Meet Accuracy Requirements
Compuscan	Alphaword III	119
Dest Data	System 3	111
AM ECRM	Concept 3	109
Hendrix	TR3	119
Kurzweil	KDEM	127

[1] Based on weighted factors of all performance characteristics and purchase price to depict degree of compliance with requirements.

e. Must have stored format recall and display with the format and capable of being displayed with text.

f. Must have full editing capabilities (i.e., block, move, copy, global search and replace, full cursor positioning, underlining, decimal alignment, automatic carrier return . . .)

g. The hardware/software system must be upwardly modular and easily upgradable to satisfy future requirements, i.e., OCR/scanning interfacing, direct interfacing to photocomposition/phototypesetting equipment.

h. Equipment must be highly reliable with minimum downtime and shall be serviced within a minimal time period.

i. No special environmental requirements applicable (i.e., excessive power, air conditioning, or ventilation requirements).

2.7.5.3.2 Evaluation of Equipment Capabilities - Selected Vendors. Based on the primary criteria outlined in the preceding subparagraph, EG&G evaluated the equipment capabilities of the selected vendors. Table 13 presents the capabilities evaluation.

2.7.5.3.3 Price/Performance Score Derivation. Relative performance rankings and weighting factors were assigned by EG&G for each word processor requirement category. Table 14 presents this data.

2.7.5.3.4 Capabilities Evaluation Summary. Based upon the EG&G assigned price/performance factors, a price/performance score was developed for word processing equipment. Under this system, the maximum theoretical price/performance score which could be attained is 198. Table 15 depicts the price/performance scores attained. Equipments which did not meet one or more of the primary capabilities criteria were not scored. The table indicates which capabilities were not met.

TABLE 13. CAPABILITIES EVALUATION OF SELECTED VENDORS WORD PROCESSING EQUIPMENT

Vendor	Model	KYBD/CRT Flex Disk	Standalone Communications	On-Line Storage	Scrolling	Format Recall	Editing Capab	Reliability	Environmental	Upgradable	Basic Purchase Price	Monthly Service	Monthly Rental	Monthly Lease
AM International	AM Text 425	Y	Y	Y	Y	Y	Y (MAX)	Y	Y	Y	$14,800	75	575	
	3500	Y	Y	Y	Y	Y	Y	Y	Y	Y	10,200	92	568	
	3100	Y	N	Y	Y	Y	Y	Y	Y	Y	21,000			
CPT	8000	Y	Y	Y	Y	Y	Y (MAX)	Y	Y	Y	13,000	55	400	
DEC	WS78	Y	Y	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	8,000	92	450	
A B Dick	Magna 5t	Y	N	Y	N	Y	Y	Y	Y	Y	13,900			
IBM	6/420	Y	Y	Y	N	Y	N	Y	Y	Y	7,050			
	6/430	Y	Y	Y	N	Y	N	Y	Y	Y	8,770			
	6/440	Y	Y	Y	N	Y	N	Y	Y	Y	19,200			
	6/442	Y	Y	Y	N	Y	N	Y	Y	Y	12,900			
	6/450	Y	Y	Y	N	Y	N	Y	Y	Y	21,600			
	6/452	Y	Y	Y	N	Y	N	Y	Y	Y	15,500			
Lanier	No Problem	Y	Y	N	N	N	Y	Y	Y	Y	12,000			
Lexitron	1101	N	N	Y	Y	Y	N	Y	Y	Y	9,995			
	1102	N	Y	Y	Y	Y	Y	Y	Y	Y	10,500			
	1201	Y	N	Y (MAX)	Y	Y	N	Y	Y	Y	11,000			
	1202	Y	Y	Y (MAX)	Y	Y	Y	Y	Y	Y	11,500	65	690	460
	1303	Y	Y	Y (MAX)	Y	Y	Y (MAX)	Y	Y	Y	15,500			
Micom	2000	Y	Y	Y	Y	Y	Y (MAX)	Y	Y	Y	13,500	83		485
NBI	System 3000	Y	Y	Y	Y	Y	Y (MAX)	Y	Y	Y	13,900	80	572	485
Radio Shack	TRS-80 II	Y	Y	Y	Y (MIN)	Y	Y (MIN)	Y	Y	Y	6,500			300
Wang	System 5, Model I	Y	Y	Y	Y (MAX)	Y	N	Y	Y	Y	7,200			
	System 5, Model II	Y	Y	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	9,400	70	446	
	System 5, Model III	Y	Y	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	11,500	70	521	
	System 25, Model I	Y	N	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	18,100			
	System 25, Model II	Y	N	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	21,100			
	System 25, Model III	Y	N	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	22,600			
	OIS 125	Y	N	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	29,900			
Xerox	800 Dual Card	N	N	N	N	N	N	Y	Y	Y	3,800			
	800 Dual Tape	N	N	N	N	N	N	Y	Y	Y	5,000			
	850 Page Display	Y	Y	Y	Y (MAX)	Y	Y (MAX)	Y	Y	Y	15,000	99	625	560

Y Satisfies requirement

N Does not satisfy requirement

MIN Satisfies requirement to minimum extent

MAX Satisfies requirement to maximum extent

Note: All pricing information is as of August 1981

TABLE 14. PRICE/PERFORMANCE SCORE DERIVATION
WORD PROCESSING EQUIPMENT

Requirement Category	Performance Relative Ranking	Requirement Weighting Factor	Subcategory Weighting Factors	Subcategory Weighting Purchase Price
Keyboard/CRT, w/Flexible Disk	1	8		5K- 6K = 11
Standalone w/Communications	1	8	Y-3	6K- 7K = 10
On-Line Storage	5	4	Max-4	7K- 8K = 9
Scrolling	3	6	Min-2	8K- 9K = 8
Format Recalling	4	5	N-0	9K-10K = 7
Editing Capabilities	2	7		10K-11K = 6
Reliability	6	3		11K-12K = 5
Environmental	8	1		12K-13K = 4
Upgradable	7	2		13K-14K = 3
Purchase Price		2		14K-15K = 2
				15K-16K = 1

Total Score = Sum of Subcategory Weighting Factor x Requirement Weighting Factor.

TABLE 15. CAPABILITIES EVALUATION SUMMARY
WORD PROCESSING EQUIPMENT

Vendor	Model	Price/ Performance Score	Remarks
AM International	AM Text 425	140	
	J500	141	
	J100		Does not meet Standalone Communications Requirements
CPT	8000	142	
DEC	WS78	160	
A B Dick	Magna SL		Does not meet Standalone Communications or Scrolling Requirements
IBM	6/420		Does not meet Scrolling or Editing Capabilities Requirements
	6/430		"
	6/440		"
	6/442		"
	6/450		"
	6/452		"
Lanier	No Problem		Does not meet on-line Storage, Scrolling, or Format Recall Requirements
Lexitron	1101		Does not meet Keyboard/CRT Flexible Diskette, Standalone Communications or Editing Capabilities Requirements
	1102		Does not meet Keyboard/CRT Flexible Diskette Requirements
	1201		Does not meet Standalone Communications Requirements
	1202	143	
	1303	145	
Micom	2000	148	
NBI	System 3000	148	
Radio Shack	TRS-80 II	136	
Wang	System 5, Model I		Does not meet Editing Capabilities Requirements
	System 5, Model II	156	
	System 5, Model III	152	
	System 25, Model I		Does not meet Standalone Communications Requirements
	System 25, Model II		"
	System 25, Model III		"
	OIS 125		"
Xerox	800 Dual Card		Meets only Reliability, Environmental and Upgraded Requirements
	800 Dual Tape		
	850 Page Display	146	

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2.7.5.4 Photocomposotion and Phototypesetting Equipment.

2.7.5.4.1 Primary Criteria for Evaluation. The following criteria were established by EG&G to evaluate whether photocomposition and phototypesetting equipment would satisfy NAFC-232 requirements:

- Must be capable of interfacing with word processor(s) either on-line or through flexible storage media.
- Must have stored formatting capability and internal storage accessibility.
- Must have capability of self interfacing with composition edit font mixing, formatting features of the equipment (i.e., w/ keyboard or CRT/keyboard).
- Must be capable of composing or accepting composed pages of typesetting all NAVCOMPT type font requirements (i.e., 8, 10, and 12 point Press Roman type, 10, 12, 14, 16, 18, and 36 point Futura Semibold type).
- Must be capable of setting a page size of 38 picas overall width, 57 picas deep, two 18 pica columns per page with 2 pica gutter per Specifications for Preparation of Camera Ready Copy.
- Must include full typesetting/composition supporting features (i.e., leading/reverse leading capability, point, font style, and head position mixing on same page, indenting and tabbing features per specifications).
- Capabilities of hyphenation, justification, margin settings and quadding must be included.
- Must be capable of editing composed copy, i.e., move, copy, merge, and assemble block of text, search/delete/insert capabilities, and full cursor positioning.
- Must have capability to provide properly composed camera ready copy to GPO.
- Highest quality typesetting in terms of resolution, character fit and alignment with capability for digitized imaging techniques.
- System hardware/software must be upwardly modular and easily upgradable to satisfy future requirements of NAVCOMPT (i.e., eventual digitization of graphics and information for data base inquiry).
- Equipment must be highly reliable with minimum downtime and shall be serviced within a minimal time period.

- No special environmental or electrical requirements applicable (i.e., excessive power, air conditioning, or ventilation requirements).
- V 16-52 Caps for Introductions, Volume, Chapter, and Appendix Titles.
- V 12-52 Parts of Introductions, Paragraph captions, Volume No./ Chapter No. and Title, Appendix and letter designator.
- V 24-52 for Chapter Numbers in Contents pages, V 30-52 for "Contents" on Content page.
- V 14-52 for Chapter and Title on Chapter contents page, and Roman Numerals for part, letter and title.
- 10 point Press Roman type for text.
- 10 point Press Roman Boldface type for paragraph headings, running heads, illustration captions and page numbers.
- Other headings in either 10, 12, 14, 16, 18, and 36 point Futura Semibold with future use of 14 and 16 point Futura Semibold only for larger type.
- Changed pages for same page numbers followed by -1, -2, -3, etc., corresponding to the number of pages changed.
- Right margin should be exactly even, flush.
- Same size reproduction, two columns/page 38 picas overall, 2 pica gutter.
- Column length equalization.
- Tables and illustrations 3/4 point ruled or unruled in 10 point and 12 point Press Roman Medium, within one column or full page width with tables centered left to right. Illustrations at top or bottom of page.
- Superior figures for footnote reference numbers set in mathematical type with footnotes in 8 point and 10 point Press Roman Medium.
- Numbering systems for Volumes, Chapters, Subsections - Arabic, Parts - Capital Letters, Sections - Roman, Paragraphs - Alphanumeric.

2.7.5.4.2 Evaluation of Equipment Capabilities - Selected Vendors. Based on the primary criteria outlined in the preceding subparagraph, EG&G evaluated the equipment capabilities of the selected vendors. Table 16 presents the capablities evaluation.

TABLE 16. CAPABILITIES EVALUATION OF SELECTED VENDORS PHOTOCOMPOSITION/PHOTOTYPESETTING EQUIPMENT

Vendor	Equipment Model No	Equipment Type[1]	Digitized Imaging	WP Interface	Support NAVCOMPT Font/Page Rqrts	Composition Features	Justification Features	Editing Capabilities	Camera Ready Copy	Reliability	Environmental Rqrts	Basic Purchase Price	Monthly Service	Monthly Rental	Monthly Lease
AM Varityper[3]	C/E 5310	PC/PT	N	Y	Y	Y	Y	Y (Min)	Y	Y	OK	21,356			
AM Varityper[3]	C/E 5410	PC/PT	N	Y	Y	Y	Y	Y (Min)	Y	Y	OK	23,356			
Compugraphics	MLS	PC/PT	Y	Y (Max)	Y	Y	Y	Y (Max)	Y (Max)	Y	OK	53,184	410	2,590[2] (1 yr)	1,505 (5 yr)
Compugraphics	QUADEX	PC/PT	Y	Y (Max)	Y	Y (Max)	Y (Max)	Y (Max)	Y (Max)	Y	OK	103,090	800	5,180[2]	3,010 (5 yr)
Compugraphics[3]	7500	PC	N	Y	Y	N	Y (Min)	Y (Min)	Y (Min)	Y	OK	16,750			
Compugraphics[3]	7700	PC	N	Y	Y	Y	Y (Min)	Y	Y	Y	OK	18,850			
Compugraphics[3]	7770	PC	N	Y	Y	Y	Y (Min)	Y	Y	Y	OK	22,000			
Compugraphics	8400	PT	Y	Y	Y	N/A	N/A	N/A	Y	Y	OK	29,549	243	1,661[2] (1 yr)	836 (5 yr)
Compugraphics	8600	PT	Y	Y	Y	N/A	N/A	N/A	Y (Max)	Y	OK	52,399	410	2,549[2]	1,483 (5 yr)
Mergenthaler	LINOTRON 202	PT	Y	N	Y	Y	Y	N/A	Y	Y	OK	49,500	495	2,892	1,042 (5 yr)
Mergenthaler	OMNITECH 2100	PC/PT	Y	Y (Max)	Y	Y	Y	Y (Max)	Y (Max)	Y	OK	32,000	320	1,825	1,119
Mergenthaler[3]	LINOTERM	PT	N	N	Y	Y	Y	N/A	Y	Y	OK	15,000			
Itek	MARK VIII	PT	Y	Y (Min)	Y	Y	Y	Y (Min)	Y	Y	OK	49,900			
Itek[3]	QUADRITEK 1201	PC/PT	N	Y	Y	Y	Y	Y (Min)	Y	Y	OK	21,070			
Alphatype	FOTIS III	PC	Y	Y	Y	Y	Y	Y (Max)	N/A	Y	OK	16,000	75	850[2]	448 (5 yr)
Alphatype	MULTISET III	PC	Y	Y	Y	Y	Y	Y	N/A	Y	OK	65,900	292	3,295[2]	1,779 (5 yr)
Alphatype	CRS	PT	Y	N	Y	Y	Y	N/A	Y (Max)	Y	OK	30,410	200	1,521[2]	851 (5 yr)

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N - Does not satisfy requirements
Min - Satisfies requirements, to minimum extent
Max - Satisfies requirements, to maximum extent
OK/Y - Satisfies requirements
N/A - Does not apply to this requirement

[1] PC/PT - Standalone Integrated Photocomposition/Phototypesetting System
PC - Standalone Photocomposer
PT - Standalone Phototypesetter

[2] Includes Service

[3] Does not meet performance requirements

Note. All pricing information is as of August 1981

2.7.5.4.3 Price/Performance Score Derivation. Relative performance rankings and weighting factors were assigned by EG&G for each word processor requirement category. Table 17 presents this data.

2.7.5.4.4 Capabilities Evaluation Summary. Based upon the EG&G assigned price/performance factors, a price/performance score was developed for photocomposition and phototypesetting equipment. Under this system, the maximum theoretical price/performance score which could be attained is 152. Table 18 depicts the price/performance scores attained. Equipments which did not meet one or more of the primary capabilities criteria were not scored. The table indicates which capabilities were not met.

2.7.5.5 Integrated Publishing Systems.

2.7.5.5.1 Primary Criteria for Evaluation. The following criteria were established by EG&G to evaluate which integrated publishing systems would satisfy NAFC-232 requirements:

a. Must be capable of meeting Primary Criteria (previously stated) as applicable to:

   (1) Optical character recognition devices

   (2) Word processing

   (3) Photocomposition and phototypesetting equipment

b. In addition, the systems must have:

   (1) Capability to scan and store in a format suitable to the publishing system, both text and graphics from current NAVCOMPT publications using OCR equipment.

   (2) Capability to update/create text and graphics from a computer terminal keyboard.

   (3) Capability to create text and graphics on a single page 8.5" x 11" paper using multiple character sets.

   (4) Capability to print on both sides of a single page 8.5" x 11" paper using multiple characters sets.

   (5) Capability to create print image magnetic tapes for printed output and COM at a central site.

   (6) Capability to electronically transfer print image data to or to accept print image magnetic tapes at a remote site for printing by a demand printing system and COM.

2.7.5.5.2 Evaluation of Equipment Capability - Selected Vendors. Based on the primary criteria outlined in the preceding subparagraph, EG&G evaluated the equipment capabilities of the selected vendors. Table 19 presents the capabilities evaluation.

TABLE 17. PRICE/PERFORMANCE SCORE DERIVATION
PHOTOCOMPOSITION/PHOTOTYPESETTING

Requirement Category	Performance Relative Ranking	Requirement Weighting Factors	Subcategory Weighting Factors	Purchase Price Factors
Digitized Imaging	2	6	OK/Y - 3	OK-$20K-5
WP Interface	9	1	N - 0	21K-40K -4
Support NAVCOMPT Requirements	1	7	Min - 2	41K-60K -3
Composition	5	3	Max - 4	61K-80K -2
Justification	6	3	OPT - 1	81K-100K-1
Editing	7	2	N/A - N/A	>100K -0
Camera Ready Copy	3	5		
Reliability	4	4		
Environmental	8	2		
Purchase Price	-	4		

Example

Total Score for Compugraphics MCS = Sum of Subcategory Weighting Factor x Requirement Weighting Factor

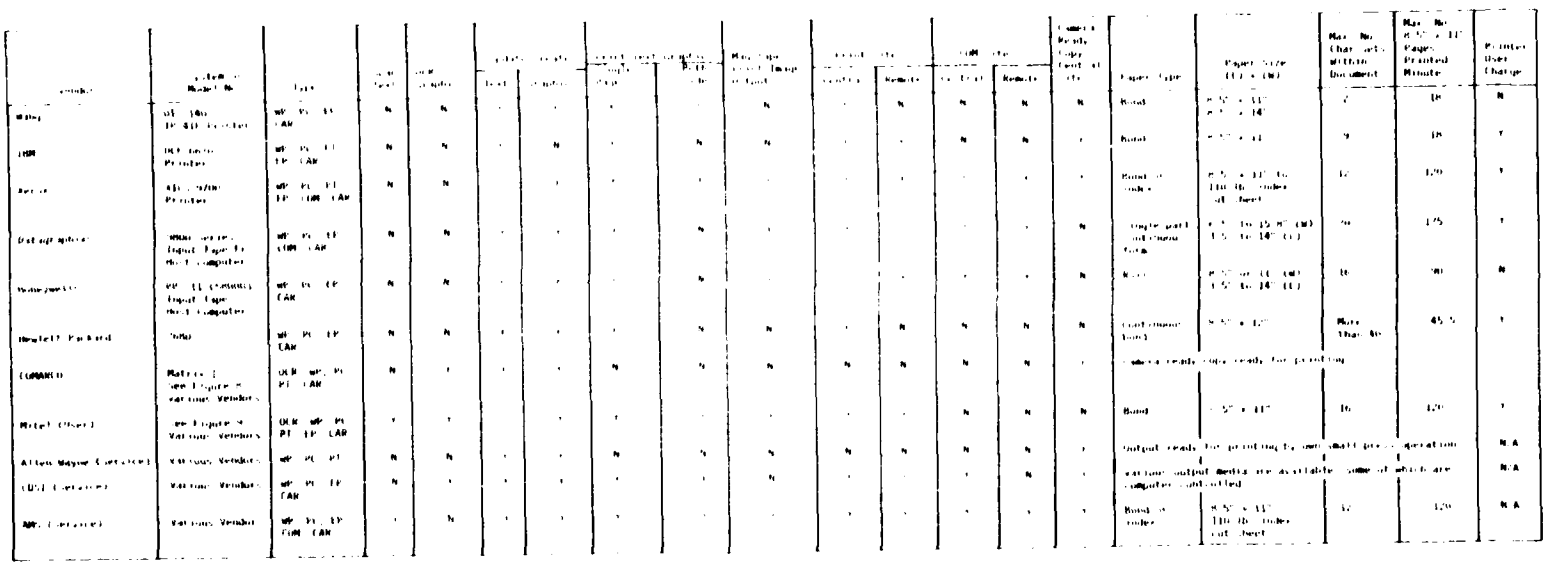
IMAGING	WP	NAVCOMP	COMP.	JUST.	EDIT	COPY	RELIAB.	ENVIRON.	PRICE	
(3 x 6)	+ (4 x 1)	+ (3 x 7)	+ (3 x 3)	+ (3 x 3)	+ (4 x 2)	+ (4 x 5)	+ (4 x 4)	+ (3 x 2)	+ (3 x 4)	= 119

TABLE 18. CAPABILITIES EVALUATION SUMMARY
PHOTOCOMPOSITION/PHOTOTYPESETTING EQUIPMENT

Equipment Group	Vendor	Model	Price/ Performance Score[1]	Remarks
PC/PT Equipment	AM Varityper	C/E 5310		Does Not Meet Digitized Imaging Requirements
	AM Varityper	C/E 5410		Does Not Meet Digitized Imaging Requirements
	Compugraphics	MCS	119	
	Compugraphics	Quadex	121	
	Mergenthaler	Omnitech 2100	123	
	Itek	Quadritek		Does Not Meet Digitized Imaging Requirements
PC Equipment	Compugraphics	7500		Does Not Meet Digitized Imaging and Composition Requirements
	Compugraphics	7700		Does Not Meet Digitized Imaging Requirements
	Compugraphics	7770		Does Not Meet Digitized Imaging Requirements
	Alphatype	FDTS III	106	
	Alphatype	Multiset III	96	
PT Equipment	Compugraphics	8400	91	
	Compugraphics	8600	92	
	Mergenthaler	Linotron 202	84	
	Mergenthaler	Linoterm		Does Not Meet Digitized Imaging Requirements
	Itek	Mark VIII	90	
	Alphatype	CRS	93	

[1] Derivation of Price/Performance Score is based on weighted factors of all performance characteristics and purchase price, to depict degree of compliance with requirements.

TABLE 19. CAPABILITIES EVALUATION OF SELECTED VENDORS INTEGRATED PUBLISHING SYSTEMS



Vendor	System or Model No.	Type	Can Text	OCR Graphics	Update Text	Update Graphics	Print Text Graphics Single Page	Print Text Graphics Multiple	Max Size Input Image	Print Site Central	Print Site Remote	COM Site Central	COM Site Remote	Camera Ready Copy Central Site	Paper Type	Paper Size (L) x (W)	Max No Char Sets Within Document	Max No 8.5" x 11" Pages Printed Minute	Printer User Charge
Wang	OI 140 IP 410 Printer	WP PC EP CAR	N	N	*	*	*	*	N	*	N	N	N	N	Bond	8.5" x 11" 8.5" x 14"	2	18	N
IBM	DCF 6670 Printer	WP PC PT EP CAR	N	N	*	N	*	N	N	*	*	N	N	*	Bond	8.5" x 11	9	18	Y
Xerox	4[illegible] 9700 Printer	WP PC PT EP COM CAR	N	N		*	*	*			*	*	*	*	Bond or index	8.5" x 11" to 110 lb. index cut sheet	12	120	Y
Datagraphix	9800 Series Input Tape Fr Host Computer	WP PC EP COM CAR	N	N	*	*	*	N	*	*		*	*	N	Single part continuous form	4.5" to 15.8" (W) 3.5" to 14" (L)	20	175	Y
Honeywell	PP 11 (9800) Input Tape Host Computer	WP PC EP CAR	N	N	*	*	*	N	*	*	*	*	*	N	Roll	8.5" or 11" (W) 3.5" to 14" (L)	16	90	N
Hewlett Packard	7680	WP PC EP CAR	N	N	*	*	*	N	N	*	N	N	N	N	Continuous bond	8.5" x 12"	More than 40	45.5	Y
COMARCO	Matrix I See Figure 8 Various Vendors	OCR WP PC PT CAR	N	*	*	*	N	N	N	N	N	N	N	*	Camera ready copy ready for printing				
Mitel (User)	See Figure 9 Various Vendors	OCR WP PC PT EP CAR	*	*		*	*	*	*	*	*	N	N	N	Bond	8.5" x 11"	16	120	Y
Allen Wayne (Service)	Various Vendors	WP PC PT	N	N	*	*	N	N	N	N	N	N	N	*	Output ready for printing by own small press operation				N/A
CDSI (Service)	Various Vendors	WP PC EP CAR	N	*	*	*	*	*	N	*	*	*	N	*	Various output media are available some of which are computer controlled				N/A
AMS (Service)	Various Vendors	WP PC EP COM CAR	*	N	*	*	*	*		*	*	*	*	*	Bond or index	8.5" x 11" 110 lb. index cut sheet	12	120	N/A

N No
* Yes
PC Photocomposition
PT Phototypesetting
WP Word Processing
OCR Optical Character Recognition Scanning
COM Computer Output Microfilm
EP Electronic Publishing
CAR Computer Assisted Retrieval
N/A Not Applicable Service organization

* Text only, prints transparencies and copies graphics when used as a convenience copier
* Include host computer capabilities when applicable
* Near future plans include Kurzweil IBM text scanner eventually plan on using [illegible]

2.7.5.5.3 Price/Performance Score Derivation. Relative performance rankings and weighting factors were not assigned by EG&G due to the different types of equipments each vendor uses in a system.

2.7.5.5.4 Capabilities Evaluation Summary. Table 20 depicts a capabilities evaluation summary for integrated publishing systems based upon the established primary criteria.

Integrated publishing systems which adequately satisfied the primary criteria are depicted in Figures 5, 6, 7, 8, 9, and 10.

TABLE 20. CAPABILITIES EVALUATION SUMMARY
INTEGRATED PUBLISHING SYSTEMS

Vendor	System or Model No.	Type	Performance	Estimated Basic Purchase Cost
Wang	OIS 140/ 1P41F Printer	WP, PC, EP, CAR	Does Not Meet Character Set Requirements	Excluded
IBM	DCF/6670 Printer	WP, PC, PT, EP, CAR	Does Not Meet Graphics Processing Requirements	Excluded
Xerox	XICS/9700 Printer	WP, PC, PT, EP, COM, CAR	Requires Graphics Keyboard Input Can Print Both Sides Sheet of Paper	563K
Datagraphix	9800 Series/ Input Tape From Host Computer	WP, PC, EP, COM, CAR	Requires Graphics Keyboard Input No Camera Ready Copy, Uses Roll Paper	413K
Honeywell	PPS II S8000/ Input Tape From Host Computer	WP, PC, EP, CAR	Requires Graphics Keyboard Input No Camera Ready Copy	273K
Hewlett Packard	2680	WP, PC, EP, CAR	Requires Grahics Keyboard Input No COM, Camera Ready Copy, or Remote Site Printing	212K
COMARCO	Matrix 1	OCR, WP, PC PT, CAR	No COM Requires Printing Facility	245K
Mitel (User)	Various Vendors	OCR, WP, PC PT, EP, CAR	No COM or Camera Ready Copy	634K
Allen Wayne (Service)	Various Vendors	WP, PC, PT	Requires Printing Facility Accountability & Control Problems	N/A
CDSI (Service)	Various Vendors	WP, PC, EP, CAR	No Camera Ready Copy Accountability & Control Problems	N/A
AMS (Service)	Various Vendors	WP, PC, EP, COM, CAR	No Camera Ready Copy Accountability & Control Problems	N/A

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PC - Photocomposition
PT - Phototypesetting
WP - Word Processing
OCR - Optical Character Recognition/Scanning
COM - Computer Output Microfilm
EP - Electronic Publishing
CAR - Computer Assisted Retrieval
N/A - Not Applicable

Note: All pricing information is as of September 1981.

[1] Excludes Microfiche Processor, Burster, Trimmer and Stacker.

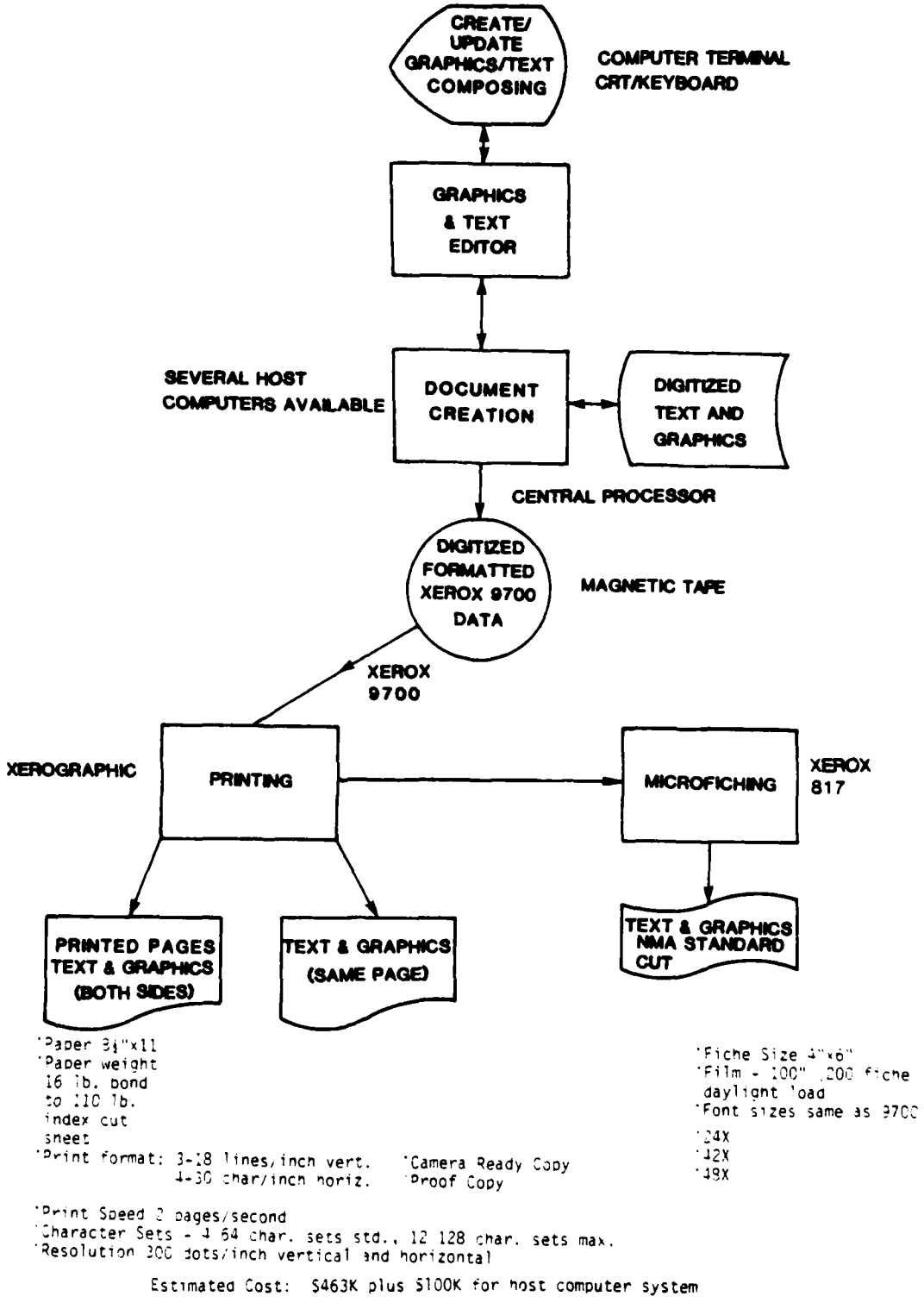
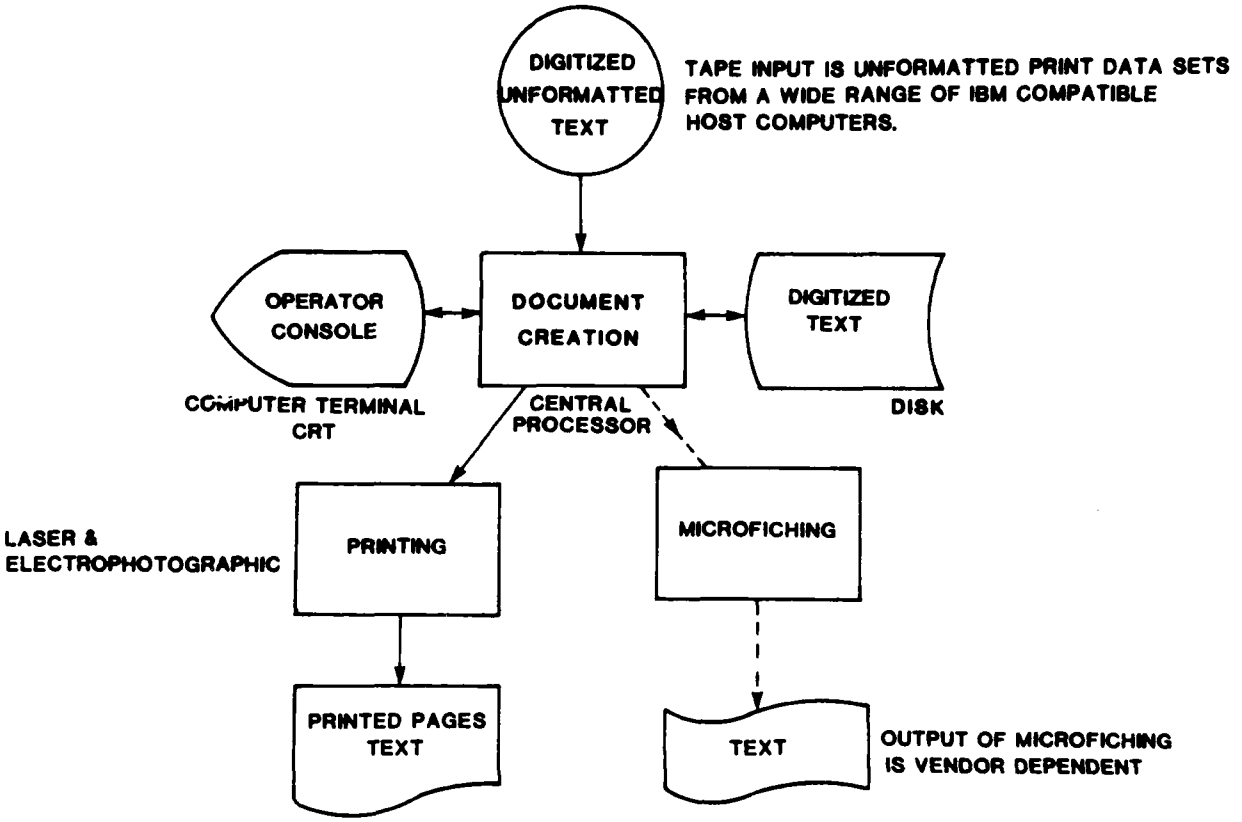


Figure 5. Xerox Integrated Composition System

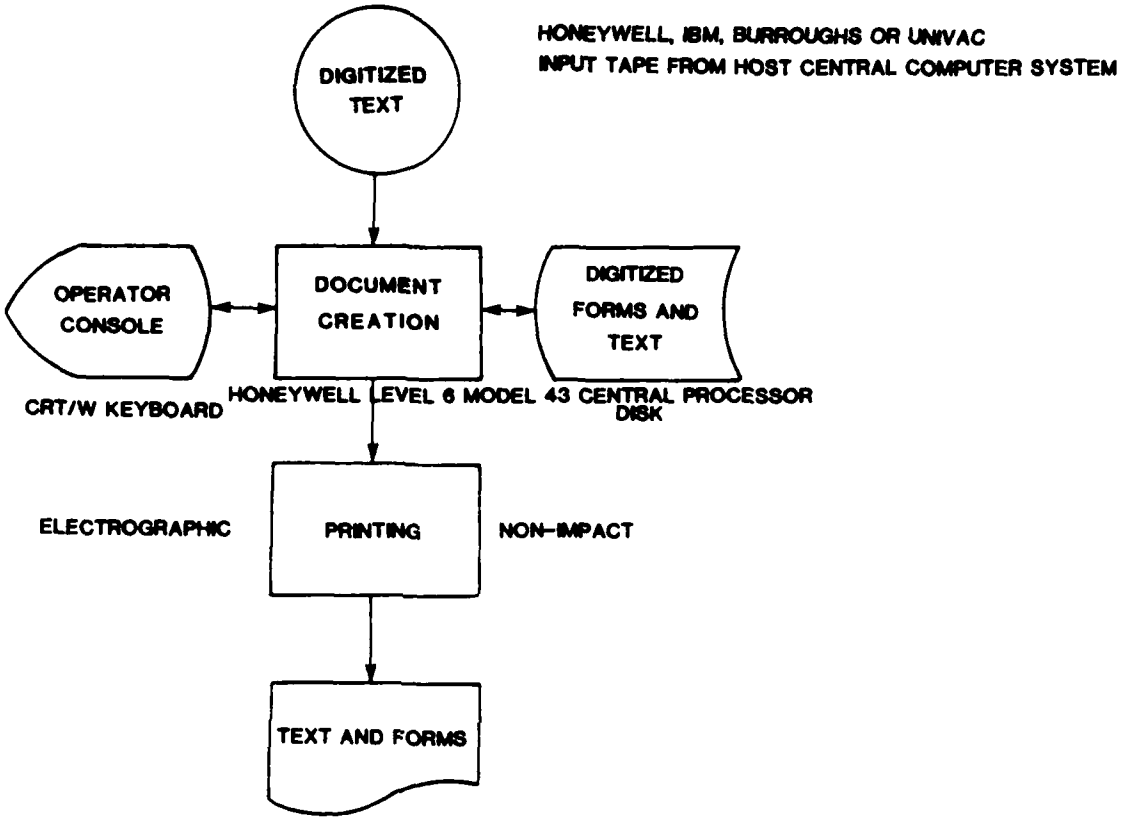


- Up to 21K LPM
- 6,8 or 12 lines/inch (can be mixed on page)
- 10,12 or 15 char./inch
- 20 std. char. fonts (max. of 4/line or page)
- 255 copies @ page printed and collated/run max.
- Paper single part continuous form
- Paper width 6.5" to 15.8"
- Paper length 3.5" to 14"
- Paper weight 18 to 27 lbs.
- Print resolution: 180 dots/inch vertical
  144 dots/inch horizontal

Estimated Cost: $313K purchase + estimated $100K for host computer system.

Major items not included in purchase cost are a burster, trimmer, stacker and microfiche processor.

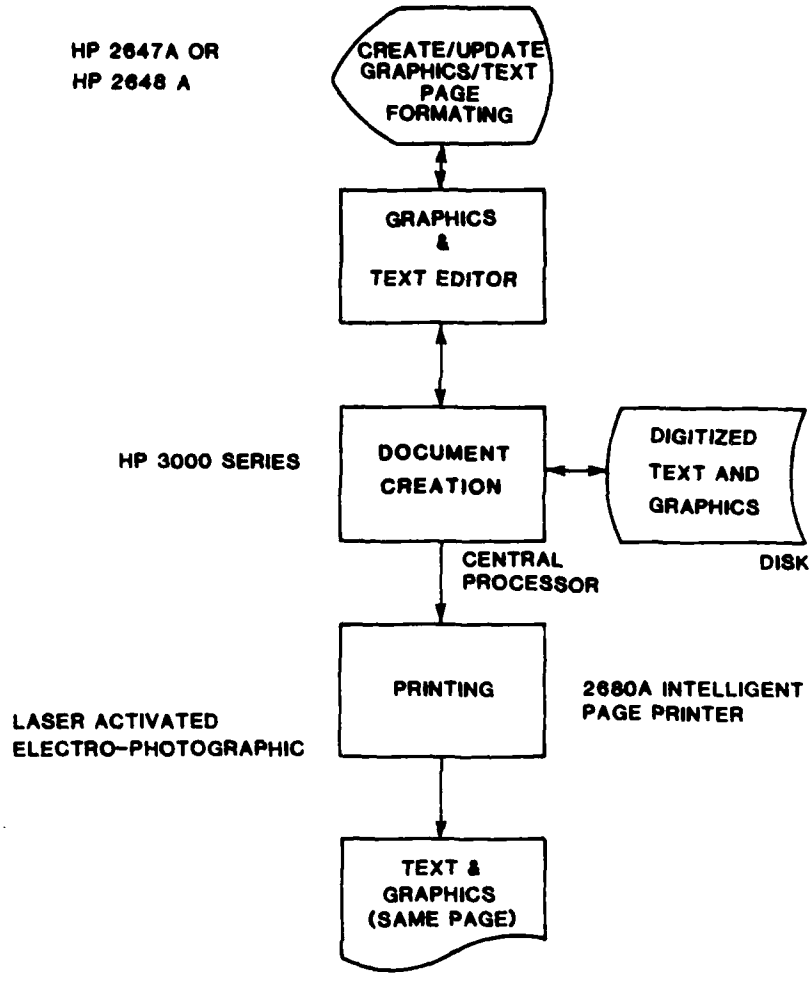
Figure 6. Datagraphix 9810 Laser Printer System



'Up to 32 copies single pass
'30 pages/minute
'Print format: 4,6,8,10 lines/inch
vertical
105 or 132 char./line
horizontal
'Up to 16 char. sets of 128 char. 8 (1 comes with system)
'Pitch 10 or 12.5 char./inch
'Resolution 200 dots/inch vertical and horizontal
'Roll paper input, cut sheet output
'Paper width - 8.5" or 11" std. (others avail. spcl. order)
'Paper length - 3.5" to 14"

Estimated Cost: $203K plus $70K for host computer system

Figure 7. Honeywell Series 8000 Page Processing System II



'Continuous bond fanfold perforated
'Paper weight 18 to 24 lbs.
'Paper width 6.5" to 12.7"
'Paper length 3" to 17"
'Print speed 22.75 to 113.75 pages/min.
dependent on page size
'40 character sets, max. 32 at one time,
multiple fonts can be used on a line
'Character sizes 22 char/inch to 1.38 inches/char.
'Dot size matrixes from 1x1 to 255x255
'Unlimited character images
'Max. 32 logical pages physical page
'Up to 32 forms at one time
'Up to 32,767 copies/page w/o addl. computer overhead

ESTIMATED COST: $212K Purchase

Figure 8. Hewlett Packard 2680 Laser Printing System

AD-A110 157 EG AND G WASHINGTON ANALYTICAL SERVICES CENTER INC R--ETC F/6 5/1
ALTERNATIVE METHODS AND PROCEDURES FOR THE MANAGEMENT OF FINANC--ETC(U)
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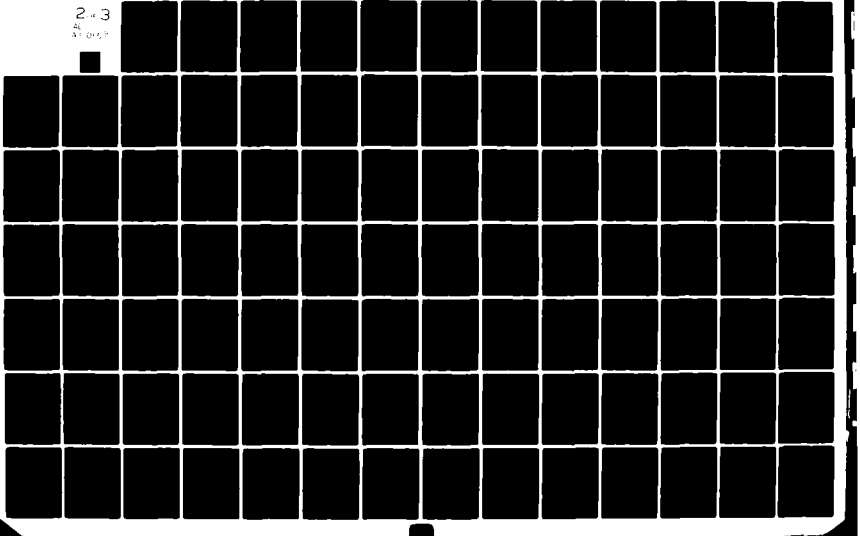

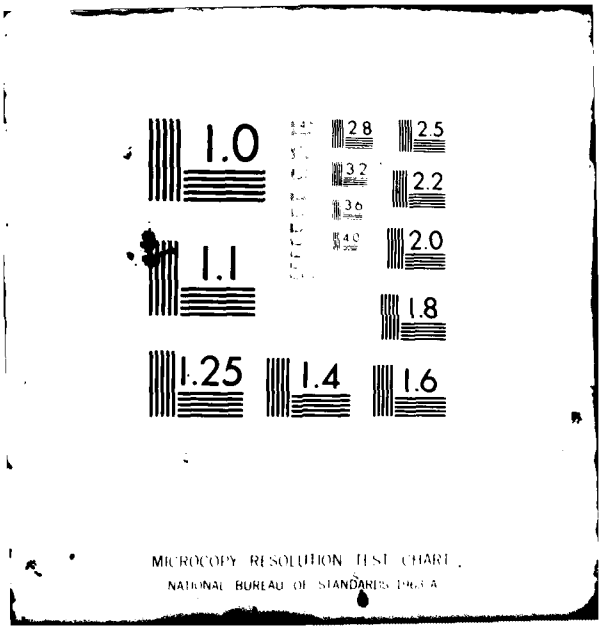
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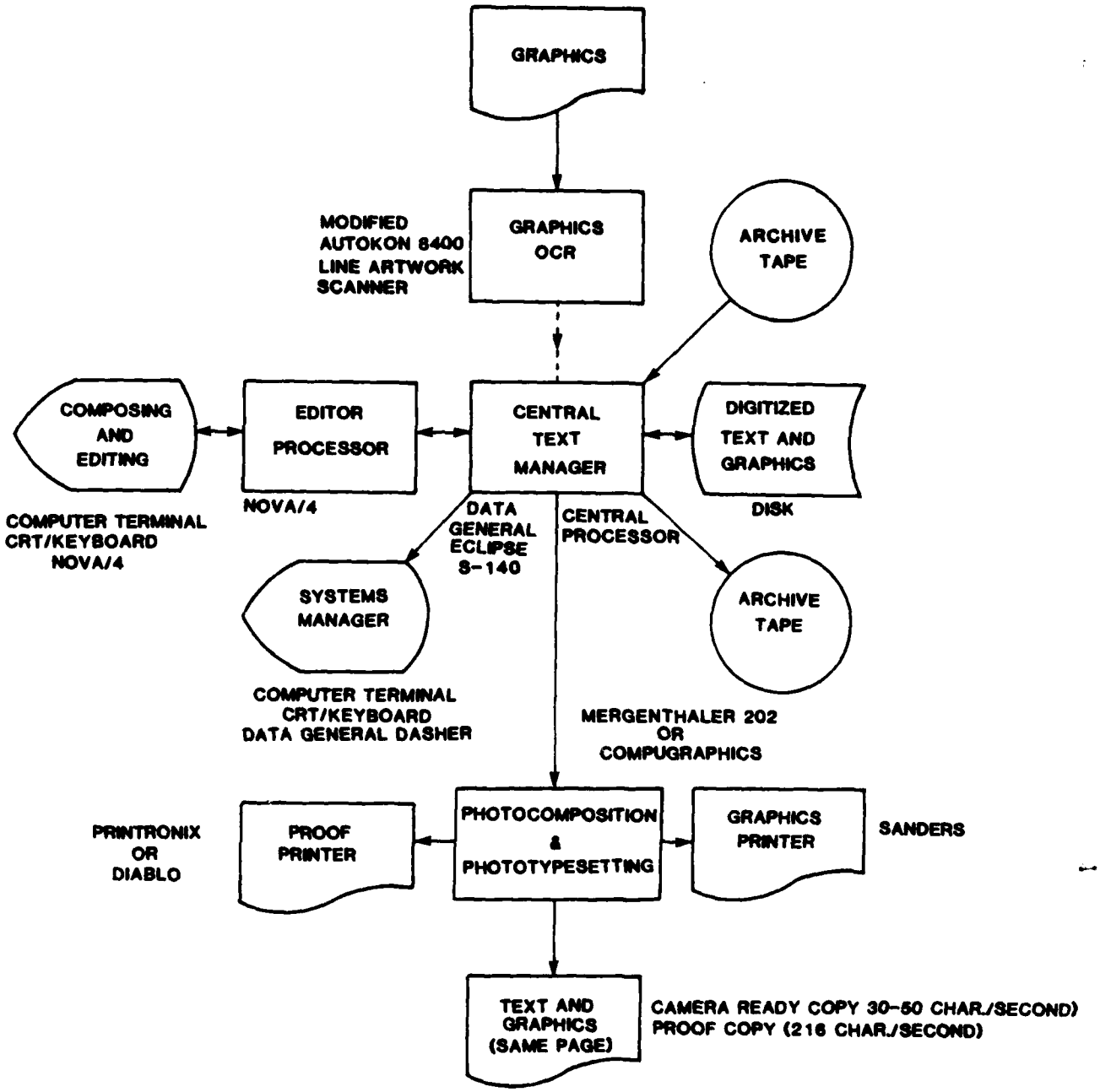
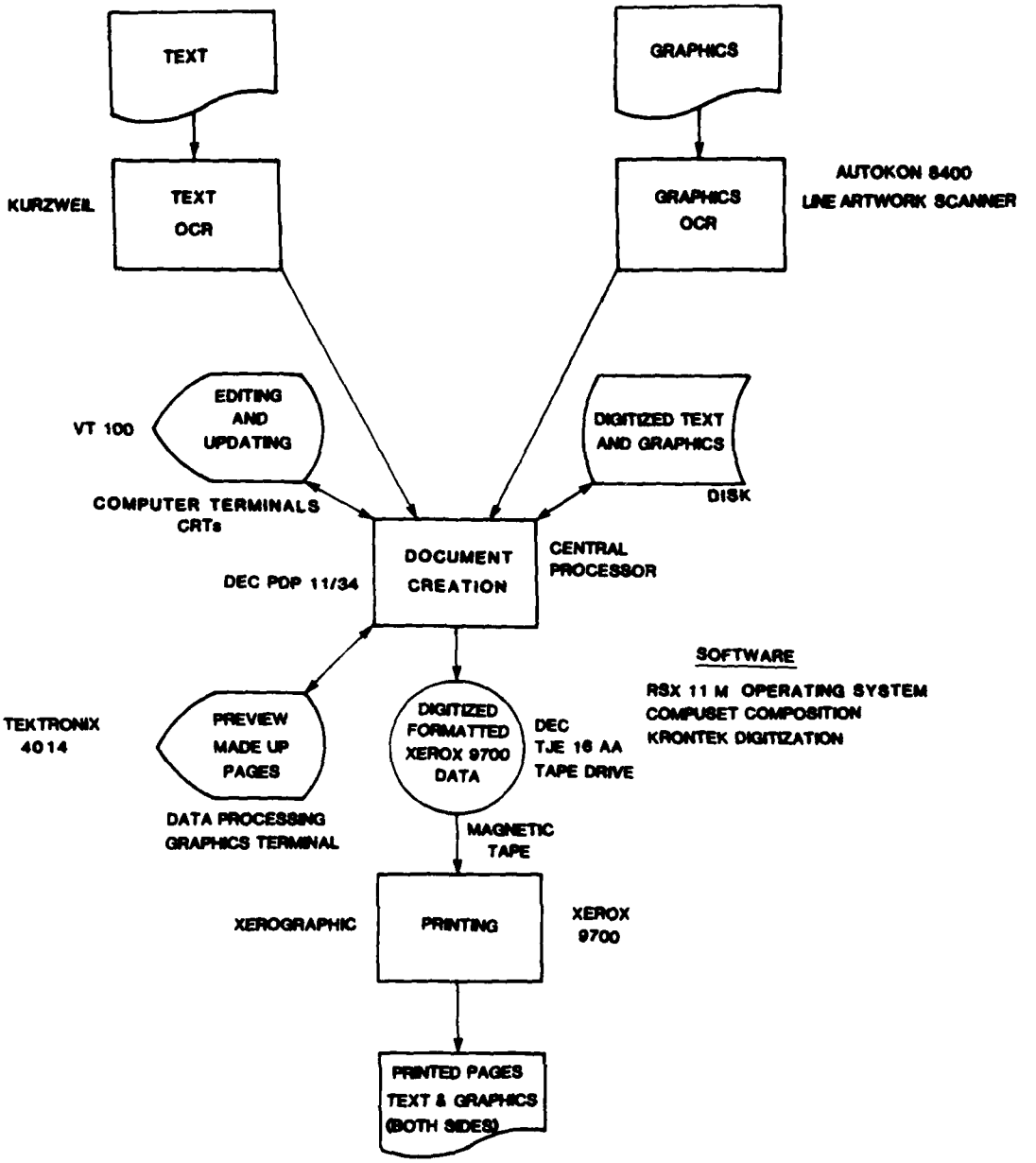


Estimated Cost: $245K including Autokon 8400

Figure 9. Comaraco Matrix 1 and Graphics Scanner Document Production System



'Paper 8½"x11"
'Paper weight 16 lb. bond to
110 lb. index cut sheet
'Print Format: 3-18 lines/inch vertical
4-30 char./inch horizontal
'Print Speed - 2 pages/second
'Character Sets - 4 64 char. sets std.
12 128 char. sets max.
'Resolution 300 dots/inch vertical and
horizontal

Estimated Cost: $634K purchased from applicable vendors

Figure 10. Mitel Electronic Publishing System

2.8 TASK VII - ALTERNATIVE PRELIMINARY SYSTEM DESIGN CONCEPTS AND RELATED COST/BENEFIT ANALYSIS

Alternative preliminary system design concepts were developed by EG&G which would utilize modern computer-related technology to disseminate, store/retrieve and update FM policies and procedures to Navy activities. Four concepts were developed to present both short term and long term alternatives. For purposes of this report, short term is defined as feasible of implementation within 12 months from date of decision to implement. Long term is defined as feasible of implementation after calendar year 1983 and following developmental system tests. These concepts include varying degrees of automation, type and structure of processing activities, system costs, and flow. Hardware, software, telecommunications, and distribution media are presented for each concept. The four alternative preliminary system design concepts are categorized as follows:

Concept A (short term)

Concept B (long term)

Concept C (long term)

Concept D (short term and long term)

2.8.1 CONCEPT A - (SHORT TERM).

2.8.1.1 Brief Description. Concept A envisions the processing of publications changes and preparation of camera-ready copy within NAFC-232 instead of utilizing GPO services. Under this concept, the printing of publications or changes thereto would continue to be performed by contract and the system of distribution would remain unchanged. The concept also visualizes that all text now contained in NAFC-232 controlled publications will be electronically transferred on a one-time basis from the present master hard copy to a magnetic media. This will eliminate repetitive keyboarding of text in the future. Two equipment modes of Concept A are presented i.e., Concept Alternative A-1 and Concept Alternative A-2, to depict different equipments which EG&G considers have approximately equal rankings. Figures 11 and 12 depict the flow and equipments pertaining to Concept Alternatives A-1 and A-2.

2.8.1.2 In-House Equipment, Costs, and Lead Times. Concept Alternatives A-1 and A-2 would retain the current NAFC-232 1202 word processor. The NAFC-232 1102 word processor would require upgrading to a 1202 at a one-time cost of $1,250. A communications option available from Lexitron would be procured for each 1202 word processor to enable electronic transfer of text from the word processors to the PC/PT equipment. Procurement of either a Compugraphcs MCS/8400 or a Mergenthaler Omnitech 2100 photocomposition/phototypesetting system would be required to enable in-house capability to produce CRC at a lower cost then continued use of GPO services.

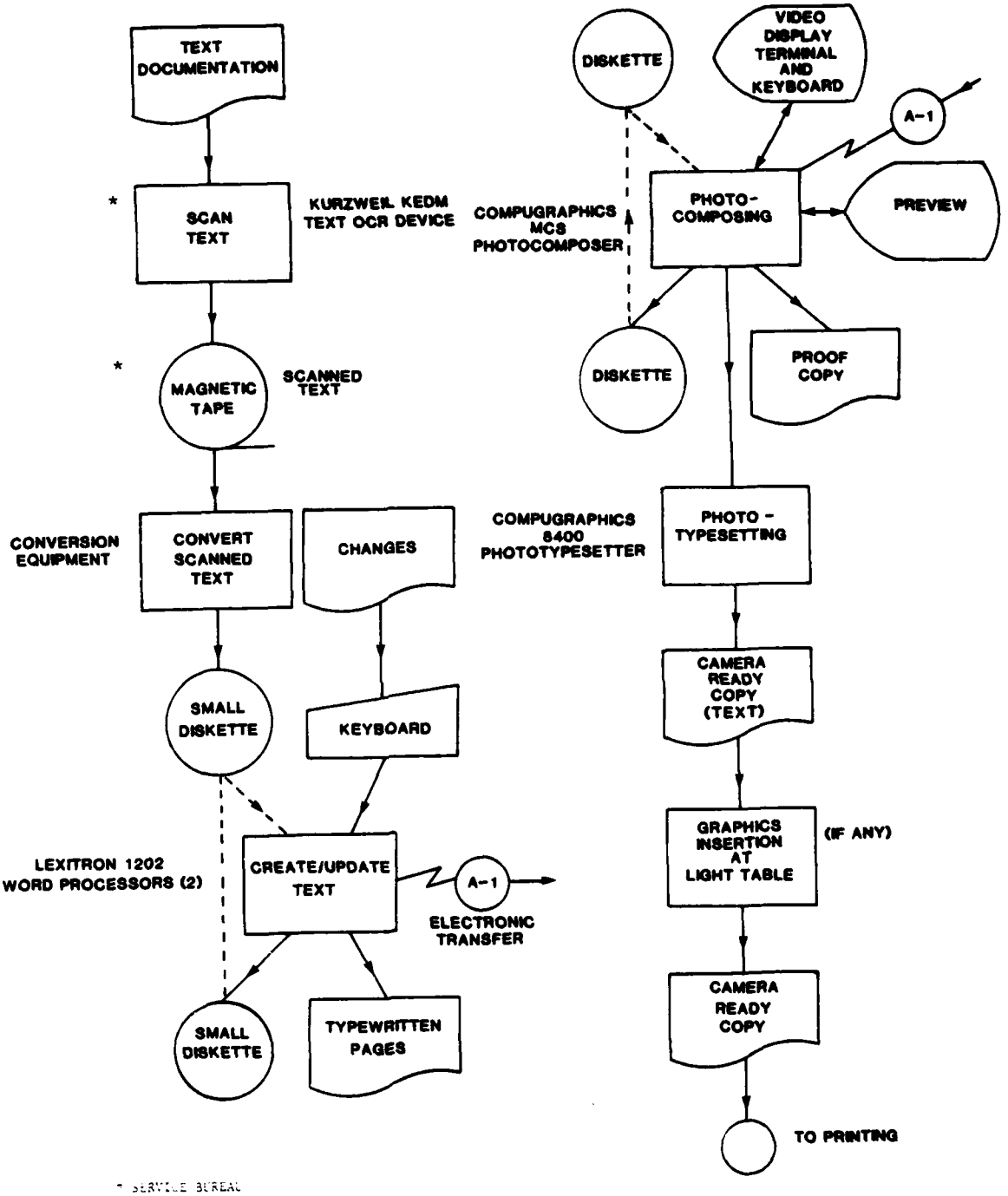


Figure 11. Concept Alternative A-1

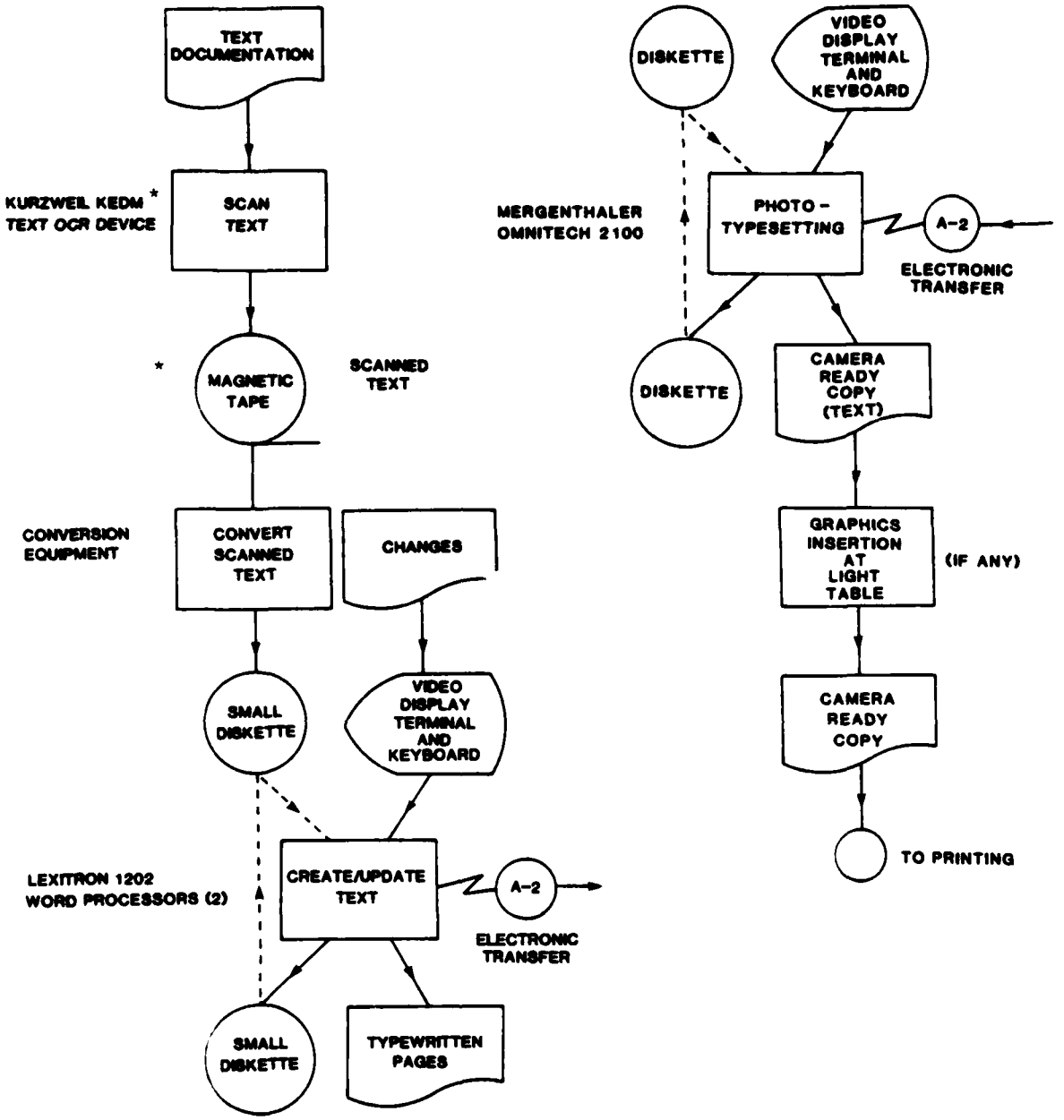


Figure 12. Concept Alternative A-2

Table 21 depicts the equipment, acquisition costs, annual maintenance costs, and lead times applicable to Concept A.

TABLE 21. IN-HOUSE EQUIPMENT, COSTS, AND LEAD TIMES

Equipment	Acquisition Cost	Annual Maintenance Cost	Lead Time
Procure and add the communications option to the Lexitron 1202 WP w/ printer (now leased)	$12,950	$1,044	30 days
Upgrade the Lexitron 1102 WP w/printer (now owned) to a 1202 WP	3,710	1,044	30 days
(A-1) Compugraphics MCS/8400 photocomposition/ phototypesetting system	$53,184	$4,920	5 months
OR			
(A-2) Mergenthaler Omnitech 2100 photocomposition/ phototypesetting system	32,000	3,840	45 days
TOTAL A-1	$69,844	$7,008	
OR			
TOTAL A-2	$48,660	$5,928	

2.8.1.3 In-House Personnel and Costs. Alternatives A-1 and A-2 would require the services of the seven civil service personnel presently assigned to NAFC-232 plus one addition (at approximate level of a GS-6). The additional position is required to perform PC/PT equipment operation. Personnel costs for both of these alternatives are the same and are summarized as follows:

Personnel	Annual Cost
GS5	$14,566
GS6(2)	32,480
GS9(3)	66,219

Personnel	Annual Cost[1]
GS11	26,710
GS12	32,013
Sub-Total	$171,988
+ 26% fringe benefits	44,717
TOTAL	$216,705

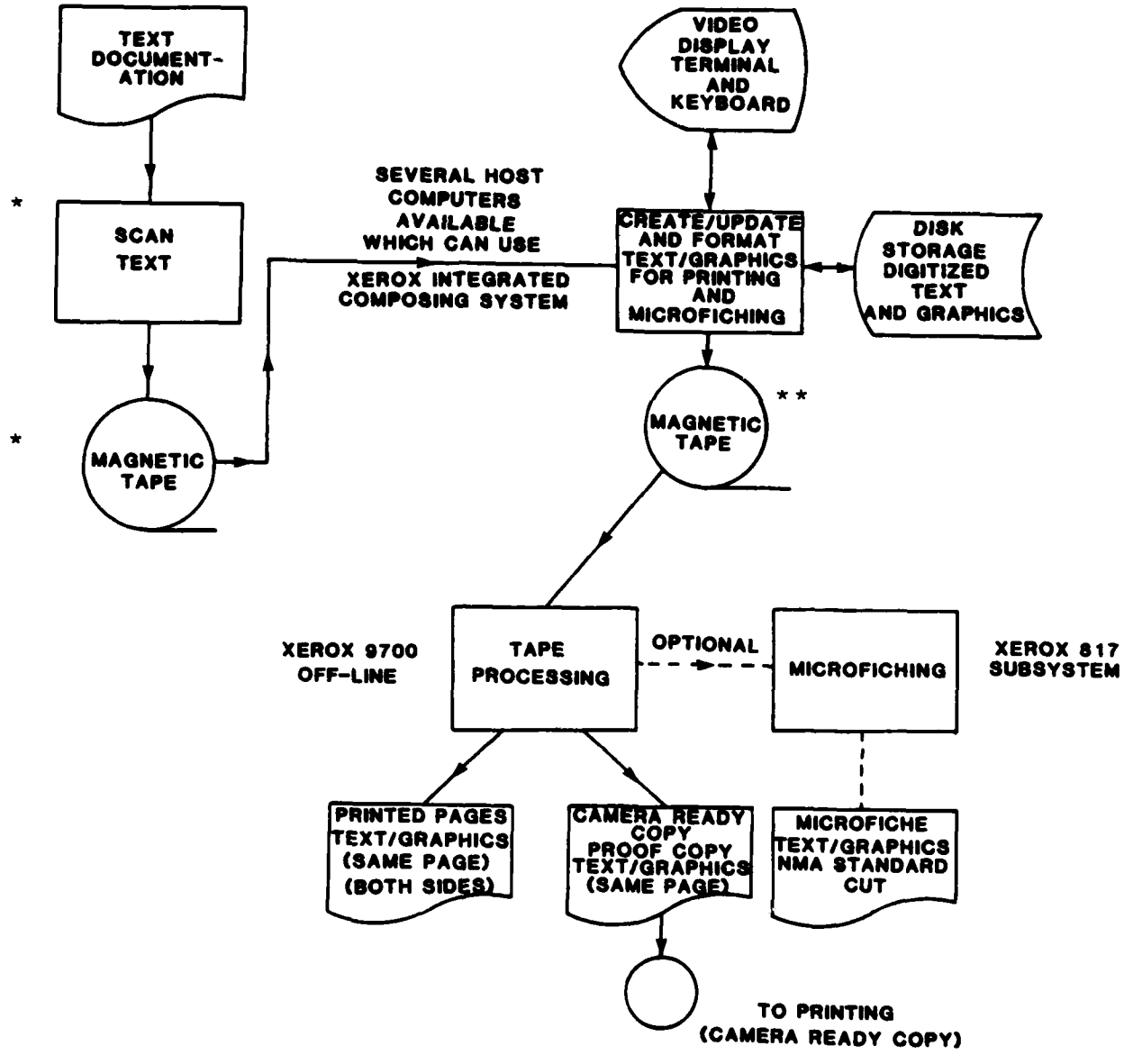
[1] Based on 1 Oct 81 rates and assumes Step 5 for each GS grade.

2.8.1.4 Outside Services and Costs. Alternatives A-1 or A-2 would require outside services at the estimated costs shown as follows:

Description	Estimated Cost
Contract printing (assumes approximately same level as 1980)	$119,300
Scanning NAFC-232 Controlled Publications Text and Creating Database on Lexitron 1202 Word Processor Diskettes (one-time charge)	55,000

2.8.2 CONCEPT B (LONG TERM).

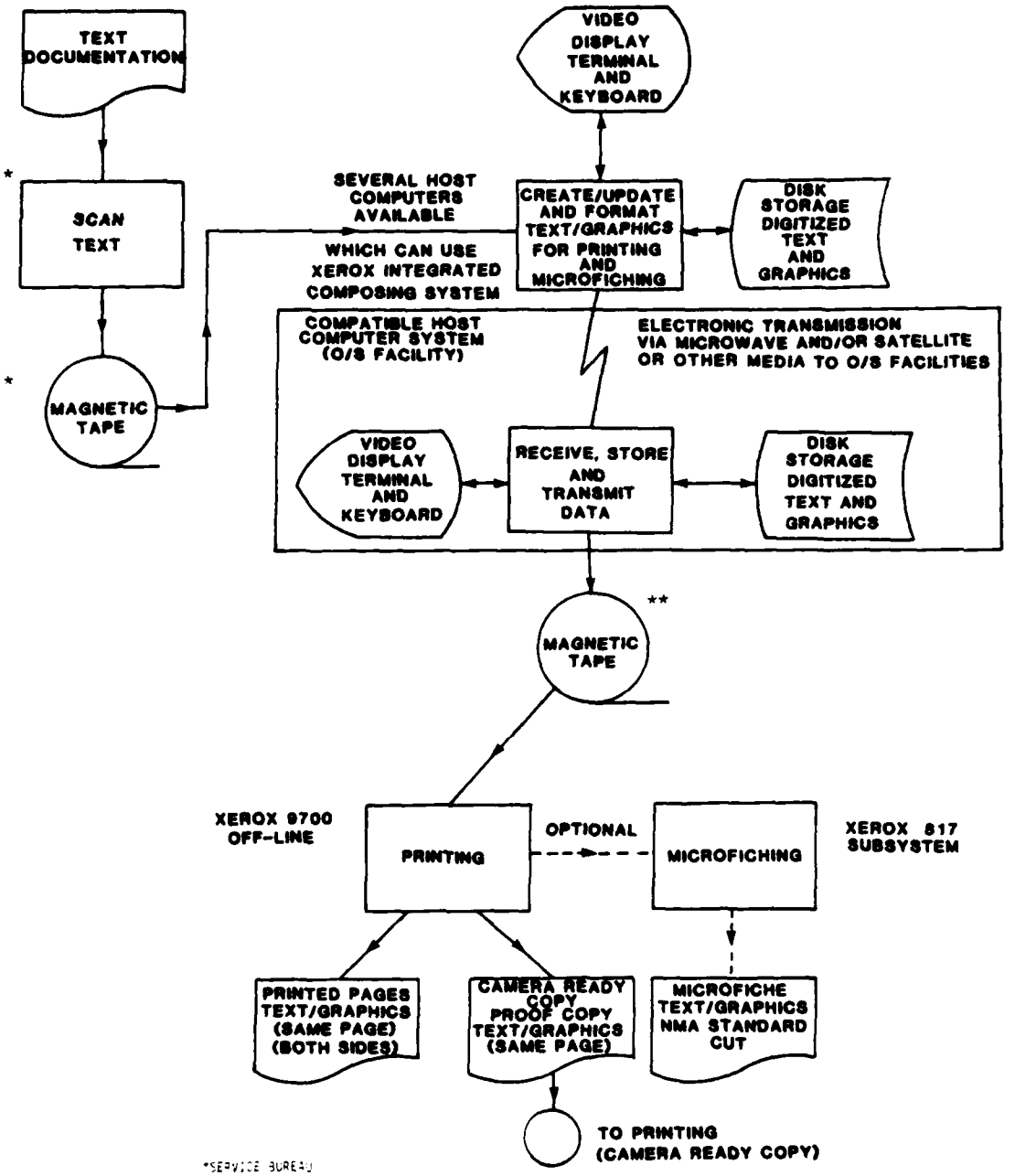
2.8.2.1 Brief Description. Concept B envisions an automated data base centrally maintained by NAFC-232 from which text and graphics can be produced in hard copy or microfiche form on demand by using a Xerox 9700 printer and a Xerox 817 microfiche producer. Two versions of Concept B are presented, i.e., Concept Alternative B-1 and Concept Alternative B-2. Concept Alternative B-1 would centralize publishing and worldwide distribution of text and graphics under NAFC-232 control. Concept Alternative B-2 would be an extension of Concept Alternative B-1 by electronically transmitting data stored in the centralized NAFC-232 controlled data base to one or more Navy Command Headquarters overseas (made as NAVEUR) and/or selected major ships at sea via microwave/satellite or other media. The receiving activities would have automated equipment compatible with the NAFC-232 host computer, Xerox 9700 printer, and Xerox 817 microfiche producer. This would enable the receiving activities to produce their own text and graphics in hard copy or microfiche form on demand. Implementation of Concept B would eliminate the need to produce CRC, and also eliminate outside contract printing, and storage/distribution by NPFC. Figures 13 and 14 depict the flow and equipments pertaining to Concept Alternatives B-1 and B-2.



*SERVICE BUREAU

**XEROX 9700 ON-LINE SYSTEM WITH ELECTRONIC TRANSFER FROM COMPATIBLE HOST COMPUTER SYSTEM TO XEROX 9700 VERSUS MAGNETIC TAPE IS ALSO AVAILABLE AT A SLIGHTLY HIGHER COST.

Figure 13. Concept Alternative B-1



*SERVICE BUREAU

**XEROX 9700 ON-LINE SYSTEM WITH ELECTRONIC TRANSFER FROM COMPATIBLE HOST COMPUTER SYSTEM TO THE XEROX 9700 VERSUS THE MAGNETIC TAPE IS AVAILABLE AT A SLIGHTLY HIGHER COST

***CONCEPT B-2 IS THE SAME AS CONCEPT B-1 WITH THE ADDITION OF SPECIAL ELECTRONIC TRANSMISSION FEATURES AND AN ON-LINE COMPUTER AT EACH OVERSEAS HQ FACILITY. MAJOR SHIP-TO SITES ARE SHOWN IN THE ENCLOSURE ABOVE.

Figure 14. Concept Alternative B-2***

2.8.2.2 In-House Equipment, Costs, and Lead Times. The limited automated equipment now utilized by NAFC-232 would be replaced by an integrated publishing system. The system under Concept B-1 would include one DEC PDP 11/34 computer system, one Xerox integrated composing system, one Xerox 9700 high speed printer, and one Xerox 817 microfiche producer if deemed necessary. The extension of Concept B-1 to Concept B-2 would add for each Navy overseas Command Headquarters and/or each selected major ship at sea one DEC PDP 11/34 compatible computer system, one Xerox 9700 high speed printer, and one Xerox 817 microfiche producer if deemed necessary.

Table 22 depicts the equipment, acquisition costs, annual maintenance costs, and lead times applicable to Concept B.

TABLE 22. IN-HOUSE EQUIPMENT, COSTS, AND LEAD TIMES

Equipment	Acquisition Cost	Annual Maintenance Cost	Lead Time
1. Xerox Integrated Composing System	$ 30,000	$ 3,000	1 month
2. DEC PDP 11/34 Computer System	106,890	10,560	4 to 5 months
3. Xerox 9700 Printing System	432,950	56,064	3 months
4. Xerox 817 Microfiching Subsystem	95,000	11,040	3 months
Total B-1	$ 664,840	$ 80,664	
or			
*Total B-2	$1,299,680	$158,328	

* Concept B-2 includes all B-1 equipment plus one each of items 2, 3, and 4 for each facility.

2.8.2.3 In-House Personnel and Costs. Alternative B-1 would require the services of eight personnel (one more than present NAFC-232 baseline). The mix would be slightly different from the current NAFC-232 baseline because the present equipment would be replaced with modern state-of-the-art automated equipment. One person is needed to operate the Xerox integrated composing system and another person is needed to operate the host computer system. These operations require different skills than are currently utilized in the NAFC-232 baseline system.

Concept B-2 requires the same number and type skills as outlined for Concept B-1. For each Navy overseas Command Headquarters and/or selected major ship one additional person would be needed to operate the compatible host computer system, the Xerox 9700 high speed printer, and the Xerox 817

microfiche producer (if one is present). Personnel costs for Concept B-1 and B-2 are summarized as follows:

	Annual Cost[1]	
Personnel	Concept B-1	Concept B-2
GS-5	$ 14,566	$ 14,566
GS-7 (2)	36,092	-
GS-7 (3)	-	54,138
GS-9 (3)	66,219	66,219
GS-11	26,710	26,710
GS-12	32,013	32,013
Sub-Total	$175,600	$193,646
+26% fringe benefits	45,656	50,348
TOTAL	$221,256	$243,994

[1] Based on 1 OCT 81 rates and assumes Step 5 for each GS grade.

2.8.2.4 Outside Services and Costs. Alternatives B-1 or B-2 would require one-time outside services at the estimated costs shown as follows:

Scanning NAFC-232 Controlled Publications Text and Creating Database on DEC PDP 11/34 central host computer system	$55,000
Computer Programmer/Analyst support to reformat text in DEC PDP 11/34 Database to be compatible with Database created by applicable Concept B or C Alternative (three man months at $5K/man month)	15,000
Computer Programmer/Analyst support to create distribution mailing list system (including labels) for DEC PDP 11/34 central host computer system (three man months at $5K/man month)	15,000
TOTAL	$85,000

2.8.3 CONCEPT C (LONG TERM).

2.8.3.1 Brief Description. Concept C envisions an automated data base centrally maintained by NAFC-232 from which text and graphics can be produced in hard copy or microfiche form on demand at one or more Navy regional sites to be determined by NAVCOMPT. This concept differs from Concept B in that the creation of hard copy or microfiche is accomplished at one or more regional

sites rather than at NAFC-232 and thereby placing the Xerox 9700 printer and the Xerox 817 microfiche producer at the selected site(s).

Two versions of Concept C are presented, i.e., Concept Alternative C-1 and Concept Alternative C-2. Concept Alternative C-1 would regionalize the printing and worldwide distribution of the NAFC-232 controlled text and graphics. Concept Alternative C-2 would be an extension of Concept Alternative C-1 but would give NAVCOMPT the option of having a regional site electronically transmit publications data to overseas facilities and/or ships or having this function performed directly by NAFC-232. Implementation of Concept C would eliminate the need to produce CRC, and also eliminate outside contract printing, and storage/distribution by NPFC. Figures 15 and 16 depict the flow and equipments pertaining to Concept Alternatives C-1 and C-2.

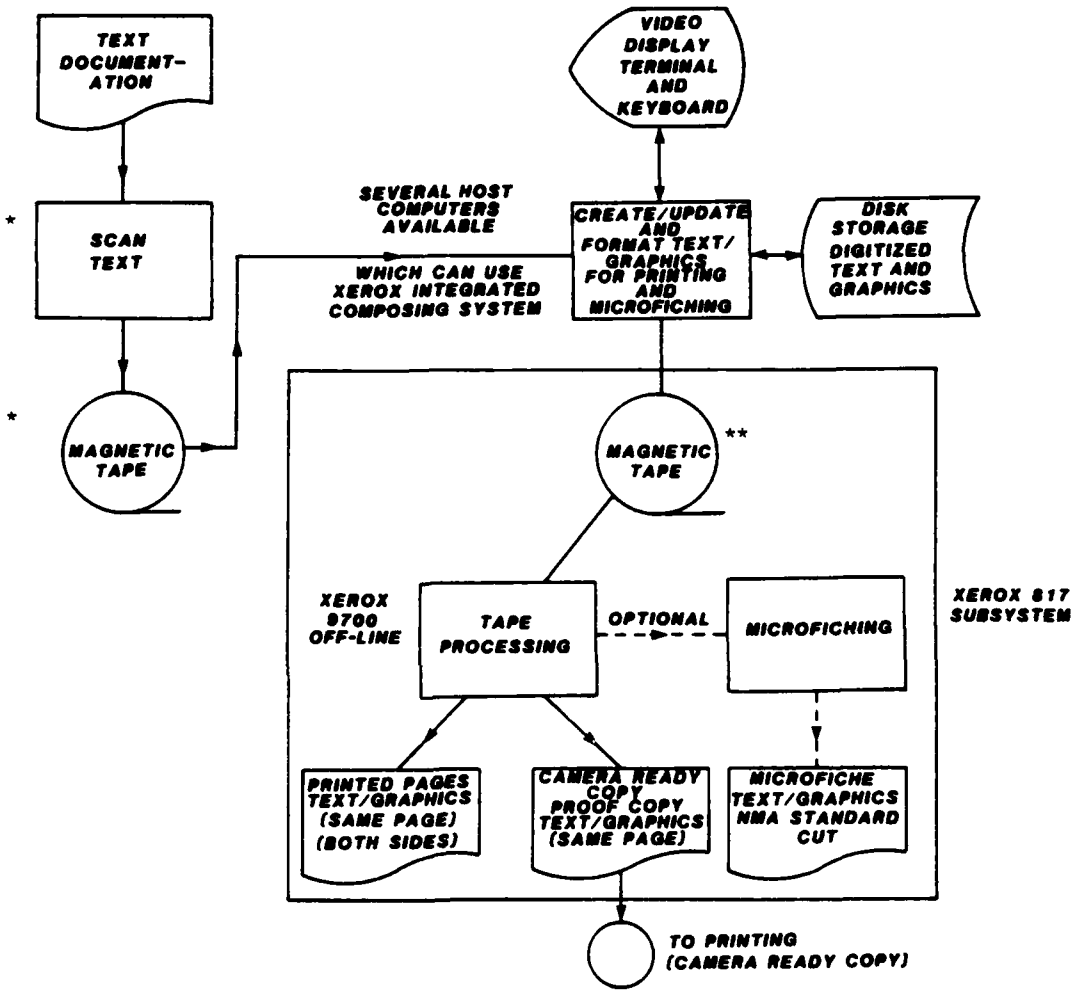
2.8.3.2 In-House Equipment, Costs, and Lead Times. The same equipment, costs, and lead times described in subparagraph 2.8.2.2 apply to Concept Alternatives C-1 and C-2. However, in addition, each regional facility would require a DEC PDP 11/34 computer system, a Xerox 9700 printer, and a Xerox 817 microfiche producer (if deemed necessary).

2.8.3.3 In-House Personnel and Costs. The same number of personnel and costs as shown in subparagraph 2.8.2.3 apply to Concept Alternatives C-1 and C-2 except that one additional person would be required at each regional facility to operate similar printing and microfiching equipment.

2.8.3.4 Outside Services and Costs. Same as stated in subparagraph 2.8.2.4.

2.8.4 CONCEPT D (SHORT TERM AND LONG TERM).

2.8.4.1 Brief Description. Concept D envisions an automated data base centrally maintained by NAFC-232 which could be accessed by CONUS users who have a high volume need for selected parts of the FM publications or by overseas Navy Command Headquarters facilities. Text, or text and graphics, would be presented to the user via a video display. The user would have the capability to select that portion of the information he requires and obtain a hard copy, if desired, using the printer associated with the video display. To assist the user in locating the subject matter present in the data base, an index will be provided which the user can query by title. Two versions of Concept D are presented, i.e., Concept Alternative D-1 (Short Term) and Concept Alternative D-2 (Long Term). Concept Alternative D-1 would utilize the NAFC-232 text data base created under Concept A. Selected parts of this text data base could be queried on line by those CONUS users/Command Headquarters facilities addressed above with selection tailored to the specific needs of the user. Concept Alternative D-2 would also utilize a central NAFC-232 data base which would include graphics as well as text. This data base would be created under Concepts B or C. If NAVCOMPT elects, copies of this data base could be provided to one or more regional facilities. CONUS users/Command Headquarters facilities previously addressed in this subparagraph could access the NAFC-232 data base directly or through a regional facility designated by NAVCOMPT, whichever is least costly in terms of communications. Under either Concept D-1 or D-2, those portions of FM publications not accessed on line by the user would need to be provided through the Navy-wide distribution system. Figures 17 and 18 depict the flow and equipments pertaining to Concept Alternatives D-1 and D-2.

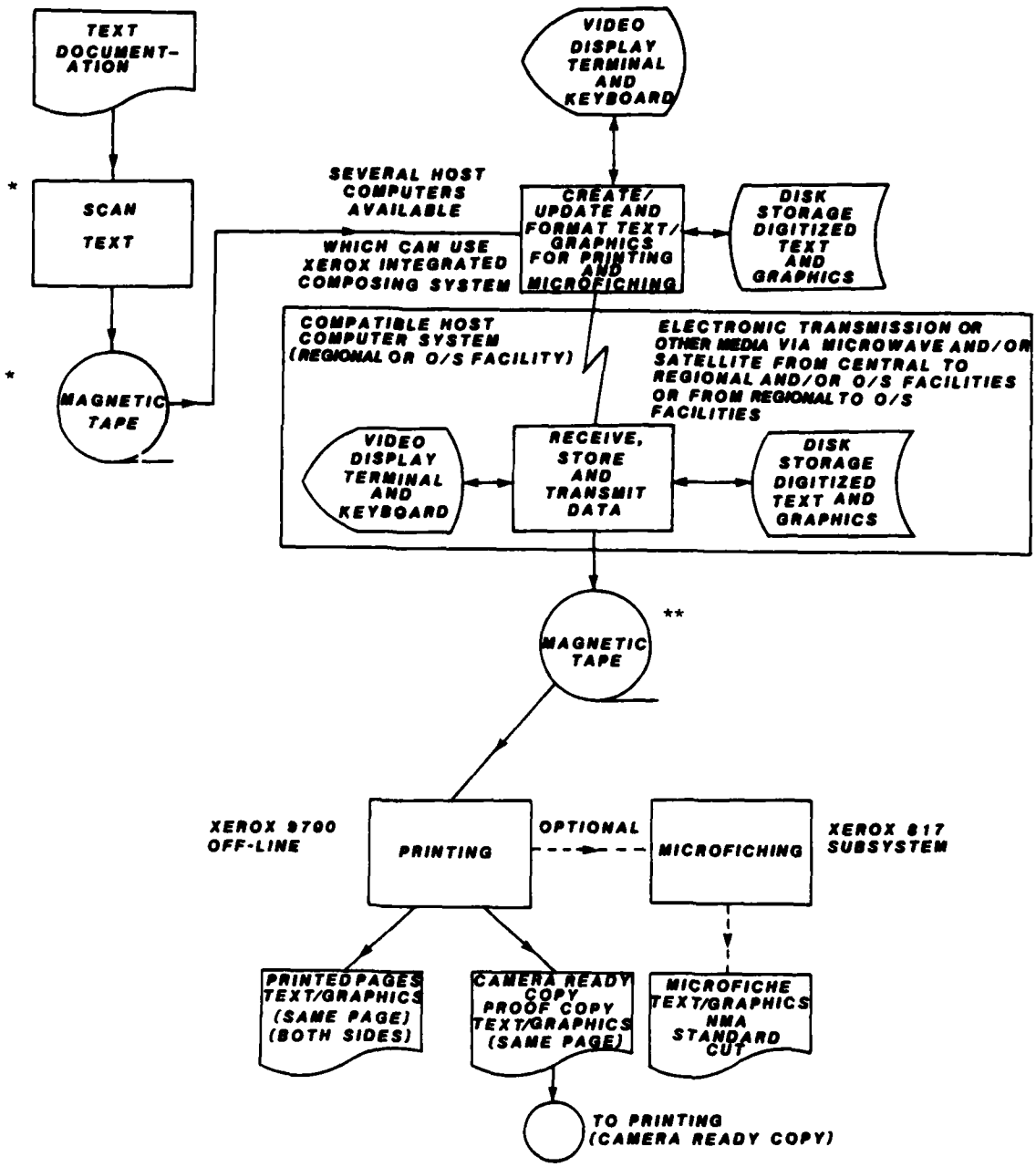


*SERVICE BUREAU

**XEROX 9700 IN-LINE SYSTEM WITH ELECTRONIC TRANSFER FROM COMPATIBLE HOST COMPUTER SYSTEM TO THE XEROX 9700 VERSUS THE MAGNETIC TAPE IS ALSO AVAILABLE AT A SLIGHTLY HIGHER COST

***CONCEPT C-1 IS THE SAME AS CONCEPT B-1 WITH THE ADDITION OF PRINTING AND OR MICROFICHING DOCUMENTATION AT REGIONAL SITES.

Figure 15. Concept Alternative C-1***

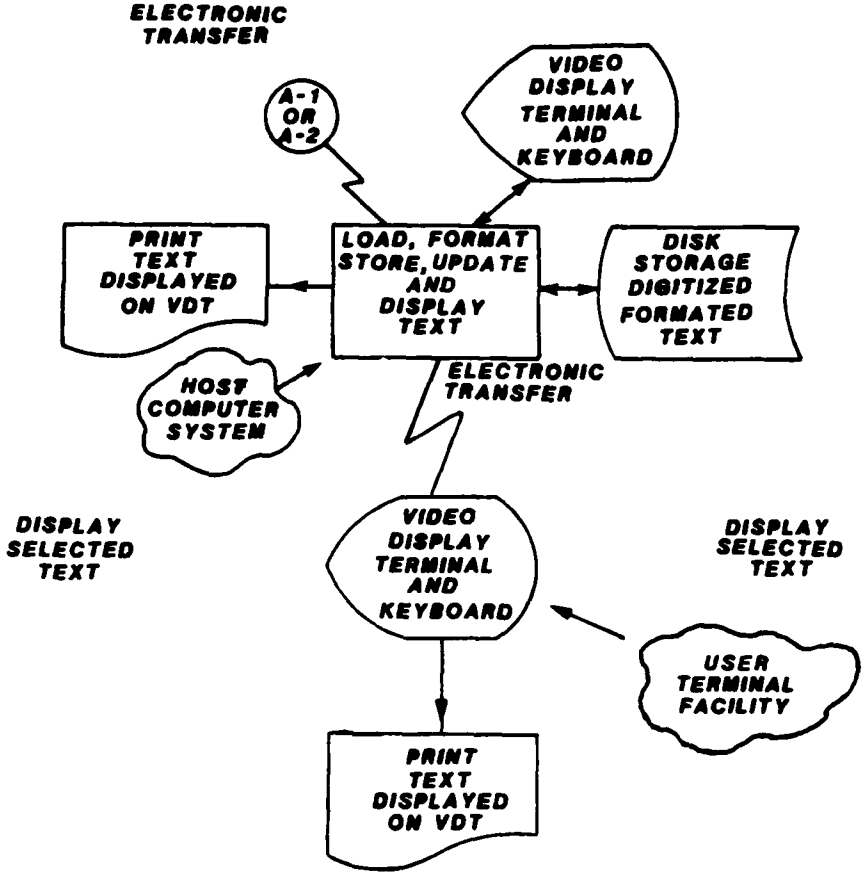


*SERVICE BUREAU

**XEROX 9700 IN-LINE SYSTEM WITH ELECTRONIC TRANSFER FROM COMPATIBLE HOST COMPUTER SYSTEM TO THE XEROX 9700 VERSUS THE MAGNETIC TAPE IS AVAILABLE AT A SLIGHTLY HIGHER COST

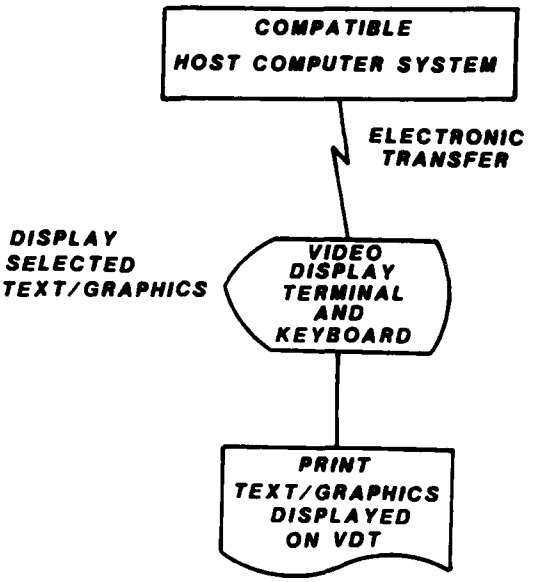
***CONCEPT C-2 IS THE SAME AS CONCEPT C-1 WITH THE ADDITION OF SPECIAL ELECTRONIC TRANSMISSION FEATURES AND AN IN-LINE COMPUTER AT EACH XEROX HQ FACILITY

Figure 16. Concept Alternative C-2***



*CONCEPT D-1 IS THE SAME AS CONCEPTS A-1 OR A-2 WITH THE ADDITION OF A HOST COMPUTER SYSTEM WHICH INCLUDES A VIDEO DISPLAY TERMINAL (VDT), ON-LINE DISK STORAGE AND A PRINTER AND VARIOUS VDTs WITH PRINTERS AT USER FACILITIES. ELECTRONIC TRANSMISSION FEATURES ARE USED TO LINK THE HOST COMPUTER SYSTEM TO USER FACILITIES.

Figure 17. Concept Alternative D-1*



*CONCEPT D-2 IS THE SAME AS ANY OF THE CONCEPT B OR C ALTERNATIVES WITH THE ADDITION OF VARIOUS VIDEO DISPLAY DEVICES (VDTs) WITH PRINTERS, AT USER FACILITIES. ELECTRONIC TRANSMISSION IS USED TO LINK THE HOST COMPUTER SYSTEMS TO THE USER TERMINALS. IN ADDITION TO THE TEXT WHICH IS DISPLAYED IN CONCEPT D-1, CONCEPT D-2 CAN ALSO DISPLAY OR DISPLAY AND PRINT GRAPHICS.

Figure 18. Concept Alternative D-2*

2.8.4.2 In-House Equipment, Costs, and Lead Times. Concept D-1 requires the same equipments as listed for Concept A plus a DEC PDP 11/34 computer system at NAFC-232 and a DEC VT 102 video display terminal with a DEC LA34 printer at each user facility. Concept D-2 requires the same equipments as listed for Concept B or Concept C plus a DEC VT 125 graphics video display terminal with DEC LA34 graphics printer at each user facility.

Tables 23 and 24 depict the equipment, acquisition costs, annual maintenance costs, and lead times applicable to Concept D.

2.8.4.3 In-House Personnel and Costs. The same number of personnel and costs as shown in subparagraph 2.8.1.3 (Concept A) apply to Concept Alternative D-1 except that one additional person is needed to operate the host computer system. Computer operation requires different skills than are depicted in Concept A.

The same number of personnel and costs as shown in subparagraph 2.8.2.3 apply to Concept Alternative D-2 except that one additional person would be required at each regional facility, if any are designated by NAVCOMPT, to operate printing and microfiching equipment.

2.8.4.4 Outside Services and Costs. Concept Alternative D-1 would require the same outside services and costs as stated in subparagraph 2.8.1.4 plus the following one-time estimated costs:

Description	Estimated Cost
Computer Systems Analyst (1.5 man months) and a Computer Programmer (2 man months) to design and implement programs to format text from selected FM publications for presentation on user video displays, and to produce an index which will assist the user in locating the subject matter present in the data base. This effort would be accomplished in a three month timeframe.	$17,500

Concept Alternative D-2 would require the same outside services and costs as stated in subparagraph 2.8.2.4 plus the following one-time estimated costs:

Computer Systems Analyst (3 man months) and a Computer Programmer (4 man months) to design and implement programs to (1) format text/graphics from selected FM publications for presentation on user video displays, and (2) to produce an index which will assist the user in locating the subject matter present in the data base. This effort would be accomplished over a six month timeframe.	$35,000

2.8.5 COMPARATIVE COST SUMMARY. Table 25 summarizes the various cost elements for the NAFC-232 baseline system and for the alternative preliminary system design concepts proposed. The annual, as well as the one-time costs, are shown to enable comparison of costs between concepts and the NAFC-232 baseline.

TABLE 23. IN-HOUSE EQUIPMENT, COSTS, AND LEAD TIMES

Applicable to Concept D-1

Equipment	Acquisition Cost	Annual Maintenance Cost	Lead Time
Same as listed for Concept A-1 PLUS:	*$ 69,844	*$ 7,008	Same
DEC PDP 11/34 Computer System	106,890	10,560	4 to 5 months
DEC VT 102 Video Display Terminal	2,400	264	2 months
DEC LA34 Printer	1,500	252	2 months
**TOTAL Concept D-1	$180,434	$18,084	

* Costs slightly less if Concept A-2 is selected.

** Assumes one user.

TABLE 24. IN-HOUSE EQUIPMENT, COSTS, AND LEAD TIMES

Applicable to Concept D-2

Equipment	Acquisition Cost	Annual Maintenance Cost	Lead Time
Same as listed for Concept B-1 plus the following for each user:	$664,840	$80,664	Same
DEC VT 125 Graphics Video Display Terminals	3,800	348	3 months
DEC LA34 Graphics Printer	1,650	252	3 months
Sub-Total	$670,290	$81,264	
Plus the following for each Regional or overseas Headquarters facility:			
DEC PDP 11/34 Computer System	106,890	10,560	4 to 5 months
TOTAL	$777,180	$91,824	

TABLE 25. COMPARATIVE COST SUMMARY (EXCLUDING DISTRIBUTION)

System	Equipment		Personnel	Outside Services	Distribution	TOTAL
	Acquisition	Maintenance				
NAFC-232 Baseline						
Annual		$ 7,815	$196,242	$273,800	Not Obtained	$ 477,857
Concept A-1						
Annual		7,008	216,705	119,300	"	343,013
One-Time	$ 69,844			55,000		124,844
Concept A-2						
Annual		5,928	216,705	119,300	"	341,933
One-Time	48,660			55,000		103,660
Concept B-1						
Annual		80,664	221,256		"	301,920
One-Time	664,840			85,000		749,840
Concept B-2[1]						
Annual		158,328	243,994		"	402,322
One-Time	1,299,680			85,000		1,384,680
Concept C-1[2]						
Annual		158,328	243,994		"	402,322
One-Time	1,299,680			85,000		1,384,680
Concept C-2[3]						
Annual		235,992	266,732		"	502,724
One-Time	1,934,520			85,000		2,019,520

TABLE 25. COMPARATIVE COST SUMMARY (EXCLUDING DISTRIBUTION) (Cont'd)

System	Equipment		Personnel	Outside Services	Distribution	TOTAL
	Acquisition	Maintenance				
Concept D-1[4]						
Annual		18,084	239,443	119,300	Not Obtained	257,527
One-Time	180,434			72,500		252,934
Concept D-2[5]						
Annual		91,824	221,256	-	"	313,934
One-Time	777,180			120,000		897,180

[1] Assumes one overseas HQ facility or major ship.

[2] Assumes one regional facility.

[3] Assumes one regional facility and one overseas HQ facility or major ship.

[4] Concept D-1 costs include Concept A-1 costs.

[5] Concept D-2 include Concept C-1 costs.

SECTION III
CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS.

Substantial data was collected during the research and investigative effort. From the detailed analytical information presented in paragraph 2.7 of the report, the reader can readily arrive at many conclusions. EG&G has selected the following which we believe to be of major importance:

- The ONR, Navy, and Marine Corps organizations and personnel visited by EG&G during the conduct of on-site structured interviews with users of the NAVCOMPT Manual and other FM publications represented an excellent cross section of Navy organizations and of the functions performed by personnel in those organizations (paragraphs 1.7, 2.4 and 2.7.2.1).

- The Navy Technical Information and Presentation Program (NTIPP) is currently in the detailed design phase subject to further development (paragraph 2.5.2). No specific findings or conclusions have evolved yet which can be applied by NAVCOMPT. Specific topics which are subjects of NTIPP's planned specifications may have applicability to NAVCOMPT planning in the future (paragraph 2.7.4.1).

- Billings to the Navy by GPO for composition work ordered by NAFC-232 after the end of calendar year 1981 should be at lower rates. GPO is utilizing recently installed automated equipment to compose and produce camera-ready copy (paragraph 2.2.2).

- The IBM Composer and the 3M Lettering System (government owned automated equipment utilized by NAFC-232) are obsolete. Neither possess communications capability or the capacity to handle digitized text. The IBM Selectric typewriters (non-automated equipment) are also obsolete. They are labor intensive for the type of publications processing work being done by NAFC-232. Modern off-the-shelf state-of-the-art automated equipment can produce camera-ready copy at less cost with greater efficiency and effectiveness, and with savings in processing time (paragraph 2.7.1.7).

- There is an urgent Department of Navy (DON) need for a master index and cross references covering all volumes of the NAVCOMPT Manual and other FM publications including Handbooks, Instructions, Notices, and Letters. Some present publications have an index for a particular volume or Handbook; some do not. No overall master index and cross reference system exists which places

in broad perspective the FM policies and procedures of the DON. A user of FM publications is unable to locate quickly what he desires and requires for the performance of his job. A great deal of time would be saved by users if they had a publication that provided an alphabetized subject matter/key word master index and cross references encompassing the full range of NAVCOMPT FM publications (paragraph 2.7.2.5).

- Conflicting or duplicating information exists in certain NAVCOMPT publications (paragraph 2.7.2.6.2).

- Users of NAVCOMPT publications desire more current and faster updating of changes (paragraphs 2.7.2.7.2, 2.7.2.7.3 and 2.7.2.7.6).

- Some of the NAVCOMPT Handbooks are out of date and in need of updating (paragraph 2.7.2.7.4).

- Navy and Marine Corps organizations worldwide are receiving a plethora of changes to JTR Volumes I and/or II each month. Most changes are initially issued by teletype. They are later consolidated and published in hard copy form by NAVCOMPT for distribution throughout the DON. Keeping up with the substance as well as the mechanics of the numerous changes to the JTR is frustrating, labor intensive, and archaic in view of the existing state-of-the-art technology. This is a major problem for users of this publication worldwide (paragraph 2.7.2.7.7).

- A significant number of the interviewed users (59 percent) of the NAVCOMPT Manual and related FM publications are of the opinion that changes are not being received in a timely manner (paragraph 2.7.2.13).

- Although the majority of users interviewed gave a rating of "Good" for readability and comprehensibility of NAVCOMPT FM publications, the number that rated them "Fair" or "Poor" is sufficient to deserve NAVCOMPT attention (paragraphs 2.7.2.19 and 2.7.2.20).

- Users of the NAVCOMPT Manual, and other NAVCOMPT publications are not satisfied with the present organization of material (paragraphs 2.7.2.21.2, 2.7.2.21.3 and 2.7.2.21.4).

- There is a need for more graphics, as well as to update present graphics, which will add a dimension of higher specificity and precision in the comprehension of the NAVCOMPT Manual and related publications (paragraph 2.7.2.22).

- Guides, Instructions for Use, and other training aids to supplement the NAVCOMPT Manual and related publications would assist users and contribute to a higher degree of productivity and effectiveness (paragraph 2.7.2.23).

- Although the majority of personnel interviewed feel strongly against the use of microfiche as publication media, a sufficient number (18 percent) expressed support to merit attention by NAVCOMPT. If offered by NAVCOMPT, this media can adequately serve certain users, i.e., the occasional user of NAVCOMPT FM publications, or the user who requires only selected volumes, handbooks, or parts thereof (paragraph 2.7.2.26).

- There is strong and enthusiastic support from those interviewed for NAVCOMPT to establish an automated data base and provide on line query access to the data now published in the NAVCOMPT Manual and other related publications (paragraph 2.7.2.27).

- Use of modern automated equipment would provide NAFC-232 a capability to publish more timely issuances of FM publication updates to Navy users worldwide. Varying degrees of timeliness would range from a small savings in time (10 to 15 percent) to near real time access on line depending upon the degree of automation (paragraph 2.7.5).

3.2 RECOMMENDATIONS.

EG&G recommends the following based upon the conclusions presented in pragraph 3.1:

- Develop and publish a master index and cross references covering all volumes of the NAVCOMPT Manual and other FM publications including Handbooks, Instructions, Notices, and Letters.

- Review the NAVCOMPT Manual, Handbooks, and other NAVCOMPT publications and identify information which needs to be consolidated and eliminate that which is conflicting. Consolidate, restructure, and publish revisions as necessary.

- Determine which NAVCOMPT Handbooks require updating; establish a Plan of Action and Milestones (POA&M) to accomplish the updating; and publish the updated Handbooks.

- Provide as a test to a limited number of users, on line access to a NAFC-232 centrally controlled automated data base. This data base will contain the information now published in hard copy form in JTR Volumes I and II. Conduct a feasibility test for a 6 to 12 month period while continuing the parallel publication and distribution of hard copy under the present system. Maintain records of man hours expended, costs, and operational effectiveness of both systems during the test. Compare the results and proceed from those results.

- Establish and implement a long term project to improve the readability and comprehensibility of NAVCOMPT FM publications.

- Review the graphics now contained in the NAVCOMPT Manual; identify and update those which are out of date; solicit suggestions from selected users as to worthy additions or modifications; and incorporate the additions decided upon by the approving official.

- Consider additional guides and training aids which would provide significant help to users and implement a program to provide those which are approved.

- Implement Alternative Preliminary System Design Concept A to achieve immediate time and cost savings in processing the updates to NAFC-232 controlled publications.

- Provide on line access to an NAFC-232 controlled text data base to a limited number of CONUS users who have a high volume need for selected parts of the NAVCOMPT publications (Alternative Preliminary Design Concept D-1). This would serve as a basis for evaluating the operational effectiveness of on line access and for determining its application to more DON users.

- For the long term, establish a text and graphics integrated publishing system. The automated data base for this system would be established and maintained by NAFC-232. Publications would be printed or microfiched on demand and distributed from one or more regional facilities except for those portions which users continually access on-line (Alternative Preliminary Design Concepts C-1 and D-2).

APPENDIX A

LIST OF PERSONS AND ORGANIZATIONS CONTACTED BY EG&G

ALPHABETICAL LIST OF PERSONS CONTACTED

* INDICATES INTERVIEW USING STRUCTURED INTERVIEW QUESTIONNAIRE
\+ INDICATES SELF-COMPLETION OF QUESTIONNAIRE WITHOUT INTERVIEW

1.	MR. JOHN P. ALBERT	NAFC
2.	* MR. R. F. ALLEN	CNET
3.	LT NICK ANDERSON	NAFC
4.	MS. MARY ANSON	NCB-3/OP923
5.	* MS. BETTY ATKINSON	COMNAVAIRPAC
6.	MR. ROBERT BAILEY	NAFC
7.	MR. MARVIN BALDING	NAFC
8.	MR. EUGENE N. BALL	PDTATAC (PER DIEM COMMITTEE)
9.	MR. KEN BARNES	NCB-3/OP923
10.	* MS. MARY JO BARNES	NSC NORFOLK
11.	* MR. ROBERT S. BARNES	FAADCLANT
12.	MR. ROBERT BIETZ	FAADCLANT
13.	* MR. LUTHER R. BOND	PSA NORFOLK
14.	MR. W. F. BOWIE	NAFC
15.	* MS. MYRA M. BRANDT	COMNAVAIRPAC
16.	* MR. DON BRIDGES	ONR
17.	* MS. LINDA K. BRIONES	MCRD SAN DIEGO
18.	* MR. HORACE BRITT	FAADCLANT
19.	MR. JACK H. BROWN	NAVMAT-01B
20.	+ MRS. LYDA BURTON	MCRD SAN DIEGO
21.	MR. WILLIAM BUTLER	NCD
22.	* MS. BETTY A. CAREY	NAVCOMSTA
23.	MR. CARLOVSKY	COMNAVAIRPAC
24.	* MAJ MARY CHETKOVICH	MC BASE PENDLETON
25.	MR. JOSEPH CHILDERS	ARMY FIN CTR
26.	* MS. PATSY CHILDRESS	MC BASE PENDLETON
27.	MR. CHARLES CLARK	NCB-3/OP923
28.	MR. THOMAS COLAHAN	NAFC
29.	* MRS. MAXWYNNE M. COLLEY	NSC SAN DIEGO
30.	* MISS MARLA COOK	MCRD SAN DIEGO
31.	MR. JOHN W. COOLEY	ARMY FIN CTR
32.	* MRS. VIRGINIA L. CORNELLIER	MC BASE PENDLETON
33.	MR. JEFF CRATCH	OSD-WHS
34.	* SKSN RICHARD F. CROSBY	USS PRAIRIE
35.	* MR. CHARLES P. DALEY	MC BASE PENDLETON
36.	* DKSA WILLIAM JOHN DANKER	USS PRAIRIE
37.	* MR. DALE DAULTON	CINCLANTFLT
38.	MR. KEN E. DUGAN	ONI
39.	MS. J. C. DULA	NAFC
40.	* MR. MORT FABER	ONR
41.	MR. J. G. FALLAT	NAFC
42.	* MR. FREDERICK FISHER	CNET
43.	MR. ROY FRAME	HQ USMC
44.	* DKCS BENJAMIN GABRIANA GAUYAN	USS PRAIRIE
45.	* LCDR ROBERT R. GILBERT	NSCS
46.	* MS. ELOISE GOGUE	NSC SAN DIEGO
47.	MR. RONALD J. GOLDEN	NCF

48.		MR. WALTER E. GOODWIN	NCF
49.	*	DK1 GLENN W GREEN	USS PRAIRIE
50.		MR. DONALD GREENE	NRL
51.	*	ENS KAREN S. GREGORY	NSCS
52.	+	MR. BRAD HALCUMS	NORFOLK NAVAL SHIPYARD
53.	*	MS. ALICE M. HALL	COMNAVAIRPAC
54.	*	DK1 QUINTIN EBALO HEBRON	USS PRAIRIE
55.		MR. RON HEILIG	ONR
56.		MR. JAMES HENNESSEY	ONR
57.		MR. JIM HILL	NAVSUP-014B2
58.		CAPT CHARLES C. HUBBARD	NCB-3/OP923
59.	*	MRS. RUTH N. JAMES	MC BASE PENDLETON
60.	*	MS. CLARE C. JOUETT	MCRD SAN DIEGO
61.	*	MR. THOMAS W. KERN	NSC SAN DIEGO
62.	*	MS. SHERRY L. KHOLER	MCRD SAN DIEGO
63.		MR. TED KILLMEYER	NCB-3/OP923
64.	*	MS. CANDY KNOBLOCH	MC BASE PENDLETON
65.	*	MR. JAMES KORAHAES	FAADCLANT
66.	*	MRS. BARBARA V. KRAMER	MCRD SAN DIEGO
67.		DPCS L. W. KRAWCZYK	NMPC
68.	*	LT ELMER M. KURTTI	MCRD SAN DIEGO
69.	*	MRS. ANNA J. LAMB	PSA SAN DIEGO
70.	*	LT RONALD LAUSTER	NSCS
71.	*	MR. DONALD R. LAWRENCE	MCRD SAN DIEGO
72.		MR. THOMAS LECKEY	ONR
73.	*	LT ROBERT S. LINGO	PSA NORFOLK
74.		MS. H. H. LIVINGSTONE	NAFC
75.		MR. JIM LONG	NAVSEA-01P3
76.	*	SK1 W. C. LUCENIO	USS PRAIRIE
77.	*	MS. JULIA-ANN LUTHER	FAADCPAC
78.	*	DKC G. C. MACALINDONG	FTC NORFOLK
79.		MR. ROBERT L. MADISON	NAFC
80.		MS. DORIS MALONE	COMNAVAIRPAC
81.		MR. L. D. MANN	NAFC
82.	+	MR. ALLEN P. MARTINSON	NORFOLK NAVAL SHIPYARD
83.	*	MR. E. A. MAURI	PSA SAN DIEGO
84.		CDR JOHN R. MCGRAA	NAFC
85.		RADM JAMES E. MCKENNA	NSC NORFOLK
86.		MR. ED L. MCLEAN	NAFC
87.		COL ROBERT N. MEREDITH	BOLLING AFB
88.		MR. PAT MONAGHAN	NAVSEA-01P
89.		MR. STEVE MONROE	NMPC
90.		MR. ROY MONTGOMERY	ONR
91.	*	SKC ROMEO N. NAFARRETE	NTC SAN DIEGO
92.		MS. LOIS NANGLE	NCD
93.	*	MR. FRANK J. NANTZ	COMNAVAIRLANT
94.		MR. B. J. O'BRIEN	NAFC
95.		MR. CAROL OLSEN	ARMY COMPT
96.	*	AKC ESTELITO A. OXINA	USS RANGER
97.	*	SKC IRINEO PASCUA	FTC NORFOLK
98.		CAPT A. K. PASZLY	NAFC
99.	*	MR. JAMES C. PATILLO	CINCLANTFLT
100.	*	MR. PERCY R. PATTERSON	SURFLANT

101.	*	SK1 GEORGE PIEPER	FTC NORFOLK
102.	*	MR. LLOYD G. PIPER	FAADCPAC
103.		MS. GLORIA PLEASANT	NAFC
104.		MR. JOSEPH P. POPPLE	AIR FORCE COMPT
105.		MR. EUGENE J. REGAN	HQ USMC
106.		MR. ALFRED T. REHM	NPFC
107.		MR. DONALD W. REHORST	ONR
108.		MR. LARRY RIGGS	NSC NORFOLK
109.		CDR R. D. ROBINSON	NSCS
110.		MR. ROBIN RUSCZAK	NAFC
111.	*	MS. AUDREY E. SEDATH	COMNAVAIRLANT
112.		MR. KENNETH SETHER	FAADCPAC
113.		LCDR ROBERT M. SHEPHARD	NSCS
114.	*	MS. JANET W. SHEPHERD	NSC SAN DIEGO
115.	*	LTJG NICHOLAS L. SHERWOOD	NSCS
116.		MR. J. RANDOLPH SIMPSON	ONR
117.		LT COL BARRY F. SKINNER	MCRD SAN DIEGO
118.		MS. MARY SMALLWOOD	GOVERNMENT PRINTING OFFICE
119.	*	MS. RENEE H. SMITH	NSC NORFOLK
120.	*	MRS. GENE SNYDER	MCRD SAN DIEGO
121.		MR. ROBERT N. STRAIN	NAFC
122.	*	LT RHYS C. SUEUR	NSCS
123.	*	MR. GUY D. TAYLOR	NSC NORFOLK
124.	*	MR. JOHN F. TAYLOR	CNET
125.	*	DK1 JUAN D. TAYLOR	NTC SAN DEIGO
126.	*	MR. ROBERT LEWIS TOMAN	COMNAVAIRPAC
127.	*	SGT JOSEPH E. TOMMASINI	MCRD SAN DIEGO
128.	*	MS. TWYLA TOWNSEND	NSC NORFOLK
129.	*	MS. DORIS M. TURANO	MCRD SAN DIEGO
130.		MAJ JOSEPH TUSINSKI	BOLLING AFB
131.		MR. L. C. UPDIKE	NAFC
132.		MR. M. J. VACCA	NAFC
133.		DR. THOMAS C. VARLEY	ONR
134.	*	MRS. MARY D. VIGEL	NSC SAN DIEGO
135.	*	DKC TIBURCIO B. VILLARUZ	USS RANGER
136.		MS. T. J. WARREN	NAFC
137.	*	MR. KEITH A. WEEKS	HQ USMC
138.		MR. A. R. WEISS	NAFC
139.	*	MRS. JOSEPHINE J. WHITE	MCRD SAN DIEGO
140.	*	MS. JANICE M. WILLIAMS	NSC SAN DIEGO
141.		MS. JUNE WILLIAMS	ONR
142.	*	MS. DIANE WILSON	NSC NORFOLK
143.	*	MR. EDWARD WILUSZ	NSC NORFOLK
144.	*	MRS. PATRICIA A. WISEMAN	FAADCPAC
145.	*	MS. JO ANN WRIGHT	MCRD SAN DIEGO
146.		LT COL ALLEN WYLIE	BOLLING AFB
147.	*	MR. EDWARD S. YORK	NRL

LIST OF ORGANIZATIONS CONTACTED
AND NUMBER OF PERSONS CONTACTED WITHIN EACH ORGANIZATION

1.	NAFC	22
2.	ONR	10
3.	CNET	3
4.	NCB-3/OP923	5
5.	COMNAVAIRPAC	6
6.	PDTATAC (PER DIEM COMMITTEE)	1
7.	NSC NORFOLK	8
8.	FAADCLANT	4
9.	PSA NORFOLK	2
10.	MCRD SAN DIEGO	14
11.	NAVMAT-01B	1
12.	NCD	2
13.	NAVCOMSTA	1
14.	MC BASE PENDLETON	6
15.	ARMY FIN CTR	2
16.	NSC SAN DIEGO	6
17.	OSD-WHS	1
18.	USS PRAIRIE	6
19.	CINCLANTFLT	2
20.	ONI	1
21.	HQ USMC	3
22.	NSCS	7
23.	NCF	2
24.	NRL	2
25.	NORFOLK NAVAL SHIPYARD	2
26.	NAVSUP-014B2	1
27.	NMPC	2
28.	PSA SAN DIEGO	2
29.	NAVSEA-01P3	1
30.	FAADCPAC	4
31.	FTC NORFOLK	3
32.	BOLLING AFB	3
33.	NAVSEA-01P	1
34.	NTC SAN DIEGO	1
35.	COMNAVAIRLANT	2
36.	ARMY COMPT	1
37.	USS RANGER	2
38.	SURFLANT	1
39.	AIR FORCE COMPT	1
40.	NPFC	1
41.	GOVERNMENT PRINTING OFFICE	1
42.	NTC SAN DEIGO	1

APPENDIX B

STRUCTURED QUESTIONNAIRE DEVELOPED BY EG&G

EG&G WASHINGTON ANALYTICAL SERVICES CENTER, INC.
Crystal Square II, Suite 1200, 1725 Jefferson Davis Highway, Arlington, Virginia 22202 • Tel. (703) 533-3000

CONTRACT NO. N00014-81-C-0076

STRUCTURED INTERVIEW

EG&G INTERVIEWER:_____ DATE:_____

I. **PERSON(S) & ORGANIZATION CONTACTED:**

A. FULL NAME(S), TITLE, AUTOVON PHONE NUMBER:

B. ORGANIZATIONAL TITLE AND FULL MAILING ADDRESS:

C. TYPE OF ORGANIZATION/ACTIVITY:

- ☐ DEPARTMENTAL
- ☐ HEADQUARTERS
- ☐ FIELD

1. STRUCTURE (Obtain organization chart or briefly describe it below):

2. PRINCIPAL FUNCTIONS/RESPONSIBILITIES (Check as applicable):

- ☐ PROGRAMMING
- ☐ BUDGET PREPARATION
- ☐ BUDGET EXECUTION/APPROPRIATED FUNDS ADMINISTRATION
- ☐ ACCOUNTING
- ☐ FINANCIAL MANAGEMENT REPORTING
  - ☐ MANUAL
  - ☐ MECHANIZED
- ☐ DISBURSING
- ☐ DATA PROCESSING
- ☐ OTHER (Explain)

II. EXPERIENCE PROFILE OF PRINCIPAL PERSON INTERVIEWED:

TOTAL YEARS WORKING EXPERIENCE: _____

EXPERIENCE IN FINANCIAL MANAGEMENT:

TOTAL YEARS: _____

A. BREAKDOWN OF DOD EXPERIENCE BY TYPE:

1. DEPARTMENTAL: _____ YEARS (CNO, CMC, Sec NAV) (List positions held and time period in each):

2. NAVMAT, SYSCOMS, OR OTHER COMMANDS: _____ YEARS (List positions held and time period in each)

3. FIELD ACTIVITIES: _____ YEARS (List positions held and time period in each)

B. OTHER THAN DOD:

TOTAL YEARS: _____ (List positions and time period in each)

C. INTERVIEWER'S NOTES:

III. USE OF NAVCOMPT MANUAL/HANDBOOKS

A. FOR EACH OF THE NAVCOMPT PUBLICATIONS BEING DISTRIBUTED TO YOUR ORGANIZATION, LIST THE FOLLOWING:

(NOTE: Obtain this information from the office receiving distribution for your organization - TOTAL distribution to be accounted for.)

PUBLICATION (Example: Vol II NAVCOMPT Manual)	RECEIVING OFFICE/ACTIVITY

B. CHECK BELOW HOW THE MANUAL/HANDBOOKS ARE USED BY YOUR ORGANIZATION:

- ☐ BASIC REFERENCE AND GUIDE, WHEN NEEDED
- ☐ CONSTANT DAY-TO-DAY OPERATIONS:
  - ☐ POM PLANNING/PREPARATION
  - ☐ BUDGET PREPARATION
  - ☐ FINANCIAL PROGRAM/PLAN ADMINISTRATION
  - ☐ FISCAL ACCOUNTING
  - ☐ DISBURSING
  - ☐ OTHER (Explain)

III. USE cont.

C. IF THE NAVCOMPT MANUAL AND/OR HANDBOOKS WERE TAILORED TO THE SPECIFIC USES REQUIRED BY YOUR ORGANIZATION/ACTIVITY, WHICH WOULD YOU REQUIRE:

☐ ALL NOW BEING DISTRIBUTED

☐ SELECTED VOLUMES/CHAPTERS OF NAVCOMPT MANUAL OR HANDBOOKS AS FOLLOWS: (Mark "X" for appropriate chapters)

NAVCOMPT VOLUME	CHAPTER 1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
VI										
VII										

HANDBOOKS:

D. STATE YOUR OPINION OF THE ADEQUACY OF THE INDEX TO THE NAVCOMPT NOTICES/INSTRUCTIONS/MANUAL/HANDBOOKS AS TO COMPLETENESS AND CROSS REFERENCES:

☐ EXCELLENT

☐ NEEDS IMPROVEMENT (Explain)

III. USE cont.

E. WHAT WOULD YOU LIKE TO SEE DONE TO IMPROVE THE EFFECTIVE USE OF THE MANUAL OR HANDBOOKS -- NOT SUBSTANTIVE CONTENT BUT HOW THE INFORMATION IS:

☐ PRESENTED:

☐ UPDATED:

☐ DISTRIBUTED:

IV. CHANGES TO NAVCOMPT MANUAL & HANDBOOKS:

A. CHANGES TO THE NAVCOMPT MANUAL AND NAVCOMPT HANDBOOKS ARE ISSUED IN VARIOUS FORMS, I.E., ELECTRICAL MESSAGE, NAVCOMPT NOTICE/INSTRUCTION/ LETTER, OR BY FORMAL HARD COPY NUMBERED CHANGE TO THE MANUAL OR HANDBOOKS. DO YOU EXPERIENCE PROBLEMS WITH ONE OR MORE OF THESE FORMS OF ISSUANCES?

☐ NO

☐ YES (Explain, e.g., identify which are too brief and require clarification or interpretation; which may be delayed because they are not addressed to the precise action office/code; or some other reason)

B. USING THE PAST TWO YEARS AS A BASE PERIOD, WHENEVER A CHANGE WAS INITIALLY ISSUED TO THE NAVCOMPT MANUAL, OR HANDBOOKS, DID YOU FIND IT NECESSARY TO TELEPHONE HIGHER HEADQUARTERS, OR NAVCOMPT (or both), FOR CLARIFICATION?

☐ NOT OFTEN -- ONLY ON OCCASION, OR NOT AT ALL

☐ OFTEN -- (Please explain briefly and identify which specific Volume/Chapter of the Manual or Handbook, this most often pertained to):

IV. CHANGES cont.

C. USING THE LAST TWO CHANGES TO THE NAVCOMPT MANUAL OR HANDBOOKS YOU RECEIVED, PLEASE INDICATE THE FOLLOWING FOR EACH:

NAVCOMPT PUBLICATION (Vol. No. And/Or Title)	CHANGE NUMBER	PUBLISHED DATE OF CHANGE	DATE YOU RECEIVED THE HARD COPY CHANGE

D. HAVE YOU HAD PROBLEMS WITH "MISSING" CHANGES?

- ☐ NO
- ☐ YES (Explain)

E. ARE CHANGES BEING RECEIVED IN A TIMELY MANNER (i.e., effecitve date of the change vs. actual date of receipt by you)? THIS QUESTION APPLIES TO INITIAL NOTIFICATIONS AS WELL AS HARD COPY FINAL CHANGES.

- ☐ YES
- ☐ NO (Explain)

F. WHICH OF THE FOLLOWING TYPES OF CHANGES TO THE MANUAL/HANDBOOKS DO YOU RELY ON AS YOUR BASIC REFERENCE SOURCE:

- ☐ THE "INITIAL" TYPES OF NOTIFICATION E.G., ELECTRICAL MESSAGE, NAVCOMPT NOTICE/INSTRUCTION/LETTER
- ☐ THE "HARD COPY" FORMAL CHANGE TO THE MANUAL/HANDBOOKS
- ☐ BOTH OF THE ABOVE, IN TURN, AS RECEIVED

IV. **CHANGES** cont.

G. WHEN YOU RECEIVE A CHANGE TO THE NAVCOMPT MANUAL/HANDBOOKS, ARE YOU ABLE TO KEEP THEM POSTED ON A CURRENT BASIS OR DO YOU EXPERIENCE DELAYS BECAUSE WORKLOAD PRIORITIES MAKE IT NECESSARY TO POSTPONE MAKING THE PUBLISHED CHANGES:

- ☐ YES
- ☐ NO

H. WHAT IS YOUR ROUGH ESTIMATE AS TO THE PERCENT OF NAVCOMPT MANUAL OR HANDBOOK CHANGES REQUIRING FURTHER EXPANSION OR CLARIFICATION BY THE CHAIN OF COMMAND OR LOCALLY:

NAVCOMPT MANUAL		NAVCOMPT HANDBOOKS
☐	LESS THAN 10%	☐
☐	10% TO 25%	☐
☐	MORE THAN 25%	☐

IF OVER 25%, STATE WHY:

- ☐ TO PRESCRIBE COMMAND, OR LOCAL MANAGEMENT SYSTEM REQUIREMENTS
- ☐ READABILITY
- ☐ COMPREHENSIBILITY
- ☐ OTHER:

I. WHEN NAVCOMPT NOTICES, INSTRUCTIONS, OR CHANGES, TO THE NAVCOMPT MANUAL/HANDBOOKS ARRIVE AT YOUR ORGANIZATION, WHICH OF THE FOLLOWING CIRCUMSTANCES ARE APPLICABLE:

- ☐ USUALLY HAVE REASONABLE TIME TO IMPLEMENT AND MEET DEADLINES PRESCRIBED
- ☐ ALMOST ALWAYS "SURPRISED" AND FACED WITH AN OVERDUE COMPLIANCE DEADLINE, OR IT CAUSES A "TIME BIND" PROBLEM
- ☐ WISH NAVCOMPT HAD PUT OUT SOME KIND OF ADVANCE "ALERT" OR ADVICE EVEN THOUGH SKETCHY

J. WHAT IDEAS DO YOU HAVE FOR IMPROVING THE ISSUANCE OF CHANGES AND TIMELINESS?

V. READABILITY, COMPREHENSIBILITY, AND USABILITY OF THE NAVCOMPT MANUAL, HANDBOOKS, INSTRUCTIONS, NOTICES, DIRECTIVES

A. RATE THE OVERALL READABILITY AND COMPREHENSIBILITY OF THE NAVCOMPT MANUAL/HANDBOOKS:

READABILITY		COMPREHENSIBILITY
☐	EXCELLENT	☐
☐	GOOD	☐
☐	POOR	☐

CITE EXAMPLES OF POOR READABILITY OR COMPREHENSIBILITY (If applicable):

B. RATE THE OVERALL READABILITY AND COMPREHENSIBILITY OF THE NAVCOMPT INSTRUCTIONS, NOTICES, DIRECTIVES:

READABILITY		COMPREHENSIBILITY
☐	EXCELLENT	☐
☐	GOOD	☐
☐	POOR	☐

CITE EXAMPLES OF POOR READABILITY OR COMPREHENSIBILITY (If applicable):

C. COMMENT ON THE OVERALL ORGANIZATION OF MATERIAL, OR POINT OUT INSTANCES WHERE THE ORGANIZATION MAKES IT DIFFICULT TO FIND INFORMATION:

V. **READABILITY** cont.

D. EVALUATE THE USE OF GRAPHICS (E.G., TABLES, CHARTS, DRAWINGS, SAMPLE FORMS, ETC). GIVE SOME INSTANCES WHERE MORE GRAPHIC SUPPORT OR A DIFFERENT APPROACH WOULD IMPROVE USABILITY.

E. IS THERE ANY NEED THAT YOU SEE FOR SUPPLEMENTARY MATERIAL (Guides, instructions for use, training, etc) TO IMPROVE THE USEFULNESS OF THE MANUAL OR THE HANDBOOKS?

VI. TYPE FINANCIAL OPERATION

A. WHAT FINANCIAL SYSTEM(S) DO YOU OPERATE UNDER:

- ☐ RSM O&MN
- ☐ NIF
- ☐ RDT&E
- ☐ STOCK FUND
- ☐ PROCUREMENT
- ☐ CIVILIAN PAY
- ☐ OTHER (Specify)

B. DO YOU PERFORM YOUR OWN FINANCIAL ACCOUNTING?

- ☐ YES
- ☐ NO (Identify organization performing)

VII. AUTOMATION

A. WOULD IT BE ADVANTAGEOUS (or at least not disadvantageous) TO HAVE SOME OR ALL OF THIS INFORMATION ON MICROFICHE OR OTHER MICROFORM? CITE SPECIFIC ADVANTAGES OR DISADVANTAGES IN YOUR ENVIRONMENT. (Assume reader/printer available).

B. SUPPOSE THE MANUAL WERE AVAILABLE AS A DIGITAL DATA BASE, SO THAT SPECIFIC, COMPLETELY UP-TO-DATE INFORMATION COULD BE CALLED UP ON A COMPUTER TERMINAL. WOULD THIS HELP YOUR OPERATION? HOW? (Or why not?) ADVANTAGES? DISADVANTAGES? COST EFFECTIVENESS?

APPENDIX C

LIST OF NAVCOMPT FM PUBLICATIONS FOR WHICH PUBLICATION/UPDATING RESPONSIBILITY IS ASSIGNED TO NAFC OFFICES OTHER THAN NAFC-232

LIST OF NAVCOMPT FM PUBLICATIONS FOR WHICH PUBLICATION/UPDATING RESPONSIBILITY IS ASSIGNED TO NAFC OFFICES OTHER THAN NAFC-232

Part I - SECNAV Instructions

Publication Number	Publication Title	Approximate Number of Pages	Responsible NAVCOMPT Office
5260.1C	Information Requirements Control	110	NAFC-122
5420.185	DON Information Requirements Control Policy Steering Committee	25	NAFC-122
7000.18B	Policy for the Development of Financial Management Systems in the Department of the Navy	8	NAFC-12
7430.1B	Policy for Administrative Examination of Military Pay Records	4	NAFC-2
5300.21A	Professional Military Comptroller School	4	NAFC-32
12410.20	Career Fellowships in Financial Management	24	NAFC-3
5120.6	Safekeeping of United States Savings Bonds	3	NAFC-411
7220.29B	Procedures for the Approval of Regulation Pertaining to Military Pay and Allowances	3	NAFC-411
7220.63D	Leave Accounting Procedures -- Navy Members Only	25	NAFC-411
7220.73A	JUMPS Area Coordinators; Designation and Responsibilities of	50	NAFC-411
7220.76A	Changes in Procedures Relating to ICMA for Navy Members	3	NAFC-411
7220.78	Military Pay and Allowances 1 Aug 79 Entitlements; Responsibility for	4	NAFC-411
5430.87C	Organization and Charter for the Integrated Financial Management Systems (IFMS) Project	200	NAFC-62

Part I (Cont'd)

Publication Number	Publication Title	Approximate Number of Pages	Responsible NAVCOMPT Office
7301.14A	Undistributed Disbursements	5	NAFC-61
Part II - NAVCOMPT Instructions			
5200.3	Productivity Reporting: Specific Reporting Dates	2	NAFC-13
5230.1	Automatic Data Processing Services Procured by Contract	2	NAFC-14
7000.36	Financial Management Systems: Standard Criteria for Internal ADP Control of	15	NAFC-14
7000.39	Department of the Navy Financial Management Improvement Program (FMIP)	30	NAFC-12
5450.1C	Navy Finance Center, Cleveland; Functional Mission of	10	NAFC-2
5450.3D	Navy Regional Finance Centers; Functional Mission of	20	NAFC-2
7200.42	Single Point of Payment of CONUS Post, Camp, and Station Petroleum (PC&S) Contracts	4	NAFC-4
7420.22A	Utilization of Social Security Number as the Primary Civilian Personnel Identifier	3	NAFC-421
7700.6A	Statistical Processing of U.S. Government Transportation Requests	150	NAFC-432
4600.1	Liquidated Damage Payments to Travelers by Scheduled Airlines	40	NAFC-432
4600.2B	Customer Identification Codes for Temporary Additional Duty Travel	10	NAFC-432
4650.7	Rental of Vehicles	9	NAFC-431

Part II (Cont'd)

Publication Number	Publication Title	Approximate Number of Pages	Responsible NAVCOMPT Office
7220.51B	Marine Corps Joint Uniform Military Pay System (JUMPS) Cross-Disbursing Procedures for Navy Disbursing Officers	100	NAFC-431
7300.108	Permanent Change of Station	3	NAFC-432
7302.20	Obligation Accounting by Participants of the Navy Management Fund (NMF) for Transportation of Things (TOT)	6	NAFC-53
7310.9D	Depot Maintenance and Maintenance Support Cost Accounting and Production Reporting of Contractors	70	NAFC-51
7020.18	Trash and Waste Material Recycling	7	NAFC-61
7040.37A	Administration of Successor (M) Accounts for RDT&E and Procurement Appropriations	15	NAFC-61
7044.7	Direct Costing of Aircraft at Test and Evaluation (T&E) Activities; Implementation of	10	NAFC-61
7100.45	Five-Year Defense Program (FYDP)	20	NAFC-631
7220.47A	Military Personnel Expenses; Control of	416	NAFC-6114
7300.89A	Contract Payments and Collections Under Military Standard Contract Administration Procedures (MILSCAP); Reporting of	30	NAFC-6225
7300.102A	Five-Year Defense Program Telecommunications Subsystem	5	NAFC-631
7300.103	Procedures for Recording Disbursements Citing Procurement Appropriations and Funds	4	NAFC-61

Part II (Cont'd)

Publication Number	Publication Title	Approximate Number of Pages	Responsible NAVCOMPT Office
7301.24	Administration of Successor M Accounts for the Military Personnel and Operation and Maintenance Appropriations	13	NAFC-61
Part III - NAVCOMPT Handbooks And Other FM Publications			
P-3006-1	Financial Management of Resources (Shore Activities)	250	NAFC-61
P-3013-1	Financial Management of Resources -- Fund Administration (Operating Forces)	300	NAFC-61
P-3013-2	Financial Management of Resources -- Operating Procedures (Operating Forces)	410	NAFC-61
P-3014-1	Financial Management of Resources -- Operations and Maintenance (Departmental Level)	200	NAFC-61
P-3062-1	Financial Management of Resources Part I -- RDT&E (Departmental Level Accounting)	90	NAFC-61
P-3062-2	Financial Management of Resources Part II -- RDT&E (Activity Level)	120	NAFC-61
P-3073	Afloat OPTAR Record Keeper's Guide	100	NAFC-61
P-2330	Accounting Handbook, Laundry Service, U.S. Naval Academy	80	NAFC-53
P-3519	Nonappropriated Fund General Financial Management Policies and Principles	85	NAFC-53
P-3520	Nonappropriated Fund Accounting Procedures for Nonappropriated Fund Activities	200	NAFC-53
P-3582	Financial Management Guidebook for Commanding Officers	50	NAFC-53

Part III (Cont'd)

Publication Number	Publication Title	Approximate Number of Pages	Responsible NAVCOMPT Office
P-3593	Midshipmen Store and Dairy Farm -- U.S. Naval Academy	230	NAFC-53
P-2060	Instructions for Reviewing and Processing Property Returns	100	NAFC-522
P-3064	Navy Wide General Ledger Account Structure	189	NAFC-61
P-3555	Procurement Accounting and Reporting System (PARS)	206	NAFC-612
P-3569	Military Personnel, Navy Financial Management System (MFS)	242	NAFC-61
P-815	Navy Regional Finance Office Procedures	450	NAFC-62108
P-1570	Military Construction Financial Management Handbook	300	NAFC-61
P-2412	Department of Navy Cost Information System	100	NAFC-631
P-3020	Midshipman Pay Manual	35	NAFC-411
P-3545	JUMPS Self-training Courses	1,100	NAFC-411
P-3546	JUMPS Self-training Courses	1,400	NAFC-411
P-3567	Navy JUMPS Payday Processing System Users' Manual	84	NAFC-411
P-6048	DOD Military Pay and Allowance Entitlements Manual	292	NAFC-411
P-2064	Administrative Examination Handbook	100	NAFC-2
P-2316	Management Handbook for Field Finance Activities	100	NAFC-2
P-3568	Financial Management Newsletter	2	NAFC-2

Part IV - Summary

	Number of Publications	Number of Pages
Part I - SECNAV Instructions	14	468
Part II - NAVCOMPT Instructions	25	994
Part III - Handbooks and Other	27	9,515
Totals	66	10,977

APPENDIX D

SPECIFICATIONS FOR PREPARATION OF CAMERA COPY

U. S. NAVY TRAVEL INSTRUCTIONS

NAVY COMPTROLLER MANUAL

JOINT TRAVEL REGULATIONS

SPECIFICATIONS FOR PREPARATION OF CAMERA COPY

Same Size Reproduction

Type Page Size: 38 picas overall width, 57 picas deep. IBM MTST/SC PR medium 10/12 justified.

Two columns per page; column width 18 picas each, 2 pica gutter, 38 picas overall. Running head on line one Press Roman bold 10 pt with a 3/4 point rule 1/16 inch below baseline of head the width of the image area. Title of volume on even pages flush right and the number of the first new paragraph on the page flush left. Title of Chapter on odd pages flush left and the number of the last paragraph number flush right.

First line of text starts on line 3, last line on 54; page number on line 57 flush outside in Press Roman bold 10 pt. Change numbers on line 57 on odd pages only, 2 picas to left of page number in 10 pt Press Roman medium.

TYPE FACES AND POSITIONS OF HEADS

Introduction

"Introduction" and volume title in 1652 caps centered over 2 columns; "to" between Introduction and volume title in 1252 lower case centered. Paragraph captions throughout introduction in 1252 caps centered over 2 columns. Subparagraph captions which appear in introduction Press Roman medium 10 pt caps. Use 3/4 point rule for illustration of paragraph numbering system, figures in Press Roman medium 10 pt.

CONTENTS PAGE

"Contents" in 3052 caps flush left. Volume number and title in 1252 caps flush left. "Chapter" in 1252 caps 1/2 inch indent. Chapter number, followed by a point, in 2452, centered under "Chapter". Chapter title in 1652 Caps and lower case, runover lines flush with first word of chapter title. Page number in 10 pt lower case Roman numeral, Press Roman bold, flush outside.

CHAPTER CONTENTS PAGE

Volume number and title in 1252 caps, flush left. Chapter and chapter title in 1452 caps flush left. Chapter number, followed by a colon, in 2452. Parts in 10 pt Press Roman medium caps 10/12, flush left. Part titles in 10 pt Press Roman medium caps, 5 picas from left margin, runover lines flush with first word of title. Section in caps and lower case, flush left; section title in caps indented 5 picas from left margin, runover lines flush with first word of title. Subsection in caps and lower case, flush left; subsection title in caps and lower case indented 5 picas from left margin, runover lines flush with first word of title. Paragraph titles indented 5 picas from left margin, caps and lower case Press Roman medium 10/12, runover lines indented 6 picas from left margin, followed by dot leaders, 2-pica space, and paragraph numbers in 10 pt Press Roman medium, flush right.

CHAPTERS

Chapter and number in 1252 caps center over 2 columns on line 2. Chapter title in 1652 caps center over 2 columns. 3/4 point rule width of image page, 1-line space below chapter title and 1-line space above part title. Part, letter, and title in 1452 caps center over 2 columns on line 5. Section caps and lower case with cap Roman numeral in 1452 with title in caps centered over 2 columns. Subsection in caps and lower case with Arabic number in Press Roman bold 10 pt with title in caps centered over 2 columns. Part, section, and subsection runover blocked with first word of title. Paragraph number and title in 10 pt Press Roman bold caps, number flush on left margin; title on same line indented 3 picas from mrgin; title runovers flush with first word of title; text in 10 pt Press Roman medium blocked (first line to be flush with left margin).

First subparagraph: Number and title in 10 pt caps Press Roman medium. Paragraph number in Arabic numerals flush left followed by a period; title to begin 2 picas from left margin on same line, terminated by a period, followed by remainder of paragraph run in, if no further subordination. If there is further subordination, title has no terminal punctuation and runovers are flush left.

Second subparagraph: Alphabetically identified by a lower case letter intended 1 pica from left margin with title to begin 3 picas from left margin in 10 pt Press Roman medium caps and lower case on same line underscored (title only not letter) terminated by a period and followed by text run in, if no further subordination of the paragraph. If there is further subordination, the title has no terminal punctuation and runovers are flush left.

Third subparagraph: Paragraph number in Arabic numerals enclosed in parentheses, follow style for second subparagraph.

Fourth subparagraph: Alphabetically identified by a lower case letter in parentheses, follow style in second subparagraph.

Itemization indented 1 pica, identified by Arabic numerals followed by a period, text beginning on same line indented 3 picas from left margin, runovers flush with first words.

Text following itemization 1-line space between last line of last itemization and first line of text. Text will be blocked flush left. Flush text with hanging indents will be indented 1 pica. If there is a subordinate entry with a hanging indent, the subordinate entry will be indented 2 picas from left margin with a hanging indent of 1 pica.

Leave 1-line space below all paragraph heads not run in. Leave 1-line space above all paragraph heads except when the head falls at the top of a column.

PAGE MAKE-UP SPECIFICATIONS

Chapters begin on new odd pages with no running head. Parts begin on new odd pages with a running head. Sections and subsections do not begin on new pages. These heads are page width with a blank space above and below. Avoid ending a column with the first line of a paragraph or beginning a column with the last line of a paragraph. All pages will be filled from lines 3 to 53 inclusive except last page of a chapter or part which obviously may be short. Change pages which are shortened by the change and are not to affect the page following will of necessity be short. Equalize column lengths by varying the space over and under paragraph heads and illustrations.

Illustrations will be either 1-column width or page width and will be inserted where indicated and will have a minimum of 1 line space above and below. Page-width illustrations will be placed at the top or bottom of the page where possible.

POSITIONING OF ILLUSTRATIONS IN RELATION TO RELATED TEXT

Illustrations must not precede related text. Position illustrations and related text in the following order.

1. on same page with related text,

2. on page facing related text,

3. on page following related text. When illustration is on page following text and all related text is concluded on the preceding page, insert legend line immediately following the last paragraph of related text, i.e., See Illustration on Page 0-00 (with no terminal punctuation). The legend line will be in Press Roman bold 10 pt, with 1 open space above and below and indented 1 pica from left margin.

Quoted matter in text when not run into the paragraph with text will be enclosed in quotes indented 1 pica from left margin with a 2-pica indent for paragraph indentions in the quoted matter.

When change pages run over and following page is not to be changed, the page number will be the same as the page with the addition of -1, -2, -3, etc., for as many pages as are necessary for the excess matter. (Example: page 2-12 runs over. Runover pages will be numbered 2-12-1, 2-12-2, 2-12-3, etc.)

PRO FORMA ENTRIES

Entries will be set full measure across the page in Press Roman medium 10 pt caps and lower case. Follow copy literally, making indentions 2 and 4 picas. "(A)" and "(B)" entries to be indented 4 picas.

TABLES

Tables will be typed in Press Roman medium 10/12 and may be ruled or not ruled and will be column width, page width, or centered left to right on page, use dot leaders. Superior figures for footnote reference numbers to be set in mathematical font. Footnotes to be typed in Press Roman medium 8/10.

NUMBERING SYSTEM

Volumes - Arabic Chapters - Arabic Parts - Cap letters Sections - Roman
Subsections - Arabic
Paragraphs - 6 digits for NAVCOMPT Manual - 5 or 6 alpha-numeric digits for JTR.

APPENDIX

Appendix and letter designator in 1252 caps centered on line 1. Appendix title in 1652 caps centered on next available line. 3/4 point rule width of image page, 1-line space below title of appendix.

Note: These specifications apply essentially to Joint Travel Regulations and NAVCOMPT Manual. See following page for variation for Joint Travel Regulations.

Specifications for the Joint Travel Regulations which vary from the specifications for Navy Comptroller Manual.

Paragraph number and title in 10 pt. Press Roman bold caps, alphanumeric identification flush on left margin; title on same line indented 4 picas from margin; title runovers flush with first word of title; text to be blocked (first line to be flushed with left margin).

APPENDIX E

RESPONSES OF INTERVIEWEES

Note: The numbers in parenthesis preceding or following the responses of interviewees in each of the Parts of this Appendix are computer code numbers assigned by EG&G for audit verification purposes.

APPENDIX E

RESPONSES OF INTERVIEWEES

PART A

ADEQUACY OF INDEX TO THE NAVCOMPT MANUAL AND RELATED PUBLICATIONS AS TO COMPLETENESS AND CROSS REFERENCES.

ADEQUACY OF INDEX

COMMENTS FOLLOWING A RESPONSE OF 'NEEDS IMPROVEMENT'

> NEED COMPREHENSIVE MASTER INDEX [01]
> COULD TRAIN OWN PEOPLE, BUT THEY PROCESS REPORTING FROM SO MANY OTHER SOURCES, NEED TO KNOW WHERE THEY (SOURCES) ARE GETTING THEIR INFO [01]

> A MASTER INDEX & CROSS REFERENCE IS BADLY NEEDED [02]
> EXAMPLE: VOL IV USED TO HAVE AN INDEX WHICH WAS QUITE DETAILED IN LAYMAN'S TERMS--WAS ELIMINATED YEARS AGO [02]
> NOW HAS A MORE GENERALIZED CHAPTER INDEX--DIFFICULT FOR NEW PEOPLE TO USE PARTICULARLY WHEN SUBJECT MATTER IS NOT CONFINED TO A SINGLE CHAPTER [02]

> DIFFICULT TO UNDERSTAND [03]
> USABLE ONLY BY VERY KNOWLEDGEABLE USERS [03]
> LOTS OF THINGS NOT IN TABLE OF CONTENTS [03]
> NEED COMPREHENSIVE INDEX--WHAT'S IN THE VARIOUS CHAPTERS [03]
> (I THINK HE'S TALKING ABOUT TABLES OF CONTENTS, NOT INDEXES) [03]

> TERRIBLE--NOT UPDATED [04]
> INCREDIBLE AMOUNT OF TIME SPENT FINDING SOMETHING [04]

> NEEDS A MASTER INDEX AND CROSS REFERENCE [05]

> A MASTER INDEX/CROSS REF WOULD BE A BIG HELP [06]

> VERY SELDOM CAN FIND AN ANSWER TO WHAT ONE IS LOOKING FOR WITHOUT EXTENSIVE SEARCH [07]
> IT IS NOW BAD [07]
> BADLY NEED A MASTER INDEX & CROSS REF [07]

> FOR THIS INTERVIEWEE INDEXES ARE ADEQUATE--RARELY USES INDEXES--KNOWS WHERE EVERYTHING IS [08]
> NOT ADEQUATE--VOL II ESPECIALLY--NEED MORE DETAILED BREAKDOWN OF TOPICS [08]
> NOT ADEQUATE--JTR/NTI SHOULD BE CROSS-REFERENCED--NOT CURRENT [08]
> EXAMPLE OF INCOMPLETENESS: FIELD DUTY--NOT IN INDEX, NOT AS 'DUTY IN THE FIELD', NOT AS 'MANEUVERS' [08]
> WITHIN JTR--CROSS REFERENCS ARE ALSO INADEQUATE--NEED CROSS REF TO NTI TO GET MORE DETAIL [08]
> JTR VOL II--INDEX INADEQUATE--NOT WELL THOUGHT OUT--NOT ALPHABETICAL [08]

> VOL IV HAS NO INDEX NOW [09]
> TABLE OF CONTENTS NOT ALWAYS A GOOD INDICATOR OF ACTUAL CONTENT [09]
> NEED A GOOD INDEX [09]

> QUITE OFTEN HAS TO GO PAGE BY PAGE TO FIND WHAT IS NEEDED [10]
> A MASTER INDEX/CROSS-REF NEEDED [10]

> INCOMPLETE IN A LOT OF AREAS [11]
> SINCE RMS CAME INTO BEING THE MANUALS HAVE FALLEN BEHIND--NEED A PROGRAM TO GET THEM BACK ON TRACK [11]

> MORE DETAILED INDEXING BY SUBJECT WOULD BE HELPFUL IN THE NAVCOMPT MANUALS [12]

> NOT WORTH A DAMN! [13]

> NOT WORTH A DAMN! [14]

> NOT WORTH A DAMN! [15]
> COMPREHENSIVE INDEX & CROSS-REF BADLY NEEDED [15]

> DON'T USE INDEX IN BACK--DO USE CHAPTER BREAKDOWNS IN FRONT [16]
> HAVE TO HAVE JUST THE RIGHT TERM TO FIND THE RIGHT MATERIAL [16]

N, [17]

> NEEDS OVERALL INDEX [18]
> USED TO HAVE VOL IV INDEX--EXCELLENT--NO LONGER THERE [18]

> NEEDS OVERALL INDEX [19]

> NEED AN OVERALL INDEX; THERE IS NO OVERALL INDEX [20]
> A REAL NEED FOR A GOOD CROSS REF SYSTEM, BY SUBJECT, KEY WORDS [20]

> THEY HAVE DEVELOPED LOCAL INDEX (FOR II AND III)--SENT TO NAVCOMPT--BECAME PART OF THE MANUAL [21]
> NEED BY TOPIC OR THEME--ESP WHERE INFO IS SPREAD THRU THE BOOKS [21]
> HE KEEPS A NOTEBOOK [21]
> ALSO NEED CHANGES TO INDEX [21]

> A MORE DETAILED INDEX & CROSS REFERENCE WOULD BE HELPFUL [22]
> THIS OFFICE TOOK 1 VOLUME AND MADE JUST SUCH AN INDEX [22]
> NOT ONLY MANUALS, BUT HANDBOOKS & NOTICES, INSTRUCTIONS, ETC [22]

> DON'T HAVE GOOD INDEX [23]
> DON'T HAVE GOOD CROSS REFERENCES [23]
> SHOULDN'T HAVE SO MUCH CROSS-REFERENCING [23]

> NEEDS INDEX BASED ON TERMS USED AT ACTIVITY LEVEL [24]

> PAYPERSMAN INDEX NEEDS IMPROVEMENT [25]
> NAVCOMPT MANUAL ETC ALSO NEEDS A MASTER INDEX TO IMPROVE ITS USABILITY [25]
> SECNAV & NMPC/BUPERS ALSO PROVIDES GUIDANCE TO DISBURSING--THESE SHOULD BE CRANKED INTO INDEX [25]
> ALSO APPLIES TO SELECTED OPNAV INSTRS--E.G. SELECTIVE REENLISTMENT BONUSES (SRB) [25]

> NEEDS OVERALL INDEX [27]
> USED TO HAVE VOL IV INDEX--EXCELLENT--NO LONGER THERE [27]

> NEEDS OVERALL INDEX [28]

> II--DIFFICULT FOR STUDENT [29]
> COMPLETE INDEX WOULD HELP [29]

> DON'T USE INDEXES [30]
> DIDN'T KNOW ALL VOLS DIDN'T HAVE INDEX [30]

> CONSTANTLY NEEDS UPDATE [31]
> NEEDS EXPANSION [31]
> MASTER INDEX LIST WOULD BE HELPFUL, KEY WORD HELPFUL [31]

> GENERALLY ADEQUATE BUT COULD BE BETTER [32]

> MASTER INDEX/CROSS-REF NEEDED & WOULD HELP [33]

> MASTER INDEX & CROSS REFERENCE NEEDED AND WOULD HELP [34]

> MASTER INDEX & CROSS REFERENCE NEEDED--WOULD HELP [35]

> IV--NO INDEX [36]
> YOU CAN SPEND DAYS IF YOU DON'T KNOW WHAT YOU'RE LOOKING FOR [36]
> NECESSARY TO HAVE EVERYTHING SO SPREAD OUT? [36]
> MASTER INDEX BADLY NEEDED [36]
> PUT INDEX IN ALPHA ORDER [36]

> IV--NO INDEX [37]
> MASTER INDEX BADLY NEEDED [37]
CAN SPEND DAYS IF YOU DON'T KNOW WHAT YOU'RE LOOKING FOR [37]
> INDEX IN ALPHA ORDER [37]

> IV--NO INDEX [38]

> *INDEX NEEDS TO INCLUDE SECTION ON FORMS CONTAINED IN EACH VOLUME* [39]
> (INCLUDED EXTENSIVE NOTES ON RECENT PROBLEMS--MM) [39]
> A CROSS-REFERENCE FOLLOWING A TOPIC DISCUSSION TO IDENTIFY WHERE ADDITIONAL INFORMATION ON THE SAME TOPIC CAN BE FOUND [39]
> NEED A CROSS REFERENCING INDEX FOR MANUAL, I.E., TIE IID & IIIE TOGETHER [39]

> INCOMPLETE/INADEQUATE--NEEDS EXPANSION [40]

> INDEX NEVER CHANGED [41]
> MATERIAL SCATTERED--NEED MASTER INDEX--DETAILED [41]

> CONCISE COMPREHENSIVE INDEX TO COVER MANUALS/HANDBOOKS AND DIRECTIVES [42]
> KEEPS OWN CROSS-REFERENCE INDEX [42]
> FOREIGN MILI PROGRAMS INFORMATION SCATTERED, SHOULD BE CONSOLIDATED [42]

> GROSSLY INADEQUATE [43]
> CONCISE COMPREHENSIVE INDEX TO COVER MANUALS/HANDBOOKS AND DIRECTIVES [43]

> A MASTER INDEX/CROSS-REF IS BADLY NEEDED [44]
> HAS DEVELOPED ONE LOCALLY FOR READY REF & USE [44]

> 3013'S & 3073 LISTS ONLY VERY MAJOR TOPICS [45]
> 1459 INDEX NEEDED [45]

> NAVCOMPT MANUALS--DIFFERENT PHRASEOLOGY ASSOCIATED WITH SAME TOPICS--OTHER MANUALS [45]
> ALSO LACK OF ADEQUACY CROSS-REFERENCING [45]

> WORTHLESS [46]
> NEVER IN CHAPTER YOU THINK IT'S IN [46]

> NO INDEX SEVERAL HANDBOOKS, MANUALS (6084....) [47]
> GOOD MAJOR CROSS-REFERENCE INDEX NEEDED FOR ALL HANDBOOKS/MANUALS [47]
> CROSS REFERENCE NTI TO JTR [47]

> INDEX IS NOT WORTH A DAMN NOW--INADEQUATE NOW [48]
> MASTER INDEX & CROSS-REFERENCE BADLY NEEDED [48]

> NEED EXISTS FOR A MASTER INDEX & CROSS-REF [49]

> SHOULD REFERENCE FORMS USED IN TEXT [50]

> SHOULD REFERENCE FORMS USED IN TEXT [51]
> SUBJECT INDEX BE BROADER IN SCOPE SO READER CAN LOCATE MATERIAL [51]

> HORRIBLE [52]
> IV HAS NO INDEX [52]
> INFO CUTS ACROSS VOLS [52]
> LOT OF TIME FUMBLING [52]
> NEED MASTER INDEX, INCL HDBKS [52]

> DEFINITELY! [54]
> NEED A MASTER INDEX & CROSS REFERENCE [54]

> DEFINITELY! [55]
> NEED A MASTER INDEX/CROSS-REF [55]

> IF ONE HAS HANDS-ON EXPERIENCE THE INDEX/CROSS-REFS ARE OK [56]
> HOWEVER, STUDENTS AND ENLISTED PERSONNEL ON STATION WITHOUT BACKGROUND HAVE GREAT DIFFICULTY [56]
> IT NEEDS TO BE SIMPLIFIED FOR THEM [56]
> THE LOWER LEVEL PERSONNEL ARE THE MAJORITY OF USERS PERCENTAGE-WISE THROUGHOUT THE NAVY [56]

> INDEXES NEVER KEPT UP TO DATE WITH CHANGES OF REFERENCE MATERIAL [57]

> HAVE TO KNOW WHICH CHAPTER (TO USE CHAPTER TABLE OF CONTENTS) [58]
> AT ONE POINT MADE UP OWN INDEX [58]
> GET MORE OUT OF STARTING WITH MAIN PARAGRAPH AND TRACKING CROSS REFERENCES [58]

> THINGS ARE DIFFICULT TO LOCATE [59]
> E.G. CONSULTANT FEES--NOT IN INDEX [59]
> NOTE: SUPPLY MANUALS MORE DETAILED, MORE TO THE POINT [59]

> NEED A MASTER INDEX/CROSS-REF [60]
> WOULD BE A BIG HELP PARTIC TO BEGINNER [60]

> NEED A MASTER INDEX/CROSS-REF--WOULD BE A BIG HELP PARTIC TO BEGINNERS [61]

> 'POOR'--A MASTER INDEX & CROSS REF IS NEEDED BADLY TO GET WHAT'S NEEDED QUICKLY [62]

> HARD TO FIND WHAT ONE IS LOOKING FOR--BADLY NEED A GOOD MASTER INDEX [63]

> GROSSLY INADEQUATE--WOULD ENCOURAGE NAVCOMPT TO DEVELOP A COMPREHENSIVE INDEX [64]

> A MASTER INDEX & CROSS REF WOULD BE A BIG HELP [65]

> WOULD LIKE AN INDEX BY FUNCTIONAL AREA THAT COVERS ALL OF NAVCOMPT PUBS COVERED IN THIS STUDY [66]

> VOLS II, III, VII ARE OK--IV HAS NO INDEX [67]
> FAVORS MASTER INDEX WITH CONSTANT UPDATING [67]

> NONE IN IV [69]

> VERY HARD TO FIND INFO [71]
> COULD USE MASTER INDEX [71]

> INDEX WOULD SAVE A LOT OF TIME [73]
> MASTER INDEX GOOD IDEA [73]
> PROBLEM KNOWING IF YOU MISSED A REFERENCE WHEN YOU'RE LOOKING FOR SOMETHING [73]

> IV, DODPM NEED INDEX [74]
> COMPREHENSIVE, COMPLETE INDEX [74]

> IV, DODPM NEED INDEX [75]
> COMPREHENSIVE, COMPLETE INDEX [75]

> 3013 DOESN'T HAVE INDEX [76]
> NEED A GOOD INDEX--SPECIFICS [76]
> SENSIBLE TO HAVE MASTER INDEX [76]

> 3013 DOESN'T HAVE INDEX [77]
> NEED A GOOD INDEX WITH SPECIFICS [77]
> SENSIBLE TO HAVE MASTER INDEX [77]

> INDEX WOULD SAVE TIME [78]
> MASTER INDEX FINE [78]
> USING HDBKS, SOMETIMES HAVE TROUBLE THINKING OF RIGHT TOPIC--INDEX WOULD HELP [78]

ADEQUACY OF INDEX

COMMENTS FOLLOWING A RESPONSE OF 'EXCELLENT'

> INDEX COULD USE IMPROVEMENT IN PER DIEMS OF OTHER COUNTRIES [26]

> NO PROBLEMS BECAUSE HE KNOWS THE BOOKS SO WELL [53]

> MAJOR TOPICS EASY TO FIND [68]
> SUB-TOPICS NOT AS EASY TO FIND [68]
> MASTER INDEX WOULD BE 'TERRIFIC' [68]

> PAYROLL AREAS ARE SPELLED OUT QUITE WELL--GENERALLY REFERENCED TO FPM [70]

> REFERS TO VOL IV [72]
> PAYPERS/DODPM--DON'T USE INDEX--1ST CLASS USES THESE [72]

APPENDIX E

RESPONSES OF INTERVIEWEES

PART B

HOW INFORMATION IN THE MANUAL OR HANDBOOKS IS UPDATED.

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS INDICATING GENERAL APPROVAL OF CURRENT STATUS

[12]
> ADEQUATE

[20]
> OK NOW

[49]
> OK AS IS

[52]
> MAY HAVE DELAY--BUT IF THERE'S TIME FACTOR, THEN SHE GETS A MESSAGE

[54]
> FEELS 3006-1 IS OK AND CURRENT

[55]
> FEELS 3006-1 IS OK AND CURRENT

[59]
> NEVER HAD A PROBLEM

[63]
> HARD COPY CHGS ARE ADEQUATE FOR SCHOOL USES--URGENCY OF CHANGES NOT CRITICAL

[69]
> NOT MUCH PROBLEM
> CHANGES RUN A MONTH BEHIND--BUT THERE ARE ADVANCE NOTICES

[71]
> UIC BOOK VERY EFFECTIVE

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

GENERAL COMMENTS ABOUT DELAYS, FASTER UPDATING, LACK OF TIMELINESS, ETC.

[03]
> BETTER AND FASTER

[05]
> WOULD LIKE TO SEE IT MORE CURRENT--MORE ADVANCE NOTICE OF CHANGES BY MESSAGE TO PAYROLL OFFICES NEEDED
> INFO IS NOT TIMELY

[06]
> NEED TO PUT EFFORT INTO UPDATING THE INFO FASTER

[07]
> DOES NOT GET ALL CHANGES & THEY ARE QUITE OLD WHEN THEY GET THEM

[09]
> CHANGES/UPDATES SHOULD BE MUCH MORE TIMELY
> THERE ARE INFINITE NUMBER OF OTHER EXAMPLES WHICH COULD BE CITED

[17]
> WOULD LIKE TO SEE MANUALS UPDATED MORE TIMELY

[26]
> SLOW IN UPDATE

[31]
> KEEP UPDATED

[33]
> NEED FASTER UPDATING; CHANGES ARE VERY SLOW

[34]
> NEED FASTER UPDATING; CHANGES ARE VERY SLOW

[35]
> NEED FASTER UPDATING

[41]
> SLOW

[44]
> IMPROVE TIMELINESS OF UPDATES WITH RESPECT TO GETTING NEW IDEAS ACCEPTED AND CRANKED IN

[47]
> UPDATING OF FORMAL CHANGES SUPER SLOW

[48]
> CHANGES ARE NOT GETTING PUBLISHED IN A TIMELY MANNER
> THEY SHOULD GET INTO PUBLISHED FORM (HARD COPY) IN A REASONABLE PERIOD
> SOME TAKE AN INORDINATELY LONG TIME

[58]
> MORE TIMELY MANNER

[62]
> UPDATES ARE NOT TIMELY ENOUGH TO THE FIELD

[70]
> E.G. VOLUNTARY ALLOTMENTS--IN FPM (22 JULY 80 IN FEDERAL REGISTER) ABOUT TWO MONTHS AND STILL NOT IN THE NAVCOMPT
> PROCESSING MAJOR CHANGES ARE SLOW IN NAVCOMPT MANUALS
> NOTHING ON MILITARY LEAVE FOR 4-6 WEEKS
> SOMETIMES HAVE TO WAIT ON NEWSPAPER STORIES TO GET INFO--OFTEN HAVE TO RELY ON VERBAL GUIDANCE FROM NAVCOMPT

[72]
> LATE--6-7 MOS.

[73]
> LATE--SOMETIMES CAUSES PROBLEMS

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS ON GETTING HARD COPY CHANGES,
DELAY BETWEEN NOTICES AND HARD COPY, ETC.

[02]
> CERTAIN CHANGES HAVE BEEN PUBLISHED VIA NOTICES OR INSTRS THAT HAVE NEVER BEEN INCORPORATED INTO THE MANUAL TO DATE
> REPORTS TO NAVCOMPT (MOST PERT) REPORTS THAT ARE REQUIRED ARE BASED ON THESE NOTICES OR INSTRS
> SHOULD NOT BE SENDING IN REPORTS THAT ARE REQUIRED BY NOTICES/INSTRS THAT DATE BACK TO 1976 OR SOME YEARS BACK

[03]
> 6 MOS TO 2 YEARS--CHANGE AFTER NOTICE; SOMETIMES NEVER

[04]
> MUCH TOO DELAYED--AT LEAST 6 MOS.

[08]
> MAY BE 6-12 MOS BETWEEN INITIAL NOTIFICATION & FINAL CHANGE

[09]
> CHANGES/UPDATES SHOULD BE MUCH MORE TIMELY
> E.G., DODPM (6048) UNDER VARIABLE SPECIAL PAY (VSP) FOR MEDICAL OFFICERS
> E.G., VARIABLE SPECIAL PAY (VSP) FOR MEDICAL OFFICERS WAS CHANGED 1 OCT 80
> THERE ARE MESSAGES ADVISING OF THE CHANGES, BUT THE MANUAL (DODPM) STILL CITES THE OLD LAW THAT EXPIRED 30 SEPT 80

[13]
> CHANGES TO VOLS I & II OF JTR ARE TIME CONSUMING & IN MANY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E., PER DIEM RATES, HIGH COST AREAS, OVERSEAS RATES
> PREVIOUS RATES ARE ELIMINATED UITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[14]
> CHANGES TO JTR-1/2 ARE TIME CONSUMING & IN MAY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E. PER DIEM RATES, HIGH COST AREAS, OVERSEES RATES
> PREVIOUS RATES ARE ELIMINATED WITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[15]
> CHANGES TO JTR-I/II ARE TIME CONSUMING & IN MANY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E. PER DIEM RATES, HIGH COST AREAS, OVERSEAS RATES
> PREVIOUS RATES ARE ELIMINATED WITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[17]
> MANUALS ARE NOT KEPT UP TO DATE--CHANGES RECEIVED IN MANY CASES A YEAR AFTER EFFECTIVE

[21]
> BETWEEN LETTER AND FINAL CHANGE TO MANUAL--INORDINATE TIME--3, 6, 9 MOS.

[23]
> MANUAL BEHIND ACTUAL CHANGES

[29]
> UPDATES SHOULD PRECEDE THE CHANGE

[31]
> SOMETIMES GET ADVANCES NOTICES--TAKES TOO LONG TO GET INTO MANUALS (NAVCOMPT SAYS IT TAKES LONG TO GO THRU CHOP CHAIN)
> AVERAGE TIME OF UPDATE IS AROUND 3 MONTHS
> TAKES FOREVER TO GET DIRECTION INTO MANUAL--E.G. COMPGEN NOV 27, 1979 (FRAUD WASTE, ABUSE)--FINALLY GOT INTO MANUAL (CH 258 1-29-81) MONTHS LATER
> NAVCOMPT NOTICE 7000--6 DEC 78--CASH MANAGEMENT--CHANGE 254 DIDN'T GET PUBLISHED TILL AUG 26, 1980--ALMOST 2 YRS TO GET INTO VOL IV

[46]
> 7300 SERIES NAVCOMPT NOTICES LONG LEAD TIME BEFORE REFLECTED IN MANUALS

[56]
> NAVCOMPT 'NOTICE' METHOD PUTS OUT CHANGES TO MANUAL
> BUT IT TAKES A LONG TIME FOR NAVCOMPT NOTICES TO APPEAR AS HARD COPY FORMAL CHANGES
> RESULT: REQUIRES KEEPING THE TWO PARALLEL SYSTEMS

[57]
> WITHIN 30 DAYS AFTER MESSAGE OR NOTICE IS PUBLISHED, INFORMATION SHOULD BE INCORPORATED INTO MANUAL
> CURRENTLY INFORMATION LOSES ITS CREDIBILITY

[64]
> SEEMS TO BE TOO LONG A TIME LAG BETWEEN TIME STATION FIRST GETS INFO ON A CHANGE 'IN PROCESS' VIA DIRECTIVE OR INSTR TO TIME FORMAL CHG COMES OUT

[65]
> THE LAG TIME BETWEEN INITIAL UPDATE/CHG NOTICE & HARD COPY CHANGE SEEMS TO BE TOO LONG

[67]
> CHANGES ESTABLISHED IN NOTICES AND INSTRUCTIONS SHOULD BE INCORPORATED IN THE MANUAL ASAP--E.G. 2270, UMR, VOL III REPORTS

[68]
> MSG CHANGE (CASH MGMT) TOOK TOO LONG A TIME TO GET INTO MANUAL
> MILS BILLS MANUAL (DOD) CHANGES OFTEN TAKE TOO LONG TO GET INTO NAVCOMPT

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS ON SPECIFIC CONTENT (VOLUMES, HANDBOOKS, ETC.)

[01]
> NEED TO UPDATE LANGUAGE--E.G., MANUAL PROCEDURE (OLD) IN MANUAL--CURRENT PROCEDURE IS COMPUTER MATCH (VOL III-34426.3)

[10]
> VOL VI IS VERY OLD AND NEEDS COMPLETE REVIEW/UPDATING--SOME PAGES ARE DATED 1953!
> PAR 039511 VOL III RE ARPA IS 1962 EXAMPLE AND WAY OUT OF DATE
> MOST OF NAVY HAS BEEN DOING EXPENSE ACCOUNTING SINCE 1968 BUT MANUAL REFERS TO ALLOTMENT ACCOUNTING.

[29]
> 3013/3073--SO OUTDATED THEY'RE UNUSABLE

[40]
> P-3006 OUT OF DATE--LAST REWRITE DATED MARCH 1976--DOES NOT KNOW OF ANY CHANGES THAT HAVE BEEN ISSUED

[44]
> 3006-1 & 3014-1 OUT OF DATE:
> --INPUTS TO UPDATE WERE REQUESTED BY NAVCOMPT ABOUT A YEAR AGO
> --FORMAL CHANGES/UPDATES NOT YET PUBLISHED
> --THEY HAVE THE NOTICES OR LETTER CHANGES--INEFFICIENT/INEFFECTIVE/DIFFICULT TO KEEP ABREAST OF DIRECTIVES BEHIND THE PROCEDURES
> --BOTH ISSUED IN MAR 76 BUT NEVER HAD ANY FORMAL CHANGE

[46]
> SEVERAL AREAS OF 3006 ARE OUT OF DATE AND SHOULD BE UPDATED

[53]
> 3006--MORE FREQUENT MAINTENANCE

[56]
> THE INACCURACIES IN THE HANDBOOKS ARE SO EXTENSIVE IT HURTS NAVCOMPTS CREDIBILITY
> THE CHANGES HAVE BEEN PUT OUT BUT LACK OF INCORPORATION INTO THE HANDBOOKS CAUSES THE INSTRUCTORS AGONY TO PROVIDE ALL THE MANY CHANGES TO THE STUDENTS FOR COURSE ACCURACY

[60]
> 3013-2 'IS NOT UPDATED BUT IT IS OUTDATED'--DATE IS NOW 12/74

[61]
> IN 1980 REC'D INTERIM CHANGE PERTAINING TO THRESHOLDS (3013-2 PAGE 4-209); PERTAINING TO 'AGED UNFILLED ORDER LISTING' (P. 4-83)
> SUMMARY FILLED ORDERS EXPENDITURES DIFFERENCE LISTING P.4-117
> FOR STUDENT USE, THESE CHANGES SHOULD HAVE BEEN PUBLISHED INTO A REVISED EDITION

[63]
> 3073 (AUG 71) IS OBSOLETE IN PART--SCHOOL DOES NOT GET CHANGES

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS ABOUT A NEED FOR ADVANCE NOTICE

[05]
> WOULD LIKE TO SEE IT MORE CURRENT--MORE ADVANCE NOTICE OF CHANGES BY MESSAGE TO PAYROLL OFFICES NEEDED

[32]
> EFFECTIVE DATE OF NOTICES & INSTRUCTIONS VS DATE OF ISSUANCE IS A PROBLEM

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS REFLECTING A SPECIAL NEED

[09]

> ONE CANNOT EFFECTIVELY TEACH FROM MSGS, INSTRUCTIONS, & NOTICES--THE MANUALS ARE THE DAY-TO-DAY READY REFERENCES

> EXAMS ARE 'OPEN BOOK' AND ARE THE SOURCE REFERENCES

> NAVCOMPT SHOULD PROVIDE THE CHANGES IN A FORMAT THAT COULD BE INCORPORATED INTO THE MANUALS AHEAD OF FLEET DISTRIBUTION SO NSCS CAN TEACH BASED ON AN EFFECTIVE DATE OF CHANGE

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

COMMENTS ABOUT INCORPORATION OF CHANGES

[13]
> CHANGES TO VOLS I & II OF JTR ARE TIME CONSUMING & IN MANY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E., PER DIEM RATES, HIGH COST AREAS, OVERSEAS RATES
> PREVIOUS RATES ARE ELIMINATED UITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[14]
> CHANGES TO JTR-1/2 ARE TIME CONSUMING & IN MAY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E. PER DIEM RATES, HIGH COST AREAS, OVERSEES RATES
> PREVIOUS RATES ARE ELIMINATED WITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[15]
> CHANGES TO JTR-I/II ARE TIME CONSUMING & IN MANY CASES COME IN SO LATE THAT IT IS OUT OF DATE--I.E. PER DIEM RATES, HIGH COST AREAS, OVERSEAS RATES
> PREVIOUS RATES ARE ELIMINATED WITH UPDATED CHANGES BEFORE ALL SETTLEMENTS BUT OFFICE MUST KEEP OLD RATES ON FILE TO COMPUTE CLAIMS & MAINTAIN A RECORD FILE

[23]
> NEED TO LOOK AT SEVERAL PLACES--MANUAL/3006/INSTRUCTIONS/ETC

[26]
> JTR--USE OF PEN/INK CHANGES IS DIFFICULT, PARTICULARLY IN JTR

[31]
> PEN/INK CHANGES BECOME TOO CONFUSING AFTER A NUMBER OF SUCH CHANGES TO ONE AREA OF MANUAL

[42]
> INCORPORATION OF CHANGES INTO THE MANUALS/HANDBOOKS IS EXTREMELY CUMBERSOME AFTER ORIGINAL NOTIFICATION

[43]
> INCORPORATION OF CHANGES INTO THE MANUALS/HDBKS IS EXTREMELY CUMBERSOME AFTER ORIGINAL NOTIFICATION

IDEAS TO IMPROVE HOW THE INFORMATION IS UPDATED

GENERAL AND MISCELLANEOUS COMMENTS

[01]
> CODES--OVERLAPPING DATA BETWEEN NAVCOMPT AND NAVSUP BOOKS--NAVSUP PUBS UPDATED QUICKER--WHY?

[03]
> TECHNICIANS WILL RUN WITH PROCEDURE IN MANUAL--WILL NOT RESEARCH INSTRUCTIONS

[07]
> WOULD LIKE TO SEE NAVCOMPT BULLETIN USED TO IDENTIFY RECENT CHANGES TO MANUAL/HDBKS
> LIST INSTRS/DIR ISSUED & SUBJECTS IN SUCH BULLETINS

[08]
> NOTIFICATION SHOULD GIVE DATE OF CHANGE

[11]
> NEED TO PUT A MORITORIUM ON CHANGES TO THE SYSTEM AND GET THE SYSTEM IMPLEMENTED--SETTLE DOWN!
> IDA, CAB, NETFIMS ARE EXAMPLES--STOP WHERE WE ARE NOW AND GET THESE WORKING!

[13]
> SYSTEM IS ARCHAIC

[14]
> SYSTEM IS ARCHAIC

[15]
> SYSTEM IS ARCHAIC

[16]
> HAS HAD OCCASIONS WHERE CONTENT OVERLAPS--THAT IS, CAN'T JUST PULL OLD PAGE & PUT IN NEW

[26]
> JTR--TOO MANY MSG CHANGES--UNDERSTAND LEGISLATION CHANGES

[29]
> LAST TO KNOW

[30]
> CHANGE PAGES IN ALL CASES
> ALL CHANGES CLEARED THRU CENTRAL AUTHORITY--ONE POINT
> DON'T KNOW WHO TO CALL TO GET AUTHORITATIVE ANSWERS

[33]
> TIME OF YEAR TO CHANGE COST ACCT CODE SHOULD PRECEDE BEGINNING OF THE NEW FISCAL YEAR

[34]
> TIME OF YEAR TO CHANGE COST ACCT CODE SHOULD PRECEDE BEGINNING OF NEW FISCAL YEAR

[35]
> TIME TO CHANGE COST ACCT CODE SHOULD PRECEDE BEGINNING OF NEW FISCAL YEAR

[43]
> INDEX SHOULD BE SCANNED FOR UPDATING AS OFTEN AS THE MANUAL/HANDBOOKS

[45]
> ALL MANUALS/HDBKS CHANGES DO NOT INCORPORATE CORRECTIONS TO ALL PERTINENT AREAS MOST OF TIME
> NAVCOMPT SHOULD ENCOURAGE AND SOLICIT USER INPUTS

[48]
> RE HDBKS: REASONABLY SATISFIED EVEN THO THEY ARE OUT OF DATE--WE HAVE NOTICES/INSTR THAT STATE CHANGES THAT WE'VE IMPLEMENTED

[49]
> 3062-2 RDT&E (VERY MINOR USE)--HAS CHANGES ISSUED TO THIS BY NAVCOMPT--CONSIDERS IT CURRENT WITH CHANGES REC'D VIA NOTICES ETC.

[50]
> NEED ACCOMPANYING EXPLANATIONS FROM APPLICABLE SYSCOMS TO IMPLEMENT CHANGES

[51]
> PUBLISH PROPOSED CHANGES TO FIELD ACTIVITIES & SOLICIT COMMENTS ON IMPACT--SIMILAR TO FEDERAL PERSONNEL MANUAL PROCESS

[56]
> NAVSUP SENDS OUT 'ADVANCE CHANGE' TO SCHOOL--PEOPLE COME TO SCHOOL TO EXPLAIN 'HOW IT'S GOING TO HAPPEN' & GIVE LEAD TIME

[57]
> DIFFICULT FOR NEW PEOPLE--TELL THEM 'FORGET THIS PART OF THE MANUAL--IT'S OUTDATED, BUT THIS NEXT PART IS OK'

[61]
> STUDENTS DO NOT HAVE BENEFIT OF THE NOTICE BUT HAVE TO RELY ON INSTRUCTOR TO BE UP TO DATE

[66]
> CHANGE NOTICES DO NOT ALWAYS SPECIFY CANCELLATION DATE--THEY SHOULD

[71]
> HDBKS--DON'T KNOW IF UPDATED OR NOT

[76]
> HANDBOOKS ARE NOT BEING UPDATED CURRENTLY
> TIMELY HARD COPY CHANGES SHOULD BE ISSUED--NOT NAVCOMPT LETTERS (E.G., FUND CODES)

[77]
> HANDBOOKS--NEED PERIODIC, ACCURATE CHANGES--NOT LETTERS (E.G. FUND CODES)

APPENDIX E

RESPONSES OF INTERVIEWEES

PART C

IDEAS FOR IMPROVING ISSUANCE AND TIMELINESS OF CHANGES.

IDEAS FOR IMPROVING ISSUANCE AND TIMELINESS OF CHANGES

[01]
> WOULD LIKE TO HAVE NO CHANGES--REPRINT MANUALS--'BLOCK' INSERT OF NEW MATERAIL--E.G., NAVSUP

[02]
> CERTAIN CHANGES HAVE BEEN PUBLISHED VIA NOTICES R INSTRS THAT HAVE NEVER BEEN INCORPORATED INTO THE MANUAL
> IV CH 2--PROVIDES THE ORDERING SPECS FOR PROCUREMENT OF TREAS CHECKS. WE NOW HAVE TO TELEPHONE NAVCOMPT TO OBTAIN:
> (1) CURRENT CONTRACT NUMBER AND (2) PRICES FOR THE CHECKS THEMSELVES EACH TIME WE PLACE A CHECK ORDER TO OBTAIN THE REQUIRED INFO
> IF MANUAL WAS UP TO DATE, WE WOULD NOT HAVE TO DO THIS--'WE SHOULD NOT BE REQ'D TO DO THIS.'
> 'MAYBE THIS SHOULD NOT BE IN THE MANUAL BUT SHOULD BE IN AN ANNUAL INSTR'

[03]
> ESTABLISH SPECIFIC TIME FRAMES FOR IMPLEMENTING--E.G., EFFECTIVE DATE...ETC
> GET RID OF NPFC

[04]
> NUMBERING SYSTEM OR LOG, SO USER KNOWS WHAT'S BEEN ISSUED
> NEED TO REFERENCE PARAGRAPH/CHAPTER IN ADVANCE NOTICES

[09]
> HAVE PEOPLE WRITE MANUALS WHO HAVE RECENT FLEET EXPERIENCE IN THEIR SUBJECT
> BRING IN SENIOR ENLISTED PERS (DK'S) INTO NAVCOMPT TO DO THE JOB
> PAYPERSMAN IS BEST MODEL OF ALL THE NAVCOMPT MANUALS

[21]
> TIE FORMAT IN INST/NOTICES TO WHAT WILL APPEAR IN MANUAL

[23]
> GET END-OF-YEAR STUFF QUICKER--AVOID LAST MINUTE CHANGES--A MONTH AHEAD

[29]
> ADVANCE NOTICES COULD COME THRU MORE SMOOTHLY
> GROUPED BY SUBJECT

[31]
> EXTEND CUT-OFF DATES
> WISH NPFC WOULD ISSUE TO MAJOR ACTIVITY FIRST

[32]
> WOULD LIKE NAVCOMPT TO PUT OUT SOME ADVANCE NOTICE OF PENDING CHANGE OR ISSUANCE OF NEW POLICY OR GUIDANCE

[33]
> IF NAVCOMPT BULLETIN CAME OUT ON A REGULARLY SCHEDULED BASIS AND IDENTIFIED ALL CHANGES ISSUED INCLUDING ADVANCE NOTICES IT WOULD HELP TRACKING

[36]
> CUT OUT MIDDLEMEN

[42]
> WORD PROCESSING, STATE OF THE ART

[44]
> NOTICES/INSTRUCTIONS/LETTERS SHOULD HAVE A CLEAR 'ACTION' PARAGRAPH TO TELL RECIPIENT WHAT IS WANTED ACTION-WISE

[47]
> UNNECESSARY MINOR CHANGES

[50]
> BETTER COORDINATION WITH SYSCOM LIAISONS AS TO CHANGES COMING

[51]
> BETTER COORDINATION WITH SYSTEM COMMANDS

[57]
> BE TIMELY AND PREPARE INFORMATION IN A MORE COLLECTIVE, COMPREHENSIBLE MANNER
> E.G. BILLING PROCEDURES--IN NAVSUP, BUT NOT EVEN COVERED IN NAVCOMPT--(FMS)
> SHOULD DELETE OUT OF DATE STUFF

[62]
> WOULD LIKE CHGS AS SOON AS POSSIBLE
> WOULD LIKE TO BE UP TO SPEED ON LATEST INSTRUCTIONS AT ALL TIMES WITH MIN TIME LAG BETWEEN NAVCOMPT & HERE

[63]
> WOULD LIKE TO BE GIVEN 'PRIORITY' DISTRIBUTION

[65]
> COORDINATE THE EFFECTIVE DATE OF THE CHANGE WITH SYSTEMS DESIGN AGENCY

[66]
> SCHEDULE OF RATES (SURCHARGE, RENTAL, ETC) ARE NOT RECOVERING FULL COSTS--THEY ARE NOT CURRENT & THEY ARE OUT OF DATE (VOL III)

[67]
> MANUAL CHANGES BEING MADE SHOULD MAKE REFERENCE TO THE NOTICE/INSTRUCTION THAT FIRST ANNOUNCED THE CHANGES
> MAKE THE CHANGES MONTHLY--AND ON TIME

[68]
> II-5--PUT ALL UIC INFO TOGETHER AND PUT ON FICHE!

[73]
> DISTRIBUTE DIRECTLY--NOT TO COMMAND

APPENDIX E

RESPONSES OF INTERVIEWEES

PART D

COMMENTS ON THE OVERALL ORGANIZATION OF MATERIAL IN THE NAVCOMPT MANUAL, HANDBOOKS, AND OTHER PUBLICATIONS.

IDEAS TO IMPROVE HOW INFORMATION IS PRESENTED

COMMENTS RELATED TO ORGANIZATION OF MATERIAL

[01]
> SINGLE TOPICS ARE SPREAD OUT--LOSE CONTINUITY
> PUT IN ONE PLACE, EVEN IF REDUNDANT--HELP THE USER
> ORGANIZE BY SUBJECT MATTER

[02]
> ORGANIZE CONTENTS BY SUBJECT AREA
> IT WOULD ELIMINATE CHASING ALL OVER VARIOUS PARTS OF THE MANUAL AND SAVE LOTS OF TIME IN COMING UP WITH PROPER ANSWERS
> THIS PRESENT METHOD IS NOT COST EFFECTIVE

[03]
> BETTER ORGANIZED--TOPICAL--E.G., GET INVENTORY ACCTG ALL TOGETHER

[06]
> PUT INFO ON GIVEN SUBJECTS IN ONE PLACE TO EXTENT PRACTICABLE--ARRANGEMENT BY SUBJECT MATTER

[07]
> I CAN NEVER SEEM TO GO TO ONE PLACE TO FIND WHAT I'M LOOKING FOR

[10]
> NUMEROUS REFERRALS IN TEXT LEAD FROM ONE PLACE TO ANOTHER AND OFTEN BACK TO ORIGINAL STARTING PARAGRAPH
> WOULD LIKE TO SEE SUBJECT MATTER ALL IN ONE PLACE
> WOULD LIKE TO SEE THE CONTENTS BROKEN DOWN INTO SUBJECT MATTER IN SMALLER VOLUMES (NOT SO MUCH ALL IN ONE VOLUME)

[11]
> SOMETIMES TOO MUCH REFERRAL

[13]
> MUCH OF THE INFO IN THE MANUAL REFERS FROM ONE PARAGRAPH TO ANOTHER--VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED

[14]
> JRT-1/2 TOO STRUNG OUT--MUCH INFO IS REPETITIVE
> MUCH OF THE INFO IN MANUALS REFERS FROM ONE PARAGRAPH TO ANOTHER
> VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED

[15]
> JTR-I/II TOO STRUNG OUT--MUCH INFO IS REPETITIVE
> MUCH OF THE INFO IN THE MANUALS REFERS FROM ONE PARAGRAPH TO ANOTHER--VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED

[21]
> FORMAT--(MANUAL ASSUMES CERTAIN LEVEL OF KNOWLEDGE)--SEGMENTATION BAFFLES EVEN THE KNOWLEDGEABLE AS TO WHAT SUPPORTS WHAT
> THEREFORE, MASTER INDEX NOT ENOUGH (SEE REPORTS 2050/2074 FOR EXAMPLE)

[23]
> PULLING TOGETHER MATERIAL CROSS-REFERENCED NOW

[25]
> THERE IS QUITE A LOT OF OVERLAP & DUPLICATION--ELIMINATE IT
> PUT INFO IN ONE PLACE TO EXTENT PRACTICABLE

[26]
> CROSS-REFERENCING PROBLEMS--BACK AND FORTH (DODPM, PAYPERS, JTR, NTI)
> TOO MANY DISBURSING PUBS--IF EACH SERVICE HAD THEIR OWN PUBS, IT WOULD BE EASIER
> FOR EXAMPLE, A NAVY DK COULD BE WORKING FOR AN AIR FORCE DISBURSING OFFICER--YOU RUN INTO INTERPRETATION PROBLEMS

[30]
> GARBAGE IN ALL OF THEM SCATTERED THROUGHOUT
> NEED TO PULL ALL RELEVANT INFO TOGETHER FOR WORKING ORGANIZATION INTO SINGLE MANUAL FOR THAT TYPE OF ORGANIZATION

[31]
> CONSTANT CROSS-REFERENCES MOST DIFFICULT TO FOLLOW--TRY TO ELIMINATE TO THE EXTENT POSSIBLE

[33]
> NEED TO GO TO SEVERAL PLACES TO FIND EVERYTHING ON THE ONE SUBJECT AREA

[34]
> NEED TO GO TO SEVERAL PLACES TO FIND EVERYTHING ON ONE SUBJECT AREA

[35]
> NEED TO GO SEVERAL PLACES TO FIND EVERYTHING ON ONE SUBJECT

[36]
> SPREAD OUT--PULL IT TOGETHER

[37]
> PULL MATERIAL TOGETHER

[38]
> SPREAD OUT--PULL IT TOGETHER

[40]
> BETTER ORGANIZED
> SHOULD HAVE ONE SECTION DEVOTED TO FUNDING DOCUMENTS:
> --WHAT ONES ARE AVAILABLE
> --WHAT CIRCUMSTANCES EACH TO BE USED FOR (I.E. WORK OR SERVICES FOR OTHER NAVY ACTIVITIES, OTHER DOD ACTIVITIES, OTHER GOV'T, PRIVATE PARTIES)
> --PERIOD OF TIME FUNDING DOCUMENT AVAILABLE FOR OBLIGATION/EXPENSE, ETC.
> 3006 NOW NEEDS 2 VOLUMES--ONE WITH AAA AND ONE WITHOUT

[41]
> TOO FRAGMENTED--BREAKS UP CONTINUITY OF INFO YOU'RE TRYING TO EXTRACT

[45]
> 3013 SECTIONS WHICH ARE IN 3073 SHOULD BE REMOVED FROM 3013

[46]
> CONFLICTS IN INFORMATION DIFFERENT PORTIONS OF SAME MANUAL

[47]
> 3073--TOO VERBOSE--DUPLICATES 3013 MANY AREAS--REMOVE EXCESS INFO BUT DO NOT ELIMINATE

[48]
> IF NAVCOMPT COULD TAKE ALL MATTER RELATED TO A GIVEN SUBJECT & GET IT INTO ONE PLACE TO EXTENT PRACTICABLE, IT WOULD ELIMINATE A LOT OF RESEARCH, DUPLICATION, AND MISINTERPRETATION

[50]
> PARAGRAPHS ARE TOO COMPARTMENTALIZED AND WITH PAGE INSERTS THEY ARE VERY HARD TO FOLLOW

[51]
> NUMBER OF CHAPTERS SHOULD BE INCREASED SO SUBJECT CAN BE BETTER IDENTIFIED
> A CHAPTER IS NEEDED ON ADMINISTERING REIMBURSABLE ORDERS (PROJ ORDER, WORK REQUEST, ETC)--CURRENTLY COVERED IN II & III

[53]
> 3006--BRING UP TO LEVEL OF MANUAL (E.G. INTERNAL CROSS REF)

[54]
> INFO IS SCATTERED--HAVE TO READ ALL OVER TO FIND WHAT'S WANTED--NO CENTRAL PLACE

[55]
> INFO IS SCATTERED; HAVE TO READ ALL OVER TO FIND WHAT'S WANTED--NO CENTRAL PLACE

[56]
> P-3073 & P-3013 HAVE A GREAT DEAL OF DUPLICATION AND SHOULD BE CONSOLIDATED

[57]
> SCATTERED--II TO III, BACK TO II, THEN IV
> 'I WOULD LIKE TO SEE THE MATERIAL CUMULATED BY SUBJECT MATTER--REIMBURSABLES IS A CASE IN POINT'

[59]
> LESS REFERENCE

[60]
> SCATTERED THROUGHOUT NOW--INFO SHOULD BE PULLED TOGETHER

[61]
> SCATTERED--INFO SHOULD BE PULLED TOGETHER

[66]
> MODULAR WOULD HELP

[67]
> A SEPARATE CHAPTER SHOULD BE DEVOTED TO REIMBURSABLE ACCTG
> COMBINE THE MATERIAL FOR REIMB ACCTG IN II-CH 3 & 6 AND III-CH 2 & 5

[68]
> SUBJECTS SCATTERED THRUOUT THAT ARE NOT CROSS-REFERENCED (E.G. CASH SALES BILLING, III-CH 2,5,8,9)
> UIC CHAP--AFTER GETTING A UIC YOU HAVE TO GO TO A DIFFERENT PART OF MANUAL TO GET WHO DOES ACCTG FOR THAT UIC

[69]
> PULL TOGETHER MATERIAL ON ONE SUBJECT

[71]
> DON'T CROSS-REFERENCE

[72]
> MAKE MORE SPECIFIC--HARD TO FIND SPECIFIC ANSWER TO SPECIFIC QUESTION

[73]
> GET RID OF CROSS-REFS
> PUT EVERYTHING YOU NEED TO DO A PROCEDURE IN ONE PLACE (FOR WORKING LEVEL)
> NOW INCONSISTENT PARAGRAPH TO PARAGRAPH

[74]
> PULL TOGETHER SCATTERED MATERIAL BY SUBJECT
> SOMETIMES GET CONTRADICTIONS

[75]
> PULL TOGETHER SCATTERED MATERIAL BY SUBJECT
> SOMETIMES GET CONTRADICTIONS

[76]
> ROUND AND ROUND (REFERENCES)--3013 BAD

[77]
> ROUND AND ROUND--REFERENCES--3013 BAD

[78]
> GET RID OF CROSS-REFERENCES
> CONSOLIDATE WHAT YOU NEED TO DO THE JOB

OVERALL ORGANIZATION OF MATERIAL

COMMENTS INDICATING GENERAL APPROVAL OF CURRENT STATUS

> ORGANIZATION OK--MATERIAL SPREAD OF NECESSITY [04]

> NTI NO PPOBLEM [08]
> NO PROBLEM WITH NAVCOMPT MANUAL--MANY CASES SHOULD PROVIDE MORE INFO ON SUBJECT BEING DISCUSSED [08]

> THINKS IT IS FAIRLY WELL ORGANIZED [11]

> OK [16]

> ADEQUATE [18]

> GOOD [22]

> OVERALL ORGANIZATION OF MATERIAL IS ADEQUATE [27]

> ADEQUATE [28]

> HDBKS--FINE [29]
> II--CHAPTER-WISE EXCELLENT [29]

> NO PROBLEMS [31]

> 1459 NO INDEX--OTHERWISE OK [45]
> 3073 WELL PRESENTED HANDBOOK [45]

> ORGANIZATION IS AS GOOD AS THEY CAN DO [52]

> OVERALL ADEQUATE EXCEPT INDEXING IS INADEQUATE [54]

> OVERALL ADEQUATE EXCEPT INDEXING IS INADEQUATE [55]

> OVERALL--GOOD [59]

> OVERALL OK--BUT PULL TOGETHER SCATTERED MATERIAL [69]

> NOT THAT MUCH TROUBLE [70]

OVERALL ORGANIZATION OF MATERIAL

COMMENTS PERTAINING TO CONSOLIDATION OF MATERIAL

> ORGANIZE BY SUBJECT, EVEN THOUGH REDUNDANT [01]

> ORGANIZE CONTENTS BY SUBJECT AREA--ELIMINATE CHASING ALL OVER VARIOUS PARTS OF THE MANUAL AND SAVE LOTS OF TIME [02]

> LOSE CONTINUITY TRACKING CROSS REFERENCES [03]
> PULL TOGETHER--E.G., SINGLE VS MULTI-YEAR APPROPRIATIONS [03]

> HARD TO FIND WHAT YOU WANT IN ONE PLACE; USUALLY GO TO SEVERAL PLACES [05]
> IF YOU LOOK HARD ENOUGH YOU'LL FIND IT [05]

> HAVE TO GO TO SEVERAL PLACES IN MANUAL TO FIND ALL PERTINENT INFO ON A GIVEN SUBJECT [06]

> NEED TO GO TO SEVERAL PLACES TO FIND WHAT IS NEEDED ON A GIVEN SUBJECT [07]
> SCATTERED MATERIAL THROUGHOUT MANUAL ON SUBJECT MATTER [07]

> PAYPERSMAN--SOME SUBJECTS IN WRONG PLACES--TOO MANY INTERNAL CROSS-REFS [08]

> MANUAL IS DIFFICULT TO USE; CROSS REFS ARE NOT COMPLETE [10]

> MUCH OF THE INFO IN THE MANUAL REFERS FROM ONE PARAGRAPH TO ANOTHER--VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED [13]

> JTR-I/II TOO STRUNG OUT [14]
> MUCH INFO IS REPETITIVE [14]
> MUCH OF THE INFO IN MANUALS REFERS FROM ONE PARAGRAPH TO ANOTHER [14]
> VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED [14]

> JTR-I/II TOO STRUNG OUT; MUCH INFO IS REPETITIVE [15]
> MUCH OF THE INFO IN MANUAL REFERS FROM ONE PARAGRAPH TO ANOTHER [15]
> VICIOUS CYCLE OF CROSS REFERENCES--COULD BE CORRELATED & CONDENSED [15]

> REDUCE CROSS-REFERENCING [23]

> PULL TOGETHER ALL MATERIAL ON A SINGLE TOPIC--COVER SUBJECT IN ONE PLACE [24]

> JTR--FLIP FLOPS BACK & FORTH WITHOUT PUTTING SUBJECT MATTER IN BASICALLY ONE PLACE [25]

> PULL TOGETHER ALL INFO FOR WORKING USER INTO SINGLE VOL [30]
> GARBAGE IN ALL OF THEM SCATTERED THROUGHOUT [30]

> ONE HAS TO SKIP AROUND IN SEVERAL PLACES TO FIND WHAT IS APPLICABLE ON SOME TOPCIS [33]

> ONE HAS TO SKIP AROUND IN SEVERAL PLACES TO FIND WHAT IS APPLICABLE ON SOME TOPICS [34]

> ONE HAS TO SKIP AROUND IN SEVERAL PLACES TO FIND WHAT IS APPLICABLE ON SOME TOPICS [35]

> MATERIAL SPREAD OUT ON ONE SUBJECT [36]

> MATERIAL SPREAD OUT ON ONE SUBJECT [37]

> MATERIAL SPREAD OUT ON ONE SUBJECT [38]

> NEEDS SUBJECT MATTER GROUPING FROM WORKING LEVEL STANDPOINT [41]
> OR, AT LEAST, BETTER CROSS REFERENCING [41]

> FOREIGN MILITARY PROGRAMS INFORMATION SCATTERED; SHOULD BE CONSOLIDATED [42]

> CONFLICTS IN INFORMATION IN DIFFERENT PORTIONS OF SAME MANUAL [46]

> ONE NEEDS TO GO TO SEVERAL DIFFERENT PLACES TO FIND EVERYTHING THAT IS STATED ON A GIVEN SUBJECT QUITE OFTEN [48]

> REIMBURSABLE ORDERS ARE COVERED IN TWO DIFFERENT MANUALS (II & III) [51]

> INFO IN III-CH 5 & 9 SHOULD BE UPDATED AND COORDINATED FOR FUNDED AND UNFUNDED PROCEDURES. [57]
> COLLECTIONS ARE SCATTERED BETWEEN III AND IV WITH SOME IN NAVSUP VOL II--MISSING FROM NAVCOMPT [57]

> WOULD BE BENEFICIAL TO COVER SUBJECTS ENTIRELY WITHIN A CHAPTER RATHER THAN SEPARATE CHAPTERS AND REFERENCING [58]

> ELIMINATE CROSS REFS [59]

> JTR-1 CH 4--SCATTERED INFO AND DIFFICULT TO MAKE A DETERMINATION ON ENTITLEMENT [60]

> JTR-1 CHAPTER 4--SCATTERED INFO AND DIFFICULT TO MAKE A DETERMINATION ON ENTITLEMENTS [61]

> NAVCOMPT MANUAL--DAISY CHAIN OF REFERENCES DRIVES YOU NUTS--I.E. REF A TO B TO C ETC [62]

> TOO MUCH OVERLAP BY REFERRING YOU BACK & FORTH [64]

> PULL TOGETHER MATERIAL--E.G. REIMBURSABLES [67]

> NEEDS SPECIFIC CHAPTERS FOR SPECIFIC FUNCTION [68]
> ONE CHAPTER EACH ON FIR, OSO, BILLINGS (CHAP 2,4,5,8,9) CONTRACTORS (PRIVATE PARTIES?) [68]

> OVERALL OK--BUT PULL TOGETHER SCATTERED MATERIAL [69]

> DON'T BEAT AROUND THE BUSH [71]

> GET RID OF CROSS-REFS [71]

> TO EXTENT POSSIBLE INCLUDE ALL PERTINENT TEXT ON A GIVEN SUBJECT IN ONE PLACE [72]
> GET RID OF CROSS REFERENCES [72]
> PULL TOGETHER MATERIAL NOW SCATTERED THROUGHOUT VARIOUS NAVCOMPT MANUAL VOLUMES/HANDBOOKS [72]

> PULL TOGETHER SCATTERED REFERENCES [73]
> *SEPARATE PARTS ACCORDING TO DIFFERENT WORK REQUIREMENTS*--"WORK PACKAGES" OR HDBKS ORGANIZED BY TYPE OF WORK [73]

> HARD TO TRACK SINGLE TOPIC [74]
> NOT ALL IN ONE BOOK [74]
> DON'T WORRY ABOUT REPETITIONS--GET RID OF CROSS-REFS [74]

> HARD TO TRACK SINGLE TOPIC [75]
> NOT ALL IN ONE BOOK [75]

> SPREAD OUT--NOT ENOUGH INFO--LEAVE YOU HANGING [76]
> PUT IN ONE PLACE ALL INFO NEEDED TO DO EACH JOB [76]

> SPREAD OUT--NOT ENOUGH INFO--LEAVE YOU HANGING [77]
> PUT IN ONE PLACE ALL INFO NEEDED TO DO EACH JOB [77]

> PULL TOGETHER SCATTERED REFERENCES FOR WORKING LEVEL [78]

OVERALL ORGANIZATION OF MATERIAL

COMMENTS ON SPECIFIC VOLUMES OR HANDBOOKS

> NTI NO PPOBLEM [08]
> PAYPERSMAN--SOME SUBJECTS IN WRONG PLACES--TOO MANY INTERNAL CROSS-REFS [08]
> JTR--STATION ALLOWANCES, VARIABLE HOUSING ALLOWANCES--THESE ARE UNRELATED TO TRAVEL--DON'T BELONG IN JTR--SHOULD BE SEPARATE OR IN PAYPERSMAN [08]

> JTR-I/II TOO STRUNG OUT [14]
> SUCH INFO IS REPETITIVE [14]

> JTR-I/II TOO STRUNG OUT; MUCH INFO IS REPETITIVE [15]

> JTR--FLIP FLOPS BACK & FORTH WITHOUT PUTTING SUBJECT MATTER IN BASICALLY ONE PLACE [25]

> COMBINE APPLICABLE PORTIONS (NAVY/MARINE) OF JTR INTO NTI [26]

> JTR--SHORTEN PARAGRAPHS, BE MORE CONCISE [26]

> II--CLARIFY INDEX [29]
> II--CHAPTER-WISE EXCELLENT [29]
> II--APPROP CHAPTER SHOULD HAVE OWN INDEX [29]

> II, IV, 3013'S TERMINOLOGY AND READABILITY DIFFICULT [45]

> 3006-1: ALL THIS SHOULD BE IN NAVCOMPT MANUAL TO BEGIN WITH [48]

> NEED BETTER TIE-IN WITH NAVFAC REQUIREMENTS IN III-CH7 FOR UTILITIES REPORTING [50]
> ALSO VII NEEDS BETTER TIE-IN WITH III-CH5 [50]

> INFO IN III-CH 5 & 9 SHOULD BE UPDATED AND COORDINATED FOR FUNDED AND UNFUNDED PROCEDURES. [57]
> COLLECTIONS ARE SCATTERED BETWEEN III AND IV WITH SOME IN NAVSUP VOL II--MISSING FROM NAVCOMPT [57]

> JTR-1 CH 4--SCATTERED INFO AND DIFFICULT TO MAKE A DETERMINATION ON ENTITLEMENT [60]

> JTR-1 CHAPTER 4--SCATTERED INFO AND DIFFICULT TO MAKE A DETERMINATION ON ENTITLEMENTS [61]

> IF APPRO DATA IN VOL II COULD BE ARRANGED IN NUMERICAL SEQUENCE FIRST AND THEN THE SUBHEADS, UNIFORMLY, IT WOULD HELP--NOW SOMETIMES MIXED [63]

> EXAMPLE OF ORGANIZATION--IF ONE TOOK VII AND CONCENTRATED ON MAKING IT SUBJECT COMPREHENSIVE ONE COULD DELETE PARTS OF II & III [64]

OVERALL ORGANIZATION OF MATERIAL

MISCELLANEOUS SUGGESTIONS

> SUGGESTED ORGANIZATION (FROM WORKER VIEWPOINT): PUT ALL REPORTS TOGETHER--BRANCH FROM THERE TO DETAILED EXPLANATIONS [03]

> NO PROBLEM WITH NAVCOMPT MANUAL--MANY CASES SHOULD PROVIDE MORE INFO ON SUBJECT BEING DISCUSSED [08]
> MANUAL--TOO MANY PLACES WHERE IT SAYS 'CO MAY...' OR 'DISB OFFICER MAY...'--SHOULDN'T IMPLY OPTIONS [08]

> SPLIT ACTIVE/LESS ACTIVE [23]
> SPLIT POLICY/PROCEDURES [23]

> SHOULD HAVE ONE SECTION DEVOTED TO FUNDING DOCUMENTS: [40]
> --WHICH ONES AVAILABLE [40]
> --CIRCUMSTANCES FOR USE [40]
> --PERIOD OF TIME FUNDING DOCUMENT AVAILABLE FOR OBLIGATION/EXPENSE, ETC. [40]

> NEEDS SUBJECT MATTER GROUPING FROM WORKING LEVEL STANDPOINT [41]
> OR, AT LEAST, BETTER CROSS REFERENCING [41]

> CONTENTS OF HANDBOOKS SHOULD BE IN MANUAL FOR MOST PART--I.E. PRO FORMA ENTRIES, POLICIES [48]
> HANDBOOKS REFER BACK TO THE NAVCOMPT MANUAL IN MANY AREAS SO WHY NOT PUT INFO IN MANUAL IN FIRST PLACE [48]

> NEED BETTER CROSS REFERENCE TO SUBJECT IN OTHER PUBLICATIONS [51]

> STRUCTURE THE NUMBERING PLAN FOR NAVCOMPT NOTICES AND INSTRUCTIONS TO COINCIDE WITH PARAGRAPHS NUMBERED IN THE MANUALS & OTHER PUBS [67]
> THIS WILL IMPROVE FINDING NOTICES/INSTR THAT MAY HAVE BEEN ISSUED TO CHANGE POLICY OR PROCEDURE WRITTEN IN THE MANUAL [67]

OVERALL ORGANIZATION OF MATERIAL

GENERAL COMMENTS

> POOR--WOULD REORGANIZE WHOLE MANUAL [03]

> OCCASIONAL CONFLICT WITH MANUALS AND INSTRUCTIONS [40]
> NEED SUPPORTING REFS FOR POSITIONS TAKEN IN MANUALS AND INSTRUCTIONS [40]

> CONFLICTS IN INFORMATION IN DIFFERENT PORTIONS OF SAME MANUAL [46]

> NOT TOO WELL ORGANIZED; DIFFICULT TO FIND WHAT YOU NEED TO KNOW [48]

> 3006 IS BETTER ORGANIZED THAN MANUAL--HAS EXAMPLES OF PROBLEMS--GOOD MANUAL FOR WORKING USER [67]

APPENDIX E

RESPONSES OF INTERVIEWEES

PART E

USE OF MICROFICHE OR OTHER MICROFORM.

USE OF MICROFICHE

COMMENTS IN FAVOR

> VOL II-CH5 PROBABLY WOULD BE BEST ON MICROFICHE & PROVIDE A COMPLETE UPDATE PERIODICALLY WITH 'THROW AWAY' OF PRIOR EDITION [06]
> FIRST CHOICE (AHEAD OF COMPUTER) [06]

> YES--ONLY IF INDEXED PROPERLY--DODPM IS INDEXED PROPERLY TO PAYPERSMAN [09]
> IF DONE LIKE THAT, IT WOULD HELP (AUTOMATION) [09]

> FICHE SHOULD BE CONSIDERATION [10]

> MICROFICHE/FILM WOULD BE USEFUL IN SOME AREAS--E.G., VOL II-CH5 OR RATES [11]
> HOWEVER, PREFERENCE WOULD BE COMPUTER TERMINAL ACCESS [11]

> YES--PARTIC FOR SUPPORT TO SHIPS [20]

> YES--BUT DON'T PUSH ONTO FIELD--CAN KILL BENEFITS [21]

> YES, IN AREAS SUCH AS HOUSING & COLA (MICROFICHE) RE CHANGES IN THESE AREAS THAT ARE IN THE MANUAL RE THE HISTORY [25]

> SHOULD BE CONSIDERED [26]

> MICROFICHE MIGHT BE A CONSIDERATION [32]
> MIGHT IMPROVE TIMELINESS OVER PRESENT HARD COPY SYSTEM [32]
> MAYBE A HYBRID SYSTEM OF FICHE AND ON-LINE WOULD BE GOOD [32]

> VOL II, III, & VII COULD BE ON MICROFICHE [33]

> NOT DISADVANTAGEOUS (FICHE) IF COST EFFECTIVE AND OPERATIONALLY EFFICIENT [42]

> LIKE MICROFICHE FOR DISTRIBUTION, HANDLING AND CORRECTIONS FOR AREAS SUCH AS II-5--VOLUMINOUS LISTINGS [46]

> ADVANTAGEOUS TO HAVE II-5 ON MICROFICHE BECAUSE THE INFO COULD BE READILY OBAINED BY USING THE INDEX ON THE FICHE [66]

> PUTTING THE WHOLE MANUAL ON FICHE WOULD NOT CAUSE HEARTBURN [67]
> ADVANTAGEOUS FOR ACCTG PERSONNEL TO HAVE II-5 ON FICHE OR TERMINAL--USE IT ON A REGULAR BASIS [67]

USE OF MICROFICHE

COMMENTS NOT IN FAVOR

> AGAINST FICHE [01]

> DON'T LIKE MICROFICHE--DIFFICULT TO READ--TIME CONSUMING [02]

> NO [03]
> EXCELLENT FOR STORAGE, RETRIEVAL--SAVE SPACE [03]
> NOT GOOD FOR FINDING ANYTHING [03]

> NO ADVANTAGES [04]

> MICROFICHE TOO HARD TO READ--CUMBERSOME [05]
> SAME COMMENT RE MICROFILM [05]

> NO--MICROFICHE/FILM; HARD TO SEE AND USE [07]

> PREFER UTILIZATION OF CUPRENT MANUALS [12]
> INFORMATION IS HARDER TO LOCATE ON MICROFICHE [12]

> MICROFICHE COULD PUT SUPERSEDED PER DIEM RATES AND HIGH COST AREAS ON THIS FOR STORAGE & REF PURPOSES [13]
> THIS WOULD BE SECOND CHOICE (TO ON-LINE SYSTEM) OR COULD BE SUPPLEMENTARY OR BACKUP [13]

> MICROFICHE COULD PUT PER DIEM RATES AND HIGH COST AREAS ON THIS FOR STORAGE & REF PURPOSES [14]
> THIS WOULD BE 2ND CHOICE (TO ON-LINE SYSTEM) OR COULD BE SUPPLEMENTARY AS BACKUP [14]

> MICROFICHE COULD PUT SUPERSEDED PER DIEM RATES AND HIGH COST AREAS ON THIS FOR STORAGE & REF PURPOSES [15]
> THIS WOULD BE 2ND CHOICE (TO ON-LINE SYSTEM) OR COULD BE SUPPLEMENTARY OR BACKUP [15]

> STINKS (FOR RESEARCH)--GOOD FOR STORAGE [16]

> MICROFICHE TOO EASILY MISPLACED OR DESTROYED [17]
> MORE DIFFICULT TO READ [17]

> NOT ADVANTAGEOUS UNTIL MANUALS CAN BE REDUCED IN SIZE AND MONTHLY CHANGES REDUCED TO SEMI-ANNUAL [18]

> NOT ADVANTAGEOUS [19]

> NO [22]

> NO--FINDING THINGS WOULD BE HARDER [24]
> MIGHT WORK IF GOOD INDEX WAS ON HARD COPY, REST ON FICHE [24]

> NOT ADVANTAGEOUS [27]

> NO [28]

> NOT FOR VOLUMES THEY USE [29]

> NO [30]

> NO--TIME NOT AVAILABLE [31]

> PREFER HARD COPY [34]

> PREFER HARD COPY [35]

> LISTINGS--MAYBE [36]
> NO--NOT AS A SUBSTITUTE [36]

> LISTINGS--MAYBE [37]
> NO--NOT AS SUBSTITUTE [37]

> LISTINGS--MAYBE [38]
> NO--NOT AS SUBSTITUTE [38]

> VOL II CHAP 5, PERHAPS ON MICROFICHE [39]
> REMAINING MUST HAVE HARD COPY FOR READING/RESEARCH [39]

> TOO MUCH EYE STRAIN [40]

> DEAD SET AGAINST [41]
> CAN'T SCAN--HARD ON EYES [41]
> OK FOR PRICE LISTS--NOT FOR NARRATIVE [41]

> PROBLEMS WITH LEGIBILITY, TIMELINESS, HUMAN PHYSICAL FACTORS [43]
> INDEXES ON MICROFICHE A HELP [43]

> NO [44]

> NO--TOO HARD TO WORK WITH--GIVES PEOPLE HEADACHES [47]

> NO [48]

> ABSOLUTELY NOT! [49]

> NOT ADVANTAGEOUS AS CHANGES MADE TOO FREQUENTLY AND MUST BE INTERPRETED BY HEADQUARTERS [50]

> NO ADVANTAGE [51]
> WOULD BE DISADVANTAGE FOR A RESEARCHER NOT FAMILIAR WITH FORMAT OF MANUAL [51]

> HORRIBLE--READERS HARD TO READ [52]
> FOR RESEARCH--NO GOOD [52]
> MAYBE VOL II [52]

> NO [53]
> MICROFICHE IS ALREADY USED FOR MANY REPORTS [53]

> THE GENERALLY POOR NATURE OF THE SYSTEM MAKES THESE REPORTS VERY TIRESOME TO READ (I.E. VERY HARD ON THE EYES) [53]
> THE QUALITY OF THE 'FICHE' FILM IS UNEVEN [53]

> MICROFICHE/FILM HARD TO READ & USE--QUALITY IS BAD [54]
> HORRIBLE FOR DAY TO DAY USE [54]

> MICROFICHE/FILM HARD TO READ AND USE; QUALITY IS BAD [55]
> HORRIBLE FOR DAY TO DAY USE [55]

> NO--NOT NEEDED AT SCHOOL [56]
> IN FLEET, DOES SEE ADVANTAGE TO FICHE OR AUTOMATION FOR SELECTED PARTS [56]

> DO NOT CARE FOR MICROFICHE--TO DIFFICULT TO READ AND WORK WITH AS AN AID (SHE WROTE THIS ON FORM) [57]
> IN INTERVIEW SHE SAID: 'HATE IT! OK FOR HISTORICAL STORAGE OR CATALOG--DEFINITELY NOT FOR RESEARCH' [57]

> DON'T CARE FOR IT [58]

> HATE IT! [59]
> MAYBE VOL II (COST ACCTS) [59]
> NARRATIVE BAD--LISTINGS OK [59]

> NO--STILL NEED HARD COPY [62]

> WANTS HARD COPY AS A BASE [64]
> COULD CONSIDER MICROFICHE AS MORE DEFINITIVE MORE DETAILED INFO TO SUPPLEMENT THE MANUAL (OR SELECTED PARTS) [64]

> NO [65]

> MAJORITY--NO [68]
> BUT UIC'S WOULD BE FINE [68]
> 'PUT ALL UIC INFO TOGETHER AND PUT ON FICHE!' [68]

> DISADV--EASIER TO READ/CARRY MANUAL--FLIP BACK AND FORTH [69]

> NO [70]
> MOSTLY NARRATIVE IN NATURE [70]
> MATERIAL DOESN'T LEND ITSELF TO FICHE--HARD TO READ [70]

> NO ADVANTAGE [71]

> NO [72]

> NO--SEVERE LACK OF SPACE FOR READER [73]
> OK FOR REFERENCE [73]

> PREFER BOOK [74]

> PREFER BOOK [75]

> NO [76]

> MASTER INDEX ON FICHE--SENSIBLE [76]

> NO [77]

> SPACE PROBLEM (NO ROOM FOR READER) [78]
> NO ADVANTAGE [78]

USE OF MICROFICHE

COMMENTS INDICATING AMBIGUITY OR MIXED FEELINGS

> JUST DON'T KNOW [08]

> DON'T KNOW--NO EXPERIENCE [23]

> NO DIFFERENCE [45]

> VOL II COULD BE PUT ON FICHE FOR USERS WHO DO NOT SPEND HOURS [60]
> DON'T USE IF THERE IS NEED TO GO BACK AND FORTH TO GET 'CODES' LIKE IN AN INTRODUCTION OR PAGE TO PAGE CROSS REF [60]
> SUMMARY: FOR OCCASIONAL USERS PROBABLY OK; FOR HEAVY USERS--NO [60]

> VOL II COULD BE PUT ON FICHE FOR USERS WHO DO NOT SPEND HOURS [61]
> DON'T USE IF THERE IS NEED TO GO BACK AND FORTH TO GET 'CODES' LIKE IN AN INTRODUCTION OR PAGE TO PAGE CROSS-REF [61]
> SUMMARY: FOR OCCASIONAL USERS PROBABLY OK--FOR HEAVY USERS, NO [61]

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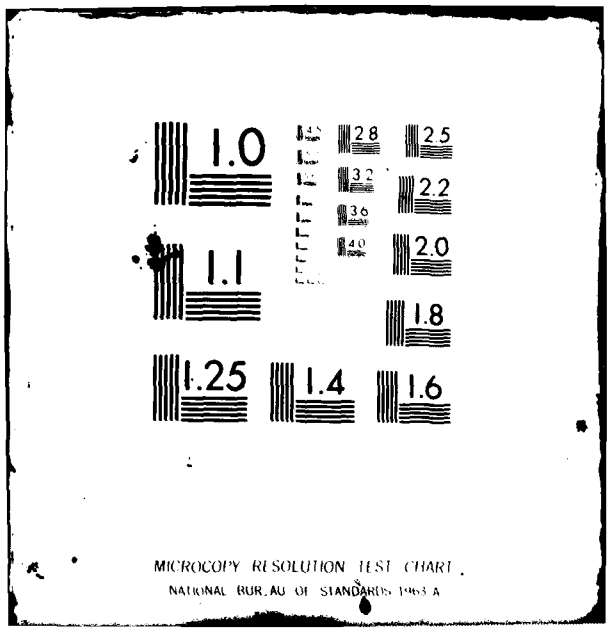
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NATIONAL BUREAU OF STANDARDS 1963 A

APPENDIX E

RESPONSES OF INTERVIEWEES

PART F

NAVCOMPT MANUAL AS A DIGITAL DATA BASE WITH TERMINAL ACCESS.

NAVCOMPT MANUAL AS A DIGITAL DATA BASE WITH TERMINAL ACCESS

COMMENTS IN FAVOR

> INTERESTING--QUERY, 'SMART' SYSTEM--NOT DUMB TERMINAL [01]
> WHAT PARTS?--II; MAYBE SOME IV [01]
> FABULOUS STEP FORWARD [01]

> WOULD LIKE TO SEE TERMINAL ACCESS--IT COULD BE A GREAT STEP FORWARD [02]
> VOL IV--CH 2, 3, & 6 WOULD BE GOOD AREAS FOR APPLICATION HERE [02]

> YES--IF INFO WAS WHAT YOU WANTED [03]
> CONCERN ABOUT ACCESS (GOOD KEYWORDS) [03]
> COMPLETE DATA BASE [03]

> WOULD LIKE TO SEE SOME PARTS OF NAVCOMPT MANUAL IN AUTOMATED DATA BASE [05]
> EXAMPLE OF AN AREA THAT COULD BE AUTOMATED WOULD BE II-CH5, III-CH3 IN ITS ENTIRELY, IV-CH9 [05]

> FAVORABLE--IF COULD QUERY SYSTEM (KEY WORDS)--GET REFERENCES PULLED TOGETHER--PRINT OUT AS NEEDED [08]
> COULD USE LOCALLY AVAILABLE HARDWARE--THAT'S A LESSER PROBLEM [08]

> YES--IT WOULD REDUCE LEAD TIME IN ISSUING CHANGES & TEACHING CURRENT INFO [09]

> MAYBE SELECTED CHAPTERS 'ON LINE' OR A COMBINATION OF FICHE AND AUTOMATED ACCESS [10]
> SHOULD BE PRECEDED BY A LIVE TEST TO ASSURE FEASIBILITY [10]

> WHY NOT HAVE EACH OF THE FIPPS BE A CENTRAL CENTER FOR THEIR AREAS FROM NAVCOMPT [11]
> ALMOST ALL USERS OF THE CENTER HAVE TERMINAL ACCESS [11]
> PREFER THESE AS TO PRIORITY: JTR-1/2, 3013, 3006 [11]

> WOULD LIKE 'ON-LINE' SYSTEM AS FIRST PREFERENCE FOR AREAS SUCH AS JTR VOLS I & II [13]

> WOULD LIKE 'ON LINE' SYSTEM AS 1ST PREFERENCE FOR AREAS SUCH AS JTR-I/II [14]

> WOULD LIKE 'ON LINE' SYSTEM AS 1ST PREFERENCE FOR AREAS SUCH AS JTR-I/II [15]

> LOVE IT [16]

> THIS WOULD BE AN EXCELLENT APPLICATION FOR AN INDEX/CROSS-REFERENCE FILE TO ASSIST IN LOCATING INFORMATION [17]
> THIS WOULD BE ESPECIALLY HELPFUL FOR THOSE PERSONS WHO USE THE MANUAL ONLY FREQUENTLY (INFREQUENTLY?) [17]

> FEELS NAVCOMPT SHOULD GO TO AN AUTOMATED DATA BASE AND ON LINE ACCESS--WOULD BE ADVANTAGEOUS [20]

> PRINTING AND SHIPPING COSTS MUST BE SIGNIFICANT AND COULD BE SAVED [20]

> YES--BUT DON'T PUSH ONTO FIELD--CAN KILL BENEFITS [21]
> FAVORS OVER FICHE [21]
> FAVORS LOCAL SYSTEM (WORD PROCESSING TYPE) VS CENTRAL [21]
> WOULD WANT SMART CRT--HILITE, MAKE NOTES, PAPER COPIES, ETC [21]
> FEELS CERTAIN PARTS CAN BE AUTOMATED--COST CODES, JOB ORDER NOS, FUNCTION/SUBFUNCTION CODES--AREAS WHERE INFO IS VERY STRUCTURED [21]
> COULD HELP FIELD ACTIVITIES [21]

> DON'T KNOW [23]
> LIKES AUTOMATION--ALL FOR AUTOMATING EVERYTHING YOU CAN [23]

> WOULD BE OK IF IT ACTUALLY HELPS FIND INFO--OTHERWISE NO BETTER THAN FICHE [24]

> SHOULD BE CONSIDERED [26]
> PAY DECISION/LOGIC TABLES [26]

> SOLVE UPDATING, BUT THEY DON'T HAVE ENOUGH TERMINALS TO GO AROUND NOW--HARD TO GET ON LINE [27]

> SOLVE UPDATING, BUT THEY DON'T HAVE ENOUGH TERMINALS TO GO AROUND--WOULD SOLVE SOME PROBLEMS [28]

> FOR THOSE PEOPLE WHO ALREADY HAVE AUTOMATION--FINE; BUT THERE ARE A LOT OF NON-AUTOMATED PEOPLE [29]

> WOULD BE ASSET [30]
> ONLY IF DATA BASE MAINTAINED BY NAVCOMPT ('CENTRAL AUTHORITY' WAS HIS BIG THEME) [30]

> ONR DOESN'T NEED TO ACCESS THAT OFTEN, SO HARD COPY IS ADEQUATE FOR ONR USES [32]
> MAYBE A HYBRID SYSTEM OF FICHE AND ON-LINE WOULD BE GOOD [32]

> NOT FOR BUDGET OFFICE HERE PER SE [33]
> HOWEVER, THINKS FOR PENDLETON AS A WHOLE, JTR-1/2 WOULD BE A GOOD IDEA TO AUTOMATE [33]

> WHEREVER SET UP, SHOULD BE MANUAL OF HEAVIEST USE (IV, JTR-1) [36]
> IN FAVOR, IF COULD DELIVER 'SMART' SYSTEM--ESP QUERY BY KEYWORD/TOPIC [36]

> SHOULD BE MANUALS OF HEAVIEST USE [37]
> IN FAVOR IF SMART TERMINAL--QUERY BY KEYWORD/TOPIC [37]

> SHOULD BE MANUAL OF HEAVIEST USE (IV, JTR-1) [38]
> IN FAVOR IF SMART SYSTEM--QUERY BY KEYWORD/TOPIC [38]

> ADVANTAGE--CURRENT INFO AT ALL TIMES WHEN TERMINAL WAS ON LINE WITH DATA BANK [39]
> DISADVANTAGES--COMPUTER DOWN TIME, COST OF TERMINALS/LINES [39]
> FAVORS TEST FOR AREAS LIKE JTR VOLS [39]

> FAVORS TEST FOR AREAS LIKE JTR VOLS [40]

> WILL TAKE WORK TO FORMAT IT TO TAKE ADVANTAGE OF SUBJECT MATTER RETRIEVAL [41]
> GIVEN THIS, WOULD BE IN FAVOR [41]

> VERY ADVANTAGEOUS--CURRENT INFO AVAILABLE FOR REFERENCE [42]
> ALSO ONE MUST CONSIDER AVAILABLE COMPUTER SYSTEMS AND COST TRADEOFFS [42]

> YES [44]
> PERHAPS IT COULD BE TIED INTO THE IDA COMPUTER SYSTEM SO THAT ADMINISTRATORS THAT HAVE TERMINALS COULD USE SAME FOR MANUAL [44]
> FM WOULD BE IMPROVED BECAUSE OF THE EASY ACCESS TO GUIDANCE [44]

> YES--REAL-TIME INFORMATION [45]

> IF AVAILABLE ON DATA BASE IN A USEABLE FORM WITH PROPER REFERENCE DOCUMENTATION THIS INFORMATION WOULD HELP [46]

> YES--ON A SELECTIVE BASIS WHERE COST EFFECTIVE [47]

> GOOD IDEA [48]
> WOULD LIKE TO SEE CONCEPT APPLIED TO JTR-1/2 [48]
> ALSO OTHER NAVCOMPT MANUAL AREAS--PAY ENTITLEMENTS (CIV/MIL) [48]

> ADVANTAGE [51]
> YOU COULD FIND OUT ALL SOURCES CONCERNING A PARTICULAR SUBJECT [51]

> GOOD FOR RESEARCH, SEARCH [52]
> CHECK OUT FLITE (FEDERAL LEGAL INFO THRU ELECTRONICS--926-7531 OR 303-320-7531)--LOWRY AFB DENVER [52]
> FLITE GIVES ACCESS TO COMPTROLLER GEN DECISIONS--LANGUAGE OF APPROPRIATIONS ACT [52]

> AUTOMATION LOOKS LIKE A GOOD IDEA PROVIDED THE EQUIPMENT WAS IN FACT PROVIDED TO ALL USERS THAT NEED IT [54]

> AUTOMATION LOOKS LIKE A GOOD IDEA PROVIDED THE EQUIPMENT WAS IN FACT PROVIDED TO ALL USERS THAN NEED IT [55]

> YES--IT DEFINITELY WOULD BE IF YOU COULD CALL UP CERTAIN ASPECTS OF REGULATIONS BY SUBJECT MATTER [57]

> LOVE TO SEE IT [58]
> FANTASTIC [58]
> ACCESS BY TOPIC--'GIVE ALL INFO ON....' [58]

> FANTASTIC IF COULD GET ALL THE INFO TOGETHER [59]
> SUSPICIOUS OF 1) MACHINE DOWN TIME; 2) ACCESS OVERLOAD (TURN AROUND TIME) [59]

> JTR-1 AND DODPM--NEED TO AUTOMATE IN THESE AREAS [60]
> FEASIBLE FOR LARGE SHIPS TOO--CARRIERS, TENDERS [60]

> NEED TO AUTOMATE JTR-1 AND DODPM [61]

> FEASIBLE FOR LARGE SHIPS--CARRIERS, TENDERS [61]

> YES [65]

> DEFINITELY IN FAVOR [67]
> ALREADY HEADING IN THAT DIRECTION [67]
> ADV: LATEST MATERIAL AVAILABLE [67]
> ADV: MORE PEOPLE IN ACCTG WOULD HAVE ACCESS TO MATERIAL [67]
> DISADV: TIME SPENT ON TERMINAL WOULD TAKE AWAY TIME SPENT MAKING FISCAL INPUTS--COULD ADD MORE TERMINALS [67]
> COST-EFF: ELIMINATION OF MAKING CHANGES TO HARD COPY MANUALS WILL SAVE MANY DOLLARS & TIME [67]

> PREFERS THIS APPROACH [68]
> UIC WOULD ALSO BE FINE HERE [68]

> GOOD FOR SHORE [72]
> SOLVE JTR/DODPM UPDATING [72]
> UPDATING WOULD BE A PROBLEM AT SEA--HOW WOULD IT BE DONE? [72]

> UPDATING GOOD [73]
> HAS SOME WORRIES--E.G. DOWN-TIME AT SEA [73]

> GOOD [74]
> AT-SEA PROBLEM WITH UPDATING [74]
> DON'T KNOW IF COULD SUPPORT ANOTHER TERMINAL [74]
> WORRY ABOUT SMALL SHIPS (WITHOUT COMPUTER) [74]

> GOOD [75]
> TIMELINESS BIGGEST ASSET [75]
> PROBLEM OF UPDATE AT SEA [75]
> DON'T KNOW IF COULD SUPPORT ANOTHER TERMINAL [75]

> GOOD IDEA IF IT'S DONE RIGHT [76]
> WORRIES: DOWN-TIME; TRAINING (TECHNICAL KNOW-HOW) [76]

> GOOD IDEA IF DONE RIGHT [77]
> DOWN-TIME, TRAINING ARE WORRIES [77]

> HELP UPDATING [78]
> CONCERNED ABOUT DOWN TIME [78]

NAVCOMPT MANUAL AS A DIGITAL DATA BASE WITH TERMINAL ACCESS

COMMENTS NOT IN FAVOR

> OK--WERE THE EQUIP TO BE ADEQUATE & RELIABLE [04]
> NSC'S COMPUTER SYSTEM IS 60% DOWN--WHEN WORKING WILL BE OVERLOADED/INADEQUATE [04]
> NOT YET VOTING FOR AUTOMATION [04]

> VOL II-CH5 IS A CANDIDATE FOR AUTOMATED DATA BASE [06]
> SECOND CHOICE (BEHIND MICROFICHE) [06]
> OTHER PARTS OF NAVCOMPT MANUAL OK AS IS IN HARD COPY FORM [06]

> NO--NOT PRACTICABLE FOR USES HERE--PREFER CONTINUED HARD CMPY [07]

> PREFER UTILIZATION OF CURRENT MANUALS [12]
> INFORMATION IS HARDER TO LOCATE [12]
> DOES NOT FEEL THAT AUTOMATION OF ANY OF THE PARTS OF NAVCOMPT MANUAL NOW USED WOULD BE OF BENEFIT IN THIS PARTICULAR FUNCTION [12]

> NO, THIS WOULD NOT HELP MY OPERATION [18]
> IT IS MUCH EASIER TO REFER TO THE MANUALS AND TO TAKE THEM FROM DESK TO DESK OR EVEN HOME [18]
> IT WOULD NOT BE COST EFFECTIVE TO PUT ALL THIS INFO ON A DATA BASE THAT COULD BE USED ONLY IN AN OFFICE [18]
> WOULD SOLVE UPDATING [18]
> THEY DON'T HAVE ENOUGH TERMINALS TO GO AROUND NOW--PIGGYBACK WOULD NOT WORK [18]

> EASIER TO REFER TO THE MANUALS AND TO TAKE THEM FROM DESK TO DESK, AND EVEN HOME [19]
> DON'T HAVE ENOUGH TERMINALS TO GO AROUND NOW--PIGGYBACK NOT POSSIBLE [19]

> DOES NOT SEE VALUE OF DOING THIS [22]

> NO--DON'T SEE HOW HELPFUL [31]
> GENERALLY TALKS POLICY (ON THE PHONE)--IS NOT WORTHWHILE FOR HIS OPERATION [31]
> MECHANIZATION OF PAY RATES, PER DIEM RATES COULD BE HELPFUL [31]

> NOT FOR BUDGET OFFICE HERE [34]

> NOT FOR BUDGET OFFICE HERE [35]

> SEES NO PRACTICALITY IN DOING THIS [43]
> FEEL NUMBER OF TERMINALS, ACCESS THERETO INCLUDING COMMUNICATIONS, NEED FOR HARD COPY, AND TRANSPORTATION THEREOF ARE DISADVANTAGES [43]
> LACK OF COST EFFECTIVITY [43]

> NO FOR II & III [49]
> MAYBE AN ACTIVITY THAT DOES BIGGER BUSINESS (VOLUME) THAN WE DO MAY HAVE A DIFFERENT IDEA [49]
> NRL DOES NOT HAVE BIG NUMBERS OF PEOPLE [49]

> NOT USEFUL AS MANUALS NOT USED ON A DAILY BASIS [50]
> ALSO NOT COST EFFECTIVE [50]

> TERMINALS ARE NOT MOBILE--NOT ALWAYS WHERE THEY ARE NEEDED--INSTALLED ONLY WHERE VOLUME OF USAGE FOR INPUT/OUTPUT JUSTIFY [53]
> WHEN COSTS OF PRINTING, DISTRIBUTING, & UPDATING MANUALS EXCEEDS THE COST OF INSTALLING, RENTING, & OPERATING SIMILAR NUMBER OF TERMINALS THEN COST EFFECTIVENESS JUSTIFIES THEM [53]
> AS A FUTURISTIC CONCEPT IT'S GREAT [53]

> NO--NOT NEEDED AT SCHOOL [56]
> IN FLEET, DOES SEE ADVANTAGE TO FICHE OR AUTOMATION FOR SELECTED PARTS [56]
> HOWEVER, AS A TEACHING AID CALL UP OF A PAGE BY INSTRUCTOR ON SCREEN COULD BE A VALUABLE TOOL AND SAVE INSTRUCTOR'S TIME [56]

> NO--PREFERS HARD COPY ON A TIMELY RECEIPT BASIS [62]

> NO [64]

> NO [66]
> WHEN RESEARCHING FOR ALL AVAILABLE DATA RELATED TO A SPECIFIC ITEM IT IS OFTEN NECESSARY TO SCAN THROUGH THE VOLUMES ON HAND [66]
> --BECAUSE OF THE VAGUE INDEX AND ALSO BECAUSE RELEVANT MATERIAL IS DISTRIBUTED THROUGHOUT VARIOUS CHAPTERS IN MORE THAN ONE VOLUME [66]

> NO--IN GENERAL [70]
> BUT IN THE FUTURE CONSOLES MIGHT BE GOOD! [70]

> NO ADVANTAGE--USE ONLY II-5 [71]

NAVCOMPT MANUAL AS A DIGITAL DATA BASE WITH TERMINAL ACCESS

COMMENTS INDICATING AMBIGUITY, MIXED FEELINGS

> REALLY DON'T KNOW HOW IT WOULD WORK OUT PARTICULARLY REGARDING CLERICAL CAPABILITY [25]

> DON'T KNOW [63]

> NOT WITH OUR RECORD! [69]
> OK IF INTELLIGENT QUERY SYSTEM [69]
> COMPUTER DOWN TIME IS A PROBLEM [69]

APPENDIX F
LIST OF ACRONYMS AND ABBREVIATIONS

LIST OF ACRONYMS AND ABBREVIATIONS

CONUS	Continental United States
CNET	Naval Education and Training Command
COM	Computer Output Microfiche
CRC	Camera Ready Copy
DOD	Department of Defense
DON	Department of Navy
DPS	Defense Printing Service
FM	Financial Management
GPO	Government Printing Office
H/W	Hardware
IRCAS	Information Requirements Control Automated System
JTR	Joint Travel Regulations
NAFC	Navy Accounting and Finance Center
NAVCOMPT	Navy Comptroller
NMA	National Microfiche Association
NPFC	Navy Publications and Forms Center
NETPDC	Naval Education and Training Program Development Center
NSCS	Navy Supply Corps School
NTI	Navy Travel Instructions
NTIPP	Navy Technical Information Presentation Program
NTIPS	Navy Technical Information Presentation System
ONR	Office of Naval Resarch
OCR	Optical Character Recognition
PASS	Pay and Personnel Administrative Support System
PAYPERSMAN	Pay and Personnel Procedures Manual
PIPPS	Publication Information Processing and Printing System
POA&M	Plan of Action and Milestones
PPBS	Planning, Programming and Budgeting System
PPS	Page Processing Systems
SFOED	Summary Filled Order/Expenditure Differences
S/W	Software
TI	Technical Information
UIC	Unit Identification Code
VDT	Video Display Terminals

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