S0005-AA-PRO-010/TMMP

REVISION 3

NAVSEA
TECHNICAL MANUAL MANAGEMENT PROGRAM
OPERATIONS AND LIFE CYCLE SUPPORT PROCEDURES

This document supersedes:
S0005-AA-GYD-070/TMMP Revision 1 dated 1 February 1991
S0005-AA-PRO-010/TMMP Revision 2 (Preliminary) dated 1 July 2000

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FOREWORD

The Naval Sea Systems Command (NAVSEA) Technical Manual Management Program (TMMP) Operations and Life Cycle Support Procedures Manual is promulgated as an information guide for the various elements of Technical Manual (TM) management and use. Overall responsibility for the NAVSEA TMMP resides at NAVSEA 04L.

The material presented within is intended for use by everyone involved in the “4 D’s” of TM management (*Definition, Development, Distribution, and Disposal)* and consists of Chapters 1 through 6.

This manual directly supports the implementation and execution of the policies outlined in NAVSEA Instruction 4160.3 by providing TMMP guidance, information, and direction, including:

- Business process descriptions and explanations
- Established operational responsibilities descriptions for individuals and ac tivities participating in the various functions that comprise TM management
- Guidelines and processes for the acquisition, development, distribution, disposal, and use of TMs
- Resource information and references to additional sources of related information
- Instructions on forms (paper and electronic requests)
- Products and services available as part of the TMMP

While this manual supplements the policies outlined in NAVSEA Instruction 4160.3, it does not provide exact, definite formulas, dollar values, or the identification of offices and codes involved in every TM life cycle process.

This manual does not cover:

- TMs under the cognizance of NAVSEA 08
- Navy Special Weapons Ordnance Publications (SWOP)

This manual incorporates the following Technical Manual Deficiency/Evaluation Reports: (TMDERs): N00253-06-RH11, Q90613-10-JS01

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CHAPTER 1
INTRODUCTION TO THE TMMP OPERATIONS AND LIFE CYCLE SUPPORT PROCEDURES MANUAL

1.1 INTRODUCTION AND PURPOSE

The Technical Manual Management Program (TMMP) Operations and Life Cycle Support Procedures Manual is intended for use by everyone involved in definition, development, distribution, or disposal, of Naval Sea Systems Command (NAVSEA) technical manuals (TMs). The operations and procedures addressed in this manual directly support the implementation and execution of the TMMP policies and business process procedures required by NAVSEA Instruction (NAVSEAINST) 4160.3B. This manual describes operational responsibilities for activities and individuals participating in the various functions that comprise TM management and provides descriptions of functions, explanation of processes, and references to additional sources of information. This manual does not cover TMs under the cognizance of NAVSEA 08 or Navy Special Weapons Ordnance Publications (SWOPs). Additionally, Joint Service Explosive Ordnance Disposal (JSEOD) TMs shall be acquired, developed, maintained, and distributed in accordance with applicable portions of this manual and S0005-AH-PRO-010, and where conflicts exist S0005-AH-PRO-010 shall take precedence.

1.2 SUPERSEDURES

This manual incorporates and supersedes the following guidance documents:

- S0005-AA-GYD-070/TMMP Revision 1, NAVSEA Technical Manual Management Program, Guide for Quality Assurance of NAVSEA Technical Manuals
- S0005-AA-PRO-010/TMMP Revision 2, NAVSEA Technical Manual Management Program Operations and Life Cycle Support Procedures.

1.3 ORGANIZATION AND CONTENT

This manual is organized around the concept of the “4 D’s” of technical manual management: *Definition, Development, Distribution*, and *Disposal*. Within this manual, TMMP responsibilities are functionally categorized as:

- Program Authority
- Acquisition Authority
- In-Service Engineering Agent (ISEA)
- Technical Manual Management Activity (TMMA)
- TM Manager
- TM User/Librarian.

As assigned functional responsibilities may vary from TM program to TM program, there may be individuals or activities performing more than one functional assignment. Where a specific activity (e.g., Naval Systems Data Support Activity (NSDSA), Naval Logistics Library (NLL)), is assigned a TMMP responsibility, that specific activity is identified within the discussion presented.

This manual comprised of six chapters and appendices as follows:

- **Chapter 1 – Introduction.** Provides an introduction to TMMP Operations and Life Cycle Support Procedures Manual
- **Chapter 2 – TMMP Operations and Procedures.** Provides an introduction and overview to the NAVSEA TMMP and its infrastructure, the policies and responsibilities for the TMMP and TMMP training
- **Chapter 3 – Technical Manual Definition.** Provides guidance, operations, and procedures for the planning, budgeting, funding, and acquisition of TMs to support new or existing ships, systems, or equipment
- **Chapter 4 – Technical Manual Development.** Provides guidance, operations, and procedures for TM quality assurance, development and maintenance, conversion/ digitization, acceptance, and certification
- **Chapter 5 – Technical Manual Distribution.** Provides guidance, operations, and procedures for TM duplication, distribution control, distribution, and stocking
- **Chapter 6 – Technical Manual Disposal.** Provides guidance, operations, and procedures for identification and disposal of TMs no longer required
- **Appendix A – List of Acronyms.** Provides a list of acronyms and abbreviations used within the NAVSEA TMMP, including this manual and NAVSEAINST 4160.3
- **Appendix B – Definition of Terms.** Provides a list of terms and their definitions as used within the NAVSEA TMMP
- **Appendix C – List of Reference Documents.** Provides a list of the documents referenced within this manual and within NAVSEAINST 4160.3
- **Appendix D – Points of Contact.** Provides a listing of contact information (websites, e-mail addresses, and phone numbers, etc.) for activities as referenced within this manual and within NAVSEAINST 4160.3.

1.4 SCOPE

This manual covers the operations and life cycle support procedures in support of the NAVSEA TMMP. The TMMP applies to all phases and aspects of the life cycle management of TMs. The structure of this manual follows the four phases of TM life cycle management which are:

- **Definition.** Phase 1, Definition, is the planning, budgeting, funding, and acquisition of TMs to support new or existing ships, systems, or equipment
- **Development.** Phase 2, Development, is the development, maintenance, conversion/ digitization, quality assurance, acceptance, and certification of TMs
- **Distribution.** Phase 3, Distribution, is the duplication, distribution control, distribution, and stocking of TMs
- **Disposal.** Phase 4, Disposal, is the identification and disposal of TMs no longer required.

While this manual supplements the policies outlined in NAVSEA Instruction 4160.3, it does not provide definite formulas, dollar values, or identify offices and codes involved in every TM life cycle process. It does, however, provide guidance in terms of description of functions,

explanation of processes, instructions on forms/formats, and references to additional sources of related information.

1.5 UPDATES

Updates will be issued to this manual as processes and methodologies change or to correct errors. Updates to this manual shall be consistent with the policies and responsibilities as defined in NAVSEAINST 4160.3.

1.6 FEEDBACK REPORTING

Errors found, comments, or recommendations to improve this manual should be reported on a Technical Manual Deficiency/Evaluation Report (TMDER). Feedback comments will be thoroughly investigated and originators will be advised of action resulting there from. There are three ways to submit a TMDER. The most expedient and preferred method of TMDER generation and submission is via the Technical Data Management Information System (TDMIS) website (see appendix D) (TDMIS account required). TMDERs can also be generated and submitted via the NSDSA website (see appendix D). When internet access is not available, a TMDER can be submitted via hardcopy to:

COMMANDER
CODE 310 TMDERs
NAVSURFWARCENDIV NSDSA
4363 MISSILE WAY, BLDG 1389
PORT HUENEME, CA 93043-4307

A copy of the NAVSEA Technical Manual Deficiency/Evaluation Report form, NAVSEA 4160/1 is included at the end of this manual. Copies of form NAVSEA 4160/1 may also be downloaded from the NSDSA website.

1.7 DISTRIBUTION AND STOCK LOCATION

This manual may be viewed, printed, or downloaded from the NSDSA website (see appendix D), from within TDMIS, or from the Naval Logistics Library (NLL) website (see appendix D).

CHAPTER 2
TMMP OPERATIONS AND PROCEDURES

SECTION 2.1 OVERVIEW

2.1.1 TMMP Operations and Procedures Overview. This section provides an overview of the Naval Sea Systems Command (NAVSEA) Technical Manual Management Program (TMMP) and its organization.

2.1.1.1 The NAVSEA TMMP ensures Fleet, shore, and training activities receive complete, technically accurate, adequate, comprehensible, and usable technical manuals (TMs) and TM products. The TMMP applies to all phases and aspects of the life cycle management of TMs and encompasses all technical publications or technical data that furnish information on the description, installation, operation, test, maintenance, repair, and overhaul of a ship, system, or equipment. This chapter contains the following sections:

2.1 TMMP Operations and Procedures Overview
2.2 TMMP Implementation
2.3 TMMP Tools
2.4 TMMP Assistance and Training.

2.1.1.2 The phases, or "4 D's", of TM life cycle management are *Definition, Development, Distribution*, and *Disposal* as depicted in figure 2.1-1.

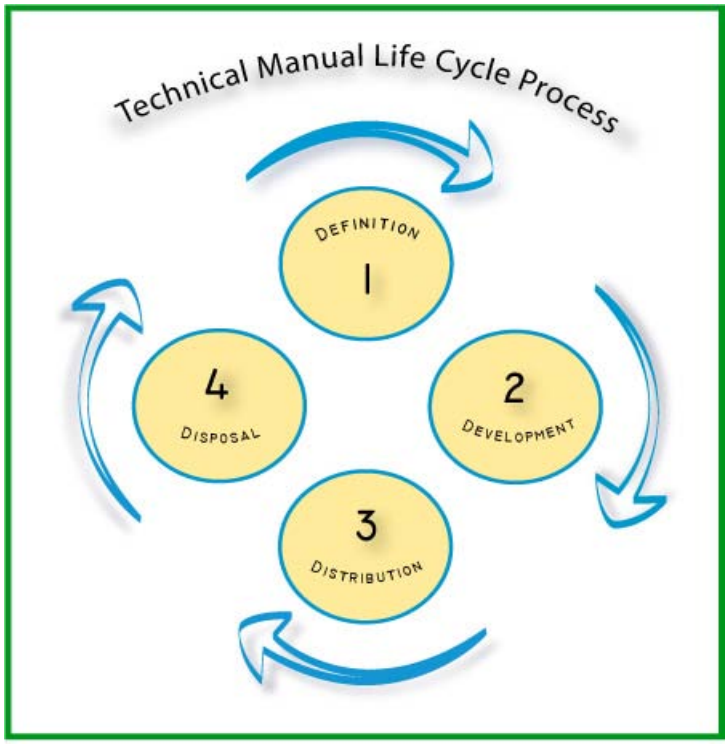

Figure 2.1-1 TM Life Cycle Phases – The "4 D's"

a. **Phase 1: Definition.**
The planning, budgeting, funding, and acquisition of TMs to support new or existing ships, systems, or equipment.

b. **Phase 2: Development.**
TM development and maintenance, conversion/digitization, quality assurance, acceptance, and certification.

c. **Phase 3: Distribution.**
TM duplication, distribution control, distribution, and stocking.

d. **Phase 4: Disposal.**
The identification and disposal of TMs no longer required.

2.1.2 TMMP Organization. A pictorial of the NAVSEA TMMP functional organization is provided in figure 2.1-2. The TMMP organization consists of specific activities assigned specific responsibilities that constitute the TMMP infrastructure, the program activities that are responsible for executing the functional TMMP responsibilities within their program, and the end users. The functional responsibilities may cross several activities, or may be within a single activity.

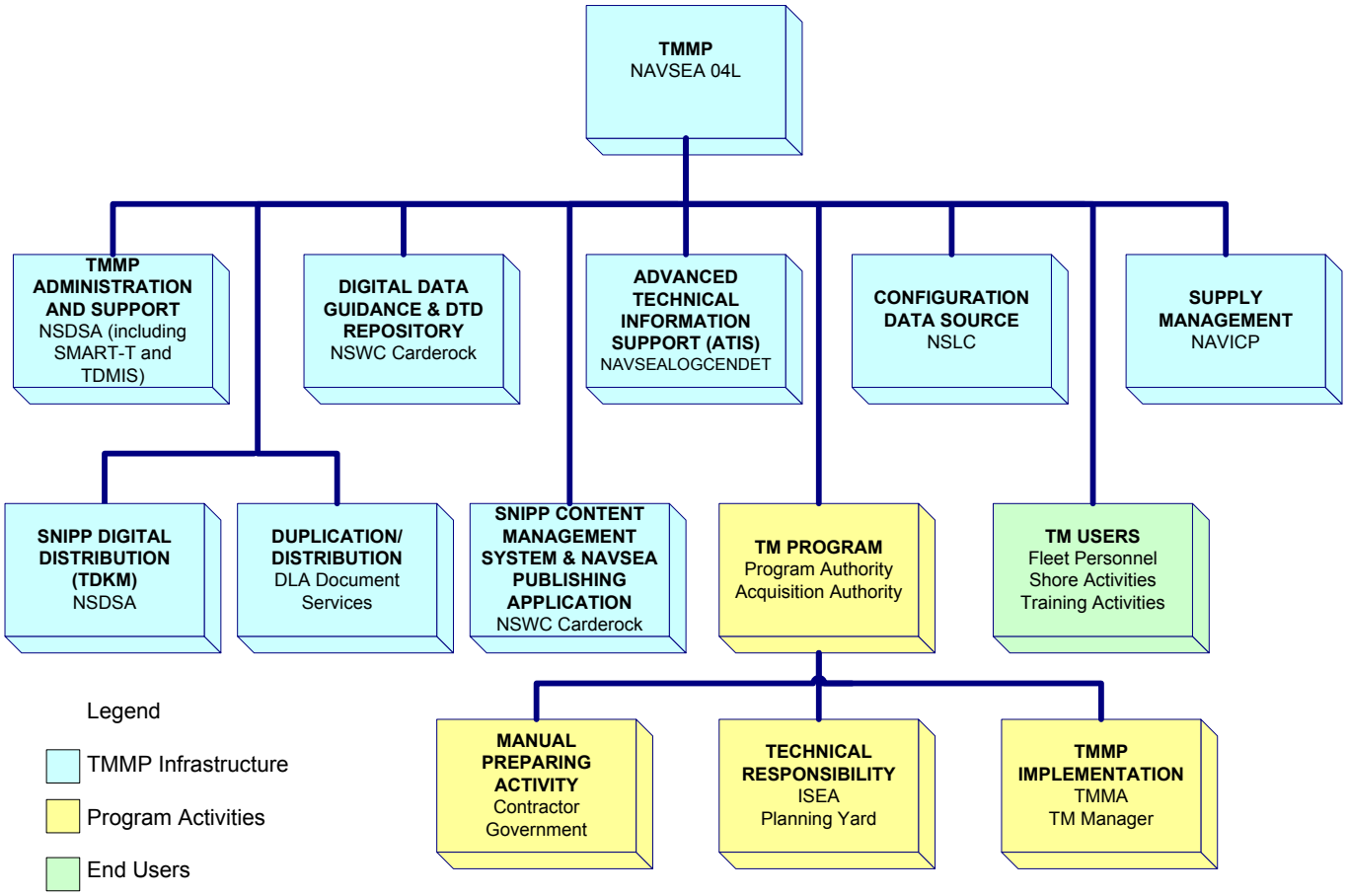

Figure 2.1-2 TMMP Organization

2.1.3 Policies and Responsibilities.

2.1.3.1 NAVSEAINST 4160.3. NAVSEAINST 4160.3 provides the policies and responsibilities for the NAVSEA TMMP. These policies and responsibilities are reflected within this manual.

2.1.3.2 Deviations and Waivers. Deviations or waivers to NAVSEAINST 4160.3 shall be in writing from NAVSEA 04L. Waiver requests are submitted via a Customer Service Request (CSR) from the NSDSA website (see appendix D). Acquisition authority activities are responsible for providing total accountability for the acquisition of quality TMs. Deviations and waivers from the TMMP do not relieve the acquisition authority activity of the responsibility for the quality of the technical product delivered. Contractual acceptance of a product does not relieve the acquisition authority activity from correcting technically deficient products.

SECTION 2.2 TMMP IMPLEMENTATION

2.2.1 Introduction to TMMP Implementation. This section addresses implementation of the NAVSEA TMMP, including responsibilities for ensuring an adequate infrastructure to support the TMMP.

2.2.2 TMMP Implementation Responsibilities. Table 2.2-1 identifies the responsibilities for implementation of the TMMP and the supporting infrastructure.

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
NAVSEA 04L	1. Provide executive direction of the TMMP. 2. Direct and fund centralized TMMP services. 3. Provide NAVSEA policy overview and guidance and implement the applicable policies of higher authorities. 4. Maintain NAVSEA TMMP instruction current in accordance with Department of Defense (DoD) and Department of the Navy (DON) policies and guidance. Approve and issue the TMMP Operations and Life Cycle Support Procedures Manual, NAVSEA S0005-AA-PRO-010/TMMP, and issue updates to the manual. 5. Develop and maintain a conforming process, known as the Standard NAVSEA Integrated Publishing Process (SNIPP), for the acquisition, development, maintenance, data storage, and distribution of NAVSEA TM source data and presentation files. Exercise overall authority and responsibility for the policies, procedures, and programs applicable to the SNIPP. The SNIPP shall be maintained as a formal, effective, conforming process to ensure that TMs are of high quality, under adequate management control, and in compliance with the current Navy infrastructure, security requirements, specifications, and Fleet and other user display requirements. 6. Provide approval/ disapproval for SNIPP waiver and deviation requests. 7. Include Technical Manual Quality Assurance (TMQA) as an integral part of the TMMP. Monitor Technical Manual Contract Requirements (TMCRs) to ensure the appropriate level of TMQA requirements are imposed in contracts. Ensure TMQA requirements are maintained and in concert with current Fleet quality needs. Coordinate TMQA requirements with other Navy offices. 8. Coordinate the maintenance of all NAVSEA TM specifications, standards, handbooks, and guides in accordance with SNIPP [i.e, Section 086 of S9AA0-AB-GOS-010, General Specifications for Overhaul of Surface Ships (GSO); Section 8 of SL720-AA-MAN-010, Fleet Modernization Program (FMP) manual regarding Selected Record Data TMs; SL720-AA-MAN-030 Navy Modernization Process – Management and Operations Manual

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
NAVSEA 04L Continued	(NMP-MOM) regarding modernization for surface ships and carriers; and MIL-DTL-24784]. 9. Represent NAVSEA within the DoD Standardization Program for the Technical Manual Specifications and Standards (TMSS) area. 10. Conduct reviews of TM products for TMMP and TM certification compliance. 11. Provide guidelines for management of TMs in command and shipboard technical libraries. 12. Coordinate the maintenance of Selected Record Data TMs with the FMP/Entitled Process FMP. 13. Perform TM management in support of the Maintenance and Material Management (3-M) Program. 14. Perform TM management for the Naval Ships' Technical Manual (NSTM) Program. 15. Designate a Headquarters Life Cycle Manager, field activity (In-Service Engineering Activity (ISEA), or planning yard (PY)), etc., to serve as the Technical Manual Management Activity (TMMA) for all Directorate TMs. Identify TMs, that while assigned to another activity as TMMA, require special review and technical certification by the NAVSEA Directorate. Provide the Naval Systems Data Support Activity (NSDSA) with a list of special TMs for status update in the Technical Data Management Information System (TDMIS). Coordinate and validate TM concerns, TMMA selection, and TMMA reassignments with participating activities prior to reporting to NSDSA. Report all TMs and TMMA selections to NSDSA for TMMA assignment and entry of information into TDMIS. Report specific TMMA Unit Identification Code/Internal Office Code (UIC/IOC) to NSDSA. 16. Operate a program to resolve TM deficiencies and to ensure that TMs are maintained current and accurate at all times. Manage a TM Deficiency Program, which includes the Technical Manual Deficiency/Evaluation Reporting (TMDER) and Advance Change Notice (ACN) Programs. 17. Provide formal criteria for use in contracts to verify and accept (or reject) of TM products and associated data items. Provide and implement TM certification requirements. 18. Coordinate with the Defense Logistics Agency (DLA) Document Services to print and distribute only certified NAVSEA TMs. 19. Provide direction to the NSDSA for NAVSEA distribution requirements and lists. 20. Represent the Navy on DoD and industry-wide TM councils. Represent NAVSEA on DoD TM Policy Councils. Represent NAVSEA as a member of Navy TM Management Councils. Act as the focal point for TM policy matters at headquarters. Perform as the central point of contact for liaison and coordination with higher authorities, other Systems Commands, and industry in all policy

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
NAVSEA 04L Continued	matters relating to TMs. 21. Monitor all the elements of the TMMP and report findings at the TMMA conferences. 22. Provide technical direction to the NSDSA in support of TMMP implementation, training, and guidance. 23. Direct technical research and analysis to identify requirements for TM automation and digitization methods to meet projected Fleet and Command needs. Develop computer-aided TM production system requirements, specifications, and standards. Coordinate those requirements with acquisition and maintenance activities and other Navy and DoD components. Develop and manage a budget for TM collection and digital conversion. 24. Provide approval/disapproval for local TMMP implementing procedures.
NSDSA	1. Maintain the NAVSEA TMMP Operations and Life Cycle Support Procedures Manual (S0005-AA-PRO-010/TMMP) and recommend TMMP changes for update to NAVSEA 04L. 2. Review TMMP related waiver and deviation requests and provide recommendations to NAVSEA 04L. 3. Operate, maintain, and document the automated centralized and integrated system known as TDMIS, including but not limited to: a. Provide TM data interfaces with automated configuration, logistics, and maintenance information systems. Interface TDMIS data with Configuration Data Managers Database-Open Architecture (CDMD-OA), Naval Data Environment (NDE), Naval Logistics Library (NLL), Streamlined Modular Acquisition Requirements Tailoring Tool (SMART-T), and other Navy databases to improve TM data accuracy. b. Operate the Technical Manual Identification Numbering System (TMINS) within TDMIS to identify and control TMs. Operate the assignment of Volume Identification (Vol ID) Numbers within TDMIS. Utilize the NLL Catalog Interface to request and obtain National Stock Number (NSN) assignments for TM products. c. Review TMINS Application Guide (N0000-00-IDX-010/TMINS) and recommend NAVSEA required updates. d. Manage the TM deficiency reporting and ACN programs within TDMIS. e. Administer user accounts providing access to TDMIS database information and establishing user privileges. f. Coordinate, collect, and ensure accurate TM data for TDMIS. Ensure TMMA and TM Manager assignment information is maintained. g. Maintain the process to generate, download, and issue Indexes of Technical Publications (ITPs) for ships, ship classes, selected shore and training activities, and battle groups (strike groups) based on data from CDMD-OA.

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
NSDSA Continued	h. Provide reports for ship and shore activities extracted from TDMIS to users. i. Act as the repository of master distribution lists for TM products. Provide label generation program and list reports for TMMAs. Ensure current address information is reflected in the distribution list database. 4. Operate, maintain, and document the SMART-T Program, including but not limited to: a. Maintain SMART-T as the source and repository for / TMCRs/TMSRs and ensure TM specifications and standards, approved for use for NAVSEA TM acquisition are cited in the ASSIST Database, and are reflected in the TMCR/TMSR database. b. Make recommendations to NAVSEA 04L on requests for deviations or waivers from current published requirements resident in SMART-T. c. Ensure SMART-T can generate TMCRs/TMSRs for requesters in a timely manner. d. Administer user accounts providing access to SMART-T and establishing user privileges. e. Coordinate efforts to maintain, consolidate, simplify, and standardize MIL-DTL-24784. Review and provide recommendations for update to TM acquisition and development specifications, standards, handbooks, etc. 5. Operate and maintain the master repository storage program, known as the Naval Engineering Technical Library (NETL), including maintaining a digital library as a part of the NETL. 6. Manage the development and maintenance of the SNIPP for NAVSEA TMs as directed by NAVSEA 04L. 7. Operate, maintain, document, and manage the Technical Data Knowledge Management (TDKM) system utilized as part of the SNIPP. 8. Review SNIPP related waiver and deviation requests and provide recommendations to NAVSEA 04L. 9. Act as NAVSEA's central point of contact and liaison between NAVSEA and Naval Inventory Control Point (NAVICP) Philadelphia for matters related to TM stock numbering, replenishment, issuing, and stock. 10. Develop and manage a TM distribution program and perform TM distribution functions as requested and funded. 11. Manage a program of TMMP training. 12. Support the Regional Maintenance Centers (RMCs), TMMAs, Fleet, and other activities with TM guidance, assistance, and TDMIS information. 13. Perform random quality assurance reviews and evaluations of TM product quality.

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
NSDSA Continued	14. Review and provide recommendations to NAVSEA 04L for approval/disapproval for local TMMP implementing procedures submitted by TMMAs.
NAVSEALOGCEN-DETLANT	Provide Advanced Technical Information Support (ATIS) compatibility testing and certification services for digital storage media (i.e., Compact Disks-Read-Only Memory (CD-ROMs) and Digital Versatile Disks (DVDs)) containing NAVSEA TMs.
DLA Document Services	1. Provide duplication and distribution services for NAVSEA TMs. 2. Manage and operate the Technical Manual Print on Demand System (TMPODS).
NSLC	Coordinate an electronic interface for digital data transfer between the CDMD-OA and TDMIS.
NAVICP Philadelphia	1. Coordinate an electronic interface for digital data transfer between the NLL and TDMIS. Maintain records of stock-numbered NAVSEA TMs, TM updates, and digital storage media containing TMs, including historical data for stocking, usage information, and statistical data. Provide NSDSA access to the NAVSEA TM data. 2. Assign stock numbers to NAVSEA TMs, TM updates, and digital storage media containing TMs. 3. Act as the inventory control point for NAVSEA TMs. Provide warehousing for NAVSEA TM stock. 4. Maintain a Burn on Demand (BOD) system for duplicating CD-ROMs to fill requisitions. 5. Maintain costs for TMs requisitioned and issued to foreign countries in support of Navy Foreign Military Sales (FMS) and military assistance programs. Reimburse appropriate Systems Command accounts for TMs requisitioned and issued to foreign countries.
NSWCCD	1. Provide digital data guidance. 2. Provide a centralized repository for Document Type Definitions (DTDs), Schemas, Style Sheets, Business Rules, Information Sets, Information Codes, and other implementation resources used to develop NAVSEA TMs. Within the repository, maintain a location for SNIPP-approved documentation.
NSWCCD Philadelphia Detachment	Operate, maintain, document, and manage a Content Management System (CMS) and NAVSEA Publishing Application (NPA) utilized as part of the SNIPP.
Program Authority	1. Implement and fund NAVSEA TMMP policies, requirements, and procedures for acquisition and maintenance of TM products supporting assigned programs. 2. Ensure TMMP requirements are included in tasking to supporting activities involved in the development or maintenance of TMs. 3. Ensure TM Manager functions that are inherently governmental are performed by the Government when the designated TMMA is a contractor activity. 4. Use the SNIPP for acquisition, development, maintenance, storage,

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
Program Authority Continued	and distribution of TMs or obtain a waiver for acquisition of TMs not utilizing the SNIPP.
Acquisition Authority	1. Implement TMMP policies, requirements, and procedures for acquisition and maintenance of TM products supporting assigned programs. 2. Ensure NAVSEA TMMP requirements are included in all tasks provided to other activities and in contracts awarded to contractors involving development of TMs. 3. Ensure TMMA responsibilities and compliance with NAVSEAINST 4160.3 and this manual are specified in all tasks provided to other activities and in contracts awarded to contractors involving assignment of TMMA functions. When the designated TMMA is a contractor activity, ensure TMMA functions that are inherently governmental are retained by the Government. Prepare or direct preparation of local implementing procedures that document compliance with NAVSEAINST 4160.3 and this manual. 4. Ensure that contracts and tasking identify use of the SNIPP for development, maintenance, storage, and distribution of TMs.
Technical Authority	1. Set the standards, including the technical requirements contained in TMs. 2. Empower their engineering agents, including ISEAs and TM Managers, consistent with NAVSEAINST 4160.3.
ISEA/PY	Implement NAVSEA TMMP policies, requirements, and procedures in performing technical maintenance, quality assurance, and certification of TM products supporting assigned programs.
TMMA	1. Implement NAVSEA TMMP policies, requirements, and procedures within the command. 2. Develop local TMMP implementing procedures, or document compliance with NAVSEAINST 4160.3 and this manual. 3. Update TMMP/TMMA shore activity level implementing instructions as changes occur in the program requirements. 4. Ensure each TM for which the activity is responsible is assigned to a trained TM Manager.
TM Manager	1. Implement the TMMP as defined in NAVSEAINST 4160.3, this manual, and local TMMP implementing procedures within the assigned TM program. 2. Obtain a TDMIS account. 3. Ensure TMMA and TM Manager assignment information is maintained current and reflected in TDMIS. 4. Complete required training and submit evidence of local TMMP compliance to NSDSA when requesting to be listed as the TMMA POC (point of contact) in TDMIS. 5. Make maximum use of the SNIPP for acquisition, development, maintenance, storage, and distribution of TM source data and presentation files.

Table 2.2-1 Responsibilities – TMMP Implementation

Activity/Function	Responsibility
Preparing Activity	Prepare and deliver TMs and TM products as defined in contract or tasking documents.

2.2.3 TMMP Infrastructure Implementation.

2.2.3.1 NAVSEA 04L provides executive direction, management, policy overview, and guidance of the NAVSEA TMMP. NAVSEA 04L plans, executes, programs, budgets, and appraises TMMP operations; establishes, promulgates, and maintains policies and requirements for the acquisition, development and maintenance of TMs; and directs the development, management, and maintenance of TMMP developed tools and processes. To ensure an effective TMMP, NAVSEA 04L will:

- Conduct periodic reviews of TM products and management systems for compliance with NAVSEAINST 4160.3 and this manual
- Analyze program effectiveness, identify problem areas, and develop program improvements
- To support training requirements, conduct random reviews of TM products, training development schedules, and ensure TMs are suitable for training course use.

2.2.3.2 NSDSA administers the TMMP program as directed by NAVSEA 04L, providing the source and repository for TMCRs/TMSRs (SMART-T), a centralized TM tracking system (TDMIS); operation of TM product identification systems (TMINS, Vol IDs); development, maintenance, and operation of standardized TMMP processes; providing access to TMMP tools, processes, and information; providing a master repository for NAVSEA TMs (NETL); providing digital distribution methods (TDKM); and providing TMMP training and guidance.

2.2.3.3 Naval Sea Logistics Support Center Detachment Atlantic (NAVSEALOGCENDETLANT) provides test and certification services for ATIS System compatibility for digital storage media containing NAVSEA TMs.

2.2.3.4 DLA Document Services provides duplication and distribution services for NAVSEA TMs including Print On Demand (POD).

2.2.3.5 NAVICP Philadelphia provides supply management and acts as the inventory control point for NAVSEA TMs. TM program supply management is provided by NAVICP through the use of the NLL, a web-accessible Naval Supply Systems Command (NAVSUP) database. NAVICP also manages the POD and BOD programs.

2.2.3.6 The Naval Sea Logistics Center (NSLC) manages the Configuration Data Managers Database – Open Architecture (CDMD-OA) which serves as the authoritative source for ships configuration information used within TDMIS.

2.2.3.7 Naval Surface Warfare Center Carderock Division (NSWCCD) provides policy guidance on digital data. NSWCCD also manages the centralized repository, known as the Navy XML/SGML Repository, for DTDs, Schemas, Style Sheets, Business Rules, Information Sets, Information Codes, and other implementation resources used to develop NAVSEA TMs.

2.2.3.8 NSWCCD Philadelphia Detachment is responsible for operation and management of a CMS/NPA used within SNIPP.

2.2.3.9 Within the TMMP, program authority activities are those activities that are responsible for ensuring TMs are acquired to support new or modified ships, systems, or equipments, such as Command directorates, Program Executive Offices (PEOs), program offices, planning yards, Ship Program Managers (SPMs), and Ship Acquisition Program Managers (SHAPMs). Program authority activities implement the policies of NAVSEAINST 4160.3 and the procedures contained herein as a part of their logistics program.

2.2.3.10 Within the TMMP, acquisition authority activities are those activities responsible for the acquisition of TMs. They implement the policies of NAVSEAINST 4160.3 and the procedures contained herein when acquiring TMs to support new or modified ships, systems, or equipment.

2.2.3.11 Within the TMMP, Technical Authority are those activities assigned technical responsibility in accordance with NAVSEAINST 5400.97C, including the technical requirements contained in TMs.

2.2.3.12 Within the TMMP, ISEAs/PYs are those activities designated with the responsibility for the technical content of TMs. They implement the policies of NAVSEAINST 4160.3 and the procedures contained herein when performing TM life cycle technical responsibilities for assigned ships, systems, or equipment.

2.2.3.13 TMMAs implement the policies of NAVSEAINST 4160.3 and the procedures contained herein when defining TM life cycle management responsibilities for assigned TMs supporting ships, systems, or equipment. TMMAs shall ensure each TM for which the activity is responsible is assigned to a trained TM Manager.

a. Selected Record Data TM life cycle responsibilities shall be assigned to a planning yard in accordance with the NAVSEA Fleet Modernization Management and Operations Manual (SL720-AA-MAN-020) and/or the Navy Modernization Process – Management and Operations Manual (NMP-MOM) (SL720-AA-MAN-030).

b. TM life cycle functions for Government or contractor TM management include performing or directing the actions listed below. In accordance with Federal Acquisition Regulation (FAR) Subpart 7.5, acquisition functions that are inherently governmental shall be performed by Government employees. Those functions listed below that are inherently governmental apply only to Government TM Managers and are so annotated (see paragraphs 2.2.3.14 and 2.2.4 for further information):

- ► TM planning, such as defining TM requirements and schedules to meet program milestones
- ► TM budgeting and estimating
- ► Defining Interactive Electronic Technical Manual (IETM) functionality
- ► Generating TMCRs/TMSRs
- ► Requesting/assigning TMINs, Vol IDs, and ACN number assignments
- ► Performing TMQA responsibilities including TM product review, validation oversight, and verification support

- **Conducting verification (Government)**
- Coordinating completion of NAVSEA TM Certification sheets and ensuring a certification sheet is completed for each final TM or TM update
- **Accepting/rejecting TM products (Government)**
- Processing digital storage media for ATIS compatibility testing
- **Determining distribution requirements and approving distribution lists (Government)**
- Maintaining distribution lists within TDMIS and directing TM distribution using only Government approved distribution lists generated from TDMIS
- Processing TMs and digital storage media for duplication
- Performing initial distribution and stocking
- Controlling TMs per the distribution statement
- Providing copies of TMs or digital storage media containing TMs to the NETL
- Processing and coordinating responses to TMDERs
- Maintaining TM records in TDMIS
- Identifying and recommending TMs for disposal (e.g., cancel, obsolete)
- Managing and coordinating the development and issue of ACNs.

2.2.3.14 TM Managers are assigned within the TMMA. They implement the policies of NAVSEAINST 4160.3, the procedures contained herein, and approved local procedures when performing life cycle management and maintenance responsibilities for assigned TMs supporting ships, systems, or equipment. Before being identified in TDMIS as a TMMA POC, TM Managers shall have completed the required TMMP and TDMIS training courses (see section 2.4) and provided local TMMP implementation documentation to NSDSA.

2.2.3.15 In accordance with FAR Subpart 7.5, acquisition functions that are inherently governmental shall be performed by a Government employee. When the designated TMMA is a contractor activity and the TM manager is a contractor employee, the following applies:

- Those TM management responsibilities that are inherently governmental shall be executed by the Government
- The contract shall specify the contractor's TMMA roles and responsibilities and that performance shall be in accordance with NAVSEAINST 4160.3 and this manual
- When the assigned TMMA POC is a contractor, a Government program authority, acquisition authority, or other designated Government employee shall be identified as the Program Sponsor Activity (PSA) POC within TDMIS.

2.2.3.16 Preparing activities, whether Government or contractor, prepare TMs and associated TM products in accordance with tasking or contractual documents, including the associated TMCR or TMSR and applicable Data Item Descriptions (DIDs).

2.2.4 Local TMMP Implementation. TMMAs are to document compliance with NAVSEAINST 4160.3 and this manual in writing by means such as instruction, notice, local procedures, or International Organization for Standardization (ISO) 9000 compliance. When the designated TMMA is a contractor activity, additional documentation identifying the responsibility for inherently governmental functions or other TMMA functions retained by the Government may also be required if not included in the contractor activity's local documentation. A sample local instruction is provided within the TMMA Module of the NSDSA website (see appendix D) and guidance for preparation of local procedures is provided in figure 2.2-1.

GUIDANCE FOR PREPARATION OF TM MANAGEMENT LOCAL IMPLEMENTATION PROCEDURES

When documenting local compliance with TMMP requirements, ensure consistency with NAVSEAINST 4160.3B and S0005-AA-PRO-010/TMMP. Consider the following items for inclusion:

1. Organizational overview of the TMMP structure within the local activity.
2. Requirement to assign each TM to a trained TM Manager. Requirement to maintain TMMA and TM Manager information current in TDMIS.
3. Procedures to review tasking documents and ensure funding for TM acquisition, maintenance, and quality assurance requirements.
4. Compliance with DON digital data policy and the SNIPP, and the requirement to obtain TMCRs/TMSRs to support TM product acquisition and development.
5. Requirement to obtain TMINS, Vol ID, and NSN assignments for TM products, as applicable, from TDMIS.
6. Requirement and procedures for TMQA implementation and TM certification.
7. Requirement to obtain ATIS certification for digital storage media (i.e., CD-ROMs or DVDs) to be distributed to the Fleet.
8. Requirement for use of DLA Document Services for printing.
9. Requirement for maintaining distribution lists within TDMIS, using lists from TDMIS for TM products being distributed via the mail, and procedures ensuring appropriate initial distribution with copies to the NETL (NSDSA).
10. Requirement for use of NAVICP Philadelphia as the inventory control point for TM products; require use of the NAVICP designated stock point as the stock point or require alternate stock point to be established by obtaining a waiver from NAVSEA 04L.
11. Procedures for issuing ACNs.
12. Procedures for processing of TMDERs.
13. Requirement and procedures for identification and disposal of superseded, cancelled, and obsolete TMs.

Figure 2.2-1 Local Implementation Procedures Guidance

SECTION 2.3 TMMP TOOLS

2.3.1 Introduction to TMMP Tools. This section provides information about the primary TMMP tools and processes used by those involved in TM management, as well as by TM users to obtain TM information or requisition TM products. Some tools are part of the Navy infrastructure and some were developed as part of the TMMP. These tools and processes, along with their primary use within TM management and the "4D's" are:

- SNIPP (provides standardized processes for TM acquisition, development, management, maintenance, storage, and distribution utilizing the tools listed below)
- TDMIS (TM Management and User Information)
- NSDSA website (TM Management and User Information)
- CDMD-OA (TM Management and User Information)
- SMART-T (Definition and Development)
- Navy XML/SGML Repository (Development)
- CMS/NPA (Development)
- NETL (Distribution)
- TDKM (Distribution)
- NLL (Distribution)
- TMPODS (Distribution)
- BOD System (Distribution)

2.3.2 TMMP Tools Responsibilities. Table 2.3-1 identifies the responsibilities for the TMMP tools.

Table 2.3-1 Responsibilities – TMMP Tools

Activity/Function	Responsibility
NAVSEA 04L	1. Provide technical direction and funding to the NSDSA for centralized TMMP services, including development, management and/or maintenance of SNIPP elements, such as SMART-T, TDMIS, NSDSA website, the Navy XML/SGML Repository, and CMS/NPA. 2. Direct the development of the SNIPP. Chair the SNIPP Control Configuration Board (CCB).
NSDSA	1. Operate, maintain, document, and manage TDMIS, SMART-T, and the NETL. 2. Review requests for TDMIS and SMART-T accounts. 3. Establish TDMIS and SMART-T accounts and grant privileges. 4. Maintain the TDMIS the interface with CDMD-OA for exchange of ship configuration and TM applicability data. 5. Maintain a website providing TMMP-related materials and information. 6. Provide TMPODS-compatible files for NAVSEA TMs and digital media containing TMS to the Defense Logistics Agency Document Services authorized TM POD /BOD site. 7. Manage the development and maintenance of the SNIPP for NAVSEA TMs as directed by NAVSEA 04L. NSDSA shall also operate, maintain, document, and manage TDMIS and TDKM system utilized as part of the SNIPP.

Table 2.3-1 Responsibilities – TMMP Tools

Activity/Function	Responsibility
DLA Document Services	1. Coordinate with the NSDSA to receive and store TMPODS-compatible files for NAVSEA TMs. 2. Coordinate with NAVICP Philadelphia to receive and fill requisitions for qualifying NAVSEA TMs.
NAVICP Philadelphia	1. Review requests for NLL accounts. 2. Establish NLL accounts and grant privileges. 3. Coordinate with DLA Document Services to provide DLA Document Services requests for qualifying NAVSEA TMs. 4. Fund DLA Document Services for TMPODS in support of storing files, printing, and mailing NAVSEA TMs. 5. Fund designated warehouse for the BOD process in support of replicating and mailing requisitioned digital media (e.g., CD-ROMs) containing TMs.
NSWC Carderock Division	Maintain and provide access to the centralized repository, known as the Navy XML/SGML Repository, for DTDs, Schemas, and Styles, Business Rules, Information Sets, Information Codes, and other implementation resources used to develop NAVSEA TMs.
NSWC CD Philadelphia Detachment	1. Operate, maintain, document, and manage a CMS and NPA utilized as part of the SNIPP. 2. Maintain the CMS/NPA, including providing user account and storage/files management.
Acquisition Authority	Request and obtain a SMART-T account, as required, to generate TMCRs/TMSRs.
TM Manager	1. Request and obtain TDMIS account with appropriate level of update privileges to maintain assigned TM information. 2. Request and obtain SMART-T account, as required, to generate TMCRs/TMSRs. 3. Request and obtain NLL account, as required. 4. Provide TMPODS-compatible files, when appropriate, to NSDSA.
TM Users / Librarians and Others	1. Request and obtain TDMIS view account, as required. 2. Request and obtain NLL account, as required.

2.3.3 Standard NAVSEA Integrated Publishing Process (SNIPP). SNIPP is the "conforming process" for the acquisition, development, maintenance, storage, and distribution of NAVSEA TMs and is designed to comply with the DON Policy on Technical Data/Digital Product and its use is directed by NAVSEAINST 4160.3. The process brings together the elements of the TMMP, utilizes Navy infrastructure, and standardizes methodology for NAVSEA TM life cycle management. It ensures final TMs are in conformance with the current Navy infrastructure and other requirements, such as:

- NAVSEAINST 4160.3
- DON Policy on Technical Data/Digital Products
- SMART-T generated TMCRs/TMSRs
- SNIPP-approved registered DTDs, Schemas, Styles

- Afloat and ashore user display requirements, most notably shipboard Navy Information/ Application Product Suite (NIAPS)
- Information Assurance and Vulnerability
- Certifications (e.g., Navy/Marine Corps Intranet (NMCI), DON Application and Database Management System (DADMS), NIAPS, Space and Naval Warfare Systems (SPAWAR), and NETWARCOM).

An overview of the SNIPP process is provided in figure 2.3.1.

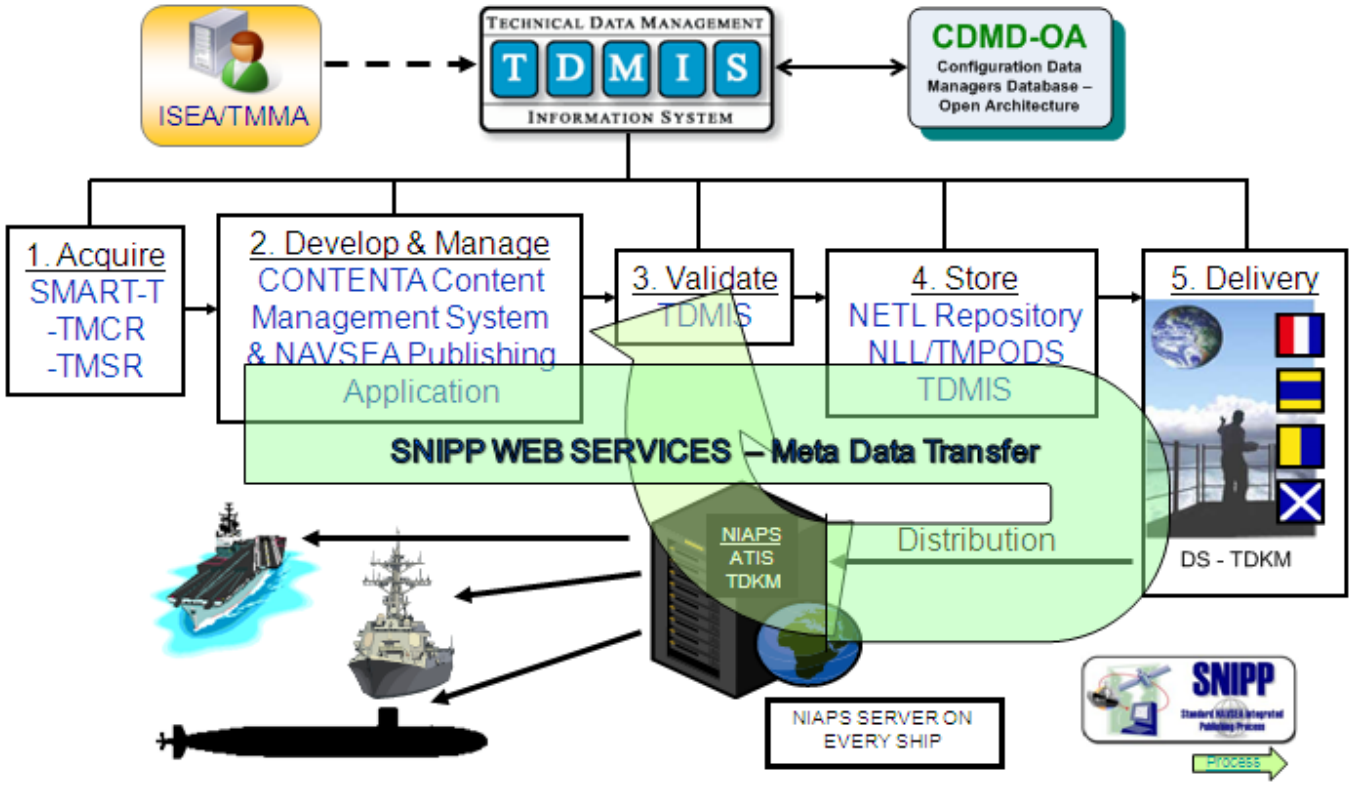

Figure 2.3-1 Overview of SNIPP

The SNIPP provides TM programs a common technical data development environment at a minimal cost, ensures TMs are produced with a common "look and feel" and conform to end-user requirements, and provides for rapid distribution of final TM products. SNIPP is maintained by NAVSEA 04L to ensure it stays current with the TMMP infrastructure and varied TM specification and end-user requirements. A SNIPP CCB approval process provides the method to introduce additional acquisition requirements, publishing and distribution options, and when approved, implement them for use by all NAVSEA programs. Examples of SNIPP design features are:

- Standardized TM format, style, and presentation output through the use of SNIPP-compliant SMART-T TMCRs/TMSRs
- Utilizes already developed and approved DTDs, schemas, and styles

- Provides a content management and storage system, a publishing system, and approved TM viewers that are maintained current with the infrastructure and specification requirements
- CMS interfaces with TDMIS for ease in TM numbering, records management, and access to TM configuration data
- Provides a delivery system for quick electronic delivery and availability of finalized TMs to fleet and other selected users
- Provides instant on-line access
- Fully satisfies supply system requirements, including producing files to support hardcopy duplication or on demand printing
- Can be modified as needed to support changed or additional specification requirements through the SNIPP CCB process.

The SNIPP utilizes existing TMMP and Navy infrastructure tools to support TMs throughout their life cycle as depicted in figure 2.3-2.

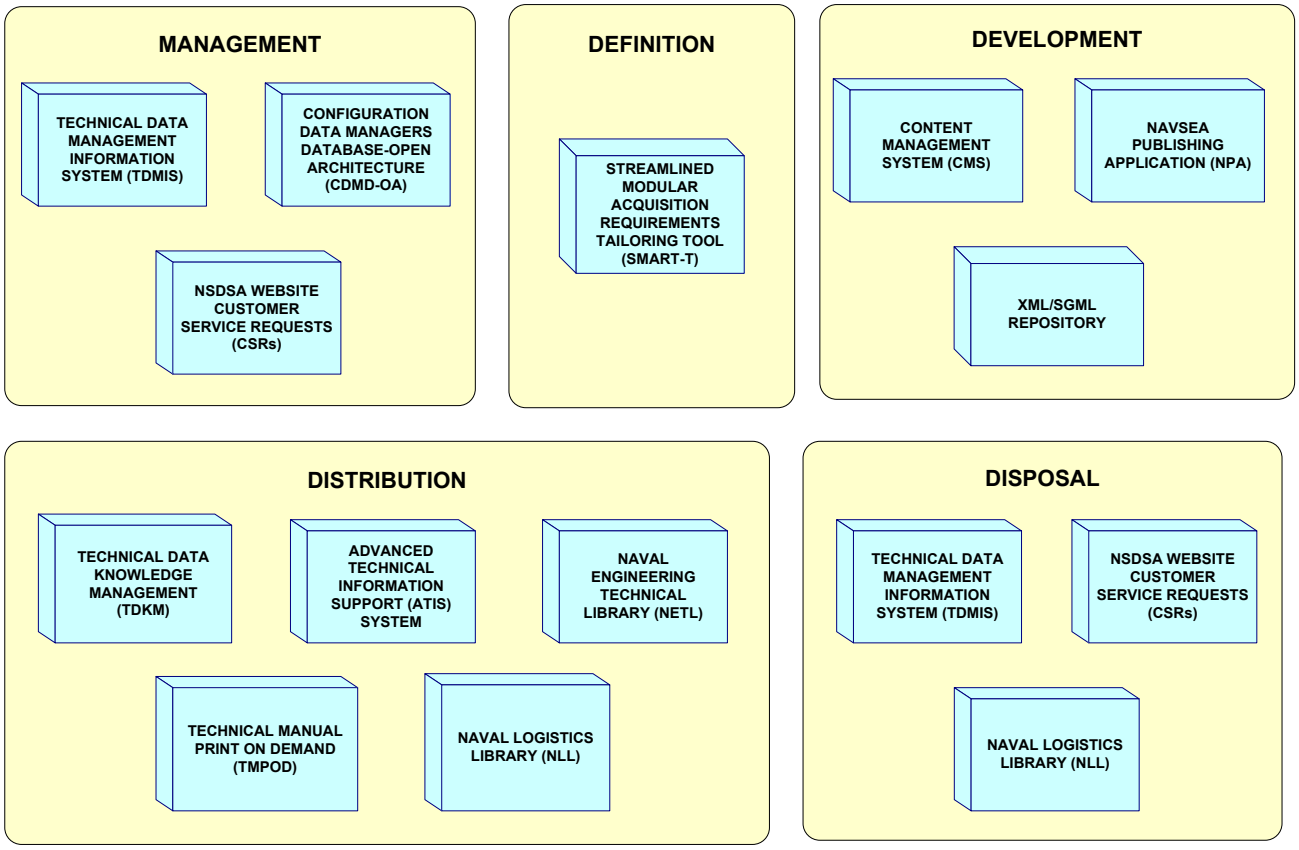

Figure 2.3-2 SNIPP's Use of Infrastructure Tools

2.3.4 Technical Data Management Information System (TDMIS).

2.3.4.1 TDMIS is a DON database used to manage and track the life cycle history of NAVSEA TMs. The TDMIS database also tracks TM history for other Systems Commands, such as SPAWAR TMs and selected Naval Air Systems Command (NAVAIR) Air Traffic Control

Equipment TMs. TDMIS provides a tool for programs to manage and users to research TM information, as well as provides viewing of selected TMs. This database contains the current revision and/or change configuration information and historical information for each TM. The primary functions of TDMIS are:

- Publication, Vol ID, or stock number information and history view screens
- Tools to assign TM product numbering (e.g., TMIN, Vol ID)
- TM deficiency management
- TM distribution information management
- Control of TM view access
- TMMA, stocking point, and other information search screens
- Ship hull/class or configuration-to-TM search screens
- Generation and retrieval of reports such as ITPs
- Library management
- Outfitting management
- Reference information.

2.3.4.2 Access to TDMIS is through the TDMIS website or via a link to the TDMIS website from the NSDSA website (see appendix D). Individuals are required to have an account to view data or TMs within TDMIS. Account registration or requests for privileges are submitted via the NSDSA website. Privileges for TM Managers or their authorized support personnel to maintain information within TDMIS are requested via the NSDSA website or from a link to the NSDSA website within TDMIS. TDMIS is maintained and managed by NSDSA.

2.3.5 NSDSA Website. The NSDSA website (see appendix D) is a secure website that provides a central location for access to TMMP-related information, training materials, reference materials, TMMA tools, and links to TDMIS and SMART-T. The NSDSA website also provides customer feedback and workflow tools in the form of CSRs that can be used to request:

- General TMMP assistance
- Assistance with TMMP policies and guidance
- SMART-T assistance
- TDMIS-related customer service actions including updating incorrect or out-of-date data, reports, account actions (e.g., new accounts or privileges requests), report software problems, or suggest improvements to TDMIS
- TMMP/TDMIS training registration or information
- Access to SNIPP requests and workflow tools.

2.3.6 Configuration Data Managers Database – Open Architecture (CDMD-OA). CDMD-OA is the Navy's authoritative data source for ship configuration information and is used by the TMMP (primarily through TDMIS) for obtaining ship configuration information.

2.3.7 Streamlined Modular Acquisition Requirements Tailoring Tool (SMART-T).

2.3.7.1 SMART-T is a web-based application designed to define acquisition requirements and generate tailored contract requirements. Within SMART-T, the Technical Manual Module contains an automated system for generating TMCRs/TMSRs tailored to specific procurements using only standardized and authorized specifications. SMART-T also provides a repository for TMCRs/TMSRs. NSDSA maintains and manages the SMART-T, including:

- Providing hosting services (e.g., administrative, security, database management, account and access management)
- Maintaining the database current with SNIPP-compliant requirements.

2.3.7.2 SMART-T is accessible via the NSDSA website (see appendix D). TMCRs/TMSRs within the repository are viewable without an account. To generate a TMCR/TMSR, responsible individuals are required to register for and obtain an account. Customer feedback (including requests for TMCR/TMSR tailoring, cancelling, or requests for waivers) can be submitted via CSR from the NSDSA website.

2.3.8 Navy XML/SGML Repository. The Navy XML/SGML Repository, maintained by NSWCCD, is a website (see appendix D) that contains official Navy implementation resources for use in the development of TMs, such as:

- DTDs
- Schemas
- Styles (Format Output Specification Instances (FOSIs), style sheets, etc.)
- Business Rules (DoD, DON, NAVSEA, Communities of Interest, and project)
- Information Sets
- Information Codes
- Model Identifiers
- Navy Baseline Tag Set (a data dictionary of commonly used data types).

Within the Navy XML/SGML Repository, there is a dedicated area for SNIPP-approved DTD suites. Each suite consists of the DTD and applicable associated styles, hazard icons, data dictionary, and tagging/authoring guidelines.

2.3.9 Content Management System/NAVSEA Publishing Application (CMS/NPA). NSWCCD Philadelphia Detachment operates, maintains, and documents the CMS and the NPA utilized by SNIPP. Services include but are not limited to:

- Providing hosting services (e.g., administrative, security, database management, account and access management)
- Interfacing with other systems or databases such as TDMIS and delivery/distribution systems in support of the SNIPP
- Ensuring TM output products conform to delivery and display requirements for Fleet and other users, including but not limited to Navy infrastructure requirements (e.g., NMCI, IT21)
- Providing data backup and restoration.

2.3.10 Naval Engineering Technical Library (NETL). The NETL is the repository for final TMs. It consists of a warehouse for hardcopy TM repository assets as well as a digital repository for electronic TMs. NSDSA maintains the NETL and provides interfaces to TDMIS and TDKM for on-line viewing and/or distribution of final electronic TMs.

2.3.11 Advanced Technical Information Support (ATIS) System. The ATIS System is a digital retrieval, display and printing system for technical documentation for standalone and Web-based platforms. ATIS is intended to be a central point of access to technical data for use

by the Navy and is the Navy's standard digital-optical system for display and retrieval of technical documentation aboard ships, including TMs. In the TM area, ATIS supports raster, intelligent raster, PDF, and any IETM viewer that follows the DON guidelines for CD-ROM based TMs. ATIS also accommodates third party CD-ROM applications into its desktop environment. ATIS can be divided into four functional areas as follows:

- The ***Support Area*** allows the system administrator to manage ATIS user accounts, passwords, data and databases
- The ***Configuration Area*** contains the databases and modules that allow the user to identify technical data and access TMs and drawings by configuration and logistics data for applicable ships, systems, and equipment
- The ***Library Area*** contains the databases and modules that define what technical data is available and provides the capability to search for either TMs/IETMs or drawings
- The ***Display Area*** contains the module that initiates the display of TMs, drawings, and other book-type documents and provides the ability to print technical documentation.

To assure compatibility with shipboard systems, CD-ROMs containing TMs that are being delivered to ships are to be certified as ATIS Compatible.

2.3.12 Technical Data Knowledge Management (TDKM). TDKM, a data replication, server to server distribution system, is a distribution pipeline digital data, including final TMs. TDKM's architecture processes and automatically moves tailored, authoritative, configuration-assured, digital technical data to afloat and shore users anywhere in the world. The TDKM builds, stores, maintains, and accesses profiles describing end user technical data requirements, pulls the necessary data, assembles a user digital technical data library collection, and pushes this collection of technical data to end user sites. TDKM does not alter or provide a means to alter content once a TM is provided to the system. The TDKM consists of three parts: the wholesalers, the brokers, and the retailers.

a. The ***Wholesaler*** is the source of TMs for delivery to the end user. The SNIPP Wholesaler is located at NSDSA and is tied into the NETL for access to the authoritative repository of NAVSEA technical manuals.

b. The ***Brokers*** serve as the knowledge manager between the end user digital library and the various content repositories maintained by and for the Navy shore establishment. It maintains the links between what is required by the end user and what is available via the Wholesaler. TDMIS and CDMD-OA have been designated to provide this function utilizing Distance Support to synchronize ship-to-shore.

c. The ***Retailer*** is used by the afloat and shore commands to receive TMs. The end user can identify what TMs are available for their configuration and then synchronize a download of desired data. The SNIPP Retailers are delivered to the fleet via Distance Support and the NIAPS, and requests for shore activity installations are made via a CSR from the NSDSA website (see appendix D). The TDKM Retailer is maintained and managed by NSDSA and NSWCCD Philadelphia Detachment under the direction of the SNIPP CCB.

2.3.13 Naval Logistics Library (NLL). The NLL, managed by NAVICP Philadelphia, is the central catalog and ordering medium for the Navy publications supply chain. All Navy publication requisitions pass through the NLL, where requirements are forwarded to the appropriate publication supply source. The NLL generates NSN assignments for NAVSEA TMs and digital storage media based upon information received from TDMIS via the Catalog Interface. The NLL is a web-accessible NAVSUP database hosting the central Navy publication catalog and ordering capabilities and provides sponsors with management tools necessary to effectively and efficiently control Navy publication supply processes. For detailed information refer to NAVSUP P-734 Naval Logistics Library Policy Guide and NAVSUP P-485 Naval Supply Procedures.

2.3.14 Technical Manual Print On Demand System (TMPODS). TMPODS serves as a digital warehouse for Navy TMs intended for printed output, including NAVSEA TMs. The TMPODS stores the TMs in digital format and provides for production and delivery of qualifying requisitioned TMs on an as-needed basis once initial distribution has been completed and initial stock has been depleted. The system, maintained by DLA Document Services, has several POD sites. Requisitions for TMs are placed through NAVICP Philadelphia and then forwarded to be filled by means of TMPODS. A POD site retrieves the TM file, prints, and assembles TMs in book form to be delivered to the TM requester. For NAVSEA TMs, TMPODS-compatible files are provided to DLA Document Services via NSDSA. TM Managers provide the TMPODS-compatible files to NSDSA or NSDSA converts existing TMs available in the NETL to a digital format and provides the files to DLA Document Services.

2.3.15 Burn on Demand (BOD). BOD is a supply system replishment program for CD-ROMs. Similar to the TMPODS, rather than stocking copies of distributed CD-ROMs, CD-ROMs are burned as needed to fill requisitions. The NAVICP manages the BOD program.

SECTION 2.4 TMMP ASSISTANCE AND TRAINING

2.4.1 Introduction to TMMP Assistance and Training. This section provides a description of the TMMP assistance and training program available to those involved in the acquisition, management, development, distribution, disposal, or use of NAVSEA TMs. The NSDSA website (see appendix D) serves as the hub for disseminating and providing information related to the NAVSEA TMMP.

2.4.2 TMMP Assistance and Training Responsibilities. Table 2.4-1 identifies the responsibilities for TMMP assistance and training.

Table 2.4-1 Responsibilities – TMMP Assistance and Training

Activity/Function	Responsibility
NAVSEA 04L	1. Provide requested guidance and technical assistance to ship, system, or equipment program authority activities/program offices and others tasked to perform NAVSEA TM management and maintenance roles. 2. Establish a TMMP training program. Fund development and maintenance of training courses. Review and approve training plans and course materials. Monitor training needs of headquarters and shore activities. Arrange for and fund training on a case-by-case basis.
NSDSA	1. Provide requested TMMP assistance, tools, and resource references for those involved in NAVSEA TM definition, development, distribution, disposal, or use. 2. Operate and maintain a website providing NAVSEA TMMP information, tools, and references. 3. Manage a program of TMMP training. Develop, maintain, and conduct training courses. Maintain records of training. Maintain a system for capturing and using feedback information from training courses. Upon request, provide special training to clarify specific TM subjects or procedures.
Program Authority, Acquisition Authority, Technical Authority, ISEA/PY and/or TMMA	1. Ensure TMMP training is provided to personnel involved in the acquisition, maintenance, and management of NAVSEA TMs. 2. As necessary, establish and provide supplemental formal and informal follow-on training at local shore activity. Incorporate TM material into locally generated training materials.
TMMA	1. Request TMMP assistance and training, and use tools and resources from NSDSA as necessary. 2. Ensure a trained individual is assigned as the TMMA POC for each assigned TM.
TM Managers	1. Request TMMP assistance, training, tools, and resources from NSDSA as necessary. 2. Complete TDMIS course and Technical Manual Management course prior to being identified as the TMMA POC in TDMIS.
Fleet, Shore, Training Activities TM Users/Librarians	Request assistance, training, tools, and resources from NSDSA as necessary.

2.4.3 TMMP Assistance. The NSDSA website (see appendix D) provides information on the TMMP, TMMP tools, entry into TDMIS and SMART-T, links to reference documents, and TMMP training materials. NAVSEA TMMP training or other TM assistance from NSDSA can be requested from the NSDSA website. The NSDSA also provides customer feedback tools in the form of CSRs on the NSDSA website and a telephone Help Desk (see appendix D).

2.4.4 TMMP Training. NSDSA manages a program of training, including courses offered in the NAVSEA TMMP and TDMIS training. Detailed course descriptions, training dates, and registration is available on the NSDSA website (see appendix D). The courses are highly recommended for anyone involved in the development of TMs, especially those who are assigned responsibilties and privileges as a TMMA POC, Requesting Activity (RA) POC, or PSA POC.

2.4.4.1 Technical Manual Management Course (TMMC). This course covers the NAVSEA TM life cycle process. From *Definition* to *Disposal*, it defines and describes the NAVSEA policies and procedures as well as the roles and responsibilities in support of the “4 D’s” of TM life cycle management. All personnel involved in the acquisition, management, development, distribution, disposal, or use of NAVSEA TMs are encouraged to take this course. This course is available as both an instructor-lead course and on-line via the NSDSA website (see appendix D). The following learning modules are included in the course:

- TM Management Overview and The 4 D's
- Definition Phase
- Development Phase
- Distribution Phase
- Disposal Phase.

2.4.4.2 TDMIS Course. This course provides instructions on updating and maintaining TM publication record-related data, researching TM data, and managing activity information within TDMIS. All personnel who have a need to use TDMIS are encouraged to take this course.

CHAPTER 3
PHASE 1 – TECHNICAL MANUAL DEFINITION

SECTION 3.1 INTRODUCTION

3.1.1 Introduction to Technical Manual Definition. This chapter addresses the definition phase of technical manual (TM) life cycle support. The definition phase includes the actions necessary to ensure quality TMs are procured and developed. This chapter is comprised of the following sections:

3.1 Introduction
3.2 Budgeting and Funding
3.3 Technical Manual Planning
3.4 Cost Estimating
3.5 Procurement.

SECTION 3.2 BUDGETING AND FUNDING

3.2.1 Introduction to Budgeting and Funding. This section addresses the cost factors and considerations involved in planning TM procurements or tasking.

3.2.2 Budgeting and Funding Responsibilities. Table 3.2-1 identifies the responsibilities for budgeting and funding a TM program.

Table 3.2-1 Responsibilities – Budgeting and Funding

Activity/Function	Responsibility
Program Authority	1. Ensure program budgets provide for all fiscal aspects of definition, development, distribution, and disposal of TMs supporting their ships, systems, or equipments. 2. Ensure program budgets provide for development of products such as TM plans, quality assurance plans, reports, certifications, and other supplementary data. 3. Ensure program budgets provide for funding the review, analysis, and correction of deficiencies. 4. Ensure that TMs are funded with and by the appropriation that funds the associated ships, systems, or equipments, or their modifications. 5. Task and fund anIn-Service Engineering Agent (ISEA) /Planning Yard (PY) and a Technical Manual Management Activity (TMMA) to provide dedicated engineering support services and perform life cycle TM management when the required capability does not exist within the program office.
Acquisition Authority	1. Support program authority in developing TM cost estimates and budgeting. 2. Ensure that TM costs are separated from hardware/software costs.
ISEA/PY	Provide cost estimating and budget development support to Program or Acquisition Authority Activities upon request.
TM Manager	Provide cost estimating and budget development support to Program or Acquisition Authority Activities upon request.

3.2.3 Budgeting.

3.2.3.1 Life Cycle Costs. Program budgets must consider all costs associated with the life cycle phases of TMs. Funds budgeted for these functions vary according to the type and complexity of the hardware or intended modification, as well as the life cycle phase of the program. The dev elopment of budgets begins early in the program or acquisition cycle. Program budgets should cover all anticipated costs, as appropriate, including:

- **Phase 1: Definition** – The planning, budgeting, funding, and acquisition of TMs to support new or existing ships, systems, or equipment
- **Phase 2: Development** – TM development and maintenance, conversion/digitization, quality assurance, acceptance, and certification
- **Phase 3: Distribution** – TM duplication, distribution control, distribution, and stocking

- **Phase 4: Disposal** – The identification and disposal of TMs no longer required.

3.2.3.2 Standard NAVSEA Integrated Publishing Process (SNIPP) Compliance. The SNIPP shall be utilized for acquisition, development, maintenance, storage, and distribution of TMs and programs shall budget for the costs associated with using SNIPP. If a program is not going to utilize all or part of SNIPP, a waiver for non-compliance shall be obtained. For programs using a non-SNIPP conforming TM process, the programs shall be responsible and budget for all life cycle support, including coordination of compatibility testing for all operating environments, information assurance and vulnerability, all aspects of display systems required for all TM users, and obtaining a waiver for acquisition of TMs not utilizing the SNIPP.

3.2.4 Funding. Program authority activities are responsible to fund and acquisition authority activities are responsible to procure new and updated TMs required for support of ships, systems, and equipment, including TMs supporting commercial items/non-developmental items (CIs/NDIs). These TMs are funded by the appropriation that funds the ship, system, or equipment (refer to DoDINST 7000.14-R, DoD Financial Management Regulation). TM updates reflecting modifications to in-production as well as out-of-production systems or equipment are funded by the appropriation that funds the modification. Costs to correct and improve TMs for out-of-production systems or equipment are funded from Operation and Maintenance, Navy (O&MN) accounts. If several programs need to revise the same TM simultaneously, update costs are shared on a pro-rated basis.

3.2.4.1 OPN and WPN Funds. Costs associated with the procurement of TMs incident to specific Other Procurement, Navy (OPN) and Weapons Procurement, Navy (WPN) projects are charged to the appropriation used to procure the specific ship, system, or equipment.

3.2.4.2 RDT&EN Funds. Costs associated with the procurement of TMs incident to specific Research, Development, Test and Evaluation, Navy (RDT&EN) projects are charged to the appropriation supporting those projects. These include development of TMs in connection with the process of obtaining service approval.

3.2.4.3 O&MN Funds. TM efforts not properly chargeable to OPN, WPN, or RDT&EN are funded by O&MN. Examples of TM procurement costs chargeable to O&MN are:

a. TMs which accompany studies and tests.

b. TMs supporting in-service, out-of-production ships, systems, or equipments that require update to correct errors and technical inadequacies (e.g., incorporation of Technical Manual Deficiency/Evaluation Reports (TMDERs) or Advance Change Notices (ACNs)), or to reflect changes in equipment operating procedures.

c. TMs for ship activations but not chargeable to a system or equipment procurement.

d. TMs which must be developed or modified because of ship changes but not chargeable to the equipment procurement.

3.2.4.4 SCN Funds. Costs associated with the procurement of TMs incident to Shipbuilding and Conversion, Navy (SCN) projects are charged to the appropriation supporting those projects. TMs to be outfitted on ships funded by SCN are to be reviewed against known

deficiencies and updated to clear all technical deficiencies. SCN funds are to be used to correct deficient TMs required for ship acquisition or outfitting.

3.2.4.5 SAP, FMS, and DSAP Funds. Costs for the development or update of TMs incident to the Security Assistance Program (SAP) or Foreign Military Sales (FMS) are charged to the funds supporting those programs. Costs for TMs being prepared or provided to support Defense Security Assistance Program (DSAP) are funded by the applicable DSAP case.

3.2.4.6 Modernization Funds. Costs for the update of Selected Record Data and systems and equipment TMs incident to an overhaul/availability are funded using Fleet Modernization Program resources.

3.2.4.7 Funds to Support Training TMs. Costs for specialized TMs to support training are funded by the training community.

SECTION 3.3 TECHNICAL MANUAL PLANNING

3.3.1 Introduction to Technical Manual Planning. TM planning is the process that ensures a comprehensive TM or set of TMs supporting installation, operation, testing, maintenance, repair, and overhaul is available to support ships, systems, and equipment. Adequate attention must be given to training and user profile requirements and their relationships to the design and maintenance concepts underlying ship, system, and equipment acquisitions. Early TM acquisition planning focuses on: 1) timely budgeting of funds to cover all TM requirements, 2) timely authorship of TMs to coincide with ship, system, or equipment training and delivery, and 3) timely review, production, and control of TM products. As program changes occur, TM plans must be updated to reflect the changed program, ship, system, or equipment requirements.

3.3.2 TM Planning Responsibilities. Table 3.3-1 identifies the responsibilities for TM planning.

Table 3.3-1 Responsibilities – TM Planning

Activity/Function	Responsibility
Program Authority	1. Establish requirements for and direct the development of acquisition program TM planning. 2. For new acquisition, utilize the SNIPP for TM development. For legacy TM maintenance not supported by SNIPP, conduct a Business Case Analysis (BCA) and obtain waivers for non-compliance when applicable. 3. Ensure a comprehensive TM or set of TMs supporting installation, operation, testing, maintenance, repair, and overhaul is a program requirement. 4. Provide tasking assignments necessary for the implementation of the Technical Manual Management Program (TMMP). 5. Direct the development of TM planning documents.
Acquisition Authority	1. Ensure acquisition program plans implement the TMMP and address all ship, system, or equipment life cycle TM requirements. 2. Coordinate TM planning and development with other logistic elements to ensure maximum use of Logistics Management Information (LMI) data. 3. Define TM requirements and their interrelationships with other logistic support elements early in the program initiation phase. 4. Ensure the Technical Data Management Information System (TDMIS) and other indices are screened for existing applicable Department of Defense (DoD) TMs or to identify available Commercial Off-The-Shelf (COTS) when COTS equipment is being used in the design. 5. Ensure candidate COTS TMs are evaluated against a COTS Technical Manual Contract Requirements (TMCR) for acceptability. 6. Coordinate the development of planning documents. Include Technical Manual Quality Assurance (TMQA) requirements in acquisition planning. 7. Determine new or revised TM requirements.

Table 3.3-1 Responsibilities – TM Planning

Activity/Function	Responsibility
ISEA/PY	Provide planning, TM evaluation, and TM requirements determination support to program or acquisition authority activities upon request.
TM Manager	1. Provide planning, TM evaluation, and TM requirements determination support to program or acquisition authority activities upon request. 2. Obtain COTS TMCRs upon request.

3.3.3 Requirements Determination. Initial planning includes defining the requirements for TMs to support new or modified ships, systems, or equipment.

3.3.3.1 TM Support. A comprehensive TM or set of TMs supporting installation, operation, testing, maintenance, repair, and overhaul shall either exist in the Navy inventory or be procured with each ship, system, or equipment. Prior to procurement, indices of DoD and pertinent commercial TMs (e.g., TDMIS) must be screened to determine if there are any existing TMs that can support the ship, system, or equipment (see paragraph 3.3.5 for further details). Unless an approved TM exists, new ship, system, or equipment procurements must include supporting TMs.

3.3.3.2 Use of SNIPP. For new acquisitions, programs shall use the SNIPP for acquisition, development, maintenance, storage, and distribution of their TMs. In instances of legacy TM maintenance, programs should conduct a BCA to determine if any or all of SNIPP is cost effective or feasible. When a program determines use of SNIPP (or any portion thereof) is not cost effective or feasible, the program shall request a waiver from Naval Sea Systems Command (NAVSEA) 04L via the NSDSA Customer Service Request (CSR) System (see appendix D). For programs granted a waiver to use non-conforming TM processes, the programs shall be responsible for the life cycle support resulting from use of the non-conforming process(es) and include these items in their lifecycle requirements and planning (e.g., coordination of compatibility testing for all operating environments, information assurance and vulnerability, and all aspects of display systems required for all TM users).

3.3.3.3 Updates to Existing TMs. Updates to existing TMs shall be compliant with DON Policy on Digital Product/Technical Data and SNIPP and shall be procured and developed to a Technical Manual Contract Requirements or Technical Manual SEATASK Requirements (TMCR or TMSR). Permanent updates to existing TMs are provided as revisions, changes, or supplements.

a. Revisions are developed when any digital TM is updated or when the technical content of a legacy TM is updated and converted to a digital format.

b. Change pages should only be developed when a BCA as required by the Department of the Navy (DON) Policy on Digital Product/Technical Data shows conversion of legacy data to a mark-up language is not cost effective and a SNIPP waiver is obtained. SNIPP does not support development of change packages.

c. Supplements may be developed in instances such as when a particular hardware modification must be described independent of the overall hardware population of a complex system.

Updates to existing TMs may encompass conversion from one format to another (e.g., converting hard copy TMs to a digital format). The DON Policy on Digital Product/Technical Data provides guidance to assist programs in making informed decisions in the acquisition or conversion of digital data. In accordance with the policy, conversion of legacy TMs to a digital format is subject to the availability of funding and justification by a cost benefit analysis. The policy states that legacy TMs may be converted to a standard markup language, Portable Document Format (PDF), or raster formats. An overview of conversion to the various formats is provided in the DON Policy on Digital Product/Technical Data. The following should be considered as decision factors when making TM conversion decisions:

- SNIPP compliancy
- Funding availability
- System complexity
- Configuration volatility
- Update frequency and urgency
- Life expectancy of the system or equipment being supported
- Quality of legacy data
- Number of Fleet users.

3.3.3.4 TM Development Requirements. New and revised TMs shall be procured and developed in accordance with a SMART-T generated TMCR/TMSR and shall be developed, managed, published, and distributed within the SNIPP environment.

For new TMs and TM updates to be acquired and developed outside of the SNIPP, Program Authorities shall submit a SNIPP Waiver Request via the NSDSA Customer Service Request (CSR) System (see appendix D). Program Authorities shall be responsible for and fund the total life cycle support for TM acquisition, development, content management, publishing, and distribution, including processes and tools. A TM life cycle plan (paragraph 3.3.4.4) shall be developed to address the planning, development, and execution of the following:

a. **DON Policy on Digital Product/Technical Data.** TMs shall be acquired, produced, delivered, and maintained in digital formats compliant with the DON Policy on Digital Product/Technical Data.

b. **NAVSEA 04L-Approved TMCR/TMSR.** A TMCR/TMSR must be developed by the Program. The TMCR/TMSR shall be approved for use by NAVSEA 04L. The TMCR/TMSR must include specific requirements for the format, style, arrangement, content, of the TM being acquired. When an IETM is being acquired, consideration must be given to the selection of IETM functionality based on cost, funding availability (initial development cost and life cycle maintenance cost), intended maintenance philosophy, user requirements, and complexity of the ship, system, or equipment that the IETM is to support. The NAVSEA 04L-approved TMCR/TMSR shall be provided to NSDSA for posting within the SMART-T Repository.

c. **Navy XML/SGML Repository.** DTDs, schemas, and styles (Format Output Specification Instances [FOSIs], style sheets/style applications) used to develop the TMs shall be provided to the Navy XML/SGML Repository.

d. **Information Assurance Security and Developer and End User Infrastructure Requirements**. The TM/IETM development and publishing tools/products, embedded user functionality, and any required display/viewing program/device, must be compliant with requirements such as:

- Navy and Marine Corps Intranet (NMCI)
- Preferred Products List (PPL)
- Navy Information/Application Product Suite (NIAPS)
- Technical Data Knowledge Management (TDKM)
- Advanced Technical Information Support (ATIS).

Compliance is required to ensure the TM can be implemented/supported/used by the Fleet sailor and the shore users. Adherence may include testing and/or obtaining required certification(s) for TM development and distribution software, tools/products.

d. **NAVSEA Duplication, Stocking, and Distribution Requirements**. Define and fund distribution and stocking for the TMs, such as:

- Method for distribution of the TM to all users (Fleet, shore, training, and others)
- Delivery to the end user and the Naval Engineering Technical Library (NETL) of any required runtime components and program/device for viewing the TM
- How TMs will be stocked.

3.3.3.5 TMQA Program Requirements. A TMQA program shall be established and documented for each TM program. The TMQA program requirements must ensure that TMs are comprehensible, usable, and written to the capability of the target audience for which they are intended. The TMQA program also must ensure TMs conform to the Reading Grade Level (RGL) defined by the applicable TMCR/TMSR. The range and depth of TMQA program requirements is determined by the complexity of the project to ensure that the resulting TM products meet the program technical requirements. The requirements for a TMQA program should be considered early in the planning and throughout the life cycle of the applicable ships, systems, and/or equipments. TMQA programs include products and events that involve both the acquiring and preparing activities. In the production phase of a hardware and TM procurement, a preparing activity TMQA Program Plan should be required, developed, and implemented. This plan establishes procedures for the development and implementation of the preparing activity program reviews, quality reviews, in-process reviews, and validation and verification requirements. Hardware development contracts/tasking should require the preparing activity to identify quality assurance provisions for the TM development phase. Shipbuilding contracts should require identification of these provisions for the detail design phase. See section 4.2 for detailed TMQA program discussions.

3.3.4 Planning Documents. Programs involved in the acquisition or modification of ships, systems, or equipment must generate planning documents. The exact type and extent of this planning is largely dependent on the category and scope of the project. The planning documents must reflect planning for required TMs to support the ship, system, or equipment.

3.3.4.1 TM Acquisition Planning. Planning for TM acquisition is required for each ship and major system procurement. TM requirements and milestones, including a TMQA program, shall be established as early as feasible in each program's acquisition plan. Broad TM requirements analysis and acquisition strategy are defined during the preliminary design and contract design. Acceptance criteria and responsibilities must be an integral part of the early and subsequent planning of any acquisition.

3.3.4.2 Duplication of Data. Each ship, system, and equipment acquisition or modification program shall ensure there is no duplication in the acquisition of data/documents for Planned Maintenance System (PMS), LMI, Supportability Analysis (SA), training material, and TMs. TM requirements and their interrelationships with other logistics support elements should be defined early in the program initiation phase. TM planning and development should be coordinated with other logistic elements to ensure maximum use of LMI.

3.3.4.3 Program Milestones. Acquisition or modification program plan milestones shall support hardware delivery schedules, training, and operational requirements. Acquisition planning objectives should ensure that TMs are available at the same time as the first production ship, system, or equipment and for the development of initial training material. Acquisition schedules for TM products should include scheduling in-process reviews (see paragraph 4.2.6.4), and should allow sufficient time for validation by the preparing activity, verification by the acquiring activity, and duplication and distribution to users. Preliminary issues of TM products are to be delivered in accordance with program requirements, but not later than the delivery of the first ship, system, or equipment. Approved and validated preliminary TMs may be used during training and verification against the initial production equipment at the discretion of the program and/or acquisition authority activity. Final, approved, verified, and certified TMs shall be provided for follow-on procurements.

3.3.4.4 Technical Manual Plan (TMP). A TMP should be prepared for each TM program. The TMP serves as a planning document reflecting the acquisition planning and life cycle support for TMs supporting the ship, system, or equipment. The plan should be maintained in a current status throughout the ship, system, or equipment life cycle, including updates as needed to support system and equipment changes and technology advances. The TMP addresses such items as:

- Mission and support criteria
- Program and TM milestones and schedules
- User requirements
- Organizations, including functions and responsibilities
- Identification of TMs required for description, installation, operation, testing, maintenance, overhaul, and repair
- Use of SNIPP
- TM digital data requirements and Interactive IETM functionalities
- TM development relationship to other logistics areas (e.g., training, supply support, engineering drawings)
- Quality Assurance Program for TMs (section 4.2)
- Delivery methods for Contract Data Requirements List (CDRL)/tasking deliverable items
- Methods for capturing review findings

- TM acceptance criteria (section 4.5)
- TM life cycle management
- Duplication, stocking, and distribution requirements (chapter 5)
- May include post-production and disposal requirements (chapter 6).

3.3.4.5 Technical Manual Organization Plan (TMOP). A TMOP may be developed to describe the preparing activity's TM development plan for a major/complex system or ship acquisition. The requirements for development of a TMOP are contained within Data Item Description (DID) DI-TMSS-81810 and within a TMCR when a TMOP is selected as a deliverable item (see paragraph 3.5.4). The following is a brief list of plan contents (refer to DI-TMSS-81810 for details):

- Scope of the TM program including assumptions, conditions, or limitations affecting TM development
- Approach for satisfying the contract and TMCR requirements
- Types of TMs that will be prepared to support the acquisition and the intent to use Government-furnished or COTS TMs
- TMCRs or TMCR tailoring that will be used or required
- DTDs that will be used
- Use of special features, functionalities, or innovations planned for the TM program
- Proposed schedule for TM development and major milestones such as validation, reviews, and delivery dates
- General description of TM delivery and record keeping methods
- Methods for coordinating contractor-subcontractor TM development efforts and methods for standardization and data control for the TM program
- Strategy for validation efforts
- Anticipated intent to support verification.

3.3.5 Commercial Off-The-Shelf (COTS) TMs. Commercially available TMs supporting CI equipments or existing TMs supporting NDI equipments will be referred to within this manual as COTS TMs. Making maximum use of CIs/NDIs and their supporting documentation is a congressionally mandated strategy that is applicable to the acquisition of all Systems Commands systems and related equipments. Commercially available TMs must meet the acceptance criteria as specified in the applicable TMCR. COTS TMs must be obtainable with rights for Government replication and distribution as a minimum. If available at no cost to the Government, digital files in vendor format shall be acquired in accordance with Defense Federal Acquisition Regulation Supplement (DFARS) section 252.227.7015, "Commercial Off-The-Shelf (COTS) manuals shall have the unrestricted right to use, modify, reproduce, release, perform, display, or disclose technical data, and to permit others to do so…" The Government shall not pay for the development of COTS TMs. If a commercial manual does not exist, or is unacceptable for the intended government use (e.g., operation, maintenance, or training) or cannot be economically supplemented to be acceptable, a TM shall be developed in accordance with a TMCR and not to "best commercial practices".

3.3.5.1 COTS TM Suitability Determination. The candidate COTS TM is evaluated to determine if it is suitable for use and whether the TM contents are compatible with the assigned ship, system, or equipment maintenance philosophy. A COTS TMCR is obtained and used to evaluate the TM. To be suitable for use in support of equipment, the TMs must:

- Exist for commercial or non-developmental equipment
- Comply with applicable COTS TMCR requirements
- Precisely reflect the configuration of the hardware
- Be fully compatible in technical content with the system/equipment maintenance plan
- Be comprehensible by the intended principal users
- Be obtainable with rights for Government replication and distribution, at a minimum
- Be subject to the same Technical Manual Identification Number (TMIN), Volume Identification (Vol ID), ATIS testing and certification, distribution, and stocking processes as military TMs.

In some cases, supplemental data must be developed. This supplemental data is prepared in accordance with the requirements of the COTS TMCR. When no COTS TM exists for an equipment or when substantial changes would be required, a new TM must be developed in accordance with a TMCR/TMSR.

3.3.5.2 COTS TM Evaluation Process. Table 3.3-2 provides an overview of the COTS TM evaluation process.

Table 3.3-2 Process – COTS TM Evaluation

Seq	Action	Notes
1.	Screen TDMIS and other indices for COTS TMs that already exist within the Navy supply system. Identify existing COTS TM that may support CI/NDI system or equipment used within the assigned program design.	Recommend performing a subject-related internet search for other government sources
2.	Determine availability of identified COTS TM and obtain copy.	
3.	Generate or obtain a COTS TMCR supporting the assigned program or task.	See paragraph 3.5.4
4.	Use a COTS TMCR to evaluate existing COTS TM to determine if it supports the intended maintenance concept and that operation, maintenance, troubleshooting, installation, repair, and supply support instructions (as applicable) are compatible with ship, system, or equipment requirements. If TM is acceptable as is, go to step 6.a or 6.b, as applicable. If not, proceed to step 5.	
5.	Based upon the evaluation of the COTS TM, determine if additional data is required to provide adequate system or equipment life cycle support. If so, determine if supplemental data could be added to the existing COTS TM or if a new TM is required. Proceed to step 6.c or 6.d, as applicable.	

Table 3.3-2 Process – COTS TM Evaluation

Seq	Action	Notes
6.	As required, take necessary steps to: a. Re-apply COTS TM that already exists within the supply system (see notes). b. Procure COTS TM and appropriate data rights. c. Procure or develop supplemental data for the COTS TM. For NAVSEA, use a COTS TMCR to procure supplemental data. d. Procure a new TM to support the system or equipment utilizing a TMCR.	Coordinate distribution and any future updates with the TMMA.

3.3.5.3 SNIPP Requirements for COTS TMs. There are no SNIPP acquisition or development requirements for COTS TMs and SNIPP waivers are not required. COTS TMs, however, can and are encouraged to be introduced into the SNIPP distribution process. To be included in the SNIPP distribution process, COTS TMs approved for use must be in an acceptable digital format (i.e., pdf), have an assigned TMIN and NSN within TDMIS (paragraph 4.3.3.3), be properly prepared for distribution (paragraph 5.5.3.4), and be provided to the NETL to support distribution via TDKM. The responsibility for initial distribution of COTS TMs is the same as for an acquired TM and is the responsibility of the program (paragraph 3.4.9).

SECTION 3.4 COST ESTIMATING

3.4.1 Introduction to Cost Estimating. This section addresses TM cost estimating and cost estimate evaluation. As part of a program's planning phase, program funding is estimated for logistic products and support. Program authorities are responsible for ensuring all TM related costs are identified and included in the program budget. Part of the budget includes funding for TM related activities and products as part of a contract or tasking document. The methods for developing cost estimates described within this manual are not mandatory; they are provided as considerations, guidelines, method options, and examples.

3.4.2 Cost Estimating Responsibilities. Table 3.4-1 identifies the responsibilities for cost estimating.

Table 3.4-1 Responsibilities – Cost Estimating

Activity/Function	Responsibility
Program Authority	Ensure all TM costs are included in program budget, including costs to incorporate resolution to identified discrepancies.
Acquisition Authority	1. Ensure TM cost estimates are developed and/or cost estimate evaluations are performed. 2. Ensure incorporation of outstanding TMDERs and ACNs are considered in all TM cost estimates.
TM Manager	1. Develop TM cost estimates and/or evaluate TM cost estimates as tasked. 2. Ensure incorporation of outstanding deficiencies (i.e., TMDERs and ACNs) are considered in all TM cost estimates.

3.4.3 TM Cost Estimates. Cost estimates can vary from detailed to rough estimates as required by the program and acquisition activities or contracting officer. The detail required can be dependent upon the stage in the program planning, contracting/tasking processes, and program life cycle. Cost estimates may be requested in terms of dollars or hours, or both and may require costs for either or both the preparing activity and the acquiring activity. The general process for estimating the contract cost of a TM product is provided in figure 3.4-1. This process may also be applied when a TM product is prepared internally within the Government by excluding contractor-only related costs (e.g., fee). Additional costs for items such as development of TMQA products and validation or verification should also be factored into the estimates where applicable.

3.4.4 Cost Considerations. Evaluation of impact on TM product content and each applicable TM element is useful in determining the scope of a new or revised TM development task. When available, source material (e.g., engineering drawings; ship, system, or equipment change proposals) are used in determining the scope or impact, which may range from coverage of a new system or equipment, coverage of system or equipment modifications, to incorporation of TMDERs, ACNs, and general updates. When evaluating source material for scope (page/screen count) and impact (degree of change), some typical TM elements to consider include:

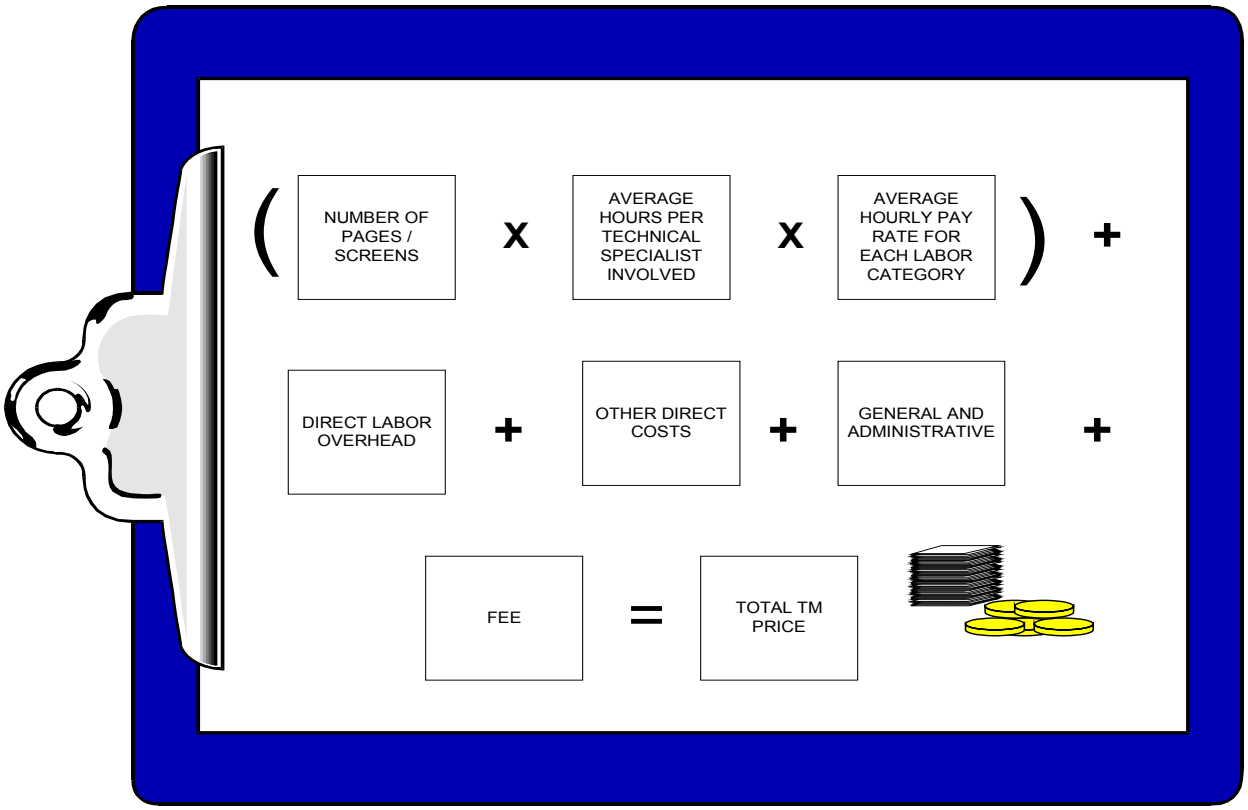

Figure 3.4-1 TM Product Development Cost Estimating General Process

- Front matter and indices
- Introductory material
- Description (physical and functional)
- Operation
- Fault isolation/troubleshooting
- Maintenance
- Parts listing or illustrated parts breakdown (IPB)
- Installation and testing
- Other ship, system, or equipment specific elements.

Once the scope/impact has been determined, typical cost considerations may include tasks (labor) and expenses (other direct costs) for either or both the preparing and acquiring activities such as those identified in the following paragraphs.

a. **Digital Data.** For a new TM, labor associated with determining the type and functionality of the TM digital data (acquiring and/or preparing activities).

b. **TMQA requirements and development or revision of TMQA documents.** Consider labor to develop and maintain (preparing activity) and review/accept the interim and final products (acquiring activity). Consider whether documents (such as TMQA Program Plan, Validation Plan, and Verification Plan) need to be developed, if they already exist, or if they exist but require update. Consider time and travel (see item m) required to

participate in meetings such as Guidance and Quality Planning Conferences and in-process reviews (preparing and acquiring activities).

c. **Data Gathering, Writing, and Production.** Consider labor (preparing activity) to research, author, and produce TM content.

d. **Development of DTD Suites.** SNIPP-approved DTD suites are available for use from the Navy XML/SGML Repository at no cost to the preparing or acquiring activities. If NAVSEA 04L has authorized the acquiring activity to develop a new DTD suite, consider labor to develop and maintain (preparing activity) the new products, review/accept the interim and final products (acquiring activity), and coordinate with NAVSEA 04L to determine if the developed DTD suite is to become SNIPP-approved.

e. **Engineering/Technical Review.** Consider labor (preparing activity) to ensure TM products are technically accurate.

f. **Validation.** Consider labor (preparing activity) to execute required validation efforts. Consider material requirements (see item l) and consider time and travel requirements (see item m) for acquiring activity if they are to witness any of the validation efforts.

g. **Verification.** Consider labor (acquiring activity) to execute required verification efforts. Consider whether verification will be combined with validation or if any preparing activity support will be required. Consider material and travel requirements (see items l and m).

h. **Duplication and Distribution.** Within SNIPP there is no acquiring activity costs for digital distribution. If there are hard copy distribution requirements (paper or CD-ROMS), consider cost to duplicate and accomplish initial distribution and stocking of TM products. (often part of “Other direct costs” to the acquiring activity).

i. **ATIS Certification.** If the acquiring activity only requires digital distribution and is using the SNIPP there is no cost to the acquiring activity. Within SNIPP ATIS certification is provided as part of the SNIPP (NSDSA Initial Distribution Process) or is not required (TDKM). If acquiring activities require development and distribution of their own CD-ROMs, consider labor (either preparing or acquiring activity) to prepare digital storage media (i.e., CD-ROMs or DVDs) to meet ATIS certification requirements and to ensure digital storage medial is certified as ATIS compatible.

j. **TM Management/Task or Project Oversight.** Consider labor to manage or oversee the TM task or project (acquiring activity). Consider costs associated with managing the TM such as obtaining TMCRs, assigning TMINs, maintaining TM information within the TDMIS, oversight of the TM preparing activity, and participation in TM management/review teams.

k. **Software and Licensing.** Consider cost to procure TM editing and publishing licenses required to utilize the SNIPP CMS/NPA (preparing or acquiring activities, and possibly end-user activities) (Other direct costs).

l. **Data Storage.** Consider cost for initial data load into the SNIPP common source possible database mainentance depending on individual program requirements.

m. **Materials.** Consider materials required to execute the task (preparing or acquiring activities) (Other direct costs).

n. **Travel Expenses.** Consider cost for travel to required meetings and events (preparing and acquiring activities).

3.4.5 Cost Estimating Methods. Cost estimating methods and formulas can vary greatly, dependent upon the complexity of the system or equipment being documented and the type of TM products being developed. Figure 3.4-2 is an example of a cost estimating worksheet for TM products that would be used when the values are known for a contracted task; some of the entries may not be applicable if the Government is the preparing activity. The following are examples of cost estimating methods and formulas for TM products.

a. When available, use similar TMs supporting similar ships, systems, or equipment as a basis for complexity and size.

b. Originally developed for use in determining page-based TM estimates, figure 3.4-3 provides an example of average hours per page for developing or revising typical types of TM data found in weapon system or equipment related TMs. This type of guideline would be used to provide hours-per-page labor estimates for various production tasks.

c. Figure 3.4-4 was developed as a general formula example of hours per page for various labor categories. This type of guideline would be used to provide per page labor estimates by labor category.

d. For Hull, Mechanical, and Electrical (HM&E) TMs (paper), studies have shown that the average production hours per page range from 8 hours for a simple TM to 16 hours for a complex TM, with the average being 13 hours per page. Additionally, studies indicated that an HM&E equipment TM page quantity could be estimated by dividing the total number of parts listed in the Illustrated Parts Breakdon (IPB) by 3.08.

3.4.6 Cost Estimating Process. Table 3.4-2 provides the typical actions taken to prepare a page-based TM cost estimate.

Table 3.4-2 Process – Cost Estimating

Seq	Action	Notes
1.	Identify the scope and complexity of the task.	Where applicable, include incorporation of outstanding deficiency resolutions (TMDERs and ACNs) and conversion efforts.
2.	Estimate the number of pages/screens anticipated or impacted.	For a TM update that is intended for electronic display, count only the total pages/screens affected. For TM updates distributed as paper, count the total pages (including backup pages) to be included.
3.	Utilizing the page/screen count, determine the TM product production hours and/or costs, as required.	Cost is determined by multiplying the hours estimate by appropriate hourly rates. If actual hourly rates are known, they should be used (recommend contacting the acquisition or contracting office for direction). Alternate methods of determining cost can include utilizing an average per page/screen cost.
4.	Where applicable, estimate the cost to duplicate, distribute, and stock TM or TM update.	
5.	Estimate the cost to develop or update TMQA products or TM plans associated with the task.	As required, separate costs for the preparing and acquiring activities.
6.	Estimate the hours and/or cost for other items, such as ATIS certification, travel, materials, etc.	As required, separate costs for the preparing and acquiring activities.
7.	Estimate the hours and/or costs for TM management and oversight.	As required, separate these acquiring activity costs from the preparing activity costs.
8.	Prepare estimate in the format requested: a. For preparing activity estimate, utilize the hours and/or preparing activity costs determined in steps 2 through 5 including applicable overhead costs. b. For acquiring activity estimate, utilize the hours and/or acquiring activity costs determined in steps 1 and 4 through 7. c. For a total cost estimate, add items a and b.	

TM COST ESTIMATING WORKSHEET

	LABOR CATEGORY	AVERAGE HOURLY RATE	HOURS (X) NUMBER OF PAGES					TOTAL COSTS
			AVERAGE MAN-HOUR PER PAGE (BY COMPLEXITY)	X	TOTAL PAGES TO BE WORKED		TOTAL HOURS	
					NEW	REVISED		
DIRECT LABOR	MANAGER	$		X				$
	ENGINEER	$		X				$
	ENGR ASST/TECH	$		X				$
	TECH. EDITOR	$		X				$
	PROGRAMMER	$		X				$
	QA ANALYST	$		X				$
	TECH. WRITER	$		X				$
	CLERICAL/WORD PROCESSOR	$		X				$
	GRAPHIC CHECKER/MGR	$		X				$
	ILLUSTRATOR	$		X				$
TOTAL DIRECT LABOR HOURS AND COSTS								$
DIRECT LABOR OVERHEAD COSTS								$
TOTAL LABOR COSTS								$
OTHER DIRECT COSTS (TRAVEL/MATERIALS/COMPUTER SUPPORT/ETC.)								$
TOTAL DIRECT COSTS								$
GENERAL AND ADMINISTRATIVE COSTS								$
SUBTOTAL PRIOR TO PROFIT								$
FEE/PROFIT								$
TOTAL PRICE								$
PRICE PER PAGE								$

Figure 3.4-2 Example Cost Estimating Worksheet

Table 1. Production Effort – Hours Per Page (including Research and Liaison)

	Change Guide	A Size Page	TOC LOI LOT	Fore-word	Intro-duction	Phys Desc	Funct Desc	Opera-tion	Block Diagram	Simple Schematic*	Signal Flow Diagram*	Power Dist Diagram*	Diagram Notes	Wire List	Photo / Art callouts	Index
New	2.0	2.0	2.0	2.0	6.0 8.0**	6.0	10.0	7.0	4.0	8.0 12.0***	16.0 24.0***	12.0 18.0***	2.0	4.0	2.0	3.0
Major Impact	2.0	1.0	1.0	1.0	4.0 6.0**	4.0	8.0	4.0	2.0	4.0 6.0***	8.0 12.0***	6.0 9.0***	1.0	3.0	1.0	1.0
Minor Impact	2.0	0.5	0.5	0.5	2.0	2.0	3.0	2.0	1.0	2.0	2.0	2.0	0.5	2.0	0.5	0.5

Notes:
* Per each sheet of the diagram.
** Where large tables such as signal transmission types are required.
*** More complex equipments such as fire control radars; complex signal routing through equipment.

Table 2. Typist and Proof Reading Effort - Hours Per Page

	Review Copy	Illustration Captions	Final
Typist	1.0	0.1 (per caption)	0.2
Proof Reader	0.5	NA	0.2

Figure 3.4-3 Example Cost Estimating for Page Based TMs – Per Page (Sheet 1 of 2)

Table 3. Illustrating and Drafting Effort (Includes Lettering)

Equivalent Final Size	Block Diagram			Simple Schematic			Signal Flow			Power Distribution			Relay Ladder			Photo Retouch	Photo Callouts
	1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P	NA	NA
New	4	8	12	6	11	16	8	12	18	4	7	10	4	7	10	Maximum 6	Maximum 5
Major Change	2	4	6	4	6	10	4	6	10	2	4	7	2	4	7	Average 4	Average 3
Minor Change	2			3			3			2			2			- - -	- - -
Pickup	1			1			1			1			1			- - -	- - -

Explanations

1. All numbers are in hours and or tenths of an hour of effort.
2. Categories: New, Major Impact, and Minor Impact
   - New = Original written page or newly prepared illustrations.
   - Major Impact = Pages of text, tables, or illustrations in existence but requiring greater than 50% revision
   - Minor Impact = Pages of text, tables, or illustrations in existence but requiring less than 50% revision
3. Under writing effort, for diagrams – The use of "Per each sheet" means an individual sheet within a multi-sheet diagram.
4. Under illustrating effort, "1P", 2P", etc., refers to the number of panels , or size, of the final drawing (not the number of sheets). Each panel equals one A-size segment (8 ½ X 11 inches).
5. Under illustrating effort, "Pickup" is meant to be minor changes such as correcting a connection point, voltage level, reference designator, etc.

Figure 3.4-3 Example Cost Estimating for Page Based TMs – Per Page (Sheet 2)

HOURS PER PAGE BY LABOR CATEGORY

TYPE OF EFFORT (LABOR CATEGORY)		SIMPLE		AVERAGE		COMPLEX	
		NEW	REV	NEW	REV	NEW	REV
TEXT AND GRAPHIC PAGES	MANAGER (TM)	.4	.2	.8	.4	1.2	.6
	ENGINEER (MID-LEVEL)	.3	.2	.7	.4	1.0	.5
	ENGINEER'S ASST/ TECHNICIAN	.5	.3	.9	.5	1.3	.7
	TECHNICAL EDITOR	.4	.2	.6	.3	.8	.4
	PROGRAMMER DIGITAL CONVERSION	.1	.1	.2	.2	.3	.3
	QUALITY ASSURANCE ANALYST	1.0	.4	2.0	.6	3.0	.8
TOTALS		2.7	1.4	5.2	2.4	7.6	3.3
TEXT PAGES	TECHNICAL WRITER	1.0	.5	2.1	1.1	4.0	2.0
	CLERICAL/WORD PROCESSING	1.0	1.0	1.0	1.0	1.0	1.0
TOTALS		2.0	1.5	3.1	2.1	5.0	3.0
GRAPHIC & ILLUST. PAGES	CHECKER/MANAGER	1.0	.5	2.0	1.0	3.0	1.5
	ILLUSTRATOR/ DESIGNER/DRAFTING	3.0	1.5	6.4	3.2	11.5	5.6
TOTALS		4.0	2.0	8.4	4.2	14.5	7.1
TOTALS HOURS PER PAGE FOR ALL CATEGORIES		8.7	4.9	16.7	8.7	27.1	13.4

Figure 3.4-4 Example Hours Per Page by Labor Category

3.4.7 TM Conversion. TM conversion is the process of converting a TM from one format to another without changes in technical content (although technical content update and TM conversion could be combined into one concurrent task). In determining costs for TM conversion, considerations include the method of conversion, storage and management, and output. Examples include:

- Method of Conversion
  - Re-authoring paper TMs into a SNIPP-compliant format
  - Converting a non-SNIPP compliant electronic format to one that is SNIPP compliant

- Storage and Management - Managing and storing digital files (source data and presentation files) within the SNIPP Content Management System

- Output
  - Distribution via SNIPP (no cost option)
  - Distribution of hardcopy paper or CD-ROMs (acquiring activity cost).

3.4.8 TMDER Cost Estimating. Determining cost estimates to correct a TM for outstanding TMDERs should be accomplished using an appropriate method for the affected TM, such as the methods discussed in paragraph 3.4.5. If actual impact data is not readily available, the following is an alternative cost estimating method.

a. **Non-technical TMDERs.** Eight (8) hours per TMDER. Multiply 8 hours by the TMMA's fiscal year (FY) stabilized hourly rate (or average contract hourly rate, if known and applicable) to obtain a cost estimate for the current FY.

b. **Technical TMDERs.** A minimum of 20 hours per TMDER. Multiply 20 hours by the TMMA's fiscal year (FY) stabilized hourly rate (or average contract hourly rate, if known and applicable) to obtain a cost estimate for the current FY.

3.4.9 Duplication and Distribution Cost Estimating. Programs are responsible for the initial duplication, distribution, and stock of TM products. For programs distributing electronic TM versions only, use of the SNIPP provides electronic initial distribution at no cost to the program. Programs are still responsible to accomplish and fund hardcopy initial distribution and stock requirements in a paper or digital media format. The DLA Document Services website (see appendix D) provides information on their duplication and distribution services and cost estimates can be requested from the DLA Document Services website. Refer to Chapter 5, Distribution, for further information on duplication, distribution, and stock.

3.4.10 Cost Estimate Evaluations. Cost estimate evaluators should use the same basic methodologies and considerations to review an estimate as to prepare one. Additionally, attention should be given to ensure that the estimate seems to be in concert with the required task, without omitting or adding requirements, indicating that the estimator understood the task.

SECTION 3.5 PROCUREMENT

3.5.1 Introduction to Procurement. This section describes the TMMP actions and responsibilities for acquiring NAVSEA TMs. TMs serve as the primary information source for technical training, installation, operation, testing, maintenance, and repair of systems and equipment. Unless technically accurate and adequate TMs already exist, new TMs or updates to existing TMs must be procured and developed as part of all NAVSEA ship, system, or equipment acquisitions.

3.5.2 Procurement Responsibilities. Table 3.5-1 identifies the TMMP responsibilities regarding the procurement of TMs.

Table 3.5-1 Responsibilities – Procurement of TMs

Activity/Function	Responsibility
Acquisition Authority	1. Ensure TMMP requirements are included in all tasking or contractual documents requiring development of TM products. 2. Request or direct the request of TMCR/TMSR preparation to support TM procurements/tasking. 3. Ensure TMCRs/TMSRs are included in tasking and contractual documents involving the development of TM products. 4. When required, ensure waivers to implement new or non-approved TM requirements for one-time unique acquisitions are requested from NAVSEA 04L (via NSDSA). 5. Acquire TMs in accordance with the DON Policy on Digital Product/Technical Data. 6. Include requirements for use of the SNIPP in contracts or tasking documents unless there is an approved waiver. 7. Require TM price estimates with the Request for Proposal (RFP) for TM development. 8. Acquire TMs by a separately-priced Contract Line Item Number (CLIN) or sub-line items per the DFARS.
NSDSA	1. Provide SMART-T user accounts to request TMCRs/TMSRs. 2. Provide tailoring services for TMCRs/TMSRs as required. 3. Review waiver requests and forward recommendations to NAVSEA 04L.
ISEA/PY	1. Provide planning assistance to program and acquisition authority activities as requested. 2. Review TMCRs/TMSRs as required.
TM Manager	1. Request TMCRs/TMSRs as required. 2. Review and request tailoring of TMCRs/TMSRs as required. 3. When required, provide support to program and acquisition authority activities to prepare waiver requests. 4. Request cancellation of unused TMCRs/TMSRs via NSDSA CSR.

3.5.3 Solicitations and Contracts. TM planning is translated into firm contractual or tasking requirements for the development of TM products. This includes the final determination of the type(s) of TMs and products and the preparation of contractual documents such as the CDRLs, Statements of Work (SOWs), Procurement Requests (PRs), solicitations, contracts, or tasking

documents. TMs and each of their associated deliverable data products and associated management data items must be listed on a CDRL DD Form 1423. Requirements for TMs listed as CLIN items must be described and defined in the SOW and referenced to a TMCR in the CDRL. CDRLs for associated TM data and management products (e.g., TMQA Program Plan, TM Book Plan, Validation Plan, Validation Certificate) must reference an approved DID for the content and format of those products. TMs shall be acquired in accordance with all applicable DFARS requirements. The following DFARS requirements are specifically identified within the TMMP policies for procurement of TMs.

a. TMs shall be acquired by a separately priced CLIN or sub-line items per the procedures established in the DFARS, Subpart 204.71. Solicitations, PRs, and contracts shall include one or more separately-priced TM CLINs or Sub-CLINs for the development and delivery of TMs or TM updates. In cases where the program authority deems that a separate priced TM CLIN is not feasible, alternative contracting methods may be used if TM procurement costs can be determined.

b. A deferred ordering clause shall be included in contracts per DFARS 252.227-7027.

c. All PRs, solicitations, and contracts requiring the delivery of TMs shall include the DFARS clause for Technical Data - Withholding of Payment (DFARS 252.227-7030). Payments shall be withheld when the TM is either deficient or late in delivery (through no fault of the Government).

3.5.4 TMCRs/TMSRs. Procurement or tasking of NAVSEA TMs and TM updates require the use of a TMCR (for contractor developed TMs) or TMSR (for Government developed TMs). TMCRs/TMSRs are used to specify TM style, format, and content requirements in CDRLs, PRs, solicitations, contracts, and tasking documents. TMCRs/TMSRs are complete documents tailored to the unique needs of specific procurements and provide the preparing activity with TM product preparation and general delivery requirements. (Specific delivery and submittal requirements for TMs to be developed via a contract must be contained within the applicable CDRL.) TMCRs/TMSRs contain organized excerpts and compilations from NAVSEA-approved specifications and definitions applicable to the specific TM products being acquired. TMCRs/TMSRs may also include optional requirements for supporting deliverables such as TMQA products, Schedules and Status Reports, TM Book Plan, IETM Content Plan, TM Organization Plan, Validation Plan, Validation Certificate, Verification Discrepancy/Disposition Record, and Verification Incorporation Record.

3.5.4.1 TMCRs for CI/NDI TMs. TMs that support CI/NDI hardware shall be evaluated for usability in accordance with a TMCR for a COTS TM. If TM supplemental data is required for a COTS TM, the data shall be supplemented in accordance with the COTS TMCR.

3.5.4.2 Requirement for the Use of TMCRs/TMSRs. TMCRs are mandatory for use in the procurement of TMs or TM updates and shall be cited in Block 4 of the CDRL. TMSRs are mandatory for use when TMs are developed internally within the Government. TMCRs are also mandatory for COTS TM evaluation and COTS supplemental data. When procuring TMs, the TMCR number must be cited in Block 4 of the CDRL and the remarks should include a direct link to the TMCR within the SMART-T Repository (see appendix D) if a hard copy of the TMCR is not included in the package. The acquisition authority activity is responsible for ensuring

TMCRs/TMSRs are reviewed and tailored as required to adequately and accurately support the procurement or task.

3.5.4.3 TMCR/TMSR Accessibility. TMCRs/TMSRs are generated and stored in SMART-T and are available for viewing in the SMART-T Repository (see appendix D). TMCRs/TMSRs can be viewed without a SMART-T account; however, an account is required to generate a TMCR/TMSR. Accounts are requested via the NSDSA website (SMART-T home page) (see appendix D).

3.5.4.4 Generating TMCRs/TMSRs. The following paragraphs provide information on TMCR/TMSR generation and tailoring. Table 3.5-2 provides an overview of the process to generate a TMCR or TMSR.

a. Generally, the TM Manager or an acquisition authority activity assigned to the program generates the TMCRs and TMSRs for the program. The screens within SMART-T guide the TMCR/TMSR requester through specific selections and questions to identify and select details about the TMs, TM products, and quality assurance required for their specific TM project. A Practice TMCR/TMSR session is available allowing the TMCR requester to view the questions asked and information required by SMART-T before actually generating the TMCR/TMSR within a Production session. When the required selections and entries are submitted via SMART-T, a TMCR or TMSR is generated, automatically assigned a TMCR or TMSR number, placed in the SMART-T TMCR repository, and is available to display or download within a few minutes.

b. Once the TMCR or TMSR has been reviewed, the originator may request additional tailoring to support program requirements. Tailoring down is the process of deleting unnecessary (non-mandatory NAVSEA TM) requirements from the TMCR/TMSR. Tailoring up is adding new or non-approved requirements which may be permissible as a one-time unique acquisition; however, a SNIPP waiver request shall be submitted and granted before requirements can be added. Requests for tailoring can be submitted by CSR (see appendix D)). The actual document tailoring is accomplished within the SMART-T database by NSDSA personnel.

c. Additional details and information on how to generate, view, and tailor TMCRs/TMSRs is available from the NSDSA website under SMART-T, Frequently Asked Questions (FAQs).

3.5.4.5 Waivers. Waivers for the non-use of a TMCR/TMSR in TM development efforts can only be granted from NAVSEA 04L for NAVSEA TMs. The request shall be made by submitting a CSR via the NSDSA website (see appendix D). A waiver does not relieve program and acquisition authority activities of the responsibility for the quality of the technical product delivered. Contractual acceptance of a product does not relieve the acquisition authority activity from correcting technically deficient products.

3.5.4.6 TMCR/TMSR Cancellation. If a TMCR or TMSR is generated, but later it is determined that it is not needed, the TMCR or TMSR should be cancelled. The TMCR/TMSR originator notifies NSDSA by submitting a CSR identifying the reason for cancellation and NSDSA personnel accomplish cancellation within the SMART-T repository.

Table 3.5-2 Process – TMCR/TMSR Generation

Seq	Action	Notes
1.	Using SMART-T, select "Production Session" to begin generation of a TMCR or TMSR.	Selecting "Practice Session" allows viewing of the questions asked; however, it will not generate a TMCR/TMSR.
2.	Complete the selections and questions presented in SMART-T.	
3.	Review the selections Summary Sheet and make any required changes. Submit for processing.	The Summary Sheet provides a quick view of the selections made by the requester.
4.	Review TMCR/TMSR.	
5.	Request TMCR/TMSR tailoring from NSDSA as necessary.	

3.5.5 Digital Data Requirements. Current policies on the acquisition, development, and compatibility of digital data must be taken into consideration as part of TM procurement.

a. New and revised TMs shall be SNIPP compliant. Use of SNIPP ensures compliance with the requirements cited in subparagraphs below. Cost effectiveness and feasibility of SNIPP compliancy for maintenance of legacy TMs shall be determined by a BCA and SNIPP waivers shall be obtained when any or all of SNIPP is not used.

b. New and revised TMs shall be acquired, produced, and delivered in digital formats compliant with DON Policy on Digital Product/Technical Data.

c. Updates to an electronic TM which was originally acquired in or has subsequently been converted to Standard Generalized Markup Language (SGML) or Extensible Markup Language (XML) shall be digitally distributed at the full document level (a reissue of the TM in its entirety) vice via a change package.

d. TMs provided to the Fleet on digital storage media shall be certified as ATIS compatible. Products used to view ATIS compatible TMs must be on the IT-21 PPL. If it is desired to use a product not on the PPL, the program must request the product be tested, approved, and added. For details, refer to the PPL on the SPAWAR website (see appendix D). For additional information on ATIS certification, see paragraph 4.4.7.

e. Procurement of TMs shall include all deliverables necessary to manage, maintain, edit, and re-author XML/SGML TMs in accordance with the DON Policy on Digital Product/Technical Data.

3.5.6 Requirements for Obtaining Data Rights. Unlimited rights in data shall be acquired for all TM products, including new TMs and updates to existing TMs. For information on acquiring COTS TM rights, see paragraph 3.3.5.

3.5.7 TMQA Program Requirements. Requirements for a TMQA program shall be included in all tasks provided to other activities and in contracts awarded to contractors involving development of TMs. Development, production, and maintenance contracts shall require validation of TMs prior to submitting them for Government verification. Section 4.2 provides guidance on defining the scope of a TM QA program and provides discussions of TMQA products and efforts.

3.5.8 Other TMMP Requirements. As applicable to the procurement or task, the following TMMP requirements are to be included in procurements and tasking documents for NAVSEA TMs.

a. An appropriate distribution statement shall be selected and identified by the acquiring activity for use on the TM products. Refer to SECNAVINST 5510.36 and/or contact the program or acquisition activity or local Security Office for assistance in selecting appropriate statements to meet the assigned program requirements. (Also see section 5.2 for further details on marking of TM products.)

b. TM masters (final reproducible copy/master databases) and source files shall be acquired and delivered to the Government for all TMs (except for commercial TMs). Source files for new or revised TM acquisitions shall be stored within the SNIPP Content Management System (CMS).

c. The development of updates to TMs affected by equipment modifications are to include the requirement to incorporate outstanding TMDERs and ACNs (see section 4.6).

d. When desired to have the preparing activity develop and deliver reproducible-ready digital storage media containing TMs, include ATIS compatibility requirements (see section 4.4).

e. Acquisition contracts that assign TMMA/TM Management functions to a contractor do not relieve the program or acquisition authority from ensuring all TMMP responsibilities are fulfilled. If TMMA/TM Manager functions are assigned to a contractor, acquisition activities shall be designated to perform inherently governmental functions.

3.5.9 Procurement of COTS TMs.

a. Maximum use shall be made of commercially available COTS TMs. They must: currently exist (off-the-shelf); describe the installation, operation, and maintenance of the system or equipment and meet the acceptance criteria specified in the applicable TMCR. Required updates or supplements to COTS TMs shall be developed in accordance with a COTS TMCR. The Government shall not pay for the development of commercial manuals.

b. Whenever possible, COTS TMs are to be acquired in any digital format provided by equipment manufacturer/vendor or other Department of Defense (DoD) sources. Only when digital format media is unavailable should paper TMs be acquired.

c. COTS TMs are to be acquired with unrestricted rights (per DFARS 252.227-7015, Technical Data – Commercial Items) for Government use, duplication, and Fleet distribution needs.

d. COTS TMs and supplemental data are to be acquired using the appropriate DIDs (DI-TMSS-81815 for commerical TMs and DI-TMSS-81816 for supplemental data.

CHAPTER 4
PHASE 2 – TECHNICAL MANUAL DEVELOPMENT

SECTION 4.1 INTRODUCTION

4.1.1 Introduction to Technical Manual Development. This chapter addresses the development phase of technical manual (TM) life cycle management, including the life cycle maintenance efforts and procedures required to keep the technical content of TMs accurate and current. The development phase includes activities required to support TM development and maintenance, conversion/digitization, quality assurance, acceptance, and certification. This chapter contains the following sections describing these supporting activities:

4.1 Introduction
4.2 Technical Manual Quality Assurance (TMQA)
4.3 TM Product Numbering
4.4 Digital Storage Media Development and Management
4.5 TM Acceptance and Certification
4.6 TMMP Deficiency Program

4.1.1.1 Within this chapter, the activity that is developing the TM is referred to as the *preparing activity*, whether the activity is contractor or Government. The Government activity that is to receive and approve the products is referred to as the *acquiring activity*.

4.1.1.2 The activity responsible for the ship, system, or equipment is responsible for the associated TMs, and the life cycle management for these TMs is to be assigned to one activity which is the Technical Manual Management Activity (TMMA). Within the TMMA, each TM is assigned to a TM Manager. In accordance with Federal Acquisition Regulation (FAR) Subpart 7.5, acquisition functions that are inherently governmental shall be performed by Government employees.

4.1.1.3 TMs that are designated as Selected Record Data are maintained by the ship's Planning Yard (PY) and the PY is designated as the TMMA (per Fleet Modernization Management and Operations Manual (FMP) SL720-AA-MAN-010/020 or Navy Modernization Process – Management and Operations Manual (NMP-MOM) SL720-AA-MAN-030. Guidance documentation (e.g., SL720-AA-MAN-010 and -020, General Overhaul Specifications for Deep Diving/Specifications for Overhaul) used to update Selected Record Data TMs are in accordance with the policies of NAVSEAINST 4160.3 and this manual.

4.1.2 Use of TMCRs/TMSRs. TMs and TM updates shall be developed in accordance with a Technical Manual Contract Requirement (TMCR) for contractor developed TM products or Technical Manual SEATASK Requirement (TMSR) for government developed TM products. The TMCR/TMSR defines the format, style, and technical content of the TM. TMs that support Commercial Item/Non-Developmental Item (CI/NDI) are evaluated for useability in accordance with a Commercial Off-The-Shelf (COTS) TMCR and any additional COTS TM supplemental data is developed in accordance with a COTS TMCR. See paragraph 3.5.4 for details on obtaining and viewing TMCRs/TMSRs.

4.1.3 Technical Manual Quality Assurance (TMQA). TMQA requirements are contained within TMCRs/TMSRs and discussed in section 4.2. TMs and TM updates shall be validated by

the preparing activity and verified by the Government acquiring activity. TMs shall not be considered final until they have completed validation and verification. Final TMs or TM updates shall not be released for duplication or distribution without a properly completed NAVSEA Technical Manual Certification Sheet (section 4.5). When directed by the program or acquisition manager, validated preliminary TMs may be used to support ship, system, or equipment requirements when the final TM is unavailable due to scheduled or in-process verification efforts.

4.1.4 Coordination with Logistic Support Elements. Logistics Management Information (LMI), Supportability Analysis (SA), Supportability Analysis Summaries (SASs) addressing tools and test equipment requirements, maintenance plans, and other Acquisition Logistics Support data shall be used to the maximum extent possible as source data in the development of TMs. TMs and their updates shall be fully coordinated with other logistic support elements to ensure there is no duplication in the development of data and documents such as Planned Maintenance System (PMS), training materials, and TMs. TM validation actions should be used to provide updates and corrections to the affected SA data.

4.1.5 New TM Development. New TMs shall be:

a. Acquired, produced, and delivered in digital formats compliant with the Department of the Navy (DON) Policy on Digital Product/Technical Data;

b. Acquired, developed, and distributed utilizing the SNIPP;

c. Made available concurrently with the first production system or equipment (hardware or software);

d. Technically accurate, adequate, and suitable for quality duplication;

e. Available in sufficient time to support the development or update of training material;

f. The primary source of technical training information and matched to the education, training, and comprehensibility levels of the intended user; and

g. Designed and written to facilitate their use in the operation, maintenance, repair, training, and logistic support of ships, systems or equipment. TMs must support all tasks and functions at the prescribed maintenance and repair level and be consistent with training, operations, maintenance planning, personnel skill levels, support, and test equipment selection, and hardware support plans.

4.1.6 TM Maintenance. TMs shall be maintained free of technical errors and support all active configurations of the ship, system, or equipment. TM updates shall specifically identify and list the content or reason(s) for update (e.g., system or equipment modification numbers, Technical Manual Deficiency/Evaluation Report (TMDER) number, Advance Change Notice (ACN) number) in the appropriate location (e.g., Foreword, Revision Summary, Record of Revision).

4.1.6.1 Authorized TM Update Methods. Existing TMs shall only be modified by issuing revisions, change packages, or ACNs and shall be produced and delivered in digital formats compliant with the DON Policy on Digital Product/Technical Data. A revision is a complete

reissue of a TM and is the only SNIPP-approved method to permanently update a TM. Change packages are only to be used when a Business Case Analysis (BCA) as required by the DoN Policy on Technical Data/Digital Product shows conversion of legacy data to a mark-up language is not cost effective and a SNIPP waiver has been requested and granted. ACNs are temporary and are only to be used in urgent instances (see paragraph 4.6.4). Permanent TM updates are used to ensure TMs are current and accurate, including items such as:

- Incorporate coverage for ship, system, or equipment hardware and software modifications or operational changes
- Extend applicability to TMs to other ships, systems, or equipments
- Correct technical errors and omissions
- Satisfy valid TMDER recommendations
- Incorporate ACNs
- Incorporate enhancements
- Reissue converted or digitized TMs.

4.1.6.2 Configuration Updates. TMs shall reflect the exact hardware or software configuration(s) throughout the life of the ship, system, or equipment. Modifications in the hardware design, computer software, hardware installation configuration, or new hardware installations are to be fully supported by corresponding updates to the applicable ship, system, or equipment TMs. TMs or TM updates shall be available prior to installing configuration modifications in operational ships, systems, or equipment, except when validated preliminary TMs are used due to scheduled or in-process verification efforts as directed by the program or acquisition manager.

4.1.6.3 Deficiency Corrections. TM updates being developed to incorporate equipment modifications are to also incorporate resolutions to outstanding TMDERs, ACNs, or other known deficiencies. A TM update may also be developed for the purpose of correcting deficiencies without any equipment modifications being associated with the update. See section 4.6 for further details on TMDERs and ACNs.

4.1.7 Marking of TMs and TM Development Products. Applicable distribution statements, export control notices, destruction statements, and proper classification markings per DON Information Security Program (ISP) Regulation, Secretary of the Navy Instruction (SECNAVINST) 5510.36, and in accordance with the applicable TMCR/TMSR, shall be used in marking TMs. TM development products shall also be appropriately marked. For details, refer to section 5.2, Distribution Control.

4.1.8 Technical Data Management Information System (TDMIS) Record Maintenance. Throughout the development of TMs, TDMIS information shall be maintained current. Once a Technical Manual Identification Number (TMIN) has been assigned and a publication record created within TDMIS, the publication record shall be updated to reflect changes or additions such as ship or configuration applicability information, estimated distribution date, and title, deficiencies and deficiency status, as well as maintaining current distribution lists and/or on line publication access. Any TM with a status of “UD” (Under Development) three years past the scheduled due date shall be automatically changed to a status of “NI” (Never Issued).

SECTION 4.2 TECHNICAL MANUAL QUALITY ASSURANCE

4.2.1 Introduction to TMQA. This section describes the implementation of TMQA programs for the acquisition and maintenance of Naval Sea Systems Command (NAVSEA) TMs.

4.2.2 TMQA Responsibilities. Table 4.2-1 provides TMQA responsibilities.

Table 4.2-1 Responsibilities – TM Quality Assurance

Activity/Function	Responsibility
Program and/or Acquisition Authority	1. Ensure a TMQA program is established and documented. 2. If the complexity of the program or task warrants, establish and fund a TM team. Oversee team performance and resolve delays in funding, personnel, contracts, material availability, or other problems. 3. Participate in the Guidance and Quality Planning Conferences, as required. 4. Task and fund engineering and technical activities to perform TMQA support, such as in-process reviews. 5. Task and fund verification, including verification planning, execution, and follow on. 6. Accept/reject TMQA and TM products.
ISEA/PY	As tasked and funded: 1. Participate as a member of TM or In-Process Review (IPR) teams. 2. Participate in Guidance and Quality Planning Conferences. 3. Perform TMQA on TM products. 4. Coordinate or support verification, including verification planning, and follow on. Oversee and/or direct verification efforts.
TM Manager	As tasked and funded: 1. Define, assist in defining, and/or evaluate TMQA programs. 2. Assist in establishing and participate as a TM team member when tasked. Perform as chair when assigned. 3. Participate in Guidance and Quality Planning Conferences. 4. Coordinate the review, evaluation, and recommend acceptance/ rejection of preparing activity TMQA deliverables. 5. Schedule and coordinate IPRs for review, evaluation, comment consolidation, and recommend acceptance/rejection of TM product deliverables. 6. Coordinate or support verification, including verification planning, execution, and follow on. 7. Retain records and certificates related to TMQA (e.g., discrepancy records, verification records and reports, TM Validation Certificates, TM Verification Incorporation Certificates, TM Certification Sheets).

4.2.3 TMQA Programs. The objective of a TMQA program is development of final TM products which meet quality requirements in terms of reliability, readability, adequacy, completeness, usability, and compatibility ensuring the Fleet, shore, training, and other users are provided technically accurate TMs that are of acceptable quality. The requirements for a

TMQA program should be considered early in the planning and throughout the life cycle of the applicable ships, systems, and/or equipments. TMQA programs are established by both the acquiring and preparing activities involved in TM products and events. The applicable TMCRs/TMSRs address requirements for development and quality assurance of TM products and contain requirements for QA events. The major products and events associated with a TMQA program are depicted in figure 4.2-1.

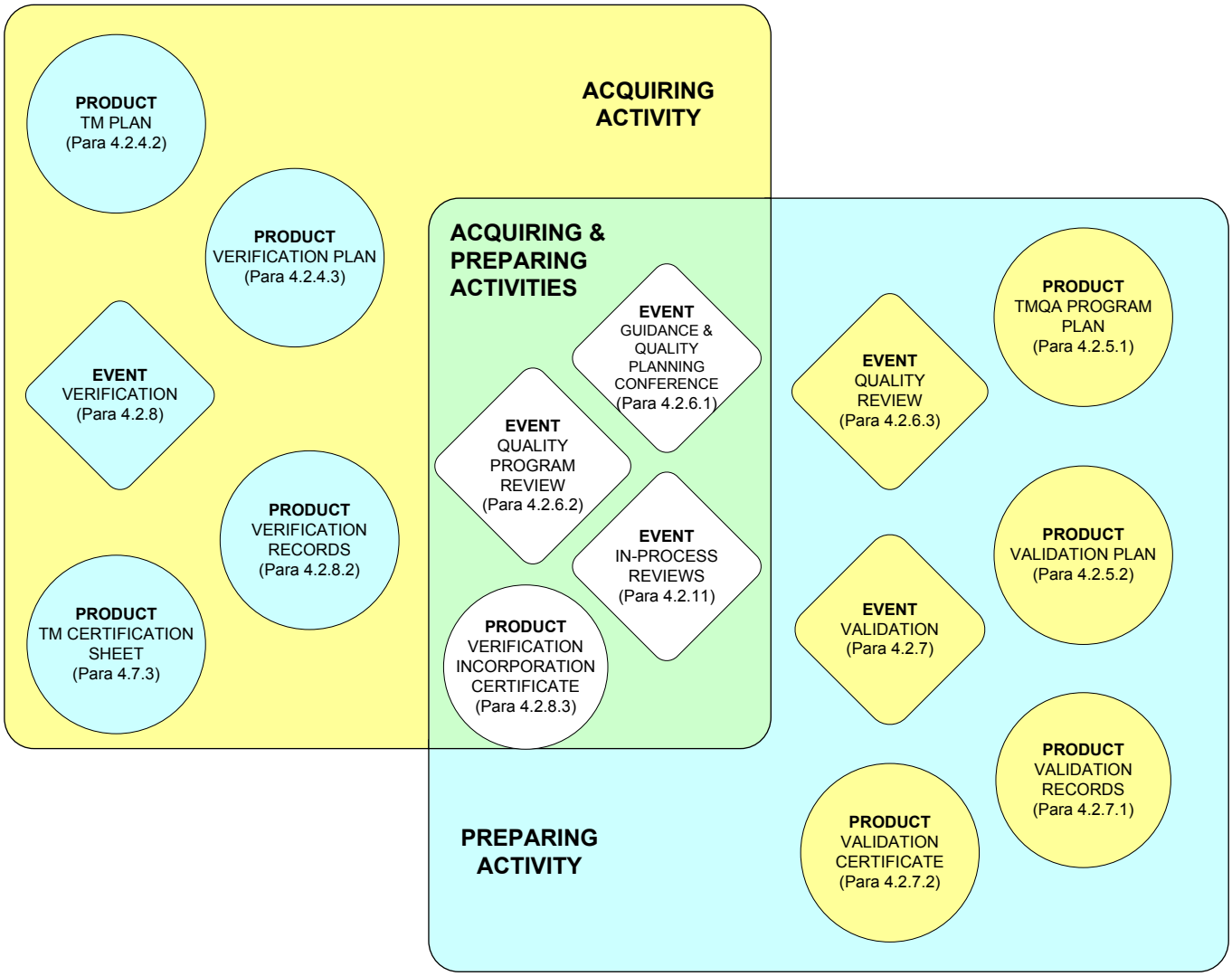

Figure 4.2-1. TMQA Major Products and Events

TMQA programs must ensure that TMs are comprehensible, usable, and written to the Reading Grade Level (RGL) of the technical personnel who operate and maintain shipboard systems and equipment. The acquiring activity determines the range and depth of TMQA program requirements based upon the complexity of the TM program to ensure that the resulting TM products meet the acquiring activity's technical requirements. Some TM programs require large investments of personnel and funds, while others require only a minimum of Government monitoring. Also refer to paragraph 3.3.3.5 for additional discussions on defining the scope of a

TMQA program in a procurement. The following are some items to consider when determining the scope of the TMQA program needed:

a. If the TM project or program is for development of new TMs or life cycle maintenance of existing TM products.

b. The system or equipment complexity, e.g.:
   - ► State-of-the-art/complex development
   - ► Moderately complex development
   - ► Simple development
   - ► COTS/ NDI equipment

c. If the system or equipment is a priority program, technically complex, or requires development of a large volume of technical data, an extensive TMQA program may be warranted. This includes reviews and deliverables scheduled at frequent intervals during TM development to monitor the preparing activity's progress.

d. When a preparing activity new to NAVSEA is involved, reviews and deliverables at regular intervals should be scheduled to establish a viable relationship with the preparing activity to resolve discrepancies or misunderstandings regarding contractual/tasking requirements early in the TM development processes.

e. Degree of confidence (past performance) in the preparing activity's TMQA program. If confidence in the preparing activity has not been established or has been eroded, it is critical to schedule regular reviews and deliverables to resolve any conflicts regarding program requirements.

4.2.4 Acquiring Activity's TMQA Program. The TM acquiring activity shall establish a TMQA program. The TMQA program shall include reviews, validation and verification, and provide for participation by Government engineering, logistics, Fleet, shore, and training personnel as appropriate. The TMQA Program ensures that TMs meet the following criteria:

- ► Adheres to governing documents including items such as TMCRs/TMSRs, Statements of Work (SOWs), Data Item Descriptions (DIDs), Contract Data Requirements Lists (CDRLs), and logistics products/technical data policies
- ► Contains all appropriate integrated logistic support, design, and support information necessary for the user to accomplish the mission for which the system or equipment is designed
- ► Contains all technical information necessary to maintain and repair the equipment for all designated maintenance levels (unless the information is otherwise provided and appropriately referenced in separate TMs which are available to the Navy)
- ► Adheres to the system maintenance plan and accurately depicts the configuration of the equipment or system that it supports
- ► Be based upon the technical data provided by the supportability analysis, and other applicable analyses (e.g., failure modes and effects analysis)
- ► Contains all technical information necessary to support the defined training requirements for the system or equipment (e.g., classroom and on-the-job-training)
- ► Meets readability and comprehensibility requirements.

4.2.4.1 TMQA Participants. TMQA participants from the acquiring and preparing activities control the quality of TMs by managing the accumulation of data, formulating plans for TMs, reviewing TM products, planning and executing validation and verification, and recommending acceptance or rejection of final TM products. Actions are typically performed during guidance conferences, in-process reviews, validations, and verifications, and as follow-up actions. For major acquisitions or for system or equipment acquisitions of significant criticality or complexity and as funded by the program or acquisition authority activity, a TM team may be established to control the quality of program TMs and to perform TMQA functions throughout the procurement period of performance. In a procurement where a TM team is not established, TMQA functions are still required to be performed, typically at a minimum by an assigned TM Manager and an assigned In-Service Engineering Agent (ISEA)/Planning Yard (PY), or by a team assembled to support specific events (e.g., in-process review team, verification team) as defined in the acquiring activity's approved planning documentation. The typical TMQA participants are as follows, including preparing activity participants providing TMQA support when a TM team is established:

a. **Acquiring Activity Participants.**
   - ► Contract Administrator – Government acquisition specialist personnel such as the Contracting Officer (CO) or Contracting Officer's Representative (COR)
   - ► TMMA – TM Manager for the TMs being developed, revised, or changed
   - ► Technical/Engineering – Government activity personnel responsible for technical content
   - ► Logistics Specialists – Government activity Subject Matter Experts (SMEs) in TMs, technical data, training, configuration management, etc.
   - ► Fleet Representation – Fleet, shore, and/or training activity personnel to review TMs for adequacy for training and Fleet use

b. **Preparing Activity Participants.**
   - ► Project Manager/Lead – Preparing activity personnel assigned to provide task oversight
   - ► Technical/Engineering – Preparing activity personnel responsible for technical content
   - ► Production Personnel – Preparing activity personnel involved in writing, editing, TMQA, etc., as required
   - ► Logistics Specialists – Preparing activity SMEs in TMs, technical data, training, configuration management, etc.

4.2.4.2 Technical Manual Plan (TMP). The acquiring activity's TMQA Program is documented in the acquiring activity's TMP (see paragraph 3.3.4.4). The TMP should include TMQA implementation that addresses the requirements, criteria, and scope for preparing activity validations and for the acquiring activity to conduct in-process reviews, verifications, certification, and acceptance. The program description within the TMP should address how the TMQA processes should be performed and identify the participants required to perform the TMQA functions.

4.2.4.3 Verification Plan. The verification process is the TMQA actions conducted by the Government acquiring activity to confirm that a TM is accurate, adequate, and supports the operation and maintenance of shipboard systems and equipment before TM acceptance. When required, a Verification Plan addressing verification requirements is generated by the acquiring activity. The degree of verification to be performed on each TM is based on the scope of the TM,

the complexity of the system or equipment, the Government's level of confidence in the preparing activity's quality assurance program, and for TM updates, the reason for the update. For TM updates to previously verified final TMs, only the new or changed TM portions need to be verified. For TM conversion efforts that do not affect technical content, a verification plan may be developed to document the verification approach for the final converted TM products. The following are examples of elements that would be included in a verification plan:

- TMs to be verified
- Method(s) of verification for each TM or TM portion, including level and degree of verification
- Dates, times, and locations for verification events
- Verification team and the team members' functions
- Preparing activity's support role in verification process
- Resources required and available; arrangements for the bailment, loan, or diversion of the system or equipment, tools and test equipment, spare parts, and kits, etc.
- Required reference documents (engineering drawings, maintenance plan, verification checklists, etc.)
- Method for recording and resolving discrepancies and other findings

Examples/templates for developing a Verification Plan and Verification Plan Outline are available on the NSDSA website (see appendix D).

4.2.4.4 Verification Methods. The degree of the verification process and the methods used to verify each TM and/or TM portion depends on the scope and complexity of the system or equipment. Selection of verification methods may take into consideration items such as proposed combined validation/verification events (see paragraph 4.2.9), review of preparing activity's validation results and records, and reviews of non-procedural TM content such as descriptive information or parts lists that are reviewed against source data during IPRs. Verification methods for the technical content can be broadly categorized into the first three groups identified below. Additionally, verification planning should include verification of Interactive Electronic Technical Manual (IETM) functionalities when applicable.

a. **Desktop.** Theory, principles of operation, system and equipment description, illustrated parts breakdown, schematic and wiring data are verified against engineering source data.

b. **Demonstration.** Operational, troubleshooting, or maintenance procedures are verified on the actual system or equipment. When using this method, procedures are performed precisely as described in the TM by Fleet or other user personnel and observed by the acquiring activity. Malfunctions shall not be introduced into the system or equipment for the purpose of verification unless specifically required for certification of procedural tasks or system tests. Destructive malfunctions shall not be introduced into the system or equipment for any purpose.

c. **Simulation.** Simulation may be selected as the verification method for specific procedures when:

   - Procedures duplicate similar ones that have already been demonstrated

- ► Procedures which if actually performed would be destructive to the system or equipment
- ► Procedures for which similar or substituted equipment is used.

d. IETM Visual and Functional Characteristics. When TMs are developed in full compliance with SNIPP, the output presentations will meet shipboard and shore site display requirements. Required IETM visual presentation and functionalities are verified to ensure navigation and sequencing through the information is logical, manageable, and user friendly, all technical information including text, tables, and graphics appear in the appropriate data panes, source files are tagged to the level and depth required by the applicable Document Type Definition (DTD)/schema and technical content requirements, and the output presentation meets the specified requirements.

4.2.5 Preparing Activity's TMQA Program. The TM preparing activity shall establish TMQA programs consistent with the applicable TMCR/TMSR. These programs include the preparing activity's TM processes from the initial collection of source data through the final product delivery and acceptance by the acquiring activity. The preparing activity's TMQA program encompasses the accountability for and development of quality control functions and shall ensure the preparing activity's continued use of adequate control functions throughout the TM development process.

4.2.5.1 TMQA Program Plan. When directed by the acquiring activity, a TMQA Program Plan shall be prepared and delivered by the preparing activity as specified in the contract/task. DID DI-TMSS-81817 must be listed in Block 4 of the CDRL to order a TMQA Program Plan from a contractor. Approved DIDs are available online in the Assist database (appendix D). The TMQA Program Plan should describe the scope and approach of the preparing activity's TMQA program by detailing the QA organization, planning, and data control to be performed on TMs being acquired, from the initial collection of source data through final product delivery and acceptance. The plan should identify the preparing activity's methods, processes, and procedures for:

- ► TM development. Methods to document TM development and TMQA processes and procedures to ensure they are controlled and current and are applied to subcontractors/vendors (as applicable).
- ► TMQA organization. The TMQA Program Plan should describe the preparing activity's QA organization (e.g., structure and approximate size during the proposed course of the QA effort). This description should identify the functions and activities that directly affect TM quality and indicate how the preparing activity's QA personnel are organized to retain their independence from personnel responsible for TM generation. Personnel performing QA functions should have sufficient, well-defined responsibility, authority, and the organizational freedom to identify and evaluate quality problems, and to initiate, recommend, or provide solutions.
- ► Record keeping. Method of documenting and maintaining objective records of QA events, TM discrepancies/findings, and corrective actions taken.
- ► Source data collection and control. The process to assure that current source data will be used for TM generation. The approach to ensure the TM is consistent with maintenance planning and other logistics management information and elements specified in the contract/task.

- Quality reviews. Method for conducting quality reviews and intent to use sampling during QA efforts.
- Support of acquiring activity reviews, meetings, and events. Plan to support and participate in acquiring activity/Government-requested conferences, IPRs, quality program reviews, verification, etc.
- TM validation approach. Outline intended TM validation methodology.
- Defect identification and corrective action. Methods for detecting deficiencies, and deficiency trends to ensure that corrective actions are implemented and effective and preventative controls are properly implemented. The TMQA program should provide for the prompt detection and correction of conditions adverse to quality. Corrective action should not be limited to specific deficiencies but should also be attentive to the cause of such deficiencies in the interest of preventing recurrence and implement preventative action programs to counter any apparent deficiency trends. The plan should describe how the preparing activity will ensure that corrective and preventative actions are properly implemented and effective, as well as provide the procedures for correcting deficiencies when detected. Corrective action should extend to the performance of suppliers and vendors and show that the preparing activity will be responsive to data from users concerning defects caused by suppliers.
- Classification of Defects listing possible types of defects classified as major or minor.

An acceptable TMQA Program Plan should provide evidence of the preparing activity's intent and methods for complying with the requirements of the TMQA Program Plan as specified in the contract/task and the applicable TMCR or TMSR. The preparing activity is responsible for the implementation of the TMQA Program Plan. TMQA Program Plans are reviewed for acceptability by the acquiring Government activity, who should provide written notice of acceptability as required by the CDRL. Once established and approved, a preparing activity's TMQA Program Plan may be reapplied to support additional TM tasks; however, a revised plan shuld be procured when required to ensure the plan is maintained current.

4.2.5.2 Validation Plan. When directed by the acquiring activity, a Validation Plan shall be prepared and delivered by the preparing activity as specified in the contract/task. DID DI-TMSS-81818 must be listed in Block 4 of th CDRL to order the Validation Plan from a contractor. Approved DIDs are available online in the ASSIST Database (appendix D). The Validation Plan should define the methods, procedures, controls, and resources that will be used to accomplish validation. The acquiring activity reviews and approves the validation plan, ensuring the plan identifies validation methods that will be adequate for development of quality TMs. The following provides a brief outline of the elements that should be included (refer to DID DI-TMSS-81818 for details):

- Identification of TMs to be validated, including applicable TMCR number(s), TMINs, and TM titles, DTDs, and maintenance levels
- Dates and locations of specific validation events and conduct
- Identification of any combined/recommended combined validation/verification events
- Personnel responsible for conducting the validation efforts, recording findings, etc.
- Identification of resources (e.g., Government furnished equipment) and simulation or substitution of support equipment
- Safety precautions and environmental requirements specific to the validation or validation location

- ► Validation methods to be used and proposed fault simulations
- ► Validation record keeping and validation findings disposition process.

The preparing activity may recommend combined validation/verification efforts or events. Combined efforts are appropriate when hardware, support equipment, personnel, or facilities are not available or time and cost restraints require concurrent performance.

4.2.5.3 Validation Methods. Validation methods for the technical content can be broadly categorized into the first three groups identified below. Additionally, validation methods to ensure IETM functionalities meet requirements are to be included when applicable.

a. **Review Against Source Data.** Theory, principles of operation, system and equipment description, illustrated parts breakdown, schematic and wiring data to be validated against engineering source data.

b. **Comparison.** Illustrations, part numbers, reference designators, controls and indicators, and adjustments shown in text and drawings compared to the actual equipment.

c. **Demonstration.** Operational, troubleshooting, and maintenance procedures validated on the actual system or equipment. Malfunctions shall not be introduced into the system or equipment for the purpose of validation unless specifically required for certification of procedural tasks or system tests. Destructive malfunctions shall not be introduced into the system or equipment for any purpose.

d. **IETM Visual and Functional Characteristics.** When TMs are developed in full compliance with SNIPP, the output presentations will meet shipboard and shore site display requirements. Required IETM functionalities are validated to ensure navigation and logical sequencing through the information is manageable and user friendly, all technical information including text, tables, and graphics appear in the appropriate data panes, source files are tagged to the level and depth required by the applicable DTD/schema and technical content requirements, and output presentation meets specified requirements. When TMs are developed in full compliance with SNIPP, the output presentations will meet shipboard and shore site requirements.

4.2.6 TMQA Meetings and Reviews. TMQA meetings and reviews include Guidance and Quality Planning Conferences, Quality Program Reviews, Quality Reviews, and IPRs.

4.2.6.1 Guidance and Quality Planning Conference. These conferences are held to ensure an understanding of the TM requirements contained in the contract/task by the preparing activity. An initial guidance conference should be conducted soon after contract/task award to clarify requirements including those related to logistics products/technical data and the proposed TMQA program. Both the preparing activity and the acquiring activity participate in such conferences, and the conferences may be requested by either the preparing activity or the acquiring activity. At the conference, contract/task documentation is reviewed to resolve ambiguities and questions. Figure 4.2-2 provides sample agenda items and the following are examples of the materials that should be available or accessible at the conference.

Guidance and Quality Planning Conference Agenda Items

a. Introduction
- ► Purpose of the guidance conference
- ► Introduction of the personnel involved

b. SOW Review

c. CDRL, DIDs, or task deliverables review
- ► Discuss each deliverable
- ► Deliverables schedule
- ► Delivery requirements (e.g., Mechanics of preparing activity document submittal)
- ► Comment submittal requirements (e.g., Mechanics of acquiring activity comment submittal)

d. TMCR/TMSR review
- ► Specification options
- ► Identify TMCR/TMSR tailoring needed
- ► Document tailoring decisions and agreements

e. Digital file requirements
- ► Use of SNIPP, accounts needed, etc.
- ► Deliverables necessary to manage, maintain, edit, and re-author XML/SGML TMs (XML/SGML source file(s) – TM text with embedded XML/SGML tags)
- ► Files that will be stored and maintained in a repository or database at the document management activity
- ► Graphic source files (e.g. Computer Graphic Metafile (CGM), Scalable Vector Graphics (SVG))
- ► Associated DTD or schema (whether new or existing)
- ► Entity files – files associated with source file that may be created and referenced by the DTD (e.g., standard text that is used or shared among instances of a class)
- ► DTD Data Dictionary – defines the meaning of XML/SGML tags used within a DTD
- ► Tagging Conventions Document – Describes rules for applying each XML/SGML tag to actual data or document content. Guide for authors and editors
- ► Any associated style sheets and filters necessary to produce the desired presentation to users
- ► ATIS IETM.NDX file and Readme file if preparing activity is tasked to produce

f. Support of maintenance concepts

g. GFI
- ► What GFI is to be made available
- ► When, where, and how GFI will be provided
- ► Disposal or return of GFI

h. Interrelationship of other deliverable technical documentation data items required as source data for TM production

i. TMINs, stock numbers, and/or Volume ID numbers that will need to be assigned and provided

j. Task schedules
- ► IPRs
- ► Validation
- ► Verification

Figure 4.2-2 Example Guidance and Quality Planning Conference Agenda Items

- SOW or other tasking documents
- CDRLs
- DIDs
- TMCR/TMSR
- List of Government Furnished Information (GFI)

4.2.6.2 Quality Program Review. Quality Program Reviews are conducted by the acquiring activity to evaluate the preparing activity's TMQA and validation processes to determine if the TMQA program is in accordance with the TMCR/TMSR and contract/task documents and is acceptable to the acquiring Government activity. These reviews are conducted by the acquiring activity at the preparing activity's facility and the acquiring activity documents the findings. Quality Program Reviews evaluate the preparing activity's TMQA program and should not be confused with technical reviews of TM products (e.g., IPRs).

4.2.6.3 Quality Review. Quality Reviews are conducted by the preparing activity to ensure their compliance with the approved TMQA Program Plan, internal work instructions, and internal procedures. Quality Reviews evaluate the availability and adequacy of materials, processes, procedures, and intermediate products which constitute TM development. Quality Reviews evaluate the preparing activity's TMQA program and should not be confused with technical reviews of TM products (e.g., IPRs).

4.2.6.4 In Process Reviews (IPRs). IPRs, conducted by the acquiring activity, are a quality assurance function and are an integral part of the TMQA program. IPRs shall be scheduled and accomplished in accordance with SOWs, CDRLs, tasking documents, and the applicable TMCR or TMSR. Whereas the Guidance and Quality Planning Conference focuses on ensuring the requirements of a TM development project are understood, IPRs assess the progress of the TM project.

a. **IPR Objectives.** IPRs are accomplished periodically to:
   - **Evaluate Products** – Evaluate products at intermediate stages of preparation to ensure compliance with prescribed specification technical content, format, and digital data requirements for TM products and functionalities. Ensure TM products conform to approved maintenance concept and plans, training plans, and provisioning concepts. Assure the completion of TMs which meet quality requirements in terms of reliability, readability, adequacy, completeness, usability, and compatibility. Ensure TM products correctly reflect the approved system or equipment baseline configuration.
   - **Minimize Deficiencies** – Deficiencies in delivered data can result from failure of the preparing activity to fully and clearly understand contract/program requirements, maintenance concept, Navy policy, application of specifications, and user capabilities/needs. TM deficiencies need to be identified in the early stages of development when corrective action is economical and timely so that TMs are ready for delivery in sufficient time to meet training, test, and operational schedules.
   - **Audit Preparing Activity Effectiveness** – Audit the effectiveness of the preparing activity and assure TM products are being developed in accordance with contract/tasking and QA documents, such as TMCRs and TMQA Program Plans.

b. **IPR Team.** An IPR team may be established to conduct TM product reviews. The IPR team participants consist of publication and technical personnel from the acquiring activity who conducts the IPR and may include personnel from the preparing activity who provide support. The typical team participants, as required for the scope of the project, might include:

- **Acquiring Activity**
  - TM Manager – Typically assigned as the team coordinator
  - Technical/Engineering – Government activity personnel responsible for technical content
  - Logistics Specialists – Government activity specialists in TMs, technical data, training, configuration management, etc., as required
  - Fleet Representation – Fleet, shore and/or training personnel to review TMs for adequacy for training and Fleet use
- **Preparing Activity**
  - Project Manager/Lead – Preparing activity personnel assigned to provide task oversight
  - Technical/Engineering – Preparing activity personnel responsible for technical content and digital data requirements (if applicable)
  - Production Personnel – Preparing activity personnel involved in writing, editing, TMQA, etc., as required
  - Logistics Specialists – Preparing activity specialists in TMs, technical data, training, configuration management, etc., as required
  - Recorder – Preparing activity personnel assigned to document and distribute the findings of meetings and other events

c. **IPR Scheduling.** The IPR schedule shall be adequate to permit the effective and timely achievement of all IPR objectives as well as ensuring prompt detection and resolution of potential problems. The milestones for the accomplishment of IPRs are to be included in the overall TM development schedule. The proposed schedule may reflect the recommendations of the preparing activity as to the number of IPRs required and the points within the development cycle at which they should occur. The acquiring activity may require additional IPRs when it appears that the TM program is not proceeding according to schedule. The preparing activity is to be notified in sufficient time for adequate preparations to be made. The preparing activity may request an IPR irrespective of the schedule at any time problems warranting a meeting are encountered. IPRs should be scheduled as often as required and each TM product should be assessed to determine the level and frequency of review required. The following provides three examples of typical review points, dependant upon the complexity of the TM project:

- Schedule and perform IPRs on the Book Plan/IETM Content Plan, the Review Draft Copy (RDC) at 25%, 50%, 75%, and 100% (fully validated Preliminary) completion points, and at the final TM product completion point
- Schedule and perform IPRs at the RDC 30% and 60% completion points, and upon completion of the Preliminary and Final TM
- Schedule and perform IPRs on each delivered product (e.g., RDC, Preliminary, Final).

d. **IPR Conduct.** The acquiring activity is responsible for coordinating and conducting IPRs, regardless of the type or location. Coordinating the IPRs includes ensuring all identified reviewers are notified of the IPR schedule and TM products to be reviewed, consolidating

the resulting review findings and comments, and providing the findings and comments to the preparing activity. When IPR checklists are developed for use in reviewing TM products, the items on the checklist should be derived from contractual or tasking documents, such as the requirements identified in the applicable TMCR/TMSR, SOW, CDRLs, or DIDs. Figure 4.2-3 provides example IPR checklist items. Requests for changes to contractual requirements or any deviations to specifications shall not be allowed during IPRs or as part of the review findings. Any proposed changes or deviations must be accomplished through established administrative channels. IPRs may be conducted by the acquiring activity on delivered products or may be conducted as a meeting.

- When an IPR is to be conducted on delivered products (including those delivered in a integrated digital data environment), the preparing activity delivers the products in accordance with the SOW and CDRL or other tasking documents to the acquiring activity. The acquiring activity coordinates the review within the acquiring activity, reviews the deliverable item, coordinates, consolidates, and distributes the resulting findings, and ensures subsequent actions with the preparing activity to resolve review findings.
- When conducted as a meeting, IPRs are usually held at the preparing activity's facility but can be held at a designated Government facility. IPRs intended for locations other than the preparing activity facility must be approved by the Government. The preparing activity is responsible for ensuring that required reference material is made available at IPRs. Table 4.2-2 is provided as an approach for conducting a meeting type IPR and the subsequent follow up actions.

e. **Review Findings.** Review findings such as quality problems, discrepancies, review comments, and disposition recommendations identified during IPRs are documented as defined by the program's TMP (e.g., in a report or captured and posted in an integrated digital data environment). The findings should adequately identify the location in the TM to which the review findings apply. Once determined, the resolution of review findings should be included in the review findings documentation.

4.2.7 Validation Conduct. Validation is an integral part of the TMQA program and is the process by which the preparing activity ensures TM products are complete, accurate, and usable. Validation is the preparing activity's responsibility, which extends to TM products developed by suppliers and vendors for the preparing activity. All new or updated TMs shall be validated by the preparing activity. The acquiring activity may observe all, or any portions, of the validation process on a scheduled or unscheduled, non-interference basis.

4.2.7.1 Validation Records. The preparing activity shall fully document validation efforts in the form of records that identify the data and/or procedure validated, the method of validation employed, discrepancies detected, and the corrective actions taken. The acquiring activity may request to review the validation records as part of determining the TM's technical adequacy, accuracy, and usability. Discrepancies recorded during validation efforts shall be resolved and corrections incorporated into the TM prior to delivery to the acquiring activity.

4.2.7.2 Validation Certificate. A Technical Manual Validation Certificate shall be completed and delivered by the preparing activity for each final TM or TM update. The Validation Certificate shall be prepared and delivered by the preparing activity as specified in the

contract/task. DID DI-TMSS-81819 must be listed in Block 4 of the CDRL to order the Validation Certificate from a contractor. Approved DIDs are available online in the ASSIST Database (appendix D). The certificate attests that the TM has been satisfactorily validated in accordance with the requirements of the applicable TMCR/TMSR and the approved Validation Plan (if applicable) and certifies that the TM product is accurate and complete. The certification shall list exceptions (e.g., portions of the TM not validated). The portions of the TM affected and the document authorizing deviation, waiver, or postponement shall be clearly identified for each exception listed. The certificate shall be signed by an authorized preparing activity representative, and, if there are exceptions, by the Government acquiring activity approving the exceptions. The completed certification shall be delivered in accordance with the contract/task CDRL.

4.2.7.3 Subcontractor Validation. When applicable, the prime preparing activity is responsible for all aspects of validation of TMs and data prepared by related subcontractors. The prime preparing activity may elect to perform the validation or request the subcontractor to perform validation. In either case, the prime preparing activity is responsible for ensuring that the subcontractor meets the requirements of the prime preparing activity's contract or task.

4.2.8 Verification Conduct. TMs must be verified by the Government prior to being finalized. Verification events on actual hardware should be conducted at a Government facility of the same maintenance level as the technical data being verified. Through the actual use of the TM to perform operational and troubleshooting procedures on the equipment, the verification process ensures that the procedures are fully representative of the system/equipment, technically accurate, and adequate to support the system or equipment.

4.2.8.1 Verification By Demonstration Process. Table 4.2-3 provides the methodology used to perform verification by demonstration.

4.2.8.2 Verification Records. The acquiring activity is responsible for maintaining verification records. Verification records include planning documents, discrepancies and findings, and resolution of the discrepancies and findings, and completed verification incorporation certificates. Discrepancies and findings records should adequately identify the location in the TM to which the comments/recommendations apply. When directed by the acquiring activity, Verification Discrepancy/Disposition Records shall be prepared and delivered by the preparing activity as specified in the contract/task. DID DI-TMSS-81820 must be listed in Block 4 of the CDRL to order the Verification Discrepancy/Disposition Records from a contractor. Approved DIDs are available online in the ASSIST Database (appendix D). The discrepancies and findings records are prepared by the acquiring activity that coordinated the verification. The discrepancies and findings records are then provided to the preparing activity for resolution. When required as a deliverable, the preparing activity completes the disposition/resolution of each discrepancy or finding and provides the results back to the acquiring activity. A meeting may be convened to discuss and resolve discrepancies and findings if necessary.

4.2.8.3 Verification Incorporation Certificate. When directed by the acquiring activity, a Verification Incorporation Certificate shall be prepared and delivered by the preparing activity as specified in the contract/task. DID DI-TMSS-81821 must be listed in Block 4 of the CDRL to order the Verification Incorporation Certificate from a contractor. Approved DIDs are available online in the ASSIST Database (appendix D). The Technical Manual Verification Incorporation

General Checklist Items

- TM adheres to governing documents including items such as TMCRs/TMSRs, SOWs, CDRLs, DIDs, and digital data policies
- TM adheres to the program maintenance plan and accurately depicts the configuration of the system or equipment that it supports
- TM is based upon the technical data provided by the supportability analysis and other applicable analyses (e.g., failure modes and effects analysis)
- TM contains all appropriate integrated logistic support, design, and support information necessary for the user to accomplish the mission for which the system or equipment is designed
- TM contains technical information necessary to support defined training requirements for the system or equipment (e.g., classroom and on-the-job-training)
- TM contains technical information necessary to maintain and repair the equipment for designated maintenance levels
- TM meets readability and comprehensibility requirements
- For final TM deliverables, review, validation, and verification findings have been resolved

Basic Editorial Review Checklist Items

1. General
   - TMINS and stock numbers assigned and properly displayed
   - Distribution statements, export control notices, and destruction notices assigned and properly displayed
   - Classification markings properly applied to the TM, text, tables, and artwork, as applicable
   - Front matter (Foreword, Safety Summary, Table of Contents/List of Figures/List of Tables/Bookmarks, etc.) are included as required and are complete and accurate
   - Information on feedback reporting/TMDER forms are included
2. Artwork
   - Legible
   - Reflective of supporting text
   - Contains figure number and title
   - Consistent use of nomenclature
3. Text
   - Format is consistent throughout the TM
   - Text reads logically and reflects consistent writing tense
   - Text supported by adequate illustrations and tables
   - Dangers, warnings, cautions, and notes used correctly
   - Dangers, warnings, and cautions precede applicable text
   - Abbreviations and acronyms adequately defined
   - Spelling and punctuation are correct and consistent
   - References/links to paragraphs, figures, and tables are correct
   - Reflects correct equipment placarding
   - Consistent use of nomenclature
   - Symbols are explained

Figure 4.2-3. Example IPR Checklist Items (Sheet 1 of 2)

Basic Technical Review Checklist Items

- Operating procedures are complete
- Maintenance functions are complete
- Use of support equipment adequately covered
- Data presentation consistent with use or repair of the system/equipment
- Maintenance tasks align with maintenance concept and skill levels
- Dangers, warnings, and cautions state appropriate hazards, results, and reasons
- Troubleshooting and corrective procedures are complete and understandable
- Agrees with source data
- Theory covered to extent necessary
- Dial, meter, and switch position/settings are stated at the beginning of operations and are correct
- All required tools, materials, and test equipment are listed
- Written procedures adequately represent actual hardware/software described
- Replacement procedures reflect provisioning
- TM reflects proper depth of required coverage
- Classification markings are correct

Functionalities for Electronic Manuals/Files Checklist Items

- SNIPP compliant
- Delivered digital data is in proper format, readable, and usable
- All required files included (data files, source files, readers, etc.)
- TM functions as contractually defined
- TM is in accordance with approved book plan/IETM content plan
- Adequate and accurate hyperlinks and hot spots
- Graphics appear in appropriate data panes
- Source files tagged in accordance with DTD/schema and technical content requirements
- IETM is compatible with end user display devices
- Presentation meets specified requirements
- Print capabilities, when applicable

IPR Checklist Items For An Updated TM

- Applicable items from above for areas of TM being updated
- Update information properly incorporated (added, deleted, or modified) and agrees with source data
- Required TMDER corrections and ACN information incorporated

Figure 4.2-3 Example IPR Checklist Items (Sheet 2)

Table 4.2-2 Process – IPR Conduct (Meeting Type IPR)

Seq	Action	Notes
1.	**Preparation** a. Schedule the date and location of the IPR. b. Notify participants and provide agenda.	Acquiring activity coordinates with all participants
2.	**Conduct the IPR** a. State the purpose, scope and objectives of the review and discuss the agenda and any action items pending. b. Review the TM schedules against the performance and anticipated deliveries of the products as cited in the CDRLs. c. Review preparing activity QA and production records to ascertain that engineering and QA personnel have reviewed and approved each page/screen of the package. d. Proceed with the level of review required for each TM/TM product.	Acquiring activity conducts Preparing activity supports Recommend using checklists; see example checklist items (figure 4.2-3)
3.	**Document the Findings** a. Document all review findings such as quality problems, discrepancies, review comments, and disposition recommendations identified during IPR. b. Review and resolve IPR review findings, or assign action to research for those that cannot be resolved at the IPR.	Acquiring activity conducts Preparing activity supports
4.	**Follow-up** a. As defined by the contract/tasking documents, the acquiring or preparing activity prepares an IPR report, minutes, or meeting report and provides copies of the IPR report to the activities participating in the IPR. b. The preparing activity and the acquiring activity ensure that directed changes have been implemented and discrepancies have been resolved.	

Table 4.2-3 Process – Verification By Demonstration

Seq	Action	Notes
1.	The designated reader(s) read the procedural steps or instructions aloud from the TM to the technician(s).	
2.	The technician(s) performs the step described in the TM as read aloud.	
3.	If the step is satisfactorily performed as described, the reader(s) and the technician(s) proceed to the next step in the TM procedure until all steps have been verified.	
4.	If any discrepancies in a step are identified, the recorder annotates the TM verification master copy or otherwise records the discrepancy. Corrections to any step in any procedure that can be made "on-the-spot" shall be recorded and re-verified.	If too extensive for on-the-spot correction, indicate that the affected section(s) of the TM is (are) unverifiable and require later re-verification.

Certificate is completed by the preparing activity and delivered to the acquiring activity attesting that all discrepancies noted during verification and provided to the preparing activity have been resolved. When required as deliverables, Verification Incorporation Certificates and copies of completed verification discrepancy/ disposition records are delivered to the acquiring activity, usually concurrently with the final TM product or as otherwise directed by the contractual/tasking documents (e.g., CDRL).

4.2.9 Combined Validation and Verification. Validation and verification events can be performed simultaneously when it is beneficial to the Government. This option may be exercised when available time, equipment, or facilities do not permit separate validation and verification. When combined validation and verification is accomplished at the preparing activity, verification planning is tailored accordingly and may involve a change in the responsibilities as outlined in the TMP or TMQA Program Plan. In certain circumstances, procedures cannot be validated or verified until the system or equipment is installed in a ship and it may be to the advantage of the Government to combine validation and verification events.

SECTION 4.3 TM PRODUCT NUMBERING

4.3.1 Introduction to TM Product Numbering. This section describes functions and responsibilities associated with NAVSEA TM product numbering. Each new TM, revision, or change is assigned a publication number. The numbers currently being assigned are TMINs. Each digital storage media (i.e., Compact Disk-Read Only Memory (CD-ROM) or Digital Versatile Disk (DVD)) containing TMs is assigned a Volume Identification (Vol ID) number. Each TM and each digital storage media are also assigned a National Stock Number (NSN). ACNs are assigned both an ACN number and a control number which are described in paragraph 4.6.4. TM product numbering assignment is accomplished by the TMMA via TDMIS. Specific instructions on how to request, obtain, and assign numbers is provided in TDMIS training courses provided by the Naval Systems Data Support Activity (NSDSA) (see section 2.4). Activities other than the assigned TMMA wanting to update a TM must receive approval from the TMMA. For information regarding an activity wanting to update or convert TMs under the cognizance of another TMMA, see paragraph 4.3.5. Local assignment of NAVSEA TM product numbers is not authorized.

4.3.2 TM Product Numbering Responsibilities. Table 4.3-1 provides the responsibilities for TM product numbering.

Table 4.3-1 Responsibilities – TM Product Numbering

Activity/Function	Responsibility
NSDSA	1. Process Technical Manual Identification Number Requests (TMIN-Rs) for assignment of TMINs. 2. Ensure NSN assignments are requested and obtained from the Naval Logistics Library (NLL). Ensure assigned NSNs are reflected in TDMIS. 3. Update Publication or CDROM Records within TDMIS when notified of updates by the TM Manager. 4. Coordinate with Naval Inventory Control Point (NAVICP) Philadelphia to resolve TM numbering problems. 5. Change TMs/digital storage media with a status of UD that are three years past the scheduled completion date to a status of NI.
NAVICP Philadelphia	1. Provide NSN assignments for TM products utilizing the NLL. 2. Coordinate with NSDSA to resolve TM product numbering problems.
TM Manager	1. Ensure records are maintained current within TDMIS for assigned TMs, TM updates, and digital storage media. 2. Ensure all final TM products have, as appropriate, a TMIN, Vol ID, and NSN assigned prior to distribution. Ensure these NSN assignments are properly printed or displayed upon TM products. 3. For changes to TMs having a publication identifier assigned an older numbering system number, ensure the change numbers are assigned within TDMIS. 4. Ensure ship/equipment applicability data is provided for each TM, TM update, or digital storage media. 5. Coordinate and ensure revision or change level assignments are accurate.

Table 4.3-1 Responsibilities – TM Product Numbering

Activity/Function	Responsibility
TM Manager Continued	6. Approve or deny requests from other activities wanting to update or convert cognizant TMs.
Other TMMAs	Coordinate with the TM Manager of record before updating or converting a TM under the cognizance of another activity.

4.3.3 Technical Manual Identification Numbering System (TMINS). The TMINS, promulgated by the Commanders of the Naval Air Systems, Space and Naval Warfare Systems, Sea Systems, and Supply Systems Commands, provides a single numbering system for TMs and, when appropriate, other publications and documents procured by the Naval Systems Commands. The TMINS establishes a standard method of assigning a unique identification number to each TM or separately bound portion of a TM. TMINS assignments are used to acquire and manage TMs and are assigned via TDMIS. Local assignment of identification numbers to distributed preliminary or final TMs, TM updates, or commercial manuals is not authorized. Detailed descriptions and guidance for TMINS is provided in N0000-00-IDX-000/TMINS. Once assigned, the TMIN is printed or displayed on all:

- New TMs
- Revisions
- Changes
- Commercial manuals and their supplements used by operating forces or in support of the Fleet
- Technical publications and documents (used by operating forces)

4.3.3.1 TMIN Structure. A TMIN consists of two distinct parts – the publication identifier and the suffix. The publication identifier is mandatory, while the suffix is optional except for classified documents. The publication identifier and the suffix are separated by a slash. The following provides a general description of a TMIN; detailed descriptions are contained in N0000-00-IDX-000/TMINS.

a. The publication identifier has thirteen characters as shown in figure 4.3-1. The publication identifier scheme is designed to provide a general indication of the purpose and content of the TM.

b. A suffix is added to the TMIN to provide user-oriented information, such as the applicable equipment designator, nomenclature, or hull number or identify security classification. The suffix is separated from the publication identifier by a slash (/) and is variable-length (up to 17 characters including the slash). For classified, no foreign, or other controlled restriction TMs, a suffix containing the security classification code is mandatory (e.g., *SE000-AA-MMO-01A/(C)*). Refer to N0000-00-IDX-000/TMINS Appendix H for further details and a list of security classification codes.

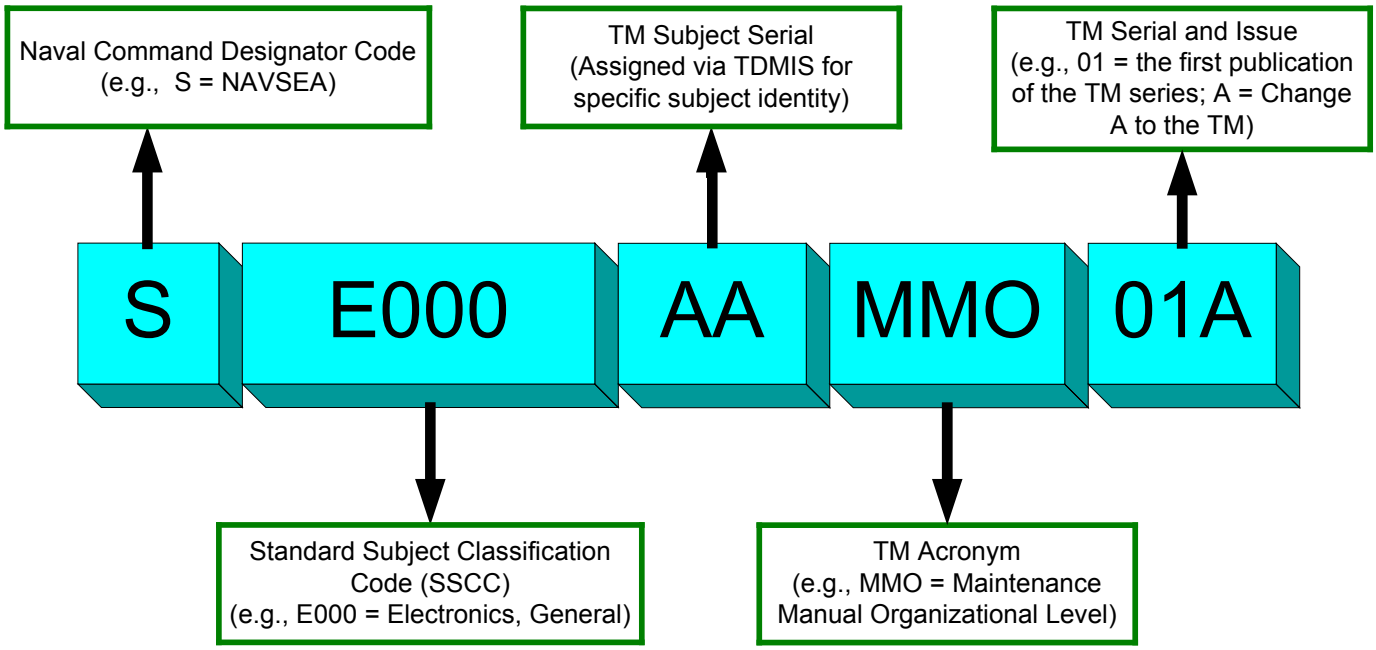

Figure 4.3-1 Sample TMINS Publication Identifier

NOTE

TMs under the cognizance of NAVSEA are normally identified by the letter "S". NAVSEA documents which are not under the functional cognizance of NAVSEA 04L are identified by the letter "T". For other codes, refer to N0000-00-IDX-010/TMINS.

4.3.3.2 Requesting a TMIN Assignment. TMIN assignments for new TMs or TM updates are requested within TDMIS, normally by the TM Manager or their representative. The process of requesting a TMIN is accomplished by completing an on-line Technical Manual Identification Numbering System Request. Each TMIN-R is assigned a unique TMIN-R control number. The control number consists of 12 characters, as follows:

Example: N46678-050010
*Where **N46678** = the Unit Identification Code (UIC) of the requester,*
*__05__ = the calendar year and **0010** = sequential number of the request*

The requests are processed within TDMIS and the resulting assignments are reflected within TDMIS as new Publication Records (new TMs or revisions) or as new changes associated with an existing Publication Record. The following subparagraphs provide additional guidance and information for requesting TMIN assignments within TDMIS. Also refer to N0000-00-IDX-010/TMINS for detailed guidance on the TMINS.

a. **Lead Time.** TMIN assignments should be requested as early as possible, preferably at least one (1) month prior to finalization of the TM.

b. **Relating TMIN Assignments.** Multi-volume or multi-part sets of TMs are routinely assigned a series of sequential TMINs which are identified by the two-character TM serial number ("AA" in the example below):

Example:
*SE000-**AA**-MMO-010, SE000-**AA**-MMO-020, and SE000-**AA**-MMO-030*

If a TM subject serial identifier has already been assigned to an existing TM for a given equipment, the TM Manager can request the same Standard Subject Classification Code (SSCC) and subject serial identifier be used in the assignment of a related TM:

Example:
*Maintenance manual **SE000-AA**-MMO-010 has already been assigned to support a given equipment; **SE000-AA**-IPB-010 might then be requested as the illustrated parts breakdown TM for the same equipment*

c. **Revision Assignments.** Revisions can be either Superseding or Non-superseding.

- Superseding Revisions are identified numerically and carry the same basic TMIN as the prior version. The Superseding Revision assignment includes a revision number and has a new publication date, a new NSN, and a supersedure notice. Each TMIN may have only one version at a time listed in TDMIS as having a Final Issue (FI) status. Only the latest issued version should be identified as FI; all previous versions should have a status of superseded (SU). Automatic update of TM status is based upon having the New/Old section of resulting TDMIS Publication Records properly identify the TMs to be superseded. Further details are provided in TDMIS training (see section 2.4).

Example:

SE000-AA-MMO-010	*Rev 00*	*SU (Superseded)*
SE000-AA-MMO-010	*Rev 01*	*FI (Final Issue)*

- Non-Superseding Revisions may have multiple version numbers listed in TDMIS as having a FI status. Non-Superseding Revisions will not have a supersedure notice, but may reference previous revisions (e.g. *"Replaces TM SE000-AA-MMO-B10 after installation of equipment modification XXX."*). An example of when a non-superseding revision would be used is to cover a particular configuration or model of an equipment and the revision does not supersede all previous versions. The Non-Superseding Revision assignment has an associated publication date based on the copy freeze date for that revision and has a unique NSN assigned.

Example:

SE000-AA-MMO-010	*Rev 00*	*FI*
SE000-AA-MMO-A10	*Rev 00*	*FI*
SE000-AA-MMO-B10	*Rev 00*	*FI*
SE000-AA-MMO-C10	*Rev 00*	*FI*

- ► When a TM assigned an older style TM number is being revised (paragraph 4.3.4), a TMIN will be assigned, whether the revision is Superseding or Non-Superseding.

d. **Update Sequence.** When more than one update is being planned at the same time, the updates must be coordinated by the TM Manager to resolve any numbering conflicts and ensure data is incorporated without conflict. For the concurrent development of a TMDER related update and a system or equipment related update, the system or equipment-related update takes precedence. For multiple system or equipment modification related updates, the update sequence will follow the modification sequence. For changes, the next available change letter based upon TDMIS query will be assigned when a request for change TMIN-R is processed within TDMIS. If a planned update sequence is altered, the Publication Record shall be updated to reflect the changes in configuration, copy freeze date, distribution date, etc.

e. **Foreign Military Sales (FMS).** For TMs that are applicable for FMS use only, "YES" is selected for the FMS block within the TDMIS TMIN-R screen. If a TM is not applicable to FMS, or is applicable to both U.S. and FMS ships, systems, or equipments, the selection for this block should be "NO".

f. **Rights in Data.** TMs for which the Government owns or has obtained total data rights, "UNLIMITED" is selected for the Rights in Data block within the TDMIS TMIN-R screen. A selection of "LIMITED" means the manufacturer retains ownership of the data and that the Government obtained limited rights in data for Government use, duplication, and distribution.

g. **Copy Freeze and Estimated Distribution Dates.** The Copy Freeze Date is the date that is estimated to appear on the cover, title page, or opening screen of the TM. This date indicates the last date that data can be received and included in the TM or TM update (sometimes called a technical cutoff date). The Estimated Distribution Date is the date that distribution of the product is expected to occur. If a TM development effort is cancelled, superseded, or delayed beyond three (3) months past the estimated distribution date, the Publication Record is to be updated to reflect the changes.

h. **Ship/Equipment Applicability Information.** Accurate ship/equipment applicability information ensures accurate Fleet Tailored Technical Data (FTTD) which is used to generate user reports such as Indexes of Technical Publications (ITPs) and ship outfitting listings. TM managers provide and maintain the Applicability information within the Publication records, while the FTTD is the result of TDMIS processing TDMIS/ Configuration Managers' Data Base-Open Architecture (CDMD-OA) data. A Repairable Identification Code (RIC) is a number assigned to identify a specific system/equipment's list of allowable spare and repair parts. The list of those parts is called the Allowance Parts List (APL) which is identified by the RIC number. This and other configuration data is extracted from CDMD-OA and provided to TDMIS where it is processed into FTTD. The processing consists of associating TMs to their equipments by pairing the configuration data identified in a TM's Publication Record with the configuration data received from CDMD-OA. As CDMD-OA is updated, TDMIS receives updates and processes them to ensure new or deleted equipments which result in a TM update are updated within the FTTD. TMIN-Rs should include as much ship/equipment applicability

information as is available. For a ship level TM, the applicable ships are to be identified at the time of completing the TMIN-R. For TMs that cover systems or equipments, the applicable configuration information such as RIC/APL numbers and equipment designators (e.g., Mark and Mod, Model/Part No, "AN" designator) should be provided. If the TM or TM update includes coverage for system or equipment modifications, the modification or alteration numbers should be provided. If not available at the time of requesting the TMIN, the RIC/APL, equipment designators, and/or modification information should be updated in TDMIS as soon as available but prior to distribution of the final TM or TM update.

i. **New/Old Information.** When a TM is to replace a prior TM (superseding revision), the superseding information should be provided in the NEW/OLD screen. This is automatically done as part of a superseding revision TMIN request, or can be added after the new TMIN is generated. This ensures that the prior TM's status is changed to SU when the newer TM has been finalized and distributed.

4.3.3.3 Commercial Manuals Numbering. Once deemed acceptable for Government use and data rights have been obtained, TMINs for COTS TMs and their supplements are generated via a TMIN-R request completed within TDMIS (paragraph 4.3.3.2). The publication date is the date assigned by the manufacturer. The assigned TMIN is to be displayed on the cover, title, or opening screen, along with the manufacturer's publication information (number, date, and title). If necessary a new cover, title page, or opening screen can be added to reflect the TMIN assignment. (Also see paragraph 5.5.3.4.)

4.3.4 Older TM Numbering Systems. Most active NAVSEA TMs tracked within TDMIS have a TMIN assigned. However, there are TMs that were assigned numbers from older numbering systems that are also tracked in TDMIS. These TMs will be assigned a new TMIN when revised. A waiver for the TMIN requirement can be requested in certain instances such as where only one volume of a multi-volume non-TMIN numbered publication is being revised. Requests for revision or change numbers are made via a TMIN-R in the same manner as for TMIN assignment requests (paragraph 4.3.3.2). These include TMs assigned:

- A 13-digit-formatted number as a publication number (*Example: 1234-56-789-1234)*
- Ordnance Publication (OP) numbers (*Example: OP 1234*)

4.3.5 TMMA Approval to Another Activity. Activities updating or converting TMs under the cognizance of other TMMAs shall receive authorization from the TM Manager of record prior to updating or converting the TMs.

a. The activity wanting to update or convert the TM initiates a TMIN-R within TDMIS to request a TMIN assignment. The TMMA Point of Contact (POC) (TM Manager listed within TDMIS) is notified there is a request pending approval when the TMMA POC logs into TDMIS. The TMMA POC then either gives approval or denies the request. If approved, NSDSA completes the TMIN generation process and a TMIN is assigned. If denied, the TMIN-R control number is automatically voided and no further processing occurs.

b. When more than one activity may be planning a TM update at the same time, the updates must be coordinated with the TM Manager to resolve any numbering conflicts.

For the concurrent development of a TMDER related update and an equipment related update, the equipment related update takes precedence.

4.3.6 Volume Identification (Vol ID). Digital storage media containing TMs are numbered and tracked via TDMIS by Vol ID numbers. Local assignment of Vol ID numbers is not authorized. A unique Vol ID is assigned to each digital storage media (i.e., CD-ROM or DVD) and all copies of that media use the assigned Vol ID. The Vol ID is comprised of eleven alpha-numeric characters. The eleven characters are usually the UIC of the activity responsible for the media, followed by a sequential set of numbers or letters for that activity:

Example: N4667800037
*Where **N46678** = the UIC and*
__00037__ = the set of sequential numbers or letters

4.3.6.1 Assigning a Vol ID. Vol IDs are assigned within TDMIS by the cognizant TM Manager. Each Vol ID number is unique to a digital storage media and can never be reused or revised. The Vol ID is displayed on the media, and where appropriate, the media packaging. If a digital storage media development effort is cancelled, superseded, or delayed beyond three (3) months past the Estimated Distribution Date, the CDROM Record shall be updated to reflect the changes.

4.3.6.2 Ship/Equipment Applicability Information. Accurate ship/equipment applicability information ensures accurate Fleet and other user reports, such as Indexes of Technical Publications (ITPs) and ship outfitting listings. Vol ID assignments should include as much ship/equipment applicability information as is available. For digital storage media that covers systems or equipments without being targeted to specific installation locations, the applicable RICs/APL numbers and equipment designators (e.g., Mark and Mod, Model/Part No, "AN" designator) should be provided. For digital storage media developed for specific ships or that contain bundled TMs for specific ships, the ships are to be identified at the time of assigning the Vol ID.

4.3.6.3 Superseding Information. For a digital storage media that is replacing a prior digital storage media, superseding information should be provided in the New/Old screen as part of the Vol ID assignment process. This ensures that the prior digital storage media's status is changed to SU when the newer media has been finalized and distributed and NSDSA has loaded the data from the newer media into TDMIS. Without this information, digital storage media must be superseded manually, generally requiring the TMMA or other user to submit a Customer Service Request (CSR) to NSDSA to initiate the process. A new Vol ID number must be assigned to each unique digital storage media; Vol IDs cannot be reused or revised.

4.3.7 National Stock Number (NSN). An NSN is required for all final distributed TM products, including each TM, TM update, and digital storage media. Each NSN is unique to a published document or digital storage media and can never be reused.

4.3.7.1 The NSN consists of 13 characters separated by dashes. The NSN for a publication is displayed on each TM or TM update on the cover or title page, change guide, or opening screen, as appropriate. The NSN for a digital storage media (e.g., CD-ROM/DVD or set of CD-ROMs/DVDs) is displayed on the media, and, where applicable, the media packaging (see

paragraph 4.4.4 for further details). For stocked TM products, a bar coded and eye-readable NSN is required (see paragraph 5.4.5).

4.3.7.2 When a TMIN or Vol ID number is requested by the TM Manager, TDMIS automatically generates a request for NSN assignment from the NLL via the Catalog Interface between TDMIS and the NLL. NSNs are assigned for each new TM product (e.g., TMs, TM updates, and digital storage media). The NLL generates the NSN and the resulting assignment is provided back to TDMIS.

4.3.8 Unused Assigned Numbers. When a TMINS or Vol ID number is assigned but is later determined to be not needed, the assigned number shall be changed from a UD status to a NI status.

4.3.8.1 Inactivating Unused Numbers. TM Managers are to ensure their records are maintained current within TDMIS, by either updating the scheduled completion date if a TM or digital storage media is delayed, or by requesting a changing the status to "NI" if the assignment is not needed. Once an assigned TMINS or Vol ID number with a status of "UD" is three years past the scheduled completion date as listed in TDMIS, it is assumed to be an unused/abandoned assignment and will automatically be changed to a status of "NI". The NLL is notified to inactivate the stock number associated with a TMINS or Vol ID number via the Catalog Interface between TDMIS and the NLL when the status for the TM or digital storage media is changed to "NI" within TDMIS.

4.3.8.2 Reinstating Numbers. Should an inactivated (status of "NI") TMINS or Vol ID assignment become needed, the TM Manager can request the status be changed back to "UD" and the number can be utilized. When the number assignment is changed back to "UD", the NSN originally associated with the TMINS or Vol ID is reactivated if the NSN has been in the inactive state for less than three years for an unclassified product or less than five years for a classified product. In cases where the NSN cannot be reactivated, a new NSN will be assigned. TMMA verification of certain information from the original Publication Record (e.g., applicability data) is required when a number is re-instated.

SECTION 4.4 DIGITAL STORAGE MEDIA DEVELOPMENT AND MANAGEMENT

4.4.1 Introduction to Digital Storage Media Development and Management. This section describes the functions and responsibilities associated with development and management of NAVSEA digital storage media (i.e., CD-ROMs or DVDs) containing TMs. Digital storage media containing NAVSEA TMs are centrally managed within TDMIS using a standardized method of assigning a unique Vol ID number. Each digital storage media is assigned a unique Vol ID and a unique NSN. Digital storage media to be distributed to the Fleet shall contain a .NDX file and shall be certified as Advanced Technical Information Support (ATIS) compatible prior to distribution.

4.4.2 Digital Storage Media Development and Management Responsibilities. Table 4.4-1 provides the responsibilities for digital storage media processing.

Table 4.4-1 Responsibilities – Digital Storage Media Development and Management

Activity/Function	Responsibility
NSDSA	Upload the .NDX files for final distributed digital storage media into TDMIS.
NAVSEALOGCEN-DETLANT	Perform testing and certification on digital storage media for ATIS compatibility, including updating ATIS status in TDMIS to YES.
TM Manager	1. Ensure all final digital storage media containing TMs are assigned a Vol ID. 2. Ensure all final digital storage media containing TMs are ATIS certified, or have a valid waiver allowing non-certification. 3. Ensure all final digital storage media containing TMs have a valid .NDX file. 4. Ensure all final digital storage media containing TMs have a valid README.TXT file. 5. Ensure all final digital storage media or sets of media containing TMs are assigned a NSN. 6. Ensure all final digital storage media are properly marked with Vol IDs, NSNs, and security markings. 7. Ensure an unclassified .NDX file is provided to NSDSA for classified digital storage media.

4.4.3 Vol ID Number Assignments. Each digital storage media containing preliminary or final TMs, TM updates, or ACNs shall be assigned a unique Vol ID number and shall be tracked within TDMIS by its Vol ID number. See paragraph 4.3.6 for detailed information on assignment of Vol IDs.

4.4.4 NSN Assignments. See paragraph 4.3.7 for information on obtaining NSN assignments. Each digital storage media containing preliminary or final TMs, TM updates, or ACNs shall be assigned a unique NSN and the NSN shall be identified within TDMIS. For multiple CD-ROMs or DVDs that will be packaged, stocked, and issued as a single stock item, only one of the assigned digital storage media's NSNs is used on the packaging and identified as the stock number within TDMIS and NLL. TMMAs are to contact NSDSA to coordinate the NSN assignment for a digital storage set.

4.4.5 .NDX File. The .NDX file is a comma delimited text file which contains the necessary information for the ATIS system to index the documents, including TMs, contained on the digital storage media into the ATIS database. A portion of the .NDX file is also used to upload digital storage media and TM information into TDMIS for finalized TM products issued on digital storage media. All distributed digital storage media containing preliminary or final TM products shall have an .NDX file included on the media. If a waiver for non-ATIS certification has been granted, the portion of the .NDX file used for uploading TM information into TDMIS shall still be included on the media. For detailed instructions on the development of an .NDX file, see the ATIS Compatibility Testing Procedures located on the ATIS website (see appendix D). The following is an example of one entry in an .NDX file with the portion that is used for uploading into TDMIS in bold:

IETM1,TM_,1,NONE,NONE,S9234-BL-GTP-010,01,20001201,FFG-7 CLASS PROPULSION PLANT SYSTEM\,VOL 1\, PROPULSION SYSTEM ,,U,,,,,,
<VOL>NSWCEXE\\ADOBE\\STARTUP.EXE,<VOL>books\\ETM12788.pdf,
<VOL>

4.4.5.1 The .NDX file allows upload of the digital storage media content index directly into TDMIS and allows linking from the TDMIS CDROM Record to the associated TDMIS Publications Records and vice versa. For classified digital storage media, a stand-alone unclassified .NDX file shall be developed and provided to NSDSA for upload into TDMIS. Once the .NDX file is uploaded into TDMIS, the CDROM Record for that digital storage media reflects a list of the content of that media, as well as add the links from the TDMIS Publication Record to the CDROM Record and vice versa.

4.4.5.2 For TM Managers providing non-distributed products (such as master copies of TMs) on digital storage media to NSDSA for repository storage only, an .NDX file is not required.

4.4.6 README.TXT File. Each digital storage media containing TMs shall also include a README.TXT file in the root directory that contains information about the media. The README.TXT includes such items as the developer, purpose, and content of the digital storage media. Detailed information on README.TXT files can be found in the ATIS Compatibility Testing Procedures which is available from the ATIS website (see appendix D).

4.4.7 Advanced Technical Information Support (ATIS). ATIS was established as the U.S. Navy's standard for display and retrieval of technical documentation such as drawings, TMs, and maintenance data in the shipboard and industrial environment. The primary mission of ATIS is to provide a digital-optical system for use by maintenance and support personnel to quickly access and use technical documentation. Management and support for ATIS software and ATIS compatibility testing and certification is provided by the Naval Sea Logistics Center Detachment Atlantic (NAVSEALOGCENDETLANT).

4.4.7.1 ATIS Certification. All digital storage media containing preliminary or final TM products which are to be distributed to the Fleet are to be certified as ATIS compatible. This process is designed to ensure that all digital storage media containing TMs are properly identified, tracked, produced, and tested prior to distribution to the Fleet and supporting shore activities. Detailed

information on ATIS certification requirements can be found in the ATIS Compatibility Testing Procedures which is available from the ATIS website (see appendix D).

4.4.7.2 Preferred Products List (PPL). Products used to view ATIS compatible TMs must be on the SPAWAR IT-21 PPL, including software "plug-ins," before ATIS testing can be accomplished. The PPL identifies COTS/Government Off-The-Shelf (GOTS) software assessed to not interfere with IT-21 network applications. Use of the SNIPP ensures that final TM products are in compliance with the PPL. If it is desired to use a product not on the PPL a SNIPP waiver must be obtained from NAVSEA 04L via the NSDSA CSR system (see appendix D) and the program is responsible to request the product be tested and approved for addition to the PPL. The PPL is available from the SPAWAR website (see appendix D).

4.4.7.3 Non-ATIS Compliance. When digital storage media is not to be ATIS compatible, a waiver must be obtained prior to distribution from NAVSEA 04L. Requests for waivers shall be made via the NSDSA CSR System (see appendix D).

4.4.8 Digital Storage Media Labeling. MIL-HDBK-9660B provides overall guidance for both classified and unclassified DoD-produced CD-ROMs destined for distribution as a final product. In addition, DVDs are to follow the same guidance, along with the following Technical Manual Management Program (TMMP)-specific requirements for labeling CD-ROMs and DVDs.

a. The face of the digital storage media shall contain information about the media, including the assigned Vol ID, date, title, NSN, applicable distribution, warning, and security markings, and superseding information for the CD-ROM or DVD.

b. The face of the digital storage media containing TMs intended for Fleet distribution shall include the statement “ATIS COMPATIBLE” (unless a waiver for non-certification has been obtained).

c. The information to be included on the face of the digital storage media, if not visible when the media is packaged, shall be included on the packaging. Sleeves and holders for digital storage media containing classified information shall be marked with appropriate classification markings.

d. For stocked digital storage media or media sets, a bar coded and eye-readable NSN shall be displayed and visible on the packaging (see paragraph 5.4.5).

SECTION 4.5 TM ACCEPTANCE AND CERTIFICATION

4.5.1 Introduction to TM Acceptance and Certification. This section describes the functions and responsibilities associated with acceptance and certification of NAVSEA TM products. Acceptance and certification of TMs and TM updates is the responsibility of the Government acquiring activity.

4.5.2 TM Acceptance and Certification Responsibilities. Table 4.5-1 provides the responsibilities for TM acceptance and certification.

Table 4.5-1 Responsibilities – TM Acceptance and Certification

Activity/Function	Responsibilities
NAVSEA 04L	1. Provide formal criteria for use in contract verification and acceptance (or rejection) of TM products and associated data items. 2. Provide and implement TM certification requirements.
Program or Acquisition Authority	1. Sign or task signature authority for the *Acquisition Approval* block on the Technical Manual Certification Sheets, NAVSEA Form 4160/8. 2. Task signature responsibility for the *Technical Approval* block on Technical Manual Certification Sheets to the ISEA/PY. 3. Accept/reject TM product deliverables.
ISEA/PY	Assign an individual signature responsibility for the *Technical Approval* block on Technical Manual Certification Sheets for assigned TMs.
TM Manager	1. Prepare Technical Manual Certification Sheets for signature for all assigned final TMs or TM updates. 2. Sign the *TM Manager* block on Technical Manual Certification Sheets for assigned final TMs. 3. Ensure properly executed Technical Manual Certification Sheets are uploaded into TDMIS. 4. Complete COTS/ NDI Acceptability Certification Sheets when tasked. 5. Ensure a properly completed Identifying Technical Publication Sheet is placed in COTS TMs. 6. Coordinate the evaluation of final TM products, and recommend acceptance/rejection of TM product deliverables to the acquisition authority activity.

4.5.3 TM Acceptance. TMs and TM updates are reviewed, validated, and verified throughout the development process for compliance with prescribed specification technical content and format requirements and to determine accuracy and adequacy for Fleet, shore, and training use. In order to be accepted, TMs and TM updates shall be successfully validated, verified, and approved. Acceptance is predicated on the TM product meeting the applicable requirements:

- SOW, CDRL, DIDs, or other tasking document requirements
- TMCR/TMSR requirements
- Digital Product/Technical Data Policy requirements
- Validation accomplished
- Verification accomplished

- RGL requirements
- Comprehensibility requirements
- Discrepancy and deficiency resolution and incorporation accomplished
- Suitability for quality duplication

When required as CDRL deliverables, Validation Certificates and Verification Incorporation Certificates shall be completed, delivered, and reviewed as part of the acceptance process. The TM Manager or TM review team provides a recommendation for acceptance/rejection to the acquisition authority activity.

4.5.4 Technical Manual Certification. Each TM and TM update shall be certified that it has been validated, verified, and conforms to applicable technical and specification requirements. Once the Final Reproducible Copy (FRC) or master digital media has been reviewed and determined to be acceptable, a Technical Manual Certification Sheet, NAVSEA Form 4160/8 (figure 4.5-1), is to be completed by the acquiring activity for each TM or TM update. Final TMs or TM updates shall not be released for duplication or distribution without a properly executed Technical Manual Certification Sheet. For revisions or changes to previously certified final TMs, only the new or changed TM portions need to be certified. For TM conversions that do not impact the technical content (e.g., paper TM scanned to PDF), the existing TM Certification Sheet is retained.

4.5.4.1 Technical Manual Certification Sheet. The following provides guidance in completing a Technical Manual Certification Sheet.

a. **CERTIFICATION APPLIES TO Block.** Indicate whether the Technical Manual Certification Sheet is for a new TM, a revision, or a change. Certification Sheets associated with revisions or changes are certifying the technical aspects and preparation of the revision or change and do not "re-certify" the entire TM.

b. **APPLICABLE TMINS/PUB NO. Block.** Indicate the TMIN/publication number covered by the certification sheet. For revisions, include the revision assignment when applicable (e.g., *SE000-AA-MMO-010 Revision 2)*. For changes, cite the change number vice the basic TM number (e.g., *SE000-AA-MMO-01**A** vice SE000-AA-MMO-01**0***).

c. **PUBLICATION DATE (day, month, year) Block.** Indicate the publication date of the TM for a new or revised TM or the date of the change date for a change as shown on the title, cover, or opening screen.

d. **READING GRADE LEVEL (RGL) Block.** Indicate the reading grade level of the TM.

e. **TITLE Block.** Fill in the actual title of the TM.

f. **TMCR/TMSR/SPECIFICATION NUMBER Block.** Indicate the TMCR or TMSR to which the TM or TM update was developed. If a waiver was granted for non-use of a TMCR/TMSR, indicate the specification that was used where applicable.

g. **PURPOSE Block.** Fill in the appropriate information on the content of the TM or TM update covered by the certification sheet. For revisions or changes, provide a brief description of the modifications from the prior version.

h. **EQUIPMENT ALTERATION NUMBERS INCORPORATED Block.** Identify ship or equipment modification/alteration numbers incorporated.

i. **TMDER/ACN NUMBERS INCORPORATED Block.** Fill in the appropriate information on the deficiencies resolved within the content of the TM or TM update covered by the certification sheet. This can inlcude TMDERs, ACNs, or Naval Message Class Advisory date time group numbers incorporated.

j. **Signature Blocks.** Fill in the block as appropriate for the individuals who will be signing the Certification Sheet. The Government acquisition authority or their representative (Government) responsible for tasking and funding the TM shall sign the *Acquisition Approval* block. The Government organization tasked and funded by the program/acquisition authority to be responsible for the TM technical content (e.g., the ISEA) shall assign senior engineering or management individuals with direct TM responsibility (Government) to sign the *Technical Approval* block. The TM Manager assigned to the TM signs the *TM Manager Approval* block.

4.5.4.2 Technical Manual Certification Sheet Placement. Completed Technical Manual Certification Sheets shall be retained as part of the records for all TMs and TM updates. The completed certifcation sheets shall be uploaded into the TDMIS Publication Record for the TM/TM update. (Note: Certification Sheets can be uploaded into TDMIS publication records for unclassified TMs only; future TDMIS capability to upload Certification Sheets against classified/restricted (includes all NOFORN) is estimated to be FY 2012. Until the future capability is available, TMMA shall retain the TM Certification Sheet and add a comment to TDMIS Publication Record that certification is on file.)

TECHNICAL MANUAL CERTIFICATION SHEET

CERTIFICATION APPLIES TO: NEW MANUALS ☐ REVISION ☐ CHANGE ☐

APPLICABLE TMINS/PUB. NO.	PUBLICATION DATE (day, month, year)	READING GRADE LEVEL (RGL)

TITLE

TMCR/TMSR/SPECIFICATION NUMBER

CHANGES AND REVISIONS:

PURPOSE

EQUIPMENT ALTERATION NUMBERS INCORPORATED

TMDER/ACN NUMBERS INCORPORATED

Continued on additional pages as needed.

CERTIFICATION STATEMENT

This is to certify that responsible Navy activities have reviewed the above identified document for acquisition compliance, technical coverage and printing quality. This form is for internal Government management use only and does not imply contractual approval or acceptance of the technical manual by the Government nor does it relieve the contractor of any responsibilities for delivering the technical manual in accordance with the contract requirements.

	NAME	SIGNATURE	ORGANIZATION	CODE	DATE
ACQUISITION					
TECHNICAL					
PRINTING RELEASE					

NAVSEA 4160/8 (Rev 7-2003)

Figure 4.5-1 Technical Manual Certification Sheet, NAVSEA Form 4160/8

SECTION 4.6 TMMP DEFICIENCY PROGRAM

4.6.1 Introduction to TMMP Deficiency Program. This section describes the TMMP Deficiency Program, which is a maintenance program to resolve user-reported TM deficiencies and to ensure that TMs are maintained current and accurate at all times. The two main components of the Deficiency Program are Technical Manual Deficiency/Evaluation Reports (TMDERs) and Advance Change Notices (ACNs). Deficiency records are maintained within the TDMIS Deficiency Module. Additionally, Manual Change Requests (MCRs) may be utilized for selected submarine related TMs. Specific instructions on how to maintain records is provided in TDMIS training courses (see section 2.4).

4.6.2 Deficiency Program Responsibilities. Table 4.6-1 provides responsibilities for the TM deficiency program.

Table 4.6-1 Responsibilities – TMMP Deficiency Program

Activity/Function	Responsibilities
Program Authority	Fund the review, analysis, and correction of reported TM deficiencies, including ACNs and TMDERs.
Acquisition Authority	Ensure that contracts and tasking documents for the development of TMs or TM updates affected by equipment or software modifications include the requirement to incorporate outstanding deficiencies (i.e., ACNs and TMDERs).
ISEA/PY	1. Research and provide technical responses to TMDERs against assigned TMs. Assess the impact of reported deficiencies on other TMs and related logistic support and take appropriate action. 2. Determine if safety related TMDERs require an urgent resolution such as issuance of an ACN. Develop, provide, and/or approve appropriate technical content for the ACN/revision.
TM Manager	1. Ensure that deficiencies reported via TMDER are reviewed, analyzed, and responded to within 30 days (routine) or 3 days (urgent). 2. Ensure the deficiency status code and other information for each deficiency is maintained current within TDMIS. 3. Assign ACN numbers and ACN control numbers for ACNs against assigned TMs. Ensure Vol ID numbers are assigned for digital storage media containing ACNs where appropriate. 4. Coordinate the development of the ACN. 5. Ensure resolutions to deficiencies are permanently incorporated into affected TMs within six months.
NSDSA	1. Manage the TM deficiency reporting and ACN program within TDMIS. 2. Perform initial TMDER processing, including loading hardcopy TMDERs and TMDER information into TDMIS. 3. As required, assign TMDER numbers and ACN control numbers.
Fleet and Other TM Users	Report deficiencies found in NAVSEA TMs either electronically or by using a TMDER form.

4.6.3 Technical Manual Deficiency/Evaluation Reports (TMDERs). TMDERs are the primary method for the Fleet and other users to identify technical and non-technical discrepancies or deficiencies or to offer suggestions for improving existing TMs. Reported problems could be anything from a missing paragraph or a page, measurements or troubleshooting procedures that are incorrect, an omitted safety step or precaution, unclear instructions, or illegible text or illustrations. The use of the TMDER is limited to identifying routine, non-emergency problems. In those instances where a TM deficiency constitutes an urgent problem, (i.e., involves a condition, which if not corrected, could result in injury to personnel, damage to the equipment, or jeopardy to the safety or success of the mission), the TM user should send a Naval Message. Figure 4.6-1 is a depiction of a hardcopy TMDER Form NAVSEA/SPAWAR 4160/1.

4.6.3.1 TMDER Numbering. TMDER numbers are assigned by the originator, or if the originator does not assign one, by NSDSA. The format for this number is:

UIC or CAGE – CY – XXXX
N46678 – 05 – ZZ11, Where:

UIC or CAGE = for the originator's activity
CY = calendar year in which TMDER is being submitted
XXXX = four characters determined by the originating activity or NSDSA (such as initials and sequential numbers, etc.)

4.6.3.2 Submission and Initial Processing of a TMDER. TMDERs can be submitted within TDMIS, from the NSDSA website, or by hardcopy using Form 4160/1. The most expedient and preferred method of TMDER submission is via TDMIS, except that TMDERs against classified/restricted (includes all no foreign) manuals must be submitted using the hardcopy method. Instructions for each method are detailed on the NSDSA website (see appendix D). NSDSA loads the submitted TMDER into TDMIS, places it in a status of G2 (TMDER Pending Evaluation) and sends confirmation of receipt to the originator. For urgent (safety related) TMDERs, NSDSA processes the TMDERs within 24 hours of receipt, and notifies the TM Manager by e-mail immediately.

4.6.3.3 TMDER Processing. The cognizant TM Manager accesses the TMDER from within TDMIS, whereby the TMDER status is changed from G2 (TMDER Pending Evaluation) to 01 (TMDER in Evaluation).

a. **Routine TMDERs.** TM Managers coordinate the evaluation of and provide responses to routine TMDERs within 30 calendar days. If the TMDER requires research that cannot be completed within 30 days, a response should still be prepared and sent within 30 days informing the originator that research is on-going. Once a response has been sent to the originator and other users, the TM Manager changes the TMDER status within TDMIS to an appropriate status code for the resolution identified in the response. If the TM Manager does not change the TMDER status within 30 days, the status will automatically be changed from 01 (TMDERS in Evaluation) to 00 (Delinquent TMDERS).

Ref: NAVSEAINST 4160.3 NAVSEA S0005-AA-GYD-030/TMMP

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 ½" x 11" on page if additional space is needed.
1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For **CLASSIFIED** TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site https://nsdsa.nmci.navy.mil or mail to: **COMMANDER, CODE 310 TMDERs, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY BLDG 1389, PORT HUENEME CA 93043-4307**

1. PUBLICATION NUMBER	2. VOL/PART	3. REV/DATE OR CHG/DATE	4. SYSTEM/EQUIPMENT ID

5. TITLE OF PUBLICATION	6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-10-xxxx)

7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMMA of Manual (NSDSA will complete)

12. SHIP OR ACTIVITY Name and Address (Include UIC/CAGE/HULL)	13. Phone Numbers:
	Commercial (___) ___-____ DSN ___-____ FAX (___) ___-____

NAVSEA 4160/1 (Rev. 9-2010) S/N 0116-LF-985-4100

Figure 4.6-1 Hardcopy TMDER Form, NAVSEA 4160/1

b. **Urgent TMDERs.** Urgent (safety related) TMDERs are to be responded to within three (3) working days. For urgent TMDERs, issuance of an ACN may be warranted as determined by the ISEA/PY.

c. **Classified/Restricted TMDERs.** TMDERs against classified/restricted TMs will be handled in the same manner as classified by NSDSA. TMDERs against classified/restricted TMs are to be submitted via the hardcopy method only. NSDSA will upload the TMDER information into TDMIS, however the recommended changes requested by the submitter will not be displayed. NSDSA will then mail the TMDER to the TMMA by NSDSA. The TM Manager is to coordinate the determination of whether or not the TMDER is actually classified with the assigned program's technical representative/ISEA, acquisition authority, or program authority. The TM Manager is to then coordinate the research, response, and resolution for the TMDER as either a routine or urgent TMDER as described above.

4.6.3.4 TMDER Evaluation and Response. The cognizant TM Manager coordinates the evaluation of TMDERs against the appropriate TMs to determine if the TM contains erroneous or outdated information. If the TMDER is against a superseded TM, the new issue should be evaluated to determine if the reported deficiency is valid and exists in the superseding TM; additionally, if there are any similar/related TMs, they should also be evaluated. Once the determination has been made as to what deficiencies exist and what the corrective course of action is, a response to the originator is prepared. The TMDER module within TDMIS provides an option to respond to originators via e-mail from within TDMIS. For TMDER responses against unclassified TMs not generated from within TDMIS, the TM Manger loads the TMDER response into TDMIS; for TMDER responses against classified/restricted TMs, a copy of the response shall be provided to NSDSA. The following provides sample TMDER response paragraphs:

a. **Action TMDER Status Code 03.** Prepare the following for those TMDERs that are non-safety, but require further investigation.

> *Your TMDER # _____ for TM # _____ has been received by this activity for action. However, the TMDER does not appear to be safety related or detrimental to equipment. Action to resolve this deficiency cannot be taken due to (TMMA insert reason). This deficiency will be addressed when this situation gets resolved.*

b. **Action TMDER Status Code 06.** Prepare the following for those TMDERs that are funded, require a TM update, and are scheduled for a TM update during the current fiscal year (FY):

> *Your TMDER # _____ for TM # _____ has been received by this activity for action. We have determined that a change to the manual is required. A revision package is in work or is planned to start this fiscal year. Distribution is scheduled on (Mo/Yr).*

c. **Action TMDER Status Code 07.** Prepare the following for TMDERs that require a TM update that is not funded in the current FY:

> *Your TMDER # _____ for TM # _____ has been received by this activity for action. We have determined that a revision to the manual is required. The revision package is not currently in work. The work is planned to start on MM/YYY.*

d. **Action TMDER Status Code 09.** Prepare the following for those TMDERs that are valid but a TM update is not cost effective:

> *Your TMDER # _____ for TM # _____ has been received by this activity for action. We have determined that the deficiency reported will not impede the operation/maintenance of the equipment, and that it is not cost effective to prepare a change at this time. The deficiency will be considered for incorporation with a future change package or revision.*

e. **Final Resolution TMDER Status Code F2.** Prepare the following for those TMDERs that are resolved without an update to the TM:

> *Your TMDER # _____ for TM # _____ has been received by this activity for action. We have determined that a change to the manual is not required for the following reason(s): (fill in reasons)*

4.6.4 Advance Change Notices (ACNs). ACNs are used to disseminate urgent or emergent personnel safety, system or equipment safety, or mission critical information due to TM deficiencies. Besides revisions and changes, ACNs are the only other authorized documentation that can be issued to correct, update, clarify, or amplify a TM. Use of bulletins, notes, newsletters, etc., is not authorized for TM changes, updates, clarifications, or amplification. ACNs are intended to be temporary documentation until a permanent TM update can be developed and issued, therefore ACNs are considered "deficiencies" and are to be incorporated into a permanent TM update within six months from the effective date of the ACN. ACNs shall not be used for logistics certification for ship, system, or equipment installations or modifications.

4.6.4.1 ACN Numbering. All ACNs are assigned both an ACN number and a control number. The ACN and control numbers are assigned by the TM Manager. Vol ID numbers shall be assigned to each digital storage media containing digitized ACNs. ACN, control number, and Vol ID assignments are assigned/requested from within TDMIS. Specific procedures for creating TDMIS deficiency records for ACNs are provided in TDMIS training courses (see section 2.4)

a. **ACN Number.** The ACN number is assigned by the TM Manager. The number cannot exceed ten characters. The recommended method to assign an ACN number is the

sequential number of ACN, followed by a slash, followed by the change or revision level in which the ACN is to be incorporated. Examples:

1/A = The first ACN to the affected TM to be incorporated into Change A
2/A = The second ACN to the affected TM to be incorporated into Change A
1/B = The first ACN to the affected TM to be incorporated into Change B
1/R1 = The first ACN to the affected TM to be incorporated into Revision 1

b. **ACN Control Number.** The control number is assigned by the TM Manager. The format for this number is:

UIC or CAGE – CY – XXXX
N46678 – 05 – ZZ11, Where:

UIC or CAGE = for the preparing activity
CY = calendar year in which ACN number is being assigned
XXXX = four characters determined by the preparing activity (such as initials and sequential numbers, etc.)

c. **Vol ID and NSNs.** If digitized ACN files are to be distributed by digital storage media, the media shall have Vol ID numbers (see paragraph 4.3.6) and associated NSNs assigned (see paragraph 4.3.7).

4.6.4.2 ACN Format. ACNs should be distributed by fastest means possible such as via Naval message or other means that protects the data being distributed. ACNs may authorize pen and ink changes or provide replacement pages to paper TMs or be issued electronically as the entire TM with the ACN incorporated. The ACN shall identify both the ACN number and the ACN control number. If the ACN was developed as a result of a TMDER, the TMDER number shall be identified within the content of the ACN.

4.6.4.3 ACN Distribution. ACNs are to be distributed within ten (10) days of obtaining the ACN numbering assignments. A copy of the ACN shall be provided to NSDSA. For ACNs against unclassified TMs that meet the criteria (e.g., PDF), a copy of the ACN is to be uploaded to the TDMIS ACN Record by the TMMA.

4.6.4.4 ACN Report. In addition to tracking ACN status within TDMIS, an ACN report can be generated from the TMDER/ACN Report tool available on the NSDSA website (see appendix D). The report lists all active ACNs and the associated TM, along with other related information.

4.6.5 Manual Change Requests (MCRs). T0005-AA-GYD-010 and -020 provide information on the use and processing of MCRs for selected submarine related TMs. MCRs are managed outside of TDMIS, however the Planning Yard Deficiencies Module within TDMIS may be used to track MCRs.

4.6.6 Correcting Deficiencies. TM updates shall be used to correct outstanding reported deficiencies (i.e., TMDERs and ACNs). Where possible, deficiency resolutions shall be

incorporated concurrently with ship, system, or equipment modifications. TMs shall also be revised to correct known deficiencies in technical content in instances that are not related to ship, system, or equipment modifications. TM updates that incorporate TMDERs or ACNs shall identify the TMDERs and ACNs by identification number. TMDERs that identify a required TM update and active ACNs shall remain in an open status category until the affected TM has been updated and the TMDER or ACN has been placed in a final resolution category (F1 – F6, F8).

4.6.7 TDMIS Deficiency Record Maintenance. It is the TM Manager's responsibility to maintain TMDER deficiency records within TDMIS, including status, action codes, dates, comments, and uploading responses into TDMIS. TM Managers are responsible for assigning ACN numbers and ACN control numbers within TDMIS, maintaining ACN information current within TDMIS deficiency records, and upl oading copies of ACNs into TDMIS. Specific procedures for maintaining TMDER and ACN deficiency records are provided in the TDMIS training courses (see section 2.4).

4.6.8 Deficiency Status. Deficiency status is used to identify the current status of a TMDER or an ACN. Within TDMIS Deficiency Record for each deficiency, the status of the deficiency is shown; the corresponding codes are primarily used for developing reports. The deficiency status/status codes as of the date of this manual are as follows [refer to Reference Data within TDMIS or NSDSA website (see appendix D) for the most current listing]:

00	*DELINQUENT TMDERS*	*F1*	*TRANSFERRED TO OTHER SYSCOM*
01	*TMDERS IN EVALUATION*	*F2*	*NO TM CHANGE REQUIRED*
02	*ACN SCHEDULED/NOT YET ISSUED*	*F3*	*TM CHANGE/REVISION ISSUED*
03	*NON-SAFETY, LONG TERM ISSUE*	*F4*	*FINAL NO COPY AT TMMA*
04	*CHG SCHEDULED/MPA IS NOT TMMA*	*F5*	*CANCELLED BY ADMIN ACTION*
05	*SUBMARINE ACN*	*F6*	*FINALIZED BY RAC*
06	*CHANGE/REVISION SCHEDULED*	*F7*	*TM SUPERCEDED*
07	*UPDATE REQUIRED NOT SCHEDULED*	*F8*	*RESPONDED TO BY NSDSA*
08	*ACN ISSUED*	*F9*	*TM/CHG PENDING DISTRIBUTION*
09	*LOW IMPACT TMDER*	*G1*	*TMDER OPEN FOR USER INPUT*
		G2	*TMDER PENDING EVALUATION*

CHAPTER 5
PHASE 3 – TECHNICAL MANUAL DISTRIBUTION

SECTION 5.1 INTRODUCTION

5.1.1 Introduction to Technical Manual Distribution. This chapter addresses the distribution phase of technical manual (TM) life cycle support. TM products shall be duplicated and distributed in time to satisfy the Fleet, training activities, and other user needs. The distribution phase includes activities required for TM product duplication, defining distribution requirements, controlling TM distribution, and stocking TM products. This chapter contains the following sections:

5.1 Introduction
5.2 Marking and Distribution Control
5.3 Distribution Requirements Definition
5.4 Stock Requirements, Replenishment, and Processing Requisitions
5.5 Initial Distribution
5.6 TM Material Storage

SECTION 5.2 MARKING AND DISTRIBUTION CONTROL

5.2.1 Introduction to Marking and Distribution Control. This section describes the functions and responsibilities for controlling the distribution of Naval Sea Systems Command (NAVSEA) TMs. T M distribution shall be controlled to reduce the risk of undesired transfer of critical technology and technical data to unauthorized individuals or countries. TM products shall to be marked as appropriate with distribution statements, export control notice, destruction notice, contractor-imposed distribution limitations, and classified markings.

5.2.2 Marking and Distribution Control Responsibilities. Table 5.2-1 identifies the responsibilities for TM marking and distribution control.

Table 5.2-1 Responsibilities – Marking and Distribution Control

Activity/Function	Responsibility
NSDSA	1. Duplicate TMs approved for Foreign Military Sales (FMS) or other cash sales in accordance with provided tasking and funding documents. 2. Update and maintain the Technical Data Management Information System (TDMIS) with data reflecting releaseability and distribution control decisions.
NAVICP Philadelphia	1. Process requests for NAVSEA TMs in accordance with applicable directives and process TMs approved for release. 2. Maintain costs for TMs requisitioned and issued to foreign countries in support of Navy FMS, military assistance programs, and cash sales. 3. Reimburse appropriate Systems Commands for FMS TMs requisitioned and issued to foreign countries.
Program Authority	1. Define the distribution statements and export control notices to be used for TM products. 2. Respond to requests for assistance in determining approval/ disapproval of Freedom of Information (FOIA), foreign, or other TM requests.
Acquisition Authority	Identify the distribution statements and export control notices to be used in TM products in contractual/tasking documents.
ISEA/PY	Ensure classification markings are correct for the data contained in the TM products.
TM Manager	Ensure NAVSEA TMs and TM products are appropriately marked with all applicable statements and notices, including distribution statements, export control notices, destruction notices, and classification markings prior to release for duplication or distribution.

5.2.3 Marking of TM Products. Applicable distribution statements, export control warnings, destruction statements, other restrictive statements, and proper classification markings per SECNAVINST 5510.36 and the DON Information Security Program Manual M-5510-36 shall be used in marking NAVSEA TMs to denote conditions of availability for distribution release, disclosure, and classification.

a. All TMs regardless of the medium, physical form, or characteristics (e.g., paper TMs, Interactive Electronic Technical Manuals (IETMs), or digital storage media containing TMs), shall be marked with a distribution statement. If the TM contains export-controlled technical data, it shall also be marked with an export control warning. If the TM contains classified information, it shall be marked with the applicable classification markings.

b. The applicable Technical Manual Contract Requirements/Technical Manual SEATASK Requirements (TMCR/TMSR) provides requirements for placement of the applicable distribution statements, export control notice, destruction notice, other restrictive notices, and classification markings on TMs.

c. The MIL-HBK-9660B provides guidance on the placement of the applicable distribution statements, export control notice, destruction notice, other restrictive notices, and classification markings digital storage media (i.e., Compact Disks-Read Only Memory (CD-ROMs) or Digital Versatile Disks (DVDs)) containing TMs.

5.2.3.1 Distribution Statement. A distribution statement is used to mark a technical document to denote permissible distribution, release, and disclosure without additional approvals or authorizations. A distribution statement in accordance with SECNAVINST 5510.36/M-5510.36 is required on all NAVSEA technical data, including TMs. The specific distribution statement to be used on a TM acquired/developed by a contractor shall be as specified on the applicable CDRL. Distribution statements shall also be placed on digital storage media containing TMs as identified in section 4.4. Procedures for assigning distribution statements on technical documents are found in SECNAV M-5510.36.

5.2.3.2 Destruction Requirements. Refer to SECNAV M-5510.36 for requirements related to destruction of technical data. All TMs marked with distribution statements B, C, D, E, F, or X shall have an appropriate destruction notice in the vicinity of the distribution statement. Digital storage media (i.e., CD-ROMs or DVDs) containing TMs shall also be marked with the applicable destruction notice.

5.2.4 Releasability. All NAVSEA TMs fall under distribution control processes. Many TMs contain detailed technical information to support unique, NAVSEA-specific systems or equipment and are restricted from release to the public or foreign governments. TMs may contain vendor-copyrighted data or may be Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) TMs that can be released only to qualified NAVSEA personnel or contractors. Despite these factors, some TMs are suitable for public release. As a part of TM control, Programs/TMMAs are to ensure that TMs and associated publication records within the Technical Data Management Information System (TDMIS) reflect the proper distribution statements, classification, and other applicable restrictions.

5.2.4.1 TM Control. The distribution statement selected for each TM denotes the extent of the TM's availability for distribution, release, and disclosure without additional approvals or authorizations. The distribution of restricted unclassified TMs or TM updates shall be limited to approved U.S. Government activities and contractors and in accordance with the distribution statement, unless release of such material is approved by the TM sponsor and NAVSEA Command Security Division in accordance with SECNAVINST 5510.36/M-5510.36. Unmarked TMs shall be reviewed and marked appropriately before release. Distribution of TMs, including those distributed via electronic means or on-line access, shall be controlled in accordance with

the assigned distribution statement for each individual TM. When existing TMs are requested for use outside DoD, a re-determination must be made as to which distribution markings will be applied.

5.2.4.2 Classified TM Control. The distribution of classified TMs is on a need-to-know basis. The handling, safeguarding, transmission, marking, downgrading, and declassification of classified TMs shall be in accordance with SECNAVINST 5510.36/M-5510-36. Distribution of the technical data shall be in compliance with the affixed marking unless specific approval from the NAVSEA controlling office is granted for release.

5.2.4.3 FOIA Requests. All requests for existing TMs from public or activities/individuals not authorized distribution shall be forwarded to the local Naval FOIA office or the NAVSEA headquarters Freedom Of Information Act Office for disposition of the request. Requests and associated funding documents for TMs approved for release, but not available through NAVICP should be forwarded to NSDSA for availability research and processing if available.

5.2.4.4 Foreign Disclosure. Foreign government, international organizations, and foreign representative requests for TMs shall be referred to the NAVSEA Office of International Programs, the NAVSEA Security Office, and the appropriate Technical Warrant Holder for coordination and processing (SECNAVINST 5510.34). If approved for release, NAVSEA informs the NAVICP and the FMS customer is charged according to the pricing guidelines presented in NAVSUP P-526. Requests and associated funding documents for TMs approved for release, but not available through NAVICP should be forwarded to NSDSA for availability research and processing if available.

SECTION 5.3 DISTRIBUTION REQUIREMENTS DEFINITION

5.3.1 Introduction to Distribution Requirements Definition. This section describes the functions and responsibilities for distribution requirements definition, including development and maintenance of distribution lists and to control viewing of publications via TDMIS. TDMIS contains a Distribution Module that is used to manage NAVSEA TM distribution information including development and maintenance of distribution lists. Distribution list development and maintenance is accomplished via TDMIS. TDMIS also provides a tool, the On Line Publication Access Request, for TM Managers to allow individuals access to view specific TMs from within TDMIS. Specific instructions on how to perform distribution module and on-line access functions is provided in TDMIS training courses (see section 2.4).

5.3.2 Distribution Requirements Definition Responsibilities. Table 5.3-1 identifies the responsibilities for development and maintenance of distribution lists.

Table 5.3-1 Responsibilities – Distribution Requirements Definition

Activity/Function	Responsibility
Program or Acquisition Authority	1. Define ship and shore activity publication distribution and allowance requirements for cognizant ships, systems, or equipment. 2. Coordinate distribution requirements to ensure adequate support to the training community. 3. Coordinate distribution requirements for the Fleet with Type Commanders (TYCOMs).
NSDSA	1. Maintain activity information within TDMIS for use in developing and maintaining distribution lists. 2. Act as a TM distribution activity when requested.
TM Manager	1. Develop and maintain distribution lists for final TM products within TDMIS. 2. Use distribution lists derived from TDMIS when distributing TM products by U.S. mail. 3. Ensure the NSDSA (Unit Identification Code (UIC) N46678) is included on all distribution lists for TM products. 4. Control TM access within TDMIS for assigned TMs and respond to requests for on-line publication access. 5. Notify NSDSA when TMs are ready for distribution.

5.3.3 Distribution Lists. Distribution lists shall be developed and maintained for each final TM and TM revision. Inclusion of an addressee on a distribution list shall be based on the need for the information and the distribution restrictions cited on the TM. Distribution lists obtained from TDMIS shall be used when distributing final TM hardcopy or digital storage media by mail. When multiple TMs are included on a digital storage media, the most restrictive statement shall be observed when developing a distribution list for the media. Distribution lists can be downloaded and/or printed locally by TM Managers.

5.3.4 Activity Addresses. Activity addresses are maintained within TDMIS by NSDSA and are identified by their UIC or Commercial and Government Entity (CAGE) code. For activities assigned a UIC, the addresses used within TDMIS are derived from the Standard Navy

Distribution List (SNDL). If an activity does not have a UIC or CAGE Code assigned, a code assignment for use only within TDMIS can be assigned by NSDSA. Activities are listed in UIC/CAGE code order within the distribution lists. Internal distribution identifiers, referred to as Attention To Codes (ATCs), can be added as needed. UICs or CAGEs can have multiple entries within TDMIS, one for each unique ATC. NSDSA (UIC N46678) shall always be included on the distribution list for all NAVSEA distributed TM products. Copies addressed to NSDSA shall be ATC: NETL BLDG 441 for paper copies or ATC: Code 312 BLDG 1389 for digital storage media with quantities as follows:

- CD-ROM/DVD only distribution – one copy of the CD-ROM or DVD
- Paper TM distribution – two copies of each paper TM
- TMs delivered in both formats – one CD-ROM or DVD and one paper copy
- TMs distributed via electronic means or on-line access – one copy of the TM file

5.3.5 Distribution List Development. Distribution requirements and lists shall be developed and maintained within TDMIS for each TM product to be distributed by mail. TM distribution requirements shall be based on specific system user needs, usage requirements, weight and available stowage, and the ability to restore from an engineering or battle casualty. Ships are not authorized to exceed or reduce these requirements unless specifically authorized by responsible authority through the TYCOM. When TMs are acquired for a platform, copies are to be distributed to all applicable platforms. Program or acquisition authority activities define ship and shore activity TM distribution and allowance requirements for cognizant ships, systems, or equipment. The TM Manager translates these requirements into TDMIS distribution lists for initial distribution of TM products. The requirements should include organizations such as the applicable ships and other equipment installation sites, training activities, intermediate and depot level maintenance activities, libraries, and NSDSA (UIC N46678). A distribution list is developed for the product to be distributed, which may be for an individual TM or TM revision, digital storage media containing TMs, or Advance Change Notice (ACN).

5.3.6 Distribution List Maintenance. Existing distribution lists shall be maintained by the TM Manager who shall add, change, or delete addresses when necessary. TDMIS automatically adds ships to a D/L based on the configuration applicability of the TM, but shore activities need to be added manually. Maintaining distribution lists provides shore support customers a means of managing their TM inventory within TDMIS. TDMIS contains only one version of a distribution list for any TM product. The review is to ensure the lists include the proper addressees in compliance with the distribution restrictions cited on the TMs, and to reflect current UIC/CAGE codes, addresses, ATCs, and quantities. Activities may update their information for their distribution requirements via TDMIS, including removing themselves from a distribution list for a given TM product, adding themselves to distribution lists for future TM products, changing desired TM quantity, or changing the ATC. The TM Manager shall review the distribution list and verify the activity requests and other changes prior to using a distribution list. NSDSA (UIC N46678) shall always be included on the distribution list for NAVSEA TM products.

5.3.7 Mailing Labels. Mailing labels can be locally printed from a report generated within TDMIS. The report is set up to print on a local printer using shipping label product number 5164 (letter-size sheet, pre-cut peel-and-stick labels, six 3-1/3 by 4-inch labels per page).

5.3.8 On Line Publications Access. Within TDMIS, TM managers can grant access to individuals needing to view TMs who otherwise would not have access. In instances where the

TMMA is a contractor, the Program Sponsor Activity (PSA) shall grant access to view TMs. Use of this feature requires the TM to be viewable within TDMIS and the individual to have a valid TDMIS account. Military and Government TDMIS accounts automatically have access to view TMs with distribution statements A through E; Contractor TDMIS accounts are more restrictive. Access can be granted as part of the TMMA's distribution, or as the result of an individual's request.

a. When on line access is being used as a part of distribution, Government TM managers/PSAs can grant access to specific TMs as part of the distribution process. The access is granted by UIC/CAGE and the individual's TDMIS user name.

b. The On Line Publications Access Requests selection within TDMIS provides a tool for individuals to request access to additional specific TMs. These requests must be approved by the TMMA/PSA before the individual is granted access. In instances where a TMMA is a contractor, the PSA shall approve/disapprove On Line Publications Access Requests.

c. The NLL provides an option for TM requesters that do not have a hard copy requirement to link to TMs that are viewable within TDMIS. The requesters, however, must have a TDMIS account and appropriate view privileges in order to access TMs.

d. Granted access to TMs remains in effect until the TMMA/PSA removes access, or until the individual's TDMIS account is disabled.

SECTION 5.4 STOCK REQUIREMENTS, REPLENISHMENT, AND PROCESSING REQUISITIONS

5.4.1 Introduction to Stock Requirements, Replenishment, and Processing Requisitions. This section describes the functions and responsibilities for stock and replenishment requirements of NAVSEA TM products to ensure support of requests from Fleet, shore, and other TM users.

5.4.2 Stock Requirements, Replenishment, and Processing Requisitions Responsibilities. Table 5.4-1 identifies the responsibilities for ensuring TM products are adequately stocked, stock is replenished when needed, and requisitions are processed.

Table 5.4-1 Responsibilities – Stock Requirements, Replenishment, and Processing Requisitions

Activity/Function	Responsibility
Program/Acquisition Authority Activities	1. Use the SNIPP for initial ship distribution. 2. Fund the initial stock of TMs (paper or digital storage media) when required. 3. Fund the replenishment of required non-TMPODS compatible hardcopy TM products depleted at the NAVICP designated warehouse or stock held at alternate carrying points.
NSDSA	1. Notify the NLL of each new or revised TM product via the Catalog Interface between TDMIS and the NLL, 2. Resolve stock problems with the TM Manager, NAVICP Philadelphia, and DLA Document Services. 3. Coordinate the loading of TM product files into TMPODS and the NETL. Digitize NETL paper assets for use in TMPODS or the digital portion of the NETL. 4. Manage the initial distribution of TMs to ships. 5. Ensure the placement of digital storage media into the Burn On Demand (BOD) system.
NAVICP Philadelphia	1. Act as the Inventory Control Point (ICP) for NAVSEA TM products utilizing the NLL as the centralized database for TM supply management. 2. Budget and fund a designated warehouse for TM storage and for shipment charges incurred for NAVSEA TM products. 3. Process information received by the NLL from TDMIS via the Catalog Interface. 4. Identify discrepancies for stock received. Coordinate resolution of NAVSEA TM stock problems with NSDSA and DLA Document Services. 5. Correct stock number or bar code errors on stock copies as directed. 6. Process requisitions for NAVSEA TM products utilizing the NLL Military Standard Requisitioning and Issue Procedures (MILSTRIP) requisition processing mechanism. Distribute TMs only to authorized activities. 7. Provide links from the NLL to TDMIS for obtaining digital copies for

Table 5.4-1 Responsibilities – Stock Requirements, Replenishment, and Processing Requisitions

Activity/Function	Responsibility
NAVICP Philadelphia Continued	those who do not have a hardcopy requirement. 8. Fund DLA Document Services for Navy publication printing and distribution services for the TMPOD process. Provide DLA Document Services with MILSTRIP transactions for TM requisitions that are to be filled by TMPODS. 9. Fund and manage the digital media BOD) system. 10. Resolve Reports of Discrepancies (RODs) for requisitioned TM products.
DLA Document Services	1. Ensure all TM products produced for stock include a bar-coded National Stock Number (NSN) displayed upon the product. 2. Send TM products intended for stock assets (new or replenishment) using proper mailing labels. 3. Store and maintain TMPODS-compatible TM files. 4. Process TM product requisitions using TMPODS to print and fill requisitions for TM paper products when MILSTRIP transactions are received.
TM Manager	1. Ensure NAVICP is the inventory control point for TM products. 2. Determine how and where TM product stock is to be maintained and take actions to ensure TM products are properly stocked and replenished. 3. Ensure all TM products produced for stock include a bar-coded NSN as reflected in TDMIS displayed upon the product. 4. Ensure TM products intended for stock assets (new or replenishment) at NAVICP-designated warehouse are sent using proper mailing labels. 5. Ensure NSDSA is on distribution for copies of TM products. 6. Ensure al TMs intended to be used in paper form have a TMPOD-compatible file prepared and provided to NSDSA.

5.4.3 Inventory Control Point (ICP). The ICP for NAVSEA TMs is NAVICP Philadelphia. The NAVICP designated warehouse shall be the carrying point for TM products, as either digital storage media containing TMs, paper TM products, TMPODS-compatible files, or links to authorized websites. If TMPODS-compatible files for a TM paper product are provided to NSDSA, paper TM stock is not required (refer to paragraph 5.4.5 for details). NAVICP Philadelphia maintains TM supply information within the NLL, and monitors, processes, and fills requisitions for NAVSEA TMs. NAVICP Philadelphia designates and funds warehousing space for NAVSEA TMs. Additionally, NAVICP Philadelphia identifies discrepancies for stock received, coordinates resolution of TM problems with NSDSA and DLA Document Services, and corrects stock number or barcode errors on stock copies as directed. In very limited instances, a waiver may be granted allowing another location to be designated as an alternate carrying point. When a waiver is granted, that location shall be designated as an alternate carrying point in accordance with NAVSUP P-734 and shall assume inventory control point and funding responsibilities including monitoring, processing, and filling requisitions under the same response time and other requirements as the NAVICP designated warehouse/TMPODS.

5.4.4 Catalog Interface. The Catalog Interface is used to provide TM information to the NLL from TDMIS. Information is automatically sent from TDMIS to the NLL for new TM products, including TMs, TM updates, and digital storage media when a Technical Manual Identification Number (TMIN) or Volume Identification (Vol ID) number is requested. NSNs are generated by the NLL and the assignments are provided back to TDMIS. The information sent from TDMIS to the NLL also includes the anticipated carrying point for the item and when initial stock is expected. Information is also sent from TDMIS to the NLL when a TM product's status is changed, such as security classification upgrading/downgrading or requisition issue restrictions.

5.4.5 TM Products Initial Stock. Program or acquisition authority activities shall be responsible for funding initial stock of TM products at the time of initial distribution of the TM product. Notification must be received by the NLL at least 30 days before receipt of stock of a new TM product. The NLL is notified when a Technical Manual Identification Number (TMIN) is generated within TDMIS and a stock number is assigned by the NLL.

5.4.5.1 SNIPP Developed TMs. For unclassified TMs developed and distributed using the SNIPP, a digital copy is placed in the NETL as part of the SNIPP distribution process. Once in the NETL, links from the NLL to TDMIS for digital access are automatically provided.

5.4.5.2 TMs Intended for Printed Output. Initial stock for paper TMs shall be provided as a TMPOD-compatible files delivered to NSDSA. Paper stock copies are not required if a TMPODS-compatible file is provided. In instances when a TMPOD-compatible file is not possible, paper copies must be provided to the NAVICP designated warehouse. The quantity for initial stock of paper is a six month supply as determined by the TM Manager based on anticipated demand (minimum of 10). Every TM provided to the supply system shall have a bar coded NSN per NAVSUP P-734 displayed upon the item. Each individual unit of issue should be bundled or shrink-wrapped. Additional information is available on the NLL (see appendix D). Contact the local DLA Document Services office for specific labels to be used for shipping. Shipping labels shall be used and shall contain the information as follows:

- Originating address
- Destination address (NAVICP designated warehouse)
- Stock number
- Quantity per carton
- Carton number and total number of cartons.

5.4.5.3 Digital Storage Media. Stock for digital storage media requires that one copy of the digital storage media be provided to the appropriate BOD site. The digital storage media shall contain a bar coded NSN. Refer to the NSDSA website (appendix D) for further details.

5.4.6 Replenishment. Replenishment is the replacing of or providing the stock assets needed to ensure requisitions for TM products can be filled after the initial stock has been depleted. NAVICP Philadelphia supports NAVSEA TM replenishment with backorder data, statistics for use in determining quantities required in order to fill/replenish supply stock.

5.4.6.1 Replenishment of Paper TM Stock Assets. Replenishment of TMs that are required in paper form and are TMPODS compatible will be accomplished by NAVICP Philadelphia/DLA Document Services by means of utilizing TMPODS, up to the maximum annual individual

document TMPOD expenditure as defined in NAVSUP P-734. Replenishment of TMs that are required in paper form and are not TMPODS-compatible is the responsibility of the sponsoring program/acquisition activity or Technical Manual Management Activity (TMMA). TM Managers (i.e., the *TMMA POC* as listed in TDMIS) will be notified by NSDSA when stock copies have been depleted.

5.4.6.2 Replenishment of Digital Media Stock Assets. Replenishment of digital media containing TMs will be accomplished by NAVICP Philadelphia by means of utilizing the BOD system.

5.4.7 Processing Requisitions. Requisitions for NAVSEA TM products are placed by MILSTRIP requisition through the NLL. Requisitions for TM products stocked by NAVICP Philadelphia are processed by NAVICP and filled through the NAVICP designated warehouse for hardcopy or digital storage media assets or by DAPS for TMPODS-produced products. Detailed information on processing and filling requisitions is contained in NAVSUP P-409 and NAVSUP P-485. NAVICP Philadelphia also resolves problems with receipt of requisitioned TM materials reported by users on Reports of Discrepancies (RODs).

5.4.8 Restricting Stocked TMs. Distribution of TMs from stock is controlled by the TM's distribution statement, notices, and classification. TMs that require additional program approval before release from stock shall be so identified in the NLL. NSDSA will assist TM Managers in coordinating this restriction with the NLL when it is required. The identified program's POC will be sent a request for approval by e-mail when a requisition for a restricted TM is received. An approval is required before the NLL fills the requisition. If the request is disapproved, the requisition is cancelled and the requester is notified.

5.4.9 Technical Manual Print on Demand System (TMPODS). The TMPODS process is a document supply mechanism whereby digitally formatted TMs are printed and distributed in rapid response to customer requisitions. TMPODS-compatible files are used to fill requisitions by printing only those copies needed to fill TM requisitions rather than storing paper copies. TMPODS is for stock replenishment purposes only and does not take the place of initial distribution (see paragraph 5.5.4). NAVICP Philadelphia funds and manages the TMPODS program and POD sites are located at various DLA Document Services offices throughout the U.S. Sponsors (e.g., NAVSEA) are responsible for providing the most current TM file to the DLA Document Services authorized TMPOD site.

5.4.9.1 Loading NAVSEA TMPODS-compatible TM files into TMPODS is coordinated through NSDSA. TMPODS-compatible files are either provided to NSDSA from the TM Manager or the files may be generated by NSDSA. DLA Document Services holds and prints from the files. NAVICP Philadelphia funds and coordinates with DLA Document Services to fill requisitions for TMPODS-available TMs.

5.4.9.2 A TMPODS-compatible version of TMs intended for printed output shall be provided to NSDSA at the time of initial distribution for TMs that meet the criteria for TMPODS. Paper stock copies are not required if a TMPODS-compatible file of the TM product is provided to NSDSA prior to initial distribution. Requirements for TMPODS compatibility are defined in NAVSUP P-734 and are outlined below:

- Digital format suitable for TMPODS printing
- Identified by a NSN in the NLL
- Consists of black and white pages or includes a limited number of color pages that constitute less than 10% of the document's total page units
- Conforms to the following print requirements:
  (a) Paper is 50# White Offset
  (b) Complete document with same size, weight paper.
  (c) Pre-drilled paper used if needed
  (d) No unusual finishing
  (e) All foldouts are assembled at the back of the manual
  (f) Finishing is 2 sides saddle stitch or screw posts.

On a very limited basis, NAVICP may include a TM file on TMPODS that exceeds the compatibility requirements outlined above at the request of a TM Manager. Exceeded requirements may be items such as requiring excessive handling or color. These TMs will only be printed to fill requisitions on a restricted basis as agreed between the TM Manager and NAVICP, generally for shipboard use only. NSDSA can assist in coordinating arrangements for these instances.

5.4.9.3 Requisitions will be restricted to fleet use only when a TM is initially distributed in digital form only, but a TMPODS-compatible file is provided to NSDSA for loading into the TMPOD process. All other requisitioning customers will be referred to the TMMA to obtain a paper copy.

5.4.10 Naval Engineering Technical Library (NETL). The NETL stores historical/reference copies of current, cancelled, superseded, and obsolete NAVSEA TMs in all distributed formats (paper, digital storage media, and digital). NSDSA populates the digital storage portion of the NETL in two ways: 1) by utilizing the digital format distribution copy of a preliminary or final TM product, or 2) by scanning existing distributed paper TM products from the NETL to produce a digital format. The NETL is interfaced to TDMIS allowing viewing of selected PDF formatted TMs from within TDMIS for those who have appropriate TDMIS view capability privileges.

SECTION 5.5 INITIAL DISTRIBUTION

5.5.1 Introduction to Initial Distribution. This section discusses the actions to ensure that NAVSEA TM products are duplicated, distributed, and stocked in sufficient time, quantity, and in all required formats to satisfy the Fleet, training activities, supply system, and other users needs. Program acquisition authorities are responsible to fund and TMMAs are responsible to perform initial distribution of TMs. For TMs distributed in multiple formats, all formats distributed to the Fleet shall also be distributed to the training community. When TMs are acquired to support a platform, copies are to be distributed to all applicable platforms.

5.5.2 Initial Distribution Responsibilities. Table 5.5-1 identifies the responsibilities for initial distribution of TMs.

Table 5.5-1 Responsibilities – Initial Distribution

Activity/Function	Responsibility
Program or Acquisition Authority	Provide funding for duplication and initial distribution of TM products to ensure TMs are distributed in sufficient time, quantity, and all required formats to satisfy Fleet, training, other user, and supply system needs.
NSDSA	1. Load qualifying TMs into the NETL. 2. Establish and maintain a program for initial distribution of TMs intended for distribution in a digital format. 3. Coordinate loading of TMPODS-compatible files into TMPODS with NAVICP Philadelphia and DLA Document Services. 4. Upload qualifying Advance Change Notices (ACNs) into TDMIS. 5. Upload .NDX files into TDMIS for distributed TM digital storage media. 6. Ensure one copy of each distributed digital storage media containing TMs is placed in the Burn on Demand (BOD) System.
DLA Document Services	1. Ensure TM products intended for stock have a bar-coded NSN. 2. Load qualifying TM files into TMPODS as directed. 3. When required, print/duplicate and distribution in accordance with DD Form 282.
TM Manager	1. Ensure that TMs are distributed in sufficient time, quantity, and all required formats to satisfy Fleet, training, other user, and supply system needs. 2. Ensure all TM formats distributed to the Fleet are also distributed to the training community. 3. Ensure TDMIS records are accurate and current and that TM products are properly identified with assigned numbers. 4. Ensure the completed Technical Manual Certification Sheet for every final TM or Revision is uploaded into TDMIS. 5. Ensure digital storage media intended for Fleet distribution have been certified as Advanced Technical Information Support (ATIS)-compatible. 6. Ensure copies of all TM formats provided during initial distribution, including ACNs, are provided to the NSDSA. 7. Use only DLA Document Services for printing of TMs in accordance with NAVSO P-35.

Table 5.5-1 Responsibilities – Initial Distribution

Activity/Function	Responsibility
TM Manager Continued	8. Determine stock requirements and ensure stock is provided to the supply system. 9. When required, coordinate with NSDSA to provide TMPODS-compatible TM files for loading into TMPODS. 10. Provide unclassified .NDX files to NSDSA for classified/restricted (includes all NOFORN) digital storage media for uploading into TDMIS at the time of initial distribution.

5.5.3 Preparation for Initial Distribution. Initial distribution can consist of digital distribution, distribution on storage media (e.g., CD-ROM), on paper, or a combination of methods. Regardless of the method(s), the TM to be distributed must have the following actions accomplished prior to initial distribution and duplication:

- TM identified with the proper TMIN and NSN obtained from TDMIS
- TDMIS Publication Records and configuration information is accurate and current
- "New/Old" information within Publication Records complete and accurate allowing automatic supersedure status processing within TDMIS to occur
- TMs properly identified with distribution, classification, and other distribution control markings as required
- A properly completed NAVSEA Technical Manual Certification Sheet, Form 4160/8, uploaded into the TDMIS Publication Record.

5.5.3.1 TMs Intended for Printed Output. TMs intended for printed output (page-oriented printing) shall conform to the following:

- Be printed only by the Government per NAVSO P-35
- Use only standard Navy paper and covers in the printing process
- For hardcopy TMs intended for stock, a bar-coded NSN shall be affixed in accordance with NAVSUP P-734. If the proper bar coding equipment is not available, the local DLA Document Services shall be requested to affix a bar-coded NSN prior to duplication. If TM is developed within the SNIPP, a barcode will be added as part of the publishing process.

5.5.3.2 Digital Storage Media. Digital storage media used to distribute TMs shall conform to the following:

- Digital storage media intended for Fleet distribution shall be certified as ATIS-compatible
- Digital storage media shall contain an .NDX file
- Digital storage media shall be identified with a proper Volume Identification (Vol ID) number and NSN obtained from TDMIS
- TDMIS CDROM Records and configuration information shall be accurate and current.
- "New/Old" information within CDROM Records shall be complete and accurate allowing automatic supersedure status processing within TDMIS to occur

- Digital storage media shall be properly identified with distribution, classification, and other distribution control markings as required. The digital storage media shall be marked with the most restrictive marking of the TM(s) contained on the media.
- For digital storage media intended for stock, a bar-coded NSN shall be affixed in accordance with NAVSUP P-734. If the proper bar coding equipment is not available, the local DLA Document Services shall be requested to affix a bar-coded NSN prior to duplication.

5.5.3.3 .NDX Files. The .NDX file is required as a part of all ATIS certified digital storage media and is used to update CD-ROM/DVD and TM status within TDMIS after a distribution copy is received by NSDSA. For CD-ROMs or DVDs that have a waiver for non-ATIS compliancy, an .NDX file shall still be contained on the CD-ROM or DVD (see paragraph 4.4.5). For CD-ROMs/DVDs containing classified TMs, a separate unclassified .NDX file shall be provided to NSDSA at the time of initial distribution. NSDSA uploads the .NDX file into TDMIS to update the CDROM and Publication Records to indicate a "FI" (final issue) status for both the CD-ROM/DVD and the TMs contained on the CD-ROM/DVD.

5.5.3.4 Preparation of Commercial TMs for Distribution. Once a commercial TM has been acquired for Government use (see paragraphs 3.3.5 and 3.5.9), it should be prepared for duplication and distribution as described in the following paragraphs.

a. Ensure the TM has an assigned TMINS number and NSN within TDMIS (see paragraphs 4.3.3.3 and 4.3.7.2).

b. The assigned TMIN and NSN (eye-readable and bar coded) is to be displayed on the cover, title, or opening screen, along with the manufacturer's publication information (number, date, and title). If necessary, add a new cover, title, or opening screen to reflect the TMIN and NSN.

c. Ensure required distribution statements, export control notices, destruction notices, or contractor-imposed distribution limitations are so identified on the cover, title, or opening screen (see section 5.2).

d. Ensure the TM identifies an appropriate method for reporting deficiencies. Hardcopy commercial manuals should have a Technical Manual Discrepancy/Evaluation Report Form NAVSEA 4160/1 included in the duplication package. All distributed commercial manuals in any format, with or without supplemental data, should include directions on the various methods available to submit a TMDER (electronically and hardcopy) and user feedback via the AnchorDesk (see applicable TMCR).

e. SNIPP requirements for distribution of COTS TMs are to ensure items a through d above are met, the manual is in an acceptable electronic format (i.e., PDF), and provide the electronic copy to NSDSA for loading into the NETL.

5.5.3.5 Final Duplication Package. Table 5.5-2 provides a list of the items that should be contained in the final duplication package when DLA Document Services is used to duplicate and distribute paper TMs or digital storage media containing TMs.

Table 5.5-2 Final Duplication Package Contents

	Contents	Paper	Digital Storage Media
1.	Final Reproducible Copy (FRC) for paper TM products: • Paper master, or • Electronic master file	X	
2.	Master for digital storage media and packaging: • Certified ATIS-Compatible CD-ROM or DVD (contains electronic TM master file(s), .NDX file, readme file, etc.) • FRC or file for CD-ROM/DVD labeling/packaging		X
3.	Bar coded NSN per NAVSUP P-734, displayed upon the item, or the direction for DLA Document Services to create and affix the bar code in appropriate location. If TM was developed in accordance with SNIPP, the bar code will be automatically inserted on the cover/title page.	X	X
4.	DoD Printing Requisition Order – DD Form 282, or the use of on-line submission to DLA Document Services	X	X
5.	Publications Running Sheet or Collation Data Record Form (Use local DLA Document Services form), as needed	X	
6.	Shipping Labels (bulk) – If sending TM assets (paper TMs or digital storage media) to supply system	X	X
7.	If DLA Document Services is to perform distribution, Distribution List and Mailing Labels (one set for unclassified, two sets for classified/restricted)	X	X
8.	Shipping Labels or the direction for DLA Document Services to ship to appropriate NAVICP designated warehouse using proper shipping labels, as required	X	X

5.5.4 Initial Distribution.

5.5.4.1 SNIPP Digital Distribution. The SNIPP provides the following in support of initial distribution and stock:

- ► Placement of electronic version of the TM in the NETL
- ► Digital distribution to ships and shore sites with a Tecnical Data Knowledge Management (TDKM) retailer via TDKM
- ► Distribution via the NSDSA Initial Distribution process for ships without TDKM capability
- ► View/download access for individuals to the TM or revision via TDMIS
- ► Links from the NLL to view/download the TM or revision within TDMIS (TDMIS account required)
- ► Provides a TMPOD-compatible electronic copy of the TM to NSDSA for use within the TMPODS.

The remaining required initial distribution is determined by the program and can consist of any combination of the following as needed: distribution of paper copies (to ships only or to a wider distribution), distribution of TM on digital storage media, or notification to users that the TM is

available digitally (via NLL/TDMIS). When TDMIS view/download access is being used as a part of distribution, Government TM managers can grant access to specific TMs as part of the distribution process. Specific instructions on how to perform on-line access functions is provided in TDMIS training courses (see section 2.4). It is the responsibility of the TM manager to notify the intended recipients if required. The TMPOD copy is primarily used for ships ordering replacement hardcopy TMs or revisions relieving the program's requirement to provide paper stock to the supply system.

5.5.4.2 Paper TMs or Digital Storage Media. When a program deems it necessary, distribution of paper TMs or TMs on digital storage media by mail shall be accomplished by use of a TDMIS developed distribution list. Refer to section 5.3 for details on developing and maintaining distribution lists. Distribution shall include NSDSA and, where appropriate, copies for stock within the supply system.

5.5.4.3 Distribution to the Supply System. To ensure all formats of a TM are properly supported within the supply system, the following is provided:

a. Within the SNIPP distribution process:
   - ► Unclassified TM digital files - Files are provided to the NETL for use in viewing via TDMIS as a part of the process (future capability to include classified/restricted TMs)
   - ► TMs that are TMPOD compatible - Requires a TMPOD-compatible file to be provided to NSDSA for placement within the TMPOD system.

b. Program-distributed TM products:
   - ► Digital Storage Media containing TMs - Requires one copy of the digital storage media to be provided to the NAVICP designated warehouse for use within the BOD system
   - ► TMPOD-compatible digital or paper TMs - Requires a TMPOD-compatible file to be provided to NSDSA for placement within the TMPOD system; this requirement also applies to digital TMs only distributed on digital storage media
   - ► Non-TMPOD-compatible paper TMs - Requires hard copies to be provided to the NAVICP designated warehouse and two copies to NSDSA. (Note: The program is responsible for stock replinishment of these TMs.)

5.5.4.4 Distribution of Advance Change Notices (ACNs). ACNs are to be distributed within ten (10) days of assigning the ACN number within TDMIS (see paragraph 4.6.4). Depending on the form and distribution process for the ACN/affected TM, ACNs should be distributed by the fastest means possible, such as naval message. Regardless of how the ACN is distributed, NSDSA (UIC N46678) shall be included as an addressee. The TM Manager is responsible for distribution copies of ACNs to all authorized activities needing the information. The distribution list for the affected TM can be used as the basis for defining the distribution requirements for the ACN. TDMIS can be used to develop distribution lists to support ACN distribution by mail (see paragraph 5.3.3). ACNs are not stocked as supply system items; filling requests for additional copies is the responsibility of the TM Manager. Where appropriate, ACNs can be uploaded into TDMIS and can then be used as a source of additional ACN copies. In order to be uploaded into TDMIS the ACN must be against an unclassified TM/non-restricted and be of a format accepted for uploading within TDMIS.

SECTION 5.6 TM MATERIAL STORAGE

5.6.1 Introduction to TM Material Storage. This section describes the receipt and storage of copies and final reproducible copy (FRC) and records for NAVSEA TMs and TM products, whether in paper or digital form to facilitate inventory replenishment and future.

5.6.2 TM Material Storage Responsibilities. Table 5.6-1 identifies the responsibilities for TM Material Storage.

Table 5.6-1 Responsibilities – TM Material Storage

Activity/Function	Responsibility
NSDSA	1. Utilize the NETL to provide a centralized location for storage of reference copies (paper, digital storage media, or digital copies) of current, cancelled, superseded, or obsolete TMs. 2. Validate TM information for distributed TM products within TDMIS. 3. Update the status within TDMIS for distributed TMs or digital storage media.
NSWC CD Philadelphia Detachment	Maintain the CMS/NPA as a storage location for TM files developed within the SNIPP.
TM Manager	1. Utilize the SNIPP for development and storage of TM source files and presentation files. 2. For TMs not developed/maintained within the SNIPP, retain FRC or digital media masters for assigned TMs or ship to NSDSA for storage in the NETL.

5.6.3 Naval Engineering Technical Library (NETL). The NETL provides a centralized location to store a reference copy of all current, cancelled, superseded, or obsolete NAVSEA and SPAWAR TMs. The NETL:

- Provides data access, retrieval, and disposal functions
- Provides reference loan copies to Command Headquarters or authorized field offices
- Stores and preserves FRC or digital media masters of TMs, revisions, and changes
- Reflects status of stored items in TDMIS.

The NETL is comprised of two parts, a library facility maintaining paper TM copies and the digital portion maintaining electronic versions.

a. The library facility stores a central collection of hardcopy TMs, as well as provides storage space for FRC or digital media masters on digital storage media of TM products.

b. The digital arm of the NETL stores reference copies of current, cancelled, superseded, or obsolete TMs that are available in digital format. The NETL is interfaced to TDMIS allowing viewing of selected TMs from within TDMIS.

5.6.4 TM Masters Storage.

5.6.4.1 TM Source and Presentation Files. For TMs developed within the SNIPP, the Content Management System/NAVSEA Publishing Application (CMS/NPA) provides storage for TM source files and presentation files as part of the TM development process.

5.6.4.2 FRC and Digital Storage Media Masters. For TMs not developed/maintained within SNIPP, TM Managers are to ensure proper storage and maintenance of FRC/digital storage media masters. When requested by the TM Manager, the NETL will provide storage for hardcopy or digital FRC.

5.6.5 Distribution Copy. Distribution copies of every distributed TM in all distributed formats shall be provided to NSDSA (see paragraph 5.3.4). NSDSA uses the final distributed TM products to ensure the TM information within TDMIS Publication Records and CDROM Records are correct, as well as update the TM and digital storage media status to indicate the distributed status (e.g., “FI” (Final Issue)).

CHAPTER 6
PHASE 4 – TECHNICAL MANUAL DISPOSAL

SECTION 6.1 TECHNICAL MANUAL DISPOSAL

6.1.1 Introduction to Technical Manual Disposal. This chapter addresses the disposal phase of Naval Sea Systems Command (NAVSEA) technical manual (TM) life cycle support. The disposal phase includes actions required to identify and dispose of, and update the records for TMs or digital storage media (i.e., Compact Disks-Read Only Memory (CD-ROMs) or Digital Versatile Disks (DVDs)) no longer required to support ships, systems, or equipment. This chapter contains the following major sections:

6.1 Technical Manual Disposal
6.2 Identification and Initiation of Status Update
6.3 Material Disposition

6.1.2 Technical Manual Disposal Responsibilities. Table 6.1-1 identifies the responsibilities for TM Disposal, including Status Update and Material Disposition.

Table 6.1-1 Responsibilities – Technical Manual Disposal

Activity/Function	Responsibility
Program Authority Activity	Budget, task, and fund the costs to dispose of TMs supporting assigned ships, systems, or equipments.
NSDSA	1. Establish and maintain implementing procedures for the orderly and prompt identification and disposition of superseded, cancelled, or obsolete TMs and digital storage media. 2. Maintain the Technical Data Management Information System (TDMIS) – Configuration Data Managers' Database – Open Architecture (CDMD-OA) interface to collect configuration information on obsolete ships, systems, and equipment and use this information to identify candidate obsolete TMs. 3. Coordinate disposition decisions with Technical Manual Management Activities (TMMAs). 4. Update and maintain publication status in TDMIS, including by means of responding to Customer Service Requests (CSRs) to update status and by uploading digital storage media .NDX files. 5. Identify superseded, cancelled, or obsolete TMs or digital storage media to Naval Inventory Control Point (NAVICP) Philadelphia. 6. Ensure one copy of each TM is maintained within the Naval Engineering Technical Library (NETL) as a historical copy. 7. Ensure the NETL is purged of excess materials associated with superseded, cancelled, or obsolete TMs or digital storage media. 8. Maintain liaison with the Washington National Records Center and coordinate the historical or archival retention of TMs. Transfer one copy of any obsolete TM to the Washington National Records Center in accordance with SECNAV M-5210.1.

Table 6.1-1 Responsibilities – Technical Manual Disposal

Activity/Function	Responsibility
NAVICP Philadelphia	1. Dispose of stock copies for superseded, cancelled, or obsolete TMs or digital storage media per NAVSUP P-734 and in accordance with security regulations. 2. Notify Defense Logistics Agency (DLA) Document Services to remove files for superseded, cancelled, or obsolete TMs from the Technical Manual Print on Demand System (TMPODS) or the Burn on Demand (BOD) System. 3. Provide copies of TM products to the Naval Systems Data Support Activity (NSDSA) when needed as a historical copy.
DLA Document Services	1. Upon receipt of notification from the NAVICP Philadelphia, remove superseded, cancelled, or obsolete TM files from TMPODS. 2. Provide copies of TM files to NSDSA when needed as a historical copy.
TM Manager	1. Identify and determine when assigned TMs or digital storage media are no longer required and should be superseded, cancelled, or identified as obsolete. 2. Ensure TDMIS Publication Records and CDROM Records are maintained current with “New/Old Information”. 3. Using a CSR, notify NSDSA when a TM or digital storage media status requires change to an inactive status. 4. Review and evaluate disposition recommendations and provide comments back to NSDSA when requested. 5. Provide copies of TM products to NSDSA when needed as a historical copy. 6. Direct disposition of superseded, cancelled, or obsolete TM product stock held at alternate carrying points or other locations. 7. Determine and direct the disposition of Final Reproducible Copy (FRC) and other associated materials and records for superseded, cancelled, or obsolete TM products in accordance with SECNAV M-5210.1, security regulations, and local destruction procedures.

SECTION 6.2 IDENTIFICATION AND INITIATION OF STATUS UPDATE

6.2.1 TMs No Longer Needed. The TM Manager shall ensure assigned TMs that are no longer required to support ships, systems, or equipment are identified as such in TDMIS. The three designations for TMs no longer required are:

a. *Superseded (SU)* -- Replaced by a newer revision. Used when a revision to the existing TM replaces the TM in its entirety or the information has been incorporated into other NAVSEA TM(s) for all users.

b. *Cancelled (CA)* -- Publication not required. Typically used when duplicate TMs are identified; one of the TMs would be designated as "CA".

c. *Obsolete (OB)* -- Equipment is obsolete. Used when the ship, system, or equipment covered by the TM no longer exists or has become obsolete for U.S. Navy use.

TMs that are no longer used for the U.S. Navy, but are being used in support of a Foreign Military Sales (FMS) case, shall be designated as "FV" (foreign vessel). TMs that cover ships, systems, or equipments that are no longer in active use by the U.S. Navy (e.g., stricken from the Naval Vessel Register (NVR)) but may be transferred for other use will retain the "FI" (Final Issue) status until final disposition is determined.

6.2.1.1 Superseded TMs. A TM is designated as "SU" (superseded) when another TM or a later version of the TM replaces the TM in its entirety. TMs that become superseded are designated as such within TDMIS by NSDSA based upon one or more of the following after the newer/updated TM is received:

a. Uploading of a digital storage media .NDX file. For digital storage media containing a superseding TM, NSDSA's receipt and upload of the .NDX file into TDMIS changes the statuses for the newer/updated TM to "FI" (Final Issue) and the prior TM to "SU" if the "New/Old Information" is properly identified in the TDMIS Publication Record for the affected TMs (see paragraph 4.3.3.2.i). "New/Old Information" is used to identify TMs that supersede or are superseded by the subject TM for the Publication Record being viewed.

b. As a part of NSDSA's TM-to-TDMIS data verification process for final TMs.

c. A supersedure notice is contained on the cover, title page, or opening screen of a newer/updated TM after the newer/updated TM has been distributed.

d. Superseding information was provided in the Technical Manual Identification Number Request (TMIN-R) when the Technical Manual Identification Number (TMIN) for a superseding revision was requested.

e. By request of the TM Manager through a CSR submitted to the NSDSA website (see appendix D).

6.2.1.2 Cancelled and Obsolete TMs. A TM is designated as "CA" (cancelled) or "OB" (obsolete) when the TM is no longer required as defined in paragraph 6.2.1. A status change is

initiated to designate TMs as cancelled or obsolete within TDMIS whenever one of the following occurs:

a. TM Manager requests a TM status to be changed to “CA” or “OB”. These requests are to be made by CSR submitted via the NSDSA website (see appendix D).

b. Someone other than the TM Manager requests a TM status to be changed to “CA” or “OB” via a CSR. NSDSA coordinates evaluation of these status change requests with the TM Manager prior to changing the status.

c. NSDSA identifies a TM as candidate for cancellation or obsolescence from configuration information received from CDMD-OA or from ships being stricken from the NVR. NSDSA coordinates evaluation of these potential TM status changes with the TM Manager prior to changing the status.

6.2.1.3 Never Issued TMs. A TM or TM update is designated as “NI” (never issued) when a TM or TM update number was assigned in TDMIS, but was never developed and/or distributed. A status change is initiated by the TM Manager to designate an assigned TM or TM update number as “NI” when it is determined that the number will not be used. Additionally, when the estimated distribution date within the TDMIS Publication Record for a TM or TM update with a status of “UD” is more than three years past the due date, the status is automatically changed to “NI” (see paragraph 4.3.8).

6.2.2 Identification of Digital Storage Media No Longer Needed. In addition to ensuring TM status is updated for TMs that are no longer required, maintenance of digital storage media status is required. A digital storage media that has been assigned a Volume Identification (Vol ID) number and contains TMs is to be designated as “SU” (superseded) or “CA” (cancelled) as described in the following paragraphs.

6.2.2.1 Superseded Digital Storage Media. A digital storage media is designated as “SU” when the digital storage media has been replaced by a later digital storage media and all of the required TMs on the digital storage media have been reissued to all applicable holders of the TMs.

a. NSDSA’s receipt and upload of the superseding digital storage media’s .NDX file into TDMIS (see paragraph 5.5.4.3) changes the statuses for the newer/updated media to “FI” (Final Issue) and the prior media to “SU” if the “New/Old Information” is properly identified in the TDMIS CDROM Record for the affected media (see paragraph 4.3.6.3). “New/Old Information” is used to identify digital storage media that supersede or are superseded by the subject media for the TDMIS CDROM Record being viewed.

b. A request to change a digital storage media status to “SU” may also be submitted by CSR via the NSDSA website (see appendix D). If the request is from someone other than the TM Manager, NSDSA coordinates evaluation of the status change request with the media’s TM Manager prior to changing the status.

6.2.2.2 Cancelled Digital Storage Media. Digital storage media is designated as “CA” when all the TMs contained on the media are no longer required and are designated as some

combination of superseded, cancelled, or obsolete. A status change is initiated to designate digital storage media as “CA” within TDMIS whenever one of the following occurs:

a. A request to change a status to “CA” is submitted to NSDSA. These requests should be made via a CSR. If the request is from someone other than the TM Manager, NSDSA coordinates evaluation of the status change request with the digital storage media’s TM Manager prior to changing the status.

b. NSDSA identifies the media as candidate for cancellation from the status of all TMs contained on the digital storage media, configuration information received from CDMD-OA, or from ships being stricken from the NVR. NSDSA coordinates evaluation of these potential status changes with the TM Manager.

6.2.2.3 Never Issued Digital Storage Media. Digital storage media is designated as “NI” (never issued) when the media has a Vol ID assigned in TDMIS, but was never developed and distributed. A status change is initiated by the TM Manager to designate an assigned Vol ID number as NI when it is determined that the Vol ID will not be used. Additionally, when the estimated distribution date associated with a Vol ID with a status of “UD” is more than three years past due, the status is automatically changed to “NI” (see paragraph 4.3.8).

SECTION 6.3 MATERIAL DISPOSITION

6.3.1 Introduction to Material Disposition. Material shall be destroyed in accordance with applicable security regulations and distribution statements, destruction notices, classification markings, and local destruction procedures.

6.3.2 Historical Copies. The NETL is the central repository for historical, or record, copies of NAVSEA TMs. The NETL shall retain one copy of TMs and TM updates for reference purposes in the most economical format available. When the status for a TM product is changed to superseded, cancelled, or obsolete, NSDSA verifies that a copy is available in the NETL. If the TM was developed and/or distributed within SNIPP, the NETL will have the required digital historical copy. If a copy is not available in the NETL, a copy is either obtained from supply system if available, or requested from the TM Manager. NSDSA also maintains liaison with the Washington National Records Center to coordinate the historical or archival retention of TMs in accordance with SECNAV M-5210.1.

6.3.2.1 Digital TMs. When the status for a TM that has an available digital file is changed to superseded, cancelled, or obsolete, NSDSA retains a copy of the digital file and disposes of any paper copies, extra digital storage media, or reproducible material within the NETL. TM digital files may be obtained from sources such as the NETL digital copy provided as part of the SNIPP distribution process, the distribution copy of a CD-ROM or DVD containing TMs, NSDSA TM conversion projects, or TMPODS.

6.3.2.2 Paper TMs. When the status for a paper only TM is changed to superseded, cancelled, or obsolete, NSDSA retains one copy in the NETL and disposes of any extra copies and reproducible material within the NETL.

6.3.3 Stock Copies. Once a TM product's status within TDMIS has been changed to superseded, cancelled, or obsolete, TDMIS sends a notification to the NLL. The information provided to the NLL includes instructions for disposition. When required, disposition instructions can also be provided via the Disposal Request on-line in the NLL. Any outstanding requests for cancelled or obsolete TM products are cancelled/rejected by NLL; outstanding requests for superseded TM products are automatically filled with the superseding TM product.

6.3.3.1 Stock Copies at NAVICP Designated Warehouse/TMPODS/BOD. Upon notification that an item is cancelled, obsolete, or superseded, NAVICP Philadelphia takes action to dispose of stock copies, including notification to the storage site to delete the TM's digital files from TMPODS/BOD.

6.3.3.2 Stock Copies at Alternate Carrying Points. For TM products stocked at alternate carrying points, the TM Manager is responsible to ensure unneeded stock is destroyed and purged from the alternate carrying point.

6.3.4 Disposition of TM Records. The TM Manager is to determine the disposition of TM records, which includes FRC, master digital files, program records, and other associated material when a TM product is superseded, cancelled, or identified as obsolete.

6.3.4.1 Disposition of FRC and master digital files for TMs not stored in the NETL shall include ensuring a historical or record copy is available to the NETL prior to destruction of FRC and master digital files. FRC and master digital files are to be destroyed in accordance with security regulations and local destruction procedures when a publication is superseded, cancelled, or obsolete, or it has been determined that artwork, negatives, or other material or reproducibles are no longer usable or needed for further reproduction.

6.3.4.2 Records associated with TM development, Technical Manual Quality Assurance (TMQA), and acceptance/approval (e.g., validation/verification certifications) of a basic TM that has been superseded should be retained for the life of the ship, system, or equipment, as those records still apply to content contained in the succeeding TM revisions. Disposition of program records, contracting records, and other associated records and material is to be determined based upon the requirements defined in SECNAV M-5210.1.

APPENDIX A
TECHNICAL MANUAL MANAGEMENT PROGRAM
LIST OF ACRONYMS AND ABBREVIATIONS

Table A-1. Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
A	
ACN	Advance Change Notice
ALS	Acquisition Logistics Support
APL	Allowance Parts List
ATC	Attention To Code
ATIS	Advanced Technical Information Support
B	
BCA	Business Case Analysis
BLDG	Building
BOD	Burn on Demand
C	
CA	Cancelled (TDMIS status code)
CAGE	Commercial and Government Entity
CCB	Configuration Control Board
CDMD-OA	Configuration Data Managers' Database – Open Architecture
CDRL	Contract Data Requirements List
CD-ROM or CDROM	Compact Disk – Read Only Memory
CGM	Computer Graphic Metafile
CI	Commercial Item
CLIN	Contract Line Item Number
CMS	Content Management System
CO	Contracting Officer
COR	Contracting Officer's Representative
COTS	Commercial Off-The-Shelf
CSR	Customer Service Request
CY	Calendar Year
D	
DADMS	DON Application and Database Management System
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DLA	Defense Logistics Agency (Document Services)
DoD	Department of Defense
DoDINST	Department of Defense Instruction
DON	Department of the Navy
DSAP	Defense Security Assistance Program
DSN	Defense Switched Network
DSPMO	Designated Ship Program Management Office
DTD	Document Type Definition

Table A-1. Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
DVD	Digital Versatile Disk
E	
ETM	Electronic Technical Manual
F	
FAQ	Frequently Asked Questions
FAR	Federal Acquisition Regulation
FI	Final Issue (TDMIS status code)
FMP	Fleet Modernization Program
FMS	Foreign Military Sales
FOIA	Freedom of Information Act
FOSI	Format Output Specification
FOUO	For Official Use Only
FRC	Final Reproducible Copy
FTM	Final Technical Manual
FTTD	Fleet Tailored Technical Data
FV	Foreign Vessel (TDMIS status code)
FY	Fiscal Year
G	
GFI	Government Furnished Information
GOTS	Government Off-The-Shelf
GSO	General Specifications for Overhaul
H	
HM&E	Hull, Mechanical, and Electrical
I	
ICP	Inventory Control Point
IDDE	Integrated Digital Data Environment
IETM	Interactive Electronic Technical Manual
ILS	Integrated Logistic Support
IOC	Internal Office Code
IPB	Illustrated Parts Breakdown
IPR	In-Process Review
ISEA	In-Service Engineering Agent
ISO	International Organization for Standardization
ISP	Information Security Program
IT-21	Information Technology for the 21st Century
ITP	Index of Technical Publications
J	
JSEOD	Joint Service Explosive Ordnance Disposal
L	
LCM	Life Cycle Manager
LMI	Logistics Management Information
M	
MCR	Manual Change Request

Table A-1. Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
MILSTRIP	Military Standard Requisitioning and Issue Procedures
MPA	Manual Preparing Activity
N	
NA	Not Applicable
NAVAIR	Naval Air Systems Command
NAVEODTECHDIV	Naval Explosive Ordnance Disposal Technology Division
NAVICP	Naval Inventory Control Point
NAVPUBINST	Naval Publications Instruction
NAVSEA	Naval Sea Systems Command
NAVSEAINST	Naval Sea Systems Command Instruction
NAVSEALOGCEN-DETLANT	NAVSEA Logistics Center Detachment Atlantic
NAVSHIPYD	Naval Shipyard
NAVSO	Naval Supply Office
NAVSUP	Naval Supply Systems Command
NAVSUPINST	Naval Supply Systems Command Instruction
NAVSURFWARCEN-DIV	Naval Surface Warfare Center Division
NDE	Naval Data Environment
NDI	Non-Developmental Item
NETL	Naval Engineering Technical Library
NETWARCOM	
NI	Never Issued (TDMIS status code)
NIAPS	Navy Information/Application Product Suite
NLL	Naval Logistics Library
NMCI	Navy Marine Corps Intranet
NMP-MOM	Navy Modernization Process – Management and Operations Manual
NO.	Number
NOFORN	No Foreign Nationals
NPA	NAVSEA Publishing Application
NSDSA	Naval Systems Data Support Activity
NSLC	Naval Sea Logistics Center
NSN	National Stock Number
NSTM	Naval Ships' Technical Manual
NSWC	Naval Surface Warfare Center
NSWCCD	Naval Surface Warfare Center Carderock Detachment
NVR	Naval Vessel Register
O	
O&MN	Operation and Maintenance, Navy
OB	Obsolete (TDMIS status code)
OP	Ordnance Publication
OPN	Other Procurement, Navy
OPNAV	Office of the Chief of Naval Operations

Table A-1. Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
OPNAVINST	Office of the Chief of Naval Operations Instruction
P	
PDF or pdf	Portable Document Format
PEO	Program Executive Office
PMO	Program Management Office
PMS	Planned Maintenance System
POC	Point of Contact
POD	Print on Demand
PPL	Preferred Product List
PR	Procurement Request
PSA	Program Sponsor Activity
PY	Planning Yard
Q	
QA	Quality Assurance
R	
RA	Requesting Activity
RAC	Rapid Action Change
RDC	Review Draft Copy
RDT&EN	Research, Development, Test and Evaluation, Navy
REV	Revision
RFP	Request for Proposal
RGL	Reading Grade Level
RIC	Repairable Identification Code
RMC	Regional Maintenace Center
ROD	Report of Discrepancies
S	
SA	Supportability Analysis
SAP	Security Assistance Program
SAS	Supportability Analysis Summary
SCN	Shipbuilding and Conversion, Navy
SECNAVINST	Secretary of the Navy Instruction
SGML	Standard Generalized Markup Language
SHAPM	Ship Acquisition Program Manager
SHIPALT	Ship Alteration
SMART-T	Streamlined Modular Acquisition Requirements Tailoring Tool
SME	Subject Matter Expert
SNDL	Standard Navy Distribution List
SNIPP	Standard NAVSEA Integrated Publishing Process
SOW	Statement of Work
SPA	Stocking Point Activity
SPAWAR	Space and Naval Warfare Systems Command
SPM	Ship Program Manager
SSCC	Standard Subject Classification Code

Table A-1. Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
SU	Superseded (TDMIS status code)
SVG	4-12
SWOP	Special Weapons Ordnance Publications
SYSCOM	Systems Command
T	
TDKM	Technical Data Knowledge Management
TDMIS	Technical Data Management Information System
TM	Technical Manual
TMCR	Technical Manual Contract Requirements
TMDER	Technical Manual Deficiency/Evaluation Report
TMIN	Technical Manual Identification Number
TMIN-R	Technical Manual Identification Number Request
TMINS	Technical Manual Identification Numbering System
TMMA	Technical Manual Management Activity
TMMC	Technical Manual Management Course
TMMP	Technical Manual Management Program
TMOP	Technical Manual Organization Plan
TMP	Technical Manual Plan
TMPODS	Technical Manual Print on Demand System
TMQA	Technical Manual Quality Assurance
TMSR	Technical Manual SEATASK Requirements
TMSS	Technical Manual Specifications and Standards
TYCOM	Type Commander
U	
U.S.	United States
UD	Under Development (TDMIS status code)
UIC	Unit Identification Code
URL	Uniform Resource Locator
V	
Vol ID	Volume Identification
W	
WPN	Weapons Procurement, Navy
www	World Wide Web
X	
XML	Extensible Markup Language
3-M	Maintenance and Material Mangement
4 D’s	Definition, Development, Distribution, Disposal

APPENDIX B
TECHNICAL MANUAL MANAGEMENT PROGRAM DEFINITION OF TERMS

The following definitions are in respect to their use within the NAVSEA Technical Manual Management Program (TMMP).

Table B-1 Definition of Terms

Term	Definition
Acceptance	The act of an authorized Government representative by which the Government assumes from another party, ownership of existing and identified supplies tendered, or approves specific services rendered, as partial or complete performance of a contract by a contractor. Acceptance does not preclude the right of the Government to obtain correct and complete material as specified by the contract when such material has been found to be deficient within its guarantee period.
Accuracy	The precision and technical correctness of the contents of a technical manual (TM). Accuracy includes the requirement that the TM reflects the "as built" or "as is" configuration of the associated ship, system, or equipment.
Acquiring Activity	As used within this manual, any Government activity that is responsible for the procurement of TMs and/or the oversight of the development of TMs and TM products.
Acquisition	As used within this manual, the process of procuring TMs, including those obtained from Government preparing activities.
Acquisition Authority Activity	Any Government activity (headquarters or field) having the responsibility for procuring TMs or TM updates in support of a ship, system, or equipment (including modifications). Examples of acquisition authority activities include: ► Ship Acquisition Program Manager (SHAPM) – Responsible for ship acquisitions ► Designated Ship Program Management Office (DSPMO) – Responsible for ship design, construction, and follow-on logistic support; ship overhaul and alternation planning management ► Program Management Office (PMO) – Responsible for systems and equipment life cycle management ► Life Cycle Manager (LCM) – Responsible for systems and equipment life cycle management ► In-Service Engineering Agent (ISEA) – Responsible for electronic, ordnance, and Hull, Mechanical and Electrical (HM&E) systems and equipment engineering support ► Naval Shipyard (NAVSHIPYD) – Responsible for ship overhaul, availabilities, and installation of alterations ► A maintenance activity is considered an Acquisition Authority Activity when the activity is responsible for acquiring TMs

Table B-1 Definition of Terms

Term	Definition
Adequacy	The depth, scope, comprehensibility, and usability of TM content necessary to support ships, systems, equipment, and training tasks at the prescribed installation, operation, and maintenance level.
Administrative Manual	A manual with an assigned Technical Manual Identification Number (TMIN) but used for non-technical purposes.
Advance Change Notice (ACN)	A controlled interim change to selected portions of a TM. An ACN is used when a situation exists that can result in injury or death to personnel, damage to equipment, or stoppage of mission. An ACN is sent to TM users by the fastest means possible such as a Naval message and is to be permanently incorporated into the TM by revision or change within six months of the effective date of the ACN. An ACN is considered a deficiency, not a permanent update.
Advanced Technical Information Support (ATIS) System	ATIS system is the Navy's standard digital-optical system for display and retrieval of technical documentation aboard ships, including TMs.
Alternate Carrying Point (ACP)	A location other than the Naval Inventory Control Point (ICP) designated warehouse designated as the stocking point for a paper TM or CD-ROM containing TMs.
Book Plan	A detailed overview of the proposed content and scope of a TM in compliance with the applicable TMCR/TMSR, Data Item Descriptions (DIDs), and contract/tasking requirements. It includes the anticipated text, illustrations, and tables of a projected TM and describes the planned approach and logic of troubleshooting principles and data. DID DI-TMSS-81813 is used to procure a book plan. Also see **IETM Content Plan**.
Burn on Demand (BOD)	A NAVICP system that provides for production and delivery of qualifying CD-ROMs containing TMs on an as-needed basis to fill requisitions.
Catalog Interface	The electronic method used to communicate publication information to the Navy Supply System's database, known as the Naval Logistics Library (NLL). To support the TMMP, the Technical Data Management information System (TDMIS) interfaces with the NLL through automatically generated requests when a TMIN or Volume Identification (Vol ID) number is requested. This initiates the assignment of a national stock number (NSN) for a TM, TM update, or CD-ROM. TDMIS also provides the NLL updated TM or CD-ROM status. (Formerly known as a Forms and Publications Status Report (FPSR)).
Change or Change Pages	A package of changed or new pages to be inserted into an existing paper-based TM. Change packages are not allowed within the SNIPP; in older legacy TM programs, change packages were used to provide permanent updates.

Table B-1 Definition of Terms

Term	Definition
Classification of Defects	The listing associated with a preparing activity's sampling procedures or plan used for product evaluation to identify TM defects. Applicable to specific product procurements, a listing of possible defects is presented in two categories: ► *MAJOR* (e.g., incorrect, incomplete, or missing maintenance procedures, values and tolerances, or schematics), and ► *MINOR* (e.g., typographical errors).
Commercial Off-The-Shelf (COTS)	Any system, subsystem, equipment, or component designed and manufactured for public sale which is available "off-the-shelf" from a commercial source.
Commercial Off-The-Shelf (COTS) TMs	Manuals available off-the-shelf from the commercial source which include operation, maintenance, and other instructions for commercial equipment. Commercial manuals are developed to support the equipment in the commercial market.
Comprehensibility	The comprehensibility of text or a text-graphics combination is gauged by the extent to which a user understands the material. Comprehensibility is measured by a test constructed from the specific passage involved and other criteria.
Conforming Process	The Standard NAVSEA Integrated Publishing Process (SNIPP) is considered the only conforming process for the acquisition, development, maintenance, storage, and distribution of NAVSEA TMs. It is called "Conforming Process" as the process produces only products that conform to the current Navy Infrastructure, specification, and end user requirements for use and display. **ALSO SEE SNIPP**
Content Management System/NAVSEA Publishing Application (CMS/NPA)	The content management system and publishing application used within the SNIPP for TM source data and presentation files development, storage, and publishing.
Contract Data Requirements List (CDRL), DD Form 1423	A CDRL lists deliverable data items and products cited in the TMCR or DIDs and defines delivery requirements. When incorporated into a contract, the CDRL becomes a binding document for the contractor to comply with in delivering data.
Copy Freeze Date	A defined date after which no technical additions, deletions, or changes will be accepted for incorporation into the TM or TM update. Additions, deletions, or changes identified after that date will be accumulated for preparation of a subsequent TM update.
Data Item Description (DID)	A document that defines the data required of a contractor. The document specifically defines the data content, format, and intended use.
Deficiency Reporting (for TMs)	The means by which an end-user of a TM reports errors or other problems with a TM to the activity responsible for life cycle maintenance of the TM. For NAVSEA, the established method is by use of the Technical Manual Deficiency/Evaluation Report (TMDER), or for urgent situations by Naval Message. **Also see Manual Change Request (MCR).**

Table B-1 Definition of Terms

Term	Definition
Deficient Technical Manual	A TM which is inaccurate, incomplete, difficult to use, or not in conformance with the applicable TMCR/TMSR, specifications, or contract requirements.
Distribution	The process used to get TMs and other technical information products to the activities which require the TMs to perform their mission.
Distribution List	A listing of the addressees to which a TM, TM update, or CD-ROM is to be distributed. TM distribution lists are maintained within TDMIS.
Distribution Statement	A statement used in marking a technical document to denote permissible disclosure and issue without additional approvals or authorizations. Distribution statements for NAVSEA TMs are per SECNAVINST 5510.36.
Document Type Definition (DTD)	The rules file or "tagset" that defines the tags that will be used to create an SGML or XML file. A set of rules specifying the structure and construct naming conventions to be used in the production and validation of XML or SGML content.
DON Policy on Digital Product/ Technical Data	Provides specific guidance to DON activities regarding the acquisition, conversion, or access to digital product/technical data.
Duplication	The process by which digital or hardcopy information products are reproduced for stock, issue, and distribution.
Electronic Technical Manual (ETM)	See **Interactive Electronic Technical Manuals (IETMs)**.
Engineering Review	A review of a proposed TM conducted by preparing or acquiring activity engineering personnel who are technically knowledgeable about the system or equipment.
Equipment	One or more assemblies capable of performing a complete function.
Equipment Designator	A numeric or alphanumeric designation that uniquely identifies a type of an equipment (e.g., AN/RC-20 Radio Set, Computer MK 152 Mod 1).
Extensible Markup Language (XML)	A pared down subset of SGML and is intended for web documents. Tags are used to structure data without regard to formatting and display instructions.
Final Reproducible Copy (FRC)	The copy of a TM or TM update that is used for duplication. The term "FRC" includes all media that may be used (e.g., hard copy or electronic copy).
Final Technical Manual (FTM)	A TM that has been validated, verified, certified, and approved as complete and accurate, and is ready or has been distributed. Within TDMIS, final TMs have a status of "FI" or "FV".
Forms and Publications Status Report (FPSR)	See **Catalog Interface.**
Government Furnished Equipment (GFE)	Components of a system furnished by the Government on the basis of a mutually agreed upon interface. The Government is normally responsible for data support of the GFE.

Table B-1 Definition of Terms

Term	Definition
Government Furnished Information (GFI)	Information, such as TMs and engineering drawings, which provides engineering data and guidance from the Government to contractors and prospective bidders. GFI is specifically identified in a list or schedule in the applicable Request for Bid/Proposal, Contract, or Ship Project Directive.
Guidance and Quality Planning Conference	A conference conducted to ensure the preparing activity's understanding of applicable specifications, Technical Manual Contract Requirements (TMCR), formal instructions, established policies, and program requirements.
IETM Content Plan	A detailed overview of the proposed content and scope of an IETM in compliance with the TMCR/TMSR, DIDs, and contract/tasking requirements. The plan identifies the content arrangement and description of the material to be presented, provides details of the functionality and look and feel of the IETM, describes the approach to be used in presenting procedural information. DID DI-TMSS-81814 is used to procure an IETM Content Plan. Also see **Book Plan**.
Index of Technical Publications (ITP)	A listing of HM&E, electronics, ordnance, and administrative TMs that are required onboard a ship based upon that ship's installed systems and equipment. The listing includes TMs, TM updates, and CD-ROMs required by a ship, TMs supporting a system or equipment, equipment or systems associated with a TM, and additional selected information about TMs. ITPs are generated within and downloaded from TDMIS.
In-Process Review (IPR)	A review of a TM product during the preparation process to assure that it conforms to the contract's or task's TMCR/TMSR requirements and to audit the effectiveness of the preparing activity's quality assurance program.
In-Service Engineering Agent (ISEA)	ISEAs include activities assigned or tasked with life cycle technical responsibilities for ships, systems, or equipment. Within this manual, ISEA is the term used to identify those activities responsible for the technical accuracy and technical certification of NAVSEA TMs distributed to support assigned ships, systems, or equipment. Also see **Planning Yard**.
Interactive Electronic Technical Manual (IETM)	The Interactive Electronic Technical Manual also called interchangeably as an "ETM" or "IETM" is technical information prepared and delivered digitally to an end user intended primarily for electronic display. IETMs may possess various functionality characteristics and may be displayed in either a linear or non-linear (frame-based) format. A TM that has been scanned or developed in a digital data format for electronic display. Both presentation and content are combined to provide users with an interactive ability to locate information.

Table B-1 Definition of Terms

Term	Definition
Life Cycle Management	All aspects of the life of a TM managed and controlled effectively in a "cradle-to-grave" approach. TM life cycle commences with the earliest identifiable statement of requirements, evolves through acquisition and updating, and ends with cancellation, supersedure, or disposal.
Maintenance	All actions necessary for maintaining equipment, or restoring it to a specified condition.
Manual Change Request (MCR)	A method of deficiency reporting for selected submarine related TMs. T0005-AA-GYD-010 and -020 provide information on the use and processing of MCRs.
National Stock Number (NSN)	Assigned by NAVICP Philadelphia, the NSN is a unique 13-digit number assigned to each TM, TM update, or CD-ROM. The NSN is the main number by which a TM, TM update, or CD-ROM is requisitioned from the supply system.
Naval Engineering Technical Library (NETL)	This repository, maintained by NSDSA, stores reference copies of current, cancelled, superseded, or obsolete NAVSEA TMs. The digital arm of the NETL stores TMs that are available in digital format and is interfaced to TDMIS allowing viewing of selected TMs from within TDMIS or links from the NLL.
Naval Logistic Library (NLL)	A web-accessible Naval Supply Systems Command (NAVSUP) database managed by NAVICP Philadelphia. It is the centralized Navy publication catalog, as well as the supply management tool used to requisition TMs, including NAVSEA TMs. The NLL also provides links for on-line TM viewing.
NAVSEA Publishing Application (NPA)	See **Content Management System/NAVSEA Publishing Application (CMS/NPA).**
Navy XML/SGML Repository	Managed by NSWC Carderock, this web-accessible repository includes DON Data Type Definitions (DTDs), Schemas, and Style Sheets, and the Navy Baseline Tag Set. The URL for this repository is provided in appendix D.
Non-Conforming Process	Any process other than the SNIPP that is used for acquisition, development, maintenance, storage, and distribution of TM source data and presentation files. Also see **Conforming Process** and **SNIPP.**
Non-Developmental Item (NDI) TMs	An NDI TM is a TM that has already been developed and is usable to support a new application of the NDI systems or equipments. Within this manual, the term "COTS TM" is used to refer to TMs commercially available as well as existing TMs supporting NDI systems or equipments.
Non-Superseding Revision	A TM revision which does not replace the preceding version of the TM. These revisions are assigned a new TMIN unique from the preceding version of the TM. Example is development of a revision covering a new model or different configuration of an equipment, using the existing TM as the baseline to achieve an effective TM at less cost.

Table B-1 Definition of Terms

Term	Definition
Preliminary Technical Manual (TM)	A validated version of the TM in its final format and style. A preliminary TM is one that has been s ubmitted to the acquiring activity for review, verification, and/or approval, and may be used on a temporary basis pending receipt of the final TM when authorized. A preliminary TM has not received final Government approval.
Preparing Activity	The organization, activity, or company (Government or contractor), that is performing the actual development of the TM products.
Print On Demand (POD) Site	An authorized DLA Document Services location that provides printing of TMs to fill requisitions. Also see **Technical Manual Print On Demand System (TMPODS)**.
Printing	Includes and applies to the processes of composition, platemaking, presswork, binding, micropublishing and the end items produced by such processes and equipment (reference NAVSO P-35).
Publication	Any book, pamphlet, manual, chart, or microform thereof manufactured by any method of printing, duplicating, or reproduction regardless of content, format, quality, distribution, or intended use.
Quality Assurance (QA)	The planned and s ystematic actions necessary to assure that material conforms to established technical requirements and achieves satisfactory performance in service. Also see **Technical Manual Quality Assurance (TMQA)**.
Reading Grade Level (RGL)	A RGL score represents an assessment of the difficulty level of the text. The RGL is determined by sampling and analyzing text. Computations may be manually or with automation. Details on how to determine RGL are provided within applicable TMCRs/TMSRs.
Review Draft Copy (RDC)	A draft copy of the TM or TM update which is submitted for review and acceptance prior to preparation of preliminary and/or final TMs or TM updates.
Revision	A second or subsequent edition of TM. Also see **Superseding Revision** and **Non-Superseding Revision**.
Sampling Plan	As specified in QA program plans, they describe a method of sampling TM products to determine acceptability of product in development.
Schema	A schema describes a model for a whole class of documents. An XML schema describes the structure of an XML document.
Selected Record Data Technical Manuals	TMs which identify critical shipboard arrangements, equipment, and systems. These TMs are under NAVSEA cognizance and a re selected for their value to the ship's force, fleet commands, planning yards, overhaul yards, training commands, and other Navy activities.

Table B-1 Definition of Terms

Term	Definition
Standard NAVSEA Integrated Publishing Process (SNIPP)	SNIPP is the "conforming process" for the acquisition, development, maintenance, storage, and distribution of NAVSEA TMs and is designed to comply with the DON Policy on Technical Data/Digital Product and its use is directed by NAVSEAINST 4160.3B. The process brings together the elements of the TMMP, utilizes Navy infrastructure, and standardizes methodology for NAVSEA TM life cycle management. It ensures final TMs are in conformance with the current Navy infrastructure and other requirements.
Streamlined Modular Acquisition Requirements Tailoring Tool (SMART-T)	A web application tool that provides a fast, easy, and accurate means for defining tailored Technical Manual acquisition and development requirements that conform to current NAVSEA-approved specifications, standards, and NAVSEA Technical Manual Management Program policy. The generated TMCR/TMSR is intended for use in a Solicitation, Contract, Task/Delivery Order, or Government Agency tasking.
Standardized Generalized Mark Up Language (SGML)	A generic set of tags which allow a TM developer to identify such structural elements as paragraphs, sections, headings, etc., within a document.
Superseding Revision	A superseding revision replaces the previous version of a TM completely upon issue. These revisions generally carry the same TMIN as the preceding TM version with a revision designator added (Example: SE000-AA-MMO-010 Revision 1).
System	Two or more items of equipment or components, each having its own functional identify, nomenclature, and TM arranged and interconnected to perform a specific operation.
Technical Data Management Information System (TDMIS)	A web-accessible Department of the Navy (DON) database used to manage and track the life cycle history of TMs. Managed by NSDSA, it contains current and historical information for each TM and is used to perform TM management functions such as assign publication numbers. In addition to NAVSEA TMs, TDMIS tracks TM history for other Systems Commands such as, Space and Naval Warfare Systems Command (SPAWAR) and selected Naval Air Systems Command (NAVAIR).
Technical Manual (TM)	The NAVSEA TMMP encompasses all NAVSEA TMs, technical publications, or technical data that furnish information on the description, installation, operation, test, maintenance, repair, and overhaul of a ship, system, or equipment. TM information may be presented in a digital and/or hard copy format. NAVSEA TMs are divided into three basic categories: General TMs, Ship Level TMs, and System/Equipment TMs.
Technical Manual Certification	A TMQA process by which the acquiring activity attests in writing as to the compliance of the data to the contract/task and TMMP requirements and to the technical accuracy of the TM or TM update. Technical Manual Certification is accomplished on NAVSEA Form 4160/8.

Table B-1 Definition of Terms

Term	Definition
Technical Manual Contract Requirement (TMCR)	Provides general and specific requirements and direction for the preparation and delivery of TMs. The TMCR/TMSR also identifies selected TM management data item deliverables (e.g., TM schedule and status report, TM cost report, TM Quality Assurance (TMQA) Program Plan, TM Book Plan, Validation Plan, Validation Certificate) that are needed in support of the specific TM acquisition. A TMCR is used for contractor-developed TMs.
Technical Manual Deficiency/Evaluation Report (TMDER)	The TMDER is the primary method for the Fleet and other users to identify discrepancies or deficiencies or to offer suggestions for improvement to existing NAVSEA TMs. The most expedient method to submit a TMDER is from within TDMIS, but they can also be submitted via the NSDSA website, or (required for classified/restricted TMs) by hardcopy using NAVSEA Form 4160/1.
Technical Manual Identification Number (TMIN)	A Navy-assigned computer-compatible number that identifies a TM or TM update according to subject or commodity. It provides unique identification and is used to track TMs throughout their life cycle. The numbering system is directed by N0000-00-IDX-000/TMINS, OPNAV Application Guide and Index for the Navy Standard Technical Manual Identification Numbering System (TMINS).
Technical Manual Identification Numbering System (TMINS)	A Navy-assigned computer-compatible numbering system that is used to assign TM identification numbers. The TMINS is documented in N0000-00-IDX-000/TMINS, OPNAV Application Guide and Index for the Navy Standard Technical Manual Identification Numbering System (TMINS).
Technical Manual Management Activity (TMMA)	The activity assigned life cycle management responsibility for NAVSEA TMs. TMMAs are designated, tasked, and funded by the program authority to perform TM management actions in accordance with NAVSEAINST 4160.3. When the activity designated as a TMMA is a contractor, those functions deemed inherently governmental shall be retained and performed by the Government.
Technical Manual Management Activity Point of Contact (TMMA POC)	As listed within the TDMIS Publication Records and CDROM Records, identifies the person assigned by the TMMA to be responsible for management of those specific TM products. Also see **Technical Manual (TM) Manager**.
Technical Manual (TM) Manager	The person assigned by the TMMA to perform TM management actions within the TMMA for assigned publications. These individuals are to be trained prior to assuming TM Manager duties and are identified within TDMIS as the TMMA POC for assigned TM products.

Table B-1 Definition of Terms

Term	Definition
Technical Manual Organization Plan (TMOP)	Describes the general processes, procedures, terms, and conditions governing the planning, selection, preparation, and submission of TMs required for a ship or major/complex system acquisition. It includes the purpose and scope of planned TMs, identifies TMCRs/TMSRs to be used, identifies the interfaces and overlaps between TMs, and provides a proposed development schedule.
Technical Manual Plan	A separate document or a section of a program plan which governs an acquisition project by documenting TM requirements.
Technical Manual Print on Demand System (TMPODS)	A system, sponsored by DAPS, that stores TMs in digital format and provides for production and delivery of qualifying requisitioned paper TMs on an as-needed basis once initial stock has been depleted.
Technical Manual Products	Deliverable items such as TM book plans, IETM content plans, RDCs, preliminary TMs and final TMs, or distributed items such as CD-ROMs containing TMs.
Technical Manual Quality Assurance (TMQA)	The actions necessary to assure that material conforms to established technical requirements and achieves satisfactory performance in service. With TMs, quality assurance is attained through a uniform program of in-process reviews, validations, verification, and certification.
Technical Manual Quality Assurance (TMQA) Program	An effort to establish a high level of confidence that the TM product offered conforms to established and contractually defined technical requirements. A quality assurance program contains required management actions by the acquiring and preparing activities, including in-process reviews, validation, and verification.
Technical Manual SEATASK Requirement (TMSR)	Provides general and specific requirements and direction for the preparation and delivery of TMs. The TMCR/TMSR also identifies selected TM management data item deliverables (e.g., TM schedule and status report, TM cost report, TM Quality Assurance (TMQA) Program Plan, TM Book Plan, Validation Plan, Validation Certificate) that are needed in support of the specific TM acquisition. A TMSR is used for Government-developed TMs.
Technical Manual Team	Comprised of appropriate personnel from both the acquiring and preparing activities necessary to coordinate the development of the TMs, to preserve the integrity of the TM requirements, and to integrate into the TMs the Integrated Logistic Support (ILS) elements required for support of the system or equipment. Teams are generally established in support of major acquisitions or for system or equipment acquisitions of significant criticality or complexity.
Technical Manual (TM) Updates	Within the TMMP, the allowable products used to permanently update an existing TM. Within the SNIPP, updates include revisions or supplements. In older legacy TM programs, change packages were used to provide permanent updates.

Table B-1 Definition of Terms

Term	Definition
Usability	The degree to which a TM enables a user to apply the information it contains in the performance of the specific task described by the material. Perfect usability would be indicated by error-free performance of the described task. The concept of usability is dependent on the skill level of the user; material with a high usability for one person may not be usable by a person with less training. TM usability is also judged by its operational suitability; that is, the material must be legible in the work environment in which it is used and must not specify procedures or tools foreign to the work center.
User	TMs are the basic source of information about a given item of equipment or system and all who use TMs are considered users. This includes personnel who install, operate, maintain, and repair systems or equipment and per sonnel associated with training activities.
Validation	The final quality assurance review required of the preparing activity. During validation the preparing activity demonstrates that the TM meets requirements for technical adequacy and ac curacy and compliance with TMCR/TMSR, specifications, and other contractual requirements.
Validation Plan	Prepared and executed by the preparing activity, the plan contains the methods, procedures, controls, and resources that will be used to accomplish validation of the TMs being procured and developed. Identifies the TMs to be validated, the scope of the validation effort, and provides dates, locations, and validation methods to be used. The plan may include recommendations for combined validation and verification.
Verification	The final quality assurance review by the Government before accepting the TM. During verification, personnel representative of the intended users test the TM to determine its adequacy and suitability as guidance for the operation and maintenance of the system or equipment. Verification is conducted with production equipment at the installation site whenever possible.
Verification Plan	Prepared and executed by the acquiring activity, the plan contains the scope and objectives of the verification process for the TMs covered by the plan. Identifies the TMs to be verified and provides dates, locations, and verification methods to be used.

APPENDIX C
TECHNICAL MANUAL MANAGEMENT PROGRAM
LIST OF REFERENCE DOCUMENTS

Table C-1. Reference Documents

Document Number	Document Title
Defense Federal Acquisition Regulation Supplement (DFARS) 204.71	Uniform Contract Line Item Numbering System
DFARS 252.227-7015	Technical Data – Commercial Items
DFARS 252.227-7027	Deferred Ordering of Technical Data or Computer Software
DFARS 252.227-7030	Technical Data – Withholding of Payment
DI-TMSS-81810	Data Item Description (DID) for Technical Manual Organization Plan (TMOP)
DI-TMSS-81815	DID for Commercial-Off-The-Shelf (COTS) Manual
DI-TMSS-81816	DID for Commercial-Off-The-Shelf (COTS) Manual Supplemental Data
DI-TMSS-81817	DID for Technical Manual Quality Assurance (TMQA) Program Plan
DI-TMSS-81818	DID for Technical Manual Validation Plan
DI-TMSS-81819	DID for Technical Manual Validation Certification
DI-TMSS-81820	DID for Technical Manual Verification Descrepancy/Disposition Records
DI-TMSS-81821	DID for Verification Incorporation Certificate
DoD Directive 5000.1	The Defense Acquisition System
DoDINST 5000.2	Operation of the Defense Acquisition System
DoDINST 7000.14R	DoD Financial Management Regulation
FAR Subpart 7.5	Federal Acquisition Regulation, Subpart 7.5 Inherently Governmental Functions
MIL-HDBK-9660B	DOD Produced CD-ROM Products
MIL-DTL-24784	Detail Specification; Manuals, Technical: General Acquisition and Development Requirements, General Specification for
NAVSEAINST 4160.3B	Technical Manual Management Program (TMMP)
NAVSEAINST 5400.97C	Virtual SYSCOM Engineering and Technical Authority Policy
NAVSUP P-409	MILSTRIP/MILSTRAP Desk Guide

Table C-1. Reference Documents

Document Number	Document Title
NAVSUP P-485	Naval Supply Procedures
NAVSUP P-526	Foreign Military Sales Customer Supply System Guide
NAVSUP P-734	Naval Logistics Library Policy Guide
NAVSO P-35	Department of the Navy Publications and Printing Regulations
N0000-00-IDX-000/ TMINS	OPNAV Application Guide and Index for the Navy Standard Technical Manual Identification Numbering System (TMINS)
SECNAVINST 5000.2D	Implementation And Operation Of The Defense Acquisition System And The Joint Capabilities Integration And Development System
SECNAVINST 5510.34	Disclosure of Classified Military Information and Controlled Unclassified Information to Foreign Governments, International Organizations, and Foreign Representatives
SECNAVINST 5510.36 and SECNAV M-5510-36	Department of the Navy (DON) Information Security Program (ISP) Regulation
SECNAV M-5210.1	Department of the Navy Records Management Program
SL720-AA-MAN-010/020	Fleet Modernization Management and Operations Manual
SL720-AA-MAN-030	Navy Modernization Process Management Operations Manual (NMP-MOM)
S9AA0-AB-GOS-010	General Specifications for Overhaul of Surface Ships (Section 086)
T0005-AA-GYD-010	Procedures for Maintaining Non-Reactor Plant System Manuals or Equipment/Component TMs' Part 1, Manual Holders Guidance Handbook, Responsibilities of Manual Holders
T0005-AA-GYD-020	Procedures for Maintaining Non-Reactor Plant System Manuals or Equipment/Component TMs' Part 2, Responsibilities of Manual Mod Producing Activities, How to Make Changes
- - -	ATIS Compatibility Testing Procedures, Procedures for Submitting Interactive Electronic Technical Manuals for ATIS Compatibility Testing, Document Reference: IETM Development Revision 10 dated July 2006.
- - -	DON Policy on Digital Products/Technical Data 23 Oct 2004

APPENDIX D
TECHNICAL MANUAL MANAGEMENT PROGRAM
POINTS OF CONTACT

Table D-1 Points of Contact

Location/Item	Description	Website/Phone/E-Mail/Address
Advanced Technical Information Support (ATIS) System	Managed by NAVSEALOGCENDET-LANT. Website containing information about ATIS, including procedures for ATIS compliancy certification.	**Website** https://secure.nslc.navy.mil/atis/default.htm **E-Mail** ATIS Help Desk navsea_atis_helpdesk@navy.mil **Phone** Help Line 301-744-4911/ DSN 354-4911
Army Media Distribution Division	Address for sending TM reprints and new items for stock	**Address** U.S. Army Media Distribution Division 1655 Woodson Road St. Louis, MO 63114-6128
ASSIST Database	The official source for all Defense Standardization Program documents	**Website** http://assist.daps.dla.mil/quicksearch
Defense Automatic Addressing System Center (DAASC)	Receives, edits, and routes logistics transactions for the Military Services and Federal Agencies	**Website** https://www.transactionservices.dla.mil/daashome/ **E-Mail** daashelp@dla.mil **Phone** Helpdesk 937-656-3247/DSN 986-3247
Defense Logistics Agency (DLA) Document Services	Activity responsible for document automation and printing within the DoD and the Federal Executive Branch Agencies, encompassing electronic conversion, retrieval, output and distribution of digital and hardcopy information.	**Website** http://www.daps.dla.mil
Navy Data Environment (NDE)	Provides access to Fleet Modernization Program website and documents	**Website** https://www.nde.navy.mil/

Table D-1 Points of Contact

Location/Item	Description	Website/Phone/E-Mail/Address
Naval Air Technical Data and Engineering Service Command (NATEC)	Website providing information on NAVAIR TMs. Point of contact for NAVAIR Air Traffic Control TMs held on board ships.	**Website** https://mynatec.navair.navy.mil/ **Phone** 1-619-545-1888 / DSN 735-1888 **E-mail** Distribution@navair.navy.mil **Address** Bldg. 90, P.O. Box 357031, NASNI San Diego, CA 92135-7031 Attn: Distribution
Naval Engineering Technical Library (NETL)	Managed by NSDSA, a historical repository for NAVSEA TMs. Also includes a digital repository that provides viewing of TMs via TDMIS.	**For contact information, see "Naval Systems Data Support Activity (NSDSA)"**
Naval Inventory Control Point (NAVICP), Philadelphia	Manages the Naval Logistics Library (NLL)	**For contact information, see "Naval Logistics Library (NLL)"**
Naval Logistics Library (NLL) (Navy Publication Index)	Managed by NAVICP Philadelphia, used for stock management of TMs. NLL is the website containing information regarding TM stock and supply. Also available on CD-ROM (NAVICP P2003).	**Website** https://nll.ahf.nmci.navy.mil **Phone** • NLL Customer Service 1-866-817-3130 or 215-697-2626 / DSN 442-2626 • NLL Customer Service, Requisition Status 1-877-418-6824 **E-mail** Nllhelpdesk@navy.mil
Naval Sea Logistics Center (NSLC)	Manages the *Configuration Data Managers Database – Open Architecture*	**Website:** http://www.nslc.navsea.navy.mil
Naval Systems Data Support Activity (NSDSA)	Activity tasked to provide TMMP assistance. Website also provides access to Technical Data Management Information System (TDMIS) and Streamlined Modular Acquisition Requirements Tailoring Tool (SMART-T).	**Website** https://nsdsa.nmci.navy.mil **Phone** Help Desk (805) 228-0669 / DSN 296-0669 **Address** COMMANDER NAVSURFWARCENDIV NSDSA Code 310 4363 Missile Way Port Hueneme, CA 93043-4307

Table D-1 Points of Contact

Location/Item	Description	Website/Phone/E-Mail/Address
Navy Distance Support / AnchorDesk	Provides Naval Forces a single place to learn about, or request, distance support services.	**Website** http://www.anchordesk.navy.mil/ **E-mail** AnchorDesk@Navy.Mil **Phone** 1-877-4-1-TOUCH [1-877-418-6824]
Navy XML/SGML Repository	Managed by NSWC Carderock. Web-accessible repository containing DON DTDs, schemas, styles, and Navy Baseline Tag Set	**Website** http://www.navsea.navy.mil/nswc/carderock/tecinfsys/xml-sgm-rep/index.html
Preferred Products List (PPL) (SPAWAR)	Identifies software assessed to not interfere with IT-21 network applications	**Website** https://navalnetworks.spawar.navy.mil
Report of Discrepancy Form SF 364	Used to report TM requisition receipt discrepancies	**Website** http://www.dtic.mil/whs/directives/infomgt/forms/sfofforms.htm
Streamlined Modular Acquisition Requirements Tailoring Tool (SMART-T) Repository	Managed by NSDSA. Application designed to define acquisition requirements and generate tailored contract requirements. Provides tool for viewing and generating TMCRs/TMSRs.	**Website** https://nsdsa.nmci.navy.mil
Technical Data Management Information System (TDMIS)	Managed by NSDSA. Application designed to manage and track TMs.	**Website** • https://mercury.tdmis.navy.mil • Account/privilege requests or other Customer Service Requests, https://nsdsa.nmci.navy.mil
Technical Manual Deficiency/Evaluation Report (TMDER)	Managed by NSDSA. Method to report discrepancies or offer suggestions to NAVSEA or SPAWAR TMs.	**Website** https://nsdsa.nmci.navy.mil/tmder/tmder.asp **Address** COMMANDER NAVSURFWARCENDIV NSDSA Code 310 TMDERs 4363 Missile Way Bldg 1389 Port Hueneme CA 93043-4307

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Ref: NAVSEAINST 4160.3 NAVSEA S0005-AA-GYD-030/TMMP

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 ½" x 11" on page if additional space is needed.
1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For **CLASSIFIED** TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site https://nsdsa.nmci.navy.mil or mail to: **COMMANDER, CODE 310 TMDERs, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY BLDG 1389, PORT HUENEME CA 93043-4307**

1. PUBLICATION NUMBER	2. VOL/PART	3. REV/DATE OR CHG/DATE	4. SYSTEM/EQUIPMENT ID

5. TITLE OF PUBLICATION	6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-10-xxxx)

7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMMA of Manual (NSDSA will complete)

12. SHIP OR ACTIVITY Name and Address (Include UIC/CAGE/HULL)	13. Phone Numbers:
	Commercial (___) ___-____ DSN ___-____ FAX (___) ___-____

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INCLUDE COMPLETE ADDRESS

USE
PROPER
POSTAGE

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PORT HUENEME CA 93043-4307

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