

**BUSINESS RULES FOR
PUBLICATIONS DEVELOPED USING S1000D**

**NAVAL SURFACE WARFARE CENTER
PANAMA CITY, FL**

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FOREWORD

These business rules should be used to supplement TMCR-NDMS-PCS1LE-000. These business rules dictate how S1000D, an international specification for technical publications, will be used to prepare publications for NSWC Panama City Division (NSWC PCD). Questions or comments about this document should be forwarded to NSWC Panama City Division, Code A24, 110 Vernon Ave., Panama City, FL 32407.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

S1000D is an International Specification for the procurement and production of technical publications. Since S1000D is an international specification attempting to meet the needs of many, it is very broadly written. When preparing documents for NAVSEA S1000D will be used for style, format, data modules, etc., however, content will be authored to meet the requirements of TMCR-NDMS-PCS1LE-000. When preparing documents for NAVAIR, S1000D will be used for style, format, data modules, etc., however, content will be authored to meet the requirements of MIL-STD-3001. In event of conflicts with this document and the other listed reference documents, contact NSWC Panama City Division to resolve the conflict.

Data produced to AECMA S1000D is presented in a modular form, called a data modules. A data module is defined as "the smallest self contained information unit within a technical publication". Individual data modules are identified by a logical and specific numbering system, the Data Module Code (DMC), which permits the use of a database to store and manage the complete information set. The database is referred to as the Common source Database (CSDB).

Data modules have two sections: one containing the content, which is the data required by the user e.g. the description or procedure, the other is the Identification and Status section, which contains all the metadata necessary to control the data module and its configuration. Each item of information, therefore, carries all its own configuration data.

A project's complete technical publications information set is held on a Common Source Data Base (CSDB). The combination of data module code, information types and DM metadata allows a selection of subsets of information to be chosen by query or table of contents designed to meet a specific users needs.

1.2 S1000D VERSION

This revision of the NSWC PCD S1000D Business Rules is written to S1000D version 3.0. For NSWC PCD documents S1000D versions 2.2, 2.3, and 3.0 may be used.

1.3 DOCUMENT PREPARATION REQUIREMENTS

S1000D has been produced to cater for many different types of Publications. Therefore, to make it suitable for a given project, some aspects of tailoring are required. These business rules constitute how the specification will be used in preparation of S1000D technical documents for NSWC PCD in conjunction with TMCR-NDMS-PCS1LE-000. The NSWC PCD business rules will include DOD, DON, and SYSCOM business rules as they become available, and will not conflict or contradict those rules. These business rules shall be referred to in the projects contractual documentation. This tailoring shall not affect the Document Type Definitions (DTD) or its basic philosophies but shall be restricted to tailoring within the specification. Anyone preparing a S1000D publication for NSWC Panama City Division shall prepare that document in accordance with these rules. Any comments or recommendations about these business rules should be directed to NSWC Panama City Division, Code A24.

These business rules constitute the aspects of S1000D that will apply to publications prepared and maintained by NSWC Panama City Division. These rules shall cover the requirements for optional elements, their population from specific data sources and the use of specific values in the project configuration file.

As used in these business rules, a Project is defined as Department of the Navy (DON), A Systems Command (SYSCOM), a program, or an individual equipment or system. Business rules will be defined for each level of responsibility. These NSWC PCD business rules will be used at the program.

1.4 INFORMATION SETS

NAVSEA has prepared information sets to map the content requirements of MIL-DTL-24784 to S1000D. These information sets will be used for all NAVSEA IETMs to ensure the content is the correct depth to

get the information to the user correctly. Copies of the information sets can be obtained from NSW PCD, Code A24.

1.5 DOCUMENT PREPARATION PROCESS

The S1000D standard supports both SGML and XML, however, all documents prepared for NSW PCD will be created in XML to the S1000D issue 2.2, 2.3, or 3.0 schemas. The dtd, schema, etc. provided by S1000D will be used without modification. Detailed directions for the generation of S1000D data is contained elsewhere in this document, but an overview is presented in the following paragraphs.

1.5.1 Evaluate Your Data Break your data into data modules. Think about reusing the data. If data can be referenced in another part of the document, make it a data module. There is no rule that says how much data makes up a data module.

1.5.2 Create a Data Module Requirements List (DMRL) A project will begin with creation of a Data Module Requirements List. A DMRL is used to identify the required data modules for a project. The DMRL supports planning, reporting, production and configuration control, especially in a work share environment.

Creation of the DMRL requires knowledge of the equipment. Subject Matter Experts may be needed to assist in creating a DMRL. DMRL creation entails laying out the data modules that will make up the publication. The appropriate type of data module must be selected, and the data module codes must be selected for the initial data modules.

Create your data module requirements list, then, make up your data module code. The Department of the Navy business rules state if the Expanded Ship Work Breakdown Structure (ESWBS) fits the equipment or system, data modules created will use the (ESWBS) for the standard numbering system (SNS) portion of the data module code. If you cannot use the ESWBS, the standard numbering system in the specification will be used if possible. If the standard numbering system in the specification will not fit, you must document how you determine the data module code you are using. In the DMRL, break your data modules into the appropriate chapter they will populate with publication modules. Remember, the DMRL may change as you start developing the data modules. Keep your DMRL up to date as you progress.

1.5.3 In Process Reviews Normally in process reviews will be conducted at the 30%, 60%, and 90% level. The following is a minimum of what will be reviewed at each In Process Review (IPR).

1.5.3.1 30% In Process Review For the 30% IPR, approximately 30% of the data modules should be completed. This review includes reviewing the XML files to ensure tagging is correct and the data modules will be compatible with the Common Source Data Base. It also includes a technical review to ensure the proper depth of content is being achieved.

1.5.3.2 60% In Process Review For the 60% IPR the majority of the data modules should be completed. This review will look at the XML files to ensure correct tagging as well as reviewing the technical data.

1.5.3.3 90% In Process Review For the 90% IPR all data modules and publication modules shall be complete. This review will look at the XML files to ensure correct tagging as well as reviewing the technical data.

1.5.4 Validation/Verification For VAL/VER each project will decide if PDF copies of each data module will be created or the IETM will be used to ensure the procedures are correct. TMERs will be produced to record all discrepancies found during an IPR. After all VAL/VER comments and changes have been incorporated into the data modules, the data module status will be changed to verified.

1.5.5 Output After the data modules have completed the QA process, they will be used to create an IETM by the project manager. Upon generation of the output, NSW PCD will get ATIS certification for the compact disks going to ships. NSW PCD will then distribute the IETMs as necessary.

1.5.6 Tag IDs Tag IDs are required for Para0, subpara1, subpara2, subpara3, step1, step2, and step3. IDs are not required on subpara4/step4 or lower unless they will be referenced. All figures and tables must have an ID. WARNING, CAUTION or NOTE that is only going to be used once does not need an ID. IDs must be unique within a data module. An ID can be reused in different data modules within the same

IETM. Prior to finishing a data module completeness check should be performed to ensure no IDs are used more than once and the data module complies with the DTD requirements.

1.6 CONTRACTOR REQUIREMENTS

Support contractors preparing S1000D documentation for NSW PCD will normally be required to only produce the technical content for data modules; style and format is controlled by the common source data base and output media. The software associated with maintaining a common source data base and the software to produce electronic or paper manuals will be maintained by NSW PCD. Contractors supporting NSW PCD will prepare data modules, publication modules, graphics, etc to be compatible with the NSW PCD common source data base.

CHAPTER 2

GENERAL REQUIREMENTS

2.1 GENERAL

Chapters 1 and 2 of the specification have general information about the specification and the general documentation process. This chapter will define how Chapters 1 and 2 will be used for NSWC Panama City Division documents.

2.2 PURPOSE

The Department of the Navy (DON) has accepted S1000D as a specification for the procurement, maintenance, and production of technical publications.

2.3 SCOPE

Considerations for the integration of training data and technical data shall be included within the scope of the development of S1000D project business rules and document management plans.

All projects shall develop business rules documenting the tailoring of the S1000D specification for a specific project. These rules shall include documented decisions for every rule required by DON or SYSCOM. Project business rules shall not contradict or supersede SYSCOM business rules. SYSCOM business rules shall not contradict or supersede DON business rules. DON business rules shall not contradict or supersede DoD business rules or requirements contained in S1000D. Business rules shall be developed prior to the start of development of technical data. Business rules shall be updated throughout the life of the project as necessary to reflect the project environment.

S1000D provided DTDs and Schemas shall not be modified.

Depending on applicability to Air, Land, or Sea working groups, US Navy Change Proposal Forms (CPF) shall be submitted through the appropriate working group for consideration by the USSMG.

CHAPTER 3 INFORMATION GENERATION

3.1 GENERAL

This chapter follows chapter 3 of version 3.0 of the S1000D specification. This chapter defines how the elements described in chapter 3 of the specification will be used for NSWC PCD documents.

3.2 DATA MODULE TYPES

The specification defines the data module types that can be used to produce a technical publication. Each data module type has its own DTD and stylesheet. The authorized data module types are:

- Descriptive
- Procedural
- Fault Isolation Information
- Maintenance Planning
- Crew/Operator
- Illustrated Parts Data
- Battle Damage Assessment and Repair
- Wiring Data
- Process
- Technical Information Repository
- Container

3.3 DATA MODULE STRUCTURE

All data modules have a basic structure that is defined in Chapter 3.2 of the specification. The structure of a data module is comprised of two sections:

- Identification and status section
- Content section

All data module sections are defined in the specification. Some elements are mandatory and some are optional. These business rules dictate which elements and attributes will be used for NSWC PCD publications.

3.4 DATA MODULE CONTENT

3.4.1 Information Sets Specification chapter 3.3, paragraph 4. S1000D has information sets describing what data is required to give the reader the proper procedures to accomplish their task. The S1000D information sets as written do not fully meet the requirements of MIL-DTL-24784 or MIL-STD-3001, therefore these standards will be used to determine what content is required for all documents being prepared. NAVSEA has developed information sets so the content requirements of MIL-DTL-24784 will be met when using S1000D. The NAVSEA information sets will be used during creation of all NAVSEA documents. Copies of the NAVSEA information sets are available from NSWC PCD, Code A24.

3.4.2 Zoning Specification chapter 3.3, paragraph 8. Zoning will not normally apply to documents prepared for NSWC PCD. If required, zoning will be discussed when a project is started and a determination made at that time.

3.4.3 Updating Data Modules Specification chapter 3.5, paragraph 1.1. The frequency of updating data modules will be decided by the program manager based on requirements and funding.

3.4.4 Change Marks and Highlights Specification chapter 3.5, paragraph 1.2. Only changes for current change level will be marked and shown. In IETP, markers will be turned off by default. Users shall have ability to turn markers "on" when the end-user wants to see the changes.

3.4.5 Revision Numbers Specification chapter 3.5, paragraph 2.2. The ability to change information during the information generation process can be facilitated by the use of revision numbers, using the attribute inwork between formal releases. Use of this attribute is at the project's discretion.

3.4.6 Data Module Change Specification chapter 3.5, paragraph 4. Individual projects will determine if data modules will be republished if the only change is in the ID/Status section of the data module.

3.4.7 Security Classification Specification chapter 3.6, paragraph 2. All S1000D documents prepared for NSWC PCD will be unclassified.

3.4.8 Quality Assurance Specification chapter 3.7, paragraph 1.2. When directed by the acquiring activity, the preparing activity shall document its TMQA program in a plan that shall describe the scope and approach of the TMQA program. The plan shall detail the organization, planning, and data control to be performed on each TM. The plan shall also provide evidence of the preparing activity's intent and methods for complying with the quality facets of MIL-DTL-24784C or MIL-STD-3001 as applicable. The plan shall require Government review for acceptability. Whether this QA has been performed will be indicated in each data module by the use of <status>/<qa>. Within <qa>, <unverif> indicates that no QA has been performed, and <firstver> indicates that the contractor has performed a QA. <sever> may be added to indicate a second QA by the government. Within each <firstver> and <sever>, @type will indicate the type of verification: "tabtop" - QA on tabletop. Primarily for non-procedural data, compares the technical content to source data to ensure the technical accuracy and depth of coverage. "onobject" - QA on equipment. Using production configured equipment, hands-on performance of the procedure using the technical instructions as written. Using production configured equipment and the technical manual procedure, simulate the actions required by comparing the task steps to the hardware, while not actually removing any equipment. "ttandoo" - Both tabletop and on equipment

3.4.9 In-Process Reviews Specification chapter 3.7, paragraph 2.1. As a minimum, in-process reviews will be conducted at the 30, 60, and 90 percent levels.

3.4.10 Verification Specification chapter 3.7, paragraphs 2.3 and 2.4. Verification as referred to in the specification covers both validation (first verification) and verification (second verification) as we know them. Validation and verification will be performed on all documents prepared for NSWC Panama City Division.

3.4.11 Quality Assurance Program Specification chapter 3.7, paragraph 3.1. It is the responsibility of the contractor maintain a quality assurance program to support technical documentation preparation..

3.4.12 General Writing Rules Specification chapter 3.9.1, paragraph 2. The U.S. Government Printing Office Style Manual will be used as a general guide for standard American English usage. Projects will also use the current version of Webster's International Dictionary of the English Language.

3.4.13 Glossary/Acronym List Specification chapter 3.9.1, paragraph 2. A glossary/acronym data module must be created when technical content users terms/acronyms are not adequately defined in the text, in the Navy, DOD, or standard dictionary. The acronym list will be created in a table the front matter or chapter 1 as dictated by the project. Time every time the acronym is used it will be placed in the acronym element. This will allow the user to see the definition by scrolling over the acronym.

3.4.14 Abbreviations Specification chapter 3.9.1, paragraph 3. Use of abbreviations will be in accordance with MIL-DTL-24784C or MIL-STD-3001 as applicable.

3.4.15 Units of Measure Specification chapter 3.9.1, paragraph 6. Measurements in U.S. standard units (ounces, pounds, gallons, inches, feet, knots, miles, and so forth) except instances in which metric measurements are required. When the metric system is used on the equipment, conversion to U.S. standards shall follow in parentheses.

3.4.16 General Writing Rules Specification chapter 3.9.1, paragraphs 8 and 9. The U.S. Government Printing Office Style Manual will be used as a general guide for standard American English usage. Projects will also use the current version of Webster's International Dictionary of the English Language.

3.5 ILLUSTRATIONS

The requirements for authoring illustrations are contained in Chapter 3.9.2 of the specification. Illustrations should be reused as often as possible to eliminate reproducing the same illustration a number of times.

Illustrations shall be prepared to amplify and clarify the text and to avoid lengthy explanations. They shall be located as close as possible to the related portions of the text. Before the production of project documentation begins, it must be defined which parts of the documentation have to be printable and if the customer is in a position to provide all end users with the technology to use electronic publication functionality such as color displays and color printing. When colored illustrations are to be printed using black and white, it should be ensured that the print medium can handle the file content.

3.5.1 Use of Engineering Drawings Specification chapter 3.9.2.1, paragraph 1. Unless specified by the project, engineering drawings shall not normally be used as illustrations. If they must be used:

1. They shall be in accordance with MIL-STD-100 and MIL-T-31000 (required for new designs after 01 July 1990) and shall be modified, as necessary, to meet the content, style, arrangement, legibility, format, and production requirements described in this document and the contract.
2. All unnecessary data that would reduce the comprehension or clarity of the illustration shall be removed, including the original drawing number and revision status.
3. They must be reduced or redrawn to meet page size restrictions and saved in a format compatible with the NSWC PCD common source data base.

3.5.2 Types of Illustrations Chapter 3.9.2.1 paragraph 6. The illustrations referenced within a data module will normally be line drawings in vector and/or raster form. Full color illustrations, photographs and monochrome (half tones) may be used provided they meet all the requirements to show clear details.

3.5.3 Graphics Format Various formats are acceptable. The requirements for data module illustrations is given in chapter 4.8, paragraph 2.2 of the specification. Graphic standards are supported by the NSWC PCD common source data base are CGM, JPG, GIF, PDF and TIF, however CGM and TIF are preferred. Graphics that will be used for HAZMAT symbols are required to be JPG format. Some multimedia types are supported. If a project decides to use multimedia, contact NSWC Panama City Division prior to starting the project to verify which types are supported.

3.5.4 Page Layout Chapter 3.9.2.1 paragraph 2.1. For ease of reading and cross-reference, the preferred layout is portrait (IPD illustrations are always to be in portrait layout). Fold-outs or landscape shall only be allowed as exceptions, as defined in the project business rules

3.5.5 Printing Illustrations Specification chapter 3.9.2, paragraph 3. Projects must define which parts of the documentation have to be printable. When colored illustrations are to be printed using black and white, the project must ensure the printed illustration is crisp and clear.

3.5.6 Color Illustrations Specification chapter 3.9.2.3 paragraph 2. Use of colors is acceptable for use in line drawings. Projects must approve the extent of the use of color. Drawings that are needed to be printed in the field or on a vessel may not have access to color printers, so fore thought is necessary on the requirements for allowing which drawings can be in color.

3.5.7 Illustration Callouts Specification chapter 3.9.2.1, paragraph 3.2.2. Illustration text should be title case unless the illustration is duplicating the information on the equipment, then the case shall match the duplicated information. An example would be a label plate.

3.5.8 Symbols Specification chapter 3.9.2.1, paragraph 4.1. In order for Contenta View to properly render symbols they must be saved as JPG files.

3.5.9 Use of Color Specification chapter 3.9.2.3, paragraph 3.1. Projects shall have the option to use additional colors to the S1000D standard color palette provided the colors remains consistent across the Project in their use. However, red will always mean danger.

3.5.10 Photographs Specification chapter 3.9.2.3, paragraph 4. Projects should request original images be stored and delivered as part of the source data deliverable. The original images are photographs before any enhancements or changes. The rationale being that once enhancements are added to a photo, changes become more costly or the image must be re-taken.

3.5.11 Use of Photographs Specification chapter 3.9.2.3, paragraph 4. Photographs may be used for illustrations. When a photograph provides for better clarity than a line drawing, the photograph should be used. Photographs will not be used on foldouts. If the intention is to use photographs in lieu of line art, it is preferred that a digital camera be used to produce the required photos. This will negate the use of halftones and the need for retouching and screening. However, if the final reproducible copy is intended to produce paper output, it may be better to prepare line art in lieu of photographs. Obtain approval from NSWC Panama City Division for the use of photographs in paper TMs. In certain instances, such as the requirement to illustrate corrosion damage or wear patterns, a line drawing or a line tracing of a photograph will not contain the necessary detail and clarity. When such illustrative material must be contained in a technical manual, photographic (halftone) illustrations or color overlays may be used. Such information may be contained in a supplement to the maintenance manual if approved by NSWC Panama City Division. The supplement shall contain sufficient information on the purpose of the supplement and technical data (test) to ensure understanding and maintain continuity of information. The basic manual shall identify the supplement and its usage.

3.5.12 Figure Title and Number Specification chapter 3.9.2.2, paragraph 2. Only use the standard method of displaying/printing figure numbers for figures with multiple sheets. The alternate method shown in the specification is not approved for use.

3.6 MULTIMEDIA

Specification chapter 3.9.2.4. Multimedia objects and their presentations are used in support of technical textual data. They must be considered secondary and not used in place of verified text. All multimedia insertions must go through the formal verification process. The range of media types considered suitable for incorporation into IETP systems includes the following:

- Audio
- Video
- Animation
- 3D Modeling

Prior to a project deciding to have multimedia objects in their documents you should get approval from NSWC Panama City Division to ensure the type chosen is properly supported by Contenta and Contenta View.

3.7 WARNINGS, CAUTIONS, AND NOTES

Dangers, warnings, cautions and notes shall be short, concise and used only to emphasize important or critical data. Dangers, warnings and cautions shall state the hazard and result or reason, unless obvious.

3.7.1 Descriptive Text Specification chapter 3.9.3 paragraph 2.2. Warning and Cautions shall not be used in descriptive text.

3.7.2 Vital Attribute in Warnings, Cautions, and Notes Specification chapter 3.9.3 paragraph 2.2.2, 2.3.2, or 2.4.2. The vital attribute for <warning> shall be used to signify between WARNING and DANGER. A "1" will signify DANGER, indicating an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations. A "0" will signify WARNING indicating a potentially hazardous situation which, if not avoided, can result in death or serious injury. The vital attribute will NOT be used to hide warnings. Project-wide dangers, warnings and cautions can be compiled into shareable DMs and a business rule written that requires projects to use. The vital attribute will not normally be used in Cautions and Notes.

3.7.3 Type Attribute in Warnings, Cautions, and Notes Specification chapter 3.9.3 paragraph 2.2.2, 2.3.2, or 2.4.2. The type attribute will not normally be used.

3.7.4 Warnings, Cautions, and Notes as Individual Data Modules Specification chapter 3.9.3 paragraph 2.2.2, 2.3.2, or 2.4.2. Warnings, Cautions, and Notes may not be created as individual data modules.

3.7.5 Notes Specification chapter 3.9.3, paragraph 2.4. If there is more than one note that applies to text they shall not be numbered. Notes shall always immediately precede the text to which they refer.

3.8 FRONT MATTER

The guidelines for producing front matter in a document produced in accordance with S1000D is provided in Chapter 3.9.4 of the specification. There are several optional front matter sections in the specification. Publications prepared for NSWC Panama City Division will follow TMCR-NDMS-PCS1LE-000 or this chapter when preparing front matter.

3.8.1 Title Page Chapter 3.9.4 paragraph 2.1. The title page is generated automatically during the publish process in Contenta. It uses information from the ID Status section of the top level publication module. The publication number must be manually entered in the properties of the top level publication module each time it is checked into Contenta.

3.8.2 Highlights Chapter 3.9.4 paragraph 2.5. The highlights shall give the reasons for the changes of the data modules/illustrations in each change and new issue. The highlights should give the data module code and the reason for change. The highlights shall not list the changes in the list of effective pages, change record or table of contents. Highlights will not be used for a new publication, but will be included with all changes or revisions.

3.8.3 Access Illustration Chapter 3.9.4 paragraph 2.6. This section will not normally be used.

3.8.4 List Of Illustrations Chapter 3.9.4 paragraph 2.16. The list of illustrations as described in the specification will not normally be used.

3.8.5 List Of Effective Pages Chapter 3.9.4 paragraph 2.2. This section will only be used for publications being distributed in paper. Publications distributed in electronic format do not require a List of Effective Pages. Paper manuals will have a list of effective pages.

3.8.6 List Of Effective Data Modules Chapter 3.9.4 paragraph 2.3. The List of Effective Data Modules (LOEDM) is a list which identifies each data module of the publication. This will not be used for publications distributed in electronic format.

3.8.7 Change Record Chapter 3.9.4 paragraph 2.4. Change Record <CR> is intended to provide a continuing record of the state of each individual copy of the publication. The CR shall only be reissued when a new issue is released.

3.8.8 List Of Abbreviations Chapter 3.9.4 paragraph 2.7. The front matter shall identify and define abbreviations used in the manual if not explained elsewhere. When more than 20 abbreviations require definition, a glossary shall be used to identify and define the abbreviations used in the manual.

3.8.9 List Of Terms Chapter 3.9.4 paragraph 2.8. A list of terms will not normally be included in the front matter.

3.8.10 List Of Symbols Chapter 3.9.4 paragraph 2.9. The front matter shall identify and define nonstandard symbols, including any icons used in the manual if not explained elsewhere. When more than 20 symbols, etc. require definition, a glossary shall be used to identify and define the symbols used in the manual.

3.8.11 Technical Standard Record Chapter 3.9.4 paragraph 2.10. A technical standard record will not normally be included in the front matter.

3.8.12 List Of Applicable Specifications Chapter 3.9.4 paragraph 2.12. A list of applicable specifications will not normally be included in the front matter.

3.8.13 Table Of Contents Chapter 3.9.4 paragraph 2.11. The Table of Contents (TOC) gives the title of all documents together with the DMC and its effectivity. The documents shall be presented in the order of appearance in the publication. The TOC shall not include the front matter documents. If the publication is divided with tab dividers a TOC also may be given to each chapter or part.

3.8.14 List Of Support Equipment Chapter 3.9.4 paragraph 2.13. The List of Support Equipment (LOSE) lists the required support equipment, necessary to perform the tasks, described in the publication. This section will not normally be used in the front matter.

3.8.15 List Of Supplies Chapter 3.9.4 paragraph 2.14. The List of Supplies (LOSU) lists the required supplies necessary to perform the tasks described in the publication. This section will not normally be used in the front matter.

3.8.16 List Of Spares Chapter 3.9.4 paragraph 2.15. The List of Spares (LOSP) lists the required spares necessary to perform the tasks described in the publication. This section will not normally be used in the front matter.

3.8.17 Product Cross Reference Table Chapter 3.9.4 paragraph 2.17. This section will not normally be used in the front matter.

3.8.18 Conditions Cross-Reference Table Chapter 3.9.4 paragraph 2.18. This section will not normally be used in the front matter.

3.8.19 Applicability Cross Reference Table Chapter 3.9.4 paragraph 2.19. This section will not normally be used in the front matter.

3.9 IDENTIFICATION SECTION

This section refers to Chapter 3.9.5.1 of the specification. Chapter 3.9.5.1 gives the definitions and guidance for the identification and status (IDSTATUS) section of all types of data modules.

3.9.1 Data Module Code Extension Specification chapter 3.9.5.1, paragraph 2.1.1. The data module code extension will not be used. Content is not currently set up to accommodate data module code extensions.

3.9.2 Deleted/Changed Data Modules Specification chapter 3.9.5.1, paragraph 2.1.4. Deleted and changed DMs shall be retained in the CSDB as part of the source history file. At publication, deleted and changed DMs shall not be provided as part of the delivery media to the end-user.

3.9.3 Change/Revised Data Modules Specification chapter 3.9.5.1, paragraph 2.1.4. All changes will be update revisions only.

3.9.4 Data Module Code Specification chapter 3.9.5.1, paragraph 2.1.2.2. The Data Module Code (DMC) forms part of the unique identifier of a data module. The population of the DMC shall be in accordance with the rules specified in Chapter 4.3 of the specification. DMC shall be prepared by the contractor and submitted to NSWC PCD Code A24 for approval. All DMC will use the <avee> tag, the <age> tag will not be used. The Model Identification section of the Data Module Code must be registered with NATO Maintenance and Supply Agency (NAMSA). NSWC PCD Code A24 will register model identification codes with NAMSA whether a contractor is preparing the documents or the government is preparing the documents.

Data modules created for NAVSEA will use the Expanded Ship Work Breakdown Structure (ESWBS) for the standard numbering system (SNS) portion of the data module code if the ESWBS fits the equipment or system.

3.9.5 Data Module Title Specification chapter 3.9.5.1, paragraph 2.1.3.1. The data module title shall give meaning to the product identification elements of the DMC. The data module title is divided into two parts, the technical name and the information name. An example of the technical name may be “Wheel”, and the information name may be “Removal”. Both tags will be used in NSWC PCD technical publications. A project will generate a list which defines the Standard Numbering System and a list of technical and information names. All data module titles shall be in title case.

3.9.6 Technical Names Specification chapter 3.9.5.1, paragraph 2.1.3.1. Technical names will be from approved nomenclature. If the equipment is in the CDMD-OA database, that name will be used. Technical names must be used consistently through out an IETM.

3.9.7 Info Name Specification chapter 3.9.5.1, paragraph 2.1.3.1. The element infoname is mandatory and shall be used as described in S1000D and as augmented by these business rules.

If a project determines the need to assign a "Not Given" info code, that information code, corresponding information name and definition shall be submitted to NSWC PCD via an S1000D change proposal with the intent to make the request a permanent part of the specification.

3.9.8 In-Work Number Specification chapter 3.9.5.1, paragraph 2.1.4.2. This is the in-work number of the unreleased data module as it's being drafted. It can be used for monitoring and control of intermediate drafts within a project. The initial in-work number shall be set to "01", and shall be incremented with every change to the data module. Use of the in-work number is at the discretion of the activity preparing the data modules.

3.9.9 Issue Number Specification chapter 3.9.5.1, paragraph 2.1.4. Every approved issue of a data module shall receive a consecutive issue number. The initial issue number shall be numbered "001".

3.9.10 Issue Date Specification chapter 3.9.5.1, paragraph 2.1.5. Every issue of a data module shall be allocated an ISO 8601 calendar date in the form YYYY-MM-DD. The issue date shall be the cutoff date from which no further changes are permitted without issuing a formal change. This is normally the "approved date", that is, the date the government accepts the information subject to the inclusion of specified comments. If the acquiring activity does not advise the preparing activity the exact date to use, the issue date shall be the date at which the last material to be included was received.

3.9.11 Language Specification chapter 3.9.5.1, paragraph 2.1.6. The <language> element will be used if the document may apply to the foreign military sales program. The English language code, EN, will be used. No <country> attribute will be assigned. If no foreign military sales usage is predicted, the language element need not be used.

3.10 STATUS SECTION

The data module status section provides information about the status of the data module.

3.10.1 Security Classification Chapter 3.9.5.1, paragraph 2.2.2. The security classification of the complete data module and it contained or associated illustrations is given. All data modules will have an unclassified security classification. For NSWC PCD, all S1000D publications will be unclassified. If a classified publication is required contact NSWC PCD for specific instructions. Priority and the attributes class, commcls and caveat, shall not normally be used.

3.10.2 Data Restrictions Chapter 3.9.5.1, paragraph 2.2.3. Data restrictions are instructions and information, applicable to the data module, that relate to the use, storage and handling. Data modules will include data restrictions. The following elements apply to data restrictions:

3.10.2.1 Applicability Chapter 3.9.5.1, paragraph 2.2.3.2. For NSWC PCD documents it is not permitted to differentiate data restrictions depending on product configuration.

3.10.2.2 Instructions Chapter 3.9.5.1, paragraph 2.2.4. The <instruct> element contains the instructions that are to be followed when data restrictions apply. This element is mandatory when data restrictions apply. All publications prepared for NSWC Panama City Division will have instructions.

3.10.2.3 Distribution Chapter 3.9.5.1, paragraph 2.2.5. The <distrib> element contains the instructions for distribution of a data module. See MIL-STD-1806 for authorized distribution statements. Distribution statements for a project will normally be dictated in the TMCR. All NSWC PCD data and publication modules will contain a distribution statement.

3.10.2.4 Export Control Chapter 3.9.5.1, paragraph 2.2.6. The <expcont> element contains any export control instructions, including storage, that are specific to the data module.

3.10.2.5 Handling Chapter 3.9.5.1, paragraph 2.2.7. The <handling> element will not normally be used.

3.10.2.6 Destruction Chapter 3.9.5.1, paragraph 2.2.8. The <destruct> element must be used on all data modules that have a distribution statement other than A.

3.10.2.7 Disclosure Chapter 3.9.5.1, paragraph 2.2.9. The <disclose> element will not normally be used.

3.10.2.8 Information Chapter 3.9.5.1, paragraph 2.2.10. The <inform> element will not normally be used.

3.10.2.9 Copyright Chapter 3.9.5.1, paragraph 2.2.11. Technical manuals shall not contain copyrighted material except as specified in the Federal Acquisition Regulations and Defense Federal Acquisition Regulation Supplement. When copyrighted material is to be included in a technical publication, the developer shall obtain prior written permission from the copyright owner or authorized agent for its use. The signed, written permission shall be delivered together with the final reproducible copy. The written permission shall contain a statement declaring whether or not a copyright credit line is required. When it is necessary to include copyright and proprietary material, it shall be clearly identified and the following warning statement shall be included on the title page: "This document contains copyright or proprietary materials. Infringement of copyright or proprietary material may violate existing Federal laws and statutes and result in criminal penalties, imprisonment, or removal from office."

3.10.3 Policy Reference Chapter 3.9.5.1, paragraph 2.2.12. The <polref> element will not normally be used.

3.10.4 Conditions Chapter 3.9.5.1, paragraph 2.2.13. The <datacond> element will not normally be used.

3.10.5 Data Module Size Chapter 3.9.5.1, paragraph 2.2.14. The <dmsize> element will not normally be used.

3.10.6 Responsible Partner Company Chapter 3.9.5.1, paragraph 2.2.15. This element will contain the UIC of NSWC PCD, N61331.

3.10.7 Originator Chapter 3.9.5.1, paragraph 2.2.16. Modules may be generated by the responsible company or organization or their suppliers/manufacturers. The originator's code shall be the company name, the NCAE (NATO Commercial And Government Entity), which is the preferred method, or both. Normally, the originator is defined as the designated design authority of the component/equipment, however, projects must nominate the originators.

3.10.8 Applicability Chapter 3.9.5.1, paragraph 2.2.17. Applicability shall indicate the applicability of the data module to a product. How the applicability element will be populated must be determined during the project planning meetings between the contractor and NSWC PCD. This is populated by the technical author or generated by the production system during initial authoring and updating activity of the data module. The applicability, at this level, can be allocated to a single product or range of product or range of ranges of product. However, at the data module level it is to be the totality of all applicability allocations within the content section of the data module. Projects shall decide on how applicability is to be used and which optional elements will be used. The following sub-elements are contained in the <applic> element:

3.10.9 Technical Standard Chapter 3.9.5.1, paragraph 2.2.19. May be used to allow the authorized technical standard and associated data to be entered, describing the information basis used to write the data module. This element will not normally be used.

3.10.10 Business Rules Data Module Reference Chapter 3.9.5.1, paragraph 2.2.20. Must be used to point out the business rules data module (BREX module) that applies to the data module. NSWC Panama City Division has not developed a BREX, so a blank refdm may be inserted in this tag.

3.10.11 Quality Assurance Status Chapter 3.9.5.1, paragraph 2.2.21. Must be used to detail the status of the QA process as required by the project. The data module shall be identified as either being unverified or verified. A data module will be changed from unverified to verified prior to delivery after successful completion of VAL/VER. It is not permitted to differentiate QA information depending on Product configuration.

3.10.12 System Breakdown Code or Functional Item Code Chapter 3.9.5.1, paragraph 2.2.22. The system breakdown code, or an equivalent code, or functional item code may be used at this location. For

those projects that are producing data modules that are in line with other logistic databases the system breakdown code could be used to capture the physical breakdown code. The functional item code could be used to capture the functional breakdown code. This element will not normally be used.

3.10.13 Skill Level Chapter 3.9.5.1, paragraph 2.2.23. May be used to identify the skill level to which the data module has been written. This element will not normally be used.

3.10.14 Reason For Update Chapter 3.9.5.1, paragraph 2.2.24. This element is mandatory at issue, release or during the production process when a data module is revised. It shall give a short explanation of the reason for updating of the data module. As data modules are issued, the previous content of this element should be updated or removed. This element will be used to provide the data for the generated highlights data module.

3.10.15 Remarks Chapter 3.9.5.1, paragraph 2.2.25. This element will not normally be used.

3.11 CONTENT SECTION COMMON CONSTRUCTS

The Content section of a data module shall be constructed in accordance with one of the following eleven information types:

- Descriptive information
- Procedural information
- Fault isolation information
- Maintenance planning information
- Crew/Operator information
- Illustrated parts data information
- Battle damage assessment and repair information
- Wiring data
- Process Data Module.
- Technical information repository data module
- Container data module

These are all described in detail in chapter 3.9.5.2 of the specification. Among these information types there are many common constructs which are described in Chapter 3.9.5.2.1.

3.11.1 Security Classifications Chapter 3.9.5.2.1 paragraph 2. Since all S1000D data prepared for NSW PCD is unclassified, paragraph and step classification markings are not required.

3.11.2 Training Information Chapter 3.9.5.2.1 paragraph 4. If a project decides it wants to use data modules for training as well as the technical document they should contact NSW PCD for guidance.

3.11.3 Change Markings Chapter 3.9.5.2.1.1 paragraph 4. The Change element can be used to the para or step level. Using the change element at the para or step level is not required. If the change element is used the rfc (reason for change) attribute will be completed with a statement of why the change occurred. Cumulative changes shall not occur. Previous change indicators shall be removed when the data module is reissued. This enables the user to quickly see what has changed in a revised IETM.

3.11.4 References Chapter 3.9.5.2.1.2. The <refs> element is used to list all data modules and technical publications that are referenced to in the subject data module. Absence of the <refs> element indicates that there are no references to other data modules or technical publications. The referenced data module or technical publication will include the title, but not an issue number.

References shall be kept to a minimum and shall be limited to Government approved documents such as military specifications and standards, TMs, drawings, engineering change data, and other approved material which will enhance the clarity and support the repair requirements and processes delineated in the manual.

Referring to information in another data module, document or publication is achieved by using the <refdm> element for data modules or <reftp> for other documents or publications. References shall only be given to a document, a set of documents or to a complete publication. In the References table, DM shall be listed in DMC order followed by the technical publication list that will be in publication number <pubcode> order, if necessary. In the References table, DM shall contain the DM title, but not the issue number in the DMC.

Only whole data modules will be referenced, no references shall be made to a part of a data module using the attribute *target* except for HAZMAT references.

3.11.5 Acronyms Chapter 3.9.5.2.1.1 paragraph 7. The <acronym> element is used to define an acronym. It has the attribute *acrotype* which is used to indicate the type of acronym and is populated as described at Chapter 3.9.6 of the specification. The <acroterm> element is used to contain the acronym itself and the <acrodef> element is used to contain the definition of the acronym. The <acrodef> element should be used to define an acronym when ever an acronym is used. This allows the user to roll over the acronym and see the definition.

3.11.6 Lists Chapter 3.9.5.2.1.3 paragraph. Three types of list are provided. These are Sequential List, Random List, and Definition List. These lists may be used as necessary, except a sequence list may not be used in a procedural data module..

3.11.7 Caption Groups Chapter 3.9.5.2.1.4. The <capgrp> element can be used to capture groups of captions that are presented in the form of a table. This element will not be used.

3.11.8 Footnotes Chapter 3.9.5.2.1 paragraph 7.12. Footnotes may be used for bibliographic references or explanations which would take too much space or in any other way would be annoying for the reader. Footnotes can be used in text and in tables. The footnote marker shall be numerical values.

3.11.9 Titles Chapter 3.9.5.2.1.5. In descriptive data modules, titles shall be included for the <para0> element, <subpara1> through <subpara4> element, <table> element, and <figure> element.

In procedural, crew and fault data modules, titles shall be included for the <table> and <figure> elements. Titles may be included for the <step1> through <step4> elements, but are not required.

3.11.10 Tables Chapter 3.9.5.2.1.6. There are two types of tables, Formal and Informal. A formal table consists of four parts, the table title line, the table head, the table rows and the table footer. An informal table is a short, simple table which does not need a table title line, table head and table footer. Informal tables shall normally do not consist of more than three columns/lines. Presentation settings for tables will be handled by the presentation system. Text alignment in tables is handled with the align attribute. The default is left, any other alignment must be set individually with the align attribute. Applicability may be applied to tables as necessary.

3.11.11 Figures - Illustrations Chapter 3.9.5.2.1.7 paragraph 2. A figure consists of one or more illustration sheets and a figure title. Figures are discussed in detail in the specification. For NSWC Panama City Division, the <applic> element may be used for figures and illustrations as necessary. If a legend is required, it will be text in title case, not part of the illustration.

3.11.12 Foldouts Chapter 3.9.5.2.1.7 paragraph 3. The <foldout> element is used to contain a figure which is larger than the default size. The use of foldouts in page oriented publications is not a problem. The use of foldouts in ETP should be limited as the viewer may not be able to handle large illustrations. Foldouts shall not be used to display tables, unless that table is handled as an illustration.

3.11.13 Hotspots Chapter 3.9.5.2.1.8. Definitions for graphical regions are inserted into the markup using the <hotspot> element between the graphic start and end tags. Interactivity for a graphical region is defined using the <xref> element inside the <hotspot> element. Hotspots are encouraged to tie text to a graphic.

3.11.14 Preliminary requirements Chapter 3.9.5.2.1.9. The element <prelreqs> is be used to contain all preliminary requirements for a task

3.11.14.1 Production Management Data Chapter 3.9.5.2.1.9 paragraph 2.1.1. The <pmd> element shall not normally be used.

3.11.14.2 Required conditions Chapter 3.9.5.2.1.9 paragraph 2.1.2. For NSWC PCD publications, the required conditions will contain references to all tasks that must be performed prior to starting the task in this data module. If the data module being prepared is for a pump removal, but a panel must be removed first, the panel removal data module will be referenced in preliminary requirements.

3.11.14.3 Required persons Chapter 3.9.5.2.1.9 paragraph 2.1.3. This element will not normally be used.

3.11.14.4 Support equipment Chapter 3.9.5.2.1.9 paragraph 2.1.4. Support equipment is a list of special tools and ground equipment required to accomplish the procedure contained in the data module. Common tools are not required to be listed, but common types of test equipment such as voltmeters, signal generators and continuity testers shall be. Support equipment shall be identified by nomenclature, identification number and quantity. This information should enable the user to procure the required support equipment through the supply system. Projects will make use of cross-references from the procedure to the support equipment listed in preliminary requirements. The attribute xrefid of element and the attribute id on element respectively, are used to establish the link between the two and will guarantee consistent use identification throughout the Procedure. The use of cross-references is mandatory.

3.11.14.5 Supplies Chapter 3.9.5.2.1.9 paragraph 2.1.5. Supplies will contain a list of any consumables (such as oils, greases, locking wire), materials (gasket sheet, sheet metal) and expendables (such as O-rings, gaskets, tab washers) required to accomplish the procedure contained in the data module. Materials shall be identified by nomenclature, identification number and quantity as applicable. This information should enable the user to procure the required supplies through the supply system. Projects will make use of cross-references from the procedure to the supplies listed in preliminary requirements. The attribute xrefid of element and the attribute id on element respectively, are used to establish the link between the two and will guarantee consistent use identification throughout the Procedure. The use of cross-references is mandatory.

3.11.14.6 Spares Chapter 3.9.5.2.1.9 paragraph 2.1.6. Spares will contain a list of items required to accomplish the procedure. Spares shall be identified by nomenclature, identification number and quantity as applicable. This information should enable the user to procure the required spares through the supply system. Projects will make use of cross-references from the procedure to the spares listed in preliminary requirements. The attribute xrefid of element and the attribute id on element respectively, are used to establish the link between the two and will guarantee consistent use identification throughout the Procedure. The use of cross-references is mandatory.

3.11.14.7 Safety Chapter 3.9.5.2.1.9 paragraph 2.1.7. Any warnings and cautions applicable to the data module as a whole shall be listed here. If no warnings or cautions are applicable to the whole data module "None" shall be stated. Warnings and cautions that apply to only one step will be listed immediately prior to that step.

3.11.15 Paras Chapter 3.9.5.2.1.10. The element is used to capture text. This can include numerous sub-elements.

3.11.15.1 Emphasis Chapter 3.9.5.2.1.10 paragraph 3. To highlight a word, an expression or a sentence, bold text is the preferred method. Alternatively, the use of color is permitted. Capital (upper case) letters, italics or underlining are not permitted to highlight text, except for legacy data.

3.11.15.2 Symbol Chapter 3.9.5.2.1.10 paragraph 4. The <symbol> element is used to capture illustrations and graphics that are intended to be presented in line within the normal text. Symbols shall be controlled by NSW PCD. A list of available symbols is available from NSW PCD. Symbols already in the data base shall be used is possible.

3.11.15.3 Subscript Chapter 3.9.5.2.1.10 paragraph 5. The <subscript> element is used to indicate text that should be subscripted. This element may be used as needed.

3.11.15.4 Superscript Chapter 3.9.5.2.1.10 paragraph 6. The <superscript> element is used to indicate text that should be super-scripted. This element may be used as needed.

3.11.15.5 Acronyms Chapter 3.9.5.2.1.10 paragraph 6. This element is described above.

3.11.15.6 Footnotes Chapter 3.9.5.2.1.10 paragraph 8. Footnotes may be used in tables or text.

3.11.15.7 Verbatim Chapter 3.9.5.2.1.10 paragraph 9. This element will not normally be used.

3.11.15.8 Paragraph significant data Chapter 3.9.5.2.1.10 paragraph 10. This element will not normally be used.

3.11.15.9 Quantity Data Chapter 3.9.5.2.1.10 paragraph 11. This element will not normally be used.

3.11.15.10 Functional Item Number Chapter 3.9.5.2.1.10 paragraph 12. This element will not normally be used.

3.11.15.11 Circuit Breaker Chapter 3.9.5.2.1.10 paragraph 13. This element will not normally be used.

3.11.15.12 Zones and Access Panels Chapter 3.9.5.2.1.10 paragraph 14. This element will not normally be used.

3.11.16 Controlled Content Chapter 3.9.5.2.1.11. This will not be used.

3.12 CONTENT SECTION — DESCRIPTIVE INFORMATION

The descriptive DTD is used to capture and represent descriptive information. The use of the common entities, elements and attributes is as detailed in paragraph 2.6 of this document.

3.12.1 Headings Chapter 3.9.5.2.2 paragraph 2.2. Main paragraphs are identified by the <para0> element. These paragraphs may be broken down into subparagraphs by using the elements <subpara1> to <subpara4>. The elements <para0> and <subpara1> to <subpara4> shall contain a title. The DTD allows for a single subparagraph under a parent, however this will not be used for NSW PCD documents. If subparagraphs are used for NSW PCD documents, there shall be two or more subparagraphs. Subparagraphs may have titles.

3.12.2 Paragraph Depth Chapter 3.9.5.2.2 paragraph 2.2. Use of element <subpara5> thru element <subpara7> is highly discouraged in development of new data. These levels will only be used in a conversion effort where the existing data is authored to this depth and restructuring of data is not feasible.

3.12.3 Applicability Chapter 3.9.5.2.2 paragraph 2.4. This element will be used in the content section to distinguish differences between equipment.

3.12.4 Special paragraphs Chapter 3.9.5.2.2 paragraph 2.6. Special paragraphs are defined as warnings, cautions and notes. The inclusion of warnings and cautions is not recommended for descriptive data modules when they are used for pure informative use, however they may be used if necessary.

3.13 CONTENT SECTION — PROCEDURAL INFORMATION

The procedural Document Type Definition (DTD)/Schema is used to capture and represent procedural information. The granularity of procedural data modules is to follow the breakdown reflected by the Standard Numbering System, the information codes and should reflect the tasks identified in the maintenance plan. The use of the common entities, elements and attributes is as detailed in paragraph 2.6 of this document.

3.13.1 Steps Chapter 3.9.5.2.3 paragraph 2.3. A step in a procedure is captured in the element <step1>. This can be broken down into 4 sub-steps using the elements <step2>, <step3>, <step4>, and <step5>. The DTD allows for a single sub-step under a parent, however this will not be used for NSW PCD documents. If sub-steps are used for NSW PCD documents, there shall be two or more sub-steps.

3.13.1.1 Step titles Chapter 3.9.5.2.3 paragraph 2.3.2. The elements <step1> to <step4> can contain a title.

3.13.1.2 Step skill level Chapter 3.9.5.2.3 paragraph 2.3.2. This element will not normally be used.

3.13.1.3 Step identifier attributes usage Chapter 3.9.5.2.3 paragraph 2.3.2. Steps will be identified so they can be cross referenced.

3.13.1.4 Step Check Chapter 3.9.5.2.3 paragraph 2.3.2. The elements <step1> to <step5> can contain a check using the attribute check. This is used to indicate that the step must be checked by a supervisor with a given qualification. This attribute will not normally be used for NSW PCD documents.

3.13.2 Applicability Chapter 3.9.5.2.3 paragraph 2.5.2. The <applic> element will be used in the content section to distinguish how steps apply to equipment or procedure variations.

3.13.3 Special paragraphs Chapter 3.9.5.2.3 paragraph 2.6. Special paragraphs are defined as warnings, cautions and notes. However, authors should note that a warning, caution or note that is placed

in a <step1> applies to all the <step2>, <step3>, <step4>, and <step5> elements within. The converse of this does not hold true.

3.13.4 Close-up requirements Chapter 3.9.5.2.3 paragraph 2.7. For NSWCD publications, the Close-up requirements will contain references to all tasks that must be performed after completion of the task in this data module. If the data module being prepared is for a pump installation, but a panel was removed under preliminary conditions, the panel installation data module will be referenced in close-up requirements.

3.14 CONTENT SECTION — FAULT INFORMATION

Chapter 3.9.5.2.4. The fault Document Type Definition (DTD)/Schema is used to capture and represent fault reporting and fault isolation information. This DTD/Schema allows for four types of fault information to be produced as individual data modules. These are fault reporting in terms of isolated, detected, observed faults or fault isolation. The fault reporting branch of the DTD enables any computerized maintenance systems to indicate faults through data modules. If fault codes exist in program logistics documents, they shall be used during creation of this data module. The fault reporting branch of the DTD uses the <afr> element. It includes the following elements:

- Isolated fault details
- Detected fault details
- Observed fault details

References to other data modules will include the element <dmtitle> but will not reference the element <issno> within references using the element <refem>.

3.14.1 Isolated faults Chapter 3.9.5.2.4 paragraph 2.2.1. The <ifault> element is used to capture isolated faults information. It has a mandatory attribute, *fcode*, which must be used to contain the fault code that is allocated as part of a logistic analysis process. This element contains the following sub-elements:

3.14.1.1 Fault description The <describe> element is used to contain the description of the isolated fault.

3.14.1.2 Detection information The <detect> element contains the information for detecting the fault. It also captures the type of fault by using the attribute *type*. The detection focuses in on a Line Replaceable Unit (LRU) and allocates a probability factor using the attribute *probfac* to indicate the likelihood that this particular LRU is faulty.

3.14.1.3 Location and repair information Any locating and repairing tasks can be captured using the <locandrep> element.

3.14.1.4 Remarks The author can use this element for additional remarks.

3.14.2 Detected faults Chapter 3.9.5.2.4 paragraph 2.2.2. The <dfault> element is used to contain information on detected faults. It has an attribute *fcode*, which can be used to contain the fault code that is allocated as part of a logistic analysis process. This element contains the following elements:

3.14.2.1 Fault description The <describe> element is used to contain the description of the isolated fault.

3.14.2.2 Detection information The <detect> element contains the information for detecting the fault. It also captures the type of fault by using the attribute *type*. The detection focuses in on a Line Replaceable Unit (LRU) and allocates a probability factor using the attribute *probfac* to indicate the likelihood that this particular LRU is faulty.

3.14.2.3 Detection and isolation information This element is used to isolate the detected fault to a suspect LRU. This is done by referring out to another data module or describing a test on the LRU using the element.

3.14.2.4 Remarks The author can use this element for additional remarks.

3.14.3 Observed faults Chapter 3.9.5.2.4 paragraph 2.2.3. The ofault element is used to contain information on observed faults. It has an attribute *fcode*, which can be used to contain the fault code that

is allocated as part of a logistic analysis process and an attribute *ftype* which can capture the type of fault. This element contains the following elements:

3.14.3.1 Fault description The describe element is used to contain the description of the isolated fault.

3.14.3.2 Fault context information This element is used to contain a description of the context in which the fault is observed.

3.14.3.3 Fault isolation information This element is used to contain the diagnostic information for the observed fault. This is done by referring out using the <refs> element or by describing a diagnostic process using the <diagnost> element or simply testing the LRU using the <lruiem> element.

3.14.3.4 Remarks The author can use this element for additional remarks.

3.14.4 Correlated faults Chapter 3.9.5.2.4 paragraph 2.2.4. Projects may use correlated faults if it applies to their data.

3.14.5 Fault isolation Chapter 3.9.5.2.4 paragraph 2.3. The fault isolation branch of the DTD identifies and describes the fault and gives the diagnostic path to isolate a faulty item. Projects must decide whether all isolation procedures should be kept in a single data module for an item or fault or whether to refer out to other data modules.

3.14.5.1 Skill levels Individual projects must decide when the skill level is to be used.

3.14.5.2 Check Check is used to indicate that the whole isolation procedure and/or individual steps/substeps must be checked by a supervisor with a given qualification. Individual projects must decide on its use.

3.15 CONTENT SECTION — MAINTENANCE PLANNING INFORMATION

The schedules Document Type Definition (DTD)/Schema is to be used to contain maintenance planning information. This type of data module will not be used because maintenance is covered by the Navy's 3M system. If a project decides to use the Maintenance Planning Information DTD/Schema, the project will outline the data modules and get written approval from NSWPCD technical manual manager prior to starting the project.

3.16 CONTENT SECTION — CREW/OPERATOR INFORMATION

The Crew Document Type Definition (DTD)/Schema is to be used to capture and represent information to be used by crew/operators. This data module could be used to give the operator of equipment instructions on how to operate a piece of equipment. If a project decides to use the Crew/Operator Information DTD/Schema, the project will outline the data modules and get written approval from NSWPCD technical manual manager prior to starting the project.

3.17 CONTENT SECTION — PARTS INFORMATION

The Illustrated Parts Data (IPD) Document Type Definition (DTD)/Schema is to be used to capture and represent parts lists and illustrated parts data. This DTD/Schema contains the following elements:

3.17.1 Illustrated Parts Catalog Chapter 3.9.5.2.7 paragraph 2.2. The mandatory <ipc> element is the container for all parts content (excluding references).

3.17.2 Figure information Chapter 3.9.5.2.7 paragraph 2.3. The element <figure> is used to capture a reference to a graphical representation of the parts listed in the parts data module. All Illustrated Parts Data modules will have a figure that references the individual parts.

3.17.3 Zones Chapter 3.9.5.2.7 paragraph 2.4. Zones can be used to indicate the zoning information of a figure, in order to know where components, described in a figure, are installed on the product.

3.17.4 Initial provisioning project information Chapter 3.9.5.2.7 paragraph 2.5. The optional <ipp> element is used to store information regarding the Initial Provisioning Project Number (IPPN). If an Initial Provisioning Project Number is used, then the element <ipp> must be used.

3.17.5 Subject variant Chapter 3.9.5.2.7 paragraph 2.6. This element will not normally be used.

3.17.6 Catalog sequence number Chapter 3.9.5.2.7 paragraph 2.7. The Catalogue sequence number (CSN) element contains the parts information for the CSN. The various attributes of the CSN are discussed in detail in the specification. The “ind” attribute is used to indicate the graphic call-out number of the being referenced.

3.17.7 Item sequence number Chapter 3.9.5.2.7 paragraph 2.7. The mandatory, repeatable <isn> element is used to store the Item Sequence Number (ISN). It also contains elements which store metadata about the item.

3.17.8 Reason for Selection Chapter 3.9.5.2.7 paragraph 2.8.1.1. The reason for selection will not normally be used for NSWCD documents.

3.17.9 Unit of Issue Chapter 3.9.5.2.7 paragraph 2.8.1.5.2. The optional <uoi> element will not normally be used.

3.17.10 PCS Data Chapter 3.9.5.2.7 paragraph 2.8.1.5.3. The optional <pcs> element will not normally be used.

3.17.11 Special Storage Chapter 3.9.5.2.7 paragraph 2.8.1.5.4. The optional <str> element will not normally be used.

3.17.12 Fitment Code Chapter 3.9.5.2.7 paragraph 2.8.1.5.5. The optional <pcs> element will not normally be used.

3.17.13 Physical Security/Pilferage Code Chapter 3.9.5.2.7 paragraph 2.8.1.5.6. The optional <pcs> element will not normally be used.

3.17.14 Calibration Marker Chapter 3.9.5.2.7 paragraph 2.8.1.5.7. The optional <cmk> element will not normally be used.

3.17.15 NATO Stock Number Chapter 3.9.5.2.7 paragraph 2.8.1.6. The element <nsn> is required, however, for NSWCD projects it will not normally be populated. Because NSNs continually change, they are not normally used in a technical manual. If a project decides to use the NSN, it will contain the NATO (or National) Stock Number (NSN) for the CSN. It has the following attributes:

- nsc. This optional attribute is used to contain the NATO Supply Class (NSC).
- ncb. This optional attribute is used to contain the first two digits of the NATO Item Identification Number (NIN) in the format of the National Codification Bureau (NCB).
- nin3to9. This optional attribute is used to contain the third to ninth digit of the NIN.
- nsn. This optional attribute can be used to contain the complete NSN.

3.17.16 Part Location Data Chapter 3.9.5.2.7 paragraph 2.7.1.7. The optional element <pbs> is used to identify the location of a part. This element is used when an attaching part or used on code is required. The specification fully explains these elements and the attribute requirements.

3.17.17 Service Chapter 3.9.5.2.7 paragraph 2.8.1.11.1. The mandatory element <srv> is used to identify the user service to which specific data is applicable. The first two characters for the <srv> code will be US. Third character will specify service as follows:

- N - Navy
- A - Army
- F - Air Force
- M - Marine Corps
- C - Coast Guard

3.17.18 Source Maintenance and Recoverability Chapter 3.9.5.2.7 paragraph 2.7.1.11.2. NAVSUP instruction 4423.29 (Table 2) will be used for SM&R codes.

3.18 CONTENT SECTION — BATTLE DAMAGE ASSESSMENT AND REPAIR INFORMATION

This data module type will not normally be used for NSWCD documents.

3.19 CONTENT SECTION — WIRING INFORMATION

The Wiring DTD/Schema (W DTD/Schema) consists of the Wiring data DTD/Schema (WD DTD/Schema) and the Wiring data description DTD/Schema (WDD DTD/Schema). Refer to chapter 3.9.5.2.9 of the specification for information on creating these data modules. It is not mandatory to use the wiring DTD/Schema. It is also possible to prepare wiring publication in form of tables and wiring diagrams by using the descriptive DTD/Schema. In this case the interactive WP functionalities (analysis of network, views and filters, context sensitive data presentation) are not available or required. For NSWC PCD documents, we recommend the descriptive DTD/Schema be utilized. If a project decides to use the Wiring Information DTD/Schema, the project will outline the data modules and get written approval from NSWC PCD technical manual manager prior to starting the project.

3.20 CONTENT SECTION - PROCESS DATA MODULE

The process data module is a method for sequencing steps and/or other data modules. It contains structures for traversing steps and data modules in a defined order and in if-then-else branches and loops. The process data module will filter steps and data modules based on the value of state variables, eg Model = B or Test passed = TRUE.

For documents prepared for NSWC PCD, the descriptive or procedural data modules will normally be used. If an individual project decides to use the process data module, the project will outline the data modules and get written approval from NSWC Panama City Division technical manual manager prior to starting the project.

3.21 CONTENT SECTION - TECHNICAL INFORMATION REPOSITORY

Chapter 3.9.5.2.11. The technical information repository data module Document Type Definition (DTD)/Schema is used to capture and represent functional item numbers information.

3.21.1 Information Type Chapter 3.9.5.2.11, paragraph 1. If a project is going to use the Technical Information Repository they must decide which if the information types their data will fit into.

3.21.2 Granularity Chapter 3.9.5.2.11.1, paragraph 1. Project must decide whether there is one single functional item number technical information repository data module or several depending of the Standard Numbering System (SNS). In this case, granularity of these data modules is determined by the application of the SNS.

3.22 APPLICABILITY

Chapter 3.9.5.3. Applicability information allows the technical author to specify which data is appropriate in what situations.

3.22.1 Data Module versus Content Applicability Chapter 3.9.5.3, paragraph 2.1. Projects must decide if the applicability applies to a complete data module or just a portion of the content. This decision should be documented in the business rules.

3.22.2 Applicability Branches Chapter 3.9.5.3, paragraph 2.2. The <applic> element has two logical branches (three branches for process data modules) which are used for separate purposes. Each project must decide which branch will be used and document that decision in their business rules.

3.22.3 Inline Applicability Chapter 3.9.5.3, paragraph 2.3. Projects must decide which markup applicability annotations will be used and document that decision in their business rules.

3.22.4 Human Readable Applicability Annotation Branch

3.22.4.1 Display Text Element Chapter 3.9.5.3, paragraph 4.1. Projects using the human readable branch of applicability will populate the element <displaytext> manually by the technical author.

3.22.4.2 Display Text Structure Chapter 3.9.5.3, paragraph 4.2. Projects using the human readable branch of applicability must decide whether to use only the free text available in element <displaytext> or to use the simple paragraph element <p>. This decision must be documented in the project business rules.

3.22.5 Computable Applicability Annotation Branch

3.22.5.1 Use of Display Class Chapter 3.9.5.3, paragraph 4.2. Projects using the computable applicability annotation branch must decide whether to use the attribute displayclass. If the attribute displayclass is used, the allowable values and desired format for each value must be documented in the project business rules.

3.22.5.2 Use Of Textual Applicability Annotations Chapter 3.9.5.3, paragraph 4.2. Projects using the computable applicability annotation branch must decide if textual applicability annotations are allowed in the element <assert> or if every element <assert> should reference a declared product attribute or condition. This decision must be documented in the project business rules.

3.22.6 How to Apply Applicability Chapter 3.9.5.3, paragraph 6. Projects must decide if inline applicability annotations are to be included in the text by adding the element <applic> to the context concerned, or if such annotations will be collected in element <inlineapplics> contained in the status section with a reference to them by use of attribute refapplic from the concerned substructure of the data module. This decision must be documented in the project business rules.

3.22.7 Consistent Population Chapter 3.9.5.3, paragraph 6. Projects must decide on the population of the elements and attributes of applicability and must then enforce its consistency throughout the entire project.

3.22.8 Applicability Cross-Reference Table

Chapter 3.9.5.3.1, paragraph 2.1. Projects defining product attributes must decide whether to specify the allowable values for a product attribute achieved by using a pattern, enumeration, both or to allow open text by not using pattern and enumeration. This decision must be documented in the project business rules.

Chapter 3.9.5.3.1, paragraph 2.1. Projects defining product attributes must decide whether to fill the display text. This decision must be documented in the project business rules.

3.22.9 Conditions Cross-Reference Table

3.9.5.3.2, paragraph 2.1. Projects defining conditions must decide whether to further specify the allowable values for a condition type using the attribute pattern in addition to the mandatory element <enum>. This decision must be documented in the project business rules.

3.9.5.3.2, paragraph 1. Projects defining conditions must decide whether to fill the display text.

3.22.10 Products Cross-Reference Table 3.9.5.3.3, paragraph 1. A project using the products cross reference table (PCT) must decide which product attributes and conditions to include in the PCT. Conditions that represent operational or environmental properties will usually not be included in the PCT as they are not associated with a product instance.

3.23 CONFIGURABLE ATTRIBUTES

Paragraph 3.9.6.1 lists a number of attributes that may be configured to a project. For NSW PCD documents, all attributes will be left at the default settings. If an individual project decides it needs to configure attributes different than the default setting, the project will outline the changes and get written approval from NSW PCD technical manual manager prior to starting the project.

CHAPTER 4 INFORMATION MANAGEMENT

4.1 GENERAL

This chapter follows Chapter 4 of the specification. Information management is comprised of the addressing, storage and handling of information objects such as data modules, illustrations and publications that enables the production and use of common technical publications within a project.

4.2 DATA MODULE CODE

Chapter 4.3. Projects shall decide on the length of the DMC for each given MI on the project and that length shall remain fixed throughout the project.

4.2.1 Model Identification Code Chapter 4.3.1. Each project will have a unique Model Identification Code. The Model Identification section of the Data Module Code must be registered with NATO Maintenance and Supply Agency (NAMSA). NSWC PCD Code A24 will register model identification codes with NAMSA whether a contractor is preparing the documents or the government is preparing the documents.

4.2.2 System Difference Code Chapter 4.3.2. Projects will determine how the system difference code will be used during DMRL creation.

4.2.3 Standard Numbering System (SNS) Chapter 4.3.3.

4.2.3.1 Materiel Item Category Code (MICC) Chapter 4.3.3, paragraph 2.2. This part of the SNS is used to indicate different SNS coding structures that are applicable to an individual project at the system, subsystem and subsystem level within the SNS. The MICC is also used to differentiate between different definitions within the same SNS. All NSWC PCD projects that derive their SNS from the S1000D specification will use the MICC.

4.2.3.2 NAVSEA Documents Data modules created for NAVSEA will use the Expanded Ship Work Breakdown Structure (ESWBS) for the standard numbering system (SNS) portion of the data module code if the ESWBS fits the equipment or system. If ESWBS does not apply, projects shall decide on the application of the SNS rule in Chapter 8.4.1 using a maintained SNS from the specification or any other maintained standardized numbering system. The SNS shall be documented in the project business rules.

4.2.3.3 NAVAIR Documents

4.2.3.3.1 For New Acquisition The SNS shall be derived from the Logistic Control Number (LCN) in the LSAR. The SNS shall be documented in the project business rules.

4.2.3.3.2 For Legacy Systems If LSAR exists, the SNS shall be derived from the LCN in the LSAR. If LSAR does not exist, projects shall decide on the application of the SNS rule in Chapter 8.4.1 using a maintained SNS from the specification or any other maintained standardized numbering system. The SNS shall be documented in the project business rules.

4.2.3.4 Support Equipment Chapter 4.3.3.3. Projects shall not use the SNS for support equipment as deprecated in Chapter 4.3.3.3.

4.2.4 Disassembly Code Chapter 4.3.4. The DC identifies the breakdown condition of an assembly to which maintenance information applies. Projects will determine how the disassembly code will be used during DMRL creation.

4.2.5 Disassembly Code Variant Chapter 4.3.5. The DCV designates alternative items of equipment or components differing slightly in design, but not enough to warrant a change of the system difference code. Projects will determine how the disassembly code will be used during DMRL creation.

4.2.6 Information Code Chapter 4.3.6. Projects will use information codes given in the specification. If the codes in the specification do not fit a requirement, the project will outline the changes and get written approval from NSW PCD technical manual manager prior to starting the project.

4.2.7 Information Code Variant Chapter 4.3.7. The information code variant will be a letter. The default is always coded "A", successive variants are coded B, C, etc.

4.2.8 Item Location Code Chapter 4.3.8. Item location codes are defined in the specification.

4.3 ILLUSTRATION CONTROL NUMBER

Chapter 4.4. Each illustration sheet or other data attached to a data module shall be identified with an Illustration Control Number (ICN). Each ICN will be preceded by the prefix "ICN". An example of an ICN is: ICN-LCSMM-A-P00000-N-61331-00001-A-01-1. The illustration control numbers will not appear on the graphic or illustration.

Chapter 3.9.2 paragraph 13. Each illustration shall be allocated an Illustration Control Number (ICN). In a CSDB, the ICN is the unique identifier of an illustration sheet or attached data, and it is used to establish the relationship to one or more data modules. The ICN contains a minimum of 27 characters and a maximum of 45 characters. For human readability and due to the variable length of the sub fields, the ICN shall in most cases be written with hyphens [-] and with the term "ICN" exactly as shown in (Figure 4-1). ICNs in publications for NSW PCD should contain the minimum number of characters required to completely identify the illustration in accordance with the specification. The ICN addresses an illustration sheet or other attached data including its update status independent of the status of a data module or publication where it is used within a figure. Where ICN identification code is the same as DMC code, it will reference the first DMC the illustration is used in, however, illustrations can be used in more than one DMC if applicable. For NSW PCD publications, the ICN will not normally appear on the reproduction area of an illustration in a data module.

Illustration control number - min 27 characters:

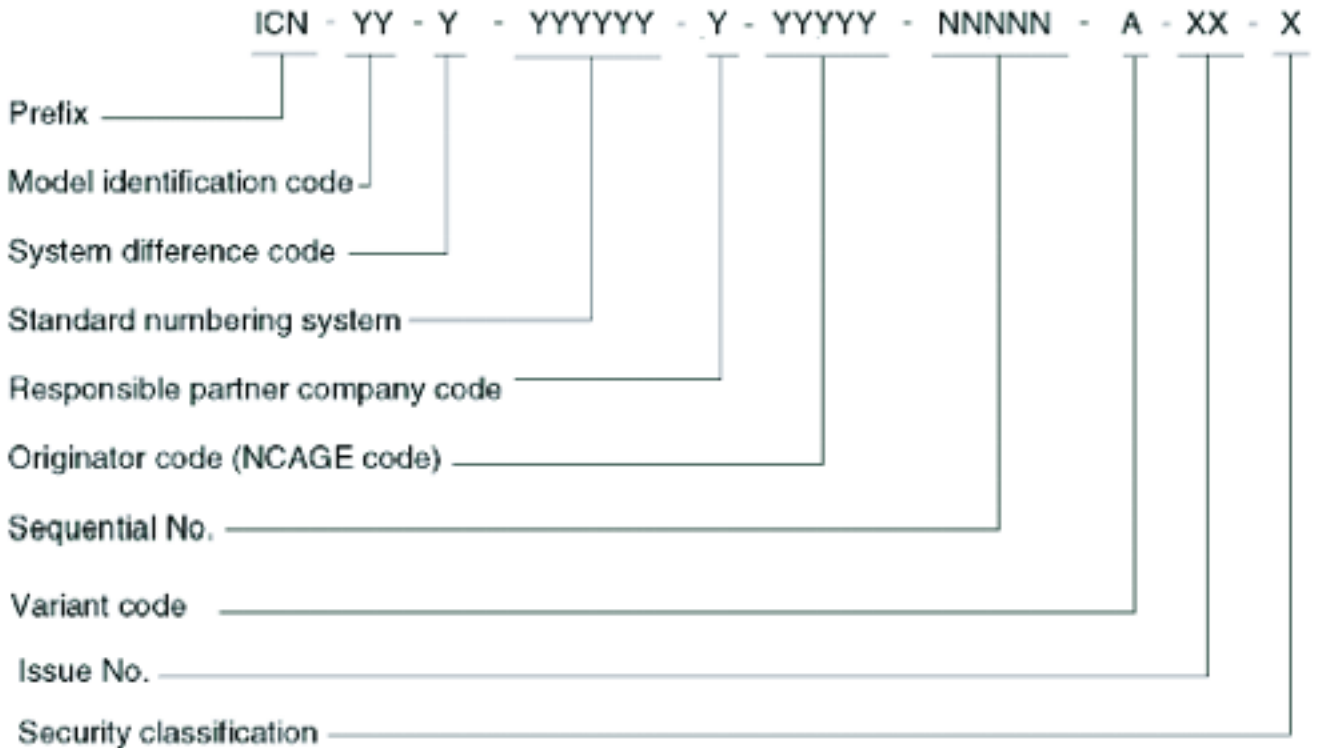


Figure 4-1. 27 Character Illustration Control Number

- 4.3.1.1 Model Identification Code** Chapter 4.4, paragraph 2.1. Identical to the MI used for the DMC.
- 4.3.1.2 System Difference Code** Chapter 4.4, paragraph 2.2. Identical to the SDC used for the DMC.
- 4.3.1.3 Standard Numbering System Code** Chapter 4.4, paragraph 2.3. Identical to the SNS used for the DMC.
- 4.3.1.4 Responsible Partner Company Code** Chapter 4.4, paragraph 2.4. The originator code for NSW C PCD publications will be 61331 to represent NSW C PCD UIC.
- 4.3.1.5 Originator Code** Chapter 4.4, paragraph 2.5. The responsible partner company is the Activity responsible for the data module in which the illustration is used. For NSW C PCD Navy publications, "N" will be used to represent Navy.
- 4.3.1.6 Illustration Sequential Number** Chapter 4.4, paragraph 2.6. The illustration sequential number consists of 5 digits. For each MI, the number shall start from 00001 for each project.
- 4.3.1.7 Illustration Variant Code** Chapter 4.4, paragraph 2.7. The illustration variant code is a single alpha character, which identifies the variants of a basic illustration. The variant code "A" identifies a basic illustration and "B" identifies the first variant after it has been entered into the CSDB as a finished document. A variant is a supplemented, scaled, cropped, rotated, mirrored and/or annotated basic illustration.
- 4.3.1.8 Illustration Issue Number** Chapter 4.4, paragraph 2.8. The illustration issue number is a 2 digit sequential numerical value. It starts from 01 for each basic illustration or variant and is incremented each time the illustration is updated.
- 4.3.1.9 Security Classification** Chapter 4.4, paragraph 2.9. A single numerical character identifies the security classification of the illustration.

4.4 DATA MODULE REQUIREMENTS LIST

Chapter 4.5.1, paragraph 1. A Data Module Requirement List (DMRL) is used to identify the required data modules for a project. A DMRL shall be required to identify the required data modules for a project. The DMRL shall be maintained throughout the project enabling a mechanism to ensure that only data modules that support the maintenance philosophy are produced. The DMRL shall be updated as necessary to ensure it is kept accurate. The DMRL supports planning, reporting, production and configuration control, especially in a work share environment. A DMRL contains the following elements:

- Data Module Code
- Data Module Status
- Data Module Titles

4.4.1 DMRL Identification Code Chapter 4.5.1, paragraph 2.1. Data module requirement lists produced according to this specification shall be given a DMRL identification code (DMLC). The DMLC comprises between 15 and 27 alphanumeric characters and is built up as shown in Chapter 4.5.1 of the specification. The DMRL identification code is shown in [Table 4-1](#).

Table 4-1. DMRL Identification Code

DMLC Element	Rule
Model Identification Code	2 thru 14 alphanumeric characters
Originator	5 alphanumeric characters
Type of the DMRL	1 alpha character
Issue year	4 numeric characters
Sequential number per year	5 sequential numeric characters

4.4.2 DMRL Status Chapter 4.5.1, paragraph 2.2. The DMRL Status section is made up of the following elements:

4.4.2.1 Issue Number Chapter 4.5.1, paragraph 2.2.1. Every issue of a DMRL shall receive a consecutive number. The initial issue shall be numbered 001.

4.4.2.2 Issue Date Chapter 4.5.1, paragraph 2.2.2. Every issue of a DMRL shall receive a calendar date in the format YYYY-MM-DD. The issue date shall be the cutoff date from which no further changes are permitted without issuing a formal change. This is normally the "approved date", that is, the date the government accepts the information subject to the inclusion of specified comments. If the acquiring activity does not advise the preparing activity the exact date to use, the issue date shall be the date at which the last material to be included was received.

4.4.2.3 Security Classification Chapter 4.5.1, paragraph 2.2.3. The security classification of the DMRL shall be given.

4.4.2.4 Data Restrictions Chapter 4.5.1, paragraph 2.2.4. If applicable, the data restrictions for the DMRL shall be given.

4.4.2.5 Reference Chapter 4.5.1, paragraph 2.2.5. The references to other DMRL (eg for a partial DMRL) shall be given using the DMLC.

4.4.2.6 Remarks Chapter 4.5.1, paragraph 2.2.6. This block may be used for inserting general remarks to this DMRL.

4.4.3 DMRL Entries Chapter 4.5.1, paragraph 2.3. Deleted data modules will appear in the DMRL with an attribute of "deleted". Each data module entry can have one of the attribute values *n* (NEW), *c* (CHANGED) or *d* (DELETED) and is made up of the following elements:

4.4.3.1 Data Module Address Chapter 4.5.1, paragraph 2.3.1. The address of the data module shall be given. This element has a further breakdown as follows:

4.4.3.1.1 **Data Module Code** Chapter 4.5.1, paragraph 2.3.1.1. The data module code for the data module shall be given.

4.4.3.1.2 **Data Module Title** Chapter 4.5.1, paragraph 2.3.1.2. The title of the data module shall be given.

4.4.3.1.3 **Issue Number** Chapter 4.5.1, paragraph 2.3.1.3. The issue number of the data module shall be given

4.4.3.1.4 **Issue Date** Chapter 4.5.1, paragraph 2.3.1.4. The issue date for the data module shall be given a calendar date in the format YYYY-MM-DD.

4.4.3.1.5 **Language** Chapter 4.5.1, paragraph 2.3.1.5. This element will not normally be used.

4.4.3.2 **Security Classification** Chapter 4.5.1, paragraph 2.3.2. The security classification of the data module may be given. This element is not required.

4.4.3.3 **Responsible Company** This element will contain the UIC of NSW PCD, N61331.

4.4.3.4 **Data Module Requirement Answer** This element will not normally be used.

4.4.3.5 **Remarks** This element will not normally be used.

4.4.4 **CSDB STATUS LIST** Chapter 4.5.2. The CSDB Status List will be maintained by NSW PCD.

4.5 **COMMENT**

Chapter 4.6. The comment will not be used for issues raised on data modules or publication modules during the verification process and the in-service phase of the product, for NSW PCD documents. The conventional reporting methods will be used.

4.6 **VERSION CONTROL**

Chapter 4.7. Updating of data modules is driven by changes to the Product or due to the technical publication process.

4.6.1 **In-Work Data Modules** Chapter 4.7, paragraph 2. Use of the inwork attribute of the <issno> element is not required during data module creation.

4.6.2 **Changing a Data Module** Chapter 4.7, paragraph 2. All data module changes will be update revisions only.

4.7 **INFORMATION MANAGEMENT**

4.7.1 **Raster Graphics Resolution** Chapter 4.8, paragraph 2. The minimum resolution for raster graphics shall be 150 dpi (unless legacy illustrations are at a lower resolution).

4.7.2 **Data Module Issue Numbers** Chapter 4.8, paragraph 2. For every release of a data module, the issue number must be incremented by one. A release is defined as the data module having been included in an IETM that was delivered to the fleet. Data modules that are reworked during the course of the project will not have the issue number incremented.

4.7.3 **Multimedia** Chapter 4.8, paragraph 2. The following types of multimedia files are supported by Contenta view:

CGM

SVG

JPG, GIF, PNG, TIF

AVI, MPEG, WMV (movies)

Shockwave Flash

NGrain Mobilizer Files (a 3D simulation viewer)

4.8 **PUBLICATION MODULES**

The publication module defines the content and the structure of a publication. It shall contain one or more references to:

data modules (including front matter data modules)

access illustration data modules

publication modules
legacy technical publications

For use of mandatory elements in publication modules refer to the specification. These business rules will only address the optional elements.

4.8.1 ID and Status Section Chapter 4.9.1, paragraph 2.1.

4.8.1.1 Issue Date This is normally the “approved date”; that is, the date the Government accepts the manual subject to the inclusion of specified comments. If the Government does not advise the contractor the exact date to use, the publication date shall be the date at which the last material to be included was received (copy freeze date). The publication date shall be shown as the day, month, and year in that sequence (for example, 15 MARCH 2006).

4.8.1.2 Language Chapter 4.9.1, paragraph 2.1.1.5. This element will not normally be used.

4.8.1.3 Data Restrictions Chapter 4.9.1, paragraph 2.1.2.2. This element will be used for the distribution statement, export controls and destruction notices.

4.8.1.4 Originator Chapter 4.9.1, paragraph 2.1.2.4. This element may be used to identify the originator of the publication module. The originator’s five digit CAGE code will be used.

4.8.1.5 Applicability Chapter 4.9.1, paragraph 2.1.2.5. Projects will specify if an Applicability Cross-Reference Table is required.

4.8.1.6 Media Chapter 4.9.1, paragraph 2.1.2.7. This element will not be used.

4.8.1.7 System Breakdown Code Chapter 4.9.1, paragraph 2.1.2.9. This element will not be used.

4.8.1.8 Reason for Update Chapter 4.9.1, paragraph 2.1.2.10. The reason for update (RFU) in publication module status should only be used if specific to the PM. The RFU of the individual DMs should roll up to the highlights of the PM and therefore not needed for the PM. Example of RFU for PM would be the addition or deletion of a DM within a PM.

4.8.1.9 Remarks Chapter 4.9.1, paragraph 2.1.2.11. This element will not be used in publication modules.

4.8.2 Content Section Chapter 4.9.1, paragraph 2.2. The content section of a publication module is made up of references to data modules, publication modules, or legacy technical manuals as needed.

4.8.3 Publication Module Code Chapter 4.9.2, paragraph 2. The publication module code is used to track and identify publication modules in the common source data base. All publication module codes will be preceded by PMC- so the data base recognizes the object as a publication module. The following is an example of a publication module code: PMC-LCSMM-61331-CH001-00. All publication module codes shall use 61331, the NCAGE (UIC) of NSWC Panama City Division.

4.9 BUSINESS RULES EXCHANGE

Chapter 4.10. NSWC PCD has not developed a business rules exchange so the S1000D default business rules exchange may be used.

CHAPTER 5 INFORMATION SETS AND PUBLICATIONS

5.1 INFORMATION SETS

Chapter 5. Information sets define the content required for data modules. Information sets can be created for maintenance actions, data module types, assembly, disassembly, etc. Information sets are being created at the SYSCOM level to define data module content. Until the SYSCOM information sets are completed, NAVSEA projects will use MIL-DTL-24784 and NAVAIR projects will use MIL-STD-3001 for content requirements.

Chapter 5.1 paragraph 1. The content within a manual or IETM shall be determined by the project to satisfy the content breadth and depth requirements as defined using existing standards and best practices as input. Note: Content depth and breadth for technical data is currently defined by a number of sources including the narrative content requirements in MIL-DTL-24784, and associated detail specifications. Projects must select the specific information sets and subsets thereof that are appropriate to their requirements.

5.1.1 Common Information Sets - Illustrated Parts Data Chapter 5.2.1.5, paragraph 1.2. The use of IPD as a stand alone publication or as a part of another publication is a project-level decision.

5.1.2 Air Specific Information Sets - Aircrew information Chapter 5.2.2.7, paragraph 2.1. The use of Simplified Technical English is a project specific decision. ASD-STE-100 Simplified Technical English is preferred; however if there are no joint nation, FMS or training reuse requirements, Standard American English can be used.

5.2 PUBLICATION INFORMATION SETS

5.2.1 Front Matter Chapter 5.3.1.2 paragraph 3.1. Possible front matter content is listed. Mandatory are required and optional are project decisions:

- Title Page (M)
- Destruction Notice (M)
- Distribution Statement (M)
- LOEDM (M) (paper)
- Change Record (M)
- Highlights (M)
- Access Illustration (O)
- LOS (Symbols) (O)
- Technical Standard Record (O)
- Table of Contents (M)
- LOASD (specs and docs) (O)
- LOSE (support eq.) (O)
- LOSU (supplies) (O)
- LOSP (spares) (O)
- LOI (illustrations) (M)
- LOTBL (Tables) (M)
- Safety Summary (M)
- HMWS work package (haz. material warning sheet) (O)
- Certification Sheet (O)
- Foreword (M)

5.2.2 Rear Matter Chapter 5.3.1.2 paragraph 3.1. Possible rear matter content is listed. Mandatory are required and optional are project decisions:

- TPDR (deficiency report) (O)
- TMDER (M)
- Alphabetical Index (O) [Conditional, ref. 24784]
- LOA (Abbreviations) (O)
- LOT (Terms) (O)

5.2.3 Technical Content Chapter 5.3.1.3 paragraph 3.2. Technical Content Requirements are usually defined in general for NAVSEA through MIL-DTL-24784C and specifics at the Project Level. Projects determine specifics when DMRL is defined.

CHAPTER 6

INFORMATION PRESENTATION

6.1 INFORMATION PRESENTATION

Chapter 6. The presentation of the information is a function of the output from the common source data base. Individual projects only have to decide if an electronic manual or paper manual is required. The functionality, styles, and presentation formats are already standardized for NSW PCD documents.

CHAPTER 7

INFORMATION PROCESSING

7.1 DTD AND SCHEMA

The DTD and Schemas for S1000D are provided at www.S1000D.org. These will be used as published without modification. All data prepared for the department of defence will be in XML with the appropriate schema for the version of the specification being used to author the data.