U.S. Marine Corps



APPLICATION CONFIGURATION MANAGEMENT PLAN



UNITED STATES MARINE CORPS

MARINE CORPS COMPUTER AND TELECOMMUNICATIONS ACTIVITY QUANTICO, VIRGINIA 22134-5010

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CONFIGURATION MANAGEMENT PLAN

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1. <u>PURPOSE</u>. To provide guidance and instructions on the development of Configuration Management Plans as required by references (a) and (b).

2. CANCELLATION. IRM-5231-09A.

- 3. <u>SUMMARY OF REVISION</u>. This revision updates configuration management terminology and clarifies the use of and the relationship between functional, allocated, and product baselines. This revision also updates and mirrors the life cycle management (LCM) development process as reflected in IRM-5231-01A, System Development Methodology Overview.
- 4. <u>AUTHORITY</u>. This publication is published under the auspices of reference (c).
- 5. <u>APPLICABILITY</u>. The guidance contained in this publication is applicable to all contractors and Marine Corps personnel responsible for the preparation of a Configuration Management Plan. This standard is applicable to the Marine Corps Reserve.
- 6. <u>DISTRIBUTION</u>. This technical publication will be distributed as indicated. Requests for changes in allowance should be submitted in accordance with reference (d).

7. SCOPE

- a. <u>Compliance</u>. Compliance with the provisions of this publication is required unless a specific waiver is authorized.
- b. <u>Waivers</u>. Waivers to the provisions of this publication will be authorized only by CMC (CC) on a case by case basis.

Subj: APPLICATION CONFIGURATION MANAGEMENT PLAN

- 8. <u>RECOMMENDATIONS</u>. Recommendations concerning the contents of this technical publication should be forwarded to CMC (MCCTA) via the appropriate chain of command. All recommended changes will be reviewed upon receipt and implemented if appropriate.
- 9. $\underline{\text{SPONSOR}}$. The sponsor of the technical publication is CMC (MCCTA).

D. P. HOUSTON

Colonel, U.S. Marine Corps Director, Marine Corps

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Information Resources Management (IRM)
Standards and Guidelines Program

<u>Application Configuration Management Plan</u> IRM-5231-09B

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Chapter 1

GENERAL

- 1.1. INTRODUCTION. The purpose of the Application Configuration Management Plan (CMP) standard is to establish uniform procedures and quidance for the development of a CMP and implementation of configuration management for all parts of the automated information system under the authority of the Project Manager. Configuration management identifies, controls, accounts for, and audits the functional and physical characteristics of automated systems, equipment, computer programs, and other designated items being developed, produced, operated, and supported by the system. This standard will apply to all contractors, vendors, and in-house development activities associated with the project. documentation guidelines within this standard are necessary to ensure configuration management is properly applied and accomplished under the same basic philosophy and principles.
- 1.2. SCOPE. Configuration management will be applied throughout the system life cycle for the development, production, and modification of applications software and automated data processing equipment, such as hardware, directly supporting the system. The provisions of this standard shall be applied to all automated systems under the purview of the project. The military standards referenced in Appendix B are oriented towards system acquisition through contracts.
- 1.2.1. <u>Definition</u>. For the purposes of this standard, the term Configuration Item (CI) is defined as an aggregation of hardware and software, or any of its discrete portions, which satisfies an end use function and has been designated for configuration management. The term Computer Program Configuration Item (CPCI), refers to a software component of a CI.
- 1.3. APPROACH. Configuration management is a discipline which applies technical and administrative direction and monitoring to identify and document the functional and physical characteristics of CIs and CPCIs. Configuration management controls changes to those characteristics, and records and reports change processing and implementation status. Configuration management includes configuration identification, control, status accounting, and audits. Configuration management is the means to ensure the integrity and continuity of design and engineering. Cost trade-off decisions made between technical performance, production, operability, and supportability are recorded, communicated, and controlled by project and functional managers.
- 1.3.1. <u>Tailoring</u>. The configuration management process will be carefully tailored to the quantity, size, scope, phase of life cycle, and nature and complexity of the CI/CPCI involved. This will be done whether the CI/CPCI is developed at government expense or privately developed and offered for government use. This also applies if the CI/CPCI is new or now in development, production, or the operational inventory. The selection of

CIs/CPCIs to be managed is determined by the government's need to control its characteristics or to control its interface with other items. The selection of system and subsystem CIs/CPCIs is basically a management decision normally accomplished through the system process. The decision is based on numerous engineering and logistic factors.

1.3.2. <u>Procedural Variation</u>. It is recognized that no common single set of configuration management procedures will meet every Marine Corps need. Due to variations in requirements, organizations, industrial commodity areas, and working relationships, specific military specifications and standards will be tailored to recognize program requirements. However, optimum uniformity throughout the system can be achieved by adherence to the policies and guidance contained in this standard, coupled with reasonable application of the prescribed DoD/MIL-SPEC/STD documentation identified in Appendix B.

1.4. PROCEDURES.

- 1.4.1. Policy Documents. The accomplishment of configuration management will be in accordance with this standard, the JointDoD Services/Agency Regulation Configuration Management which regulates other Department of Defense (DoD) Directives, and Military Standards as specified in Appendix B of this document. CMPs for hardware and software under project control address the application of configuration management during development to the extent required, and include provisions for controlling CIs and CPCIs during production as well as during modification of changes on fielded systems. The CMP will address the following:
- a. Hardware such as automated data processing equipment directly supporting the system.
- b. Software components such as data base programs, report generation programs, operational programs, and self-test programs.
- c. Documentation such as manuals, plans, specifications, and drawings.
- <u>Initiation Points</u>. Initiation of configuration 1.4.2. management will be consistent with the objectives of the project and its life cycle phases. During the Concepts Development Phase, the application of CMP shall be limited to the control of functional characteristics of CIs/CPCIs. CIs/CPCIs during the Design Phase may be subject to configuration management but only the minimum constraints will be imposed. During the Development Phase, CIs/CPCIs will be subject to configuration management at the system/subsystem level. CIs/CPCIs during the Deployment and Operations Phases will be subject to configuration management throughout their life cycle until removed from inventory. Configuration management for those privately developed or off-the-shelf hardware and software products acquired by the government, shall be initiated upon establishment of the product baseline. The CI/CPCI and its supporting documentation must be

verified before acceptance. Once accepted, they are subject to configuration control, status accounting, and configuration audit disciplines for maintenance and modification. The baseline is established when the documentation or application software is approved. Configuration management is an integrated effort. It provides the means to preserve the integrity and continuity of design, development, implementation and maintenance of a project. Configuration management monitors this process and requires active participation by all project organizational activities.

- 1.4.3. <u>Baselines</u>. Baselines will be employed throughout the life cycle of a CI/CPCI to ensure an orderly transition from one major commitment point to the next in the life cycle. Baselines will be established at those points in the project where it is necessary to define a formal departure point for control of future changes in performance, design, production, and related technical requirements. Although there is a natural order of events and actions during the life cycle of a CI/CPCI, the specific functional and physical characteristics, or special program requirements, may necessitate certain variations. The initial configuration identification could well be a range of proposed broad system performance parameters and characteristics. Such a preliminary system description may be used to facilitate the evaluation of alternative design approaches as major system performance specifications and cost trade-offs are made.
- 1.5. <u>REQUIREMENTS</u>. A CMP is required for each project. In the case of programs containing many projects, this requirement may be satisfied by a CMP being written for the whole control program, with supplements to that plan written for each project. The CMP will be tailored to the scope, complexity, technical characteristics, and organizational and management structure which pertain to the system effort. They will also address the entire system life cycle. Existing procedures and organizational structures will be used to the fullest extent possible.
- 1.5.1. <u>Project Manager</u>. The Project Manager is responsible for the establishment of the scope, objectives, and requirements of the configuration management program during its entire life cycle. Project management will retain overall responsibility for the configuration management program, monitoring its execution, and ensuring timely and appropriate corrective action. In addition to the other provisions of this standard, configuration management program requirements will address the following:
- a. The transfer of hardware and software configuration management responsibility from acquisition to operational organizations.
- b. Configuration management controls for all systems during development and operational testing and initial system deployment.
- c. Use of configuration management in the support of deployed systems, particularly the software portion.

- d. Identification of the hardware and software documentation which comprise each baseline.
- e. Library control of development, test, and operational versions of software (code and related data), the media on which it resides (tape, disk, or hardcopy), and the related documentation.
- f. Control of software (media and documentation) and hardware (documentation) for purposes of physical protection, continuity of operations, privacy, and security.
- 1.6. <u>CONFIGURATION MANAGEMENT TECHNIQUES</u>. The primary functions of configuration management are identification, control, status accounting, and audits. These functions are addressed in the following paragraphs.
- 1.6.1. <u>Configuration Identification</u>. Configuration identification will be established in the form of technical documentation. It is the current or conditionally approved documentation for a CI/CPCI as set forth in specifications, drawings, and associated lists. This identification becomes more detailed as design and testing progresses. Configuration identification shall be used as the basis for configuration control and status accounting throughout the entire life cycle. This technique requires the development of formal departure points called baselines. The foundation of any configuration management program exists in baseline management which is defined in MIL-STD-483 as "the application of technical and administrative direction to designate and control the documents which formally identify and establish the configuration identification of an item at specific times during its life cycle: that is functional, allocated, and product baselines." These three baselines will be established at specific points where it is necessary to define a formal departure point for the control of future changes in design. These baselines are discussed in Paragraphs 1.6.1.a through 1.6.1.c. At any time in the project life cycle, all of the previously established baselines, together with approved changes, constitute the current configuration identification of the entire system.
- a. <u>Functional Baseline</u>. The functional baseline will be required on designated CIs/CPCIs and will serve throughout the life cycle as a description of its required functional characteristics. It consists of the Functional Requirements Definition (FRD) and approved planning documents as applicable (i.e., CMP, Quality Assurance Plan, Requirements Statement, Project Management Plan and Economic Analysis). The functional baseline is normally established at the conclusion of a successful System Requirements Review (SRR).
- b. Allocated Baseline. The allocated baseline will serve throughout the life cycle as the detailed technical description of the CIs/CPCIs. The interface requirements between components are noted and the test required to demonstrate the characteristics of functions and the necessary design constraints are

- specified. Normally, both the Preliminary Design Review (PDR) and Critical Design Reviews (CDR) are held prior to the formal establishment of the allocated baseline. The approved General Design Specification (GDS) and approved Detail Design Specification (DDS) are the primary components of the allocated baseline. However, the Data Base Plan, Data Base Conversion Plan, Test Plan, Automated Data Processing Equipment (ADPE) Support Plan, and Telecommunications Support Plan may also be included as applicable to the information system being developed.
- c. <u>Product Baseline</u>. This identification will be used to prescribe the necessary "as-built" configuration for a CI/CPCI in the deployment and operation phase of the life cycle. This baseline consists of the following: Code, Users Manual, Computer Operations Manual, Implementation Plan, and Training Support Plan. The Acceptance Test Plan may also be included if deemed appropriate. This baseline will be established upon the successful completion of an Acceptance Review and a Physical Configuration Audit.
- 1.6.2. <u>Configuration Control</u>. Configuration control will be exercised at all echelons of the project on the basis of the applicable baseline, and the stage of the CI/CPCI life cycle. Configuration control is the systematic evaluation, coordination, and implementation of changes in the configuration of an item. Configuration control includes the functions designed to ensure that:
- a. The configuration is in accordance with the configuration identification.
- b. The approved configuration is produced and not altered without thorough review to determine the effects on interchangeability, cost, schedule, logistic support, operation, and maintenance.
- c. The approved changes are incorporated at the programmed effective date and within the required schedule.
- 1.6.3. Configuration Status Accounting. Configuration status accounting is the recording and reporting of information that is needed to manage the configuration, and includes a listing of the approved configuration identification, the status of proposed changes, and the implementation status of approved changes. It provides traceability of configuration baselines as well as any changes. The standard data elements and related features prescribed in MIL-STD-482, shall be used as applicable. Report formats shall be reviewed by the Project Manager to ensure appropriate data is recorded to meet project requirements.
- 1.6.4. Configuration Audits. Compliance with specifications and other contract requirements will be verified by means of configuration audits. Configuration audits shall consist of a Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA). The FCA is a formal examination of the functional characteristics of an item to verify that the item has achieved

the performance as specified in the Functional Requirements Definition or General Design Specification. The PCA is a formal examination of the "as-built" configuration of an item against its technical documentation in order to establish that item's product baseline. MIL-STD-1521A and Appendix XII to MIL-STD-483 prescribe requirements for conducting audits on systems, hardware, and software. At least one FCA and PCA must be performed during the development phase immediately prior to submission of System Decision Paper III. Additional audits may be conducted as necessary throughout the development life cycle.

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CONTENT AND FORMAT

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Chapter 2

CONTENTS AND FORMAT

- 2.1. <u>DOCUMENTATION STANDARDS</u>. The CMP should be developed in accordance with the documentation standards described within this section. All sections and paragraphs which are described will be included in the plan. However, the paragraphs contained within each section can be expanded to fit each particular application. In an instance where a particular section or paragraph is not applicable, the title of that specific section or paragraph will be included, followed by a statement that it is not applicable.
- 2.1.1. <u>Table of Contents</u>. The CMP shall be formatted as shown in Appendix C.
- 2.1.2. <u>Description of Contents</u>. The contents of the CMP should be developed using the narrative descriptions outlined in Appendix D.
- 2.1.3. <u>Evaluation Criteria</u>. In order to evaluate the criteria for completeness and accuracy of the CMP, the reviewer must, at a minimum, ensure that the following requirements are met.
- a. All sections and paragraphs in Appendixes C and D must be addressed.
- b. The title of any section or paragraph deemed not appropriate for the plan must appear with a statement of non-applicability and justification for its exclusion.
- c. The purpose and scope of the plan must be consistent with the objectives of this standard.
 - d. The identification, control, status accounting, and auditing functions must conform to generally accepted methodology.
 - e. The overall plan must represent a sound approach to the task and present a viable structure as adjudged by the Marine Corps and project staff personnel familiar with the intricacies of the system and its environment.
 - 2.2. <u>DOCUMENTATION DEPENDENCIES</u>. The documentation governed by this standard may also rely on the content of other project deliverables and/or standards. Figure 2-01, "Precedence Relationship," shows those project deliverables and standards which impact the CMP deliverables.
- 2.2.1. <u>Consultation Documents</u>. The bars that are in line vertically with the CMP show the concurrent documents that may be consulted at that time. The bars under Plans and Specifications are project deliverables governed by standards, and the bars

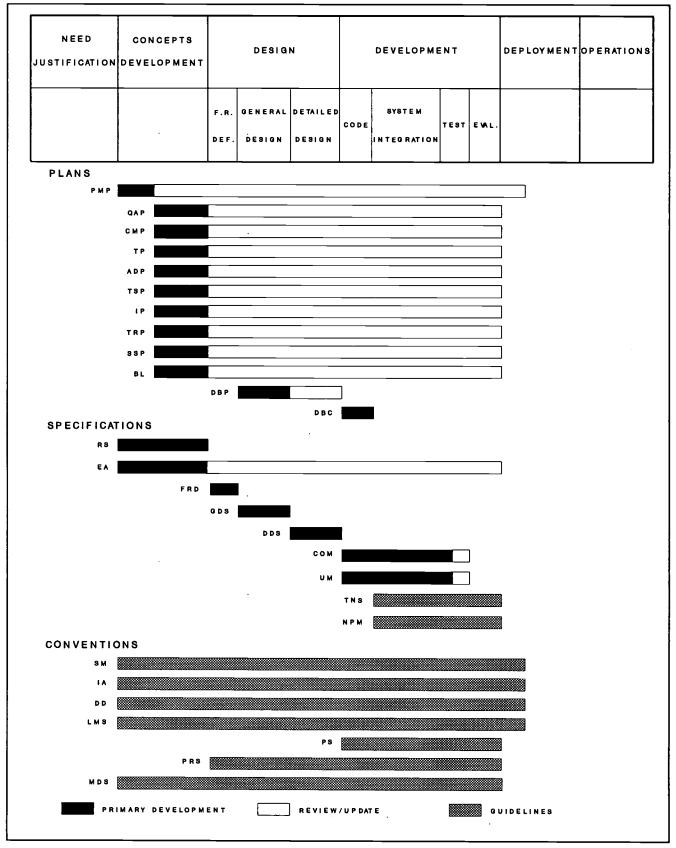


FIGURE 2-01 Precedence Relationship

under conventions are particular conventions described by standards. The deliverables and standards used for consultation are:

- a. Economic Analysis Deliverables (IRM-5236-03)
- b. Quality Assurance Plan Deliverables (IRM-5231-10A)
- c. Project Deliverable Style Manual (IRM-5230-02A)
- d. Inspection and Acceptance (IRM-5231-17A)
- e. Data Dictionary (IRM-5235-01A)
- f. Library Management System (IRM-5233-06A)
- 2.2.2. Reviews. All project deliverables, but particularly those governed by the Systems Development Methodology (SDM) Standards, are subject to a formal review process. This process is shown in Figure 2-02, "Review Mechanisms." This figure defines the type and occurrence of required reviews during the life cycle of any Automated Information System (AIS) project. There are two types of reviews: a formal review of documents; and a project status review that results in a decision paper. The review of documents is used in the preparation of the decision papers. The primary information obtained from the review of documents supports quality assurance and configuration management.
- 2.2.3. Change Requirements. Since SDM is an integrated methodology, issues may arise during development of the CMP that will require changes to preceding documents. These changes must be documented and approved in accordance with the quality assurance and configuration management procedures. Externally imposed milestones that are unrealistic to accomplish should not be used as an attempt to defer or eliminate the documentation requirements.

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FIGURE 2-02 Review Mechanisms

Appendix A

GLOSSARY

ADP: ADP is an acronym for "ADPE Support Plan"

ADPE is an acronym for "Automated Data Processing Equipment"

AIS is an acronym for "Automated Information System." combination of information, computer, and telecommunications resources, and other information technology and personnel resources which collects, records, processes, stores, communicates, retrieves, and displays information.

AIS Project: One or more activities being managed as a unified undertaking which contribute toward the development and implementation of a new AIS or the significant enhancement of an existing AIS.

is an acronym for "AIS Project Baselining." BL: Description of a specific project, containing at least the following key elements: functional requirements, planned capabilities, schedule, costs, and approved funding.

is an acronym for "Configuration Item" CI: CI

CMP is an acronym for "Configuration Management Plan" CMP:

is an acronym for "Computer Operations Manual" COM: COM

CPCI is an acronym for "Computer Program Configuration CPCI: Item"

is an acronym for "Data Base Conversion Plan" DBC DBC:

is an acronym for "Data Base Plan" DBP: DBP

is an acronym for "Data Dictionary" DDDD:

is an acronym for "Detailed Design Specification" DDS: DDS

is an acronym for "Economic Analysis" EΑ EA:

FRD is an acronym for "Functional Requirements FRD: Definition"

is an acronym for "General Design Specification" GDS: GDS

is an acronym for "Inspection and Acceptance IA: IA Standard"

is an acronym for "Implementation Plan" IP: ΙP

is an acronym for "Information Resources Management" IRM: IRM

<u>LCM</u>: LCM is an acronym for "Life Cycle Management." A management discipline for acquiring and using AIS resources in a cost-effective manner throughout the entire life of an AIS.

LMS: LMS is an acronym for "Library Management System"

MDS: MDS is an acronym for "Man-Machine Dialogue Standard"

NPM: NPM is an acronym for "Network Procedures Manual"

PMP: PMP is an acronym for "Project Management Plan"

PRS: PRS is an acronym for "Prototyping Standard"

PS: PS is an acronym for "Programming Standard"

<u>OAP</u>: QAP is an acronym for "Quality Assurance Plan"

RS: RS is an acronym for "Requirements Statement"

<u>SDM</u>: SDM is an acronym for "System Development Methodology." A collection of methods, procedures, and activities associated with developing an automated information system.

<u>SDP</u>: SDP is an acronym for "System Decision Paper." An SDP recaps the essential information on an AIS for decision makers. An updated SDP is submitted at each major LCM milestone and provides the necessary information for the decision making process.

<u>SM</u>: SM is an acronym for "Style Manual"

SSP: SSP is an acronym for "System Security Plan"

TNS: TNS is an acronym for "Naming Conventions"

TP: TP is an acronym for "Test Plan"

TRP: TRP is an acronym for "Training Support Plan"

<u>TSP</u>: TSP is an acronym for "Telecommunications Support Plan"

<u>UM</u>: UM is an acronym for "Users Manual"

Appendix B

REFERENCES

- 1. MCO P5231.1A Life Cycle Management for Information Systems Projects (LCM-IS)
- Joint DoD Services/Agency Regulation, Configuration Management
- 3. DoD Directive 5010.19 Configuration Management
- 4. DoD-STD-2167 Defense System Software Development
- 5. DoD-STD-480A Configuration Control Engineering Changes, Deviations and Waivers
- 6. MIL-STD-481 Configuration Control Engineering Changes, Deviations and Waivers (Short Form)
- 7. MIL-STD-482A Configuration Status Accounting Data Elements and Related Features
- 8. MIL-STD-483 Configuration Management Practices for Systems, Equipment, Munitions, and Computer Programs
- 9. MIL-STD-490 Specification Practices
- 10. MIL-STD-1521A Technical Review and Audits for System, Equipment, and Computer Programs
- 11. MIL-S-83490 Specification, Type and Forms

Appendix C

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Section	10.	Subcontractor/Vendor Control

Appendix D

CONFIGURATION MANAGEMENT PLAN CONTENT DESCRIPTION

SECTION 1 INTRODUCTION

This section should describe the purpose and scope of the CMP and other general information required in the CMP.

1.1 PURPOSE AND SCOPE

This paragraph should describe why the CMP is being developed and how it will be used. It will include a description of the scope of configuration management activities within the overall system life cycle.

1.2 DEFINITIONS

This paragraph should contain unique definitions contained within the plan or shall reference definitions of terminology used in the CMP.

1.3 CONFIGURATION MANAGEMENT SUMMARY

This paragraph should describe the major features and objectives of the CMP and provide a concise summary of the approach to configuration management. In addition, it will describe how the configuration management function will interface with other activities such as quality assurance and systems engineering.

SECTION 2 APPLICABLE DOCUMENTS

This section should list those standards, manuals, specifications, and other documents applicable to the configuration management function. Each document should be completely identified by title, document number, issuing authority, and date of issue.

SECTION 3 CONFIGURATION MANAGEMENT ORGANIZATION

This section should identify the organizational structure for configuration management in narrative and graphic chart form. It will include, but not be limited to the following:

- a. Relationships among the project organization, functional organizations within the USMC, in-house development efforts, and contractor organizations. The development contractor should limit comments to an organizational structure which is applicable to the contractor's organization and Marine Corps interfaces. A chart could be used to show these relationships.
- b. Responsibilities and authority for configuration management of all participating organizations and groups. The responsibilities and authorities within the application

developer/contractor for configuration management should be described. A chart may be used to illustrate the responsibilities associated with a given organizational entity.

- c. Identification of the configuration management organization including configuration management boards, configuration control boards, and group or material review boards. In the case of a development contractor the membership, authority and activities of a Contractor Configuration Control Board should be indicated.
- d. Relationships among the different organizations having a direct impact upon configuration management. The application developer/contractor should expand the relationship between different organizations within the application developer/contractor as described in Appendix D, Section 1, Paragraph 1.3, "Configuration Management Summary."

SECTION 4 CONFIGURATION IDENTIFICATION

This section should describe the necessary prerequisites and procedural data required to ensure proper identification of the system and system components being developed. It should include:

- a. Identification and selection of CIs/CPCIs, and other additional items considered necessary to ensure proper configuration identification, including their relationship to the project Work Breakdown Structure (WBS). The application developer/contractor should identify to what level configuration management will be accomplished, which items they consider necessary to control, and information as to how the items are interrelated.
- b. Developing, numbering, changing, and maintaining specifications. In the case of a contracted development the contractor should describe how they will work with the Government to maintain specifications.
- c. Preparing, identifying, and revising engineering drawings and associated lists. The application developer/contractor should describe how they will identify, revise, and update Data Flow Diagrams, Data Dictionary elements or any other relevant backup material.
- d. The establishment of functional, allocated, and product baselines as appropriate.
- e. Preparing and processing design specifications during development and identifying their relationship to higher level specifications or documentation.
 - f. Establishing the software support library.
- g. Assignment of nomenclature and serial numbers, if applicable.

h. Procedures for formal release and distribution of baselined documentation and software to multiple users. When developing these distribution procedures, refer to the Library Management Standard (IRM-5233-06) for procedures on exporting and importing software.

SECTION 5 CONFIGURATION CONTROL

This section should describe the procedures necessary to ensure the systematic evaluation, coordination, and implementation of changes to the configuration of an item. In the case of a contractor application development, the Contractor Configuration Control Board and how this organization interfaces with the Marine Corps should be described in terms of flow of information. At a minimum it shall address:

- a. Configuration control organization, authorities, activities, and depth of control and interfaces for these activities.
- b. Procedures for preparation, processing, and submission of Engineering Change Proposals (ECP) and Software Change Proposals (SCP) in accordance with DoD-STD-480A or MIL-STD-481.
- c. Format, processing, and submission of Requests for Deviation and Waivers.
- d. Preparation, processing, and submission of all Class I engineering changes to the procuring agency or procuring agency's representative Configuration Control Board.
- e. Format and processing of Class II engineering changes. A letter format is acceptable for the processing of Class II engineering changes. The Government must have sufficient time to review and respond to all Class II change submissions.
- f. Preparing and processing of Specification Change Notices (SCN). Specific distribution procedures for SCNs to multiple users which include the modified documentation and software revisions need to be addressed. Refer to the Library Management Standard for procedures on exporting and importing software.
- g. Preparation and processing of Software Trouble Reports (STR). The Software Trouble Reports must include sufficient information to adequately describe, track, evaluate, and document a specific problem. The following items are recommended for inclusion in Software Trouble Reports, but may be tailored as required: System or Project Name, Originator, Problem Number, Problem Name, Origination Date, Need Date or Priority, Analyst Name, Telephone Number, Date Assigned, Date Completed, Analysis Time, Problem Status, Approval of Solution, Follow-Up Action, Corrector Name, Telephone Number, Correction Date, Version Number, Correction Time, Software Element or Document Affected, Description of Problem, and Recommended Solution Impacts.

- h. Procedures for ensuring that the implementation of approved changes is reflected in the baseline, program descriptive documentation, and program materials (for example, design, test, and user narrative).
- i. Configuration Control Board (CCB) structure and responsibilities. The application developer/contractor should reference Section 3 for organizational information. The role of the Contractor CCB should be discussed in relation to Change Control and the above outlined procedures.

SECTION 6 SOFTWARE CONFIGURATION AUTHENTICATION

This section should describe the process that will confirm traceability of developed software. At a minimum, it will describe procedures for:

- a. Reconciling software deliverables to their approved documentation.
- b. Assuring that the software, descriptive documentation, and program materials are properly identified.
 - c. Assuring the incorporation of approved changes.
- d. Reconciling the Configuration Status Accounting Reports and the status of the software, descriptive documentation, and program materials with the approved baselines and the approved changes.

SECTION 7 CONFIGURATION STATUS ACCOUNTING

This section should present the procedures for collecting, recording, processing, and maintaining data necessary for producing Configuration Status Accounting Records and Reports. It will include at a minimum the following:

- a. Format and data elements for configuration management status accounting records and reports.
- b. Format and form of a configuration list to reflect an "as designed" versus an "as built" configuration.
- c. Content and format of periodic summary reports to reflect status of ECPs, SCPs, and STRs as appropriate.

SECTION 8 INTERFACE MANAGEMENT

This section should describe the strategy for coordinating efforts involved in design to ensure compatibility through interfaces such as where two or more activities are involved in the development of a CI/CPCI.

SECTION 9 CONFIGURATION AUDITS

This section should include the following:

- a. Quality assurance measures that apply to configuration management.
- b. Planned procedures for Functional Configuration Audits (FCA) and Physical Configuration Audits (PCA).
- c. Format for reporting results of in-process configuration audits.
- d. Plans, procedures, and schedules for conducting configuration management audits.

SECTION 10 SUBCONTRACTOR/VENDOR CONTROL

This section should describe the procedures for controlling subcontractors and vendors to ensure compliance with configuration management requirements.

COMMENTS/REVISIONS

Technical publications under the Information Resources Management (IRM) Standards and Guidelines Program (MCO 5271.1) are reviewed annually. Your comments and/or recommendations are strongly encouraged.

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