5. Testing. State requirements for testing other than Software Validation Testing. Specifically, Unit Test, Integration Test, and Performance Test requirements should be identified. Software Validation Testing is described in the Software Validation Test Plan.
6. Problem Reporting and Corrective Action. Describe methods and procedures for problem reporting and corrective action as well as the organizational elements responsible for their implementation.
7. Tools, Techniques, and Methodologies. Identify special tools, techniques, and methodologies required.
8. Code Control. Define the methods and facilities used to maintain, store, secure, and document controlled versions of the identified software during all phases of the software lifecycle. For larger projects, this may be implemented by writing a Software Configuration Management Plan.
9. Media Control. Define the methods and facilities used to identify the media for each software product and to protect the physical media from unauthorized access, inadvertent damage, or degradation during all phases of the software life cycle.
10. Supplier Control. Define the process and procedures for assuring that software provided by Suppliers meets established requirements.
11. Records Collection, Maintenance, and Retention. Define the SQA documentation to be retained, the methods used to assemble, safeguard, and maintain this documentation, and shall designate the retention period.
12. Training. Identify the training required to meet the needs of the SQA Plan.
13. Risk Management. Define the methods and procedures used to identify, assess, monitor, and control areas of risk.

H.6 Software Validation Test Plan

Purpose

The Test Plan describes the process used to perform validation testing. This plan identifies the resources required for the proposed testing effort based on estimating the number of tests required. This estimate is derived from the

SRS. This plan also defines the Comple
to stop testing. This test plan is intend
ments of the SQA Plan.

Outline

Reference: IEEE-Standard 1012-1998

1. Overview
   a. Organization. Describe th
   and the relationship of this
   such as, development, proje
   configuration management, a
   b. Tasks and Schedules
   c. Responsibilities
   d. Tools, Techniques, Metho
2. Processes
   a. Management
   b. Acquisition
   c. Supply
   d. Development
   e. Operation
   f. Maintenance
3. Reporting Requirements
4. Administrative Requirements
5. Documentation Requirements
6. Resource Requirements
7. Completion Criteria. Define
   mine when testing is complete
   ria should be considered:
   - All of the Test Scripts have b
   - All SPRs have been satisfacto
   - All changes made as a result
   - The projected software relia
   for software.

SRS. This plan also defines the Completion Criteria used to determine when to stop testing. This test plan is intended to be consistent with the requirements of the SQA Plan.

Outline

Reference: IEEE-Standard 1012-1998

1. Overview
   a. Organization. Describe the organization of the testing effort and the relationship of this organization to other organizations such as, development, project management, quality assurance, configuration management, and document control.
   b. Tasks and Schedules
   c. Responsibilities
   d. Tools, Techniques, Methods
2. Processes
   a. Management
   b. Acquisition
   c. Supply
   d. Development
   e. Operation
   f. Maintenance
3. Reporting Requirements
4. Administrative Requirement
5. Documentation Requirements
6. Resource Requirements
7. Completion Criteria. Define the criteria that will be used to determine when testing is completed. As an example, the following criteria should be considered:
   - All of the Test Scripts have been executed.
   - All SPRs have been satisfactorily resolved.
   - All changes made as a result of SPRs have been tested.
   - The projected software reliability growth meets reliability goal for software.

- The test coverage metric indicates that at least 95% of the code has been executed. A statement identifying the 5% of the code that hasn't been executed and why is included in the Test Report.

H.7 Software Validation Test Procedure

Purpose

The Test Procedure document contains the detailed test scripts that will be run.

Outline

1. Organization and Responsibilities
2. Overview of Test Scripts
3. Appendix
4. Detailed Test Scripts

H.8 Software Validation Test Report

Purpose

The purpose of this report is to document the results of software validation testing.

Outline

1. Organization and Responsibilities
2. Summary of Results
3. Summary by Software Version
4. Metrics
5. Conclusions and Recommendations
6. Appendices
7. Completed Test Scripts
8. Software Problem Reports

H.9 Software Validation Test

Purpose

The test scripts document the

Test Script Header

Test Identifier: _____
Test Category: _____
Developed by: _____
Latest Rev: _____

Test Log:

Engineer Date Version

_____
_____
_____
_____

Test Objectives:

1.
2.
3.

Hardware:

1.
2.
3.

Initial Setup:

1.
2.
3.

H.9 Software Validation Test Script

Purpose

The test scripts document the specific details of each test.

Test Script Header

Test Identifier: _____
Test Category: _____
Developed by: _____
Latest Rev: _____

Test Log:

Engineer	Date	Version	SPRs found	SPRs verified

Test Objectives:

1.
2.
3.

Hardware:

1.
2.
3.

Initial Setup:

1.
2.
3.

Test Script

Initial Test Setup

Detailed Steps

1. Perform step 1 [Pass or Fail]
   Expected results for step 1
2. Perform step 2 [Pass or Fail]
   Expected results for step 2
3. Perform step 3 [Pass or Fail]
   Expected results for step 3

Notes and Observations:

H.10 Software Configuration Management Plan

Purpose

The purpose of this plan is to define the methods to be used to identify software products, control and implement changes, and record and report change implementation status. A Software Configuration Management Plan would normally be written for complex projects that involve a large number of software engineers.

Outline

Reference: IEEE-Standard-828-1998

1. Management
   a. Organization. This section describes the organizational structure that influences the configuration management of the software during development.
   b. Responsibilities. This section describes the organization element responsible for each configuration management task.
   c. Interface Control. This section defines the methods used to:
   - Identify
   - Process
   - Provide
   - Maintain document
   - Control the ware on

   d. Implementation. This for the implementation ment Plan.
   e. Applicable Policies. identifies all policies implemented as part
2. Activities
   a. Configuration dures for identifying
   b. Configuration for controlling
   c. Configuration procedures for
   d. Audits and Reviews. audits and reviews.
3. Tools, Techniques, and specific tools, techniques, CM functions.
4. Supplier Control. This that vendor-supplied
5. Records Collection and documentation to be guard, and maintain this retention period.