CCPS Project Plan
Configuration Management Plan

21. Introduction

This section presents CCPS Change Management policy, and outlines the process to be used. See *CCPS Methods and Procedures* as well.

21.1 Policy

All project deliverables, internal or external, shall be maintained according to this Configuration Management (CM) Plan. Exceptions to this policy shall be made only with the written consent of the Project Manager.

21.2 Organization

The group responsible for execution of this plan shall be the *Configuration Control Board (CCB).* The CCB shall be assisted by a *Configuration Management Administrator (CMA).*

21.2.1 Configuration Control Board (CCB)

The Project Manager shall select the CCB. Its specific responsibilities include the following:

1. Acceptance or rejection of *Change Requests (CRs).*
2. Assignment of *Severity* to CRs.
3. Assignment of CRs to specific product releases.
4. Development, documentation, and distribution of appropriate CR statistics.
5. General administration of the CR process.

The Project Manager shall select one person from the CCB to chair the CCB.

21.2.2 CM Administrator (CMA)

The project will use a computer system to administer CRs, as specified below. The CMA is generally responsible for maintenance and administration of the CR system. Specific responsibilities include, but are not limited to, the following:

1. Authorization of users of the system.
2. Training of users of the system.
3. System backup and recovery.
4. General system administration per the administrator's manual (Reference 3).

The CMA shall be managed technically by the chair of the CCB. The CMA may have collateral duties as appropriate.

21.3 Items Covered by the CM Process

Project Configuration Items (CIs) covered by this Configuration Management process are explicitly identified below.

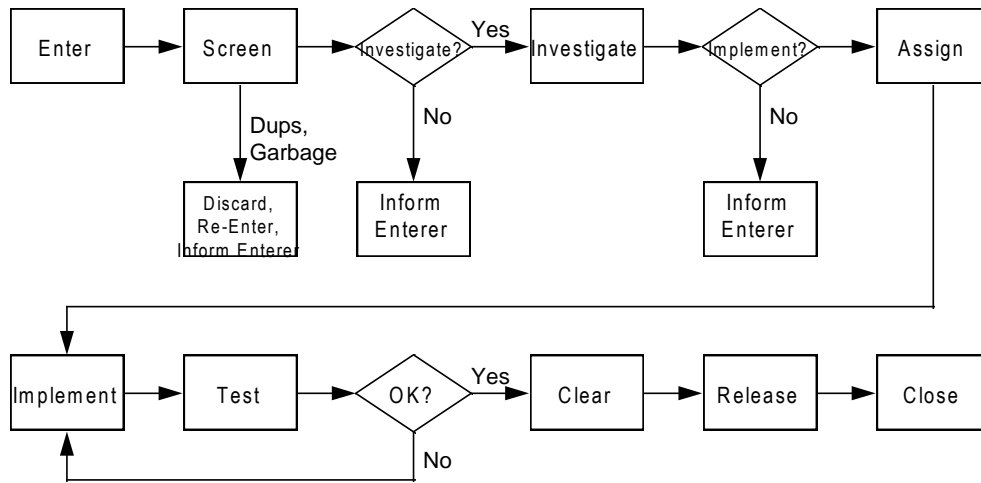| CI	Owner	Approvals
ATCO Contract	Business Manager	Business Manager Project Manager ATCO
Project Plan	Project Manager	Business Manager Project Manager
X.25 Board Specification		
BoardTech Contract		
CCPS Architecture		
Etc.		
Etc.		

21.4 CM Process

The Configuration Management process follows the steps outlined below, and illustrated in the attached figure "Configuration Management Process." (See also Reference 4, which applies specifically to the CM system chosen.)

1. CR entry to the CM system.

2. Screening of CRs for duplicates, unintelligible ones, etc., and deletion or request for re-entry as appropriate.

3. Acceptance or rejection (for investigation) of each CR by the CCB.

4. Initial assignment of accepted CRs to individual for effort and impact investigation.

5. Acceptance or rejection (for implementation) of each CR by the CCB.

6. Assignment of accepted CR to individual for implementation.

7. Implementation.

8. Testing appropriate to the item, e.g., inspection of contract changes.

9. (Possible re-work and re-test).

10. Clearance (e.g., passed system test, but not released to field).

11. Closure (running in field).

```
┌───────┐   ┌───────┐    ╱Investigate?╲  Yes  ┌──────────┐   ╱Implement?╲   ┌────────┐
│ Enter │──▶│ Screen│──▶◀            ▶───────▶│Investigate│─▶◀          ▶──▶│ Assign │
└───────┘   └───────┘    ╲            ╱        └──────────┘   ╲         ╱    └────────┘
                │              │ No                               │ No
          Dups, │              ▼                                  ▼
          Garbage        ┌────────┐                         ┌────────┐
                │        │ Inform │                         │ Inform │
                ▼        │ Enterer│                         │ Enterer│
          ┌─────────┐    └────────┘                         └────────┘
          │ Discard,│
          │ Re-Enter,│
          │Inform Enterer│
          └─────────┘

      ┌─────────┐   ┌──────┐    ╱OK?╲  Yes  ┌───────┐   ┌─────────┐   ┌───────┐
      │Implement│──▶│ Test │──▶◀     ▶─────▶│ Clear │──▶│ Release │──▶│ Close │
      └─────────┘   └──────┘    ╲   ╱        └───────┘   └─────────┘   └───────┘
                                   │ No
```

21.5 Tools

In order to implement the process described above, the project has chosen the ClearCase product administration system. All references to "Configuration Management System" should be read as if ClearCase were specifically identified.

21.6 Metrics

At a minimum, the metrics outlined below shall be collected, summarized, and made available to the Project Manager:

1. By Severity group (typically 1 and 2, and 3 and 4), number of CRs in specific status groups. (Typically these status groups are open, passed system test, and closed.) This shall be a running tally, i.e., plotted against time from project inception.

2. By Severity group, closure time distribution and average closure time. This shall be collected by month, or such other time unit that the Project Manager requests.

The reports identified above shall be available for specific parts of the product, e.g., software, as well as in aggregate, as required by the Project Manager. The "Severity group" and "status group" mentioned above shall also be specified by the Project Manager.

Other reports may be specified by the Project Manager.

21.7 Training

The level of training for use of ClearCase is variable within MSDS. Consequently, the whole CCPS team will attend a training session together. This will be provided by the CleareCase sales organization at a one-time cost of $5000. Continued training will be provided by the CMA.

It will not be necessary to train an administrator, as we have decided to purchase that support from MSDS Operations (see below).

21.8 Staffing

We shall purchase the services of a CMA from MSDS Operations. Estimated average level of effort is 1/4 time. The associated cost is $30,000 yearly.

21.9 Facilities

We shall purchase computer and software cycles from MSDS Operations, thereby avoiding purchase of either computers or software for Configuration Management. For our level of activity our estimate of the cost is $5,000 monthly.

21.10 Budget and Resources Summary

Because we shall purchase training, CMA services, and computer services, the cost to CCPS is a direct expense, a one-time training fee of $5000, and a total ongoing operations fee of $90,000 yearly (staff and computer cycles).