
Change Control Process for <Project Name>

Version 1.0 draft 1

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Revision History

Name	Date	Reason For Changes	Version
		initial draft	1.0 draft 1

Introduction

Purpose

This document describes the process that is to be used for requesting and managing changes to work products created or maintained by the members of <project>. This process will facilitate communication about requested changes among the stakeholders of <project>, provide a common process for resolving requested changes and reported problems, and reduce the uncertainty around the existence, state, and outcome of a change that has been requested in a work product.

Scope

Any stakeholder of <project> can submit the following types of issues to the change control system:

- requests for requirements changes (additions, deletions, modifications, deferrals) in software currently under development
- reports of problems in current production or beta test systems
- requests for enhancements in current production systems
- requests for new development projects

This change control process applies to baselined work products created or managed by the members of the <project>, including:

- software that has been released to production or is in beta test
- requirements specifications for <project>
- group procedures and processes
- user and technical documentation

The following work product classes are exempted from this change control process:

- work products that are still under development, except for requirements changes requested in new projects
- interim or temporary work products created during the course of a project
- any work products intended for individual use only

Definitions

<u>Term</u>	<u>Definition</u>
issue	An item that someone has submitted to the change control system that describes a software problem, a requested enhancement, a proposed change in requirements for a product under development, or a new project being proposed.
stakeholder	Someone who is affected by or who can influence the project.

Roles and Responsibilities

Role	Description
CCB Chair	Chairperson of the change control board; has final decision-making authority if the CCB does not reach agreement; asks someone to be the Evaluator for each change request and asks someone to be the Modifier for each approved change request
Change	The group that decides to approve or reject proposed changes for

Control Board	a specific project
Evaluator	The person whom the CCB Chair asks to analyze the impact of a proposed change
Modifier	The person who is assigned responsibility for making changes in a work product in response to an approved change request; updates the status of the request over time
Originator	The person who submits a new change request
Project Manager	The person who is responsible for overall planning and tracking of the development project activities
Verifier	The person who determines whether a change was made correctly

Change Request Status

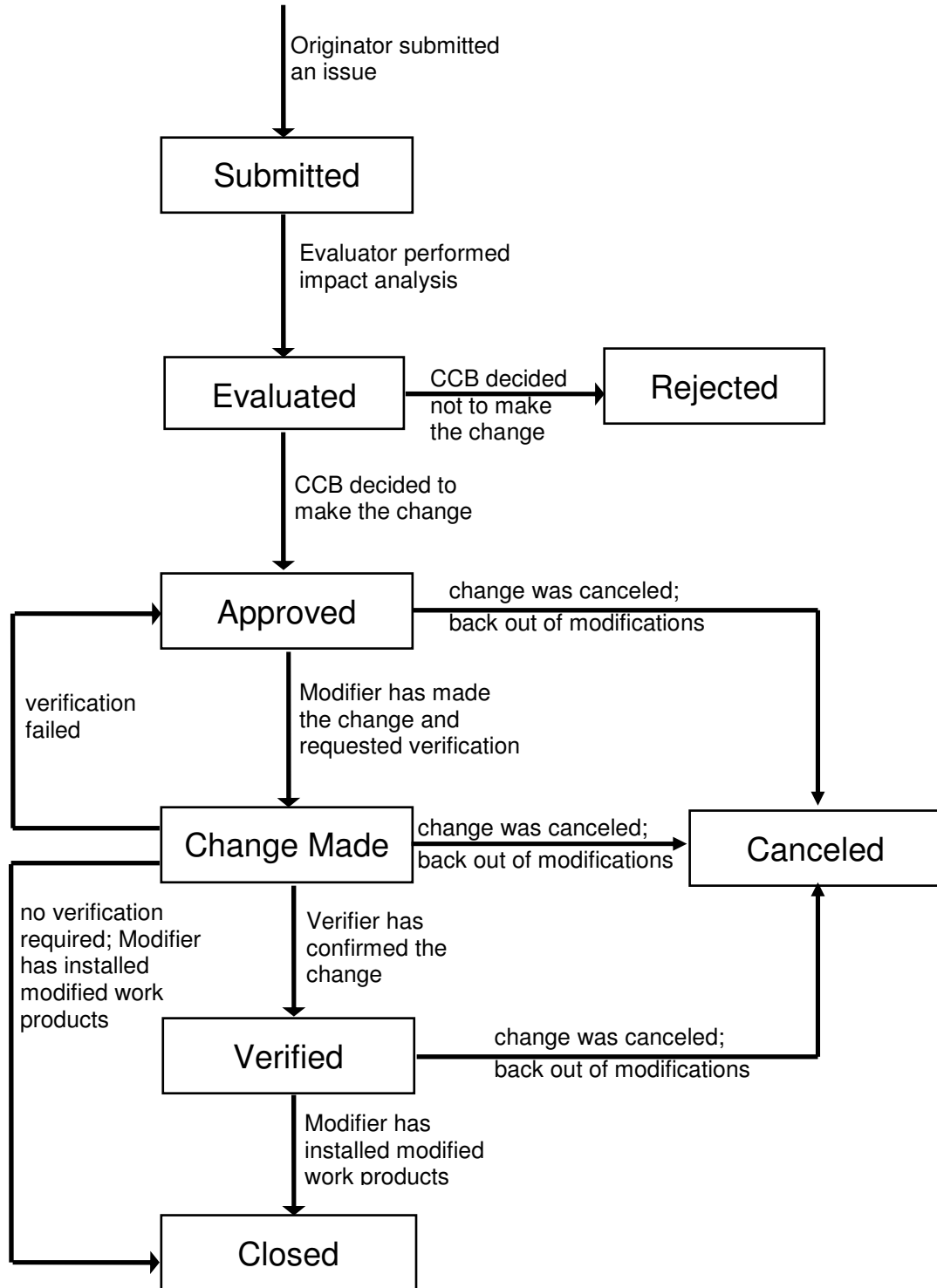
Status Changes A requested change will pass through several possible statuses during its life. These statuses, and the criteria for moving from one status to another, are depicted in the state-transition diagram in Figure 1 and described in the Possible Statuses table.

Notifications Any time an issue status is changed, the change control tool will send an e-mail notification automatically to the issue Originator, the issue Modifier, and/or the CCB Chair, as specified below.

Possible Statuses

Status	Meaning
Approved	The CCB decided to implement the request and allocated it to a specific future build or product release. The CCB Chair has assigned a Modifier.
Canceled	The Originator or someone else decided to cancel an approved change.
Change Made	The Modifier has completed implementing the requested change.
Closed	The change made has been verified (if required), the modified work products have been installed, and the request is now completed.
Evaluated	The Evaluator has performed an impact analysis of the request.
Rejected	The CCB decided not to implement the requested change.
Submitted	The Originator has submitted a new issue to the change control system.
Verified	The Verifier has confirmed that the modifications in affected work products were made correctly.

Figure 1. State-Transition Diagram for Issue Statuses.



Procedure

Entry Criteria

- Change control board is established for the project.
 - Baselined work products exist.
 - The Originator has submitted a valid issue or change request with all necessary information to the CCB Chair.
 - The change control tool sets the issue's initial status to Submitted.
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Tasks

1. The CCB Chair assigns an Evaluator.
 2. The Evaluator assesses the issue as to feasibility, whether it really pertains to the indicated project, whether a reported problem can be reproduced, an estimate of the labor hours needed to implement the change, and so on. For a requirement change, use the Impact Analysis Checklist for Requirements Changes, the Effort Estimation Worksheet for a Requirement Change, and the Impact Analysis Report Template. Change status to Evaluated.
 3. The CCB decides whether the requested change should be made (or the reported problem fixed) at this time, at some point in the future, or not at all. Input should be solicited from others potentially affected by the change before making the decision.
 4. If the change was accepted, the CCB Chair assigns a Modifier, sets the status to Approved, enters any explanation in the Response attribute, and schedules the work. The Project Manager negotiates any necessary changes in project commitments with affected stakeholders. Tool sends e-mail to the assigned Modifier and the Originator.
 5. If the change was rejected, the CCB Chair sets the status to Rejected and enters an explanation of why in the Response attribute. Tool sends e-mail to the Originator and CCB Chair.
 6. The CCB Chair and the Originator determine whether formal verification of the change will be required, following the procedure in the **Verification** section. If so, they select the verification method to be used and the CCB Chair assigns a Verifier.
 7. The Modifier makes the necessary changes in the affected work products and notifies any other affected parties if corresponding changes need to be made, such as user documentation, help screens, and tests.
 8. The Project Manager updates the project plans, task lists, and schedules to reflect the impact of the change on project work remaining to be done. The Project Manager revises any task dependencies as necessary.
 9. If it becomes apparent during the work that the requested change is not feasible after all, the Modifier notifies the CCB Chair, who may then set the status to Canceled. The Modifier backs out of any modifications made, restoring the work products to their previous baseline. Tool sends e-mail to the Originator, CCB Chair, Modifier, and Project Manager.
 10. When the change is completed, the Modifier sets the status to Change Made, updates the issue in the database with appropriate notes in the Response attribute, and enters the hours of effort that were required to make the change in the Actual Hours attribute. Tool sends e-mail to the Originator and CCB Chair.
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Verification

1. The Modifier notifies the Originator and Verifier (if one was assigned) that the change has been made and makes all modified work products available to the people responsible for verification.
2. The Verifier performs the agreed-upon verification steps.
3. If verification is successful, the Verifier sets the status to Verified. Tool sends e-mail to the Originator and Modifier.

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4. If verification is not successful, the Verifier sets the status back to Approved and describes the problem in the Response attribute. Tool sends e-mail to the Originator and Modifier. The process resumes with Task #7.
5. For a problem report issue or an enhancement request issue, the Modifier installs the modified work product as appropriate and updates the product baseline. For requirements changes, the Modifier updates version numbers on all modified work products per the project's version control procedure, checks them back into the version control system, updates requirements traceability information and requirements status attributes as necessary, and updates the requirements baseline.
6. The Modifier sets the status to Closed. Tool sends e-mail to the Originator and CCB Chair.

**Change Control
Status Reporting**

The CCB Chair generates a report at the end of each month summarizing the status of the contents of the change control database. These reports identify all status changes made in the previous month, list the status of all change requests that currently have a status other than Rejected or Closed, and indicate the level of change activity. The project leadership team reviews these reports to determine whether any corrective actions are necessary.

Exit Criteria

- o The status of the request is either Rejected or Closed.
 - o The modified work products have been correctly installed into the appropriate locations.
 - o The Originator, CCB Chair, and Project Manager have been notified of the current status.
 - o Pertinent requirements traceability information has been updated.
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Appendix: Attributes Stored for Each Issue

Field	How Set	Contents
Actual Hours	Modifier	Actual labor hours of effort needed to implement the change.
Description	Originator	Free-form text description of the change being requested. This cannot be changed after it is entered. If reporting a problem, enter the exact error message text observed here.
Date Submitted	System	Date this issue was submitted to the tool.
Date Updated	System	Date this issue was most recently updated.
Estimated Hours	Modifier	Estimated labor hours of effort needed to implement the change.
Implementation Priority	CCB Chair	Relative importance of making the change: Low (default), Medium, High.
Issue ID	System	Sequence number assigned to the issue.
Issue Type	Originator	Type of change request being created: Problem, Enhancement, Requirement Change, New Project.
Modifier	CCB Chair	Person who is assigned responsibility for implementing the change.
Originator	Originator	Originator's name.
Originator E-Mail	Originator	Originator's e-mail address.
Originator Phone	Originator	Originator's phone number.
Originator Priority	Originator	Originator's relative importance of the change: Low, Medium, High.
Planned Release	CCB Chair	Product release number for which this approved change is scheduled, determined by CCB.
Product	Originator	Name of the product or project in which a change is being requested or a problem reported.
Problem Severity	Originator	For a problem report, set severity of the change (see Table 1). Use N/A if this issue is not a problem report.
Response	CCB Chair, Modifier	Free-form text of responses made to the change request. Multiple responses can be made over time. Do not change existing responses.
Status	Originator, Modifier	Update current status of the change request as it moves through the states described in the Change Request Status section. Date of status changes and name of user making the update are shown automatically.
Title	Originator	One-line description of the issue.
Verifier	CCB Chair	Name of individual who is responsible for verifying that changes were made correctly.

Table 1. Problem Severity Descriptions.

Severity	Examples
Minor	Cosmetic problem, usability improvement, unclear error messages; customer can live with the problem (default)
Major	Problem adversely affects product functioning, but a workaround is available; customer will be annoyed; serious usability impairment; problem blocks some testing
Critical	Product does not function at all or crashes; the wrong results are generated; further testing of the application is not possible
Emergency	Anything that requires a change to be made immediately, bypassing the change control process temporarily