- 1. <u>Scope</u>: The Change Control Board (CCB) prioritizes, approves, plans, and integrates requests for changes and bug fixes into the current release (i.e., during project execution after requirements and/or design freeze) and into future releases.
- 2. <u>Submission of Change Request</u>: Any member of a project team may submit a Change Request (CR) to the CCB using the Change Control Database. The Change Request Form provides for a change request that includes the following items:
  - a) Definition of the change: Describe the change and why is it needed, including the customers and users requesting and affected by the change.
  - b) Subsystems changed: List at least one and possibly more subsystems to which changes are proposed.
  - c) Unchanged subsystems affected: List any subsystems not changed that the change will affect.
  - d) Documentation to be updated: List all documents in the project repository that must be updated as part of the change, including both internal project documents (e.g., Project Plan, Test Plan, Engineering Specification(s), and User Interface Specification) and deliverable documents (e.g., User's Guide, Packaging, and Jewel Cases).
  - e) Priority: Propose the appropriate priority (one through five descending scale or X):
    - 1. Urgent: Request or bug fix must be implemented immediately. (Emergency release/patch must have accompanying disposition plan.)
    - 2. Essential: Request or bug fix is must-have or must-fix, respectively, for this scheduled release.
    - 3. Valuable: Request would provide significant benefit, or bug significantly reduces value delivered, to one or more customers/users in this scheduled release.
    - 4. Desirable: Request or bug fix should be in this release if possible within feature, budget, and schedule constraints; otherwise in next scheduled release.
    - 5. Discretionary: Request or bug fix could be included whenever possible in some future release, allowing for all other priorities.

- 1X Rejected: Do not implement request, as costs, issues, or risks outweigh benefits.
- f) Dependencies: List any linkages between this change and other pending changes, on pending decisions, or on any assumptions.
- g) Cost/savings: Estimated cost or savings inherent in the change as well as post-release benefits.
- h) Effort: Estimated number of person-hours of effort required to implement the change.
- i) Requested completion: Date to complete all implementation, testing, and integration tasks.
- 3. <u>Bug Reports:</u> Bug fixes are handled through the CCB process, but no change request form is required. If the CCB deems a bug report out of scope for the current release, the submitter of the bug report may convert the bug report into a change request (which cancels the bug report and opens a new change request form). Individual programmers, with consent of their managers, may dispose of low-risk, low-effort, medium-to-high-priority bug reports filed by other team members without CCB review.

## 4. CCB Review:

- 4.1 <u>CCB Membership:</u> CCB for each project shall consist of a representative, either the team manager or a responsible subordinate designated by the team manager, of the following groups:
  - a) Development (one representing/responsible for each changed and affected subsystem)
  - b) Test
  - c) Technical Support
  - d) System Operations
  - e) Finance
  - f) Marketing
  - g) Sales
  - h) Release Engineering
  - i) Project Management
- 4.2 <u>CCB Process:</u> The Change Control Board shall solicit impact statements from the project team for all proposed changes and bug fixes. At each regularly scheduled CCB meeting, the CCB shall review all outstanding change requests and bug reports filed since the last CCB meeting. Priority one (i.e., urgent) change requests or bug reports will trigger a meeting within one business day, or be disposed via e-mail and/or conference call. At the CCB

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meeting, the CCB shall prioritize (using the scale above) each change or bug fix for implementation, testing, and change integration, or reject the change or bug fix. Following completion of any non-rejected change or fix, the appropriate CCB members shall approve the final disposition.

# 4.3 CCB Process Checklist:

Step #	Step	Done?
1.	Gather requested changes and bug fixes proposed for inclusion in the current, a future, or an emergency system release.	
2.	Review proposed requests during a regular or emergency change control board meeting, via e-mail, or by conference call.	
2.A	Assess associated feature, budget, schedule, and quality benefits, costs, issues, and risks for implementation, testing, and release. Defer consideration to a subsequent meeting and obtain clarifying information if necessary.	
2.B	Prioritize or reject request.	
2.C	Identify implementation, testing, and release integration deliverables, and estimated completion dates.	
3.	Plan, implement, test, and integrate the change or fix, noting new costs, benefits, issues, or risks.	
4.	Present implementation, testing, and release integration results and deliverables for final approval.	
4.A	Assess outstanding feature, cost, schedule, and quality costs, benefits, issues, and risks.	
4.B	Weigh benefits of including change against costs, issues, and risks.	
4.C	Approve or reject inclusion of the change in appropriate release.	
5.	If approved, check new or changed system components, project documents, and other deliverables into configuration management.	

- 4.4 <u>Final Approval</u>: Each member of the Change Control Board (as outlined in section 4.1) shall indicate final approval or rejection for each requested change or bug fix following implementation, testing, and release integration. Project and Executive Management may override the CCB decision on approval or rejection.
- 4.5 <u>Final Approval Criteria:</u> The following outlines the final approval criteria for all changes and bug fixes under this process. Final approval allows integration of the change or fix into the system and delivery to customers or users as part of a regular, maintenance, or patch release (i.e., any non-Beta release).
  - a) Development: Each appropriate development manager (or designate) approves to indicate: 1) The change has no impact to subsystems within his/her purview; or, 2) The development team has fully unit/component tested all anticipated impacts of the change(s) to the subsystem(s) and the development manager has reported any major technical or business impact issues or risks to the CCB.
  - b) Test: The test manager (or designate) approves to indicate: 1) The test team has subjected the change an agreed-upon set of tests; and, 2) The test manager has presented the test results to the CCB, including a discussion of the business and technical risks assessed and mitigated and those business and technical risks not assessed or mitigated.
  - c) Technical Support: The technical support manager (or designate) approves to indicate: 1) The change has not introduced any major technical or business impact issues or risks; or, 2) Any issues introduced have a corresponding customer response documented and posted on the support database and any risks introduced have been appropriately mitigated.
  - d) System Operations: The system operations manager (or designate) approves to indicate that the system infrastructure and the system operations team are ready to support the change.
  - e) Finance: The finance manager (or designate) approves to indicate that the financial impacts or risks are understood and they are acceptable.
  - f) Marketing: The marketing manager (or designate) approves to indicate that the marketing benefits of the change outweigh any business or technical issues or risks.
  - g) Sales: The sales manager (or designate) approves to indicate: 1) One or more users or customers requires the change; and, 2) The benefits to users or customers outweigh the business or technical issues or risks.
  - h) Release Engineering: The release engineering manager (or designate) approves to indicate: 1) The release engineering team has received and checked into the project repository all new and changed components,

- documents, and other associated deliverables, and identified those deliverables in the repository with the appropriate change request/bug report identifier; and, 2) The release engineering team is prepared to integrate the change into the scheduled or emergency release/patch, build, and package a release containing the change as part of the scheduled release or emergency release/patch, as appropriate.
- i) Project Management: The project manager approves to indicate: 1) All tasks associated with the change are completed; 2) All deliverables required for the change are implemented, tested, and integrated into the release; 3) The project manager has received appropriate approval from the CCB for the change; and, 4) The project manager shall notify the project team and executive management of the integration of the change in the appropriate release.
- 4.6 Attachment Requirements: The submitter of the change request shall include all appropriate supporting information as an attachment to the Change Request Form in the Change Control Database. The CCB may request additional information, returning the Change Request to the submitter for future research and resubmission for a subsequent meeting.
- <u>4.7 Final Deliverables:</u> Prior to final approval, the Project Manager shall confirm that all deliverables required for implementation, testing, and integration of the release are completed, and the Release Engineer shall confirm that all deliverables are checked into the project repository.