



System Development and Life-Cycle Management (SDLCM) Methodology

Subject Peer Review	Type	Procedure
	Identifier	P-2101
	Effective Date	February 2002
	Revision No.	1

Approval

CISSCO Program Director

1. PURPOSE

This procedure specifies how to plan for and conduct a peer review.

Peer reviews are objective approaches to finding problems in the products of a Project effort or Maintenance task at a time when correcting these errors reduces the cost of the error. They are conducted by the peers of the author who prepared the product being reviewed. When all problems found are resolved, that is, all defects are corrected and all action items are addressed, product quality is certified.

2. APPLICABILITY

This procedure applies to all NRC Project efforts or Maintenance tasks subject to the SDLCM Methodology requiring creation or modification of code.

Peer reviews cover potentially all technical and management products on a Project. For example, peer reviews apply to the products of systems development, software development, database development, user interface development, hardware development or integration, and testing. They apply as well to planning documents, requirement documents, design documents, and test documents. Any product may be considered for peer review.

3. REFERENCE PUBLICATIONS

- *SDLCM Methodology Handbook*

4. PROCEDURE

4.1 Process Flow Diagram

The peer review procedure consists of those steps identified in Figure 2101-1.

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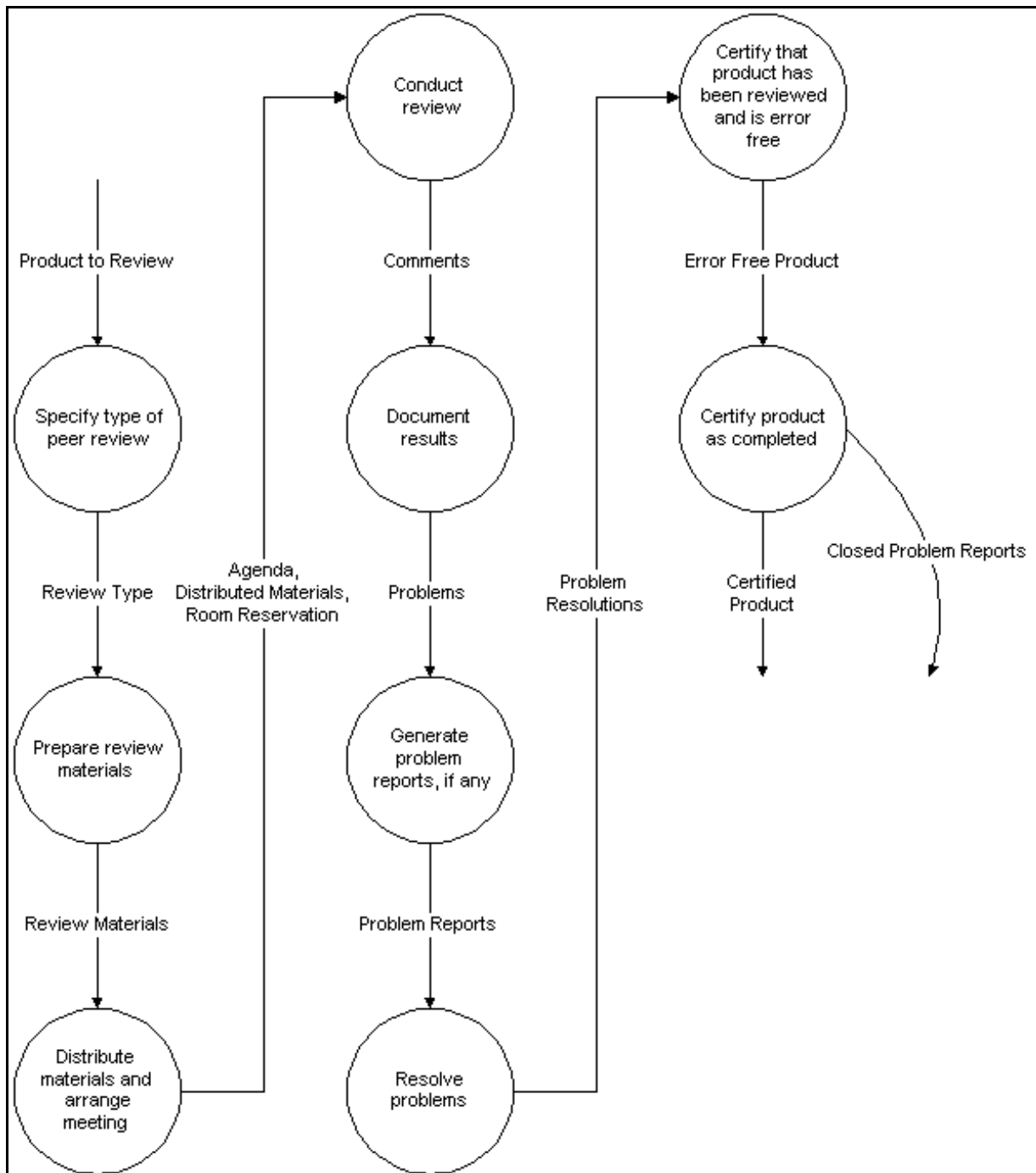


Figure 2101-1. Peer Review Procedure

4.2 Entry Criteria

The following inputs are necessary to begin this procedure:

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- The product to be reviewed.

The following triggers are necessary to begin this procedure:

- The product is considered to be complete by the author.

4.3 Steps

Peer reviews typically involve several people—at least one product author, one moderator, and one or (usually) more reviewers.

The product author generates the material to be reviewed and makes it available to the moderator and reviewers before the inspection meeting. The moderator possesses skills and training in the dynamics of conducting reviews. The moderator has several responsibilities including keeping control of the inspection meeting. Reviewers are peers of the person whose product is being reviewed. QA may be part of the reviewers. Reviewers identify potential problems during their independent review before the inspection meeting. During the meeting the potential problems are discussed and recorded if the reviews concur. The inspection peer review is highly structured. The main focus is the identification of problems not the correction of problems. Problem resolution is the responsibility of the author. The moderator ensures that a record is kept of the resolution of all problems; the moderator may actually do this recording or the moderator may assign another, and sometimes independent, person to keep the record.

Inspection peer reviews can be used for any kind of technical or management product on a Project. When all problems found are resolved, a peer certifies product quality. Until all problems found are corrected, problem reports, action item lists and other methods are used to keep the current status of the product.

1. Specify the type of peer review: one-on-one or group.
2. Prepare the review materials. The author of the product prepares the review materials, including copies of the products and any review questions or criteria that the author feels should be examined closely.
3. Distribute materials and arrange meeting. The author of the product distributes the review materials, coordinates the review schedule with participants, and reserves the meeting room. Reviewers review the product before the meeting so that the meeting time can be used efficiently.
4. Conduct the review meeting. The moderator leads the meeting and solicits comments from the reviewers.
5. Document the review results in meeting minutes.
6. Document problems in problem reports, if found.
7. Resolve problems: the author of the product fixes any problems found in the product.

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8. Certify that the product has been reviewed after fixes have been made and that the product is free of errors. After all errors (if any) have been fixed by the author, a peer of the author certifies that the product is free of errors.
9. Certify that product is complete and of high quality. After the author's peer certifies that all errors have been fixed, QA certifies that the product is complete, in accordance with QAP.

4.4 Exit Criteria

The results of the peer review are:

- All product problems have been resolved.

The outputs of the peer review are:

- Certified product
- Closed problem reports.

4.5 Verification

Quality assurance (QA) verifies that the unit test has been performed and all problems resolved.

4.6 Roles

Table 2101-1 specifies the roles and responsibilities for each of the steps in the peer review procedure.

Table 2101-1. Unit Test Step-Role Table

Steps:	Roles:	Project Manager	Moderator	Author	Reviewers (Peers)	QA
1. Identify the product to be reviewed.		P				
2. Specify the type of peer review to be used, based on the criticality of the product.		P				
3. Prepare the review materials.				P		
4. Distribute the materials and arrange the meeting..				P		R
5. Conduct the review.			P	P	P	P
6. Document the review results in meeting minutes.				P		R
7. Document problems in problem reports, if any.				P		R
8. Resolve problems.				P		R

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Steps:	Roles:	Project Manager	Moderator	Author	Reviewers (Peers)	QA
9. Certify that product has been reviewed and all errors have been fixed.					P	P
10. Certify product as complete.						A

Legend: P=Performs, R=Reviews, A=Approves, S=Supports