



System Development and Life-Cycle Management (SDLCM) Methodology

Subject Software Engineering Notebook Processing	Type	Procedure
	Identifier	P-3041
	Effective Date	February 2002
	Revision No.	2

Approval

CISSCO Program Director

1. PURPOSE

This procedure documents the processing of a Software Engineering Notebook (SEN). An SEN organizes and centralizes information pertaining to an element of software and ensures ready access to that information for modification and audit. See SDLCM Methodology Standard S-3091, Software Engineering Notebook, for more information on content.

2. APPLICABILITY

This procedure applies to all software elements (for example, modules, units, data files, database subschema), whether new, adapted, or converted, composing a software system under development or in maintenance. This procedure does not necessarily apply to unchanged transported software elements.

3. REFERENCE PUBLICATIONS

The following publications contain related information:

- *SDLCM Methodology Handbook*
- SDLCM Methodology Standard S-3091, Software Engineering Notebook

4. PROCEDURE

SENs are created when the System Requirements Specification (SRS) is baselined and maintained through the final delivery of the software.

4.1 Data Flow Diagram

An illustration of the SEN process is shown in Figure 3041-1.

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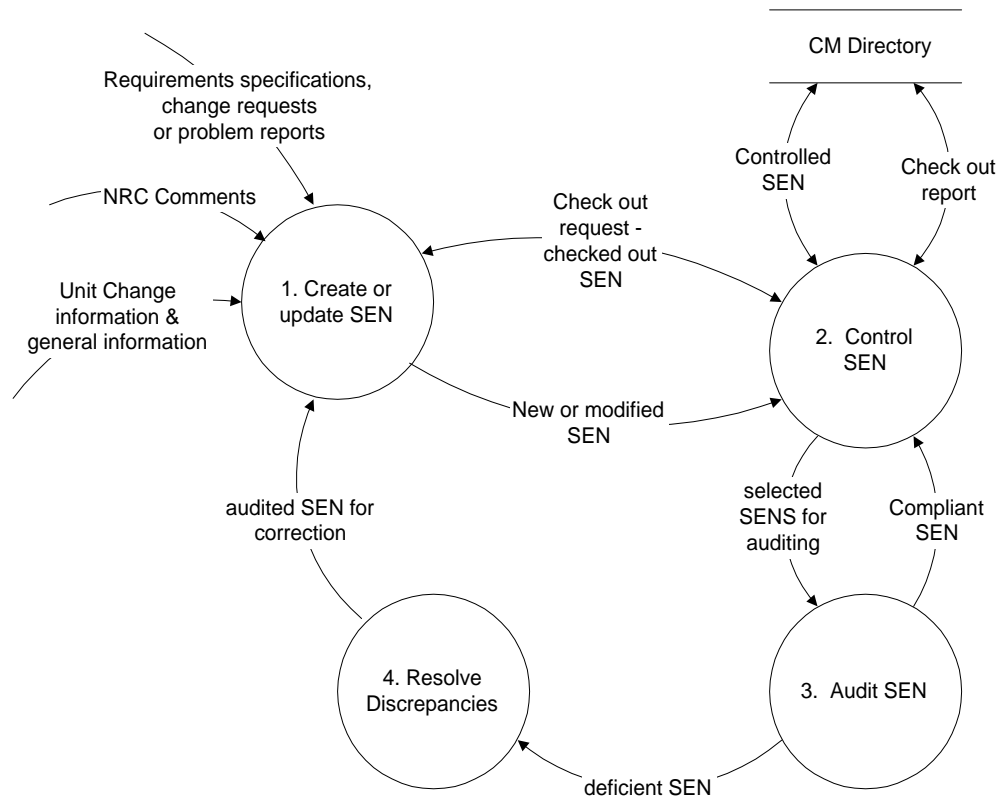


Figure 3041-1. Software Engineering Notebook Processing Data Flow Diagram

4.2 Entry Criteria

An SEN will be created for each new module during the design phase and will be maintained through completion. While a module is being designed, coded, and tested, the SEN will be used as a workbook and maintained by the programmer working on that module or system. An SEN will be created and maintained for each legacy software element whenever it becomes necessary to modify the element.

4.3 Steps

1. Create or update the SEN:

- For new modules, initiate the SEN with the original software specifications and design data and all pertinent information through deployment. (See the

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sample checklist in Table 3041–1. See SDLCM Methodology Standard S–3091 for information about the content of the SEN.)

- For modifications to existing software, check the current SEN out of the CCM library and maintain it in a current status reflecting all new modifications.
 - For modifications to transported software with no SEN, create an SEN using existing documentation and other available information that coincides with the SEN checklist.
 - When the module has been deployed, deliver the SEN to CCM for maintenance.
2. CCM maintains the SENs in a controlled library. CCM maintains a record of checked out and returned SENs.
 3. QA may audit a SEN at any time during the software development life cycle to verify that its contents are complete for that particular phase.
 4. SEN audit results are provided to the appropriate software development manager (current or last user) to resolve any discrepancies.

Table 3041–1. Software Engineering Notebook Processing Checklist

Checklist Item	Comments	YES	NO	N/A
Prologue <ul style="list-style-type: none"> • System/program description (including version) • Inputs • Outputs • Interfaces • Changes (TAC # or Problem Report, title, date of change) 				
Design documentation: <ul style="list-style-type: none"> • Detailed design • Inspection Checklists • PDL 				
Current listing (s)				
Test plans and procedures				
Test results				

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Checklist Item	Comments	YES	NO	N/A
Problem reports (corrected)				
Difference listing(s) (previous vs. current)				
Build procedures				
Installation instructions				

4.4 Exit Criteria

After the software development life cycle is complete (software delivered to NRC for acceptance testing), the developer submits the SEN to CCM and the SEN is added to the controlled CCM library.

4.5 Verification

QA performs a random sample audit as part of the normal CCM audit or a build release audit.

4.6 Roles

Table 3041-2 is a Step-Role Table for the Software Engineering Notebook Processing Procedure.

Table 3041-2. SEN Processing Step-Role Table

Steps:	Roles:	SW Engineer	QA	CCM
Create or update SEN		P		
Control and check out SEN			R	P
Audit SEN			P	S
Respond to QA Audit		P	A	

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