CMMI and Integrated Product and Process Development (IPPD)

CMMI SE/SW/IPPD Version 1.02

SEPG 2001 Tutorial
New Orleans, LA
March 12, 2001

Roger Bate, rrbate@gte.net
Diane Gibson, dlg@sei.cmu.edu
Karen Richter, krichter@ida.org
<table>
<thead>
<tr>
<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 MAR 2001</td>
<td></td>
<td>00-00-2001 to 00-00-2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. TITLE AND SUBTITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMMI and Integrated Product and Process Development (IPPD) CMMI SE/SW/IPPD Version 1.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. AUTHOR(S)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carnegie Mellon University, Software Engineering Institute, Pittsburgh, PA, 15213</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. PERFORMING ORGANIZATION REPORT NUMBER</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. SPONSOR/MONITOR’S ACRONYM(S)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. SPONSOR/MONITOR’S REPORT NUMBER(S)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>12. DISTRIBUTION/AVAILABILITY STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved for public release; distribution unlimited</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. SUPPLEMENTARY NOTES</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>14. ABSTRACT</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>15. SUBJECT TERMS</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>16. SECURITY CLASSIFICATION OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. REPORT unclassified</td>
</tr>
<tr>
<td>b. ABSTRACT unclassified</td>
</tr>
<tr>
<td>c. THIS PAGE unclassified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17. LIMITATION OF ABSTRACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as Report (SAR)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. NUMBER OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19a. NAME OF RESPONSIBLE PERSON</th>
</tr>
</thead>
</table>

Form Approved
OMB No. 0704-0188

Standard Form 298 (Rev. 8-98)
Prepared by ANSI Std Z39-18
Outline

→ Definition

Background

How does IPPD work in the CMMI?
(big picture)

IPPD process areas

IPPD in SE/SW

Summary
CMMI IPPD Definition

IPPD provides a systematic approach to product development that achieves a timely collaboration of relevant stakeholders throughout the product life cycle to better satisfy customer needs.
CMMI Integrated Team Definition-1

A group of people with complementary skills and expertise who are committed to delivering specified work products in timely collaboration. Integrated team members provide skills and advocacy appropriate to all phases of the work product’s life cycle and are collectively responsible for delivering the work products as specified. An Integrated Team should include empowered representatives from organizations, disciplines, and functions that have a stake in the success of the work products.
CMMI Integrated Team Definition-2

An integrated team is comprised of people

• with complementary skills and expertise
• appropriate skills and advocacy
• fully empowered to represent stakeholders
• in all phases of the work product’s life cycle

These people are committed to and collectively responsible for

• delivering work products, as specified
• through timely collaboration
CMMI Work Product Definition-1

Any artifact produced by a process. This may include files, documents, parts of the product, services, processes, specifications, and invoices. Examples of processes as work product include a manufacturing process, a training process, and a disposal process. A key distinction between a work product and a product component is that a work product need not be engineered.
CMMI Work Product Definition-2

Any artifact produced by a process

- parts of a product
- files, documents, specifications, invoices
- services
- processes, e.g., manufacturing process, training process, disposal process

A work product is different from a product component -- it need not always be engineered
Outline

Definition

Background

How does IPPD work in the CMMI? (big picture)

IPPD process areas

IPPD in SE/SW

Summary
IPPD Background -1

Grew out of concurrent engineering

• Adopted by US industry in the 1980s to respond to global economic pressures

• Used teams of design and manufacturing engineers to develop the manufacturing process concurrently with the product

• Phased, parallel release

  - the manufacturing process was in place when the product design was released
IPPD Background -2

DoD defined concurrent engineering as

“A systematic approach to the integrated, concurrent design of products and their related processes, including manufacture and support. This approach is intended to cause the developers, from the outset, to consider all elements of the product life cycle from conception through disposal, including quality, cost, schedule and user requirements.”

IPPD Background -3

IPPD expands on concurrent engineering and systems engineering

• Product-related processes are developed—or tailored from standard processes—concurrently with the product

• Integrated product development teams involve stakeholders spanning the product life cycle

• A disciplined systems engineering approach is applied to integrating business as well as technical functions
Several DoD actions paved the way for DoD to formally adopt IPPD principles

- Defense Science Board Study (DSB) on Engineering in the Manufacturing Process
  - Based on industry success with IPPD, the DSB members recommended that DoD employ IPPD in its practices and relationships with industry
- Formation of the Defense Manufacturing Council and the Office of Systems Engineering
- Acquisition Reform activities
On May 10, 1995, Secretary of Defense William Perry directed the DoD to apply Integrated Product and Process Development (IPPD) and Integrated Product Teams (IPTs) throughout the acquisition process to the maximum extent practical.
CMMI Project Requirements

Provide industry and government with a set of integrated products to support process and product improvement

• Improve the efficiency of and the return on investment for process improvement

• Reduce redundancy and complexity encountered when using multiple Capability Maturity Models® (CMM®s) and related Capability Models (CMs)

• Develop a new model encompassing the Systems Engineering and Software Engineering disciplines and IPPD concepts
CMMI Source Models

Combine into a single model for use by organizations pursuing enterprise-wide process improvement

• Capability Maturity Model for Software, SW-CMM v2.0 draft C

• EIA/IS 731, Systems Engineering Capability Model

• Integrated Product Development Capability Maturity Model (IPD-CMM) v0.98
Integrated Product Development (IPD) – CMM

Grew out of a study of commercial and military organizations

• Focused on organizations practicing IPD with teams

• Conducted interviews for good and bad examples of IPD implementation
  - Benefits gained
  - Problems confronted

• Compiled database of results which were published by Cusick*

Outline

Definition

Background

How does IPPD work in the CMMI? (big picture)

IPPD process areas

IPPD in SE/SW

Summary
IPPD affects all Process Areas

IPPD is not a discipline.
Rather, it is a way of doing business.

IPPD is employed in conjunction with the CMMI disciplines (software and systems engineering)
It shapes how you perform the work in these disciplines.
Scope of IPPD

CMMI SE/SW/IPPD adds to CMMI-SE/SW:

- Two totally new process areas
- A revised Integrated Project Management (IPPD) process area
- IPPD amplifications and references
- New glossary definitions and acronyms
- Overview material
Maturity Levels

IPPD process areas are at Maturity Level 3 in the Staged Representation

Amplifications and References are added to Maturity Levels 2 and 3 SE/SW process areas because these process areas need to be implemented differently when IPPD is being practiced
IPPĐ Fundamental Concepts* -1

Expressed in new IPPĐ process areas:

• Use of multifunctional teams
• Leadership commitment to IPPĐ
• Appropriate allocation and delegation of decision-making
• Organizational structure that rewards team performance

IPPD Fundamental Concepts* -2

Embedded in SE/SW model components:

• The design of downstream processes during product design
• Timely and appropriate collaboration of all relevant stakeholders
• Focus on the customer’s needs during product and process development
• Continuous and proactive identification and management of risk
• Focus on measurement and improvement of processes to develop and deliver the product
Outline

Definition

Background

How does IPPD work in the CMMI? (big picture)

→ IPPD process areas

IPPD in SE/SW

Summary
IPPD Process Areas

A new Support process area, Organizational Environment for Integration (OEI)

An IPPD-specific Integrated Project Management (IPPD) process area (IPM (IPPD)) which adds two new specific goals

A new Project Management process area, Integrated Teaming (IT)
Organization Environment for Integration--OEI
OEI Purpose

Purpose

To provide an IPPD infrastructure and manage people for integration.
OEI Specific Goals

SG 1: Provide IPPD Infrastructure
An infrastructure that maximizes the productivity of people and effects the collaboration necessary for integration is provided.

SG 2: Manage People for Integration
People are managed to nurture the integrative and collaborative behaviors of an IPPD environment.
OEI Context

Provide IPPD Infrastructure

IPPD-Enabled People and Work Environments

Manage People for Integration

Mechanisms and Incentives to Support Integration and Collaboration
## Goals and Practices for OEI

<table>
<thead>
<tr>
<th>Specific Goals</th>
<th>Specific Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide IPPD Infrastructure</td>
<td>• Establish the Organization’s Shared Vision</td>
</tr>
<tr>
<td></td>
<td>• Establish an Integrated Work Environment</td>
</tr>
<tr>
<td></td>
<td>• Identify IPPD-Unique Skill Requirements</td>
</tr>
<tr>
<td>Manage People for Integration</td>
<td>• Establish Leadership Mechanisms</td>
</tr>
<tr>
<td></td>
<td>• Establish Incentives for Integration</td>
</tr>
<tr>
<td></td>
<td>• Establish Incentives to Balance Team and Home Organization Responsibilities</td>
</tr>
</tbody>
</table>
Related Process Areas for OEI

Organizational Process Definition (OPD)
- Establishing organization’s set of standard processes and library of process assets

Organizational Training (OT)
- Identifying training needs and providing the necessary training

Integrated Project Management (IPPD)
- Managing stakeholder involvement, resolving coordination issues, establishing the project’s shared vision, and organizing integrated teams
OEI Summary - 1

Establish and maintain a shared vision for the organization

Establish and maintain an integrated work environment that supports IPPD by enabling collaboration and concurrent development

Identify the unique skills needed to support the IPPD environment
OEI Summary - 2

Establish and maintain leadership mechanisms to enable timely collaboration

Establish and maintain incentives for adopting and demonstrating integrative and collaborative behaviors at all levels of the organization

Establish and maintain organizational guidelines to balance team and home organization responsibilities
Integrated Project Management (IPPD)--IPM (IPPD)
IPM (IPPD) Purpose

Establish and manage the project and the involvement of the relevant stakeholders according to an integrated and defined process that is tailored from the organization’s set of standard processes.

Establish a shared vision for the project and organize integrated teams.
IPM (IPPD) Specific Goals -1

SG 1: Use the Project’s Defined Process
The project is conducted using a defined process that is tailored from the organization’s set of standard processes.

SG 2: Coordinate and Collaborate with Relevant Stakeholders
Coordination and collaboration of the project with relevant stakeholders is conducted.
IPM (IPPD) Specific Goals - 2

SG 3: Use the Project’s Shared Vision

The project is conducted using the project’s shared vision.

SG 4: Organize Integrated Teams

The integrated teams needed to execute the project are identified, defined, structured, and tasked.
IPM (IPPD) Context

- Use the Project’s Defined Process
- Organizational Process Focus
- Stakeholders
- Contributions to Organization’s Process Assets
- Defined Process Based Project Plan
- Coordinate and Collaborate with Relevant Stakeholders
- Project’s Shared Vision
- Organize Integrated Teams
- Integrated Team Structure
- Organizational Environment for Integration
- Stakeholders
- Project Planning

Product Requirements

© 2000 by Carnegie Mellon University
IPM (IPPD) Details - 1

- Establish the Project’s Defined Process
- Use Org Proc Assets for Planning Project Activities
- Integrate Plans
- Use the Project’s Defined Process
- Manage Project Using Integrated Plans
- Contribute to Org Process Assets
- Other Project & Org Functions

- Manage Dependencies
- Documented Critical Dependencies
- Resolve Coordination Issues
- Defined Process Based Project Plan
- Manage Stakeholder Involvement
- Agendas and Schedules for Collaborative Activities

- Coordinate with Relevant Stakeholders
- Defined Process
- Other Project & Org Functions

- Other Project & Org Functions

- Manage Dependencies
- Documented Critical Dependencies
- Resolve Coordination Issues
- Defined Process Based Project Plan
- Manage Stakeholder Involvement
- Agendas and Schedules for Collaborative Activities

- Coordinate with Relevant Stakeholders

- Other Project & Org Functions

- Manage Dependencies
- Documented Critical Dependencies
- Resolve Coordination Issues
- Defined Process Based Project Plan
- Manage Stakeholder Involvement
- Agendas and Schedules for Collaborative Activities

- Coordinate with Relevant Stakeholders

© 2000 by Carnegie Mellon University
IPM (IPPD) Details - 2

Organize Integrated Teams

Define the Project’s Shared Vision Context

Info on Org/Project Situation

Member Aspirations

Establish the Project’s Shared Vision

Determine Team Structure

Develop a Preliminary Distribution of Requirements

Establish Integrated Teams

Team Structure

List of Teams

Responsibility & Requirements Allocation

Integrated Teams

Member Aspirations

Project’s Shared Vision

Integrated Teams

Use the Project’s Shared Vision

Work Breakdown Structure

OEI

© 2000 by Carnegie Mellon University
<table>
<thead>
<tr>
<th>Specific Goals</th>
<th>Specific Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the Project’s Defined Process</td>
<td>• Establish the Project’s Defined Process</td>
</tr>
<tr>
<td></td>
<td>• Use Organizational Assets for Planning Project Activities</td>
</tr>
<tr>
<td></td>
<td>• Integrate Plans</td>
</tr>
<tr>
<td></td>
<td>• Manage Project Using Integrated Plans</td>
</tr>
<tr>
<td></td>
<td>• Contribute to Organizational Process Assets</td>
</tr>
<tr>
<td>Coordinate and Collaborate with Relevant Stakeholders</td>
<td>• Manage Stakeholder Involvement</td>
</tr>
<tr>
<td></td>
<td>• Manage Dependencies</td>
</tr>
<tr>
<td></td>
<td>• Resolve Coordination Issues</td>
</tr>
</tbody>
</table>
## Goals and Practices for IPM(IPPD) - 2

<table>
<thead>
<tr>
<th>Specific Goals</th>
<th>Specific Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shared Vision</strong></td>
<td>- Define the Project’s Shared Vision</td>
</tr>
<tr>
<td>Context</td>
<td>- Establish the Project’s Shared Vision</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organize Integrated Teams</strong></td>
<td>- Determine Team Structure for a Project</td>
</tr>
<tr>
<td></td>
<td>- Develop a Preliminary Distribution of Requirements to Integrated Teams</td>
</tr>
<tr>
<td></td>
<td>- Establish Integrated Teams</td>
</tr>
</tbody>
</table>
Related Process Areas for IPM (IPPD)

Organizational Environment for Integration

• Creating the work environment and the organization’s shared vision and managing people for integration

Integrated Teaming

• Establishing and maintaining a team
IPM (IPPD) Summary -1

Tailor the project’s defined process from the organization’s set of standard processes

Manage the project using integrated plans

Use and contribute to the organization’s process assets

Enable each relevant stakeholder’s unique expertise and concerns to be identified and considered during the development of the product
IPM (IPPD) Summary -2

Ensure that the relevant stakeholders associated with the project coordinate their efforts in a timely manner to

- Address system requirements, plans, objectives, issues, and risks
- Make their commitments
- Identify, track, and resolve issues
IPM (IPPD) Summary -3

Establish a shared vision for the project aligned with the shared vision of the organization

Determine the structure of the teams that will execute the project’s tasks

Decide on the allocation of responsibilities to the teams

Establish the teams

Manage the performance of the team structure
Integrated Teaming (IT)
State of the Practice of Integrated Product Teams (IPT) - 1*

- A recent SEI study of the state of the practice of Integrated Product Teams (IPTs) found that the use and effectiveness of IPTs varies across the DoD and defense industry.

- An IPT is now a recognizable concept across the DoD.

- The implementation of IPTs in the DoD is an integral part of a much larger, interdependent system of process improvements.

When IPTs are implemented well, they provide excellent outcomes, along the lines predicted in DoD guidance and training briefings.

One interviewee said: “Best experience I’ve had!”

It is not trivial to implement IPTs well, and there are often problems.
State of the Practice of Integrated Product Teams (IPT) - 2∗

These mechanisms enable successful IPTs:

- Setting and maintaining objectives
- Creating teams
- Supporting teams
- Improving communication
- Tools supporting communication
Integrated Teaming Purpose

To form and sustain an integrated team for the development of work products.
Integrated Teaming Specific Goals

SG 1: Establish team composition.
Team composition that provides the knowledge and skills required to deliver the team’s product is established and maintained.

SG 2: Govern team operation.
Operation of the integrated team is governed according to established principles.
Integrated Teaming Context

- Sponsor's Objectives
- Assigned Product
- IPM (IPPD)
- Organizational Environment for Integration
- Stakeholders
- Project Planning
- Integrated Team
- Governing Team Operation
- Plans and Commitments
- Establish and Maintain Team Composition

© 2000 by Carnegie Mellon University
Integrated Teaming Details

- Establish Team Composition
  - Identify Team Tasks
  - Identify Knowledge and Skills
  - Assign Appropriate Team Members

- Results Lists
  - Task Descriptions
  - Functions, Skills, and Expertise Lists

- Establish Team
  - Team’s Shared Vision
  - Team Charter
  - Assignments, and Responsibilities

- Define Roles and Responsibilities
  - Establish Operating Procedures
  - Ground Rules and Procedures
  - Plans and Commitments

- Ground Rules and Procedures

- Stakeholders
- Assigned Product
- Sponsor’s Objectives

© 2000 by Carnegie Mellon University
## Goals and Practices for IT

<table>
<thead>
<tr>
<th>Specific Goals</th>
<th>Specific Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish Team</td>
<td>• Identify Team Tasks</td>
</tr>
<tr>
<td>Composition</td>
<td>• Identify Knowledge and Skills Needed</td>
</tr>
<tr>
<td></td>
<td>• Assign Appropriate Team Members</td>
</tr>
<tr>
<td>Govern Team</td>
<td>• Establish a Shared Vision</td>
</tr>
<tr>
<td>Operation</td>
<td>• Establish a Team Charter</td>
</tr>
<tr>
<td></td>
<td>• Define Roles and Responsibilities</td>
</tr>
<tr>
<td></td>
<td>• Establish Operating Procedures</td>
</tr>
<tr>
<td></td>
<td>• Collaborate among Interfacing Teams</td>
</tr>
</tbody>
</table>

© 2000 by Carnegie Mellon University
Related Process Areas for IT

Integrated Project Management (IPPD)

• Coordinating and collaborating with relevant stakeholders and considering IPPD
• Creating a project shared vision and organizing integrated teams for project execution

Project Planning

• Planning for project execution (tasks, knowledge, skills) within an IPPD environment with integrated teaming

Organizational Environment for Integration

• Establishing and maintaining an integrated work environment and managing people for integration
Integrated Teaming Summary - 1

Identify and define the team’s internal tasks to generate the team’s expected output

Identify the knowledge, skills and functional expertise needed to perform the team’s tasks and assign the appropriate personnel to be team members

Establish and maintain the team’s shared vision and the team charter
Integrated Teaming Summary - 2

Define and maintain the roles and responsibilities of each team member

Establish and maintain integrated team operating procedures and collaboration among interfacing teams
IPPD Process Areas Summary

Practices in OEI

• establish physical infrastructure and organizational management practices for IPPD
• enable the integrated teamwork needed for successful project completion

Integrated Teams are a core component of IPPD

• the structure of integrated teams is established through practices in IPM (IPPD)
• each specific team is formed and sustained through practices in IT

Shared visions for the organization, the project, and the team are developed, one in each IPPD PA
Outline

- Definition
- Background
- Why is IPPD in the CMMI?
- How does IPPD work in the CMMI?
  (big picture)
- IPPD process areas
  - IPPD in SE/SW
- Summary
IPPD Fundamental Concepts*

Embedded in SE/SW model components:

• Design of downstream processes during product design
• Timely and appropriate collaboration of all relevant stakeholders
• Focus on the customer’s needs
• Proactive identification and management of risk
• Measurement and improvement of development processes
Design of downstream processes during product design

• the concurrent design of products and processes is implicit throughout the model, in the definition of ‘work product’

• design of downstream processes is implicit in references to ‘life-cycle’ requirements -- specifically, SP 1.2-1 Establish Life-Cycle Model Descriptions

• in an IPPD environment, this is done by an integrated team
Fundamental concepts embedded - 2

Timely and appropriate collaboration of all relevant stakeholders

- Generic Practice 2.7 Identify and involve relevant stakeholders applies to every PA in CMMI

- in IPPD, stakeholders are included on the integrated team
Focus on the customer’s needs during product and process development

- Generic Practice 4.1  Establish quality objectives ... based on customer needs... applies to every PA
- requirements are based on customer needs; products are validated against customer needs; process and product standards are frequently imposed by the customer; work products are delivered to customers; customers can be relevant stakeholders
- in IPPD, integrated teams perform the above
Fundamental concepts embedded - 4

Proactive identification and management of risk

- Risk Management is an SE/SW PA
- Specific risks associated with IPPD processes and teaming are identified in amplifications throughout the model
Fundamental concepts embedded - 5

Measurement and improvement of development processes

- measurement activities are detailed in the Measurement and Analysis PA
- the improvement of development processes is one of the ‘raison d'être’ of all versions of the CMMI
Process Management Process Areas

Processes used for IPPD emphasize
- parallel rather than serial development
- concurrent development of products and related processes from all phases of the product life cycle and from both business and technical functions
- effective teamwork

Organizational Training includes skills needed for pursuing IPPD
- cross-functional training
- leadership training
- interpersonal and team skills training
Project Management Process Areas

Project plans and resources
- are team plans and resources
- involve all integrated teams
- include commitment of all team members

Supplier selection considers
- willingness to participate in integrated teams using IPPD
- commitment to IPPD
Engineering Process Areas

Requirements development and alternative selection
- include the participation of stakeholders
- from all phases of a product’s life cycle
- from both technical and business functions

Development of alternatives and ‘final’ design
- include concurrent development of appropriate processes across the product life cycle

Product integration, verification and validation strategies
- are developed concurrently and iteratively with the product and product component designs
CMMI IPPD Definition

IPPD provides a systematic approach to product development that achieves a timely collaboration of relevant stakeholders throughout the product life cycle to better satisfy customer needs.
Outline

Definition

Background

Why is IPPD in the CMMI?

How does IPPD work in the CMMI? (big picture)

IPPD process areas

IPPD in SE/SW

→ Summary
IPPDPD Environment

Support Process Areas

- Organization
- IPPD Infrastructure
- OEI
  - Integrated work environment and people practices
  - Teaming Environment
  - Project Management Process Areas
    - Coordination and collaboration among project stakeholders
    - IPM (IPPDPD)
      - Shared vision and integrated team structure for the project
      - Product Architecture for Structuring Teams
    - IT
      - Integrated team management for performing Support processes
    - Process Management Process Areas
      - Ability to develop and deploy IPPD processes and supporting assets
      - IPPD knowledge and skill needs
    - Engineering Process Areas
      - Integrated team management for performing Engineering processes

© 2000 by Carnegie Mellon University
CMMI-SE/SW/IPPD V 1.02- SEPG 2001 Tutorial - page 73
Summary

CMMI-SE/SW/IPPD v. 1.02 was released for public review on December 12, 2000

Change requests submitted by February 28, 2001 will be considered for next release (Version 1.1 due December 2001)

Available at

http://www.sei.cmu.edu/cmmi/