

Software Process

2/12/01

Lecture #3

16.070

- Overview of the Software Development Process (SWDP)
- Details on the first phase -- Conceiving
- Example of Conceiving
- Designing, Implementing, Operation
- Summary of SWDP
- Learning Objectives:
 - Describe the SW Development Process as a specialization of the generic Product Development Process (PDP)
 - Use the First Phase of SWDP

Software Engineering Process

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Generic PDP	Needs, Requirements	Analysis, Architecture	Preliminary Design	Detail Design	Chunk Building, Testing	Integration, Testing	Operating	Maintaining, Upgrading, Retiring
Uckan Text "C"	Requirements Specification	Analysis	Design		Implementation, Testing and Verification		-----	
Laplante Text "R"	Concept	"Partitioning"	Design		Programming, Test		----	Maintenance

Good SWDP is just a specialization of an underlying Generic PDP

Conceiving: Needs to Requirements

Interpret the Needs (which exist outside your organization)

- Who is the customer? Who benefits?
- What are their needs? What is the opportunity?
- How will they benefit? What value will they derive?

Define the Requirements (which are set within your organization)

- What exactly is the "problem" to be solved?
- What features should be provided?
- What functions should be performed?
- Must include consideration of technical, financial, regulatory viability

Output: A clear, correct, complete and consistent statement of the goals and requirements -- What the system will do.