

Review of Some Key Points

- Consider inside the textbook covers
 - (4 "pages")
 - These summarize some (though not all) key points
- Let's review based on these important pages

Sample Unified Process: Artifacts and Timing

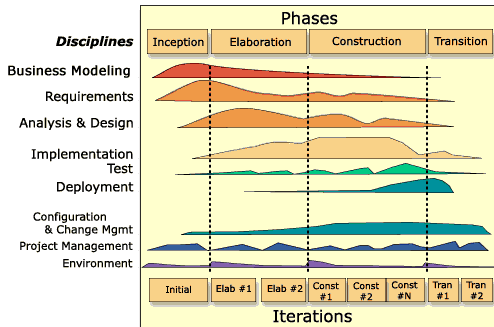
- (See inside front cover, at top)

Discipline	Artifact	Iteration*	Incep.	Elab.	Const.	Trans.
			II	El..En	Cl..Co	TI..T2
Business Modeling	Domain Model					
Requirements	Use-Case Model		s	r		
	Vision		s	r		
	Supplementary Specification		s	r		
Design	Glossary		s	r		
	Design Model			s	r	
Implementation	SW Architecture Document			s	r	
	Data Model			s	r	
Project Management	Implementation Model			s	r	r
Testing	Project Management		s	r	r	r
Environment	Test Model			s	r	
	Development Case		s	r		

- There UP "disciplines"
 - See also a familiar figure:

Rational Unified Process: Overview

Artifacts Examples Roles Roadmaps Site Map



More on UP Artifacts and Timing

– Match column A to column B

Disciplines

- Business modeling
- Requirements
- Design
- Implementation
- Project Management
- Testing
- Environment

Artifacts

- Vision
- Use-Case Model
- Domain Model
- Design Model
- Implementation Model
- SW Development Plan
- Development Case
- Test Model

(The environment discipline and its development case are noted briefly on p. 21 & p. 23)

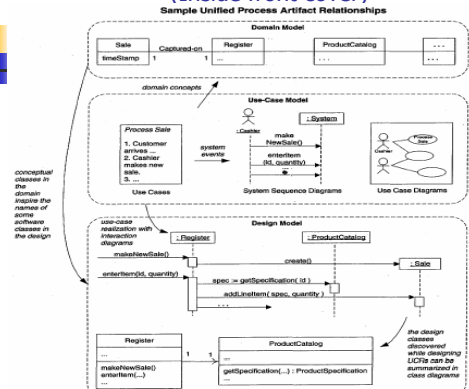
More UP Artifacts and Timing II

- Which start during the inception phase?
- Which start during the elaboration phase?

Requirements
Design
Implementation
Project Management
Testing

Sample UP Artifact Relationships

(Inside front cover)



Sample UP Artifact Relationships II

- Note that
 - Both domain and design models
 - ...have class diagrams
 - Use Case modeling describes
 - ...processes in 3+ major ways
 - Both Domain and Use Case modeling
 - ...use interaction diagrams

GRASP Patterns

- (See page facing front cover)

Pattern	Description
Information Expert	Assign a responsibility to the information expert—the class that has the information, uses, and is used by the responsibility.
Creator	Assign the responsibility to create an instance of class A. One of three is true: 1. A creates A. 2. A aggregates A. 3. A has an association class for A.
Controller	Assign the responsibility for handling a system event message to a class representing one of the domain objects. 1. Assign the event system, device, or collection handler method. 2. Assign the user interface which which the system event occurs (a user or system controller).
Low Coupling	Assign responsibilities so that responsibility coupling remains low.
High Cohesion	Assign responsibilities to the classes that are most related.
Indirection	Assign responsibilities to the classes that are most related.
Protected Variations	Assign responsibilities to the classes that are most related.

GRASP Patterns II

Match names to abbreviated descriptions

- Information Expert
- Creator
- Controller
- Low Coupling
- High Cohesion
- Indirection
- Protected Variations
- Suggests "new" calls in a class that heavily uses the constructed objects
- The class that has the needed information should be the class that does something with it
- Minimize communication among modules
- Maximize relatedness of the parts of each module

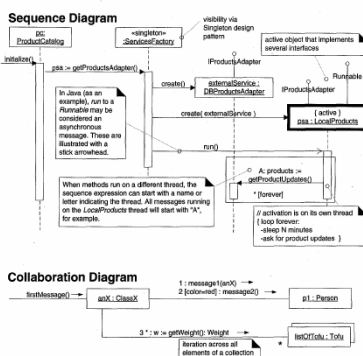
GRASP Patterns III

Match names to abbreviated descriptions

- Controller
- Indirection
- Protected Variations
- Handle system events in a façade class or the highest level class for the use case
- Have an object that mediates between calling and responding objects
- Create a stable interface between similar but varying tax calculators and the calling of whichever of them is to be used

Interaction Diagrams

(See page facing back cover)



Interaction Diagrams II

Consider Interaction diagrams, collaboration diagrams, and sequence diagrams

- Which is a generic term for the other two?
- Which two say exactly the same thing?

Use Case Diagrams

(see inside back cover)

- Note: system box; user; actor; use case; auxiliary notations also allowed

Sample UML Notation

