

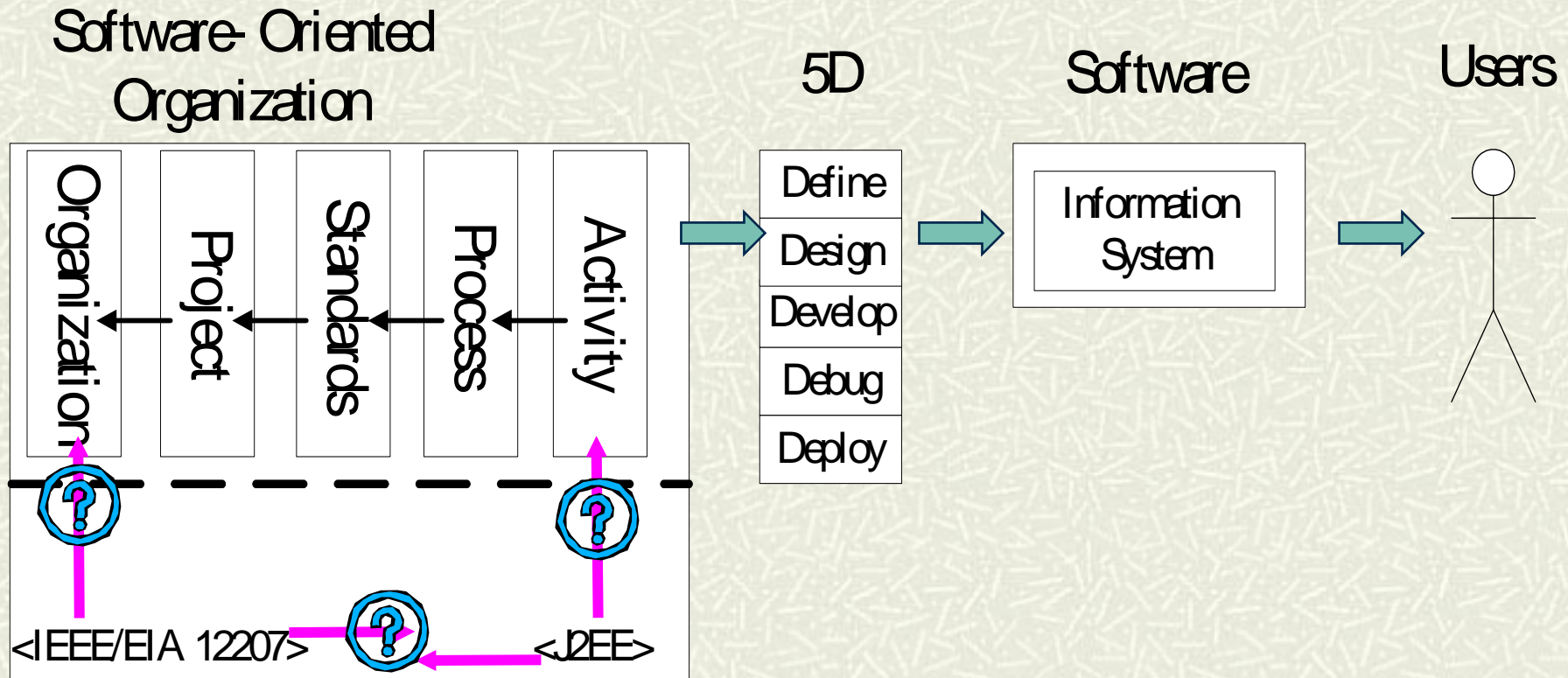
The Study on Ontology Integration of IEEE/EIA 12207 and J2EE

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Outline

- # Motivation
- # Our Approach
- # Combine the knowledge IEEE12207 with J2EE
- # Conclusion and Future work

Motivation



Our Approach

- # Use IEEE/EIA 12207 Knowledge
- # Use J2EE Technology knowledge
- # Integrate the knowledge of IEEE/EIA 12207 and J2EE

Use IEEE/EIA 12207 Knowledge

- # Object
- # Identify
- # Interpret
- # Apply

The Ontology of IEEE/EIA 12207

Software- Oriented Organization

What

Organization

Project

Standards

Process

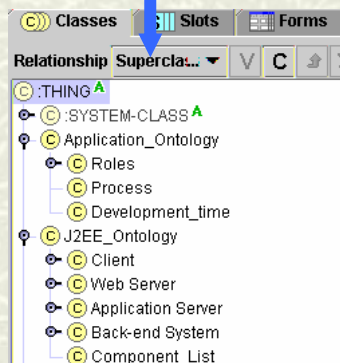
Activities



How

<IEEE/EIA 12207>

<J2EE>



5D

Define

Design

Develop

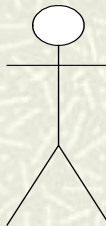
Debug

Deploy

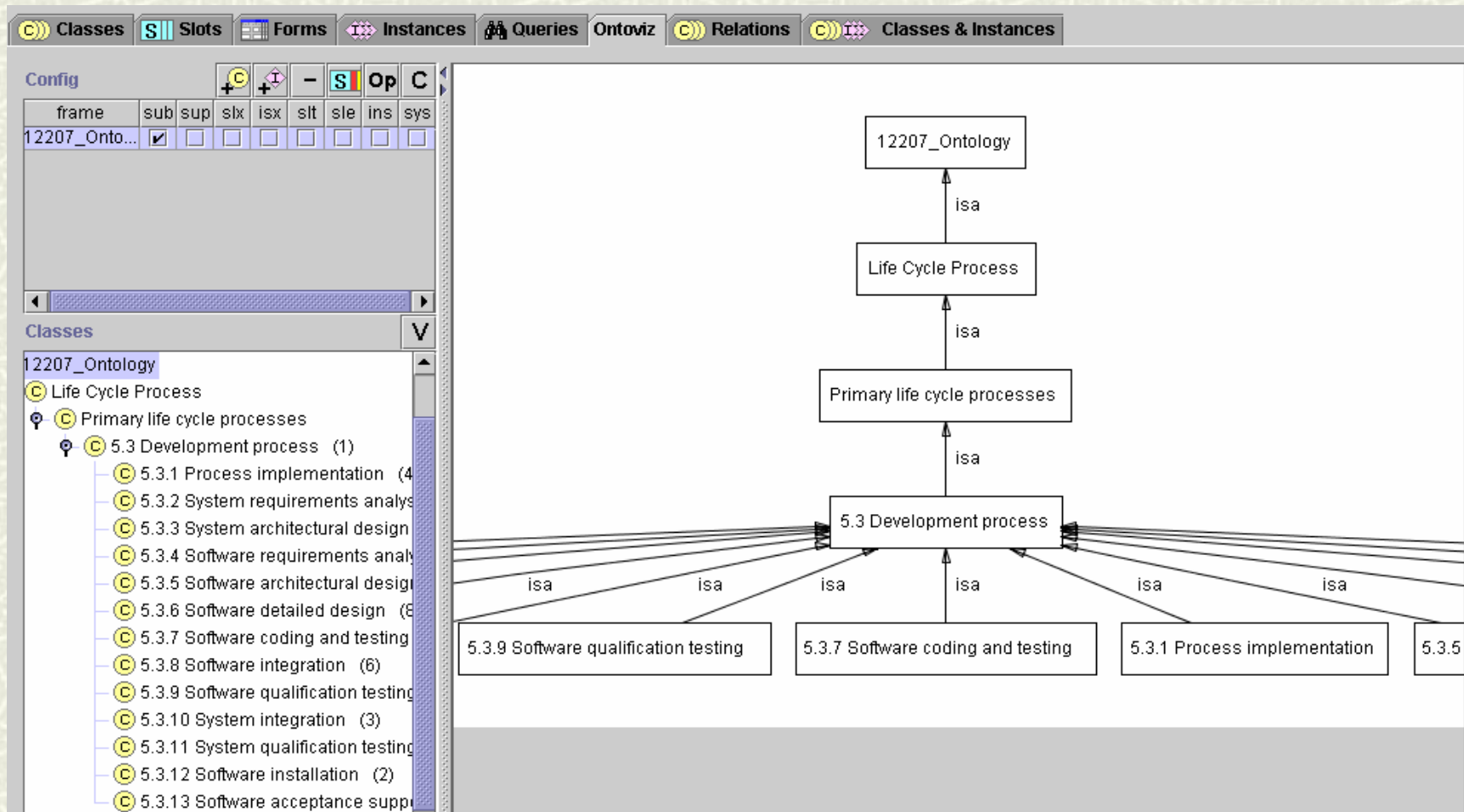
Software

Information
System

User



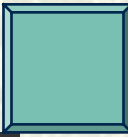
The Ontology of IEEE/EIA 12207



Use J2EE Technology knowledge

- # Object
- # Identify
- # Interpret
- # Apply

The Ontology of J2EE



Software- Oriented Organization

What

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Project

Standards

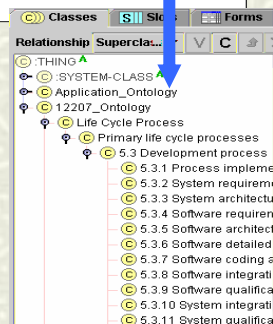
Process

Activities

How

<IEEE/EIA 12207>

<J2EE>



5D

Define

Design

Develop

Debug

Deploy

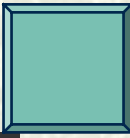
Software

Information
System

User



Integrate the knowledge of IEEE/EIA 12207 and J2EE



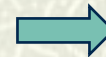
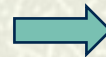
Software- Oriented
Organization

5D

Software

User

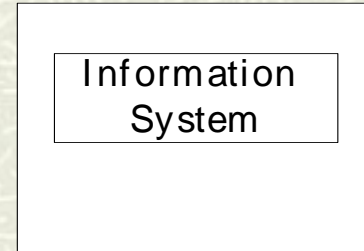
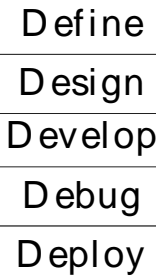
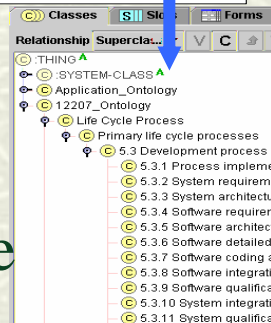
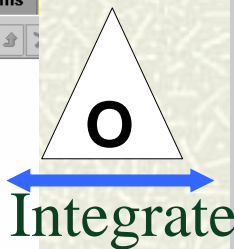
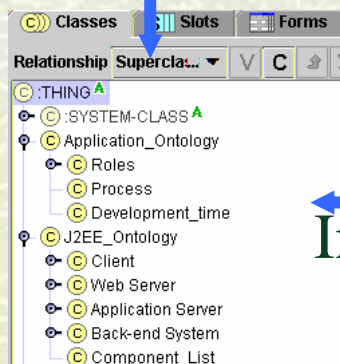
What



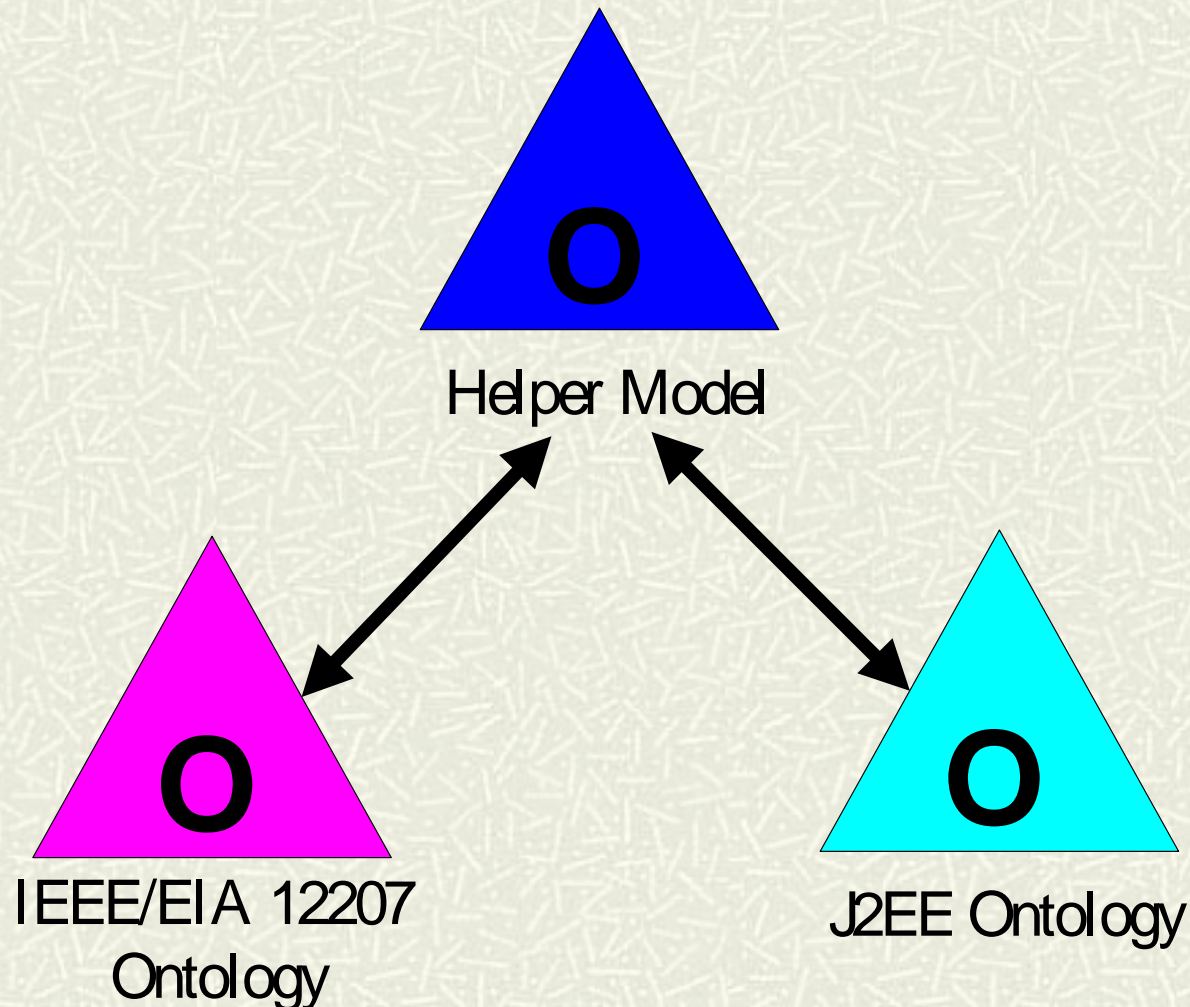
How

<IEEE/EIA 12207>

<J2EE>



Integrate Approach



Integration of the knowledge of IEEE/EIA 12207 and J2EE

- # Helper model is the broker between domains to map ontology.
- # Helper model identify the knowledge by
 - Role
 - Task
 - Timing
 - Place
 - document

Ontology of IEEE/EIA 12207 Knowledge(1/2)

Has Relation		Role									
		PM(X1)	SA(X2)	Architect(X3)	SD(X4)	Engineer(X5)	Integrate	Tester(X6)	Programmer(X7)	Manager(X8)	Document
develop process of IEEE/EIA 12207	System Requirement Analysis(Y1)		✓							✓	✓
	Software Requirement Analysis(Y2)		✓							✓	
	System Architectural Design(Y3)			✓						✓	
	Software Architectural Design(Y4)			✓						✓	
	Software Detailed Design(Y5)				✓				✓	✓	
	System Integrating(Y6)					✓				✓	

Ontology of IEEE/EIA 12207 Knowledge(2/2)

Has Relation		Role									
		PM(X1)	SA(X2)	Architect(X3)	SD(X4)	Engineer(X5)	Integrate	Tester(X6)	Programmer(X7)	Manager(X8)	Document
develop process of IEEE/EIA 12207	Software Integration(Y7)					>				>	
	System Qualification Testing(Y8)							>		>	
	Software Qualification Testing(Y9)							>		>	
	Software Coding and Testing(Y10)								>	>	
	Software Installation(Y11)								>	>	
	Software Acceptance Support(Y12)								>	>	

Ontology of J2EE Knowledge

Has Relation		Role									
		PM(X1)	SA(X2)	Architect(X3)	SD(X4)	Integration Engineer(X5)	Tester(X6)	Programmer(X7)	Manager(X8)	Document User(X9)	Other(X10)
J2EE Architecture Component	Component (Z1)			£ ¾		£ ¾			£ ¾		
	Container(Z2)		£ ¾			£ ¾			£ ¾		
	EJB(Z3)				£ ¾	£ ¾			£ ¾		
	Applet(Z4)					£ ¾		£ ¾	£ ¾		
	Jsp(Z5)					£ ¾		£ ¾	£ ¾	£ ¾	
	JDBC(Z6)			£ ¾		£ ¾			£ ¾		
	Servlet(Z7)					£ ¾		£ ¾	£ ¾		
	Interface(Z8)				£ ¾	£ ¾		£ ¾	£ ¾		
	Web server(Z9)					£ ¾	£ ¾		£ ¾		
	AP server(Z10)					£ ¾	£ ¾		£ ¾		
	Database(Z11)				£ ¾	£ ¾	£ ¾		£ ¾		

Conclusion and Future work

- # We will continue to find out some result and have some chance to discover some problem with any other research group.
- # We hope we can keep some contribution that can help others in research and application of ontology.
- # Combine the mechanism of inference.we will pay some attention on how to integration the inference mechanism on the ontology

The Ontology of J2EE

