

21b. Guided Development of Value Added Services based on ERP Systems

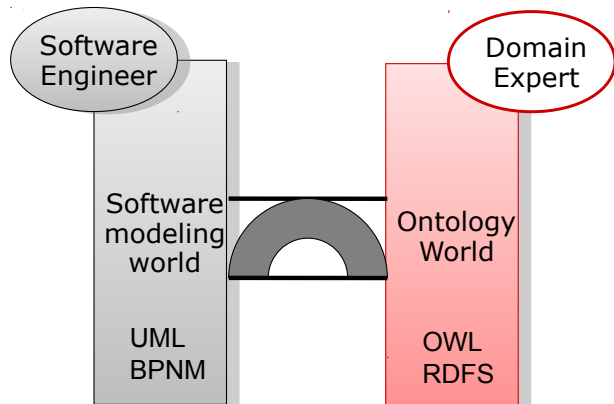
1 Project „Marrying Ontology and Software Technology (MOST)“

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Marrying Ontologies and Software Technology (MOST)

- 3 ▶ Bring together domain knowledge and software know-how



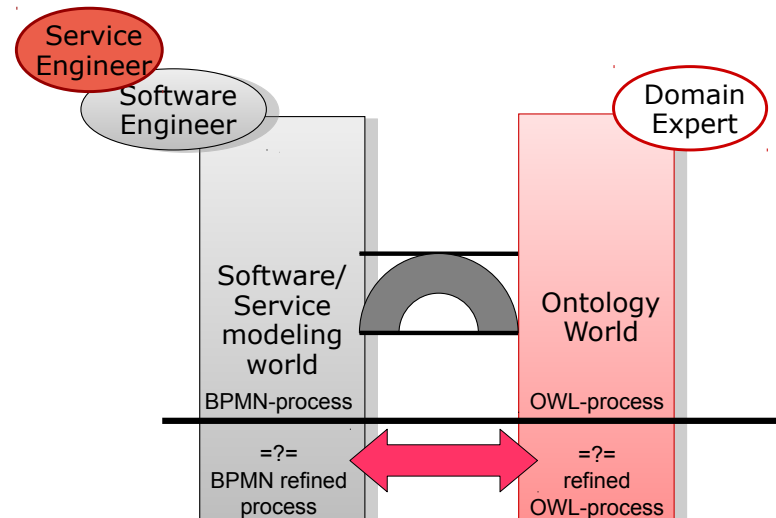
Literature

- 2 ▶ Semantic Technologies for Software Engineering
 - www.reasoningweb.org
 - 6th International Summer School 2010, Dresden, Germany
 - Springer, Lecture Notes in Computer Science 6325
- ▶ Ontology-Driven Software Development (ODSD)
 - Springer, 2012

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Ontology Services for Business Process Refinement

- 4 ▶ Transport BPMN to OWL and check refinement



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Process Refinement for Value Added Services

- 5
- ▶ MOST developed a “Guidance Engine” for editing processes and workflows
 - ▶ Development support:
 - Suggest continuation tasks
 - Invalid refinement of processes -> propose remodeling
 - Unbound tasks in processes -> propose refinement or remodeling

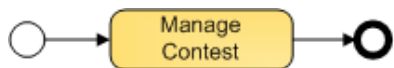
Workflows are edited in a Workbench (Here, ADO from BOC)

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The screenshot shows the ADO Workbench interface. The main window displays a BPMN process diagram with several tasks and connectors. A validation error is visible in the bottom right corner, stating: "The object 'Cancel Contest (TASK)' in the model 'Process C (BPMM Business Process Diagram)' represents an inconsistent refinement with respect to the model...".

Example: Suggest Continuation Tasks

- 7
- ▶ „Game contests“ as processes



- Available Tasks**
- Remodel Process A
 - Refine Process Process A
 - Ground Process Process A
 - Refine Activity Manage Contest
 - Ground Activity Manage Contest

Example ctd.

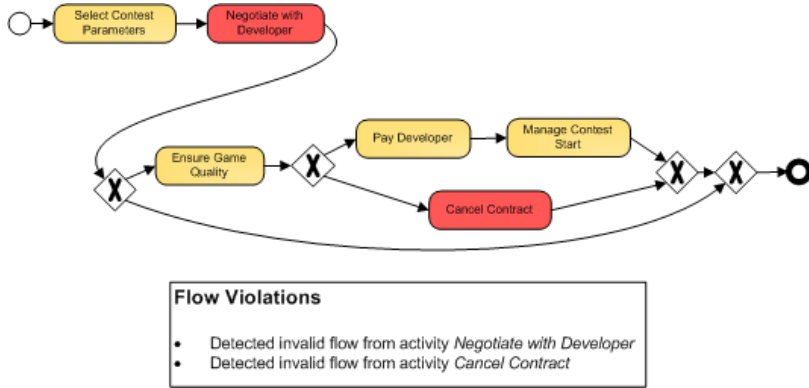
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- Available Tasks**
- Remodel Process B
 - Refine Process Process B
 - Ground Process Process B
 - Refine Activity Select Contest Parameters
 - Ground Activity Select Contest Parameters
 - Refine Activity Manage Developer Relationship
 - Ground Activity Manage Developer Relationship
 - Refine Activity Manage Contest Start
 - Ground Activity Manage Contest Start

Discover Refinement Clashes

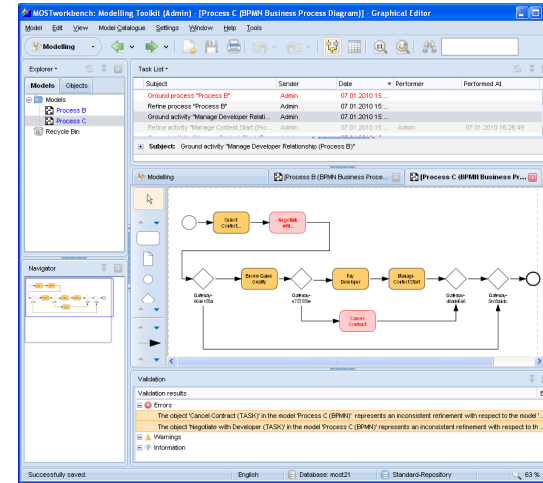
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Screenshot: Marking Faulty Refinements (Red)

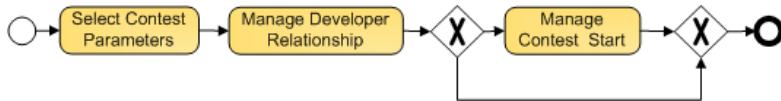
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Example Remedied

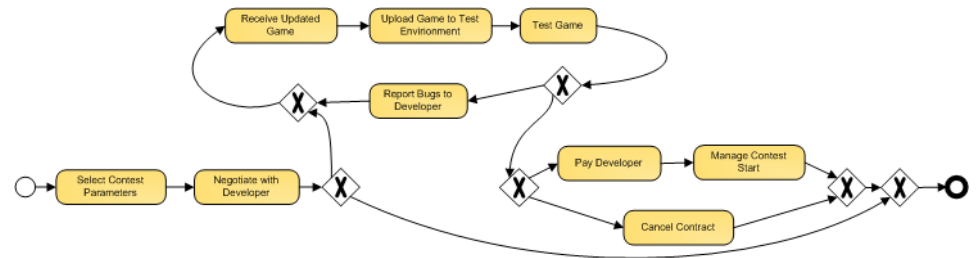
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Example: Now Refinement Works!

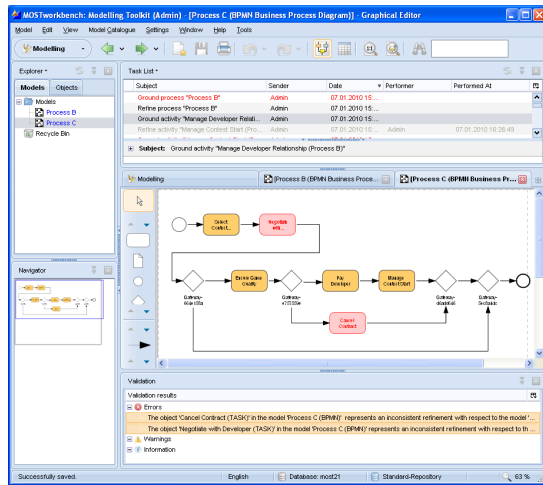
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Screenshot: MOST Workbench on ADO

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Technology: Process Refinement Ontology

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- ▶ Process ontology
 - Tasks as concepts
 - Ordering relations as *to* and *from* properties
- ▶ Refinement constraints:
 - Execution order after refinement must correspond to order before refinement
 - Pre-refinement process as constraints of post-refinement process

