

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

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Project „Marrying Ontology and Software Technology (MOST)“

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Design Patterns and Frameworks, © Prof. Uwe Aßmann

Literature

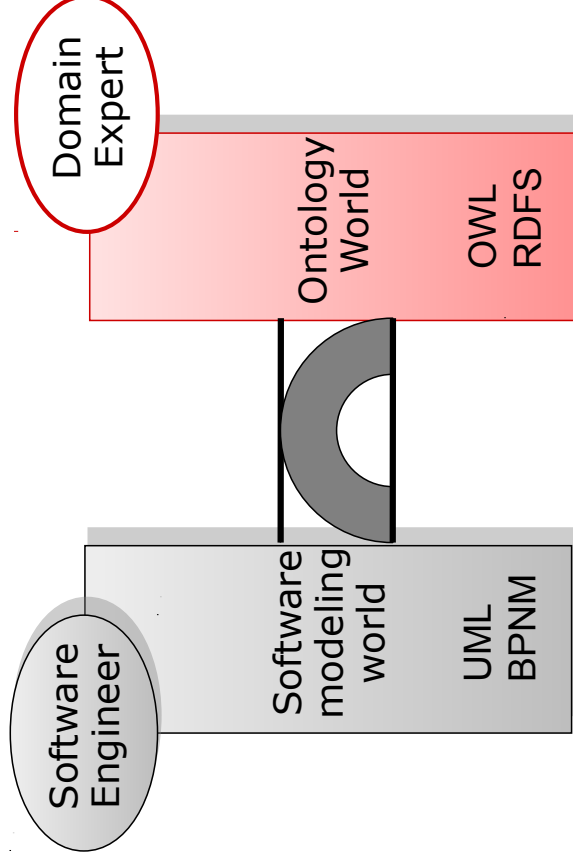
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- ▶ Semantic Technologies for Software Engineering
 - www.reasoningweb.org
 - 6th International Summer School 2010, Dresden, Germany
 - Springer, Lecture Notes in Computer Science 6325
- ▶ Ontology-Driven Software Development (ODSD)
 - Springer, 2012



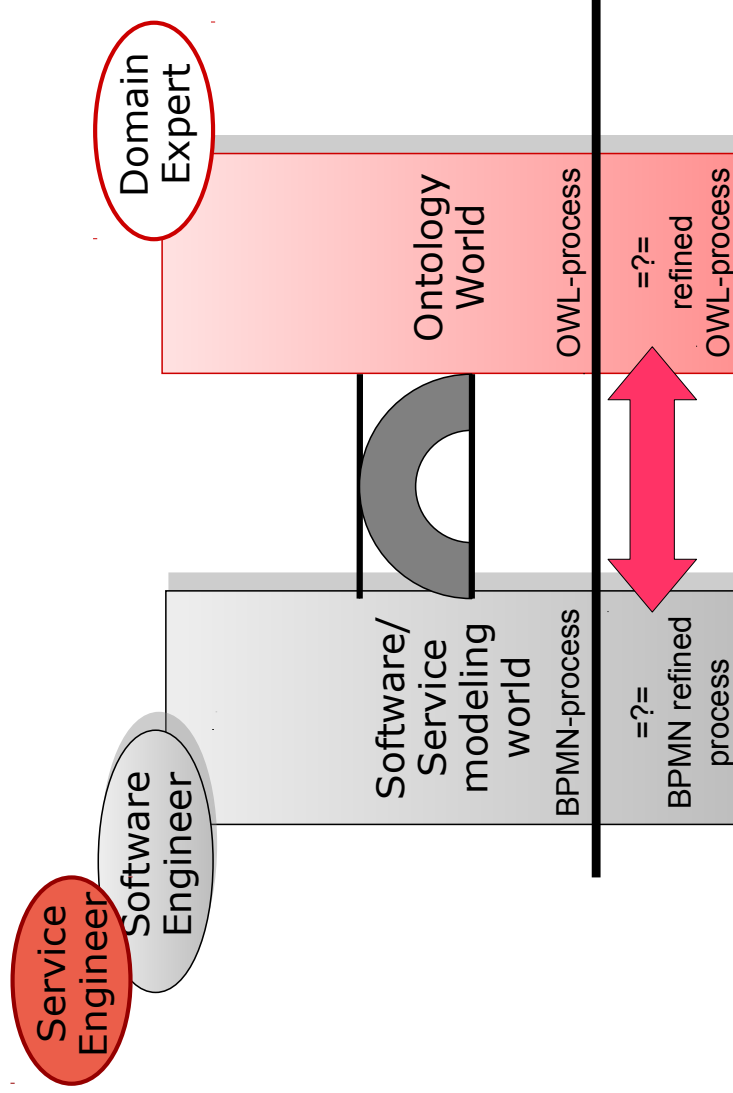
Marrying Ontologies and Software Technology (MOST)

- Bring together domain knowledge and software know-how



Ontology Services for Business Process Refinement

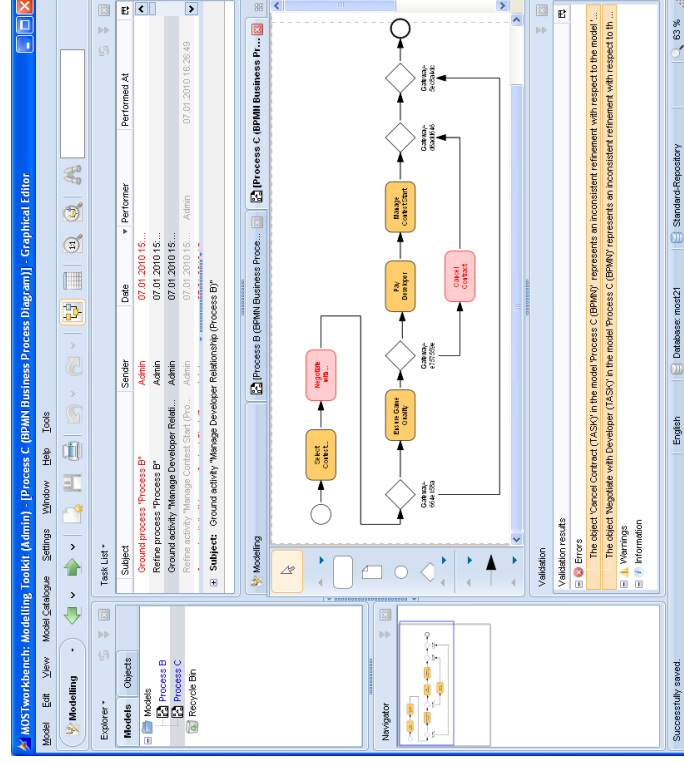
- Transport BPMN to OWL and check refinement



Process Refinement for Value Added Services

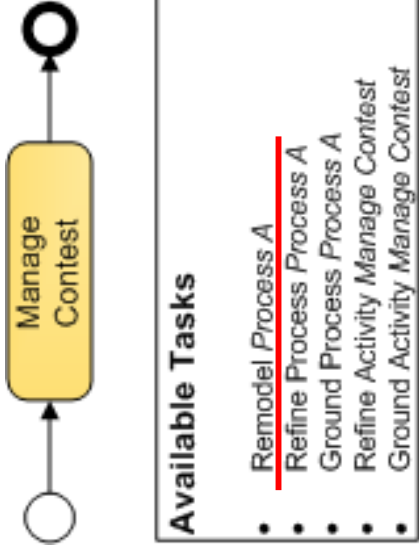
- ▶ MOST developed a “Guidance Engine” for editing processes and workflows
- ▶ Development support:
 - Suggest continuation tasks
 - Invalid refinement of processes -> propose remodeling
 - Unbound tasks in processes -> propose refinement or remodeling

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

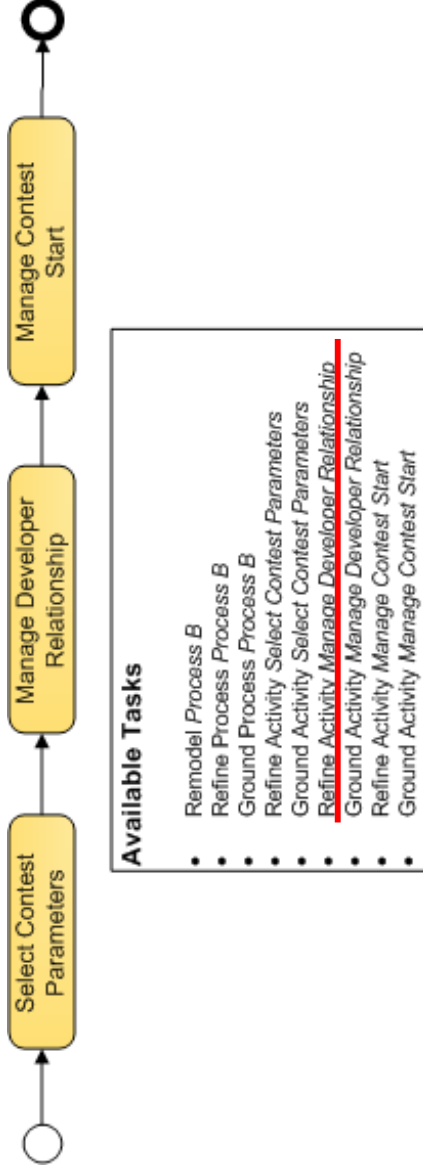


Example: Suggest Continuation Tasks

- ▶ „Game contests“ as processes

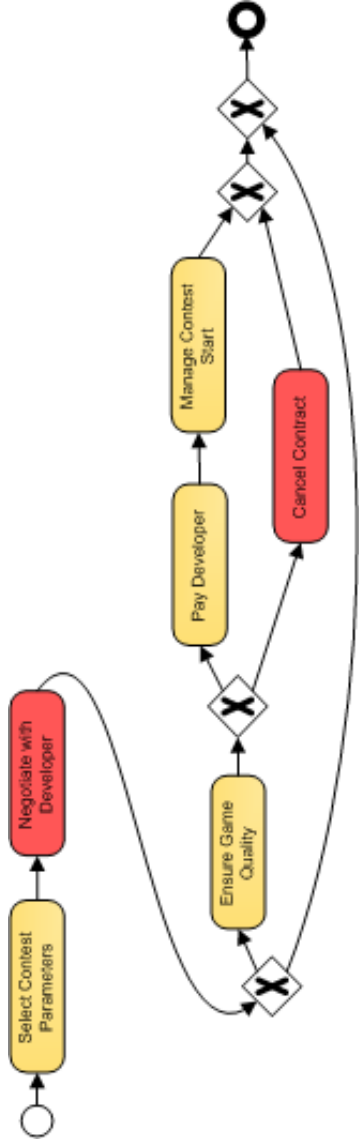


Example ctd.



Discover Refinement Clashes

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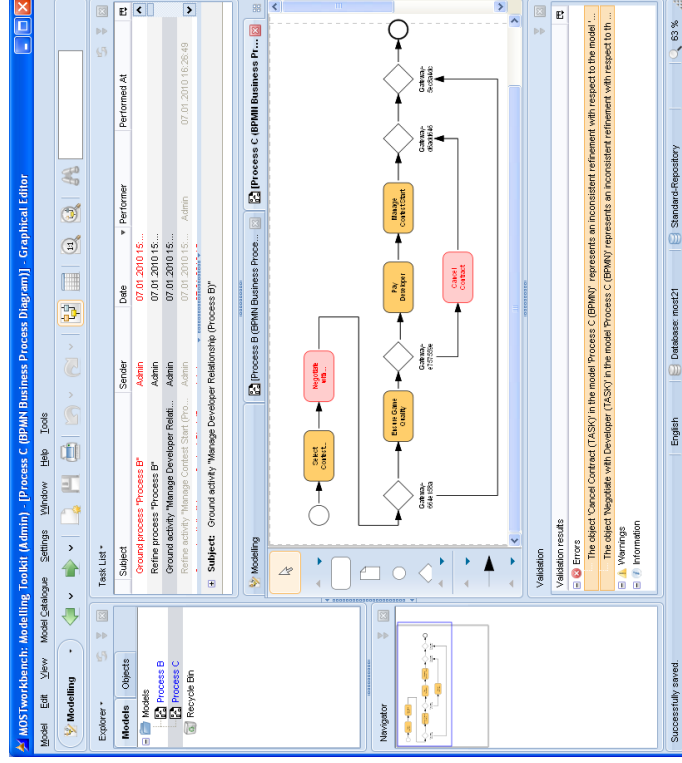
Flow Violations

- Detected invalid flow from activity *Negotiate with Developer*
- Detected invalid flow from activity *Cancel Contract*



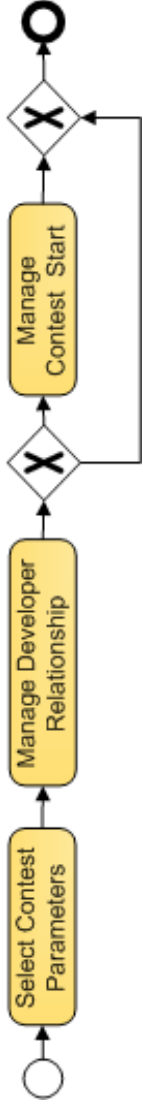
Screenshot: Marking Faulty Refinements (Red)

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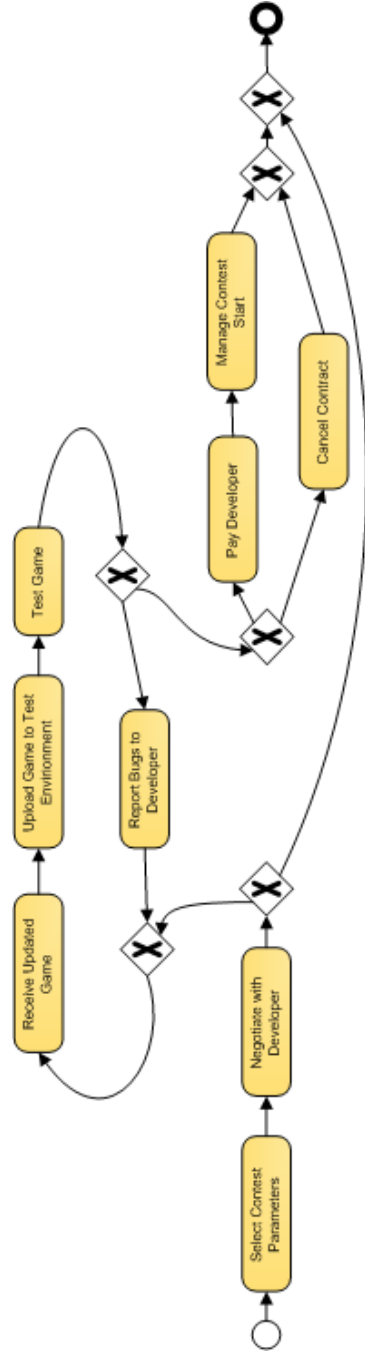
Example Remedied

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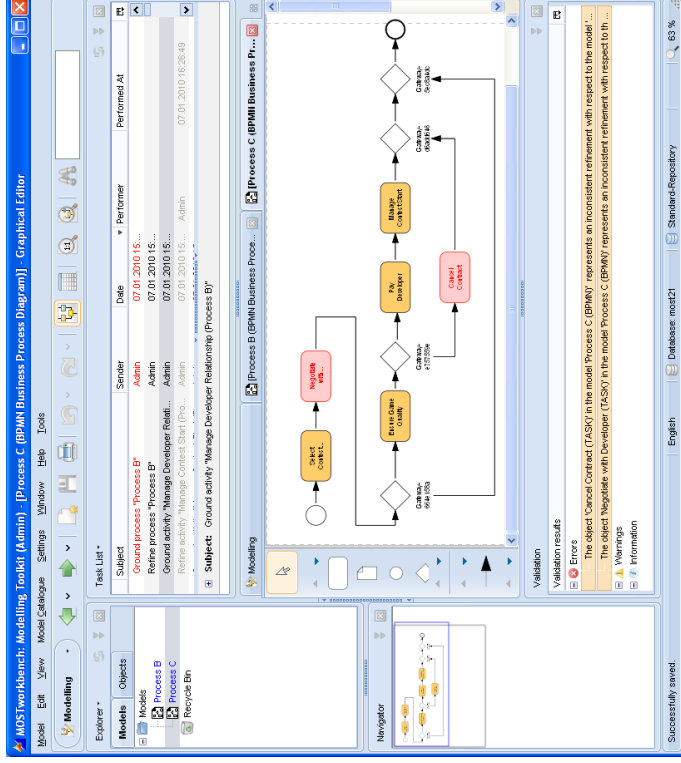
Example: Now Refinement Works!

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Screenshot: MOST Workbench on ADO

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Technology: Process Refinement Ontology

▶ 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

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