The ONTORULE project: Where ontology meets business rules

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Agenda

- The ONTORULE Project
  - ONTORULE Objectives
  - ONTORULE Vision
  - ONTORULE Components
  - ONTORULE – Partner Involvement

- Concrete Solution within ONTORULE
  - Management – Coping with Different Formalisms
  - Management – Coping with Different Knowledge Sources
  - Covering Dynamic Processes
The ONTORULE Project

- EU co-funded FP7 Project

- Partners

  - IBM
  - ontoprise
  - PNA Group
  - CTIC
  - Université Paris 13
  - Audi
  - ArcelorMittal

- Broader Objective

  - “… to enable the right people to interact in their own way with the right part of their business application…”

- Link: http://ontorule-project.eu/
ONTORULE Objectives

- Acquisition of business vocabulary and business rules from appropriate sources
  - Business professionals
  - Natural language documents

- Their separate management and maintenance

- Their transparent operationalization in IT applications
  - By efficient combinations
ONTORULE Vision

Modeling the business logic

Specifying the decision logic

Implementing the decision logic
ONTORULE – High Level Architecture (intermediate)

**Acquisition**
- Ontology Extraction
- Rule Extraction
- Modeling

**Management**
- Ontology & Rule Authoring
- Ontology Population
- Static & Dynamic Rule & Ontology Checking
- Documentation

**Execution**
- Rule Execution/Querying
- Dynamic Debugging
- Unit Testing
- Result Explanation

**Tools and Standards**
- OMG SBVR
- W3C OWL, RDF, RDFa, SKOS, RIF
Concrete Solution within ONTORULE – by ontoprise and Partners

Management

Execution

Information Integration/Ontology Population

Rule Authoring

Ontology Authoring

Rule & Ontology Checking

Querying

Result Explanation

ObjectLogic (successor of F-Logic)
Management – Coping with Different Formalisms

- Visualizing and editing of linguistic information
  e.g. from text documents
  e.g. from Terminea + SemEx from

- Importing and editing of OWL, RDF and RIF
  e.g. from
Management – Coping with Different Knowledge Sources

- Information integration of arbitrary data sources
Covering Dynamic Processes – Decision Logic

- Some problems not easy to cover with LP approaches
- Our Solution
  - Identify different problem types (e.g. Diagnosis, Planning, Configuration, …)
  - Implementation by separating different knowledge types

<table>
<thead>
<tr>
<th>Task Knowledge</th>
<th>• Strategy to achieve the goal</th>
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<tbody>
<tr>
<td>Inference Knowledge</td>
<td>• Use domain knowledge to solve a defined problem</td>
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<tr>
<td>Domain Knowledge</td>
<td>• Application relevant knowledge</td>
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Thank you for your attention.
If you have any questions feel free to ask me or contact us.

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