Semantics Utilised for Process Management within and between Enterprises
Agenda

- Motivation
- Idea
- Realization
- Objectives
- Discussion
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semantics utilised for process management within and between enterprises

Motivation
This is cumbersome!
Why do I always need IT staff to solve my business problems?
It takes too long to get these folks, they use different terminology than I do…

I am happy to describe what the activities do in my terms. Can the system be smart enough and find the right services itself?
Business / IT Divine

Business Experts' Perspective: Processes

Querying of the Process Space

Manual Labor

IT Implementation Perspective

Process Implementation
Here is my business process:

Wow! This is perfect – nothing left to do for me!
bring back business process management to business professionals

SUPER answers two most urgent issues emerging from BPM:

- shift in control of processes from IT professionals to business natives
- carrying up business process management to a new complexity level
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Idea
Three Layers

- Semantic Web Services
- Workflow BPEL Engine
- Business Process Modelling
Semantic Web Services

Objectives that a client wants to achieve by using Web Services

Goals

Ontologies

Web Services

Mediators

Provide the formally specified terminology of the information used by all other components

Semantic description of Web Services:
- capability (functional)
- interfaces (usage)

Connectors between components with mediation facilities for handling heterogeneities
Programming in the Large

Workflow System

Choreography
Flow
Process

Application

Programming in the Small

Application Server

Web Services
Functions
Business Process Modelling
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Realization

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Administrative details

- Start Date: 1st April 2006
- End Date: 31st March 2009
- Overall Budget: 16.4 M Euro
- Overall Funding: 11 M Euro
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<th>Work Packages</th>
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<td>Telecoms Use Case Framework and Ontology</td>
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<td><strong>WP1</strong></td>
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<td>Semantic BP Ontology and Operational Semantics</td>
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Objectives
Scientific Objectives

■ Construction and assessment of technological framework for SBPM
■ Acquiring new generic languages suited for representation of processes, different process models and goal description
■ Creation of automated annotation techniques of already existing BPs, their fragments, IT components
■ Development of process query tools
■ Adjustment of existing reasoners to the specific needs of SUPER
■ Elaboration of industrial-strength mediation procedures for automated coupling between business and IT perspectives
Challenges

- Low degree of automation in the implementation stage of BPs
- Implementation delay of BPs
- Cognitively inadequate complexity of BPs
- Process blindness of managers
- Invisible, complex interdependencies of BPs
- Knowledge of BPs is represented in heterogeneous information sources
- Evolution of BPs in time
- Discrepancies both in within the organizations and between different ones
- Strict control of knowledge flow from within the organisation
- further automation of the business process life cycle
- adding a layer designed for business professionals to handle the BPM on their own
- demonstration of successful deployment both of SWS and SBPM in industrial-strength applications applied repetitively in the field of telecommunications.
Project impact

- Research community
  - new approaches
  - methods and tools
  - contribution to standards

- Commercial companies
  - more addaptive companies
  - removing functional bottlenecks

- Public domain
  - more competitive goods and services

- European Community
  - research and business competitiveness
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Discussion
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Thank you