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Putting Business Intelligence into Documents

SBPM 2007 - Workshop on Semantic Business Process and Product Lifecycle Management

Date: 07.06.2007
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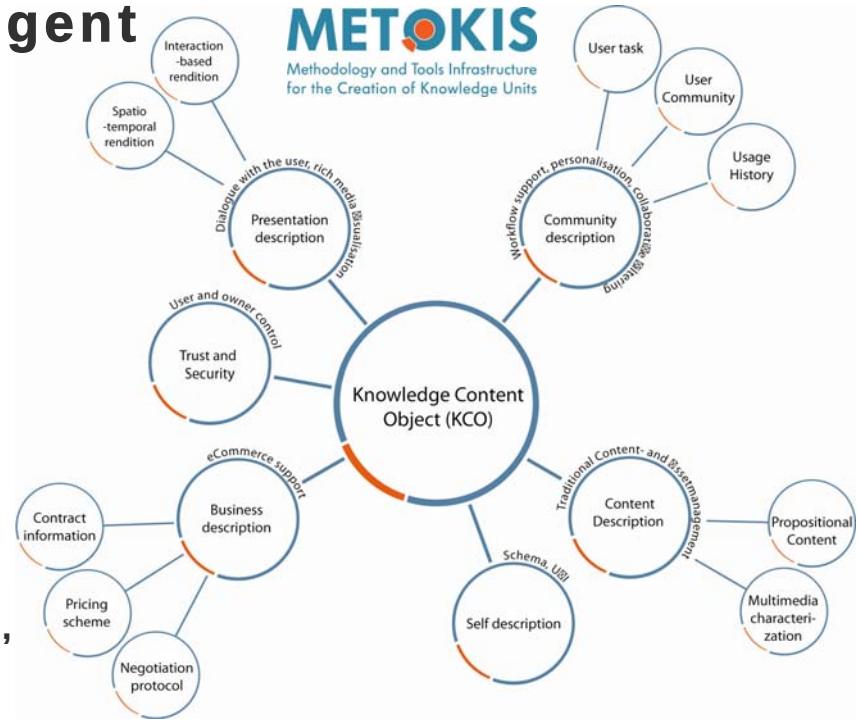
Our vision: The Application of Intelligent Content Objects in SBPM

- Definition „**Intelligent Content**“
  - *Content* containing information with *semantic descriptions of its properties and its behaviour*
  - *Carrier architecture* for semantically rich *information goods*

- ***What?***
  - Utilize Intelligent Content Objects as a rich structured *business knowledge exchange unit* between systems
- ***Why?*** Ongoing problems in BPM
  - Mediation between expert‘s view on BP and the resulting implementation (The Critical IT / Process Divide)
  - Mediation and exchange between participating applications

KCO – A model for Intelligent Content

- **Highly formalized** Semantic (Rich) Content Model based on the DOLCE foundational ontology
- A Knowledge Content Object (KCO)
  - Is a *container* for Content Objects (CO)
  - Is itself a Content Object
- KCOs are described by **semantic facets**:
  - **Content-, Business-, Community-, Trust&Security-, Presentation-, and Self Description**



- **Role of ontologies:** The use of foundational ontologies establishes
  - a minimal but shareable model for **content interoperability** between heterogeneous applications
  - A basis for a **common understanding** of the structure of the information
  - A **foundational grounding** for user intentions, plans and tasks enabled through the use of DOLCE DDPO

How-To: The Application of KCOs in SBPM

- ***Main intention of SBPM***: To *increase the level of automation* in BPM
- **Main intention of KCOs**: To *increase the level of interoperability* between system by modelling
  - content and knowledge about BP,
  - their application domain, and
  - parts of the process space:
    - *User Plans and Tasks* in the context of a community
    - *User Roles* in the particular community
    - *Negotiation Protocols and Pricing Schemes* (e.g. for content negotiation)
- **Our Goal:** To apply IC Objects in SBPM systems like [1] in order to execute plans modelled in the business and community facet of a KCO
- **Prerequisite(s):** Mapping between DOLCE DPPO to WSMO (current work)

[1] Martin Hepp, Frank Leymann, Chris Bussler, John Domingue, Alexander Wahler, and Dieter Fensel: "Semantic Business Process Management: Using Semantic Web Services for Business Process Management" In: Proceedings of the IEEE ICEBE, 2005.

Expected Benefits and Contribution

- **Expected Benefits**
  - *Exchange of content AND knowledge* in one unit
  - *Increase Knowledge Transfer between individuals*
  - C*ross-application execution of business processes* (esp. for content procurement, negotiation or billing)
- **Contribution**
  - A *methodology* to model content and knowledge and to transfer both between applications (Status: Done partially in the METOKIS project)
  - A *foundational ontology framework* for modelling information artefacts in business processes (established through DOLCE) (Status: Done partially in the METOKIS project)
  - A *foundational grounding for parts of WSMO* by mapping DDPO to WSMO (Status: Ongoing work in the GRISINO project)

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References:
METOKIS, http://metokis.salzburgresearch.at
GRISINO, http://www.grisino.at