Using process modeling for well-directed distribution of knowledge assets

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Ulrike Steffens, Mathias Uslar
OFFIS
Oldenburg, Germany

Overview

- **Motivation**
- **infoAsssetBroker as example for product-oriented KM**
- **KMDL as example for process-oriented KM**
- **Integration of infoAssetBroker with KMDL**
- **Conclusions**

Motivation: Knowledge-Intensive Work

- **Creative**
- **Innovative**
- **Cooperative**
- **Incomplete definition of tasks**
- **Autonomous knowledge-worker decisions**
- **Chain of action cannot be determined in advance**
- **Many variants**
- **Many special cases**
- **Incomplete IT support**

Motivation: Products vs. Processes

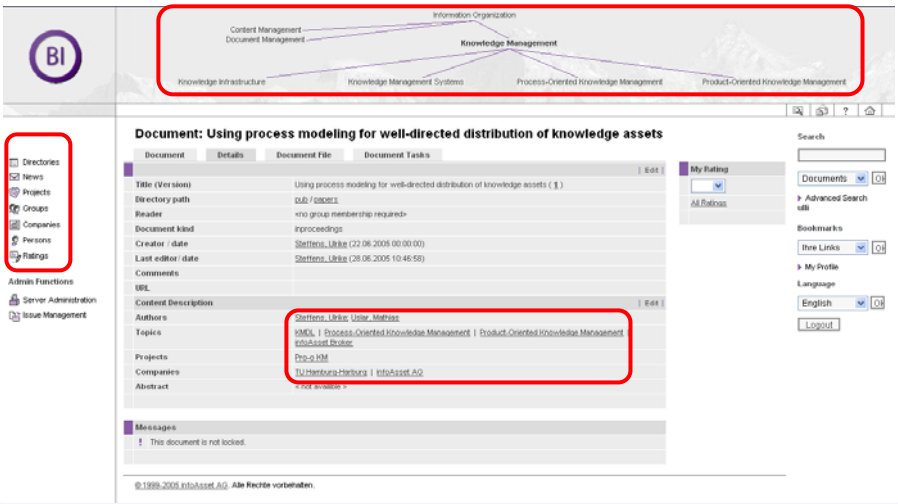
- **Product-centered Knowledge Management:**
  - Focus on documents and asset metadata
  - IT manipulation of single objects (creation, storage, rendering, retrieval, access, ...)
  - Structure within object collection
  - Tools (DMS, knowledge maps, knowledge portals)
  - Key question: What knowledge do we have?
- **Process-centered Knowledge Management:**
  - Focus on knowledge-intensive processes
  - Tacit knowledge is considered
  - Social communication is an essential part
  - Knowledge connected to process tasks
  - Methodologies and tools (modelling, analysis, support, execution)
  - Key question: Where do we use our knowledge?

Motivation: Products vs. Processes

- **Product-centered collection of documents and metadata needs target orientation**
- **Process-modelling has to be adapted to existing knowledge-management practices**
- **Formalization of knowledge-intensive processes is often not feasible → knowledge-workers need rich environment containing documents and metadata**
- **Knowledge-intensive work calls for the support of both:**

Product- and process-orientation complement eachother

infoAsset Broker: Materializing Knowledge Products



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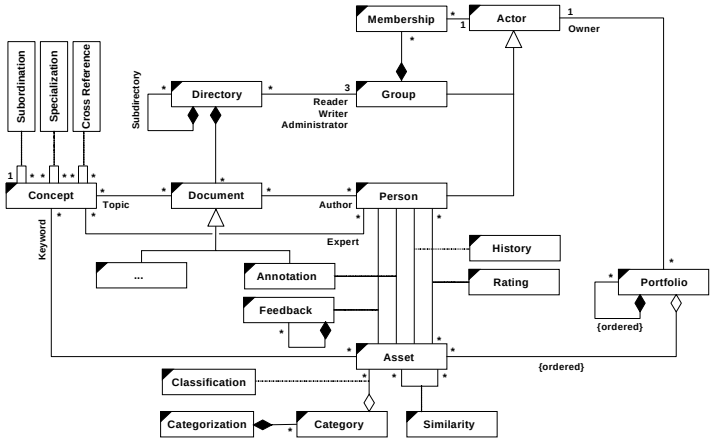

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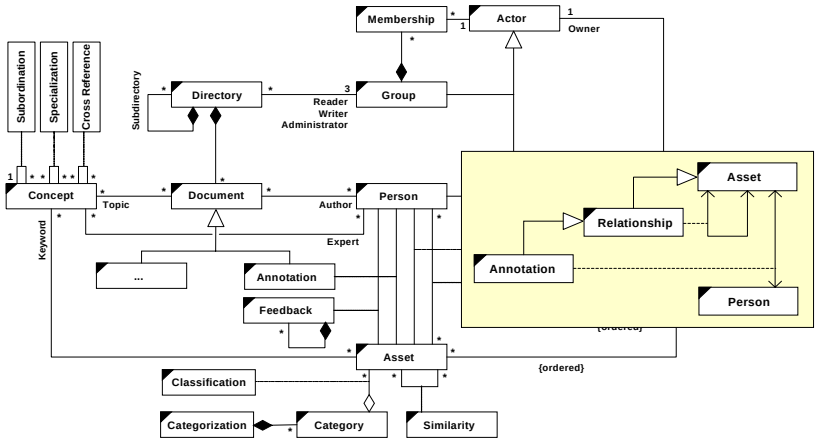
infoAsset Broker: Materializing Knowledge Products

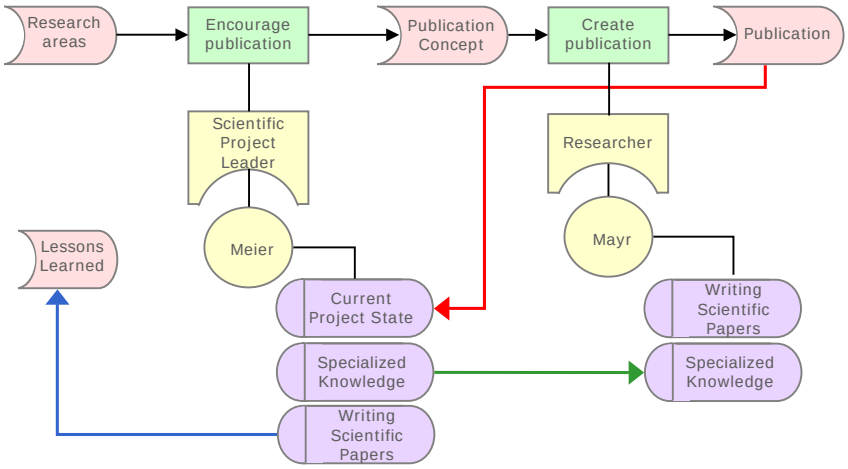


infoAsset Broker: Materializing Knowledge Products

- **Knowledge Portal**
- **Collects metadata for different types of arbitrary knowledge assets**
- **Assets are linked by different relationships → different navigation paths**
- **Search on metadata and contents**
- **Concepts as a connecting element between information and knowledge**

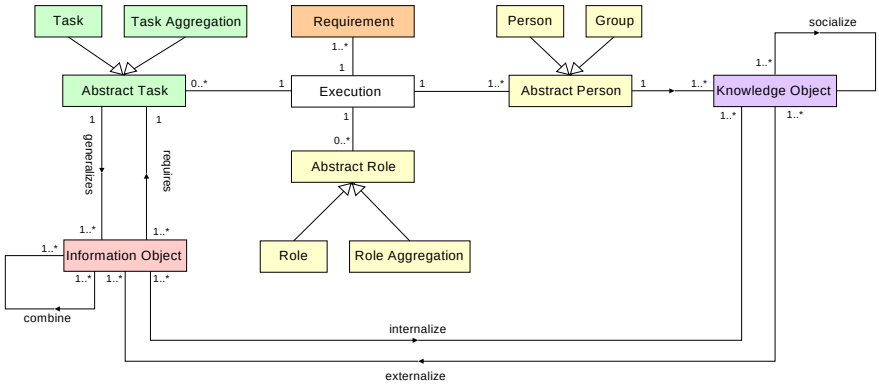
- **Open question: What is the best way to use a tool such as the infoAsset Broker?**

KMDL® – a modelling language for knowledge-intensive processes



Gronau, N. and Weber, E. (2004). Defning an infrastructure for knowledge intensive business processes. In Journal of Universal Computer Science: Proceedings of I-Know 04

KMDL® – a modelling language for knowledge-intensive processes



Gronau, N.; Korf, R.; Müller, C.: KMDL - Capturing, Analysing and Improving Knowledge-Intensive Business Processes. Journal of Computer Science, 4, 2005; S. 452-472.

KMDL® – a modelling language for knowledge-intensive processes

- **Separates tacit knowledge and information**
- **Represents creation, use, and necessity of knowledge**
- **Represents knowledge flow (conversions)**
- **Offers tool support (K-Modeler)**
- **Analysis for discovering weaknesses**

- **Questions:**
  - How can modelling be adequately supported?
  - Could all knowledge-intensive processes be described and steered by a language such as KMDL®?

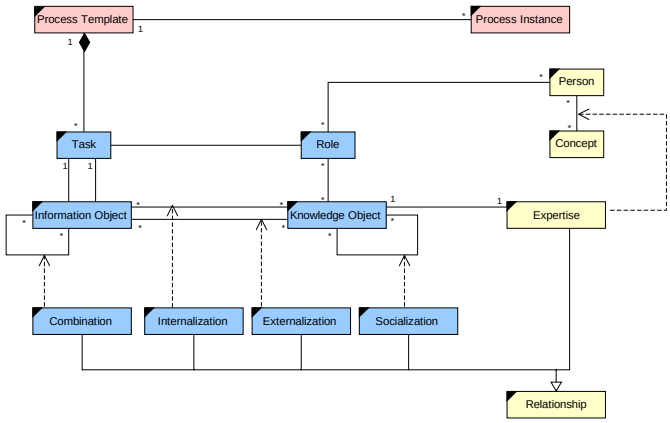
Supporting KMDL Modelling in the infoAssetBroker

- **Monitor ad-hoc processes**
- **Knowledge objects**
  - expertise expressed directly
  - expertise reflected by relationships
- **Information objects**
  - situations in which documents are used or produced
  - e.g. annotated macros
- **Results might give process modelling a head start**

Supporting asset use with KMDL

- **Process- or task-dependent search**
- **Process-dependent portfolios**
  - containing process-relevant assets
  - might automatically be equipped
- **Processes as assets**
  - metadata
  - graphical representations
  - guide for knowledge workers
- **Process templates which can be instantiated**
- **Process instance history**

Processes – Another Kind of Knowledge Asset



Conclusions and future work

- **Process modelling and product collection are complementary**
- **Process knowledge itself is an important asset**
- **Differentiate between process templates and instances**
- **Processes use collected assets → overlap in data models → integration**
- **Next steps**
  - implementation of different services
  - further research on knowledge-intensive processes
  - possibly think of further features of modelling language