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MoKi

the Modelling WiKi ---

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Motivations

- Enterprise modelling: modelling the relevant aspects of an enterprise.
- Enterprise modelling is a collaborative activity involving a team of modellers.
- Our collaborative modelling paradigm:
  - asynchronous collaboration toward the creation of the enterprise model;
  - specification at different degrees of formality;
  - automatized alignment between informal/formal specification.

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MoKi: the **Mo**delling Wi**Ki**

- It supports our collaborative paradigm.
- It currently supports the creation of integrated domain and process models.
- It is built on top of Semantic MediaWiki.
  - wikis support collaborative editing;
  - users are quite familiar with wikis;
  - only a web-browser is required on the client side;
  - wikis can provide a uniform tool/interface for the specification of enterprise model;
  - semantic information provided in the wiki can be reused to automatically create the formal models.

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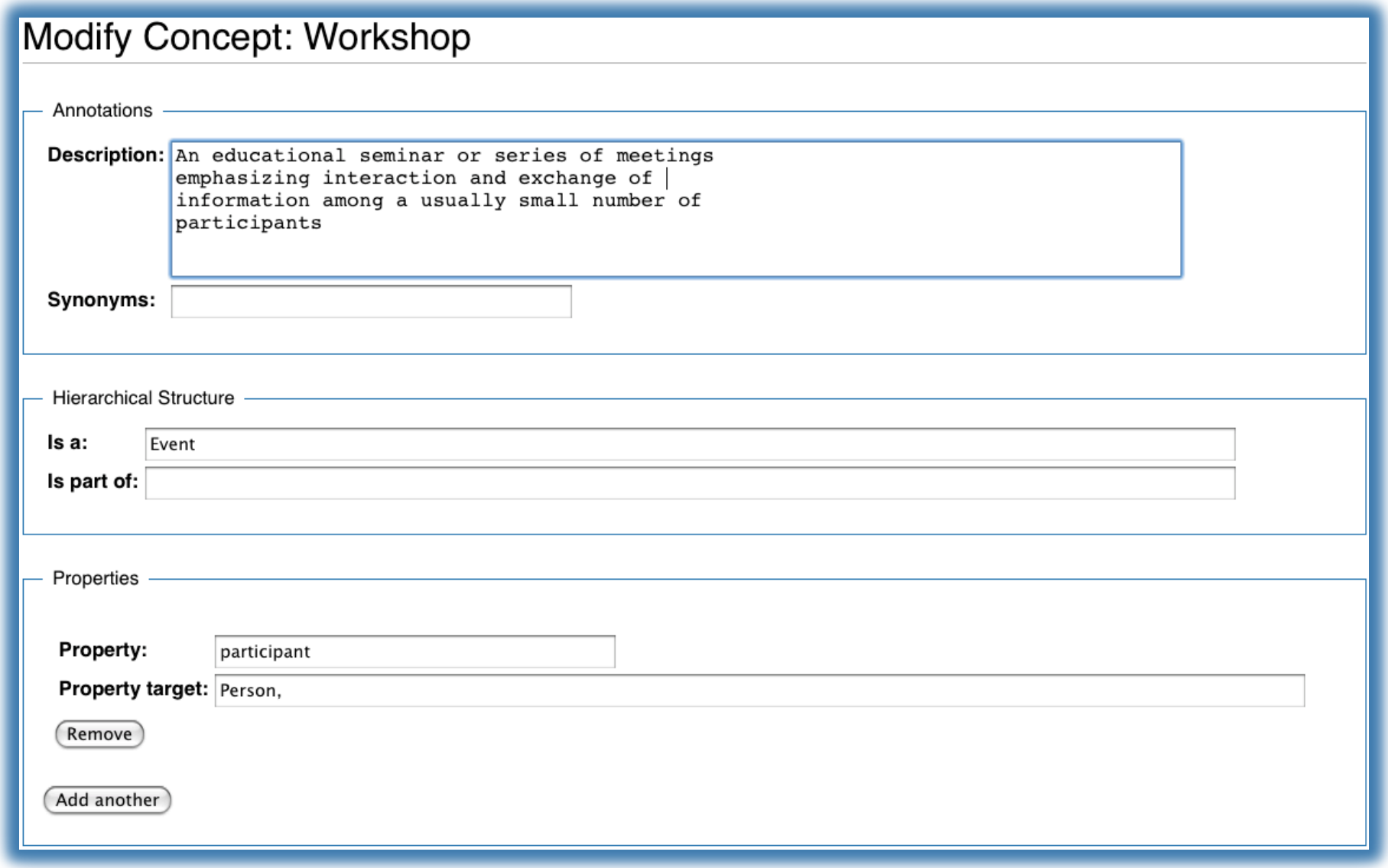
Pages in Moki

- A page for each element of the enterprise model, containing:
  - an informal description in natural language, to document and clarify the model;
  - a structured part composed of triples (subject, relation, object), to represent the intra/inter-connection between elements of the models.
- Use of appropriate forms/templates to guide users in providing valuable descriptions.

A domain concept page



- Similarly for properties and processes.

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Import

- Import of an available domain ontology.
- Input of structured lists of elements.
  - inserting lists of domain concepts organized according to pre-defined semantic structures (taxonomy or partonomy).
- Text analysis functionalities.
  - extract relevant terms from digital resources, and to cluster such terms according to their relatedness. (KnowMiner)

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Visualisation

List domain concepts

Number of concepts in the Domain Model: 71

Concept	Description	Is part of
Misc	Work of another or undetermin the scheme is not explicitly sta	
UndergraduateIntermediateClass	see: http://www.neurolabor.de/ /cgi-bin/dict/urlexp/200307052	
UndergraduateAdvancedClass	see: http://www.neurolabor.de/	
GraduateClass	see: http://www.neurolabor.de/	
Topic	If changing this concept (or its ontology depends on the fores The swrc topic ontology can b http://ontoware.org/frs/downlo	
Document	Dublin Core elements added. See: http://dublincore.org/docu for document types see: http://www.bsz-bw.de/diglib/m	

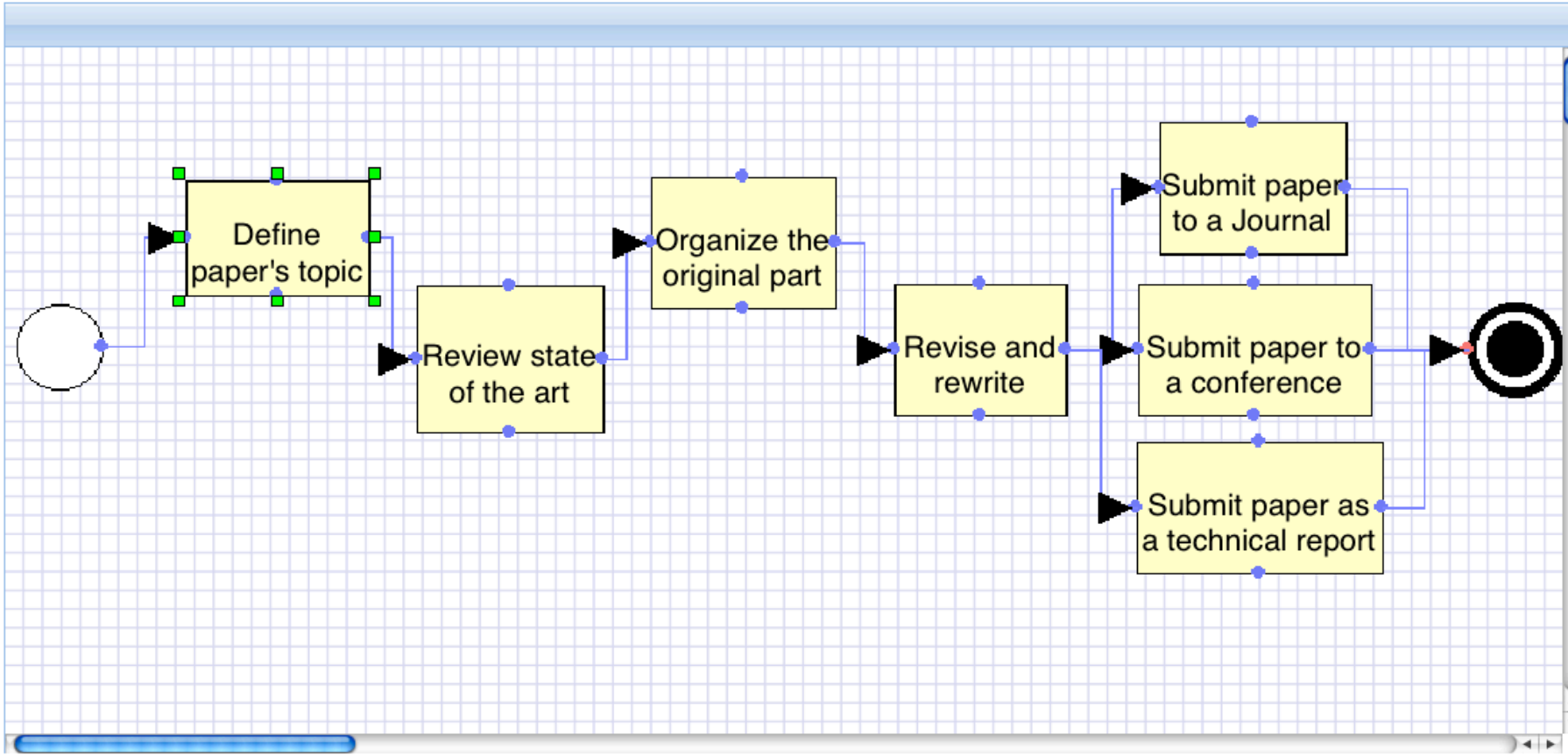
Domain Model: Is_a Browser

- Thing
  - Document
    - Publication
    - Unpublished
  - Event
  - Organization
  - Person
    - Employee
      - AcademicStaff
      - AdministrativeStaff
      - Manager
      - TechnicalStaff
    - Student
  - Product
  - Project
  - Thing
  - Topic

Process editing

Write a paper

Export to eRDF fromat (for Oryx) Only this process | Sub processes in same file as embedded design

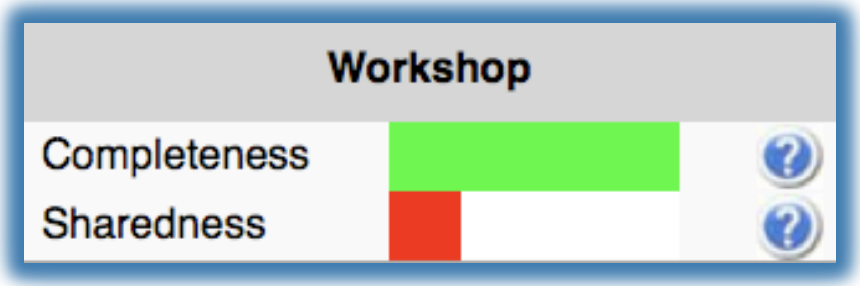


Description: The process of writing a scientific paper

Required concept: Publication, ResearchTopic, Event

Revision & Export

- Revision support: automatic checks to verify the quality of the enterprise model.



- Export functionalities: automatic export of the enterprise model to an OWL ontology.
  - The process model and the domain model can also be exported separately.
  - The process model can also be exported in a BPMN specification (eRDF serialisation).

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Usage of MoKi

- Used to create six medium-size enterprise models for the use cases in APOSDLE (FP6 EU-project – www.aposdle.org).
- Used in a Knowledge Management course at TU Graz (6 installations with ~50 users each).
- In use @ the Joint European Summer School on Technology Enhanced Learning 2009.
- Twin tools:
  - Clip-MoKi – collaborative tool for modeling clinical protocols encoded in ASBRU;
  - BP-Moki – collaborative tool for the creation of semantically annotated business processes.

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Things we are working on…

- Support modelling of individuals and data-type properties.
- Provide tailored templates for different families of ontology concepts.
- Extend import/export functionalities to support more expressive constructs.
- Extend support for revision.
- Support different levels of formality for differently skilled users.

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This is the end…

- A demo version of MoKi is available on line at:

  moki.fbk.eu

- For any question/info feel free to contact me at:

Marco Rospocher (rospocher@fbk.eu)

See you @ the demo!