

# OntoHub Perspectives

The Ontohub team

12.12.12

# Time plan

10h	Intro / Motivation / Know-How
10.30h	Ontohub and its background (OntoOp ISO standard, OOR community, Hets community)
11h	Ontohub.org web portal demo
11.30h	Ontohub architecture and data model
13h	Lunch
14h	Aims
14.30h	Motivation / Know-How / Work areas
15h	Organisation (regular meetings, programming sessions, github, issue tracker)
15.30h	Setup of development environment
ca. 16h	End



- ambitious goals:
  - establishing a hosted registry-repository;
  - enabling and facilitating open, federated, collaborative ontology repositories, and
  - establishing best practices for expressing interoperable ontology and taxonomy work in registry-repositories.
- lot of OOR presentations at conferences
- regular Skype conferences
- implementation: only through Bioportal, only for OWL
- <http://www.oor.net>

The screenshot shows the NCBO BioPortal website in a web browser. The browser's address bar displays <http://bioportal.bioontology.org/>. The page has a blue header with the BioPortal logo and navigation links: Browse, Search, Projects, Annotate, All Mappings, All Resources Alpha, Sign In, Register, Help/About, and Ser. Below the header, a "Welcome to the NCBO Bioportal" section contains a paragraph explaining the portal's purpose and providing links for searching ontologies, finding ontologies, and searching resources. At the bottom of the page, there are three search boxes: "Search all ontologies" with a search button and a link to "Advanced Search"; "Find an ontology" with a search button and a link to "Browse Ontologies >"; and "Search resources" with a search button and a link to "Advanced Resource Search".

NCBO BioPortal: Welcome to the NCBO Bioportal

<http://bioportal.bioontology.org/>

Most Visited Getting Started Latest Headlines NITE XML Toolkit UO ESL teachers Jason Leopold My I... rattie nebulizing ELI Online Data Search Crux Rock Climbing

NCBO BioPortal: Welcome to the N...

BioPortal Browse Search Projects Annotate All Mappings All Resources Alpha Sign In Register Help/About Ser

### Welcome to the NCBO Bioportal

Use BioPortal to access and share ontologies that are actively used in biomedical communities. You can search for terms in ontologies (try typing "Melanoma" in the "Search all ontologies" box in the left column), browse a list of ontologies in BioPortal (type "NCI Thesaurus" in the "Find an ontology" box in the middle column), search biomedical resources that we automatically annotated with ontology terms (try typing "Melanoma" in the "Search resources" box in the right column). You can [create ontology-based annotations for your own text](#), [link your own project that uses ontologies to the description of those ontologies](#), [find and create relations between terms in different ontologies](#), review and comment on ontologies and their components as you [browse](#) them. [Sign in to BioPortal](#) to submit a new ontology or ontology-based project, provide comments on ontologies or add ontology mappings.

Search all ontologies

Enter search term, e.g., melanoma Search

[Advanced Search](#)

Find an ontology

NEMO - Neural ElectroMagnetic Ontologie Explore

[Browse Ontologies >](#)

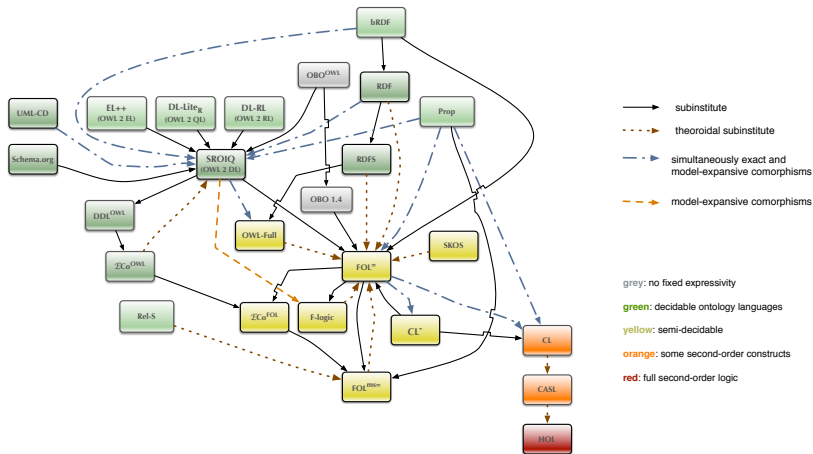
Search resources

Enter a term, e.g., Melanoma Search

[Advanced Resource Search](#)

- ISO Standard 17347 (currently: working draft)
- Distributed Ontology Language (DOL)
  - OWL (Web Ontology Language)
  - RDF (Resource Description Framework)
  - EER (Enhanced Entity-Relationship Diagrams)
  - Common Logic
  - UML (Unified Modeling Language)
  - ...
- Community of 10-15 experts
- bi-weekly Skype conferences
- <http://ontoiop.org>

# OntoOp Logic Graph



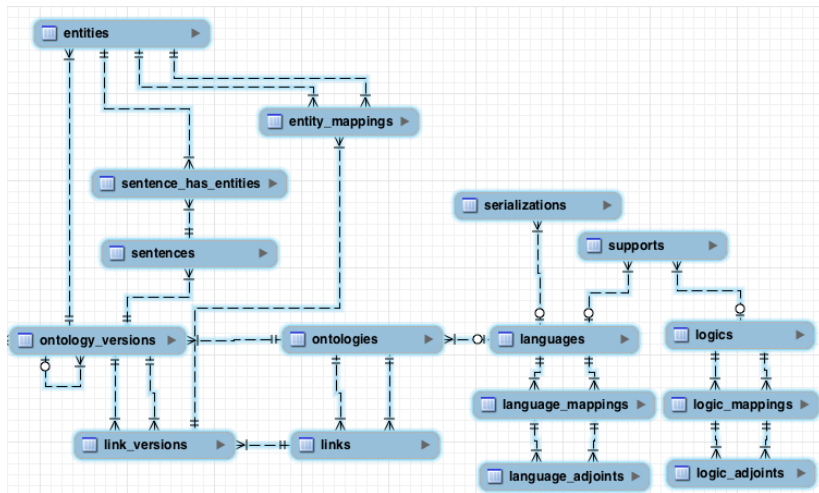
## Heterogeneous Tool Set (Hets)

- Logic backend for OntoHub
- can parse and analyse all involved languages
- interface to about 15 proof tools
- <http://www.dfki.de/cps/hets>



- provide a repository for *heterogeneous* ontologies
- generalise Bioportal and OOR to heterogeneous ontologies
- provide a repository for OntoOp/DOL
- provide a web-frontend for Hets

# Ontohub architecture and data model



Deutsches  
Forschungszentrum  
für Künstliche  
Intelligenz GmbH



SFB/TR 8

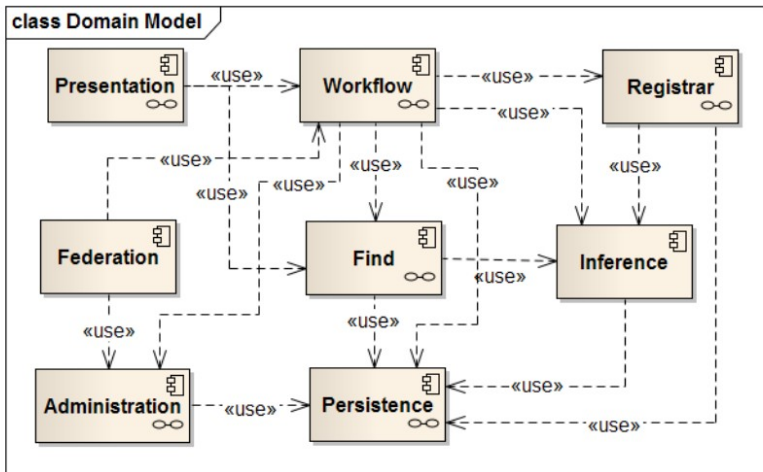
SPATIAL COGNITION

## OntoHub short-term and long-term goals

- Keep functionality through tests
- CRUD functionality for logics, translations, ...
  - read in logic graph from RDF registry
- display graph of ontologies and links (and logic graph)
  - use graphviz / dot
- Reasoning
- Git backend (distributed development of ontologies)
- long-term goal: OOR architecture



## Revised Architecture



- New Rails model “repository”, which simultaneously provides namespace for ontologies
- underlying git or svn repositories
- permissions per repository (not per ontology)
- only contents of master branch is displayed in Ontohub
- store who has pushed when what
- server side git hooks

- who does what?
- meetings
- shared office in Cartesium