INTRODUCTION

The European project @aneurIST aims to provide an integrated infrastructure related to intracranial aneurysms and subarachnoid bleedings. Its benefits for clinicians and scientists include improved support of diagnosis and treatment planning and an easier access to domain knowledge.

The @aneurIST ontology integrates several disease description levels, e.g. clinical, genetic, epidemiologic views from various information sources, e.g. clinical databases, literature and terminologies.

SOURCES

- Clinical databases and information models
- Literature abstracts
- UMLS Metathesaurus
- Domain experts
- Open biomedical databases

AVAILABILITY

The ontology and related material can be downloaded at http://ontology-aneurist.org

REFERENCES


ARCHITECTURE

- DOLCE lite top-level ontology
- OWL-DL (SH/IND)!
- Editor: Protégé 4
- Reasoner: Pellet, Fact++
- Web-based Ontology browser

COVERAGE

- About 2800 classes
- Scope:
  - anatomy, surgery, neurology
  - fluid dynamics
  - epidemiology
  - molecular biology
- 98 relations (with 70 inherited form DOLCE)
- Linked to lexicon with about 9000 entries

CURRENT STATE

- Used for text mining
- Linkage to clinical information systems in preparation

FURTHER CHALLENGES

- Create convincing use cases for demonstrating the benefit for ontology in @aneurIST
- Avoid overlap between ontology and information model design
- Communicate the rationale of ontology support for semantic mediation
- Train curators in applying ontology best practices and avoiding systematic modeling errors (see examples)