WebProtege and BioPortal as Infrastructures for Ontology Evaluation

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Ontolog Forum

WebProtégé

- Collaborative ontology browser and editor for the Web

- Platform for building Web-based semantic applications

- Customizable and extensible

- OWL-API backend

- OWL 2, OBO, RDF(S)

- Integrated with BioPortal to support the editing-publishing lifecycle of ontologies

- "Google docs" for ontologies; over 500 ontologies submitted by users

- Free and open source; implemented in Java and GWT

WebProtégé – simplified interface

Features of WebProtégé

- Collaboration support; SVN-like revisions

- Contextual notes and discussions attached to any entity in the ontology, including reviews

- Complete and executable change history

- Sharing of ontologies, access policies

- Download any revision of the ontology

- Integrates with BioPortal content, notes and proposals

- Will integrate with Protégé 5+ desktop client

BioPortal

- An open repository of biomedical ontologies and terminologies developed by NCBO at Stanford

- Publishing of ontologies, versioning (over 320 ontologies)

- Storing metadata

- Online, open, community-based peer review

- All content and functionality available as REST Web services

- 65,000 unique visitors per month

- http://bioportal.bioontology.org

BioPortal – Browsing ontology terms

NCI Thesaurus

Summary ▾

Details

ONTOLOGY ID:	1032
BIOPORTAL PURL:	http://purl.bioontology.org/ontology/NCIt
STATUS:	Production
FORMAT:	OWL
CATEGORIES:	
GROUPS:	Unified Medical Language System Cancer Biomedical Informatics Grid
CONTACT:	NCICB Support, ncicb@pop.nci.nih.gov
HOME PAGE:	http://ncicb.nci.nih.gov/core/EVS
PUBLICATIONS PAGE:	
DOCUMENTATION PAGE:	http://nciterms.nci.nih.gov
DESCRIPTION:	A vocabulary for clinical care, translational and basic research, and public information and administrative activities.
LICENSE INFORMATION	The version of the NCI Thesaurus (NCIt) available in BioPortal has been modified by reformatting some property values so that they can be more easily browsed (replacing or removing embedded XML). The original, unmodified NCIt, as well as NCIt license information, is available at http://ncit.nci.nih.gov.

Metrics ⑦

NUMBER OF CLASSES:	93411
NUMBER OF INDIVIDUALS:	0
NUMBER OF PROPERTIES:	200
MAXIMUM DEPTH:	14
MAXIMUM NUMBER OF SIBLINGS:	2619
AVERAGE NUMBER OF SIBLINGS:	145
CLASSES WITH A SINGLE SUBCLASS:	6668
CLASSES WITH MORE THAN 25 SUBCLASSES:	30477
CLASSES WITH NO DEFINITION:	37617

Versions

VERSION	RELEASE DATE	UPLOAD DATE	DOWNLOADS
12.04e	04/30/2012	06/08/2012	Ontology
12.03d	03/26/2012	05/23/2012	Ontology
11.06d	07/27/2011	09/30/2011	Ontology
11.01e	03/15/2011	03/21/2011	Ontology
10.03	03/15/2010	05/24/2010	Ontology
			more...

Reviews   Add your review

★★★★☆ **Usability**
★★★★☆ **Domain Coverage**
★★★★☆ **Correctness**
★★★★☆ **Quality Of Content**
★★★★☆ **Degree Of Formality**
★★★★☆ **Documentation And Support**

Good coverage for cancer research domains and moderate coverage for more general health care research. Especially good cancer related drug coverage, and chemotherapy regimen coverage. Includes number of standards used by the community, including CDISC, UCUM, FDA standard product labeling terminology, and others. Quality in many areas high. OWL DL, but degree of formality varies by area of the terminology. Available through easy to use browsers, API and multiple download formats.
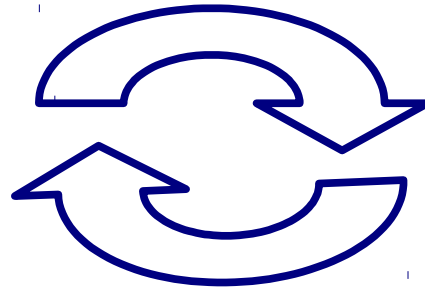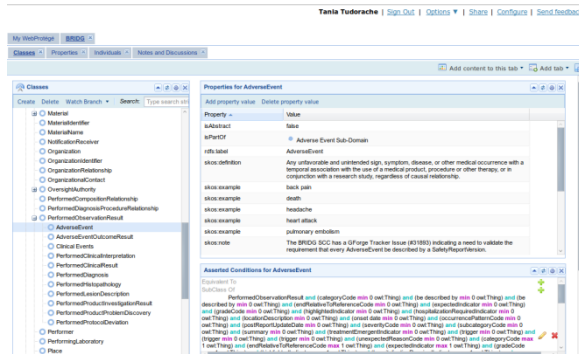
Projects Using This Ontology   Create new project

PROJECT	DESCRIPTION	PEOPLE	INSTITUTION
Patient/Research Participant Permissions Ontology	An ontology to capture patients' and research participants' res...		MUSC
ISA software suite	An open source ISA software suite and an extensible hierarchica...	International collaborative effort	Multiple institutions; leads at University of Oxford, UK
NCBO Resource Index	The NCBO Resource Web service is a system for ontology based a...	NCBO	Stanford University
Pediatric Terminology	Terms associated with pediatrics, representing information rela...	Ranjana Srivastava, Daniel Lyman, Ipsita Das	National Institute of Child Health and Human Development
OntoCAT	High level abstraction API (Java/REST/R) for interacting with o...	Tomasz Adamus...	EMBL-EBI, University of Groningen
LogMap	Logic-based and Scalable Ontology Matching. LogMap is a highly ...	Ernesto Jimenez Ruiz and Bernardo Cuenca Grau	University of Oxford
MeRy-B	MeRy-B is a plant metabolomics platform allowing the storage an...	Daniel Jacob, Catherine Deborde, Annick Moing	INRA & Univ. Bordeaux
Hypertrophic Cardiomyopathy	The Hypertrophic Cardiomyopathy (HCM) project is focused on the...		
NViz: A Visualization Tool	Ontology alignment, the task of...	Watson W.K. Chua	

An Integrated Editing and Publishing Infrastructure for Ontology Evaluation

WebProtégé

BioPortal

- Collaborative editing platform
- Internal notes and discussions
- Enacting of proposals for change

- Publishing platform
- Elicit public commenting
- Reviews
- Proposals for change

Ontology Evaluation with WebProtégé and BioPortal

- Support an ontology review process similar to the scientific papers' review

- Different levels of reviewing:

  - Internal review (on development version in WebProtégé)

  - Public review (on released version in BioPortal)

- Address the reviewing comments in WebProtégé and publish a new released version to BioPortal

- Reviews and proposals are structured so that many of them can be enacted automatically

Accessing BioPortal notes in WebProtégé

Browse BioPortal notes

Add new note

Actions on BioPortal notes

Configure BioPortal connection

Some issues

- Visibility of reviews: public or private?

- How to incentivize users to review ontologies?

- How to structure a review? E.g. R1: *"I've used this ontology for annotating images, and it works great."* - 5 stars; R2: *"This ontology is useless for data integration in domain X."* *- 1 star*

- Are there generic types of tasks for which ontologies can be evaluated?

- What kind of reviewing workflow is needed?

- How to aggregate reviewing data?

Resources

- WebProtégé:

  - http://webprotege-beta.stanford.edu

  - Documentation: http://protegewiki.stanford.edu/wiki/WebProtege

  - Papers:
    http://protegewiki.stanford.edu/wiki/WebProtege#References

- BioPortal:

  - http://bioportal.bioontology.org

  - Documentation: http://bioportal.bioontology.org/help

  - Papers:
    http://bioportal.bioontology.org/help#How_to_cite_NCBO_and_BioPortal