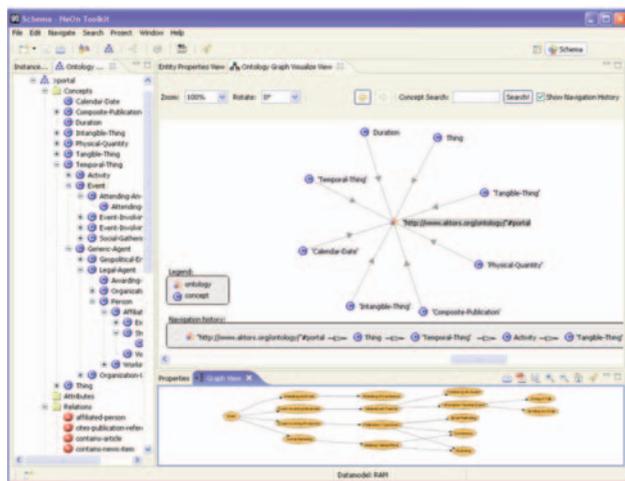


Aim

The NeOn project aims to advance the state of the art in using ontologies for large-scale semantic applications in distributed organisations by creating an open infrastructure, and associated methodology, to support the complete development lifecycle of this new generation of semantic applications. As an open, modular infrastructure, it is made of many technological components provided by the NeOn partners.

The NeOn Toolkit

The NeOn Toolkit is a novel ontology engineering environment for semantic applications. It supports distributed components for ontology management, reasoning and collaboration in networked ontologies. Built on the Eclipse platform, the NeOn Toolkit provides an open and modular framework for plugin developers.



Oyster and OMV

Oyster assists researchers in managing, searching and sharing ontology metadata in a peer-to-peer network.



It exploits semantic web techniques in order to provide a solution for exchanging and re-using ontologies. Oyster implements a proposal for a metadata standard, the so called Ontology Metadata Vocabulary (OMV). OMV provides an extensible vocabulary to describe different aspects of an ontology, such as, for instance, its language, domain, provenance, links with other ontologies, and the methodology used to build it.

The Alignment Server

Ontology reconciliation involves identifying the correspondences between entities occurring in different ontologies. We call a set of such correspondences an alignment. We have designed an RDF format for expressing alignments in a standardised way, and for sharing them through an Alignment Server. The Alignment Server is extensible and already integrates the novel ontology matching techniques developed within NeOn, such as the Scarlet relation discovery service.

The Alignment Server provides the following services:

- Storing, locating, and sharing alignments
- Creating new services by combining existing alignment algorithms
- Customising alignments
- Output processing (transformations, axioms, rules)
- Comparing alignments

Watson

As more and more semantic data becomes available online, a new generation of Semantic Web applications are appearing that dynamically locate, select and exploit multiple external semantic resources and ontologies.



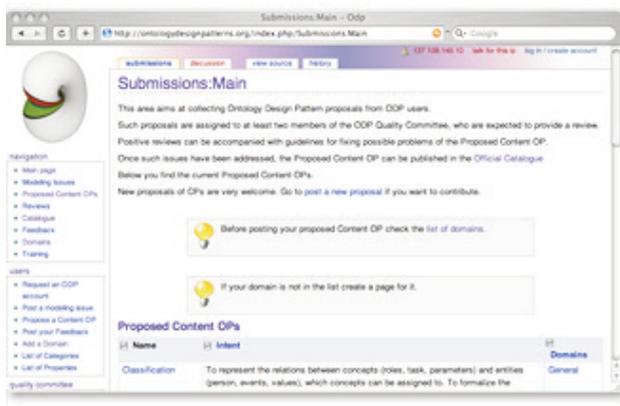
Watson is a gateway to the Semantic Web specifically developed to support such applications. It collects (through Web crawling) and indexes semantic documents and provides a variety of access mechanisms, both for human users (Semantic Web search engine interface) and for applications. Indeed, core to Watson is a set of Web Services and APIs, making it possible for applications to search and explore semantic content sourced anywhere on the (Semantic) Web. Watson already provides the basis for a number of innovative applications, which exploit the large scale semantic markup available on the Web.

RaDON

RaDON (Repair and Diagnosis for Ontology Networks) provides a set of techniques for dealing with the inconsistencies and incoherences which may arise when integrating different ontologies. In particular, RaDON supports novel strategies and consistency models for distributed and networked environments such as the computation of Minimal Inconsistent, Minimal Unsatisfiability-Preserving or Minimal Incoherence-Preserving Subsets (MIS, MIPS, MUPS). Radon can repair ontologies automatically or alternatively can support manual repair operations.

OntologyDesignPatterns.org

OntologyDesignPatterns.org is a portal dedicated to ontology design patterns (ODPs) for the Semantic Web. ODPs support best practices in ontology engineering by defining high quality modelling solutions to typical problems that can be encountered when building an ontology. **OntologyDesignPatterns.org** supports both open rating and traditional reviewing for the evaluation of its content, and includes an official catalogue, which is validated by two Editors in Chief and the ODP Quality Committee.



More...

There are many more technologies, systems and components that have been or are currently in development within the NeOn Project. For more information, visit the **Technologies** section of the neon-project.org website, and the **Plugins** section of the neon-toolkit.org portal.

Links

The NeOn Toolkit: neon-toolkit.org

Oyster and OMV: oyster.ontoware.org

The Alignment Server: alignapi.gforge.inria.fr

Scarlet: scarlet.open.ac.uk

Watson: watson.kmi.open.ac.uk

RaDON: ontoware.org/projects/radon

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Lifecycle Support for Networked Ontologies



www.neon-project.org

NeOn Technology Highlights

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