Organising web links semantically with Boek

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Abstract & Objectives

- The aim of the research is to create an open source semantic web framework for developing Rich Internet Applications (RIA).
- The framework by developing a semantic web RI application called Book (Dutch for "boek") to create better web URIs.

Why Semantic Web?

- The Semantic Web (Berners-Lee et al., 2000) and related technologies provides an infrastructure to organise data based on semantics.
- The Semantic Web = A Web with meaning.
- The Semantic Web can describe data in a way understood by machines.

Semantic Web Fundamentals

- Resource Description Framework (RDF): (Pr{o}sch, 2004) - language for describing information and resources making it possible for computer programs in search, collect, analyse and process information.
- RDF Schema (RDFS) and Web Ontology Language (OWL) provide vocabularies for expressing metadata.
- RDF graphs provide resources as classes, properties, and values.
- RDFS gives resource names and properties values.

Semantic Web Applications

- Why Semantic Web
- RDF Triple Store
- Jena
- SPARQL
- OWL

Semantic Web Technologies

- Jena API
- RDFS
- RDF
- SPARQL
- OWL
- RDF graphs and is not same as updating the graphs
- Jena provides a programming environment for RDF, RDFS, OWL, and includes a rule-based inference engine.
- RDFS provides a framework for resource and querying, especially for the OWL language
- SPARQL query engine for Java that supports the SPARQL RDF Query Language in the Semantic Web querying means finding RDF graphs and it is not an updating the graphs.

References

- Berners-Lee, T., Hendler, J., and Lassila, O. The semantic web - a new form of web content that is meaningful to computers to allow it to revolutionise web possibilities. In Scientific American, 284 (2001) 34–43, May