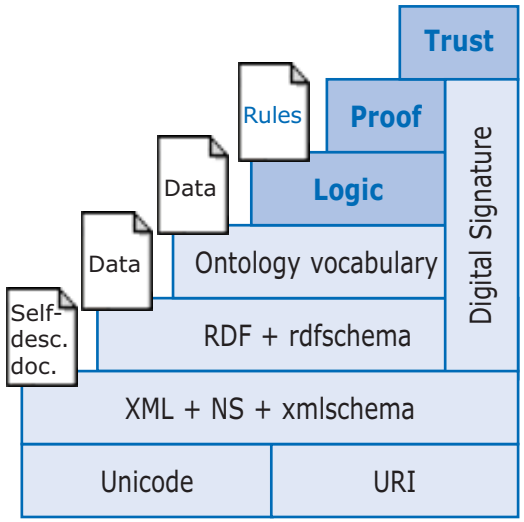
Objectives

Reasoning languages for the Web are a newly emerging technology. REWERSE aims at providing tangible technological bases for widespread development of intelligent Web applications. The goal will be achieved by:

- developing a minimal collection of complementary and inter-operable reasoning languages for the Web
- testing these languages on context-adaptive Web systems and Web-based decision support systems



"For the Semantic Web to function, computers must have access to [...] sets of inference rules that they can use to conduct automated reasoning."

Tim Berners-Lee, James Hendler, Ora Lassila.
The Semantic Web, Scientific American, May 2001

Application Areas

Reasoning in Bioinformatics. The current bottleneck upon which future progress in biology depends is the coherent integration of hundreds of databases and bioinformatics tools online with hundred thousands of protein sequences and millions of literature abstracts. Reasoning-based solutions developed in REWERSE deal with rules for mediation and for formulating complex queries, consistent integration of Bioinformatics data, and adaptive portals for molecular biologists.

Reasoning with geotemporal information (e.g. begin of Easter holidays, next elections), **geospatial information** (e.g. near, southern London), and **events**. Locations and time play essential roles on today's Web and will most likely become even more important with the advent of mobile computing and Semantic Web applications.

Reasoning in personalized information systems. To provide users optimized access to information, with appropriate quality, with required information depth, according to the user's actual situation will be one of the key technologies for usability in the Semantic Web and can finally lead to intelligent context-aware environments.

REWERSE is always looking for new application areas and scenarios from industry.

Please contact us if you are interested!

Working Groups

Rule Markup Languages

Towards unified markup and tools for reasoning Web languages
Co-ordinator: Dr. Gerd Wagner, Professor, Eindhoven University of Technology, NL

Policy Specification, Composition, and Conformance

Towards user-friendly high-level specifications for complex Web systems
Co-ordinator: Dr. Piero Bonatti, Professor, Università di Napoli, IT

Composition and Typing

Towards methods and rules for software interoperability in the Web context
Co-ordinator: Dr. Uwe Aßmann, Professor, Linköpings Universitet, SE

Reasoning-aware Querying

Towards a query and transformation language for the Web with reasoning capabilities
Co-ordinator: Dr. François Bry, Professor, Universität München, DE

Evolution and Reactivity

Towards specifying the evolution of Web-based data repositories
Co-ordinator: Dr. José Alferes, Professor, Universidade Nova de Lisboa, PT

Web-based Decision Support for Event, Temporal, and Geographical Data

Enhancing event, temporal, and location reasoning on the Web
Co-ordinator: Dr. Hans Jürgen Ohlbach, Professor, Universität München, DE

Towards a Bioinformatics Semantic Web

Adding semantics to the Bioinformatics Web
Co-ordinator: Dr. Michael Schroeder, Professor, TU Dresden, DE

Personalized Information Systems

Towards user-adapted Web information and teaching systems
Co-ordinator: Dr. Nicola Henze, Assistant Professor, Universität Hannover, DE

Activities

University Education and Training

Knowledge dissemination in academia
Co-ordinator: Dr. Jan Małuszynski, Professor, Linköpings Universitet, SE

Technology Transfer and Awareness

Knowledge dissemination in industry
Co-ordinator: Tim Geisler, webXcerpt Software GmbH, München, DE

REWERSE

Please contact us if you are interested in our research.

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REWERSE involves 27 European research and industry organizations and about 100 computer science researchers and professionals. The EU Commission supports REWERSE with more than 5 Million Euro over 4 years. REWERSE has started on 1st March 2004.

REWERSE Participants

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Heriot-Watt University, Edinburgh, UK

Eindhoven University of Technology, NL

Universität Göttingen, DE

Universität Hannover, DE

Foundation of Research and Technology – Hellas, Heraklion, GR

Friedrich-Schiller-Universität Jena, DE

LibRT, Amsterdam, NL

Linköpings Universitet, SE

Universidade Nova de Lisboa, PT

University of Malta, MT

The Victoria University of Manchester, UK

Ludwig-Maximilians-Universität München, DE

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REWERSE reasoning on the web

Making the Semantic Web vision a reality

REWERSE ***http://rewerse.net***

- a Network of Excellence funded by the European Commission and by the Swiss Federal Office for Education and Science within the 6th Framework Programme project REWERSE number 506779
- a leading virtual research center on reasoning on the Web
- a competitive advantage for European Industry