REWERSE

http://rewerse.net

REasoning on the WEb with Rules and SEmantics

The objective of REWERSE is to establish Europe as a leader in reasoning languages for the Web by

- networking and structuring a scientific community that needs it, and by
- providing tangible technological bases that do not exist today for an industrial software development of advanced Web systems and applications.

Impact

The community networked and structured by REWERSE

- develops a coherent and complete, yet minimal, collection of inter-operable reasoning languages for advanced Web systems and applications;
- tests these languages on context-adaptive Web systems and Web-based decision support systems selected as test-beds for proof-of-concept purposes;
- brings the proposed languages to the level of open pre-standards amenable to submissions to standardisation bodies such as the W3C.

REWERSE develops Education and Training activities targeted at Universities as well as Technology Transfer and Awareness activities targeted at the European industry on reasoning languages for Web systems and applications.

REWERSE's main innovation

For the full exploitation of the Semantic Web it is necessary not only to describe meta-data but also provide languages and methods to query and to automatically *reason* over these data, i.e. to derive new not explicitly stated information from existing data using various forms of *rules*.

REWERSE is developing a format, or markup, for rule languages, approaches to specifying policies, i.e. high-level specifications for complex Web systems, methods for composing and typing Web rule and query languages, a query language for Web and Semantic Web data, rule-based approaches to specifying reactive behaviours of Web systems. In addition, REWERSE develops methods for expressing and processing temporal and location data, semantic approaches to Bioinformatics, and methods for personalisation.

REWERSE's results so far

The focus of REWERSE is the definition of languages and support tools for reasoning on the Web and the application of these technologies in different application domains. In its first months REWERSE has defined requirements and base components for the different technologies accompanied by thorough state-of-the-art surveys. At the end of year one use cases for the respective technologies have been defined that all require rules and reasoning for satisfactory realisation. In year 2 REWERSE has been implementing first prototypes of the respective technologies. More concretely,

the languages, use-cases, prototypes and applications that are worked on concern: rule markup languages, policy specification, typing and composition of rules, querying and transformation, reactive behaviour and evolution of information, geotemporal and geospatial reasoning, bioinformatics data integration and personalisation on the Web.

These research results can be followed on http://rewerse.net; in particular the results are documented in the deliverables and research publications available at http://rewerse.net/publications.html. At month 20 REWERSE members have contributed to over 200 internationally reviewed publications showing that REWERSE's focus is perfectly targeted to current research needs. Demonstrations of prototypes developed within REWERSE are available at http://rewerse.net/downloads_demos/.

REWERSE has organised three major dissemination events in year 2: the first "Reasoning Web" Summer School (July 2005, Malta), the industry awareness event "Semantic Web Days" (October 2005, Munich) and the research workshop "Principles and Practice of Semantic Web Reasoning" (PPSWR'05) (September 2005, Dagstuhl) (cf. http://rewerse.net/project_events.html).

Since October 2005 REWERSE holds a consortium membership in the W3C and has a dedicated standardisation task force. REWERSE members actively participate in standardisation activities, in particular in the W3C Rule Interchange Format Working Group and in the W3C Semantic Web Health Care and Life Sciences Interest Group (HCLSIG). Details of the standardisation activities can be followed at http://rewerse.net/standardization.html.

More details

- REWERSE Website: http://rewerse.net
- Deliverables and research publications: http://rewerse.net/publications.html
- PR material and demos (e.g. Project Flyer, Workpackage Fact Sheets, Project Presentation, Annual Public Reports, Demo descriptions etc.): http://rewerse.net/downloads_demos/
- Press releases: http://rewerse.net/press_releases.html
- Project events, e.g. scientific or technology transfer conferences:
  - Overview: http://rewerse.net/project_events.html
  - Reasoning Web Summer School 2005: http://reasoningweb.org/
  - Semantic Web Days 2005: http://www.semantic-web-days.net/
  - PPSWR 2005: http://rewerse.net/PPSWR05/
- REWERSE Research and Application Working Groups: http://rewerse.net/workinggroups.html
- REWERSE Dissemination and Standardisation Activities: http://rewerse.net/activities.html

REWERSE's upcoming work

In the future, REWERSE will further work on the above mentioned issue and deliver research reports and prototypes. In particular, in year 3 REWERSE plans to refine and test its demonstrators and prototypes thus showing the power of the new paradigm for rules and reasoning on the Web.

The dissemination of the results will be further extended via the annual summer school Reasoning Web, refinement of university and industry teaching material and infrastructure, technology transfer events, and the research workshop PPSWR. Furthermore, REWERSE is actively participating in W3C Standardisation activities

Administrative details

Project Reference	506779
Framework	FP6
Priority	Priority 2, IST
Action Line	Semantic-based knowledge systems
Contract Type	Network of Excellence
Start Date	2004-03-01
End Date	2008-02-29
Duration	48 months
Project Status	Execution
Project Funding	
EU Commission part	5 150 000 Euro
Swiss part	360 720 Euro
Participants	27 from 14 European countries
WWW	http://rewerse.net

List of participants

Short Name	Full Name	Country
Munich	Ludwig-Maximilians-Universität München	Germany
Bucharest	Institutul National de Cercetare-Dezvoltare in Informatica	Romania
Edinburgh	Heriot-Watt University, Edinburgh	United Kingdom
Cottbus	Brandenburg University of Technology at Cottbus (BTU Cottbus)	Germany
Göttingen	Universität Göttingen	Germany
Hannover	Universität Hannover and Learning Lab Lower Saxony	Germany
Heraklion	Foundation for Research and Technology - Hellas	Greece
Freiburg	Albert-Ludwigs-Universität Freiburg	Germany
LibRT	LibRT B.V., Amsterdam	Netherlands
Linköping	Linköpings Universitet	Sweden
Lisbon	Universidade Nova de Lisboa	Portugal
Dresden	Technische Universität Dresden	Germany
Malta	University of Malta	Malta
Manchester	The University of Manchester	United Kingdom
Nancy	INRIA - Unité de Recherche Lorraine (LORIA)	France
Naples	Università di Napoli	Italy
Paris	INRIA Rocquencourt	France

Skövde	Högskolan i Skövde	Sweden
St. Gallen	Universität St. Gallen	Switzerland
Tekniker	Fundación Tekniker, Eibar	Spain
Telefonica	Telefónica Investigación y Desarrollo, Madrid	Spain
Turin	Università degli Studi di Torino	Italy
Venice	Università Ca' Foscari Venezia	Italy
Vienna	Technische Universität Wien	Austria
Warsaw	Instytut Podstaw Informatyki Polskiej Akademii Nauk	Poland
webXcerpt	webXcerpt Software GmbH, München	Germany
Zurich	Universität Zürich	Switzerland

Contact persons

Project Management Office

Scientific Co-Ordinator
Dr. François Bry, Professor
http://rewerse.net/~bry/

Project Manager
Dr. Uta Schwertel
http://rewerse.net/~schwertel/

Institut für Informatik
Ludwig-Maximilians-Universität München
Oettingenstraße 67
D-80538 München
phone: +49 89 2180 9016
fax: +49 89 2180 9017

Events in connection with the project

2005

Semantic Web Days 2005
Date: October 6-7, 2005
Location: Munich, Germany
www: http://www.semantic-web-days.net/
Type: Technology Transfer to industry – Workshops targeted at industry

Workshop PPSWR 2005 ("Principles and Practice of Semantic Web Reasoning")
Date: September 11-16, 2005
Location: Dagstuhl, Germany
www: http://rewerse.net/PPSWR05/
Type: Research dissemination – Scientific workshop

Summer School Reasoning Web 2005
Date: July 25-29, 2005
Location: Malta
www: http://reasoningweb.org
Type: Education and Training – Summer School

REWERSE at ESWC 2005 Industry Forum
Date: May 30, 2005
Location: Heraklion
www: http://rewerse.net/TTA/NewsandEvents/event.htm
Type: Technology Transfer to industry – Co-organisation of industry forum

REWERSE at CeBIT Future Match Event
Date: March 10-16 2005
Location: Hannover
www: http://rewerse.net/TTA/NewsandEvents/event.htm
Type: Technology Transfer – Presentation of REWERSE at Future Match event

2004

REWERSE presentation at KM Europe
Date: November 9, 2004
Location: Amsterdam, Netherlands
www: http://rewerse.net/TTA/NewsandEvents/event.htm
Type: Technology Transfer – Stand, demos, presentation

Workshop PPSWR 2004 ("Principles and Practice of Semantic Web Reasoning")
Date: September 8-9, 2004
Location: St. Malo, France
www: http://www.pms.ifi.lmu.de/PPSWR04
Type: Research dissemination – Scientific workshop

2003

Workshop PPSWR 2003 ("Principles and Practice of Semantic Web Reasoning")
Date: December 8, 2003
Location: Mumbai, India
www: http://www.kbs.uni-hannover.de/~henze/ppswr03/
Type: Research dissemination – Scientific workshop

Last updated: 30/01/2006