

Recent Projects

SPITFIRE - Semantic-Service Provisioning for the Internet of Things using Future Internet Research by Experimentation - under negotiation (project coordinator) A European STREP project whose goal it is to investigate unified concepts, methods, and software infrastructures for the efficient development of applications that span and integrate the Internet and the embedded world. CONET - Cooperating Objects NETWORK of excellence (principle investigator DERI) A European Network of Excellence whose goal it is to build a strong community in the area of Cooperating Objects, bringing together researchers from the areas of embedded systems, pervasive computing systems, and wireless sensor networks. We participate as experts in semantics and sensor networks middleware. The project started June 1, 2008 and will end May 31, 2011. PECES - Pervasive Computing in Embedded Systems (principle investigator DERI) A European STREP project whose goal it is to create a comprehensive software layer to enable the seamless cooperation of embedded devices across various smart spaces on a global scale in a context-dependent, secure and trustworthy manner. We participate as experts in semantics and sensor networks middleware. The project has started October 1, 2008 and end September 30, 2010. SUPER - Semantics Utilised for Process Management within and between Enterprises (principal investigator DERI) A European Integrated Project whose goal is to raise Business Process Management (BPM) to the business level, where it belongs, from the IT level where it mostly resides now. This objective requires that BPM is accessible at the level of semantics of business experts. We participate by leading the overall architecture development and contributing to semantic business process descriptions and semantic business process mining. The project started April 2006. NEPOMUK - Networked Environment for Personalized, Ontology-based Management of Unified Knowledge (project manager EPFL 2006) A European Integrated Project whose goal is to develop a comprehensive solution for extending the personal desktop into a collaboration environment which supports both the personal information management and the sharing and exchange across social and organizational relations. We participate by providing a distributed search and storage infrastructure and methods for self-organized semantic alignment. The project started January 2006. DIP - Data, Information, and Process Integration with Semantic Web Services (project manager EPFL 2004-2006, 2006-2007 DERI project coordinator) A European Integrated Project in the Semantic-based knowledge systems program. DIP's goal is to make Semantic Web Services a reality by providing an infrastructure (i.e., an architecture and tools) that for data and process integration in eWork and eCommerce as the Web did it for human information access. Leading house is DERI at the National University of Ireland, Galway. EPFL participated by methods for establishing semantic interoperability among Web Services. The project started January 2004 and ended February 2007 and was officially named "EU flagship project".

Bricks - Building Resources for Integrated Cultural Knowledge Services (project manager EPFL 2004-2005) A European Integrated Project in the Digital Libraries program. The goal of BRICKS is the definition, development and maintenance of a user- and service-oriented space to share knowledge and resources in the cultural heritage domain. Leading House is Engineering Ingegneria Informatica SpA from Rome, Italy. EPFL participates by realizing a decentralized meta-data storage for XML documents. The project started January 2004. Evergrow - Ever-growing global scale-free networks, their provisioning, repair and unique functions (project manager EPFL 2005-2006) A European Integrated Project in the FET program to invent methods and systems, and build infrastructure for measurement, mock-ups and analysis of network traffic, topology and logical structure. Leading house is SICS in Stockholm, Sweden. EPFL participate in the subproject on scalable decentralised self-healing services which investigates fundamentals of P2P architectures. The project started in January 2004. Knowledge-Web - Realizing the semantic web A European Network of Excellence in the Semantic-based knowledge systems program. Its goal is to support the transition of Semantic Web technology from academia to industry. Leading house is University of Innsbruck, Austria. EPFL participated in the areas of managing meta-data and ontologies, ontology integration and semantic web languages. The project started January 2004. Self-organized Distributed Applications in a Mobile Environment (senior researcher EPFL 2002-2006) This is a subproject of the Swiss Research Centre for Mobile Ad-Hoc Networks (NCCR MICS). I participated with work on emergent semantics and self-organizing data access in mobile ad-hoc networks and decentralized, self-organizing methods for efficient data access. The project started in 2002 and the first phase lasted 4 years. P-Grid This is a research project on developing our P2P platform. OPELIX - An open personalized electronic information commerce platform (project manager, finished) A European IST project in Framework 5. The goal was to provide a customizable platform to enable electronic commerce with non-tangible information products. I did this project while with TU Vienna. Our contribution was the architecture, Internet-scale delivery and dissemination, and payment. Minstrel (push system, finished)