# Projects Related to SeLeNe

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## 1 Introduction

The evolution of the Web and the appearance of XML boosted the last few years the interest for the creation of a totally distributed and interoperable learning system over a Peer-to-Peer network. In the next pages are summarized the most important attempts to this direction.

## 2 Edutella

The vision of the Edutella project is to provide metadata services needed to enable interoperability between heterogenous JXTA applications such as a Peer-to-Peer (P2P) network for the exchange of educational resources between German Universities, Swedish Universities, the Stanford University and others.
In particular the project is a effort to identify, architect and implement an RDF-based metadata infrastructure. The services that are provided are:

1. Query and Retrieval of RDF Metadata. This Service is one of the core services of Edutella upon which other services are built. For the needs of the projects the RDF-QEL-i query exchange language was defined for the implementation of the distributed queries over the Edutella Network.

2. Data Persistence and availability and workload balancing plus maintenance of the integrity of the data.

3. Interoperability between different peers by translating different meta-data vocabularies.

4. Annotation of different material stored in the Edutella Network.

The project is open source.

Link: http://edutella.jxta.org/

# 3    CANDLE

The main objective of CANDLE (Collaborative and Network Distributed Learning Environment) is to use the Internet in order to improve the quality and reduce the cost of e-Learning services in Europe by using web and multimedia technology, and to enable co-operation between universities and industry in creating and reusing learning material and improving the quality of delivery.
The use of the system proposed does not constrain the freedom of academics and trainers to develop, improve and generally manipulate their own courses. The design allow any individual teacher to combine course objects and even to create his own courses that meet his learners particular needs. This flexibility is achieved through the use of toolkits, component architectures and the particular pedagogical frameworks.
The services provided are:

1. Course delivery via Web.

2. Courseware exchange.

3. Course creation from existing material.

4. Learning material publishing.

5. Improvement of courses' material.

6. Course quality provision through a helpdesk for the users.

Link: http://www.candle.eu.org/

# 4 Open Learning Repository

The Open Learning Repository (OLR)is a submodule of the PADLR Project (Personal Access to Distributed Learning Repositories). OLR aim at metadata-based course portals, which structure and connect modularized course materials over the Web. The modular content can be distributed anywhere on the Internet, and is integrated by explicit metadata information in order to built courses and connected set of selected materials. The reusability of the modules for other courses leads to a course portal the its contents are integrated modules from different courses and authors.

For the storage of the metadata a relational database is used, but no content is stored in it. The database is used as the central repository from which the authors can choose the necessary modules and connect them.

The OLR system is currently used in the context of two courses, the Artificial Intelligence and Software Engineering.

A platform is provided by the system in order to allow the test of different navigation schemas including the traditional concepts.

Link: http://telmann.kbs.uni-hannover.de:3333/doc/

# 5 ELENA

The ELENA is an IST Project. Its objective is to demonstrate the feasibility of smart spaces for learning. These smart spaces are defined as educational service mediators, which allow the consumption of heterogenous learning services via the assessment of tools, learning management systems, educational repositories and live delivery systems.

Its main objectives can be summarized in the following:

1. Analysis of existing standards for modelling learning data beyond learning objects and provision, when possible, of the recommendations for their further development.

2. Development of schemas for the description of new educational services.

3. Design and implementation of a smart space that integrates heterogenous services.

4. Test the ways the whole system can be applied in the field of education and training from a business and organization perspective.

5. Development of the guidelines for deploying smart learning spaces in an organization, institute etc.

The vision of ELENA is an operational learning services network based on an interoperable communication infrastructure that will be most beneficial for learners by opening a much wider spectrum of learning possibilities.

Link: http://www.learninglab.de/english/projects/elena.html

# 6 GESTALT

The GESTALT's project main purpose is to construct an online training demonstrator using the tools and technologies developed by three other projects (PROSPECT,RENAISSANCE,GAIA).
The final demo will offer:

1. The ability to users to search, locate and access online interactive multimedia training courseware from the institution of their choice.

2. Extensions to metadata to cover interoperability across heterogeneous platforms.

3. Online training.

Link: http://www.fdgroup.co.uk/gestalt/about.html

# 7 Access to Flexible Learning Resources

The intention of this project is to investigate access to flexible learning sources within Australian Vocational Education and Training (VET) system.
During the project it was researched overseas models and a literature survey was conducted, while a sample of VET practitioners was interviewed. Also, a review and analysis of available learning materials databases was conducted and a discussion paper was written. The final report contains recommendations on how to improve access to flexible learning resources.

Link: http://www.flexiblelearning.net.au/accessresource/

# 8 EASEL

The main direction of this project is the combination of the appropriate technologies so as the reuse of electronic learning material to be feasible and the educators to be able to assemble the learning objects and create new educational offerings.

The project launched in February 2000 and has nine (9) participants from five (5) European countries, which contribute with a particular expertise in the fields of information technology and e-learning.

Link: http://litc.sbu.ac.uk/easel/

# 9 METAe

The METAe is a research and development project with the intention to develop application with the following characteristics:

1. Automatic recognition and extraction of metadata from printed material such as book and periodicals.

2. Search engine based on XML/SGML.

3. An OCR-engine that will be able to recognize a variety of printing systems.

4. Open Source Library online with digitized printed material.

The project is co-funded the European Union and comprises 14 partners from 7 European countries and the USA.

Link: http://meta-e.uibk.ac.at/

# 10 WonderWeb

The WonderWeb project focuses its efforts to the development of new ontologies. Its main objectives can be summarized in the following:

1. Development of the appropriate set of ontology languages that will extend the existing Web standards, by simultaneously preserving maximum backward compatibility.

2. Development of a framework containing the appropriate technologies and techniques that enable the use of the ontologies.

3. Creation of a wide applicable set of foundational ontologies. Each of these ontologies will be the basis for the development of more detailed domain ontologies.

4. Development of a concise technical infrastructure and tools, suitable for the creation of the real world applications.

The project is funded by IST and participate four universities of Europe.

Link: http://wonderweb.man.ac.uk/

# 11    Ontoknowledge

This project develops tools and methods for supporting management of knowledge over reusable ontologies. The ontologies are the main technical topic in this project since they are used for various tasks within the development operation of integration and mediation.
The On-To-Knowledge aims to provide knowledge management in large distribute organizations.
The project is, also, funded by IST.

Link: http://www.ontoknowledge.org/

# 12    OntoWeb

The OntoWeb is a European Union funded project about Ontology based information exchange of knowledge management and electronic commerce.
The general goal of this project is the semi-automatic construction of community portal using the community's metadata. Through that the community members must be able to:

- Access Information via Ontology-based Query and Browsing.

- Provide Information inside and outside the portal.

The portal must allow centralized access to distribute information, while the participants must be able to enrich resources located outside of the portal.

Link: http://www.ontoweb.org/

# 13   European Schoolnet

The European Schoolnet is a international partnership of 23 European Ministries of Education developing learning for schools, teachers and pupils across Europe.
Its main purpose is the use of ICT (Information and Communications Technology) in Europe for policy-makers and education professionals. This is achieved via the exchange of information and communication at school education levels using the appropriate technologies.

Link: http://www.eun.org