

RSWA 2008 - Realizing a Semantic Web Application

You are aware of the Semantic Web, but you haven't got time to develop a Semantic Web application yourself? This tutorial explains how to develop step-by-step a Semantic Web application that expects a music style as an input; retrieves data from online music archives and event databases; merges them and let the users explore events related to artists that practice the required style. Try out the result <http://meex.cefriel.it/meex> !

Objective

This tutorial focuses on the step by step development of of a Semantic Web Application we named **Music Event Explorer** or shortly **meex** (try it out here <http://swa.cefriel.it/meex>). During this tutorial we challenge the Semantic Web technologies on the Web 2.0 ground of realising a mash-up that reuses, transforms and combines existing data taken from the open Web (namely **MusicBrainz**, **MusicMoz** and **EVDB**).

In the scope of this exercise we use:

- **OWL** to model the data sources
- **RDF** as unified relational data model
- **GRDDL** to translate XML data sources in RDF
- **D2RQ** to translate relational database in RDF
- **Jena** as application framework that support programmers in combining all the data in a unified RDF model and in managing it
- a RDF storage (configured within Jena) to guarantee persistency of the unified RDF model
- a OWL reasoner (configured within Jena) to reason upon the data in the unified RDF model
- **SPARQL** to query the unified RDF model
- **Joseki** as a SPARQL endpoint server to make accessible the RDF data
- a SPARQL client (configured within Jena) to access RDF data via SPARQL queries
- **Exhibit** a Semantic Navigation Engine

The tutorial requires attendees to have some familiarity with the vision of the

Semantic Web and with its technologies. A limited understanding of Java should be sufficient to follow the tutorial given that the tutorial will be mainly focused on the Semantic Web side of the problem of developing a Semantic Web application.

Material

Slides and handouts

The **slides in [ppt]** and **in [pdf]** of the tutorial are available for download. Reuse is encouraged under **CC licence (BY-NC-SA)**; don't forget to attribute our work by citing the names of the three authors and point to **this page**.

Download meex

To run meex on your local machine make sure to have installed the **Sun Java JDK 1.6 compiler** and the **Eclipse IDE**. To download meex, click on the **meex download link**. Within the zip file read the Readme-EN.pdf to install and configure meex.

Presenter

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Organizers

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Editions

- 4-6.4.2008 - Two lessons in the course of "**ARGOMENTI AVANZATI DI SISTEMI INFORMATIVI - A**" of prof. **Manolescu Ioana** of Politecnico di Milano.
- 7.5.2008 - **11th International Conference on Business Information Systems (BIS 2008)** Innsbruck, Austria
- 27.10.2008 - **7th International Semantic Web Conference (ISWC 2008)**, Karlsruhe - Germany