ODESeW: a Semantic Web application generation framework.

Speaker: Angel López Cima

Date: 26/05/2009
What is ODESeW?

Application development framework
- A set of reusable libraries or classes used to implement the standard structure of a type of applications.
- A software component that models and solves a specific type of problem, providing a set of extensible and configurable components and an engine to coordinate and execute them.

Web-based
- Based on Struts (http://struts.apache.org)
  - Widely used platform for Web application development
  - Developers can still use Struts as in a non-Semantic Web application
- Based on the design pattern Model-View-Controller (MVC)

Based on ontologies
- Backbone of the Web application implemented
- WebODE ontology server
- RDF Schema and OWL ontologies
Features

• Manages several ontologies as data model.
• Uses an ontology as the definition of user profiles.
• Restricts read/update access to instances.
• Provides tools for generating views for human (web pages) and views for software agents (RDF).
• The user navigation and the web pages composition are defined by a navigation and composition models. These models:
  • are reusable in different web application that share the same ontologies.
  • can customize the navigation&visualization for different users.
  • can specified difference navigation&visualization for different devices (smart phones, PDA, PC, etc).
Data Model

- Domain Model
  - Ontologies about a domain

- User Model
  - Stores user profiles
  - Represented as an ontology, which can be extended for each application

- Data Model Manager
  - Manages how to connect to the actual data

- Permission Layer
  - Restricts accesses and modifications on the Data Model
  - Uses the User Model to retrieve the user profile
Renders data for users
  • HTML for human users
  • RDF for other software agents

Created using any standard Java Web technology for web visualization
  • JSP, JSTL, Velocity, Portlet, etc.
Controller

Defines the application behaviour

• Receives actions from users, interprets them and executes them

Actions

• They can access and modify the Data Model
• Basic types of actions
  • Navigation
  • Instance edition
  • View inclusion
  • RDF export

Actions can be reused and extended

• Personalized actions

Actions are managed using:

• A Navigation Model
• A Composition Model
ODESeW is used at OEG for setting portals for EC European project.

The portals are used as dissemination tool:
- Project description.
- List of deliverables.
- List of publications & software.
- Etc.

ODESeW support an application for Project Management:
- Reports for each partner:
  - Work Progress Report
  - Effort Report
  - Dissemination Report
- Monitorization of reports
- Compile the reports in different documents for the EC reviewers.
The user requests the view of Angel Lopez