

Sesame Metadatabase

Jeroen Wester, Jeen Broekstra en Arjohn Kampman
Sesame Team, Aduna



Sesame is an open source database used for storage and retrieval of metadata, based on Semantic Web standards like RDF/S and OWL. In the poster session we try to explain how Sesame is used in real life projects.

Description

Sesame is an open source database used for storage and retrieval of metadata. Based on Semantic Web standards, like RDF/S and OWL, people use Sesame as middleware to:

- Integrate information sources, like files systems or databases, for website presentation;
- Generate Semantic Web services for easy sharing of information between computers.

Sesame has been designed with flexibility in mind. It can be deployed on top of a variety of storage systems (relational databases, in-memory, file systems, keyword indexers, etc.), and offers a large scala of developer tools to leverage the power of RDF and RDF Schema, such as a flexible access API, which supports both local and remote (through HTTP, SOAP or RMI) access, and several query languages, of which SeRQL is the most powerful.

Why RDF metadata?

RDF gives interoperability. RDF allows flexible integration and homogeneous access on data from heterogeneous sources. With RDF it becomes feasible to integrate multiple sources in a meaningful way.

Projects

In this section we briefly describe three projects to demonstrate how Sesame can be applied. Sesame developers were closely involved in the projects mentioned below.



1. **DOPE** (Drug Ontology Project Elsevier, <http://aduna.biz/dope>):
The Elsevier Science DOPE Browser is used to explore a large set of life science documents, structured using the EMTREE thesaurus. Sesame is used to store and retrieve the metadata of the documents. There is a client that enables the user to access the documents based on the metadata facets that are stored in Sesame.



2. **ANWB.nl** (Proof of Concept 'De Ideale Gids', <http://www.anwb.nl>):
ANWB members have access to many information sources. Multiple information sources, like camp site information, route information, web store products are combined in one generic layer based on Sesame. In this layer the visitor for example finds camp sites at the end of the planned route to France.



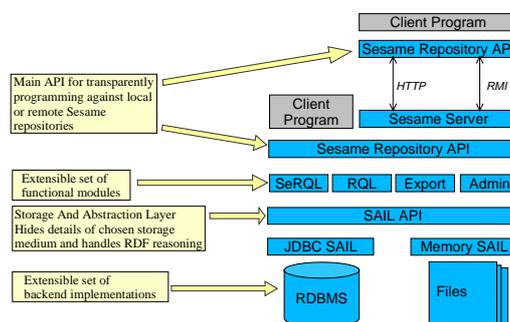
3. **Aduna AutoFocus** (<http://aduna.biz>):
AutoFocus helps users finding information by showing related facets of information, like related keywords, mime types, locations, dates etc. Sesame is used to store the metadata of scanned documents, emails, web pages.

The projects mentioned above are all real life projects and all are in an ongoing stage. Sesame is used as a middleware component. It has a vital role in all projects as the component that integrates and provides access to all sources used.

Technology

Sesame is a scalable modular architecture for storing, querying and inferencing RDF. It can be deployed as a web server, through RMI, or be used as a Java library.

Features include fast parsing and writing of RDF, 3 query languages (SeRQL, RQL, RDQL), full inferencing support for RDF and RDF Schema, and in-memory and persistent storage.



Community

Sesame is supported by a world wide community. The home of Sesame is <http://openrdf.org>. There you find all the information about installation, API's, query languages, the links to the software. There is an active forum with answers to questions from the community. Sesame developers answer questions of new members and in little time you will have your answers.



openRDF.org forum

The forum on openRDF.org is one of the best ways of finding answers for Sesame questions. August 2004: 150 members; 800 posts; 203 topics in 9 different forums.

Authors

Jeroen Wester is Senior Managing Consultant for Aduna. He is in the company for five years and is closely involved in product development and customer projects. Next to that he is part of the Aduna management team and project leader of Sesame. Before joining Aduna Jeroen worked for CIBIT (IT training and consultancy) and for Océ Technologies (R&D copiers and printers).

Jeen Broekstra is a software developer at Aduna. He has a Masters degree in Artificial Intelligence and is currently working on a PhD in knowledge representation. His research interests include storage, querying and inferencing for ontology languages, and the Semantic Web.

Arjohn Kampman is lead architect for Sesame and software developer at Aduna. He holds a Bachelor in Computer Sciences. His main interests include storage, querying and inferencing for ontology languages.

Links

- openrdf.org
This website is fully dedicated to Sesame. The community forum provides answers to many questions. It also contains links to documentation, plug ins, and the software itself.
- nl.net
Stichting NLnet is a non-profit organization with a mission and a philosophy. The mission is to advance network technology. The philosophy is Open Source.