



Handling Metadata

WWW2002 Developers Day – Semantic Web
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ontoprise

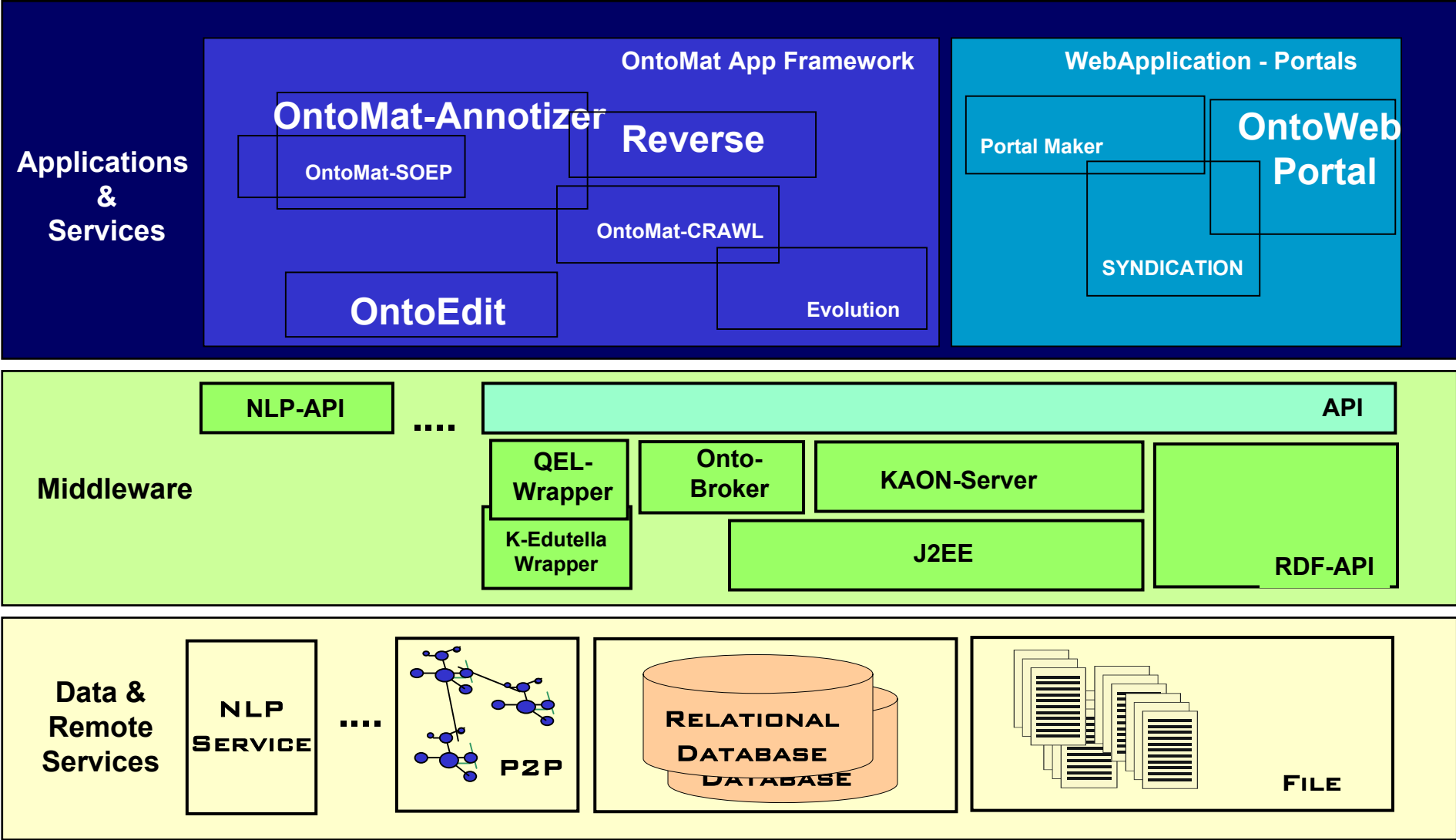
- SEMANTICS FOR THE WEB -

Objective: Flexible Framework for Handling Metadata

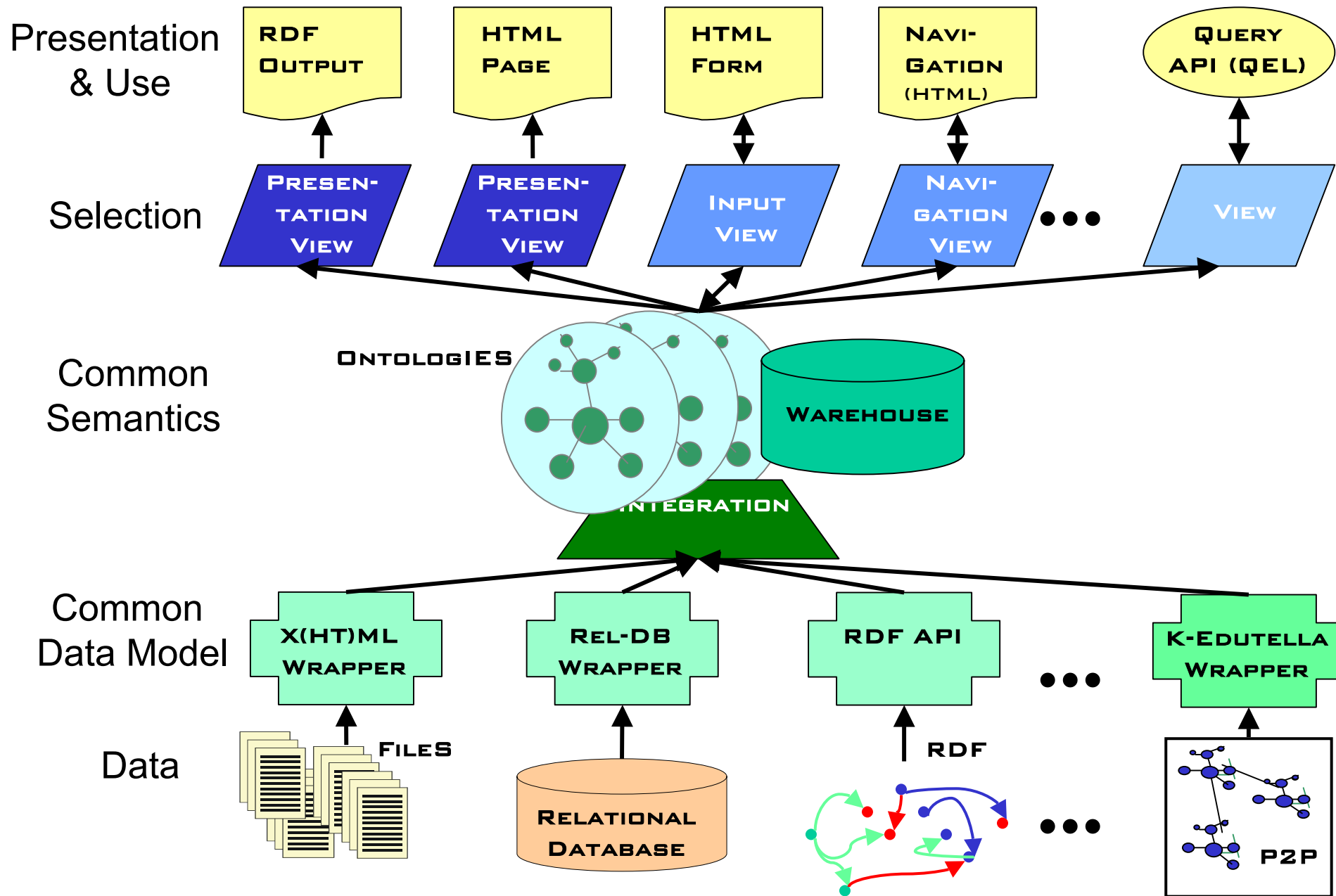
Example Tools

- **Metadata Creation: OntoMat**
- **Metadata Handling: KAON (Reverse)**
- **Metadata Distribution: Edutella**
- **If time remains (haha)**
Ontology Creation: OntoEdit

KAON Conceptual Architecture



Semantic Information Integration – e.g. OntoWeb Portal



TIME2Research

Querytool | Query_select | Inhalte_select | Attribute zeigen | Kurzcheck | Eingehende Prüfung | TDD | M & A

Suche Eingabe Text <input type="text" value="sap"/> <input type="button" value="Submit"/> <input type="button" value="Reset"/>	Inhalte Unternehmen <input type="text" value="all"/> Ariba Commerce One	Markt <input type="text" value="all"/> B2B-Marktplätze- enterprise resource plann ...	Produkt <input type="text" value="all"/> APO mySAP.com	Technologie <input type="text" value="all"/>
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non / all / zurück / vor / search /

Adresse: SAP-Walldorf

PLZ 69190
strasse Neurottstraße 15,
url http://www.sap-ag.de

Produkt: mySAP.com

Produkt: SAP R/3

Unternehmen: SAP AG

url http://www.sap.de
WKN 716460

Unternehmen: SAP AG	
url	http://www.sap.de
WKN	716460
entwickelt Produkt	APO
	mySAP.com
	SAP R/3
hat wettbewerber	Ariba
	Commerce One
	I2 Technologies
ist anbieter auf markt	B2B-Marktplätze-
	enterprise resource planning
	ERP
	PPS
	Produktionsplanung und -steuerung
	SCM
	Supply-Chain-Management

Markt: B2B-Marktplätze-	
hat anbieter	Ariba
	Commerce One
	SAP AG
hat produkt	mySAP.com

Search and Navigation

Begriffe

- Branche
 - Automobil_Branche
- Finanzwesen
 - Bankwesen
 - Versicherungsindustrie
- Gesundheitswesen
- Markt
 - SoftwareMarkt
 - SystemsoftwareMarkt
 - eBusiness_Markt
 - SCM_Markt
 - CRM_Markt
 - StandardssoftwareMarkt
 - BI_Markt
 - CMS_Markt
 - EAI_Markt
 - HardwareMarkt
- Informationsquelle
 - Person
 - Dokument
 - Marktstudie
 - Technologiestudie
- Technologie
- Dokumententyp
- Regionen
 - Alle Ordner öffnen
 - Alle Ordner schließen
 - Baum neuzeichnen

Verbindungen

- Marktstudie
- Person

Auswahl

Finden
Neu

- SCM_Markt
- Automobil_Branc
- Marktstudie

Dokumente

Anzahl der gefundenen Dokumente: 22

- <c:\miner daten\research\bi software.doc>
Advanced Business Intelligence Tools: Software Profiles October 12, 1999 Acumate Enterprise Solution (ES) 1.3 Kenan Systems Corp. One Main Street, Ninth Floor, Cambridge, MA 02142-1517, Telephone 1 617 225 2200, 1 800 775 3626; fax 1 617 225 2220 Function: Integrates data from a variety of sources a
- <c:\miner daten\research\defining e-commerce.htm>
1.0 Introduction. 2.0 Definition of Electronic Commerce / Topic Overview. 3.0 Internet Banking Developments. 4.0 Insurance Companies and the Internet. 5.0 Electronic Brokerages. 6.0 Financial Portal Sites. 7.0 Credit Cards and the Internet. 8.0 Smart Cards. Appendix A: Appendix C: Bibliography.
- <c:\miner daten\research\erp vendors and the myth of the 80-20 rule in scp.htm>
Previous. Search Results. Return to Search. Next. Top VIEW 28 October 1997. ERP Vendors and the Myth of the 80/20 Rule in SCP B. Enslow, A. Mesher. A familiar theme sounded by enterprise resource planning (ERP) vendors when discussing their supply chain planning (SCP) development plans is that the
- <c:\miner daten\research\from mainframes to distributed computing the management issue.htm>
1.0 Introduction. 2.0 Business Drivers and Economics. 3.0 Politics and Approval. 4.0 IS Organization and Management. 5.0 Skills and Training. 6.0 ESPs. 7.0 External Forces. 7.5 External Forces by Stage. 8.0 Conclusion. Appendix. Acronym Key. 1.1 Purpose. 1.2 What Is a Transition?. 1.3 The Status of Transitions Today.
- <c:\miner daten\research\from mainframes to distributed computing the technical>

OntoMat-Annotizer

The screenshot shows the OntoMat-Annotizer application window. The main interface is divided into two panes: an Ontology Browser on the left and an HTML Browser on the right.

Ontology Browser 1: Displays a hierarchical tree structure of classes. The visible classes are: PhDStudent, Project, Publication, Book, InProceedings, Proceedings, Report, Tool, and Topic. Below the tree is a table with columns 'Attributes' and 'Values':

Attributes	Values
title	Towards Semantic ...
year	2002

At the bottom of the Ontology Browser, there is a list of classes with icons: algorithm (Algorithm), application (Application), application_domain (Application_), author (Person), and conference (Conference).

HTML Browser 1: Displays a document titled "Towards Semantic Web Mining" by Bettina Berendt. The document content includes:

Towards Semantic Web Mining
Bettina Berendt
Institute of Information Systems, Humboldt University Berlin
Spandauer Str. 1, D--10178 Berlin,
Germany
<http://www.wiwi.hu-berlin.de/~berendt>
berendt@wiwi.hu-berlin.de

Andreas Hotho, Gerd Stumme hotho@aifb.uni-karlsruhe.de stumme@aifb.uni-karlsruhe.de Institute of Applied Informatics and Formal Description Methods AIFB,
University of Karlsruhe,
D--76128 Karlsruhe,
Germany
<http://www.aifb.uni-karlsruhe.de/WBS>

Abstract
Semantic Web Mining aims at combining the two fast-developing research areas Semantic Web and Web Mining. The idea is to improve, on the one hand, the results of Web Mining by exploiting the new semantic structures in the Web; and to make use of Web Mining, on the other hand, for building up the Semantic Web. This paper gives an overview of where the two areas meet today, and sketches ways of how a closer integration could be profitable.

Research Paper at International Semantic Web Conference (ISWC) 2002, June 9-12th, 2002 Sardinia, Italia

At the bottom of the HTML browser, there are tabs for "HTML", "Source", and "Annotation". The "HTML" tab is selected. Below the tabs, it says "State: Loaded" and "Namespace: <http://annotation.semanticweb.org/iswc/tswm.html#>". There is also a checkbox labeled "editable" which is currently unchecked.

The status bar at the bottom of the application shows "Ready." on the left and "6099.0k free" on the right.

Reverse

The screenshot displays the KAON - Integrated Developer's Environment interface. The main window is titled "DB-Ontology Structure Mapping" and contains two side-by-side panes: "Database Structure" and "Ontology Structure".

Database Structure:

- All Tables
 - academicstaff
 - addresses
 - administrativestaff
 - countries
 - countryid : int
 - countryName : varchar
 - phoneCode : varchar
 - emailaddresses
 - employees
 - organisations
 - organistaionid : int
 - orgaName : varchar
 - personaddresses
 - persons
 - phdstudent
 - projectmembers
 - projects
 - projectsfinancesby
 - students

Ontology Structure:

- Ontology
 - Address
 - Country
 - EEmailAddress
 - address
 - emailOf [Person]
 - Organization
 - Enterprise
 - University
 - Name
 - carriesOut [Project]
 - employs [Employee]
 - finances [Project]
 - Person
 - Employee
 - Student
 - birthday
 - firstName
 - lastName
 - hasAddress [Undergraduate]
 - hasEmail [EEmailAddress]
 - member [Project]
 - Project

The status bar at the bottom left shows "Ready." and the bottom right shows "3238.0k free".

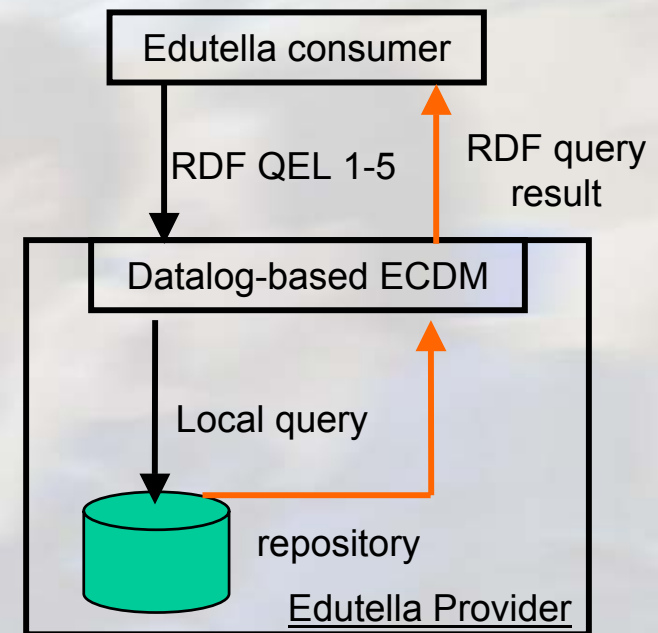


RDF-QEL: RDF Query Exchange Language

RDF-based Query Exchange Language (RDF-QEL)

- RDF QEL1: conjunctive query
- RDF QEL2: RDF QEL1 + disjunctive query
- RDF QEL3: RDF QEL2 + negation (SQL92)
- RDF QEL4: RDF QEL3 + transitive closure (SQL3)
- RDF QEL5: RDF QEL4 + general recursion

- Datalog is used as the internal data model (ECDM: Edutella Common Data Model) and provided as a set of Java classes
- RDF is used to represent the queries transmitted between the peers
- Wrappers for other RDF query languages (RQL, TRIPLE, etc.) and XML query languages (like Xpath)



Edutella query data flow



Edu

JXTA Service

Query Exchange Language Parser

Query Class Model

RDBMS
Adapter

RDF File
Adapter

dbXML
Adapter

...

**Thank you very
much**

www.aifb.uni-karlsruhe.de/WBS

www.learninglab.de

www-db.stanford.edu

www.ontoprise.de