

# *Rodin*

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A System for the Simultaneous Exploration of  
Digital Library Resources and Linked Open Data  
Ontologies

EOD-Conference "Semantic technologies in libraries:  
from text to structure - from words to meaning"

10.- 11. Mai 2012

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Olomouc

Haute Ecole de Gestion - Geneva

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# Overview

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- . Background
  - . Essentials
    - . Demonstration
  - . Librarians & RODIN
- . Discussion

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***Background***

## Swiss electronic library

### The portal for Swiss university libraries

E-lib.ch is the Swiss portal for academic information research. It offers a single point of access to the products and services of twenty sub-projects and to the extensive holdings of Swiss university libraries and a wide range of other institutions.

The sub-projects are being carried out by numerous different partners between 2008 and 2012, with financial support from the state.



# RODIN

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## Project duration

01.2009–12.2012

## Contact

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## ROue D'INformation (Wheel of Information): a tool for bundling and linking user-relevant sources of information

"RODIN" (ROue D'INformation; Wheel of Information) is an information portal that can be customised to suit the user, giving them the option of searching in different information resources simultaneously. The resources are represented by different widgets. The user chooses which sources he/she wishes to add or remove and how they should be arranged.

The idea is that all the information sources included in e-lib.ch which have a search function are to be incorporated in "RODIN". For example, the interfaces for ✉ ["swissbib"](#) and ✉ [RERO DOC](#) have been incorporated, while special search environments have been created for the information portals ["Infonet Economy"](#) and ✉ ["infoclio.ch"](#). Conventional web resources such as Google Books and Delicious can also be consulted in the form of widgets.

After carrying out a simple search in all the selected information sources, the user has the option of refining the search by using bibliographical ontologies. Starting from one document from all the results, semantic relationships (synonyms, hypernyms and hyponyms) are defined within the ontologies, which form the basis for further searches.

The project was started at the beginning of 2009 and will run until the end of 2012. Then the project is due to be continued by the Fachhochschule für Wirtschaft Genf HEG (School of Business Administration, Geneva) with follow-up financing.

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# Initial questions

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1. What will future library systems look like?
2. What is the role that librarians will play?
3. Is scientific search more complex?

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# Digital Libraries and Portals

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- . Portals as lists of resources (data bases, e-journals, digital surrogates) with multiple interfaces
- . DLs with indexed search engines (swissbib.ch) or harvesters (ETH Knowledge Portal / library.ethz.ch)
- . Is a third way possible?  
A solution without complex data management?
- . What about the Semantic Web, LOD and SKOS?

# The role of librarians

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## Librarianship: a janus headed discipline

### (Meta-)Data

Thesauruses

Taxonomies

Ontologies

Back office



### Services

Loan

Reference

Place

Front office

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# The role of librarians

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Meta-(Data)

Conversion of  
bibliographical  
data into LOD-  
Ontologies



Services

New services,  
different spaces,  
user friendly tools

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# Scientific search

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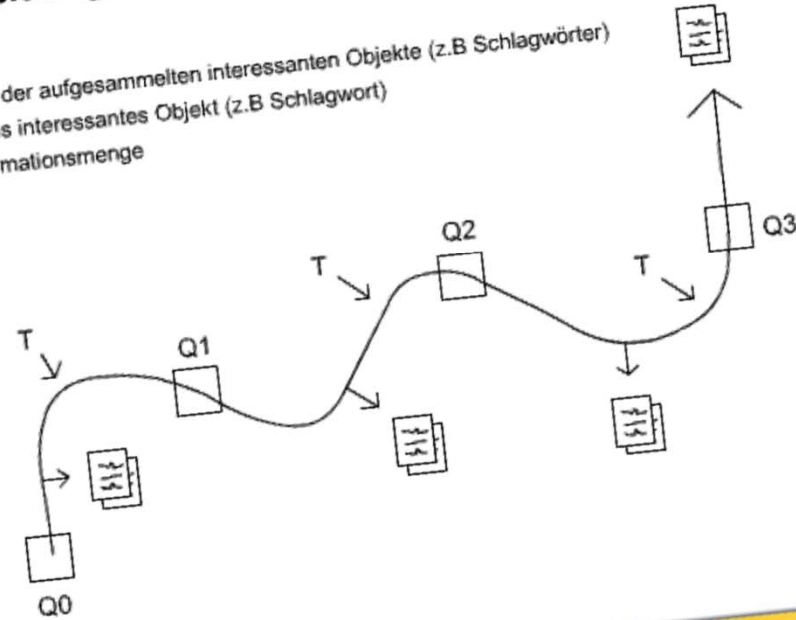
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# Scientific search

## Berrypicking, dynamische Informationsbeschaffung

Q = Liste der aufgesammelten interessanten Objekte (z.B. Schlagwörter)  
T = neues interessantes Objekt (z.B. Schlagwort)  
= Informationsmenge



Berrypicking

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***Essentials***

# Goal

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RODIN is a  
personal(izable) information portal  
that allows  
the aggregation of and the complex search in  
heterogeneous data and metadata resources  
while making use of LOD ontologies.

# Information wheel

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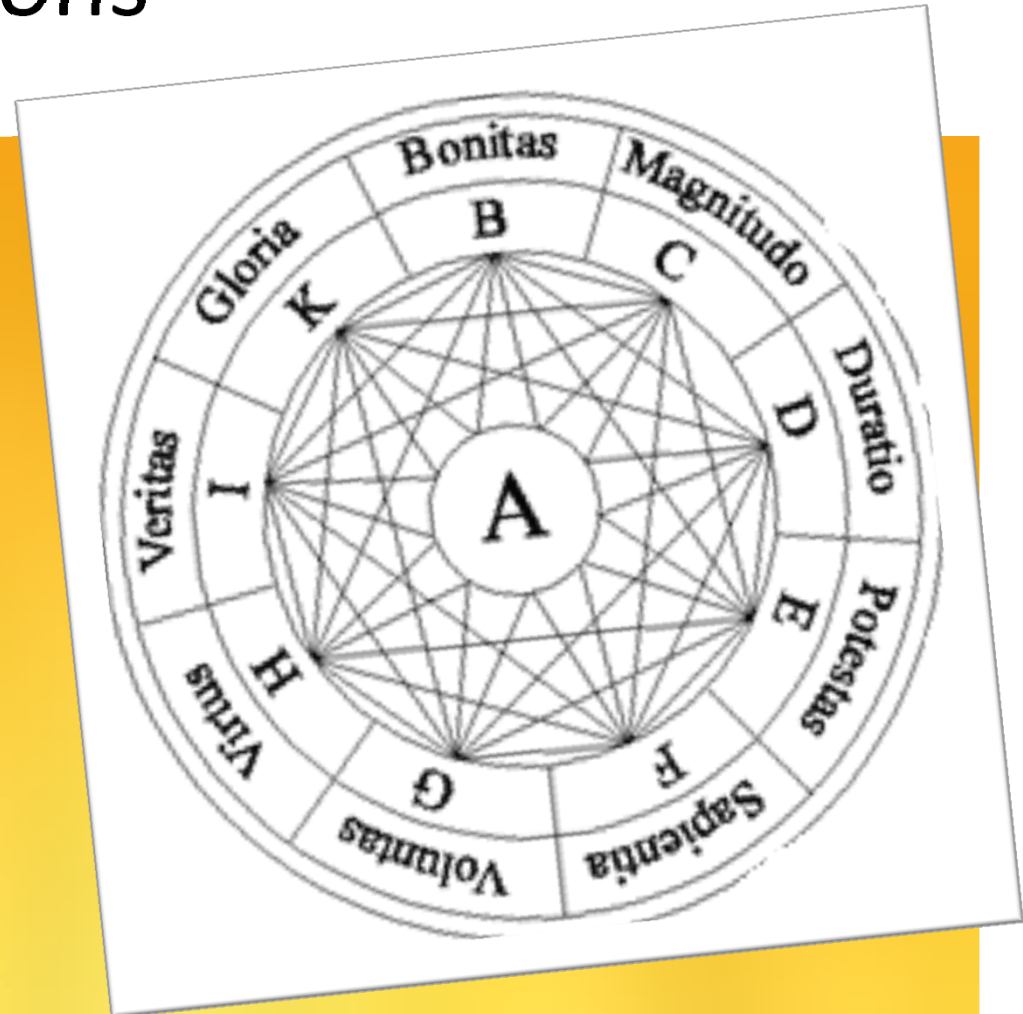


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# Semantic Connotations



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# RODIN

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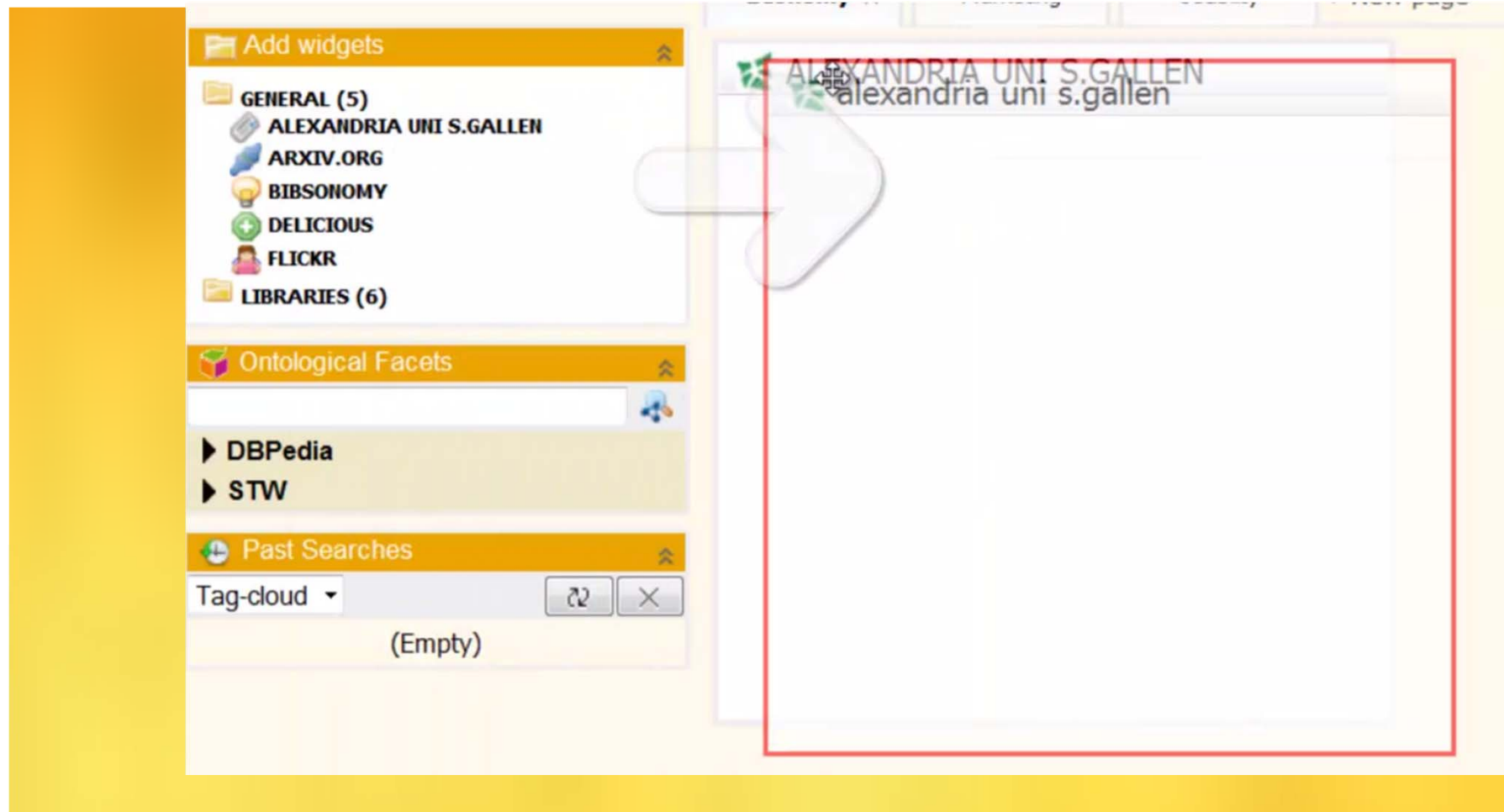
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# Widget

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# Ontologies

The screenshot shows a web interface for an ontology browser. At the top, there are two categories: 'GENERAL (5)' and 'LIBRARIES (6)'. Below these is a section titled 'Ontological Facets' with a search bar containing the word 'money'. The results are organized into a tree structure under 'DBPedia 14'. The first level is 'More general terms 1', which includes 'Macroeconomics monetary economics'. The second level is 'More specific terms 10', which includes 'Financial crises', 'Economic problems', 'Monetary economics', 'Macroeconomics', 'Economic crises', 'Financial system', 'Currency', 'Monetary reform', 'Economic disasters', and 'Numismatics'. The third level is 'Related terms 3', which is currently empty. Each item in the list has a small icon to its right, likely representing a facet or a specific ontology.

- GENERAL (5)
- LIBRARIES (6)
- Ontological Facets
- money
- ▼ DBPedia 14
  - ▼ *More general terms 1*
    - Macroeconomics monetary economics
  - ▼ *More specific terms 10*
    - Financial crises
    - Economic problems
    - Monetary economics
    - Macroeconomics
    - Economic crises
    - Financial system
    - Currency
    - Monetary reform
    - Economic disasters
    - Numismatics
  - ▼ *Related terms 3*

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# RODIN

The screenshot displays the RODIN web application interface. At the top, a search bar contains the word "economy" and a "Search" button. Below the search bar, the text "Results per widget: 11" is visible. The main content area features a network visualization with "Economics" at the center, connected to various related terms such as "Macroeconomics and monetary economics", "Economic history", "Resource economics", "Economics terminology", "Environmental economics", "Economics by year", "Economic problems", "Mathematical economics", "Labor and demographic economics", "Economics lists", "Economics publications", "Mathematical and quantitative methods (economics)", "Economics profession and organizations", "Economic botany", "Social sciences", "Law and economics", "Sustainable development", "Society", "Industrial organization", "Other special topics (economics)", "History of economic thought, methodology, and heterodox approaches", "Economic development, technology, and innovation", "Emerging markets", "Globalization", "International economics", and "Economic history".

On the left side, there are two panels: "Add widgets" and "Ontological Facets". The "Add widgets" panel lists several sources: GENERAL (5), ALEXANDRIA UNI S.GALLEN, ARXIV.ORG, BIBSONOMY, DELICIOUS, FLICKR, and LIBRARIES (6). The "Ontological Facets" panel shows the search term "economy" and lists results from DBPedia 3 (Economics, Economic systems, Economies) and STW 21 (Business Cycle Growth Economic Structure).

At the bottom, there are three widget panels: SWISSBIB, ALEXANDRIA UNI S.GALLEN, and Google. Each panel shows search results for "economy". The SWISSBIB panel shows 10 results found, with the first result being "selected papers from the 11th Seminar on the". The ALEXANDRIA UNI S.GALLEN panel shows 10 results found, with the first result being "Brodts Torsten Heitmann Mark Customer". The Google panel shows 5 results found.

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The screenshot displays a web application interface for 'knowledge' management. At the top, there is a search bar with the text 'knowledge' and a 'Search in RODIN' button. Below the search bar, a navigation menu includes 'Reflection' and 'Memory'. The main content area features a central network diagram with 'Memory' at the center, connected to various related terms such as 'Knowledge', 'Information', 'Sources of knowledge', 'Inductive reasoning', 'Memories', 'Cognition', 'Corporate social', 'Lytic system', 'Aphasia', 'Imaginal memory', 'Epistemic', 'Neuroscience', 'Memory processes', 'Memorists', 'Commemoration', 'Informing', 'Memories', 'Memory', 'Unshared problems', 'Proteus', 'Filing about shared memories', and 'Social reporting'. To the left, there are several toolbars: 'Add widgets' with categories like 'GENERAL (4)', 'LIBRARIES (3)', 'INFOKEY (2)', 'ALEXANDRIA UNI S GALEN', and 'RERODOC'; 'Ontological facets'; and 'DBpedia 19' with a 'Broader terms' section listing 'Cognition', 'Concepts', 'Memory', and 'Learning'. Below the network diagram, there are search results from 'ALEXANDRIA UNI S GALEN' and 'GOOGLE BOOKS'. The 'ALEXANDRIA UNI S GALEN' results include 'What are the Business Benefits of Enterprise Mashups', 'Quality Metrics for Mashups', 'Discovering new roles of journalists using social network analysis and twitter', 'A Longitudinal Social Network Analysis of German Politicians Twitter Accounts', 'Social Capital CSR and the Web 2.0', 'Corporate Social Responsibility in Social Media', and 'Online Trust Management Eine Herausforderung für die Unternehmenskommunikation'. The 'GOOGLE BOOKS' results include 'Knowledge management, organizational memory, and transfer behavior: global', 'Fearful symmetry: a study of William Blake', and 'Imaginal creativity: the pivotal force of the genesis/ontogenesis of human...'. The interface also includes a 'Refine search' section with 'Text' and 'UNIVERSE' tabs, and a 'New page' button.

# Demonstration

***Librarians & Rodin***

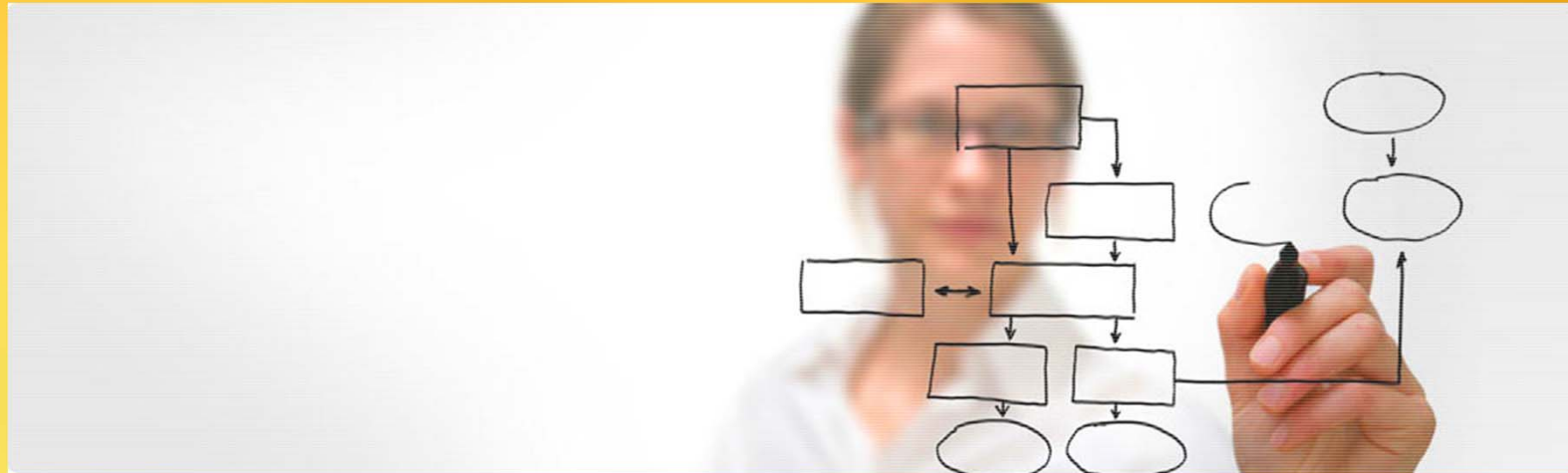
# Long live the middle man

Activity	User	Librarian	Developer
Identification of customer's needs		x	
Discovery	(x)	x	(x)
Licencing		x	
Technical Approval, Development, Publication			x
Promotion, Consulting		x	
Universe Composition, Aggregation	x	(x)	
Searching	x	(x)	
Tagging, Rating, Sharing, Cloning	x	x	(x)

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# Librarians as Ontology Engineers

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# The role of librarians

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Meta-(Data)

Ontology-Engineer



Services

Mediator

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# The role of librarians

The screenshot displays a web application interface with a search bar at the top right containing the text "Suche". Below the search bar, there are several tabs: "SMALLTEST", "UNIVERSE x", "NewProject", and "+ Neue Seite". The main content area is divided into two panels. The left panel, titled "Ontologische Facetten", shows a search query "information visualization, Computer gr" and a list of facets. The right panel, titled "BibSonomy :: BIBSONOMY", shows search results for the same query, including book titles, authors, years, and page counts.

**Ontology Engineering**

**Creating Information Services**

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***Discussion***

# Problems encountered

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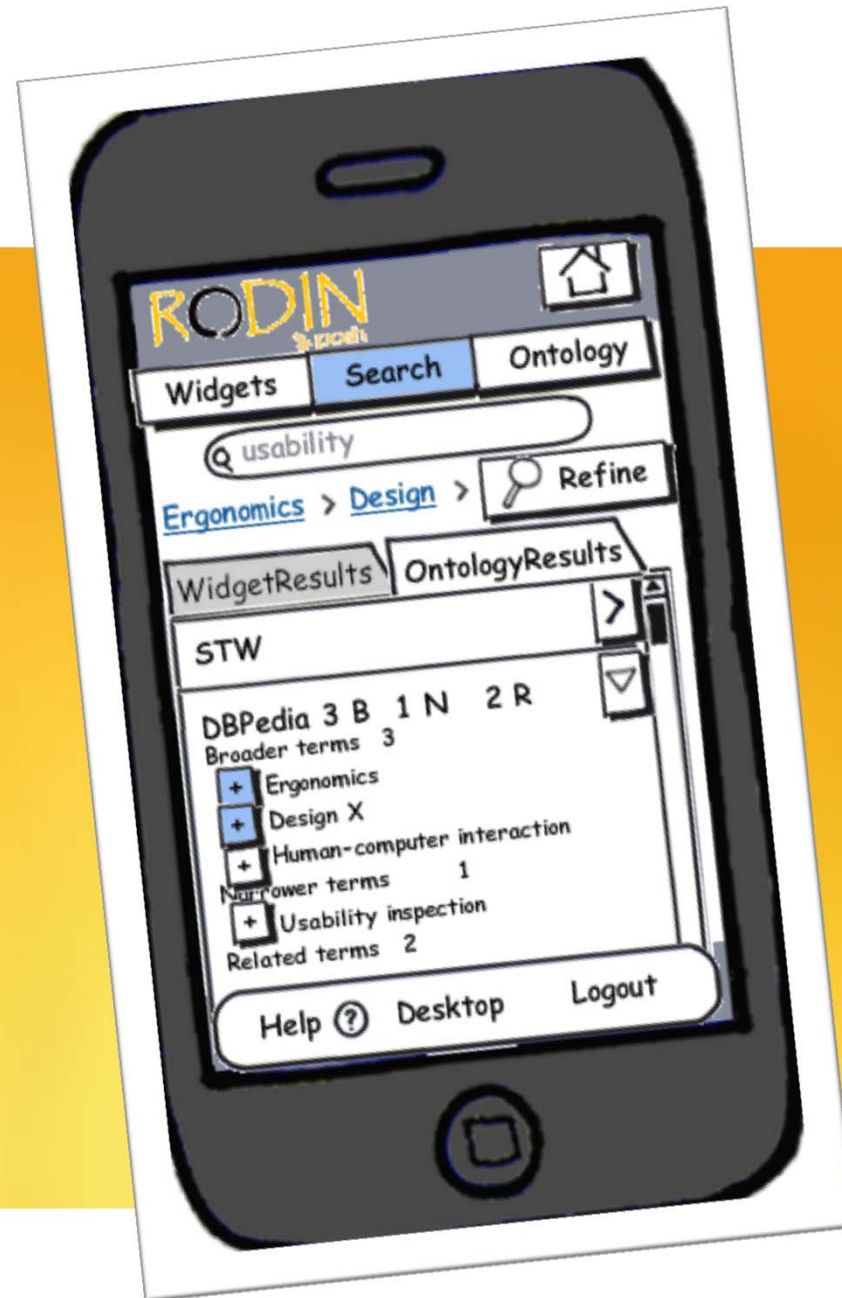
1. Lack of standards for widget integration
2. Brittleness of Semantic Web Applications
3. Complexity of Ontologies

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# Mobile RODIN

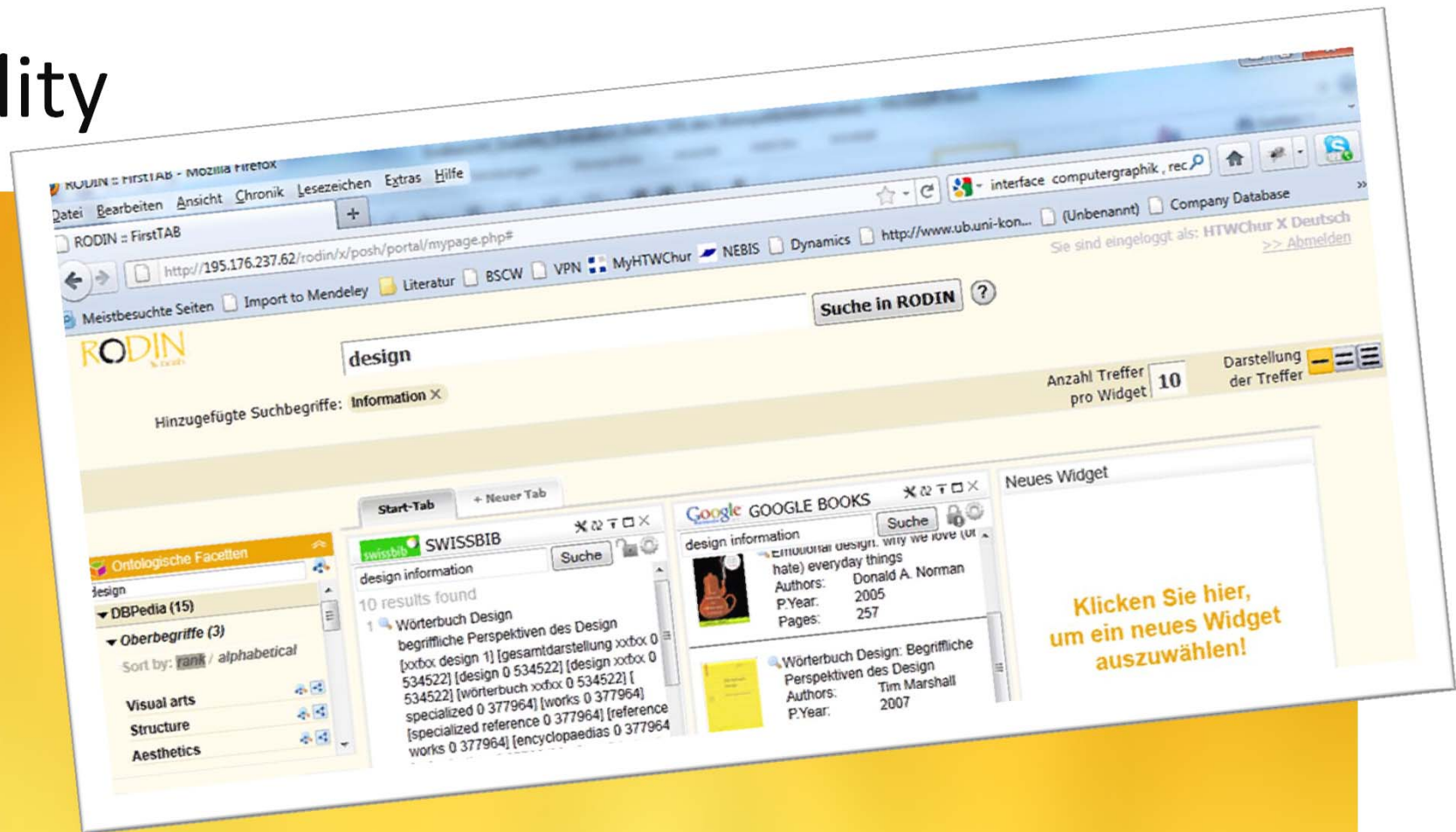
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# Usability



Test RODIN and participate in an online usability test!  
(in German or French)

Send an e-mail to: [nicolas.prongue@etu.hesge.ch](mailto:nicolas.prongue@etu.hesge.ch)

# Questions

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Send further questions to:  
[rene.schneider@hesge.ch](mailto:rene.schneider@hesge.ch)

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