The Web of Data for E-Commerce in One Day

A Hands-on Introduction to the GoodRelations Ontology, RDFa, and Yahoo! SearchMonkey

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About the Organizers

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Learning Goals

Participants will learn

• to use
  – the GoodRelations conceptual structures and
  – the RDFa syntax
  to augment static and dynamic Web sites by the various relevant
details of a commercial Web presence;
• RDFa modeling patterns for more complex RDF structures;
• to publish data on the Semantic Web and make it available for
indexing services, repositories, Yahoo SearchMonkey and
applications;
• to query the Web of Data using SPARQL, and
• the development of simple Yahoo SearchMonkey and Yahoo
BOSS applications.
Logistics

09:00-10:30  Overview and Motivation: Why the Web of Data is Now 15’
Quick Review of Prerequisites 15’
The GoodRelations Ontology: E-Commerce on the Web of Data 60’

10:30-11:00  Coffee Break

11:00-13:00  RDFa: Bridging the Web of Documents with the Web of Data 45’
Expressing GoodRelations in RDFa: A Running Example 30’
GoodRelations – Advanced Topics 45’

13:00-14:30  Lunch Break

14:30-16:00  Querying the Web of Data for Offerings – SPARQL 15’
Hands-on Exercise: Annotating a Web Shop 45’
Querying the Web of Data – Exercises 15’
Publishing Semantic Web Data: Make Your RDF Available 15’

16:00-16:30  Coffee Break

16:30-18:00  Yahoo SearchMonkey and Yahoo BOSS 45’
RDFa Advanced Topics 30’
Discussion, Conclusion, Feedback Round 15’
Resources: Information

- Wiki page
- GoodRelations Primer
- GoodRelations Documentation
  [http://purl.org/goodrelations/v1](http://purl.org/goodrelations/v1)
- RDFa
  [http://www.w3.org/TR/2008/REC-rdfa-syntax-20081014/](http://www.w3.org/TR/2008/REC-rdfa-syntax-20081014/)
- SPARQL
  [http://www.w3.org/TR/rdf-sparql-query/](http://www.w3.org/TR/rdf-sparql-query/)
- Yahoo SearchMonkey
Resources: Tools

- RDF Validator (and Visualizer)
  http://www.w3.org/RDF/Validator/

- GoodRelations Annotator
  http://www.ebusiness-unibw.org/tools/goodrelations-annotator/

- PyRDFa
  http://www.w3.org/2007/08/pyRdfa/

- Twinkle
  http://www.ldodds.com/projects/twinkle/
  → Custom configuration file from Wiki

- RDF2dataRSS
  http://www.ebusiness-unibw.org/tools/rdf2datarss/
Overview and Motivation: Why the Web of Data is Now

Martin Hepp
Limitations of the Web, 2009
Specificity vs. Keyword-based Search

- Synonyms
- Homonyms
- Multiple languages
- No parametric search
No Unified View: Jumping Back and Forth Across Data Silos
We know the best hits only when done.
Limited Ability to Reuse Data
The Web: A Bottleneck for Sharing Product Data
Web of Data ("Semantic Web")
E-Commerce on the Web of Data
Goal: A Unified View on Commerce
Data on the Web

Manufacturers
Payment
Product Model
Master Data
Shop Offerings
Auctions
Spare Parts & Consumables
Warranty
Delivery
Retailers

Arbitrary Query
Extraction and Reuse
Use Case 1: Product Search

• Find all MP3 players that have a USB interface and a color display, and sort them by weight (lightest first).

...on a Web Scale!
Use Case 2: Product Model Data Reuse

Manufacturer
Structured Data on Products and Services

Retailer / Web Shop
Structured Data on Products and Services

Product Specifications:
Type of Product, Features etc.

World Wide Web

World Wide Web
Use Case 3: Fine-grained Affiliate Marketing

Offers of computer add-ons that have an USB interface

The Web of Data is NOW and HERE

- **RDFa** has become a W3C Recommendation
- **Yahoo SearchMonkey** and BOSS
- **Google** adopts RDFa
- **GoodRelations** ontology
- **SPARQL** Query language and endpoint interface
- Scalable, commercial **repositories**
- **Linked Data Guidelines**: Best Practices for co-existence of the Web of Data and existing Web content
Motivation

M. Hausenblas
Motivation

M. Hausenblas

2008

2009
Thank you.