

Semantic MediaWiki

in 15 minutes

Markus Krötzsch

SMW Project
AIFB, Karlsruhe University

Semantic Wiki Mini-Series
Dec 11 2008

Semantic MediaWiki



Content management for

- rich text
- structured data

Based on the «Wiki Way»

- user-governed
- collaborative
- easy

Semantic MediaWiki



Original goal:

Enhance existing wiki applications.

(Non-goal: Research.)

Organizing Data in SMW



Basic idea:

Assign property-value pairs to wiki pages

Organizing Data in SMW



Typical (but not the only) wiki syntax:

`[[property::value]]`

Organizing Data in SMW



Properties in the wiki ...

- ... can be introduced as needed
- ... have their own wiki pages
- ... may be given a datatype

Examples: Capital of, Population,
Startdate, Name, Homepage, ...

Organizing Data in SMW



Datatypes in the wiki ...

- ... affect how data values are displayed
- ... influence searching and browsing
- ... are usually not user-defined

Examples: Number, Text, Page,
Date, URL, ...

Inline Queries



Basic idea:

Allow dynamic views on wiki data to be embedded into pages.

Inline Queries



Aspects of an inline query:

- 1) Which pages constitute the result?
- 2) Values for which properties are displayed per result?
- 3) How should all this be formatted?

Inline Queries



Example:

- 1) Show all countries in Africa
- 2) each with their population and area
- 3) within a table.

Inline Queries



User input:

- 1) SMW query language (technically closely related to OWL 2 EL classes)
- 2) Additional printout statements
- 3) Formatting parameters

Inline Queries



Example:

```
{#ask: [[ Category:Country]]  
      [[located in::Africa]]  
| ?Population  
| ?Area  
| format=table  
}}
```

SMW and the Semantic Web

Content model:

- Based on sublanguage of OWL 2 DL
- Closely related to OWL EL and OWL RL

Data exports:

- OWL/RDF
- RSS, CSV, ...
- JSON (planned)



Selected Applications

Online introduction of some SMW sites:

<http://korrekt.org/page/Ontolog>



Beyond SMW Core



Active user community

- Some hundreds of sites known using it
- World-wide usage (20-50 languages)
- Public mailing lists, forum, bugtracker

Active developer community

- Various independent extensions
- Halo development team at ontoprise
- Integrated into MediaWiki community



SMW: <http://semantic-mediawiki.org>

Slides: <http://korrekt.org/page/Ontolog>

Copyright Markus Krötzsch

Terms of Licensing

Creative Commons
Attribution

<http://creativecommons.org/licenses/by/3.0/de/deed.en>

Image copyrights

Icons by <http://everaldo.com>, released under the terms of GPL