



# SEMANTIC RESULT FORMATS

AUTOMATICALLY TRANSFORMING STRUCTURED DATA INTO USEFUL OUTPUT FORMATS

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Wikimania 2010, Gdansk (Poland)  
July, 10th, 2010

# Agenda

- Short Introduction to SMW & SRF
- Overview of existing Result Formats
- Inside Semantic Result Formats
- (Hands-on example)



Motivation:  
 „Show all bakeries open after midnight“



**VENICEWIKI**

Vai Ricerca

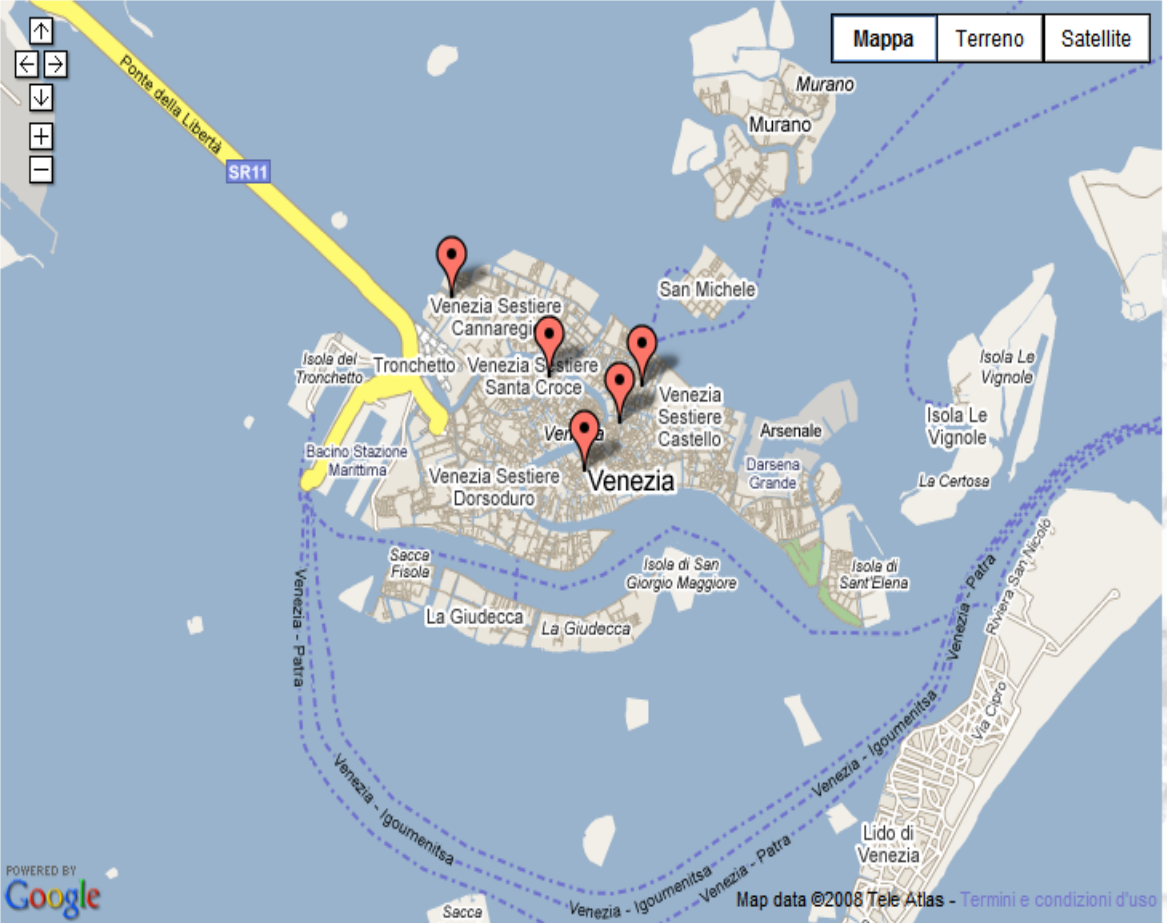
[voce](#) [modifica campi](#) [modifica questa pagina](#) [cronologia](#) [aggiorna](#)


[Entra o crea un nuovo accesso](#)

## Mappa delle Osterie e bacari



Mappa
Terreno
Satellite



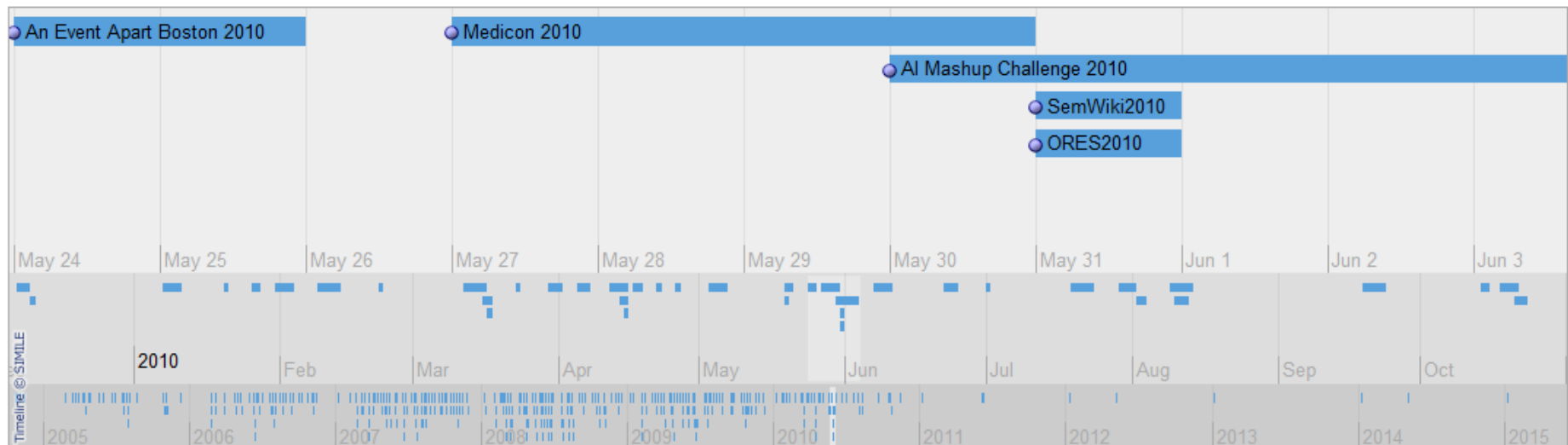
POWERED BY 

Map data ©2008 Tele Atlas - [Termini e condizioni d'uso](#)

- Partecipazione**
- [Pagina principale](#)
  - [Cos'è Venicewiki](#)
  - [Guida al sito](#)
  - [Cosa puoi fare](#)
  - [Portale comunità](#)
  - [Ultime modifiche](#)
  - [Forum](#)
- Navigazione**
- [Venezia](#)
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  - [Tempo libero](#)
  - [Alloggiare](#)
  - [Mangiare e bere](#)
  - [Annunci gratuiti](#)
  - [News](#)

Motivation:  
„Show all events in the Wiki by date“

## Conferences



# Semantic MediaWiki (SMW) Distilled

## 1. Wiki pages with semantic annotations

### AI Mashup Challenge 2010

**Series:** [AI Mashup Challenge](#)  
**Start date:** May 30, 2010  
**End date:** June 3, 2010  
**Location:** [Hersonissos, Crete, Greece](#)  
**Topics:** [Mashups](#), [Artificial Intelligence](#), [Semantic Web](#), [Web](#)

#### Links

- [Homepage](#)
- [Call for papers](#)
- [Wiki](#)

#### Presentations

[edit]



Category: [Conference](#)

#### Facts about AI Mashup Challenge 2010

[Call for papers page](#) <http://www.wikicfp.com/cfp/servlet/event.showcfp?eventid=7610> +

**End date** 3 June 2010 23:59:00 +

**Homepage** <http://sites.google.com/a/fh-hannover.de/aimashup/> +

**Location** [Hersonissos, Crete, Greece](#) +

**Series** [AI Mashup Challenge](#) +

**Start date** 30 May 2010 +

**Topic** [Mashups](#) + , [Artificial Intelligence](#) + , [Semantic Web](#) + , and [Web](#) +

**Wiki URL** [http://semanticweb.org/wiki/AI\\_Mashup\\_Challenge\\_2010](http://semanticweb.org/wiki/AI_Mashup_Challenge_2010) +

## 2. Wiki page containing semantic query

### Conference Archive (this year)

[edit]

For a full archive of conferences [click here](#).

	Location	Start date	End date
<a href="#">Velocity 2010</a>	<a href="#">Santa Clara, CA</a>	22 June 2010	24 June 2010 23:59:00
<a href="#">RailsConf 2010</a>	<a href="#">Baltimore, MD</a>	7 June 2010	10 June 2010 23:59:00
<a href="#">SemWiki2010</a>	<a href="#">Heraklion, Greece</a>	31 May 2010	31 May 2010 23:59:00
<a href="#">ORES2010</a>			
<a href="#">AI Mashup C</a>			
<a href="#">Medicon 201</a>			

```
== Conference Archive (this year) ==
For a full archive of conferences
[[Conferences/Archive|click here]].
```

```
{ {#ask: [[Category:Conference]]
  [[Start date::>{{CURRENTYEAR}}]]
|?Location
|?Start date
|?End date
|format=broadtable
|sort=Start date
|order=desc
|limit=50
}}
```

# Semantic Result Formats (SRF)

## Conference Archive (this year) [edit]

For a full archive of conferences [click here](#).

<input type="checkbox"/>	<input type="checkbox"/> Location	<input type="checkbox"/> Start date	<input type="checkbox"/> End date
<a href="#">Velocity 2010</a>	<a href="#">Santa Clara, CA</a>	22 June 2010	24 June 2010 23:59:00
<a href="#">RailsConf 2010</a>	<a href="#">Baltimore, MD</a>	7 June 2010	10 June 2010 23:59:00
<a href="#">SemWiki2010</a>	<a href="#">Heraklion, Greece</a>	31 May 2010	31 May 2010 23:59:00
<a href="#">ORES2010</a>	<a href="#">Hersonissos, Crete, Greece</a>	31 May 2010	31 May 2010 23:59:00
<a href="#">AI Mashup Challenge 2010</a>	<a href="#">Hersonissos, Crete, Greece</a>	30 May 2010	3 June 2010 23:59:00
<a href="#">Medicon 2010</a>	<a href="#">Chalkidiki, Greece</a>	27 May 2010	30 May 2010 23:59:00

- SRF provides **alternative renderings/visualizations** for semantic queries besides the plain table or list layout
  - Some provided with SMW
  - Most included in Extension:Semantic Result Formats
  - Some additional extensions (e.g. Extension:Semantic Maps)

**Maps and Semantic Maps**  
Talk by Jeroen De Dauw  
Later this afternoon @ 04:30 PM

# SRF Distilled

```
{ {#ask: [[Category:Conference]]  
|?Location  
|?Start date  
|?End date  
|format=myresultformat  
}}
```

Query results

```
<table width="100%" id="querytab"  
<tbody><tr>  
  <td><a title="Velocity 2010" href="/Velocity_2010">Velocity 2010</a></td>  
  <td><a title="Santa Clara, CA" href="/Santa_Clara_CA">Santa Clara, CA</a></td>  
  <td>22 June 2010</td>  
  <td>24 June 2010 23:59:00</td>  
</tr>  
<tr>  
  <td><a title="RailsConf 2010" href="/RailsConf_2010">RailsConf 2010</a></td>  
  <td><a title="Baltimore, MD" href="/Baltimore_MD">Baltimore, MD</a></td>  
  <td>7 June 2010</td>  
  <td>10 June 2010 23:59:00</td>  
</tr>  
  ...
```

HTML Code

For a full archive of conferences click here.

	Location	Start date	End date
<a href="#">Velocity 2010</a>	Santa Clara, CA	22 June 2010	24 June 2010 23:59:00
<a href="#">RailsConf 2010</a>	Baltimore, MD	7 June 2010	10 June 2010 23:59:00
<a href="#">SemWiki2010</a>	Heraklion, Greece	31 May 2010	31 May 2010 23:59:00

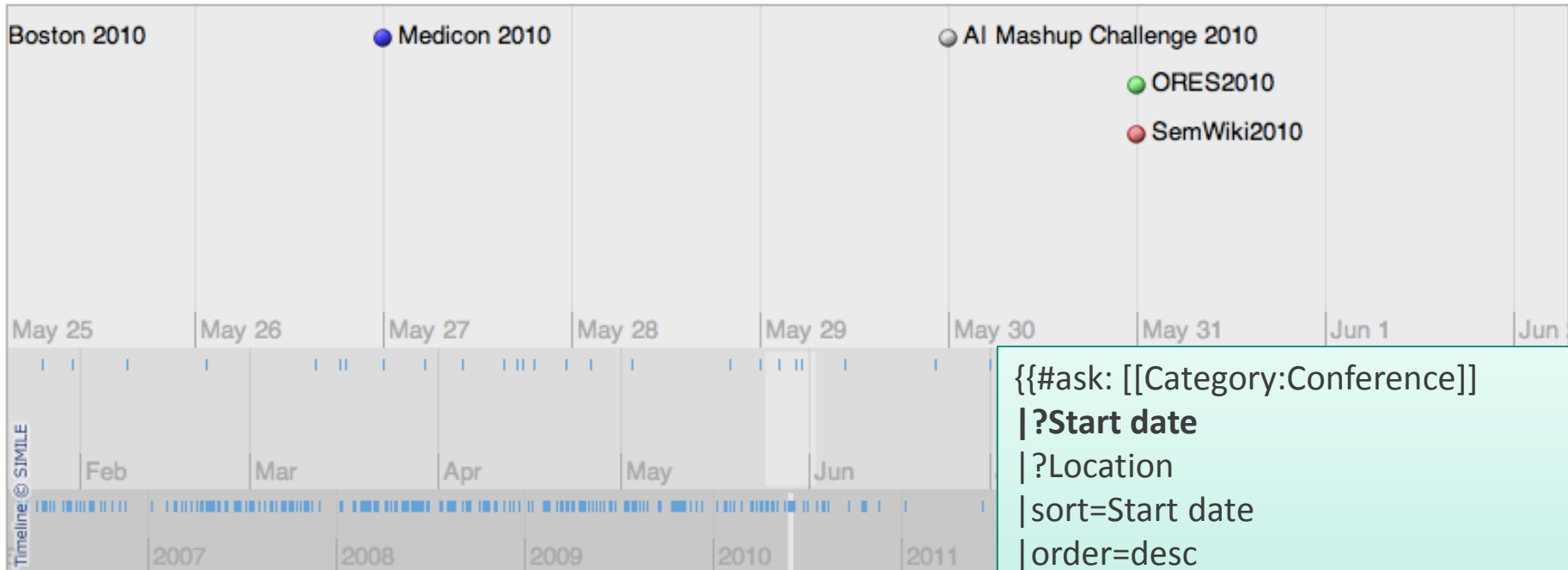
MyResultPrinter.php  
(do magic here...)

# SRF Overview

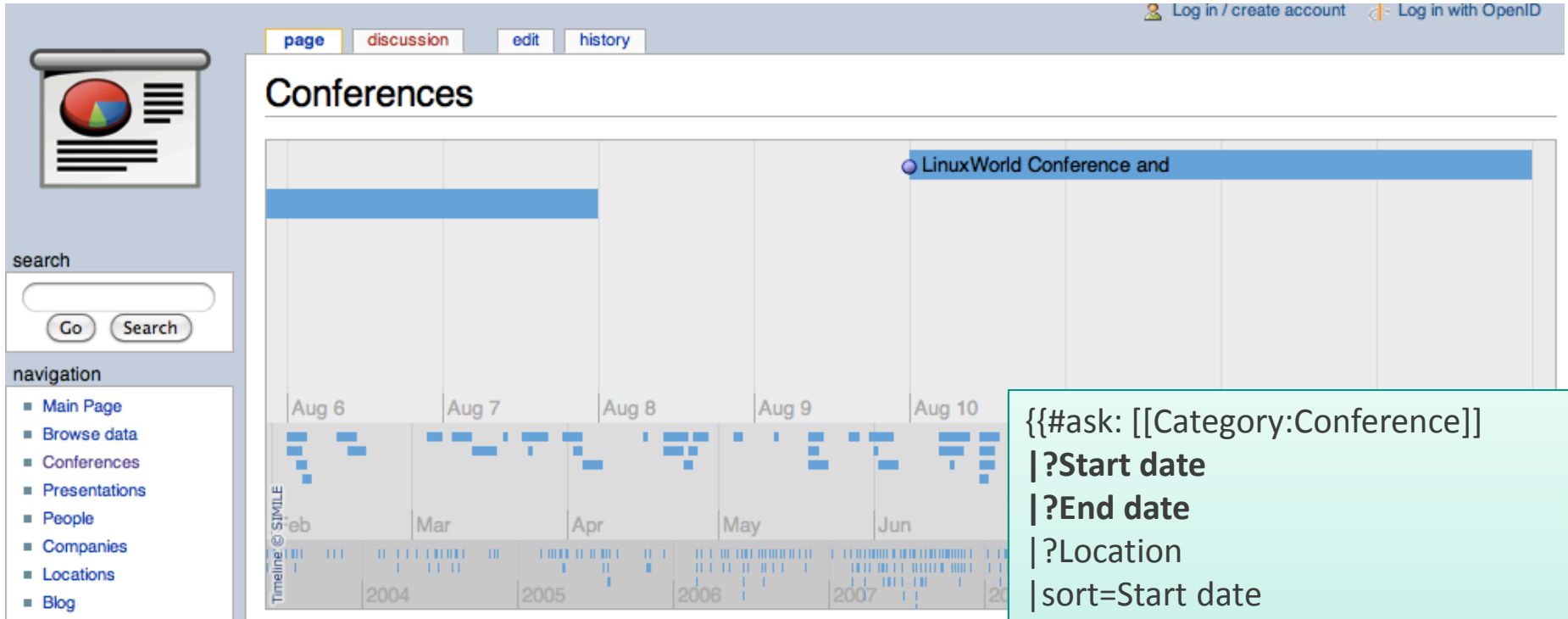
Type / Included in	SMW Core	Extension:SRF	Custom Extension
<b>List</b>	Table/Broadtable List/ol/ul Category	Outline	
<b>Graphing</b>		Graph Googlebar/-pie Ploticus Process	SMW+ (2D/3D-bar, line chart) UMLClass
<b>Time-based</b>		Timeline Eventline Calendar	
<b>Further presentations</b>		Exhibit Gallery	Semantic Maps
<b>Export</b>	RSS CSV JSON	iCalendar vCard Bibtex	
<b>Other</b>	Count Template Embedded Debug	Math	



# Eventline



```
{#{ask: [[Category:Conference]]
|?Start date
|?Location
|sort=Start date
|order=desc
|format=timeline
|timelineposition=today
|timelinebands=DAY,MONTH, YEAR
|limit=5000
}}
```



page discussion edit history

## Conferences

LinuxWorld Conference and

Aug 6 Aug 7 Aug 8 Aug 9 Aug 10

Feb Mar Apr May Jun

2004 2005 2006 2007

search

Go Search

navigation

- Main Page
- Browse data
- Conferences
- Presentations
- People
- Companies
- Locations
- Blog

Log in / create account Log in with OpenID

```
{{#ask: [[Category:Conference]]
|?Start date
|?End date
|?Location
|sort=Start date
|order=desc
|format=timeline
|timelineposition=today
|timelinebands=DAY,MONTH, YEAR
|limit=5000
}}
```

<http://www.techpresentations.org/Conferences>

# Calendar format

DISCOURSE

DB

The user-powered  
database of political  
commentary

Navigation

Main Page

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Recent items

Opinion item calendar

Semantic search

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Add an opinion item

Add an author

Add a source

Add a topic

How to add content

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Related changes

Upload file

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## Opinion calendar

April 2010

◀ Today ▶

April 2010

Go to month

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
The Legal Assault on Health Reforms 28	A grim sign for ObamaCare President Obama starts a revolution 29	Shut up, he argues The health care fight is not over 30	Is mandate constitutional? 31	Don't Believe the Writedown Hype 1	2	3
Costs? What costs? 4 Making Financial Reform Fool-Resistant	We Call That Double-Dipping 5	Governor won't face crisis 6	Tax shock is just start for Obamacare The Dodd Bill: Bailouts Forever 7	8	9	10
11	12	13	Oops, we did that? More health care surprises 14	15	Too Big Not to Get Right 16	Squelching the bad news on ObamaCare 17
18	19	Everybody Loves a Winner	20	Get ready to live with nuclear Iran		
25	ObamaCare Mulligan The Case against the Dodd Bill	26	Chris Dodd's carve-outs for cronies 27			

```

{{#ask: [[Category:Items]]
[[Was published on::>{{#calendarstartdate:}}]]
[[Was published on::<{{#calendarenddate:}}]]
| ? Was published on
| limit=200
| format=calendar
}}
    
```

[http://discoursedb.org/wiki/Opinion\\_calendar](http://discoursedb.org/wiki/Opinion_calendar)



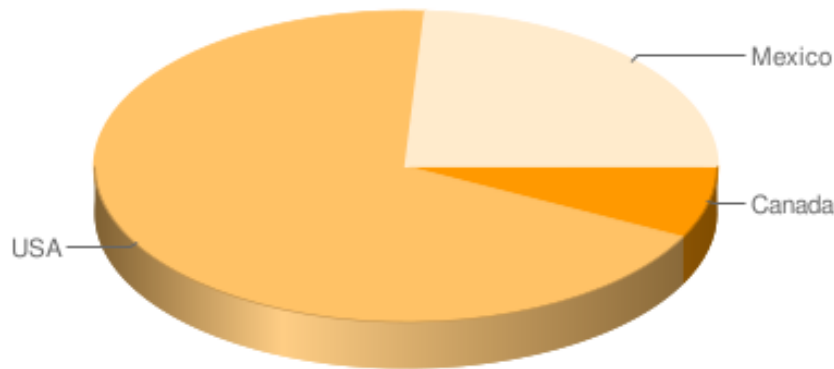
# Pie chart

[page](#)[discussion](#)[edit](#)[history](#)[delete](#)[move](#)[protect](#)[watch](#)[refresh](#)

## North America

The North American continent is one of the 7 continents of the **earth**. It contains **United States of America** and **Canada**.

### Countries



```

{{#ask:[[Category:Country]]
[[located in::North America]]
[[population::+]]
|?population
|format=googlepie
}}

```

#### Facts about North America ⓘ

Has political entity [United States of America](#) + 🔍, and [Canada](#) + 🔍

Located in [Earth](#) + 🔍, and [America](#) + 🔍

Category: [Continent](#)

# Bar chart

[page](#)[discussion](#)[edit](#)[history](#)[delete](#)[move](#)[protect](#)[watch](#)[refresh](#)

## North America

The North American continent is one of the 7 continents of the **earth**. It contains **United States of America** and **Canada**.

### Countries



#### Facts about North America

Has political entity **United States of America** + 🔍, and **Canada** + 🔍

Located in **Earth** + 🔍, and **America** + 🔍

Category: [Continent](#)

```
{{#ask:[[Category:Country]]
[[located in::North America]]
[[population::+]]
|?population
|format=googlebar
}}
```

# Graph



Semantic  
Web

Navigation

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Tools

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Events

services

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## Sandbox

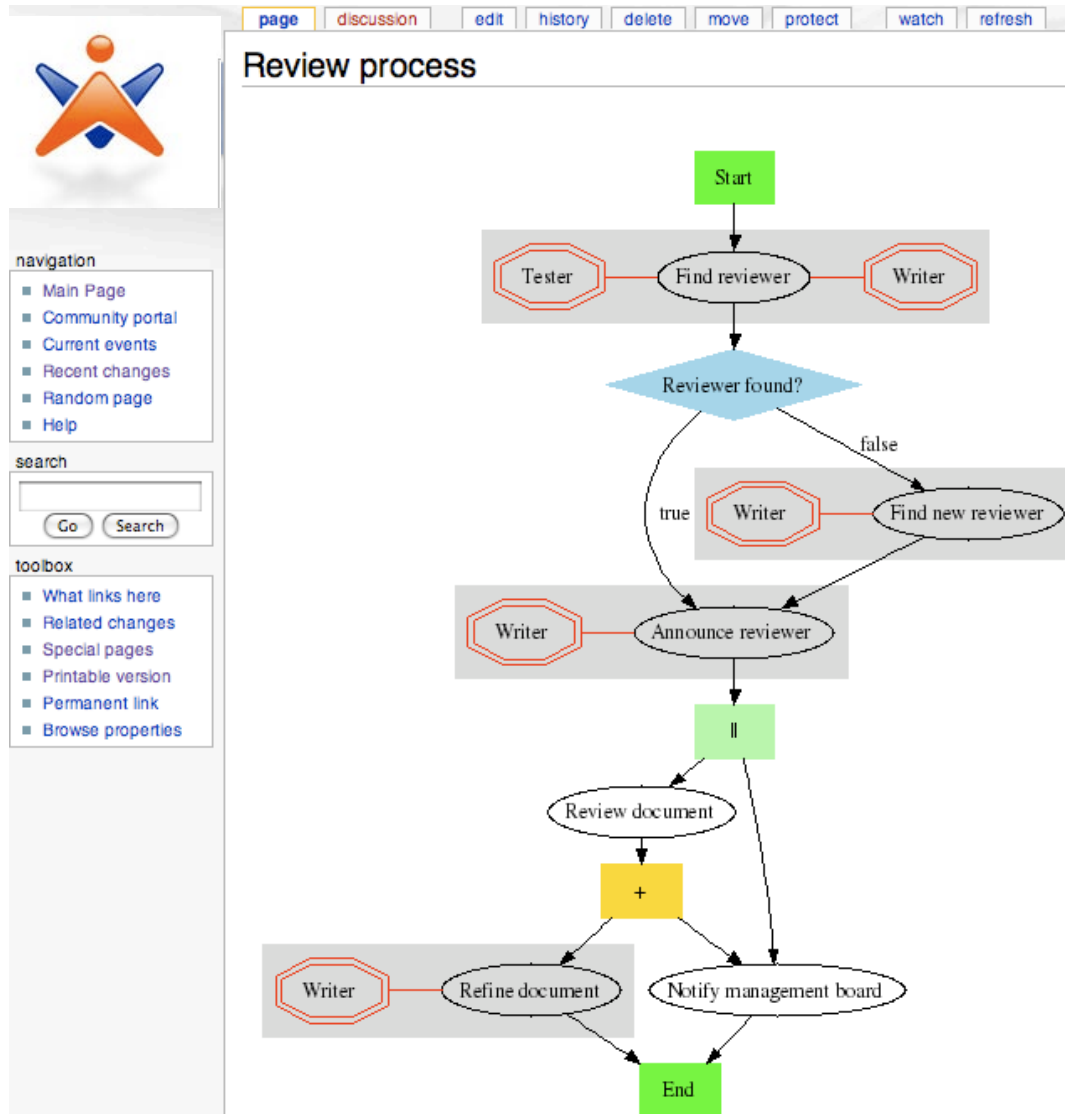
For more extensive testing, please go to <http://sandbox.semantic->

```
{#{ask: [[Category:Person]]  
| ?has child  
| ?knows  
| format=graph  
| graphcolor=Yes  
| graphlink=Yes  
| graphlegend=Yes  
| graphlabel=No  
| graphsize=10,10  
| rankdir=TB  
}}
```



black: Borders

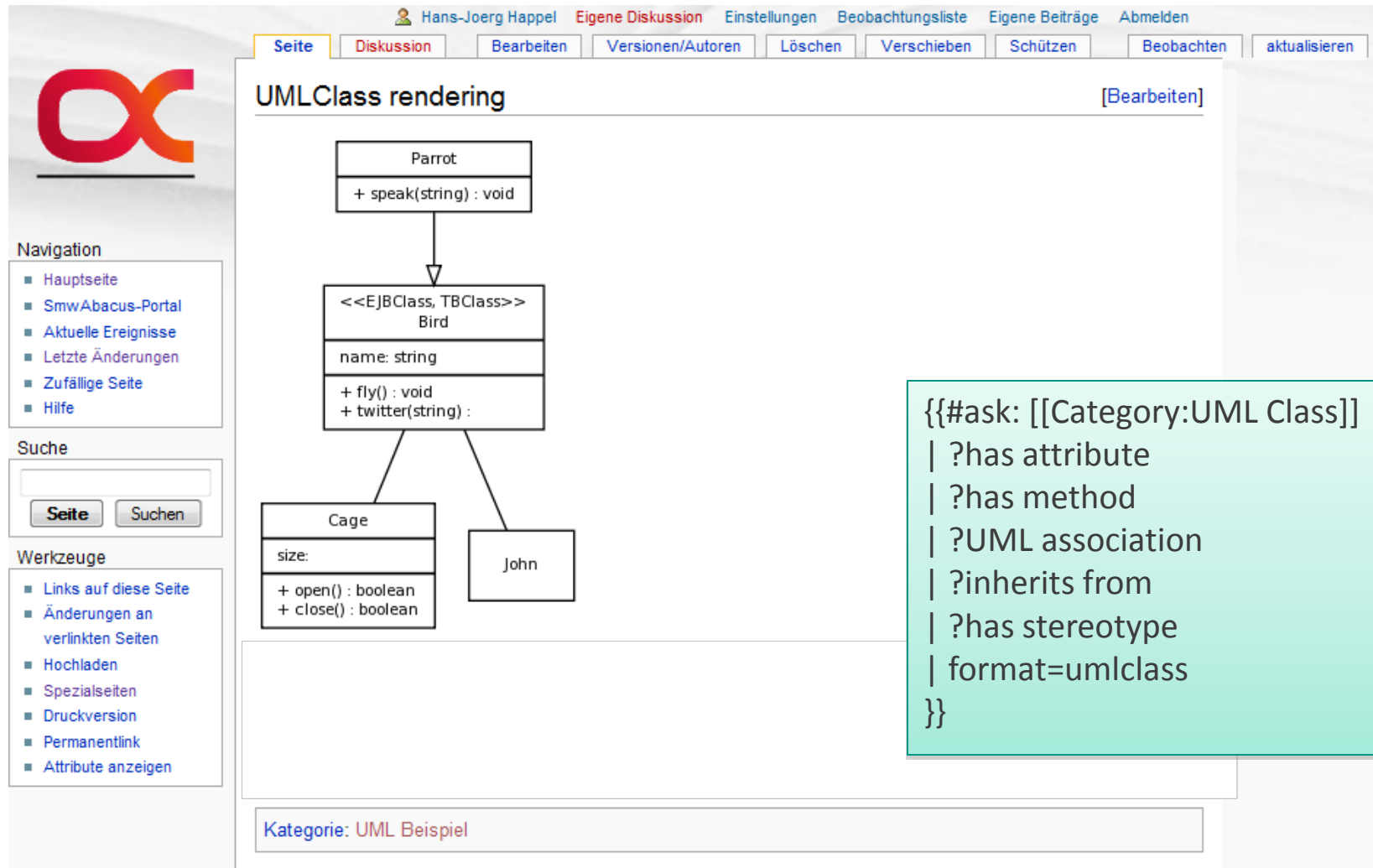
# Process diagram



```

{{#ask: [[Category:Process Step]]
[[Category:{{PAGENAME}}]]
| ?has OrSuccessor=hasorsuccessor
| ?has Successor=hassuccessor
| ?has contruesuccessor
| ?has confalsesuccessor
| ?has Condition=hascondition
| ?has Role=hasrole
| ?uses Resource=usesresource
| ?has Status=hasstatus
| format=process
| graphsize=12,12
| graphvalidation=no
| showroles=yes
| showstatus=yes
| showresources=yes
}}
  
```

# UML diagram



Navigation

- Hauptseite
- SmwAbacus-Portal
- Aktuelle Ereignisse
- Letzte Änderungen
- Zufällige Seite
- Hilfe

Suche

Seite Suchen

Werkzeuge

- Links auf diese Seite
- Änderungen an verlinkten Seiten
- Hochladen
- Spezialseiten
- Druckversion
- Permalink
- Attribute anzeigen

```
classDiagram
    class Parrot {
        + speak(string) : void
    }
    class Bird {
        <<EJBClass, TBClass>>
        name: string
        + fly() : void
        + twitter(string) : void
    }
    class Cage {
        size:
        + open() : boolean
        + close() : boolean
    }
    class John
    Parrot --|> Bird
    Bird -- Cage
    Bird -- John
```

UMLClass rendering [Bearbeiten]

```
{{#ask: [[Category:UML Class]]
| ?has attribute
| ?has method
| ?UML association
| ?inherits from
| ?has stereotype
| format=umlclass
}}
```

Kategorie: UML Beispiel



# BibTeX - export

```
@Inproceedings{dengler2010cmwsm,  
  address = "Gdansk, Poland",  
  author = "Frank Dengler and Hans-J\"{o}rg Happel",  
  booktitle = "Proceedings of the 6th International Symposium  
on Wikis and Open Collaboration",  
  month = "Juli",  
  publisher = "ACM",  
  title = "Collaborative Modeling with Semantic MediaWiki",  
  year = "2010",  
}
```

```
{{#ask: [[{{{BASEPAGENAME}}]]  
| ?author  
| ?title  
| ?booktitle  
| ?year  
| ?edition  
| ?volume  
| ?number  
| ?series  
| ?pages  
| ?address  
| ?month  
| ?organization  
| ?publisher  
| ?note  
| ?bibtype=type  
| format=bibtex  
}}
```



Studium und Lehre

Personen

Forschungsgruppen

Veröffentlichungen

Jahresberichte

Vorträge

Veranstaltungen

Projekte

Kooperationen

Stellenmarkt

Kontakt

### Collaborative Modeling with Semantic MediaWiki

Frank Dengler, Hans-Jörg Happel

Published: 2010 Juli

Buchtitel: Proceedings of the 6th International Symposium on Wikis and Open Collaboration

Verlag: ACM

Erscheinungsort: Gdansk, Poland

Referierte Veröffentlichung

BibTeX

**Kurzfassung**

Modeling is an important aspect of information systems development, allowing for abstract descriptions of systems and processes. Therefore, models are often characterized as communication artifacts between different stakeholders in a development process. However, modeling as such has turned out to be a specialist activity, requiring skills in arcane modeling languages and complex tools. In this paper, we suggest and present an approach for collaborative, Wiki-based modeling of process models and UML (class-)diagrams. While other web-based "lightweight" modeling tools are available, our approach consequently follows the paradigm and allows us to semantically process the modeled information building upon Semantic MediaWiki.

# iCalendar export

[Log in / create account](#)



Navigation

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[Tools](#)  
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Page [Discussion](#)

Read

[Edit](#)

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## ISWC2008

ISWC 2008, the **International Semantic Web Conference 2008**, will be hosted by the [AIFB, Universität Karlsruhe \(TH\)](#). It is a major international forum where visionary and state-of-the-art research of all aspects of the [Semantic Web](#) are presented.

**Contents** [\[hide\]](#)

[1 Introduction](#)  
[2 Topics](#)

### ISWC2008

7th International Semantic Web Conference

Start [Oct 26 2008 \(iCal\)](#)

[30 2008](#)

[:2008.semanticweb.org](#)

#### Location

[lsruhe](#)

[many](#)

#### Important dates

[ch 28 2008](#)

[/ 16 2008](#)

```
BEGIN:VCALENDAR
PRODID:-//SMW Project//Semantic Result Formats
VERSION:2.0
METHOD:PUBLISH
X-WR-CALNAME:Special:Ask/-5B-5BISWC2008-5D-5D/-3Fstart-
20date=start/format=icalendar/limit=20
BEGIN:VEVENT
SUMMARY:ISWC2008
URL:http://semanticweb.org/wiki/ISWC2008
UID:http://semanticweb.org/wiki/ISWC2008
DTSTART:20081026
DTSTAMP:20090428T135015
SEQUENCE:44833
END:VEVENT
END:VCALENDAR
```

```
{{#ask: [[Category:Person]]
| ?startdate = start
| ?enddate = end
| ?location
| format=icalendar
}}
```

# vCard export



User page [Discussion](#)

Read

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## User:Markus Kröttsch

(Redirected from [Markus Kröttsch](#))

**Markus Kröttsch** currently is the prime maintainer of this site. Please contact him if you have comments or questions regarding semanticweb.org.

```
BEGIN:VCARD
VERSION:3.0
N;CHARSET=UTF-8:Kröttsch;Markus;;;
FN;CHARSET=UTF-8:Markus Kröttsch
CLASS:PUBLIC
ORG;CHARSET=UTF-8:AIFB;
EMAIL;TYPE=internet:mak@aifb.uni-karlsruhe.de
TEL;TYPE=WORK:+49-721-608-7362
SOURCE;CHARSET=UTF-8:http://semanticweb.org/wiki/User:Markus_Kr%C3%B6ttsch
PRODID:-:///Semantic MediaWiki
REV:20091113101319
URL:http://korrekt.org
UID:http://semanticweb.org/wiki/User:Markus_Kr%C3%B6ttsch
END:VCARD
```

Markus Kröttsch		vCard
mak@aifb.uni-karlsruhe.de		
Affiliation:	AIFB	
Homepage:	<a href="http://korrekt.org">korrekt.org</a>	
Phone:	+49 721 608 7362	
PC member of: SemWiki2010, ICFCA2010, ICCS2008, SemWiki2009, ICFCA2009, SSW2009, ALPSWS2008, OWLED 2008, ICCS2008, OWLED 2008 DC, FAInt-07, ICCS2007, ICCS2006, RoW2006		
OC member of: OWLED 2008, SWKM2008		
See also:	<a href="#">FOAF</a>	

```
{{#ask: [[Category:Person]]
| ?firstname
| ?lastname
| ?url = homepage
| format=vcard
}}
```

# Outline

## Outline example

This is an example of the Semantic Result Formats [Outline format](#)

```
{#ask:[[Category:Items]]
|? Was published by
|? Was written by
|? Addresses topic
|format=outline
|outlineproperties=Was published by, Was written by
|sort=Was published by}}
```

And here is the result:

### Asia Times Online

#### Nir Rosen

- Iraq: Three from one doesn't add up (Addresses topic Post-invasion Iraq)

### Bangkok Post

#### Bangkok Post editorial board

- Trade is a 2-way street (Addresses topic Doha round)

### Bangor Daily News

#### Bangor Daily News editorial board

- GOP Stand Against Torture (Addresses topic Military Commissions Act of 2006)

### Best of the Web Today

#### James Taranto

- For McCain, It's Personal (Addresses topic Military Commissions Act of 2006)
- The Vanity of Judicial Activism (Addresses topic Parents v. Seattle)

### Boston Herald

```
{#ask:[[Category:Items]]
|? Was published by
|? Was written by
|? Addresses topic
|format=outline
|outlineproperties=Was published by, Was written by
|sort=Was published by
}}
```

## Flor y Fauna/Teakwood I

< Flor y Fauna

Flor y Fauna's Teakwood I is a 30 hectare **teak** planting. Teakwood I was planted in **1989** on Flor y Fauna's **Vasconia** plantation.

The Teakwood I parcels are **investment objects**.

### Photos



View of tree stand in **Flor y Fauna** Teakwood I



FyF 2003 Een van de dikste bomen aan de rand van Teakwood I



Inspection of a dead tree in Teakwood I by Popko



Popko embraces one of the biggest trees in Teakwood I



View of tree stand in **Flor y Fauna/Teakwood I**.



View of **Flor y Fauna/Teakwood I** tree stand.

```
{{#ask: [[Category:Photos]]
| ?caption
| format=gallery
}}
```

page
discussion
edit
history

## Beers

**KACHELANSICHT** • TABLE • MAP

sortiert nach: [Brewed in country](#) und [beer\\_type](#); sowie nach... •  Gruppierung wie Sortierung


search

**Brewed in Country**

- 1 Australia
- 2 Belgium
- 1 Brazil
- 1 China

### Australia (1)

- Hahn Premium**



**Brewed by:** Hahn Premium


**City:** Sydney

**Country:** Australia

**Beer Type**

### Belgium (2)

- Leffe**




**Brewed by:** Anheuser-Busch InBev

**City:** Leuven

**Country:** Belgium

**Beer Type**
- Stella Artois**



**Brewed by:** S.A. Interbrew Belgium N.V.

**City:** Bruxelles

```

{{#ask: [[Category:Beer]]
| ?brewed by
| ?beer type=Beer
| ?brewed in city
| ?brewed in state
| ?brewed in country
| ?Image URL
| ?Brewed Coordinate
| format=exhibit
| views=tiles,tabular, map
| facets=search,Brewed in Country
| limit=100
| mainlabel=Beer Name
| height=600px
| sort=brewed in country,Beer Type
| lens=beer2
}}
    
```

#### exhibits

- ReadingGroups
- Conferences

#### exhibit result printer

- Documentation
- Walkthrough

#### smw json exporter

- Documentation
- Exhibits from SMW Data
- Blogging SMW Data

#### remote querying

- Documentation

#### search

Go
Search

#### toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Browse properties

# INSIDE SEMANTIC RESULT FORMATS

MyResultPrinter.php  
(do magic here...)

# Implementing SRF result printers: core workflow

- Register an own „format“/PHP-class combination in LocalSettings.php
  - The PHP class needs to extend SMWResultPrinter
- At runtime, SMW will call the `getResultText( )` method of this class, based on the ASK-format
  - SMW will pass the query result `$res` as a SMWQueryResult object
  - `getResultText( )` **transforms this query result to any arbitrary output** (usually HTML) which is returned to SMW and **rendered in the Wiki page body as result of the ASK query**





# Configuring Semantic Result Formats

- Precondition: SMW installed
- Additional result formats typically come as a single PHP file
  - Copy into your MediaWiki path
- Configure in LocalSettings.php (after SRF is included):

```
# Semantic Result Formats Extension must be included before!  
# ...  
$smwgResultFormats['myprinter'] = 'SRFMyPrinter';  
$wgAutoloadClasses['SRFMyPrinter'] = $IP .  
    '/extensions/SemanticResultFormats/MyPrinter/SRF_MyPrinter.php';
```



# Printers need to extend SMWResultPrinter

- Core method to implement:
  - `getResultText($res, $outputmode)`
- Additional methods:
  - `readParameters($params, $outputmode)`
- Methods useful when producing file output
  - `getMimeType($res)`
    - use if printer does not return Wikitext/HTML
  - `getFileName($res)`

# getResultText(\$res, \$outputmode)

- `{ {#ask: [[Category:City]] | ?located in } }`



1) `$res` is a **SMWQueryResult** which contains all rows.

`$res`→`getNext()` will return an **array of SWM\_ResultArrays** representing one row

2) One row is an **array of SWM\_ResultArray** objects.

Each `SWM_ResultArray` represents one column of the row.

	Located in
Karlsruhe	Baden-Württemberg Rheinebene
Stuttgart	Baden-Württemberg

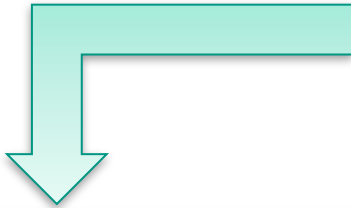
3) One column in one particular row is a **SMW\_ResultArrayObject** (`$s`).

`$s`→`getNextObject()` will retrieve an array of content items **representing the values in the cell** (alternatively, you may use “`foreach ($s→getContent() as $value)`”).

Calling `$s→getPrintRequest()→getLabel()` will return a **String with the column head** (e.g. “Located in” in this case)

Usually, this will only be one array element, but it can be more (as in the example here).

# getResultText(\$res, \$outputmode)



<input type="checkbox"/>	<input type="checkbox"/> Located in
Karlsruhe	Baden-Württemberg Rheinebene
Stuttgart	Baden-Württemberg

```
$row = $res->getNext();

// iterate rows in query result set
while ($row != false){

    // iterate columns in row
    foreach ($row as $field) {
        $columnTitle = $field->getPrintRequest(); // e.g. „Located in“

        // iterate all values in column
        foreach ($field->getContent() as $value){
            $val = $value->getShortWikiText(); // e.g. „Baden-Württemberg“
        }
    }

    $row = $res->getNext();
}
```

# readParameters(\$params, \$outputmode)

- Method is called before rendering the output (i.e. `getResultText()`)
- `$params` contains parameters passed to the ASK-query (`$value = $param[ „param1 “ ]`)

```
{ {#ask: [[Category:Conference]]  
|?Location  
|?Start date  
|?End date  
|param1=value1  
|param2=value2  
}}
```

- Default parameters (defined in `SMWResultPrinter`): `intro`, `outro`, `searchlabel`, `link`, `default`, `headers`
  - Call `SMWResultPrinter::readParameters($param, $outputmode)` to reuse in your code

# HANDS-ON EXAMPLE

# Create a new Result Printer to label links to wiki pages

1. Create new result printer file
2. Add `readParameters()` method
3. Add `getResultText()` method
4. Configure in `LocalSettings.php`

# Create new php file SRF\_MyPrinter.php

```
<?php
/**
 * @note AUTOLOADED
 */

if( !defined( 'MEDIAWIKI' ) ) {
    die( 'Not an entry point.' );
}

class SRFMyPrinter extends SMWResultPrinter {
    $m_outputtype='';

    protected function readParameters($params, $outputmode) {
        SMWResultPrinter::readParameters($params,$outputmode);
    }

    protected function getResultText($res, $outputmode) {
        $result = '';
        return $result;
    }
}
```



# Method readParameters()

- Look for parameter 'outputtype'
- Set variable `$this->m_outputtype` with parameter value

```
{ {#ask: [[Category:Conference]]  
|?Location  
|?Start date  
|?End date  
|format=myresultformat  
|outputtype=upper  
}}
```

```
protected function readParameters($params, $outputmode) {  
  
    SMWResultPrinter::readParameters($params, $outputmode);  
  
    if (array_key_exists('outputtype', $this->m_params)) {  
  
        $this->m_outputtype = trim($this->m_params['outputtype']);  
  
    }  
  
}
```

# Method getResultText()

```
protected function getResultText($res, $outputmode) {
    $result = '';
    $this->isHTML = true;
    $row = $res->getNext();
    while ( $row !== false ) {
        $wikipage = $row[0]->getResultSubject(); // get the object
        $subject = $wikipage->getLongWikiText();
        $label='';
        foreach ($row as $field) {
            $req = $field->getPrintRequest();
            if ( (strtolower($req->getLabel()) == "haslabel") ) {
                $value = current($field->getContent()); //save only the first
                if ($value !== false) $label = $value->getShortWikiText();
            }
        }
        if ($label=="") $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()->getFullURL();
        if ($this->m_outputtype=='upper') $label = strtoupper($label);
        $result .= '>' . $label . '</a>, ';
        $row = $res->getNext();
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```

# Method getResultText() - in detail

- If set, treat result as plain HTML
- This setting is used only after the result text was generated

```
protected function getResultText($res, $outputmode)
{
    $result = '';
    $this->isHTML = true;
    $row = $res->getNext();
    while ( $row !== false ) {
        $wikipage = $row[0]->getResultSubject(); // get
        $subject = $wikipage->getLongWikiText();
        $label='';
        foreach ($row as $field) {
            $req = $field->getPrintRequest();
            if ( (strtolower($req->getLabel()) == "hasla
                $value = current($field->getContent()); //
                if ($value !== false) $label = $value->get
            }
        }
        if ($label=="") $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()-
        if ($this->m_outputtype=='upper') $label = str
        $result .= '>' . $label . '</a>, ';
        $row = $res->getNext();
    }
    if (strlen($result)>2) $result = substr($result,
    return $result;
}
```

# Method getResultText() – in detail

- Row access of result object with while loop

```
protected function getResultText($res, $outputmode) {  
    ...  
    $row = $res->getNext();  
    while ( $row !== false ) {  
        $wikipage = $row[0]->getResultSubject(); // get the object  
        $subject = $wikipage->getLongWikiText();  
        ...  
    }  
    ...  
    $row = $res->getNext();  
}  
    ...  
}
```

# Method getResultText() – in detail

- Get the result subject (object of the first column)
- Get title name (String) of result subject

```
protected function getResultText($res, $outputmode) {  
    ...  
    $row = $res->getNext();  
    while ( $row !== false ) {  
        $wikipage = $row[0]->getResultSubject(); // get the object  
        $subject = $wikipage->getLongWikiText();  
        ...  
    }  
    ...  
    $row = $res->getNext();  
}  
...  
}
```

# Method getResultText() – in detail

- Iterate over row array to get value array of each column

```
protected function getResultText($res, $outputmode) {  
    ...  
    while ( $row !== false ) {  
        ...  
        foreach ($row as $field) {  
            $req = $field->getPrintRequest();  
            if ( (strtolower($req->getLabel()) == "haslabel") ) {  
                $value = current($field->getContent()); //save only the first  
                if ($value !== false) $label = $value->getShortWikiText();  
            }  
        }  
        ...  
    }  
    ...  
}
```

# Method getResultText() – in detail

- Get print request label of a field (column head) and compare it to predefined value “haslabel”

```
protected function getResultText($res, $outputmode) {  
    ...  
    while ( $row !== false ) {  
        ...  
        foreach ($row as $field) {  
            $req = $field->getPrintRequest();  
            if ( (strtolower($req->getLabel()) == "haslabel") ) {  
                $value = current($field->getContent()); //save only the first  
                if ($value !== false) $label = $value->getShortWikiText();  
            }  
        }  
        ...  
    }  
    ...  
}
```

# Method getResultText() – in detail

- Get value(s) of the SMW\_ResultArray

```
protected function getResultText($res, $outputmode) {
    ...
    while ( $row !== false ) {
        ...
        foreach ($row as $field) {
            $req = $field->getPrintRequest();
            if ( (strtolower($req->getLabel()) == "haslabel") ) {
                $value = current($field->getContent()); //save only the first
                if ($value !== false) $label = $value->getShortWikiText();
            }
        }
        ...
    }
    ...
}

// get all values (comma separated)
foreach ($field->getContent() as $value) {
    $label .= ($label?',' : '') . $value->getShortWikiText();
}
```



# Method getResultText()

- If field with heading “haslabel” was not found or empty use subject name

```
protected function getResultText($res, $outputmode) {
    ...
    while ( $row !== false ) {
        ...
        foreach ( $row as $field ) {
            ...
        }
        if ( $label == "" ) $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()->getFullURL();
        if ( $this->m_outputtype == 'upper' ) $label = strtoupper($label);
        $result .= '>' . $label . '</a>, ' ;
        ...
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```

# Method getResultText()

- Get URL of wiki page for link

```
protected function getResultText($res, $outputmode) {
    ...
    while ( $row !== false ) {
        ...
        foreach ( $row as $field ) {
            ...
        }
        if ($label=="") $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()->getFullURL();
        if ($this->m_outputtype=='upper') $label = strtoupper($label);
        $result .= '>' . $label . '</a>, ' ;
        ...
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```

# Method getResultText()

- If value of outputtype equals “upper”, make label string uppercase

```
protected function getResultText($res, $outputmode) {
    ...
    while ( $row !== false ) {
        ...
        foreach ( $row as $field ) {
            ...
        }
        if ( $label=="") $label = $subject;
        $result .= '<a href="'. $wikipedia->getTitle()->getFullURL();
        if ( $this->m_outputtype=='upper') $label = strtoupper($label);
        $result .= '>' . $label . '</a>, ' ;
        ...
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```

# Method getResultText()

- Finish the HTML link and add a comma and a blank
- Remove last comma and blank

```
protected function getResultText($res, $outputmode) {
    ...
    while ( $row !== false ) {
        ...
        foreach ( $row as $field ) {
            ...
        }
        if ( $label=="") $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()->getFullURL();
        if ( $this->m_outputtype=='upper') $label = strtoupper($label);
        $result .= '">' . $label . '</a>, ';
        ...
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```

# Method getResultText()

```
protected function getResultText($res, $outputmode) {
    $result = '';
    $this->isHTML = true;
    $row = $res->getNext();
    while ( $row !== false ) {
        $wikipage = $row[0]->getResultSubject(); // get the object
        $subject = $wikipage->getLongWikiText();
        $label='';
        foreach ($row as $field) {
            $req = $field->getPrintRequest();
            if ( (strtolower($req->getLabel()) == "haslabel") ) {
                $value = current($field->getContent()); //save only the first
                if ($value !== false) $label = $value->getShortWikiText();
            }
        }
        if ($label=="") $label = $subject;
        $result .= '<a href="'. $wikipage->getTitle()->getFullURL();
        if ($this->m_outputtype=='upper') $label = strtoupper($label);
        $result .= '>' . $label . '</a>, ' ;
        $row = $res->getNext();
    }
    if (strlen($result)>2) $result = substr($result, 0, -2);
    return $result;
}
```



# Configure in LocalSettings.php

- Precondition: SMW installed
- Additional result formats typically come as a single PHP file
  - Copy into your MediaWiki path
- Configure in LocalSettings.php (after SRF is included):

```
# Semantic Result Formats Extension must be included before!  
# ...  
$smwgResultFormats['myprinter'] = 'SRFMyPrinter';  
$wgAutoloadClasses['SRFMyPrinter'] = $IP .  
    '/extensions/SemanticResultFormats/MyPrinter/SRF_MyPrinter.php';
```



# Use your new Result Printer

```
{ {#ask: [[Category:Conference]]  
|?has label  
|format=myresultformat  
|outputtype=upper  
}}
```



[page](#) [discussion](#) [edit](#) [history](#)

## Personen

```
{{#ask: [[Category:Person]]  
|?Name=haslabel  
|format=myprinter  
|outputtype=upper  
}}
```

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- <http://www.slideshare.net/hhappel/2010-0710semanticresultformats-v4b> (These slides)
- [http://www.semantic-mediawiki.org/wiki/Help:Inline\\_queries#Result\\_formats](http://www.semantic-mediawiki.org/wiki/Help:Inline_queries#Result_formats)
- [http://www.mediawiki.org/wiki/Extension:Semantic\\_Result\\_Formats](http://www.mediawiki.org/wiki/Extension:Semantic_Result_Formats)
- [http://www.mediawiki.org/wiki/Extension:Semantic\\_Maps](http://www.mediawiki.org/wiki/Extension:Semantic_Maps)



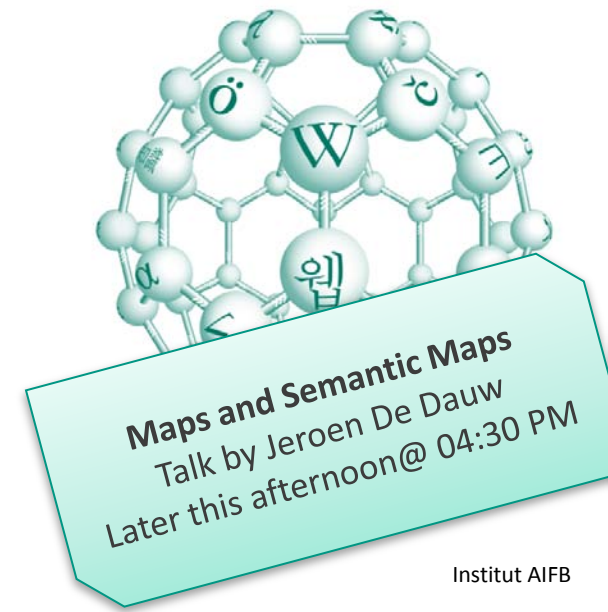
# Summary



- Semantic Result Formats allow for easy export & visualization of semantic data from SMW



- Feed the SMW ecosystem and your own Semantic Result Format!



# SRF\_MyPrinter.php (for copy/paste)

```
<?php/** * Print query results in interactive timelines. * @author Frank Dengler
* @author Hans-Joerg Happel * @file * @ingroup SemanticResultFormats */** *
Result printer for labeling links to wiki pages. * @ingroup SemanticResultFormats
*/if( !defined( 'MEDIAWIKI' ) ) { die( 'Not an entry point.' );}class
SRFMyPrinter extends SMWResultPrinter { protected $m_outputtype=''; protected
function readParameters($params, $outputmode) {
SMWResultPrinter::readParameters($params,$outputmode); if
(array_key_exists('outputtype', $this->m_params)) { $this->m_outputtype =
trim($this->m_params['outputtype']); } } protected function
getResultText($res, $outputmode) { $result = ''; $this->isHTML = true;
$row = $res->getNext(); while ( $row !== false ) {
$wikipage = $row[0]->getResultSubject(); // get the object $subject =
$wikipage->getLongWikiText(); $label=''; foreach ($row as $field) {
$req = $field->getPrintRequest(); if ( (strtolower($req->getLabel()) ==
"haslabel") ) {
$value = current($field->getContent()); //save
only the first if ($value !== false) $label = $value-
>getShortWikiText(); } } if ($label=="")
$label = $subject; $result .= '<a href="'. $wikipage->getTitle()-
>getFullURL(); if ($this->m_outputtype=='upper') $label =
strtoupper($label); $result .= '>' . $label . '</a>, ' ; $row = $res-
>getNext(); } if (strlen($result)>2) substr($result, 0, -2);
return $result; }}
```