How to reuse knowledge from a Semantic MediaWiki in your own applications and websites

(in lack of a shorter title)

Tutorial

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AIFB, University of Karlsruhe

Agenda

- What's this Semantic Web stuff, anyway?
- Wow, cool, but *why* should I use it?
- Ah, I see, but *how* do I use it?
- Neat! May I try?
- Err… do you have time for questions?

What’s this Semantic Web stuff?

It’s about cool web resources

The Beautiful South

(founded 1989) Type: Group
Beautiful South, The

Info: [Link to this | Details | Aliases | Releases | Similar artists | Search Google]

Edit: [Log in to edit this]

The Beautiful South:

- has a MusicMoz page at http://musicmoz.org/Bands_and_Artists/B/Beautifu... [info]
- has a Wikipedia page at en: The Beautiful South [info]
- has/had member(s) **Dave Hemingway**, **Dave Rotheray** and **Paul Heaton**

3 relationships not shown. View all relationships...

[View relationships | Edit]

Yellow highlights indicate pending changes.

Change to full listing — Showing **album, EP, single, comp. releases**. Show **all releases**

Albums

11	4	138 TRM	16 PUID:	Official	1989	-	Welcome to the Beautiful South
11	3	55 TRM	12 PUID:	Official	1990	-	Choke
12	1	58 TRM	19 PUID:	Official	1990	-	Choke
12	3	135 TRM	16 PUID:	Official	1992-04	-	0898
12	2	81 TRM	13 PUID:	Official	1994	-	Miaow
12	3	200 TRM	17 PUID:	Official	1996	-	Blue is the Colour

Inosensu: Kôkaku kidôtai (2004)

watch the trailer

Directed by
Mamoru Oshii

Writing credits
Masamune Shirow (comic Koukaku-Kidoutai)
Mamoru Oshii (screenplay)

Add to MyMovies | Photo Gallery | IMDbPro Details

Photo Gallery (30 photos)

more

Genre: Action / Animation / Drama / Sci-Fi / Thriller / Fantasy (more)

Tagline: Sore wa inotchi innosensu ('Innocence is Life') (more)

Plot Outline: In the year 2032, Batô, a cyborg detective for the anti-terrorist unit Public Security Section 9, inve of a female robot--one created solely for sexual pleasure--who slaughtered her owner. (more) (view trailer)

User Comments: Beautiful, but not for everyone. (more)

IMCDB
INTERNET MOVIE CARS DATABASE

Last completed movie pages

Knight Rider, Sandra: One More Night, Re-Flex: The Politics of Dancing, The Avengers, Top Gear, Cosa de brujas, Hill Street Blues, The Worlds Greatest Rally Cars, Julie Lescaut, OMD: La Femme Accident, Polizeiruf 110 - Der Riss, Jeff Lynne: Video, Heaven 17: This is Mine, Tatort - Rechnung ohne Wirt, Icon, (more...)

Advertising

Dodge Charger
All-New 2006 Dodge® Charger - Equip & Price Online Now. Find a Dealer!

2006 Pontiac
Dealers Reveal Secret Formula

Ads by Google

Aston Martin in movies and TV series

Aston Martin AMV8 Concept in Top Gear, 1978-2006 ★

1951 Aston Martin DB2 in The Fast and the Furious, 1954 ★★★

Aston Martin DB2/4 in Danger Man, 1960-1961 ★★★

Aston Martin DB2/4 in Checkpoint, 1956 ★★★

1954 Aston Martin DB2 Checkpoint, 1956 ★★

1954 Aston Martin DB2/4 MkI in The Birds, 1963 ★★★

1959 Aston Martin DB2/4 MkIII in Danger Man, 1960-1961 ★★★

Aston Martin DB3S in Checkpoint, 1956 ★★★★

Aston Martin DB3S in Checkpoint, 1956 ★★★

Aston Martin DB4 in Th Death of Peter Sellers ★★★

No image to display

Click for details and comments about this vehicle

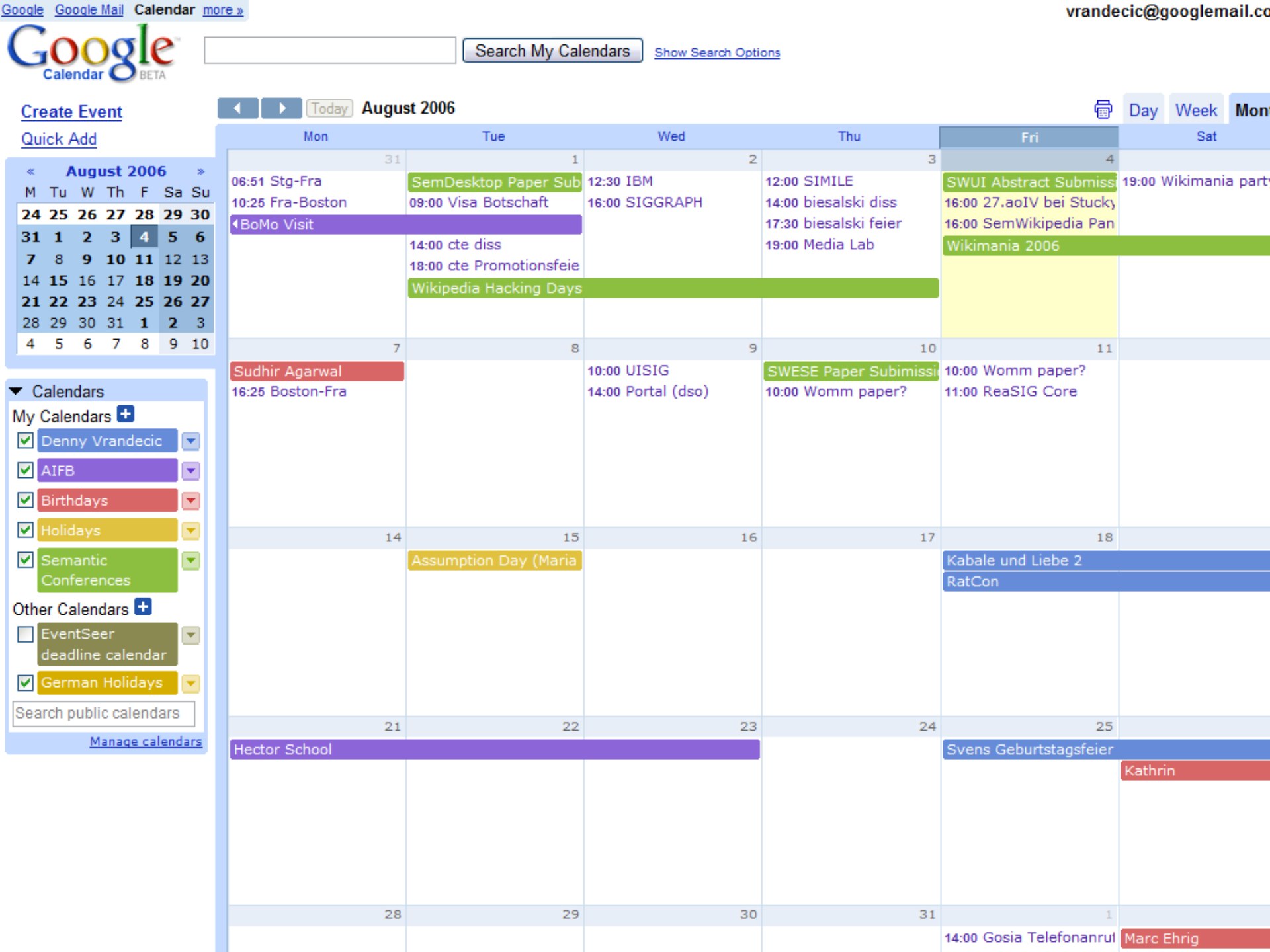
Aston Martin DB4 in Phaedra, 1962

Aston Martin DB4 in The

Aston Martin DB4 in How to Get

1960 Aston Martin DB4 in Janis et

1960 Aston Martin DB4


Google Google Mail Calendar more »
vrandecic@googlemail.co
Google Calendar BETA
Search My Calendars
Show Search Options
Create Event
Quick Add
« August 2006 »
M Tu W Th F Sa Su
24 25 26 27 28 29 30
31 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31 1 2 3
4 5 6 7 8 9 10
Calendars
My Calendars
Denny Vrandecic
AIFB
Birthdays
Holidays
Semantic Conferences
Other Calendars
EventSeer deadline calendar
German Holidays
Search public calendars
Manage calendars
Today
August 2006
Day
Week
Mon
Mon
Tue
Wed
Thu
Fri
Sat
31
06:51 Stg-Fra
10:25 Fra-Boston
BoMo Visit
1
SemDesktop Paper Sub
09:00 Visa Botschaft
14:00 cte diss
18:00 cte Promotionsfeie
Wikipedia Hacking Days
2
12:30 IBM
16:00 SIGGRAPH
3
12:00 SIMILE
14:00 biesalski diss
17:30 biesalski feier
19:00 Media Lab
4
SWUI Abstract Submiss
16:00 27.aoIV bei Stucky
16:00 SemWikipedia Pan
Wikimania 2006
19:00 Wikimania party
7
Sudhir Agarwal
16:25 Boston-Fra
8
9
10:00 UISIG
14:00 Portal (dso)
10
SWESE Paper Subimissi
10:00 Womm paper?
11
10:00 Womm paper?
11:00 ReaSIG Core
14
15
Assumption Day (Maria
16
17
18
Kabale und Liebe 2
RatCon
21
Hector School
22
23
24
25
Svens Geburtstagsfeier
Kathrin
28
29
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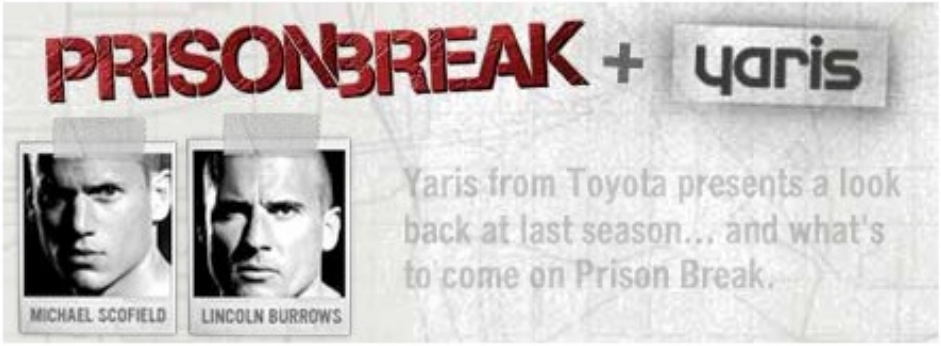
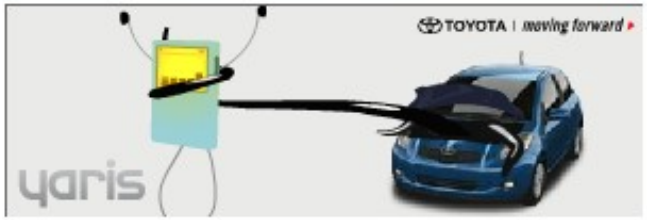
1
14:00 Gosia Telefonanrul
Marc Ehrig

Books NEW! Chat Rooms Games Music Videos
Blogs Comedy NEW! Horoscopes MySpaceIM NEW!
Careers Filmmakers Movies NEW! Schools





MySpace Music

[more music]

Slayer

Metal / Thrash / Hardcore
California

EXCLUSIVE

Slayer's back with another punishing CD, cheerfully dubbed *Christ Illusion*. Listen to the whole album before it's released on August 8, exclusively on Myspace! » **Listen Now**

MySpace Specials

MySpace Secret Shows

Sign up with MySpace Secret shows now! You'll always be the first to know about secret shows by your favorite bands in your hometown. Trust us, you'll wanna be there.
» **Check it out!**

Member Login

E-Mail:

Password:

Remember Me

LOGIN SIGN UP!

Forgot your password?

Cool New People

Duncan

Scott

Kylee

Videos

presented by: cingular raising the bar

[more videos]

Artist on Artist: Zach Braff and Kevin Smith

Two great directors, Zach Braff and Kevin Smith, in L.A., discussing eachothers careers, Kevin also talks about how addicted he is to Myspace

WIKIPEDIA
The Free Encyclopedia

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- Contact Wikipedia
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- Upload file
- Special pages
- Printable version
- Permanent link
- Cite this article

in other languages
- Български
- Deutsch
- Español
- Français
- Nederlands

Sex toy

From Wikipedia, the free encyclopedia

'''Marital aid''' redirects here. For the Yes, Dear episode, see Marital Aid.

A **sex toy** is any object or device that is primarily used in facilitating human sexual pleasure. This term can also include BDSM a
are designed to resemble human genitals and can be classified as vibrating or non-vibrating. Sex toys usually do not include con

A related "softer" term is **adult toy**. Another related term is **marital aid**, often used as a euphemism for sex toys, although *mar*
to drugs and herbs marketed as supposedly enhancing or prolonging sex.

Contents [hide]

1 Legal issues
2 Types of sex toys
  2.1 Male and female
  2.2 Penile toys
  2.3 Vaginal / Clitoral stimulation
3 Medical devices sometimes used as sex toys
4 Flesh-like materials used in sex toys
5 References and further reading
6 External Links
7 See also

Legal issues

In many areas, such as some U.S. Southern states, the sale of sex toys is either regulated or prohibited, though enforcement is
books and these laws prohibiting or regulating "obscene devices" occasionally take center stage. As recently as 1999, an assist
commenting on a case involving sex toys and discussing to what end the devices are used was quoted as saying there is no "fu
to produce orgasm". It is also common practice for someone to move a motor home near a proposed sex shop[*citation needed*] as
opening where the law prohibits an "adult" establishment within a certain distance of a dwelling.

Types of sex toys

ウィキペディア
フリー百科事典

ナビゲーション
- メインページ
- コミュニティ・ポータル
- 最近の出来事
- 最近更新したページ
- おまかせ表示
- アップロード（ウィキメディア・コモンズ）

ヘルプ
- ヘルプ
- 井戸端
- 連絡先
- バグの報告
- 寄付

検索
表示 検索

ツールボックス
- リンク元
- リンク先の更新状況
- アップロード
- 特別ページ
- 印刷用バージョン
- この版への固定リンク
- この項目を引用

他の言語

大人のおもちゃ

出典: フリー百科事典『ウィキペディア（Wikipedia）』

医療情報に関する注意: ウィキペディアは百科事典であり、一般的な説明をするにとどまります。ご自身の健康
談してください。

18 ***注意**: この項目には性風俗営業等に関する記述があります。年齢その他の理由で情報入手に法的制約のある方
い。*

大人のおもちゃ（おとなのおもちゃ）は、人間の性的欲望を満たす目的で作られる工業製品である。**性具**（せいぐ）、**愛**

目次 [表示]

概要

これら用具は生殖器や肉体を刺激する事で、性的な快楽を得るための物である。

マスターベーション（オナニー）用の物や特殊な性癖に特化した物もあるが、使用法によっては性機能障害や不感症の
補助的に使用される事もある。

その用途上、18歳未満の人が購入する事は道徳上で公序良俗に反すると考えられているため、その販売に関しては
制の上で制限が設けられている。

これら器具類は大別して

- 男性が一人で楽しむ物
- 女性が一人で楽しむ物（または複数の女性が同時に楽しむ物）
- 男性が女性に性的刺激を与えるために使用する物
- 女性が男性に性的刺激を与えるために使用する物
- 男女が性交時に同時に使用して、性的快感を強める物
- 特殊な性癖を満足させるために用いられる物

How does the data integrate?

It’s easy!

- Write a spider
- Screengrab the text
- Mine the information with regexps
- Do this for every different page
- Combine the data in your app
- Rewrite when page layout changes
- Test with different pages
- Hope that it usually works

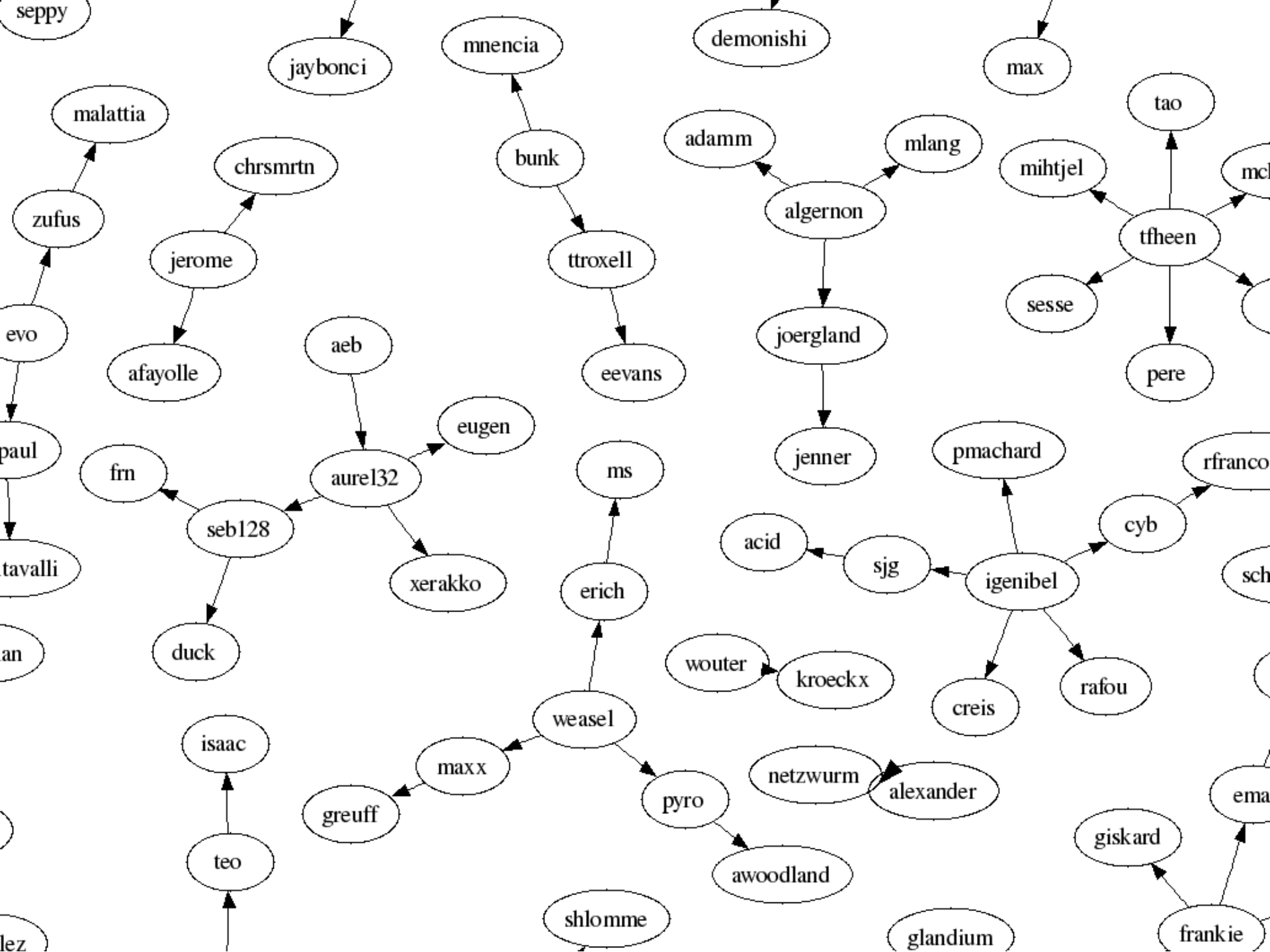
That’s easy?

No, but it’s the only way

Besides the Semantic Web

The Semantic Web

- Data format standard: RDF
- RDF describes graphs
- A web of data


seppy
jaybonci
mnencia
demonishi
max
malattia
chrsmrtn
bunk
adamm
mlang
tao
mihtjel
zufus
jerome
ttroxell
algernon
tfheen
sesse
evo
afayolle
aeb
eevans
joergland
pere
paul
eugen
frn
aurel32
ms
pmachard
rfranco
jenner
seb128
cyb
acid
sjg
igenibel
tavalli
xerakko
erich
duck
wouter
kroeckx
creis
rafou
weasel
isaac
maxx
netzwurm
alexander
greuff
pyro
giskard
teo
awoodland
shlomme
glandium
frankie

The Semantic Web

- Data format standard: RDF
- RDF describes graphs
- A web of data

- RDF is for databases what HTML is to Hypertext
- Global interoperability of the data

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE rdf:RDF[
        <!ENTITY rdf 'http://www.w3.org/1999/02/22-rdf-syntax-ns#'>
        <!ENTITY rdfs 'http://www.w3.org/2000/01/rdf-schema#'>
        <!ENTITY owl 'http://www.w3.org/2002/07/owl#'>
        <!ENTITY smw 'http://smw.ontoware.org/2005/smw#'>
        <!ENTITY smwdt 'http://smw.ontoware.org/2005/smw-datatype#'>
        <!ENTITY wiki 'http://wiki.ontoworld.org/index.php/'>
        <!ENTITY thing 'http://wiki.ontoworld.org/index.php/_'>
        <!ENTITY relation 'http://wiki.ontoworld.org/index.php/_Relation-3A'>
        <!ENTITY attribute 'http://wiki.ontoworld.org/index.php/_Attribute-3A'>
        <!ENTITY wikiurl 'http://ontoworld.org/index.php/'>
]>

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        xmlns:rdfs="&rdfs;"
        xmlns:owl ="&owl;"
        xmlns:smw="&smw;"
        xmlns:wiki="&wiki;"
        xmlns:thing="&thing;"
        xmlns:relation="&relation;"
        xmlns:attribute="&attribute;">
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        </owl:AnnotationProperty>
        <owl:AnnotationProperty rdf:about="&smw;hastype">
                <rdfs:isDefinedBy rdf:resource="http://smw.ontoware.org/2005/smw"/>
        </owl:AnnotationProperty>
        <owl:Class rdf:about="&smw;Thing">
                <rdfs:isDefinedBy rdf:resource="http://smw.ontoware.org/2005/smw"/>
        </owl:Class>
        <!-- exported page data -->
        <smw:Thing rdf:about="&thing;Angola">
                <rdfs:label>Angola</rdfs:label>
```
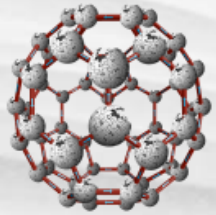

So, what about MediaWiki?

- Semantic MediaWiki extension
- Grab sf.net/projects/semediawiki
- Install it (easy)
- Or go to ontoworld.org



navigation

- Main Page
- People
- Events
- Help
- Simple Semantic Search
- Recent changes

search

Go Search

toolbox

- What links here
- Related changes
- Special pages
- Printable version
- Permanent link

Angola

This article, or parts of this article, has been imported from the english Wikipedia

Angola is a country in south-central Africa bordering Namibia, the Democratic Republic of the Congo, and Zambia, and with a west coast along the Atlantic Ocean. The exclave province Cabinda has a border with Congo-Brazzaville. A former Portuguese colony, it has considerable natural resources, among which oil and diamonds are the most relevant. The country is nominally a democracy and is formally named the **Republic of Angola** (Portuguese: *República de Angola*, pron. IPA: [ʁɛ.'pu.βli.kɐ dɨ ɐ̃.'ɣɔ.lɐ]).

República de Angola
Republic of Angola

Anthem: *Angola Avante!*
(Portuguese: "Forward Angola!")

Capital	Luanda 8°50'S 13°20'E
Largest city	Luanda
Official language(s)	Portuguese
Government	Multi-party democracy
Area	
- Total	1,246,700 km² (23rd) 481,354 sq mi
- Water (%)	Negligible
Population	
- 2005 est.	15,941,000 (countries by population|61st)
- Density	13/km² (199th) 34/sq mi
GDP (PPP)	2003 estimate
- Total	$43,362 million (82nd)
- Per capita	$2,813 (126th)
HDI (2003)	0.445 (160th) – low
Currency	Kwanza (AOA)
Time zone	CET (UTC+1)
- Summer (DST)	not observed (UTC+1)
Internet TLD	.ao
Calling code	+244

Facts about Angola — Click + to find similar pages. View as RDF

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE rdf:RDF[
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        <!ENTITY rdfs 'http://www.w3.org/2000/01/rdf-schema#'>
        <!ENTITY owl 'http://www.w3.org/2002/07/owl#'>
        <!ENTITY smw 'http://smw.ontoware.org/2005/smw#'>
        <!ENTITY smwdt 'http://smw.ontoware.org/2005/smw-datatype#'>
        <!ENTITY wiki 'http://wiki.ontoworld.org/index.php/'>
        <!ENTITY thing 'http://wiki.ontoworld.org/index.php/_'>
        <!ENTITY relation 'http://wiki.ontoworld.org/index.php/_Relation-3A'>
        <!ENTITY attribute 'http://wiki.ontoworld.org/index.php/_Attribute-3A'>
        <!ENTITY wikiurl 'http://ontoworld.org/index.php/'>
]>

<rdf:RDF
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        xmlns:rdfs="&rdfs;"
        xmlns:owl ="&owl;"
        xmlns:smw="&smw;"
        xmlns:wiki="&wiki;"
        xmlns:thing="&thing;"
        xmlns:relation="&relation;"
        xmlns:attribute="&attribute;">
        <!-- reference to the Semantic MediaWiki schema -->
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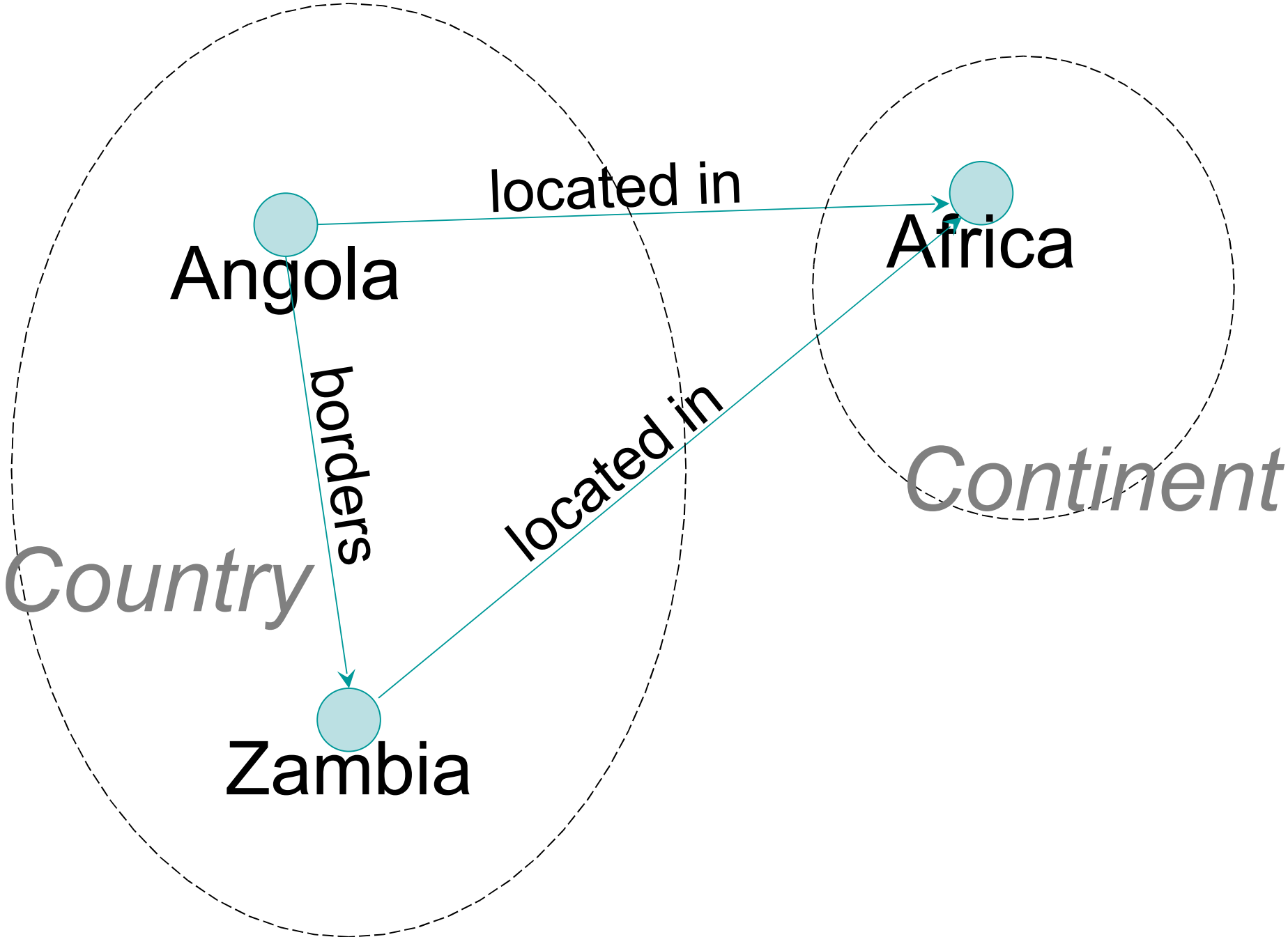
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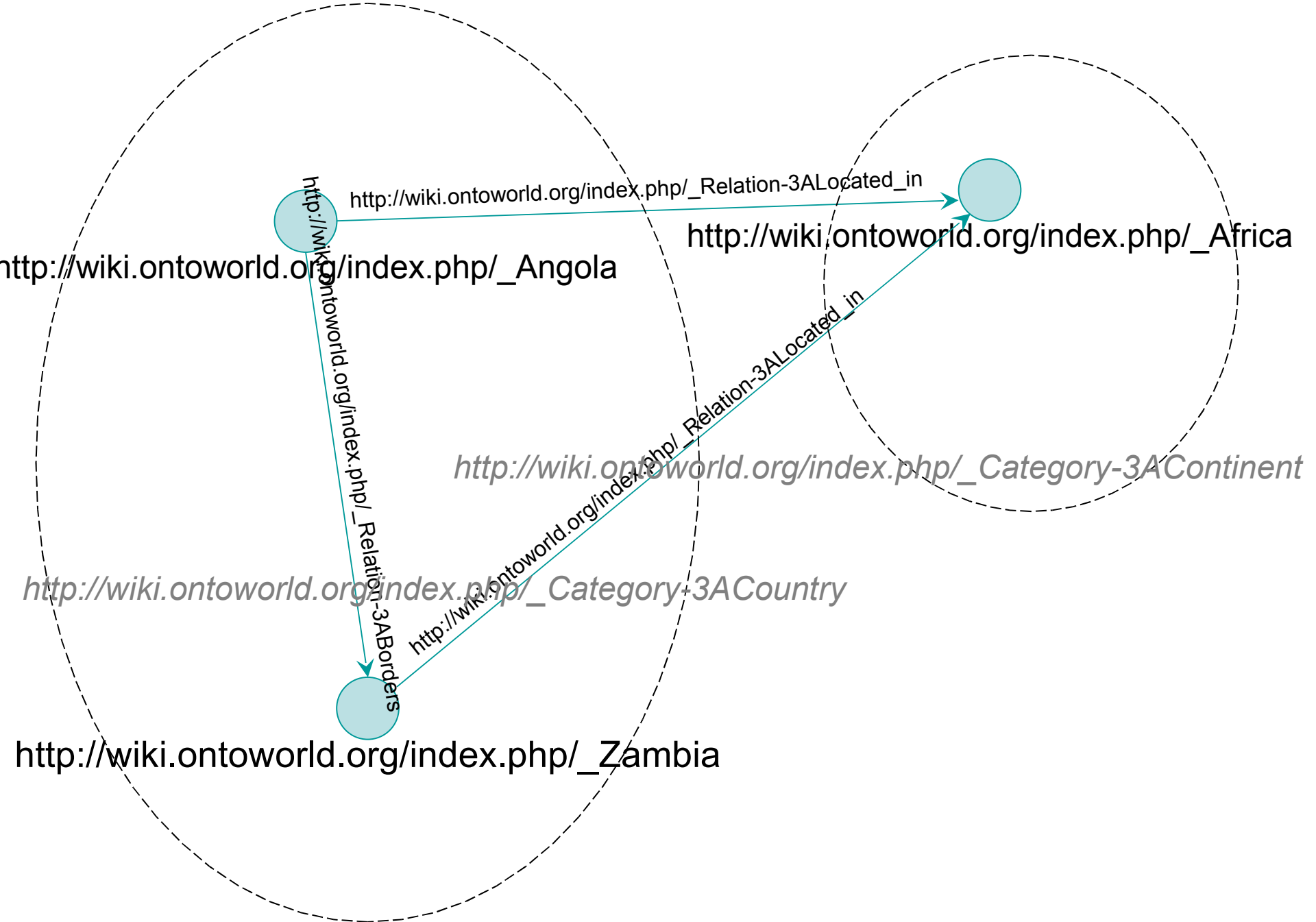
Angola
Africa
borders
located in
Continent
Country
Zambia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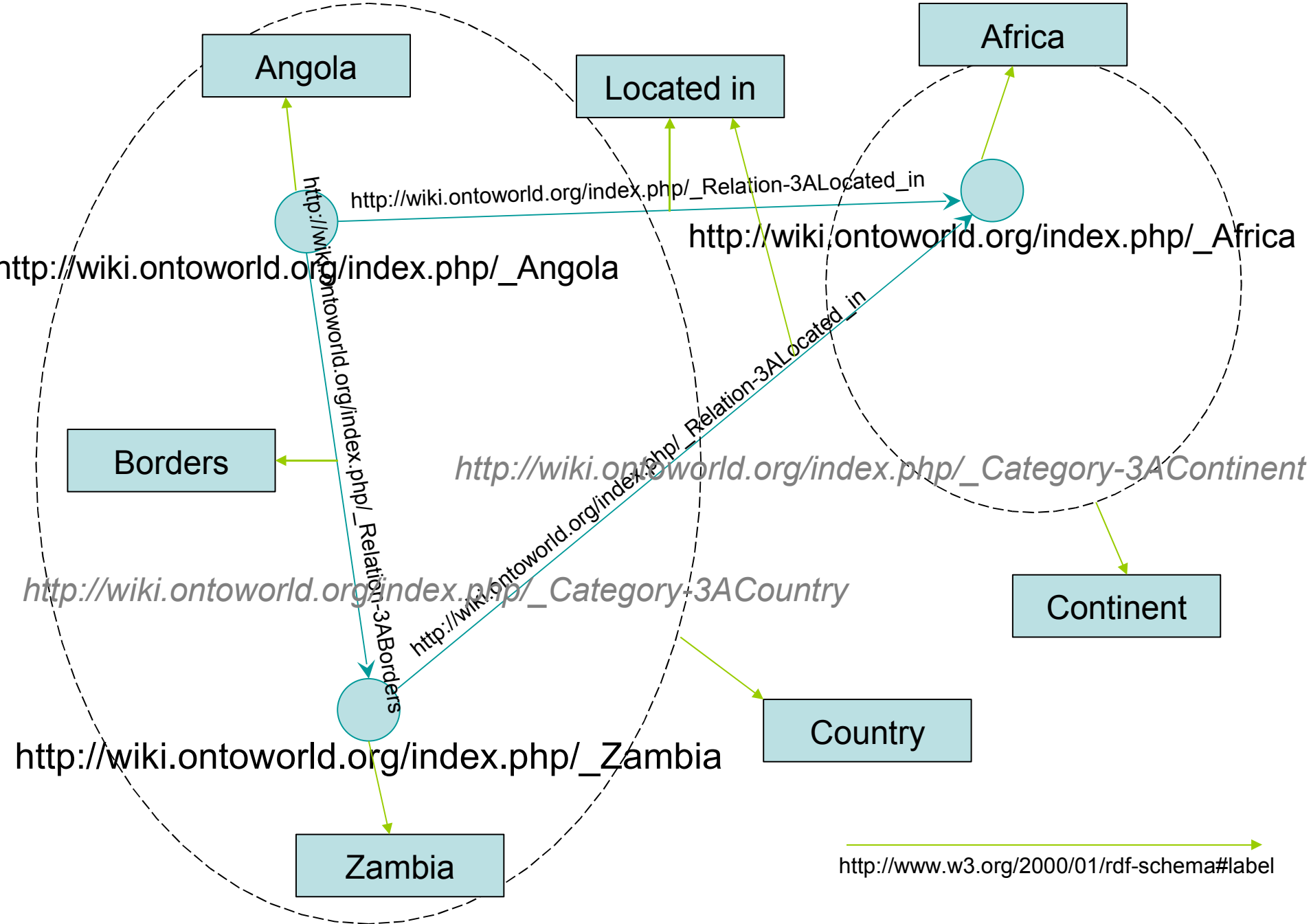
Angola
Located in
Africa
http://wiki.ontoworld.org/index.php/_Relation-3ALocated_in
http://wiki.ontoworld.org/index.php/_Angola
http://wiki.ontoworld.org/index.php/_Africa
Borders
http://wiki.ontoworld.org/index.php/_Category-3AContinent
http://wiki.ontoworld.org/index.php/_Relation-3ALocated_in
http://wiki.ontoworld.org/index.php/_Relation-3ABorders
http://wiki.ontoworld.org/index.php/_Category-3ACountry
Continent
Country
http://wiki.ontoworld.org/index.php/_Zambia
Zambia
http://www.w3.org/2000/01/rdf-schema#label

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xmlns:attribute="&attribute;">
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        <relation:Borders rdf:resource="&thing;Central_African_Republic"/>
        <relation:Borders rdf:resource="&thing;Gabon"/>
        <relation:Borders rdf:resource="&thing;Cameroon"/>
```

And this *is* easy!

```
import SemanticMediaWiki

ow = SemanticMediaWiki.SMW(
"http://ontoworld.org/index.php/Special:ExportRDF/",
"http://wiki.ontoworld.org/index.php/_")

country = ow.load("Angola")
print country
print country.located_in

bordered = country.borders

print len(bordered)
for b in bordered: print b
```

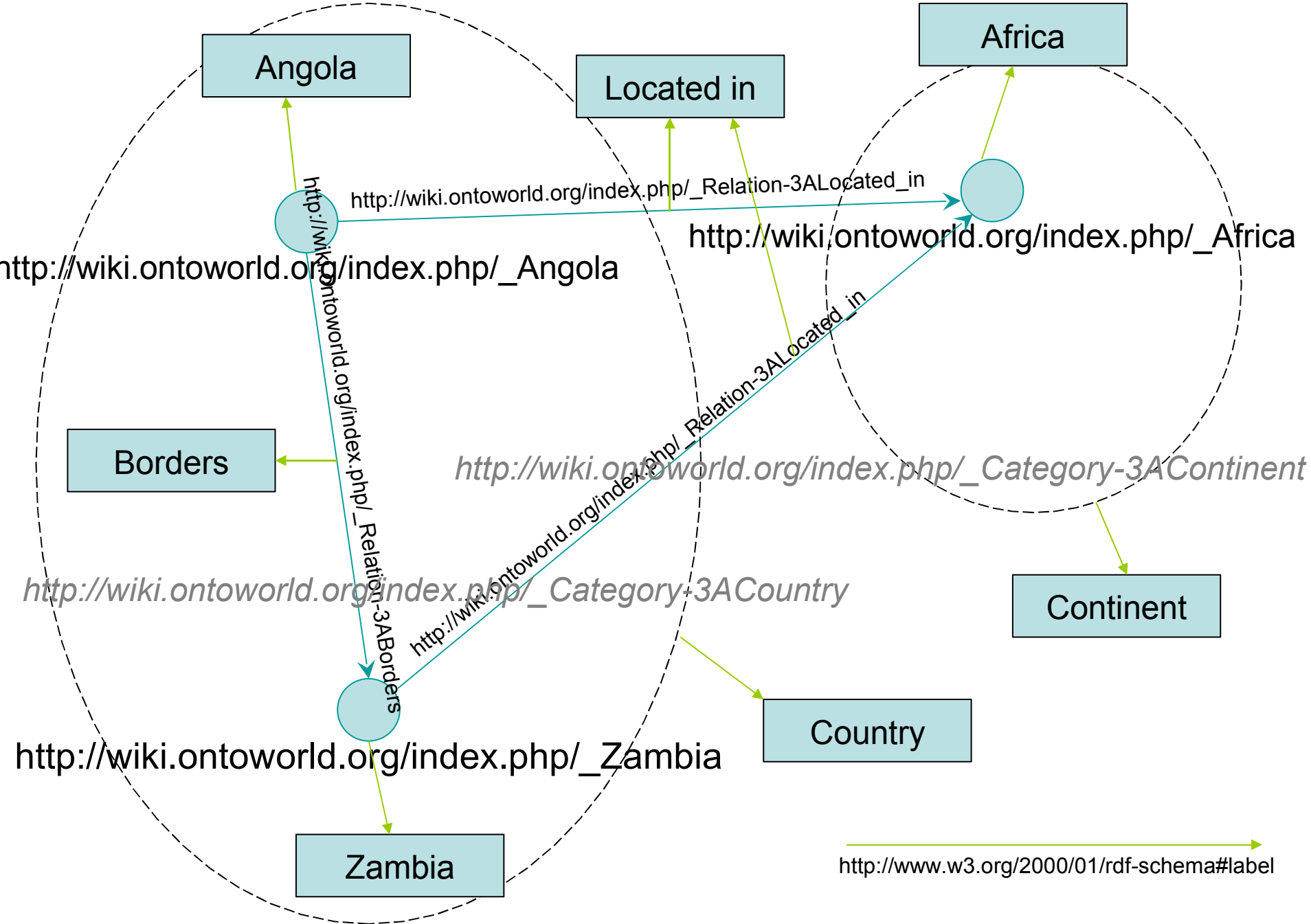
So, this is only for Python?

- No, RDF is an open standard (W3C)
- Java
- JavaScript
- C
- C++
- Haskell
- Common Lisp
- Perl
- Pike
- Prolog
- Ruby
- .Net / Mono
- PHP

SPARQL : RDF Query Lang

```
PREFIX rdfs:
  <http://www.w3.org/2000/01/rdf-schema#>
PREFIX thing:
  <http://wiki.ontoworld.org/index.php/_>
PREFIX relation:
  <http://wiki.ontoworld.org/index.php/_Relation-3A>

SELECT ?label
WHERE {
   thing:Angola relation:Located_in ?c .
   ?c rdfs:label ?label
}
```


Angola
Located in
Africa
http://wiki.ontoworld.org/index.php/_Relation-3ALocated_in
http://wiki.ontoworld.org/index.php/_Angola
http://wiki.ontoworld.org/index.php/_Africa
Borders
http://wiki.ontoworld.org/index.php/_Category-3AContinent
http://wiki.ontoworld.org/index.php/_Relation-3ALocated_in
http://wiki.ontoworld.org/index.php/_Relation-3ABorders
http://wiki.ontoworld.org/index.php/_Category-3ACountry
Continent
Country
http://wiki.ontoworld.org/index.php/_Zambia
Zambia
http://www.w3.org/2000/01/rdf-schema#label

```
<html>
 <body>
  Angola is in
  <?php
   define("RDFAPI_INCLUDE_DIR", "path/api/");
   include(RDFAPI_INCLUDE_DIR . "RDFAPI.php");

   $model = ModelFactory::getDefaultModel();
   $model->load("full URI/ExportRDF/Angola");
   $result = $model->sparqlQuery('SPARQL');
   $value = $result[0]['?label'];
   echo $value->getLabel();
  ?>
 </body>
</html>
```

Off the shelf tools

- Lots of tools use RDF
- To visualize, browse, explore, query…
- Usually Open Source
- Can be used to learn how to program
- Demo of Longwell

Let’s play!

Python:

- Get RDFLib from rdflib.net
- Ask me for SMW lib

PHP:

- Get RAP from www.wiwiss.fu-berlin.de/suhl/bizer/rdfapi

Times for question!