



WORLD WIDE WEB  
*c o n s o r t i u m*®  
Australian Office

# *Introduction and Applications of the Semantic Web*

*Ivan Herman, W3C*

*May 2009*

***Let's organize a trip to Budapest from  
Amsterdam using the Web!***

***You try to find a proper flight with ...***

# ... a big, reputable airline, or ...

Book flights - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.klm.com/travel/nl\_nl/apps/ebt/ebt\_home.htm

Stel hier uw vraag (in me ?)

**KLM** Royal Dutch Airlines **nwa**

Book flights You are not logged in

1 Vlucht zoeken 2 Datum kiezen 3 Tijd kiezen 4 Uw gegevens 5 Bekijken & betalen

Contact KLM Service Center

E-mail een vriend(in) Print deze pagina

**Kies uw heen- en terugvlucht.**

Vertrek: Amsterdam (Schiphol) naar Boedapest (Ferihegy Airport)

☒ Alleen vluchten gebaseerd op Alleen de beste verbindingen (10 van 13)

☐ Alleen rechtstreekse vluchten tonen (5 van 13)

☐ Laagste tarieven (9 van 13)

☐ Alle vluchten (13)

Kies	Prijs	Vertrek	Aankomst	Vlucht
<b>Rechtstreekse vluchten</b>				
<input checked="" type="radio"/>	300	10:00 Vr 15 Aug 08 Amsterdam (Schiphol) Totale reistijd: 2 uren 0 minuten Uitgevoerd door MALEV Hungarian Airlines Vliegtuigtype :Boeing 737	12:00 Vr 15 Aug 08 Boedapest (Ferihegy Airport)	KL3201
<input type="radio"/>		12:20 Vr 15 Aug 08 Amsterdam (Schiphol) Totale reistijd: 2 uren 0 minuten Uitgevoerd door MALEV Hungarian Airlines Vliegtuigtype :Boeing 737	14:20 Vr 15 Aug 08 Boedapest (Ferihegy Airport)	KL3203

**Kies tarief**

**Take Off**

RETOUR tarieven per persoon incl. belasting en toeslagen (excl. reserveringskosten)

**Take Off (25% FB Miles)**

300

☒ Geselecteerd

**Take Off**

341

Selecteer

**Take Off (Flexibel)**

383  
455  
537

# ... the airline of the target country, or ...

Review - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://booking.malev.com/BookingSite/Review/Review.aspx

BOOK YOUR TRIP  
FLIGHTS, SCHEDULES  
PREPARE FOR FLIGHT  
FLYING WITH MALEV  
DUNA CLUB  
CUSTOMER CARE  
CORPORATE INFO






**MALEV** Hungarian Airlines  
ONE MORE REASON TO TRAVEL

English

1 Search 2 Select 3 Review 4 Traveller data 5 Purchase 6 Confirmation

### SELECT DELIVERY METHOD


Please select ticket delivery method below!

	Delivery method	Service fee	Address
<input checked="" type="radio"/>	 E-ticket	EUR 10 <a href="#">View service fee breakdown</a>	with e-invoice
<input type="radio"/>	 Airport	EUR 30	KLM ticket office, departure hall 2.
<input type="radio"/>	 Office	EUR 30	KLM ticket office, departure hall 2.
<input type="radio"/>	 Courier		Courier or mail delivery is available only within the country of departure! You will be asked to provide a delivery address on the next page. Please note that in case of courier delivery we will be unable to deliver your ticket(s) to a PO box.
<input type="radio"/>	 Mail	EUR 30	

### FLIGHT SUMMARY

Outbound flight		Return flight	
From:	Amsterdam, Schiphol (AMS), Netherlands	From:	Budapest, Ferihegy 2A (BUD), Hungary
	Budapest, Ferihegy 2A (BUD).	To:	Amsterdam, Schiphol (AMS),

**BOOKING GUIDE**  
Book Cheap!  
Card payment  
About ticket pickup  
If you are not among the travellers  
Online Client Service

  
Check it!

# ... or a low cost one

Online booking | Select Flights - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://wizzair.com/skylights/cgi-bin/skylights.cgi?step=1

**W!ZZ** wizzair.com

new destination from London Luton:  
Timisoara (from 17 December)

online booking useful information destinations travel services partners

important changes regarding checked-in baggages - Please click here for more details...

flights agency login my account search bookings log in

**Book a Flight**

Round Trip One Way

From: Eindhoven

To: Budapest-Terminal 1

Depart: 14 Aug

Return: 03 Sep

Passengers: 1 Adult Over 14 years 0 Child 2 to 14 years

search select contact passengers purchase confirmation

The flights available for the date(s) that you have selected are shown below. Review and select that you wish to purchase by ticking the dot next to the fare price or use the form to the left ha search for new flights. All times are local.

Fares shown below are for one way flights and per adult, child and infant. The total price includes the taxes and the charges. Payments made with debit and credit cards are subject to a payment Click here to find out the exact amount. The fee depends on the type of card that you wish to u payment.

going out ✈

Eindhoven » Budapest-Terminal 1

date	fareclass	flight	departs	arrives		price excluding tax	taxes and charges
Fri 15 Aug 08	Web	W6 228	13:25	15:20	<input type="radio"/>	Adult 94.99 EUR	26.00 EUR
Sun 17 Aug 08	Web	W6 228	13:25	15:20	<input type="radio"/>	Adult 73.99 EUR	26.00 EUR

Next Week >

***You have to find a hotel, so you look for...***



# ... a really cheap accommodation, or ...

Hostels - online booking at Youth Hostels and Backpackers Hostels - instant online reservations and reviews with HostelTraveler.co...

File Edit View History Bookmarks Tools Help

http://www.hosteltraveler.com/index.php

**HostelTraveler.com**

Hostel Traveler ... instant online booking for youth hostels, budget hotels and hostelling the globe

Welcome member travelers! [Sign in](#)

[Hostels](#) [Reviews](#) [Best deals](#) [Top Cities](#)

everything for travelers:

[Search Hotels/Cities](#)

[Check Reservations](#)

[Free Membership](#)

**Find Hostels and Lodging at your destinations.**

Look for **IWB** for instant online booking.

[How it Works](#)

[Step 1-Find Lodging](#)

[Step 2-Make Reservations](#)

Secure online hostel booking at worldwide youth hostels, backpackers, and budget hotels.

[Home](#)

[Start Over](#)

[Members](#)

[Lodging Operators](#)

[About this Site](#)

[Selection Status](#)

3 accommodations have been found matching your criteria.

**Select your accommodations and click [Make Reservations](#) for rates, availability, and reservations.**



Click on names to see photos, reviews, and more information.

**Tip:** Click [Instant](#) for rates and instant secure confirmations.

Sort by: ☒ **Price (Lo-Hi)** ☐ Price (Hi-Lo) ☐ Traveler Rating ☐ Hostel Class ☐ Hostel Name

[View Advanced Display Options](#)

**Balaton, Hungary** [Make Reservations](#)

<input type="checkbox"/>	<b>Unity Hostel Balaton</b> Rakoczi Ut 268 Hostel 8 Units <a href="#">Write a Review</a>			From <b>€12</b> 2hours from Budapest,we are located right behind a free beach access to the lake, right opposite a large shopping and dinning court, only few minutes from the best clubs.lots of freebies!!!
--------------------------	---	--	---	--



... or a really luxurious one, or ...

Search Results - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.hilton.com/en/hj/hotels/search/newresults.jhtml?searchType=city&sta

**Hilton**  
Travel should take you places®

Sign in Username or HHonors #: Password or PIN: Register Forgot password? ☐ Remember Me View Text Only Customer Support 1-800-HILTONS

Specials & Packages Reservations Meetings Social Gatherings Hilton HHonors Things to Do eBrochures My Favorites

**Search Results**

**Change Your Search**

**Location**  
City: Budapest  
Search Within: 40 mi km  
State/Province: State / Province  
Country: Hungary

**Brand**  
☒ Hilton Hotels  
☐ All Hilton Family Hotels

**Search Results** Print Help

The following locations matched your request.  
Rates displayed may be non-refundable.  
Please review rate rules and restrictions prior to booking your stay.

Sort by: Brand Show: All Hotels Go View Hotels on a Map >

**Hilton Hotels**

**Hilton Budapest WestEnd** Compare Hotel

Vaci ut 1-3  
Budapest, Hungary, 1062  
36-1-288-5500

Available

# ... an intermediate one ...

Szállás Utazás Magyarországon - Wellness-Szállás, Nyaralás, Utazás, Programok - Magyarországon - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.travelsinhungary.hu/view\_kat.php?katid=1&megye=budapest

TRAVELS IN HUNGARY  
www.travelsinhungary.hu

MAGYAR ENGLISH DEUTSCH

Keresés Az összes kategóriában OK

TÖRZSVENDÉG  
KEDVEZMÉNYEK

REGISZTRÁCIÓ

ELÉRHETŐSÉG

VENDÉGKÖNYV

Szállás (Wellness, Aktív  
pihenés, Gyógyturizmus)

Étterem

Programok, Látnivalók

Szórakozás (Élményfürdők,  
Kalandparkok)

Rendezvényszervezés  
(konferenciák-tréningek)

AJÁNLATOK

**Szálláshely \ Budapest**

Válasszon megyét:  
Válasszon!

Válasszon várost:  
Válasszon!

Ajánlatok száma a kategóriában: 1.

**Airport Hotel Budapest\*\*\*\***

★★★★☆

**SZÁLLÁSHELY**  
**Budapest(Vecsés)**  
Ferihegyi repülőtéri szálloda és konferencia központ  
részletesen...

***oops, that is no good, the page is in Hungarian that almost nobody understands, but...***

# ... this one could work

Bestwestern.com, the World's Largest Hotel Chain - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://book.bestwestern.com/bestwestern/selectHotel.do?ata=00158210

Best Western

Welcome to bestwestern.com®

Customer Service Rewards Program Gift Card Groups & Meetings

My Profile Email or Member#: Password: SIGN-IN Forgot Password Create Password Enroll Now

HOME FIND A HOTEL CHECK RESERVATIONS TRIP PLANNER PROMOTIONS & PROGRAMS PACKAGES

RESERVATIONS HOTEL LOCATIONS BEST WESTERN PREMIER HOTELS NEW HOTELS QUESTIONS & ANSWERS

Hotel Search Results Select Occupancy Select Room Review & Reserve Confirmation

## Find a Hotel - Select Hotel

Page: 1

Modify Your Search:

City: Budapest

Select State or Province: All

Select Country: Hungary

Check-In: 08/15/2008

Check-Out: 09/03/2008

Features & Amenities:

- High Speed Internet
- Complimentary Breakfast

5 Hotels Found within 50 Mi / 80 Km of the Budapest Area

Show: All Hotels By: Distance

Display Currency In:

Show Hotels on a Map

### Best Western Hotel Hungaria

Stay at this 4-star Budapest hotel offering guests deluxe accommodations near some of Budapest's popular attractions and business locations. Visitors... More >

Photo Gallery

Pet Policy

Rákóczi Ut 90,  
Budapest, H-1074, Hungary  
Distance from City Center: 0.86m / 1.38km

Hotel not available on selected dates.

Check Alternate Dates

***Of course, you could decide to trust a specialized site...***



# ... like this one, or...

Create your package from Amsterdam to Budapest (and vicinity) - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.expedia.com/pub/agent.dll?qscr=cmsh&subm=1&CMBTX\_0\_rgnm=Bud

Welcome - Already a member? [My Itineraries](#) | [My Account](#) | [Customer Support](#)

**Expedia** Search Expedia

Home Flights Hotels Cars **Vacation Packages** Cruises Activities DEALS & OFFERS Maps Business Travel Rewards

Start search over

**Change your search**

Departing: 8/18/2008

Returning: 9/3/2008

Star Rating: Show all

Lodging Type: Show All

Name contains:

**Go**

**Change Travelers**

2 Adults  
1 Room

[Change travelers](#)

## Create your package from Amsterdam to Budapest (and vicinity)

**Maps:** [Area map view](#) [Hotel map view](#)

**Hotel amenities:** [Narrow your search](#)

Show hotels in this area:

Budapest (and vicinity) (all areas) **Go**

Not what you're looking for? [Choose a different destination](#)

View packages: 1 - 25 26 - 50 51 - 75 76 - 97 [Previous](#) | [Next](#)

Sort by: ☒ **Expedia Picks** ☐ Price ☐ Hotel Name ☐ City ☐ Star Rating ☐ Traveler Opinion

Avg/person: \$2889	
<p><b>Corinthia Grand Hotel Royal</b></p> <p>Impressive landmark building with imposing Neo-classical façade and soaring glass atrium, set on Pest's busy Erzsébet Avenue, and housing shops, a spa, ... <a href="#">More lodging info</a></p> <p><b>Hotel promotion - Stay 3 Nights and Save 20% on Your Stay!</b></p> <p>★★★★★ Budapest, PEST</p> <p>Executive Double-Executive lounge usage Check in: 8/18/08</p> <p>Includes: Free Wireless Internet, Spa Check out: 9/03/08</p> <p>Credit, Breakfast Buffet</p> <p>Amsterdam (AMS) to Budapest (BUD) Depart: 8/18/08 6:00 PM - 8:00 PM Malev Hungarian Airlines</p>	<p><b>Total:</b> <a href="#">Price details</a> <b>\$5778</b></p> <p><a href="#">Get ThankYou® Points</a></p> <p><b>Traveler Opinion</b> 4.7 out of 5 15+ reviews</p>

**1-800-55**  
Call now for the same great deals plus expert advice



# ... or this one

Budapest Hotels: Read Budapest Hotel Reviews and Compare Prices - TripAdvisor - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.tripadvisor.com/Hotels-g274887-Budapest-Hotels.html

est tourist

My TripAdvisor  
Register Now!

22,582,888 Travelers from 190 Countries Planned Trips Here This Week!

Home Destinations Fun & Games Just For Members

Home → Europe → Hungary → Budapest

## Budapest Hotels

ADD TO MY MAP WRITE A REVIEW EMA

Hotels (272) B&Bs / Inns (24) Specialty Lodging (83)

### Find Hotels Travelers Trust

Check-in: Any date

Check-out: Any date

☒ My dates are flexible

Price: Any Price  U.S. Dollars

Hotel class: Any Class  Adults: 2

Recommended For: All

### Best deals: Budapest hotels

- [Budapest. Boek en bespaar tot 75%.](#)  
Booking.com Geen reserveringskosten!
- [Great Budapest Hotels](#)  
www.Venere.com/Budapest\_Hotels See maps & pics, read book online. Relax and enjoy your stay!
- [Budapest easyHotel Deals](#)  
www.easyHotel.com City Centre from just €15 per night from founder of easyJet
- [Cheap Hotels Budapest](#)  
www.otel.com/BudapestHotels Fantastic rates on Budapest Huge Savings. Instant Confirmation!

[View all deals for Budapest](#)

### Recommended Hotels

(1-20 of 272)

Sort by: Popularity  [next >>](#)

### Free Budapest Guide

Get the best picks for where to eat and play.

[Download pdf](#)

***You may want to know something  
about Budapest; look for some photo-  
graphs...***

# ... on flickr ...

Flickr: Budapest - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.flickr.com/groups/budapest/

Signed in as Ivan Herman Help Sign Out













Home You Organize Contacts Groups Explore

Search this group's pool Search

**Budapest** Share This

Group Pool Discussion 1,418 Members Map Invite Friends

**Group Pool** ( 19,017 items | Add photos or video )

					
NEW From apuc	NEW From André Fromont	NEW From carlogambino	NEW From carlogambino	NEW From Crashbandi	NEW From Crashbandi
					
NEW From Crashbandi	NEW From Crashbandi	NEW From Crashbandi	NEW From Crashbandi	NEW From Crashbandi	NEW From Crashbandi

» More

**Discussion** ( 33 posts | Post a new topic )



# ... on Google ...

budapest - Google Image Search - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://images.google.nl/images?hl=en&q=budapest&btnG=Search+Images&gbv=2

Web Images Maps News Video Gmail more

Sign in

Google

budapest

Moderate SafeSearch is on

Search Images Search the Web Advanced Image Search Preferences

Images Showing: All image sizes

Results 1 - 18 of about 19,900,000 for **budapest** [definition]. (0.25 seconds)

E-mail this photo E-mail.  
**Budapest**  
 550 x 412 - 40k - jpg  
[www.tripadvisor.com](http://www.tripadvisor.com)

**Budapest, Hungary**  
 450 x 338 - 43k - jpg  
[www.transitionsabroad.com](http://www.transitionsabroad.com)

**Budapest looks its most beautiful at ...**  
 1024 x 768 - 161k - jpg  
[web.kvif.bgf.hu](http://web.kvif.bgf.hu)

**Beautiful-Budapest**  
 430 x 320 - 34k - jpg  
[www.budapesthotels.com](http://www.budapesthotels.com)  
 [ More from  
[www.budapesthotels.com](http://www.budapesthotels.com) ]

**Hotel Victoria Budapest**  
 575 x 473 - 92k - jpg  
[www.victoria.hu](http://www.victoria.hu)

**Fly to Budapest and experience one ...**  
 909 x 682 - 347k - jpg  
[www.sterling.dk](http://www.sterling.dk)

**Danube Bridge Elisabeth in Budapest ...**  
 1024 x 768 - 194k - jpg  
[budapest5.freeblog.hu](http://budapest5.freeblog.hu)

**Budapest had 2421831 inhabitants in ...**  
 422 x 425 - 29k - jpg  
[www.squidoo.com](http://www.squidoo.com)

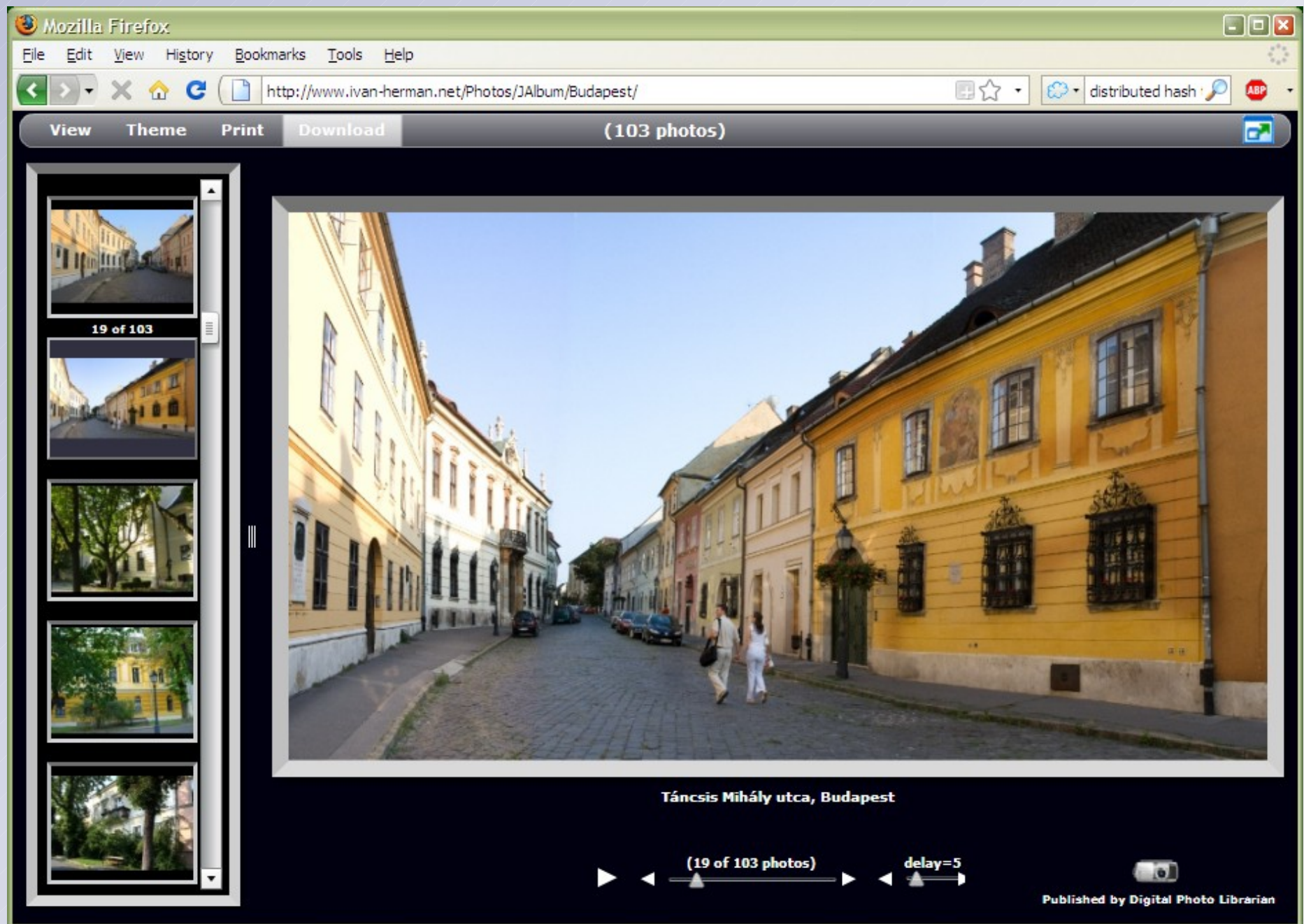
**budapest night**  
 575 x 352 - 206k - jpg  
[www.wayfaring.info](http://www.wayfaring.info)

**Budapest - Things to Do with a Day ...**  
 400 x 300 - 32k - jpg  
[cruises.about.com](http://cruises.about.com)

**Jewish Cultural Heritage in Budapest**  
 452 x 360 - 67k  
[www.budapesthotels.com](http://www.budapesthotels.com)

**Hungary, Budapest, Parliament**  
 640 x 480 - 199k - jpg  
[www.hungary.travelphotoguide.com](http://www.hungary.travelphotoguide.com)

... or you can look at mine 😊





# ...or at a (social) travel site

Budapest Travel Guide | Budapest Tourism - RealTravel - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://realtravel.com/budapest-hungary-travel-guide-d13081-1.html

realtravel™ Real People. Real Advice. Real Experiences.™

Free Travel Blog | Free Trip Planner | Sign

Travel Guides | Hotels | Attractions | Things To Do | Editor's Picks | Deals

Search

You are here: Destinations > Europe > Hungary > Budapest > Travel Guide

**BUDAPEST TRAVEL GUIDE AND TOURISM**

Introduction | **Guides** | Trips | Photos | Flights | Hotels | Restaurants | Attractions | Deals




photo by Taisteal

**Budapest Travel Guide**

This capital city - made up of two parts, Buda and Pest - sits on one of the most beautiful areas of the Danube River and it shows. Often dubbed the "Paris of Eastern Europe", it is a combination of Old World grandeur and a thriving cultural scene. Budapest has a vibrancy and vitality that never slows and the numerous sights can occupy travelers for weeks. With so much history and culture to explore, no traveler leaves unsatisfied.

[more Budapest photos >](#)  
[Destinations near Budapest >](#)

**Price Compare Tool**

Search multiple sites for the best rate in Budapest

[COMPARE FLIGHTS](#)

[COMPARE HOTELS](#)

Travel Guide Information From Our Partners



# *What happened here?*

- You had to consult a large number of sites, all different in style, purpose, possibly language...
- You had to mentally *integrate* all those information to achieve your goals
- We all know that, sometimes, this is a long and tedious process!

- All those pages are only tips of respective icebergs:
  - the real *data* is hidden somewhere in databases, XML files, Excel sheets, ...
  - you have only access to what the Web page designers allow you to see

- Specialized sites (Expedia, TripAdvisor) do a bit more:
  - they gather and combine data from other sources (usually with the approval of the data owners)
  - but they still control how you see those sources
- But sometimes you want to personalize: access the original data and combine it yourself!
- The value is in the *combination* of the data

# Here is another example...

**CoCoDat - Collation of Cortical Data** - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.cocomac.org

CoCoMac DATABASES ORT EXAMPLES

## CoCoDat: Collation of Cortical [microcircuitry] Data

CoCoDat is a microcircuitry database that published experimental reports. The data and cellular compartment), as well as the

- Morphology
- Firing properties
- Ionic currents
- Ionic conductances
- Synaptic currents
- Connectivity

The database is available for download u data tables but also a Search Board with manual or automatic relaxation of the sea

- Brain region
- Layer
- Neuron type

http://www.cocomac.org/cocodat/catalyzer/inc

**Cell Centered Database - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

http://ccdb.ucsd.edu/sand/main?event=gallery&action=show&dpl=y

red database

## Cell Centered Database™ Gallery

National Center for Microscopy and Imaging Research

Data | Search | Gallery | Dictionary | Publications | MyCCDB | Data Download | Contact us | Help

2D image Reconstruction Segmentation Animation

**NeuronDB = Thalamic relay neuron - Overview (A) ()** - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://senselab.med.yale.edu

senselab

## NeuronDB

### Thalamic relay neuron

Back

Mode: **Overview** Data/Search plus Connectivity plus Classical References/Notes Models

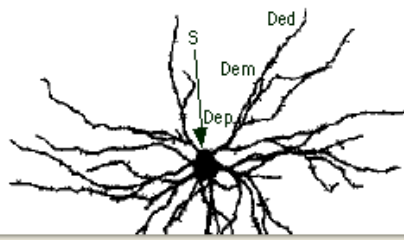
Region: Distal equivalent dendrite Middle equivalent dendrite Proximal equivalent dendrite Soma Axon hillock Axon fiber Axon terminal All Compartments

Properties: Receptors Channels Transmitters **All Properties**

Interoperation: Gene and Chromosome Experimental Data (neurodatabase.org) Microscopy Data (CCDB)

Neuron type: principal

Organism: Vertebrates



1. Equivalent dendrite
2. Distal equivalent dendrite
3. Middle equivalent dendrite
4. Proximal equivalent dendrite
5. Soma

Show other

Show other

Show other

Show other

Show other

Show other

Done

logged out

***Another example: social sites. I have a list of “friends” by...***

# ... Dopplr,

DOPPLR: Ivan Herman's fellow travellers - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.dopplr.com/traveller/IvanHerman/fellows

W easy jet

DOPPLR FOR IVAN

Find and Invite | Your connections | Your trips | Your account | Sign out


Visit our blog for updates

Where Next? { Gent, Boston, Vienna... }

+ Add a trip

Type the name of a city or a traveller

Find people and places



## Welcome, Ivan

In the last 2 weeks,  
one of your fellow travellers added a trip that coincides with you. [Find out more in your journal...](#)

You are at home in [Amsterdam](#).






You can [invite](#) people to Dopplr to see your trips, find them on [other networks](#) you use  
or look for [travellers you already know](#) to encourage more coincidences.

You have a [public profile](#). [Edit it?](#)

You can now create a public profile to display to the whole internet if you want, not just Dopplr users — and take  
any of the information to embed on your own website. [Give it a try!](#)

Your trips | Fellow travellers | Your journal | Your carbon

List or Map

-  Peter Brown is in [Montréal](#) until August 16th. [Boston](#) soon. [Montréal](#) later.
-  Daniel Appelquist is in [Washington](#) until August 23rd. [Aspen](#) soon. [Washington](#) later.
-  Eva Méndez is in [Maraña](#) until August 17th. [Santo Domingo](#) later.
-  Danny Weitzner is in [Bergen](#) until September 5th. [Los Angeles](#) later.
-  Charlton Barreto is in [Vienna](#) until August 18th. [Sacramento](#) soon. [Vienna](#) later.



# ... Twine,

My Connections | Twine - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.twine.com/user/ivanherman/connections

BETA INVITE-ONLY twine

ivanherman Logout Account

Home My Items My Twines My Connections Explore Start a Twine

Search

## My Connections


Search within My Connections...

View All Sort by Most Recent


Refine your view by...

You can also filter by selecting from the following categories.


related twines



Dean Allemang  
at home  
Oakland, CA  
3 Twines | 4 Items  
[Send Message](#) | [Disconnect](#)



David Provost  
Breathing  
Boston  
20 Twines | 15 Items  
[Send Message](#) | [Disconnect](#)




Attila Gardos  
Hungary, Budapest  
9 Twines | 8 Items  
[Send Message](#) | [Disconnect](#)


Connect with People

Invite People to Twine


### Recommended M




jim  
got my  
san fra  
83 Twi



Steve  
Seattle  
38 Twi



James  
living i  
95008  
122 Tw



Chris  
All rea  
Mill Val  
73 Twi

# ... LinkedIn,

LinkedIn: My Contacts: Connections - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.linkedin.com/connections?trk=hb\_side\_cnts

Account & Settings | Help | Sign Out | Language

Advanced Search People Search

Home Groups Profile Contacts Inbox (19)

Add Connections

Ivan Herman  
Semantic Web Activity Lead, World Wide Web Consortium  
What are you working on?  
Your profile is 80% complete [Edit]

## Contacts

Connections Imported Contacts Network Statistics Add Connections

### Connections

☐ Show contacts with new connections advanced options

Showing 311 of 311 connections. 15 outstanding sent invitations

A	<b>Aasman, Jans</b> Ja@franz.com View & edit details »	CEO at Franz Inc	252
B			
C			
D			
E	<b>Abramatic, Jean-François</b> jfa@ilooq.fr View & edit details »	Chief Product Officer at ILOG	163
F			
G			
H	<b>Adida, Ben</b> ben@adida.net View & edit details »	Software Security Researcher and Entrepreneur	148
I			
J			
K	<b>Allemang, Dean</b> dino-link@happydino.com View & edit details »	Chief Scientist at TopQuadrant Inc.	179
L			
M			
N	<b>Allison, Kevin</b> kevin.allison@ft.com View & edit details »	San Francisco Correspondent at The Financial Times	152
O			
P			
Q	<b>Alonso, Jose Manuel</b> jalonso@w3.org View & edit details »	eGovernment Lead at W3C	106
R			
S			
T			

# ... and, of course, Facebook

The screenshot shows the Facebook 'All Friends' page in a Mozilla Firefox browser window. The address bar displays the URL: <http://www.new.facebook.com/friends/#/friends/?fclid=0&view=everyone&>. The page header includes the Facebook logo, the user's name 'Ivan Herman', and navigation links for 'Friends', 'Applications', and 'Inbox'. A search bar is located in the top right corner.

The main content area is titled 'All Friends' and features a 'Friend Lists' sidebar on the left. The sidebar includes links to 'All Friends', 'CWI', 'Family', 'IW3C2', and 'W3C Team', along with a 'Make a New List' button. Below the sidebar, there are sections for 'Find Friends' (with a link to 'Find people you know who are already on Facebook') and 'Invite your friends to join Facebook'.

The main content area displays a list of friends. At the top, there are tabs for 'Showing: Status Updates', 'Recently Updated', 'Phonebook', and 'Everyone'. A search bar for friends is also present. Below the tabs, a dropdown menu for 'Show:' is set to 'Choose an option...'. The text 'You have 137 friends.' is displayed, followed by a pagination link '1 2 3 Next'. The list of friends includes:

- Shadi Abou-Zahra** (with a profile picture)
- Ross Ackland** (with a placeholder profile picture)
- Ben Adida** (with a profile picture)
- Anupriya Ankolekar** (with a placeholder profile picture)
- Daniel Appelquist** is hanging out in Aspen. (with a profile picture and a timestamp of '15 hours ago')
- Lora Aroyo** (with a placeholder profile picture)

On the right side of the page, there are advertisements for 'Make more' and 'Do You T Photos?'. The bottom of the page features a status bar with icons for a list, a person, and a checkmark.

- I had to type in and connect with friends again and again for each site independently 😞
- This is even worse then before: / feed the icebergs, but I still do not have an easy access to data...

# *What would we like to have?*

- Use the data on the Web the same way as we do with documents:
  - be able to link to data (independently of their presentation)
  - use that data the way I want (present it, mine it, etc)
  - agents, programs, scripts, etc, should be able to *interpret* part of that data

## *Put it another way...*

- We would like to *extend* the current Web to a “Web of data”:
  - allow for applications to exploit the data directly



***But wait! Isn't what mashup sites are already doing?***

# A “mashup” example:

Triplt | Organize your travel - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.tripit.com/trip/show/id/858966

View Change Log

## Trip Details

Summary View Expanded View

Thursday, July 24, 2008

Budapest, Hungary (Edit)  
Avg: Sunny / Hi 28°C / Lo 14°C

Add Plans

### Flight from Amsterdam (AMS) to Zurich (ZRH)

edit | delete | copy | move

<b>FLIGHT</b>  14:55 CEST	<b>Swiss International Airlines 729</b>	Depart: Amsterdam (AMS), 14:55 CEST	nonstop 1h 25min aircraft Airbus A320-100/200 374 miles	Conf. # JFFRAL
	Arrive: Zurich (ZRH), 16:20 CEST			

Connects to: LX 2258 at 17:20 CEST

<b>Passengers</b> Ivan Herman Eva Boka ep Herman	<b>Booking Information</b> Booked on 18/4/2008 <a href="http://www.swiss.com">http://www.swiss.com</a>
--	--

---

### Flight from Zurich (ZRH) to Budapest (BUD)

edit | delete | copy | move

<b>FLIGHT</b>  17:20 CEST	<b>Swiss International Airlines 2258</b>	Depart: Zurich (ZRH), 17:20 CEST	nonstop 1h 35min aircraft Fokker 100 500 miles	Conf. # JFFRAL
	Arrive: Budapest (BUD), 18:55 CEST			

Passenger(s): Ivan Herman, Eva Boka ep Herman.

---

### Map of Budapest, Hungary

delete |

Budapest, Hungary

Map Satellite Hybrid

- In some ways, yes, and that shows the huge power of what such Web of data provides
- But mashup sites are forced to do very ad-hoc jobs
  - various data sources expose their data via Web Services
  - each with a different API, a different logic, different structure
  - these sites are forced to reinvent the wheel many times because there is no standard way of doing things

## *Put it another way (again)...*

- We would like to extend the current Web to a standard way for a “Web of data”

## *But what does this mean?*

- What makes the current (document) Web work?
  - people create different documents
  - they give an address to it (ie, a URI) and make it accessible to others on the Web

# Steven's site on Amsterdam (done for some visiting friends)

The Internet Guide to Amsterdam - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://homepages.cwi.nl/~steven/amsterdam.html



## The Internet Guide to Amsterdam

### Contents

- [Introduction](#)
- [Time](#)
- [Weather](#)
- [Language](#)
- [Money](#)
- [Tipping](#)
- [Electricity](#)
- [Safety and Health](#)
- [Hotels](#)
- [Eating and Drinking](#)
- [Transport](#)
- [Shopping](#)
- [News](#)
- [Communications](#)
- [Places to See](#)
- [What's On](#)
- [The Amsterdam Year](#)
- [Maps](#)
- [Books](#)
- [Other Resources](#)

**Designed to be printed out and taken with you.**

Written by [Steven Pemberton](#), CWI, Amsterdam, and [Astrid Kerssens](#), Amsterdam.

Linked to by more than 450 other sites; more than **3,500,000** grunted readers!

*The top Amsterdam travel guide according to Google. If you know how Google works, you know that that says something about this site!*

See also [London](#)

### A Review of this Guide

**The Internet Guide To Amsterdam:**  
WebUser Gold Award  
Rating: ★★★★★  
Reviewed By: Jane Hoskyn

Sometimes, it's the simple things in life that make your heart skip a beat. This is especially true when you're abroad and you need a guide that loads really fast on your mobile phone or PDA (check), doesn't involve clicking from page to page to find what you want (check), isn't written in fluffy tourist-board-speak (check), has all the links you need and none of the ones you don't (check), and is put together by someone who loves your destination and knows it better than the insides of his own eyelids (check). Step forward Steven Pemberton, creator of this exemplary guide to having a damn good time in the 'Dam.

### Introduction

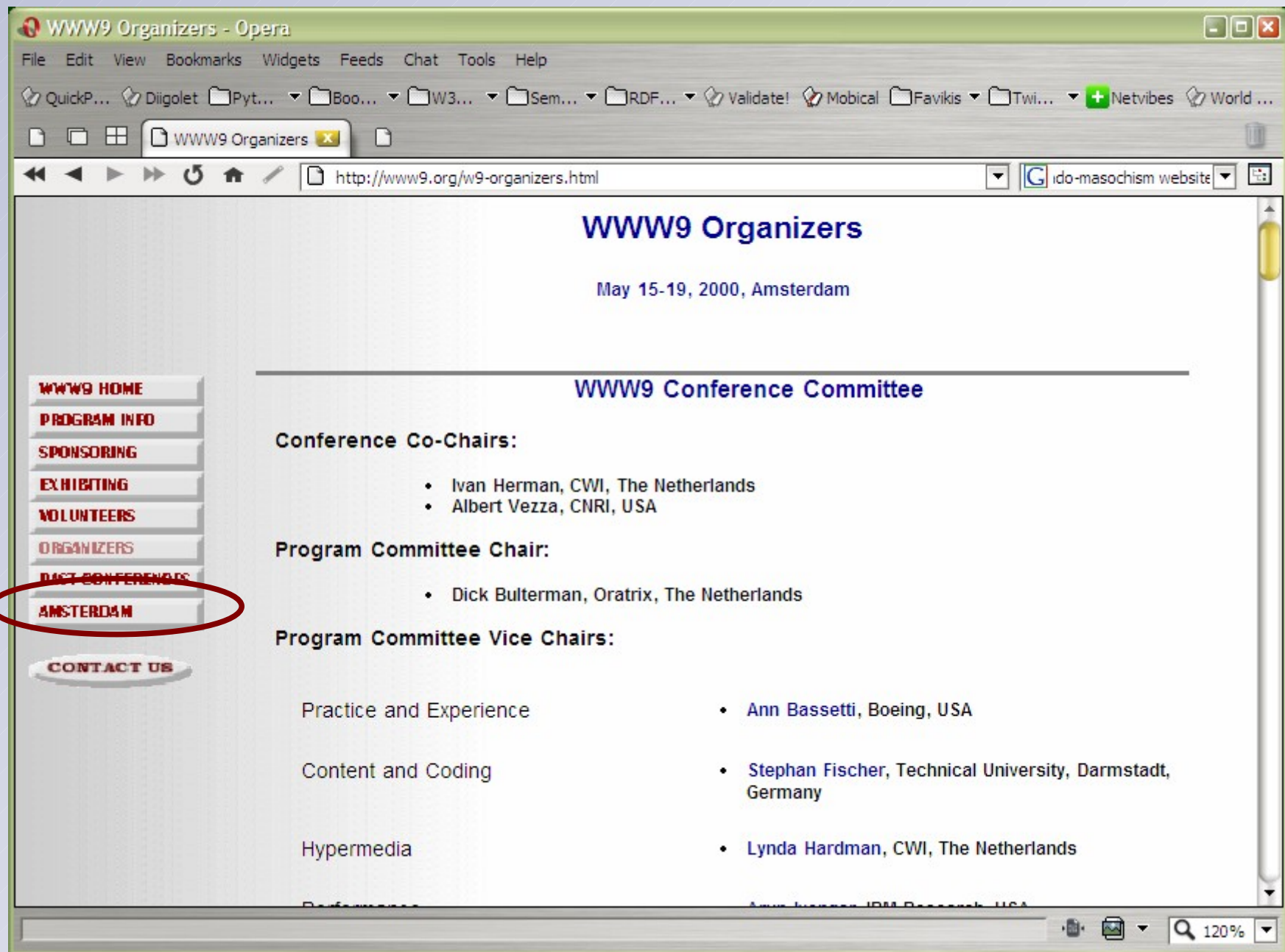
Amsterdam is an unusual city in that it has all the advantages of a big city – culture, history, food, entertainment, good



## *Then some magic happens...*

- Others discover the site and they link to it
- The more they link to it, the more important and well known the page becomes
  - remember, this is what, eg, Google exploits!
- This is the “Network effect”: some pages become important, and others begin to rely on it *even if the author did not expect it...*

# *This could be expected...*



41

# *but this one, from the other side of the Globe, was not...*

Netherlands - Spring Break Information - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://msass.case.edu/international/SPNetherlandsFAQ.html

CASE.EDU: HOME | DIRECTORIES | SEARCH

**CASE WESTERN RESERVE UNIVERSITY**  
MANDEL SCHOOL OF APPLIED SOCIAL SCIENCES

**INTERNATIONAL COURSES/PROGRAMS**

MSASS | About | Admissions | Programs | Students | Faculty | Research | Library | Calendar | Departments

**International Courses**

- General Information
- Descriptions by Country
- Passport Application
- Dutch Visa Application
- Previous Trips
- Testimonials

**Netherlands - Spring Break Information**

Please also see the following links for information on the trip to the Netherlands

- General FAQ
- Applying for a Dutch Visa
- A Students Photo Journal of the Netherlands

**What Forms do I need for this Program?**

All of the forms you will need are linked from the Forms page.

More information? Check out these links:

**Amsterdam Links**

Spring Break Trip participants to Amsterdam may familiarize themselves with Amsterdam by visiting the following web sites. On website address nl refers to the Netherlands.

Information on travel outside the United States , including instructions on getting a passport:  
<http://travel.state.gov>

A must see website <http://homepages.cwi.nl/~steven/amsterdam.html>

United States Consulate, Amsterdam: <http://www.usemb.nl>

Virtual Tour of Amsterdam: <http://www.channels.nl>

# *What would that mean for a Web of Data?*

- Lessons learned: we should be able to:
  - “publish” the data to make it known on the Web
    - standard ways should be used instead of ad-hoc approaches
    - the analogous approach to documents: *give URI-s to the data*
  - make it possible to “link” to that URI from *other* sources of data (not only Web pages)
    - ie, applications should not be forced to make targeted developments to access the data
    - generic, standard approaches should suffice
  - and let the network effect work its way...

# Example: combine data from experiments

- A drug company has huge amount of old experimental data on its Intranet
- Data in different formats (XML, databases, ...)
- To reuse them:
  - make the important facts available on the Web via standards
  - use *off-the-shelf* tool to integrate, display, search

**Internal Compound Repurposing Example**

Welcome, Allergy & Respiratory Team Member

This tool allows you to identify opportunities for additional uses of compounds from other teams within your project. It combines internal data, public data and the results of case mining experiments to provide testable hypotheses.

Control Panel & Item Filtering

Area	5/2 Approach	3/2 Term+Reason	1/2 Max_Stage_Reached	1/2 Literature Links
20 Pain	<input checked="" type="checkbox"/> 7 Antibody	<input type="checkbox"/> 37 ACTIVE	<input type="checkbox"/> 51 Candidate	<input checked="" type="checkbox"/> 0 - 50
10 Metabolic Disease	<input checked="" type="checkbox"/> 1 Recombinant	<input type="checkbox"/> 12 BIOMARKER	<input type="checkbox"/> 10 Discovery	<input type="checkbox"/>
8 Cancer	<input type="checkbox"/> 18 SM_Agonist	<input checked="" type="checkbox"/> 51 EFFICACY	<input checked="" type="checkbox"/> 41 Exploratory	<input type="checkbox"/>
3 Sexual Health	<input checked="" type="checkbox"/> 12 SM_Antagonist	<input checked="" type="checkbox"/> 11 MARKET	<input type="checkbox"/> 19 HTS	<input type="checkbox"/>
2 Infectives	<input checked="" type="checkbox"/> 21 SM_Inhibitor	<input checked="" type="checkbox"/> 11 REORG	<input type="checkbox"/> 11 Phase I	<input type="checkbox"/>
1 Urogenitals	<input checked="" type="checkbox"/>	<input type="checkbox"/> 10 TOXIC	<input type="checkbox"/> 13 Phase III	<input type="checkbox"/>
			<input type="checkbox"/> 41 Screening	<input type="checkbox"/>

51 items filtered from 710 originally (Reset All Filters)

Area	Original+Indication	Target_Name	Approach	Start	Term+Reason	Max_Stage_Reached	Owner	OMIM Lit	All Lit	2007 Lit	Mech	RNA	GED	Pathway	Compounds
Metabolic Disease	Diabetes	Liver glycogen phosphorylase	SM_Inhibitor	2007-Q2	EFFICACY	Candidate	P. Person								SW-030072
Sexual Health	Erectile Dysfunction	Integrin alpha-3 (Galactose protein B3)(VLA-3) (CD49C)	SM_Antagonist	2006-Q3	EFFICACY	Candidate	P. Person								SW-029782
Sexual Health	Erectile Dysfunction	Leukotriene C4 synthase	SM_Agonist	2006-Q3	EFFICACY	Candidate	M. Manager				1				SW-029638
Sexual Health	Erectile Dysfunction	transcription elongation factor A (SII)-like 4	SM_Inhibitor	2005-Q2	EFFICACY	Candidate	P. Person								SW-029626
Infectives	HEV	Putative four repeat ion channel (ix)	SM_Inhibitor	2006-Q2	EFFICACY	Candidate	L. Leader								SW-029994
Infectives	HEV	Voltage-gated potassium channel protein KV1.2 (ix)	SM_Agonist	2007-Q1	EFFICACY	Candidate	A. Scientist							1	SW-029653
Urogenitals	Incontinence	Human RNA binding motif (RBM) gene, partial cds.	SM_Agonist	2007-Q3	EFFICACY	Candidate	L. Leader							1	SW-029684
Pain	Migraine	Monocarboxylate transporter homologue 2 (SLC6A4) (ix)	SM_Inhibitor	2007-Q3	EFFICACY	Candidate	L. Leader	18							SW-030085



## *But it is a little bit more complicated* 🤖

- On the traditional Web, humans are implicitly taken into account
- A Web link has a “context” that a person may use



# Eg: address field on my page:

Ivan Herman - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.w3.org/People/Ivan/

W3C

## Ivan Herman

My Work at W3C | Contact information | Short CV | Upcoming trips | Public presentations

### My Work at W3C

I am Semantic Web Activity Lead; that is my main work at W3C. I am member of [IW3C2](#) (International World Wide Web Conference Committee) (the committee coordinating the yearly WWW conference series), serving as a liaison for W3C, and of [SWSA](#) (Semantic Web Science Association), the committee responsible for the International Semantic Web Conferences series.

As part of my work, I also participate in lots of outreach activities, and I regularly make presentations, tutorials, etc. You can consult my [list of presentations](#) for further details.

### Contact information

Email:  
[ivan@w3.org](mailto:ivan@w3.org)  
 (sha1sum: 5ac8022d5f6942aa4775ca2f63e4676bafd5e80b)


Postal address:  
 C/o Centre for Mathematics and Computer Sciences (CWI)  
 Kruislaan 413, P.O. Box 94079, 1090 GB Amsterdam, The Netherlands.

Phone numbers:  
 phone: +31-20-5924163  
 mobile phone: +31-641044153  
 fax: +31-20-5924312

PGP/GPG:  
 My GnuPGP key and signature is available on-line.

FOAF:  
 You can either extract a short FOAF information from this page, or consult my more complete, public FOAF file.

Misc:



# ... leading to this page

Centrum Wiskunde & Informatica | CWI - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.cwi.nl/


home | contact | nl | intranet | nl Search...

**CWI** Centrum Wiskunde & Informatica


about cwi events library news research scientists

## Centrum Wiskunde & Informatica


Centrum Wiskunde & Informatica (CWI) performs fundamental scientific research in mathematics and computer science. CWI transfers the acquired knowledge to society and industry. The institute's strategy for the period up to 2012 is to concentrate research on four broad, societally relevant themes:




Earth & life sciences



The data explosion



Societal logistics




Software as service

## News

13-10-08

**PhD defence Jarek Byrka**



22-09-08

**Best Paper Award for SMIL State research**

At the ACM DocEngineering Symposium in Sao Paulo, Brazil, from 16 till 19 September, CWI researchers Jack Jansen and Dick Bulterman received the Best Paper Award.

[read more](#)

## Agenda

18-10-08

**Science Day at the Science Park Amsterdam**

At Science Day the Science Park Amsterdam will be open for This year the theme of Science Day is 'Crack the code'. CWI workshops en demonstrations within this theme for every age

[read more](#)

21-10-08

**MAS Seminar, speaker Svetlana Dubinkina**

Two speaker session

Tea starting at 10.00

Room: M279

Speakers:

1. Svetlana Dubinkina, CWI MAS 1, tba
2. James Glazier, University of Indiana Bloomington, tba

[read more](#)

28-10-08

**MAS Seminar, speaker Peter Sonneveld**

- A human understands that this is an institution's home page
- He/she knows what it means (realizes that it is a research institute in the Netherlands)
- On a Web of Data, something is missing; machines can't make sense of the link alone

- New lesson learned:
  - extra information (“label”) must be added to a link: “this links to an institution, which is a research institute”
  - this information should be machine readable
- This is a *characterization* (or “classification”) of *both* the link *and* its target
  - in some cases, the classification should allow for some limited “reasoning”
    - eg, if an address refers to Amsterdam, then this means it is also in the Netherlands

# *Let us put it together*

- What we need for a Web of Data:
  - use URI-s to publish data (not only full documents)
  - allow the data to link to other data
  - characterize/classify the data and the links (the “terms”) to convey some extra meaning
  - and use standards for all these!



# ***So What is the Semantic Web?***

***It is a collection of standard technologies to realize a Web of Data***

- It is that simple...
- Of course, the devil is in the details
  - a common model has to be provided for machines to describe, query, etc, the data and their connections
  - technologies should be around to “export” the data
  - the “classification” of the terms can become very complex for specific knowledge areas: this is where ontologies, thesauri, etc, enter the game...
  - but these details are fleshed out by experts as we speak!



# *Example: find the right experts at NASA*

- NASA has nearly 70,000 civil servants over the whole of the US
- Their expertise is described in 6-7 databases, geographically distributed, with different data formats, access types...
- Task: find the right expert for a specific task within NASA!

# Example: find the right experts at NASA

- Approach: integrate all the data with standard means, and describe the data and links using generic (and simple) vocabularies

The screenshot displays the POPS v.28.3 application window, titled "POPS v.28.3 - Connected to 'POPS on FatDuck' - Using Model 'POPS on FatDuck Model' - Logged in as 'Michael Grove'". The interface includes a menu bar (File, Options, Bookmarks, Advanced, Help) and four main panels at the top: "NASA Center (15)", "Project (176)", "Competency (21)", and "People (1)".

- NASA Center (15):** Lists various NASA centers, with "GSFC" selected. Source: x500.
- Project (176):** Lists various projects, with "Mars Global Surveyor" selected. Source: WIMS.
- Competency (21):** Lists various competencies, with "Geospatial Science and Technologies" selected. Source: CMS.
- People (1):** Lists people, with "Jeanne M" selected. Source: [unclear].

Below these panels is the "Information Panel" titled "View Different Social Network's Present in the Data". It shows a social network graph with nodes representing people and their connections. The nodes shown are "Jeanne M", "Michael H Grove", and "Jeffrey T". The graph is labeled "POPS".

On the right side of the Information Panel, there is a legend:

- Same Skill and Same Department (Red line)
- Same Skill and Same Project (Green line)
- Same Skill, Project, and Facility (Blue line)
- Am I Connected? (Purple line)

Below the legend, there is a text box containing contact information for Michael Grove:

Name: Michael Grove  
Email: [redacted]@nasa.gov  
Phone: 301. [redacted]  
Employer: Clark and Parsia

At the bottom of the Information Panel, there are navigation buttons "<<" and ">>" and a "Social Net" button. The page number "1 of 1" is displayed at the bottom right.



***Wait! Does it mean that I have to convert all my data in some way?***

- Not necessarily; this would not always be feasible
- There are technologies to make your data *accessible* to standard means without converting it
  - run-time “bridges” (eg, rewriting queries on the fly)
  - annotate existing data (eg, XHTML pages)
  - extract data from XHTML/XML files
  - etc
- Some of these techniques are still being developed



# Example: “Linking Open Data Project”

- Goal: “expose” open datasets for integration
- *Set links among the data items* from different datasets
- Set up query endpoints
- Altogether billions of relationships, millions of links...



# *Example data source: DBpedia*

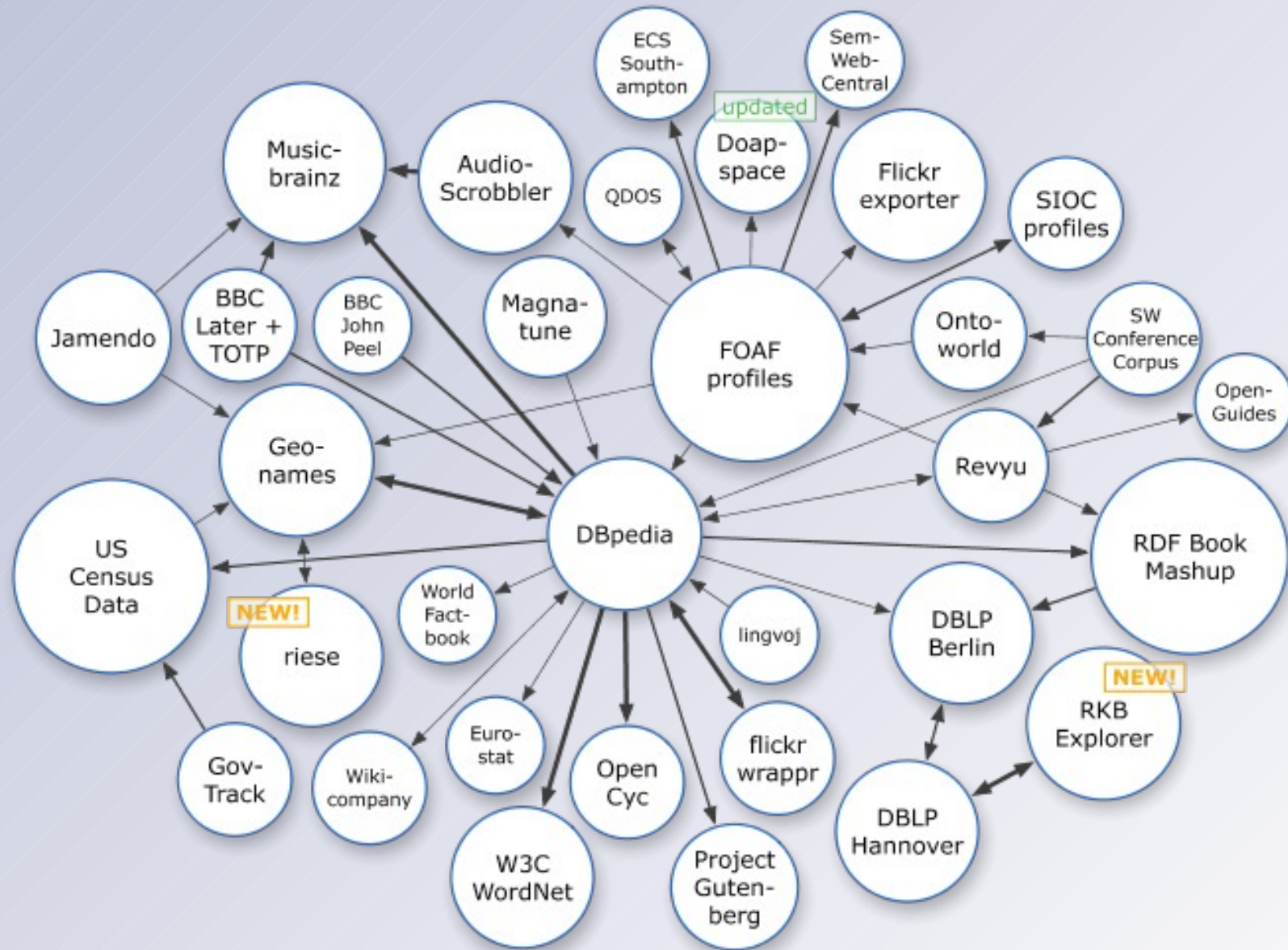
- DBpedia is a community effort to
  - extract structured (“infobox”) information from Wikipedia
  - provide a query endpoint to the dataset
  - interlink the DBpedia dataset with other datasets on the Web



UNIVERSITÄT LEIPZIG

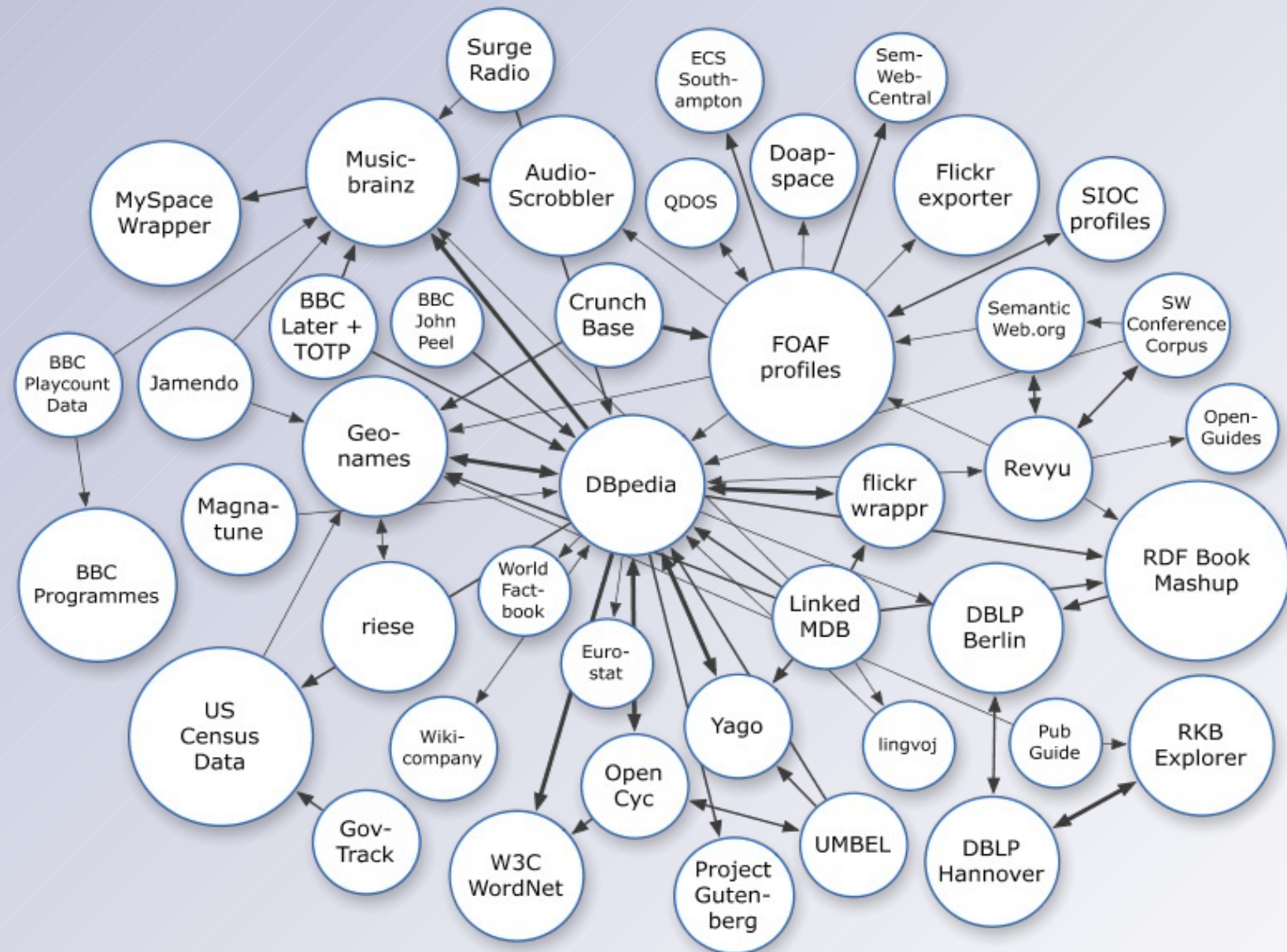


# The LOD “cloud”, March 2008



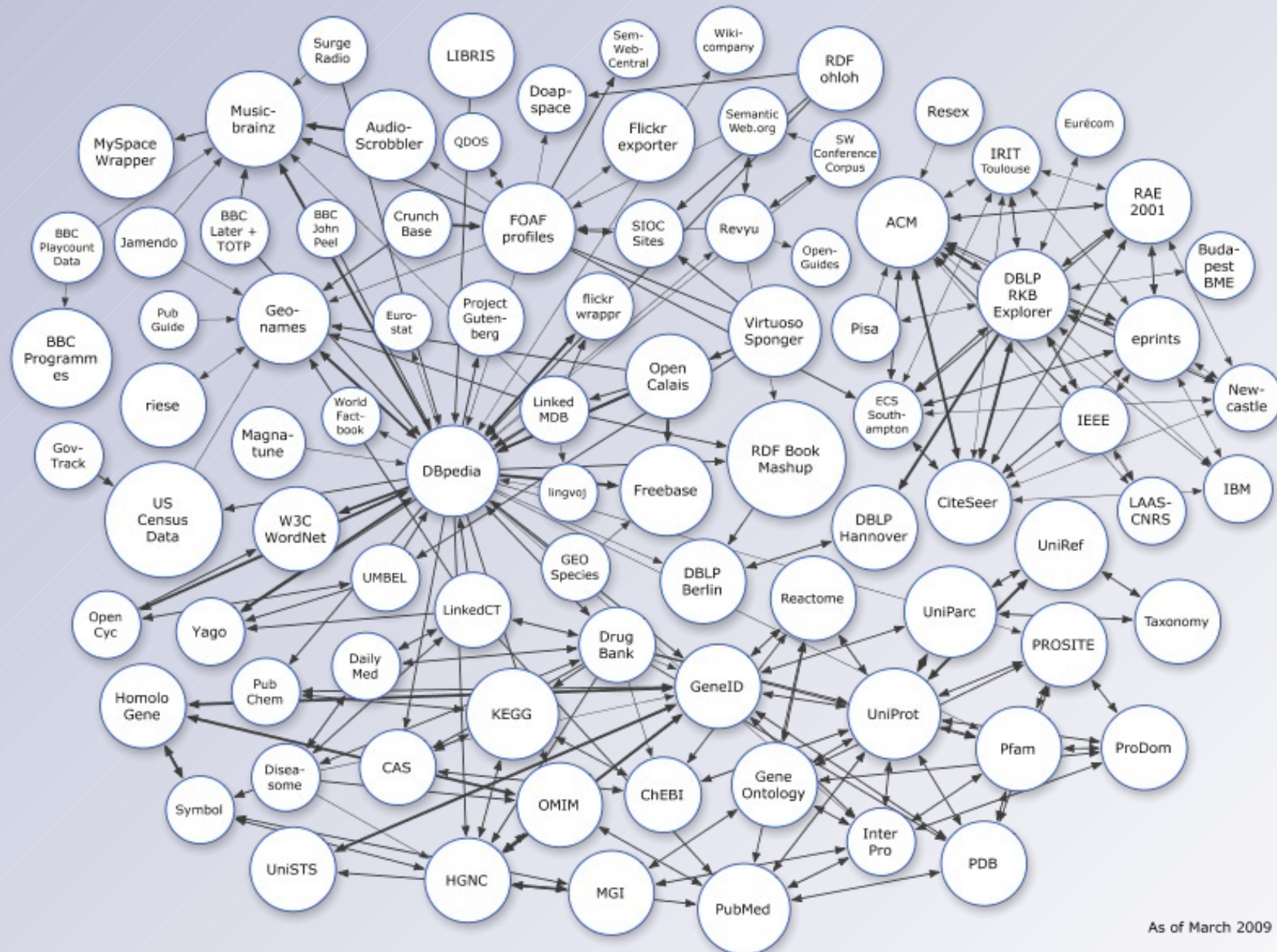


# The LOD “cloud”, September 2008



As of September 2008

# The LOD “cloud”, March 2009



As of March 2009

***All this sounds nice, but isn't that just  
a dream?***



# The 2007 Gartner predictions

During the next 10 years, Web-based technologies will improve the ability to embed semantic structures [... it] will occur in multiple evolutionary steps...

By 2017, we expect the vision of the Semantic Web [...] to coalesce [...] and the **majority of Web pages are decorated with some form of semantic hypertext.**

By **2012**, **80% of public Web sites will use some level of semantic hypertext to create SW documents [...]** **15% of public Web sites will use more extensive Semantic Web-based ontologies to create semantic databases**

(note: “semantic hypertext” refers to pages “prepared” for integration)

# *The “corporate” landscape is moving*

- Major companies offer (or will offer) Semantic Web tools or systems using Semantic Web: Adobe, Oracle, IBM, HP, Software AG, GE, Northrop Gruman, Altova, Microsoft, Dow Jones, ...
- Others are using it (or consider using it) as part of their own operations: Novartis, Pfizer, Telefónica, ...
- Some of the names of active participants in W3C SW related groups: ILOG, HP, Agfa, SRI International, Fair Isaac Corp., Oracle, Boeing, IBM, Chevron, Siemens, Nokia, Pfizer, Sun, Eli Lilly, ...



# *Lots of Tools (not an exhaustive list!)*

- Categories:
  - Triple Stores
  - Inference engines
  - Converters
  - Search engines
  - Middleware
  - CMS
  - Semantic Web browsers
  - Development environments
  - Semantic Wikis
  - ...
- Some names:
  - Jena, AllegroGraph, Mulgara, Sesame, flickurl, ...
  - TopBraid Suite, Virtuoso environment, Falcon, Drupal 7, Redland, Pellet, ...
  - Disco, Oracle 11g, RacerPro, IODT, Ontobroker, OWLIM, Tallis Platform, ...
  - RDF Gateway, RDFLib, Open Anzo, DartGrid, Zitgist, Ontotext, Protégé, ...
  - Thetus publisher, SemanticWorks, SWI-Prolog, RDFStore...
  - ...

# *Some deployment communities*

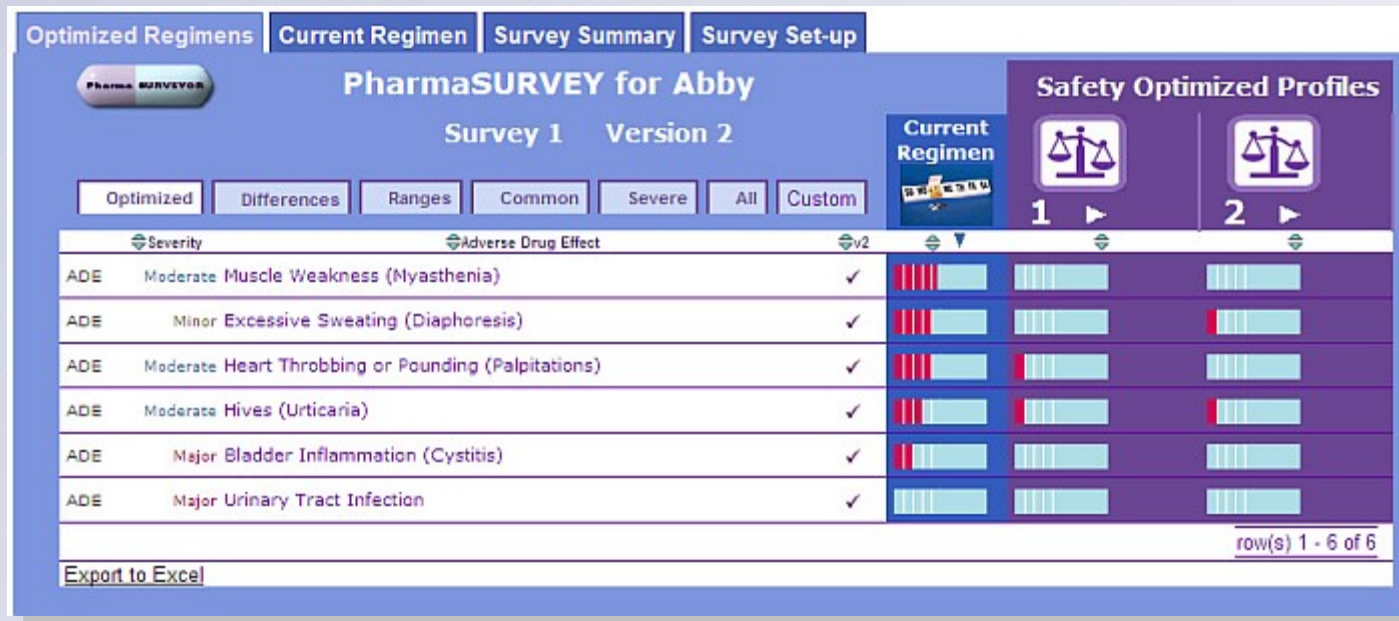
- Major communities pick the technology up: digital libraries, defence, eGovernment, energy sector, financial services, health care, oil and gas industry, life sciences ...
  - Health care and life science sector is now very active
    - also at W3C, in the form of an Interest Group

- Eg, “bio” related datasets
  - done, partially, by the “Linking Open Drug Data” task force of the HCLS IG at W3C



# Help in choosing the right drug regimen

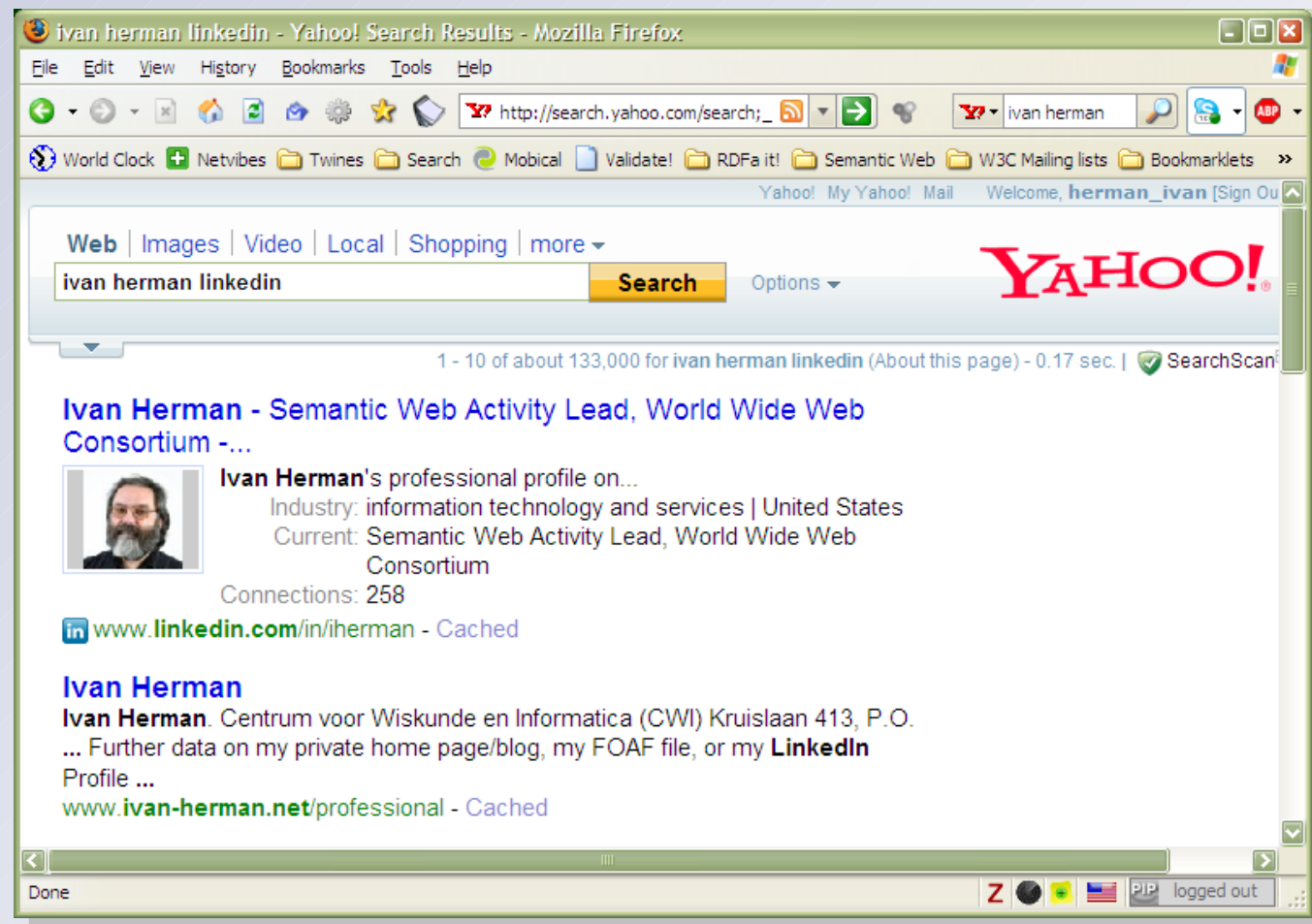
- Help in finding the best drug regimen for a specific case, per patient
- Integrate data from various sources (patients, physicians, Pharma, researchers, ontologies, etc)
- Data (eg, regulation, drugs) change often, but the tool is much more resistant against change





# Yahoo's SearchMonkey

- Search based results may be customized via small applications
- Metadata embedded in pages are reused
- Publishers can export extra data via other formats





# Information in Web Pages: SlideShare

What is the Semantic Web ... x

http://www.slideshare.net/ivan\_herman/what-is-the-semantic-web-in-15-minutes-presentation

ivan\_herman Logout All Languages

**slideshare** Present Yourself

Home Browse My Slidespace Upload Community Widgets

Search

**Real World Semantic Apps**  
Calais offers semantic metadata extraction - free - to all  
opencaais.com

**NLP framework for .NET**  
The most complete .NET framework for Natural Language Processing  
www.proxem.com

**Ajax**  
Stop Object-Relational Mapping. Use InterSystems Caché DB. Download Now  
InterSystems.com/Cache

Ads by Google  
ADVERTISE ON SLIDESHARE

**What is the Semantic Web (in 15 minutes...)** Edit Presentation

Share Favorite Download + Group/Event

**W3C** WORLD WIDE WEB consortium Benelux Kantoor

**Internet Society**

What is the Semantic Web? (In 15 minutes...)

ISOC Nieuwjaarsreceptie 2009

2009-01-15, Amsterdam, The Netherlands

Ivan Herman, W3C

ivan\_herman, 2 months ago

Embed `<div style="width:428px;text-align:left" id="ss_919716">` custom

172 views, 1 favs, 0 embeds more stats

Very short introduction to what the Semantic Web is more

**Get yourself in your presentation**

Add mp3 audio to create a SlideCast

Insert YouTube videos

**Related Presentations** More by user

**Scrum**  
In 15 minutes  
505 views

**Improve Your Self Confidence In 15 Min...**  
165 views

**jQuery in 15 minutes**  
78638 views

Categories

Technology

Change Category

Tags

web semantic

Groups / Events

opensourcevhowto

Ads by Google

RDF Web

WPF Framework

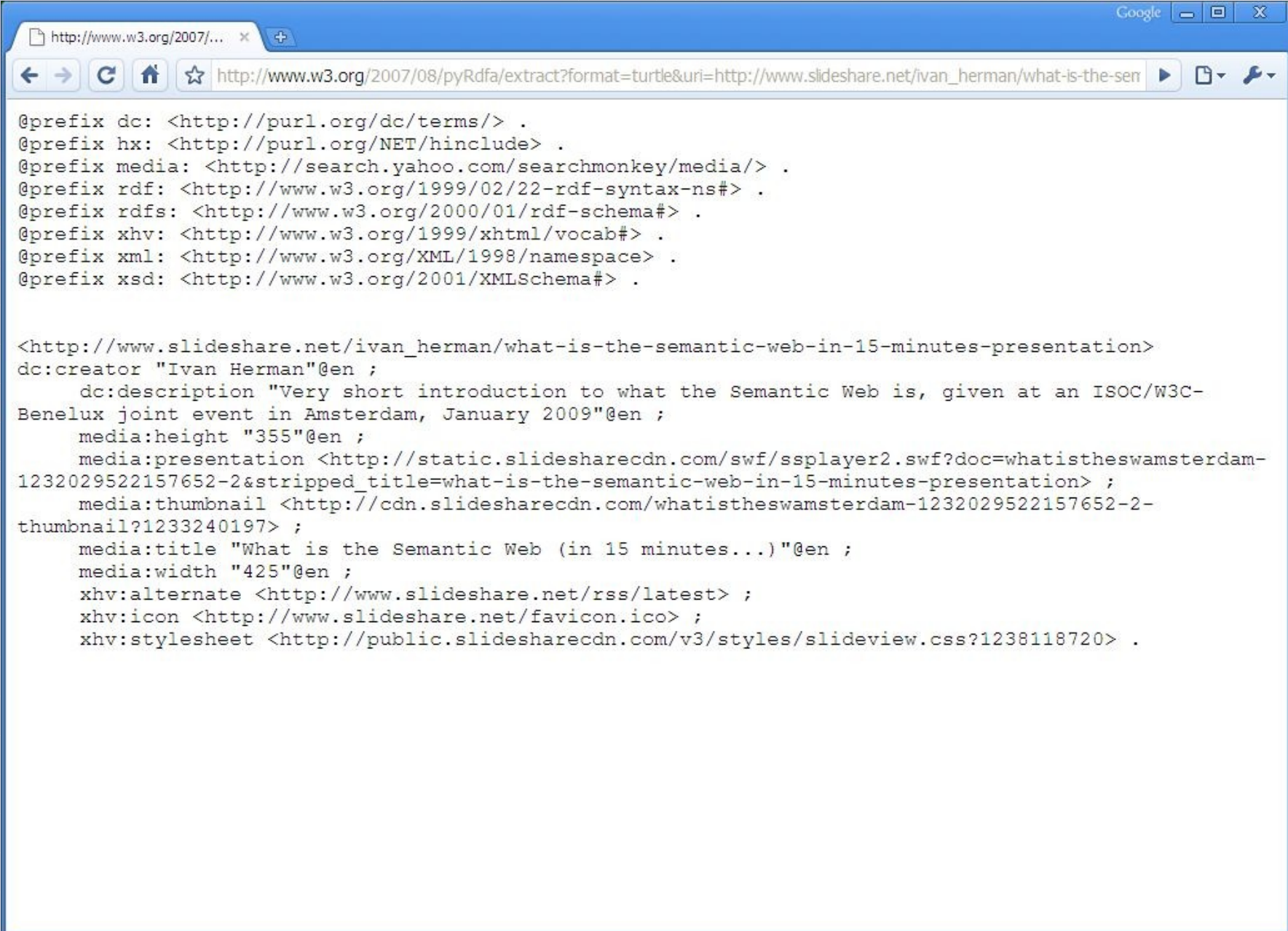
Mapping Web

Semantics Web

share 1 / 54 full

**PRESENTATION LOAD**

# Information in Web Pages: SlideShare



The screenshot shows a web browser window with the address bar displaying the URL: `http://www.w3.org/2007/08/pyRdfa/extract?format=turtle&uri=http://www.slideshare.net/ivan_herman/what-is-the-sem`. The browser's title bar includes the Google logo and window controls. The main content area displays an RDF extract in Turtle syntax, which describes a presentation on SlideShare.

```

@prefix dc: <http://purl.org/dc/terms/> .
@prefix hx: <http://purl.org/NET/hinclud> .
@prefix media: <http://search.yahoo.com/searchmonkey/media/> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xhv: <http://www.w3.org/1999/xhtml/vocab#> .
@prefix xml: <http://www.w3.org/XML/1998/namespace> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<http://www.slideshare.net/ivan_herman/what-is-the-semantic-web-in-15-minutes-presentation>
dc:creator "Ivan Herman"@en ;
  dc:description "Very short introduction to what the Semantic Web is, given at an ISOC/W3C-
Benelux joint event in Amsterdam, January 2009"@en ;
  media:height "355"@en ;
  media:presentation <http://static.slidesharecdn.com/swf/ssplayer2.swf?doc=whatistheswamsterdam-
1232029522157652-2&stripped_title=what-is-the-semantic-web-in-15-minutes-presentation> ;
  media:thumbnail <http://cdn.slidesharecdn.com/whatistheswamsterdam-1232029522157652-2-
thumbnail?1233240197> ;
  media:title "What is the Semantic Web (in 15 minutes...)"@en ;
  media:width "425"@en ;
  xhv:alternate <http://www.slideshare.net/rss/latest> ;
  xhv:icon <http://www.slideshare.net/favicon.ico> ;
  xhv:stylesheet <http://public.slidesharecdn.com/v3/styles/slideview.css?1238118720> .
  
```

# Improved Search (GoPubMed)

- Search results are re-ranked using ontologies
- Related terms are highlighted, usable for further search

The screenshot displays the GoPubMed web interface within a Mozilla Firefox browser window. The search term 'tinnitus' is entered in the search bar, and the results show 1,000 articles. The left sidebar contains a hierarchical ontology tree under the heading 'what'. The 'Diseases' category is expanded, and 'Tinnitus' is highlighted with a red circle. The main content area lists five articles, each with a title, author, journal, and PMID. The titles of the articles are: 5: Pros and cons of tinnitus retraining therapy., 1: Gabapentin effectiveness on the sensation of subjective idiopathic tinnitus : a pilot study., 3: Algorithm for evaluation of pulsatile tinnitus., and 4: Functional imaging of unilateral tinnitus using fMRI. A blue arrow points to the first article title. The interface also includes a 'find it!' button, a 'goPubMed' logo, and a 'who' section on the left side.

GoPubMed - Mozilla Firefox

File Edit View History Bookmarks Tools Help

GoPubMed Go3R

what

Top categories

- Diseases [985]
  - Tinnitus [959]
  - Hearing Loss [424]
  - Vertigo [170]
  - Hearing Loss, Sensorineural [168]
- Named Groups [762]
  - Patients [619]
- Biological Sciences [885]
  - Noise [116]
  - Questionnaires [134]
  - Evaluation Studies [264]
  - Treatment Outcome [114]
  - Stress, Psychological [98]
- Techniques and Equipment [908]
  - Anatomy [600]
  - Natural Sciences [792]
  - biological\_process [461]
  - Chemicals and Drugs [445]
  - Organisms [500]
  - cellular\_component [82]
  - molecular\_function [67]
  - Technology, Industry, Agriculture [111]
  - Psychiatry and Psychology [661]
  - Unclassified [6]

Hot topics in GO & MeSH

- Tinnitus
- Find categories ...
- Find related categories ...
- My last 5 queries
- Clipboard [0]

1,000 articles

To see other authors, see the who section on the left side.

5: Pros and cons of tinnitus retraining therapy. PMID: 18368566 Related Articles

Hatanaka A et al., Acta Otolaryngol, 128 (4): 365-8, 2008

A significant reduction in the Tinnitus Handicap Inventory (THI) was obtained as early as 1 month after implementation of tinnitus retraining therapy (TRT).

1: Gabapentin effectiveness on the sensation of subjective idiopathic tinnitus : a pilot study. PMID: 17960408 Related Articles

Bakhshaei M et al., Eur Arch Otorhinolaryngol, 2007

Pure-tone audiograms, laboratory test and personal histories were used to exclude any particular etiology of tinnitus.

3: Algorithm for evaluation of pulsatile tinnitus. PMID: 18368578 Related Articles

Mattox DE et al., Acta Otolaryngol, 128 (4): 427-31, 2008

Among patients with venous tinnitus, sigmoid sinus diverticulum was the most common finding.

4: Functional imaging of unilateral tinnitus using fMRI. PMID: 18368576 Related Articles

Lanting CP et al., Acta Otolaryngol, 128 (4): 415-21, 2008

The response to sound in the inferior colliculus was elevated in tinnitus patients compared with controls without tinnitus.



# Improved Search (Go3R)

- Same dataset, different ontology
  - (ontology is on non-animal experimentation)

Go3R - Mozilla Firefox

File Edit View History Bookmarks Tools Help

GoPubMed Go3R

what

3R Relevance Filters (Beta)

Top categories

- Diseases & Symptoms [601]
  - Tinnitus [547]
  - Hearing Loss [248]
  - Vertigo [98]
  - Disease [118]
  - Hearing Loss, Sensorineural [95]
  - more
- Methodology [408]
- Life Sciences [503]
- Body Systems & Structures [40]
- Bioethics [102]
- Reduction [90]
- more
- Statistics [125]
- Substances, Preparations & Products [277]
- Biological Material & Organisms for Animal U
- Method Specification [36]
- Animal Species [40]
- Product Properties & Effects [62]
- Product Testing & Assessment [20]
- 3Rs Methods in the Life Sciences [6]
- Animal Experiment [61]
- 3Rs Relevant [5]
- In Vitro Experimental Design [20]
- In Vivo Experimental Design [5]
- Animal Condition, Physiological & Psychology
- Animal Care & Handling [3]
- Toxic Actions of Substances [7]
- Unclassified [390]

Find related categories ...

My last 5 queries

Clipboard [0]

1,000 articles

differences ( $P > 0.05$ ).

2: Microvascular decompression of cochleovestibular nerve.

Yap L et al., Eur Arch Otorhinolaryngol, 2008

PMID: 18389269 Related Articles

This report provides a review of all the published studies on MVD of the eighth (8th) nerve in alleviating cochleovestibular symptoms and presents three additional patients who underwent MVD of the eighth nerve for tinnitus or vertigo.

3: Algorithm for evaluation of pulsatile tinnitus.

Mattox DE et al., Acta Otolaryngol, 128 (4): 427-31, 2008

PMID: 18368578 Related Articles

Among patients with arterial tinnitus, carotid atherosclerotic disease was the most common.

4: Functional imaging of unilateral tinnitus using fMRI.

Lanting CP et al., Acta Otolaryngol, 128 (4): 415-21, 2008

PMID: 18368576 Related Articles

This article shows that the inferior colliculus plays a key role in unilateral subjective tinnitus.

5: Pros and cons of tinnitus retraining therapy.

Hatanaka A et al., Acta Otolaryngol, 128 (4): 365-8, 2008

PMID: 18368566 Related Articles

A significant reduction in the Tinnitus Handicap Inventory (THI) was obtained as early as 1 month after implementation of tinnitus retraining therapy (TRT).

6: Mass casualty incident management, triage, injury distribution of casualties and

# *New type of Web 2.0 applications*

- New Web 2.0 applications come every day
- Some begin to look at Semantic Web as possible technology to improve their operation
  - more structured tagging, making use of external services
  - providing extra information to users
  - etc.
- Some examples: Twine, Revyu, Faviki, ...



# *Integration of “social” software data*

- Internal usage of wikis, blogs, RSS, etc, at EDF
  - goal is to manage the flow of information better
- Items are integrated via
  - Semantic Web based unifying format
  - simple, public vocabularies
  - internal data is combined with linked open data like Geonames
  - Semantic Web queries are used internally
- Details are hidden from end users (via plugins, extra layers, etc)

# Integration of “social” software data

L'ensemble de ces lieux d'échange, de rencontre et de réflexion permettent de proposer des évolutions d'ordre réglementaire et législatif.

**Personnalités :**

[onto|members]

**Domaines :**

[onto|domaines]

**Localisation:**

Ville, Pays:  
 paris, fra  
 Paris, France

Répéter ce champ

**Rattachement:**

Affiliation principale:

Lien:

Répéter ce champ

**Domaine et Métier:**

Domaine:  
 Activités Associatives

Métier:  
 Associatif

Zone Géographique:  
 France

Inline macro →

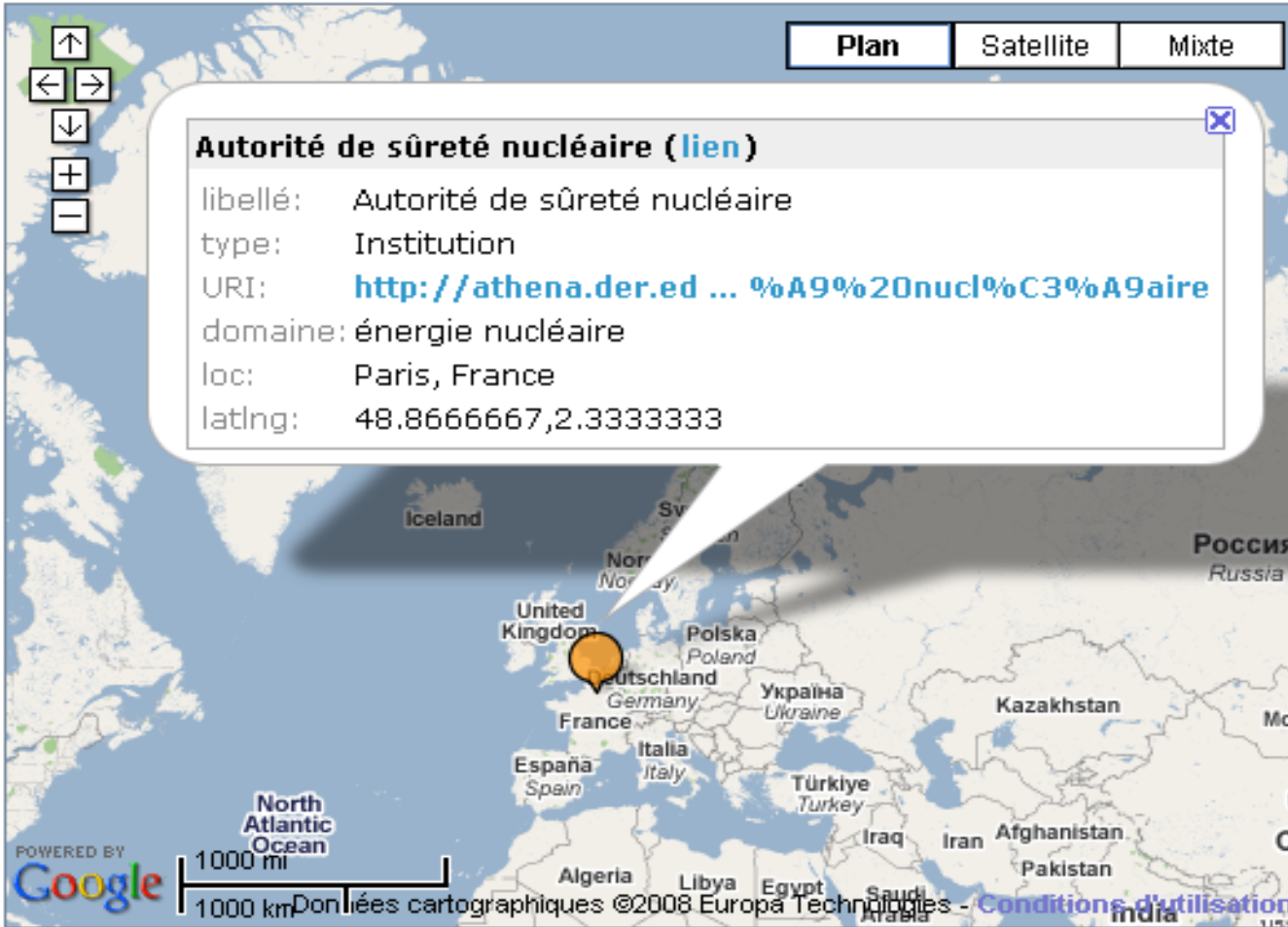
Simple autocomplete field →

Complex instance field →

# Integration of “social” software data

BLOCS • **CARTE**

1 Institution filtrés sur un total de 173 items ([Réinitialiser tous les filtres](#))



**Autorité de sûreté nucléaire (lien)**

libellé: Autorité de sûreté nucléaire  
 type: Institution  
 URI: <http://athena.der.ed ... %A9%20nucl%C3%A9aire>  
 domaine: énergie nucléaire  
 loc: Paris, France  
 latlng: 48.8666667,2.3333333

**Type** 1 ☒

2 **Entreprise** ☐  
 1 **Institution** ☒  
 1 **Personne** ☐

**Domain** 1 ☒

**financières**  
 1 **Energie** ☐  
 1 **énergie nucléaire** ☒  
 2 **Protection de l'environnement** ☐

**Localisation**

1 **Paris, France**

# Conclusions...

- More and more data should be “published” on the Web
  - this can lead to the “network effect” on data
- New breeds of applications come to the fore
  - “mashups on steroids”
  - better representation and usage of community knowledge
  - new customization possibilities
  - ...



# Thank you for your attention!

These slides are also available on the Web:



<http://www.w3.org/2009/Talks/05-Oz-IntroSW-IH/>