



Social Semantic Web

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Questions

Web of Data

- ❖ Definition
- ❖ Purpose
- ❖ Recognizable for Machines

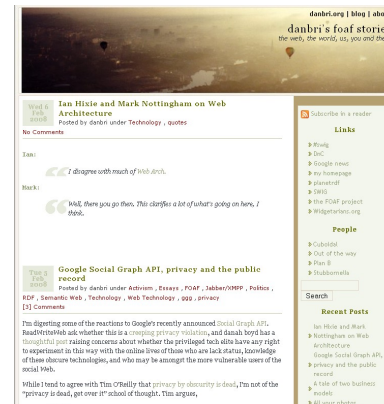


- ❖ Tim Berners Lee
 - WWW
 - W3C
 - Semantic Web

Examples



facebook



Examples

- ❖ Information Sharing:
- ❖ Office: Google Documents
- ❖ Photo Sharing and Tagging: Flickr
- ❖ Video sharing: YouTube
- ❖ Blogs, RSS, Blogger.com
- ❖ Open Source Community: Linux
- ❖ Tagging and Bookmarks: Del.icio.us
(Social Tagging for Bookmarks)
- ❖ File Management
- ❖ Google Maps

Examples

- ❖ Social Websites and Communication:
 - Facebook
 - Balatarin
 - LastFM
 - Skype
 - StudiVZ
 - LinkedIn, Xing
 - Gmail

Examples

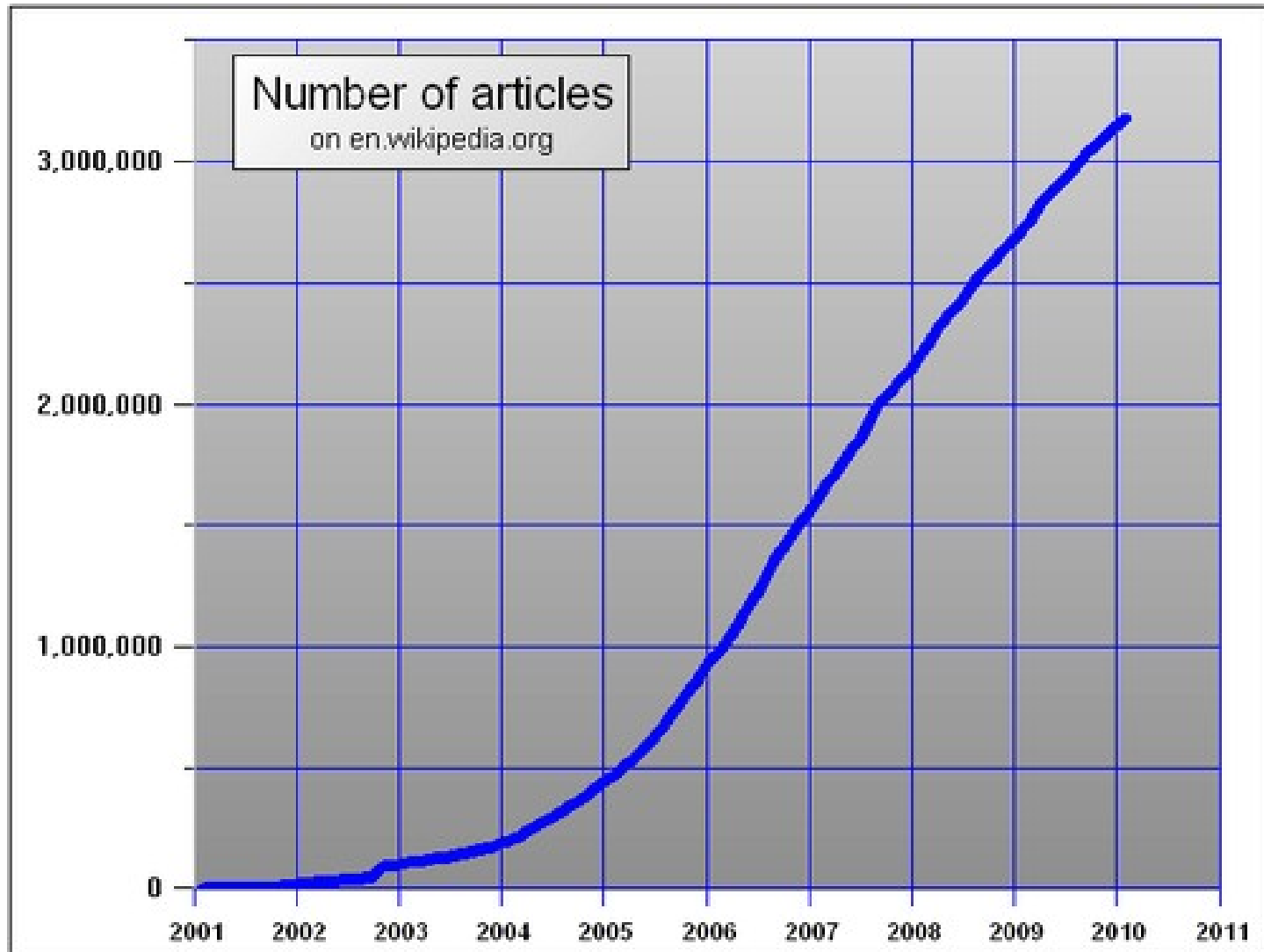
❖ Wikis

- Most famous and biggest Wiki: Wikipedia (Online encyclopedia)
- Worlds biggest encyclopedia, Top 10 web site, 100 languages
- social: collaborative (nobody owns contents)
- Wiki ^{is} invented by Ward Cunningham
- But: Also often used in Intranets (i. e. our group)
- Problems solved socially instead of technically
- Flexible structure

Wikipedia



<http://en.wikipedia.org/wiki/Wikipedia:Statistics>



Flickr.com

Tags / beach / clusters

beach

(Or, try an [advanced search](#).)



[ocean](#), [sand](#), [sea](#), [water](#), [sunset](#), [waves](#),
[sky](#), [sun](#), [blue](#), [clouds](#)

[➔ See more in this cluster.](#)



[tree](#), [palm](#)

[➔ See more in this cluster.](#)



[brasil](#), [brazil](#)

[➔ See more in this cluster.](#)

Tag Clouds

All time most popular tags

amsterdam animal animals april architecture art australia baby barcelona
beach berlin bird birthday black blackandwhite blue boston bridge building bw
california cameraphone camping canada car cat cats chicago
china christmas church city clouds color colorado concert day dc dog dogs england
europe family festival fireworks florida flower flowers food france
friends fun garden geotagged germany girl graduation graffiti green hawaii
holiday home honeymoon house india ireland italy japan july june kids lake
landscape light london losangeles macro march may me mexico moblog
mountains museum music nature new newyork newyorkcity newzealand night
nyc ocean orange oregon paris park party people phone photo pink portrait
red reflection river roadtrip rock rome sanfrancisco school scotland sea seattle sign
sky snow spain spring street summer sun sunset taiwan texas thailand
tokyo toronto travel tree trees trip uk unfound urban usa vacation
vancouver washington water wedding white winter yellow zoo

Size of Tags:
count of usage

Browsing
replaces
Searching

Different
meaning for
different users

Orientation in
Information Set

Web 2 Evolution

❖ Technical Evolution

- Web User Interfaces become faster (AJAX)
- Desktop shifts to Web (GMail, AJAX)

❖ Social Evolution

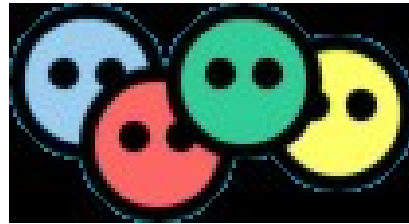
- Collective creates additional value (Wiki, Tagging)
- Free contents become popular (Licenses)
- Attention is getting monetarized (Text-Ads)
- Websites with additional value by recombination (Mash-Ups, RSS)



Media for Communities

❖ DBpedia

❖ FOAF



❖ SIOC

❖ NextBIO

Captcha

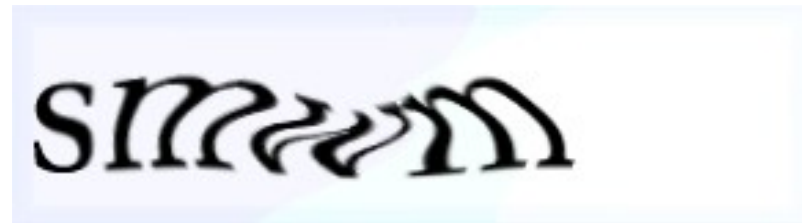
- ❖ Description

- ❖ Usage

- ❖ CAPTCHA can NOT provide User authentication.

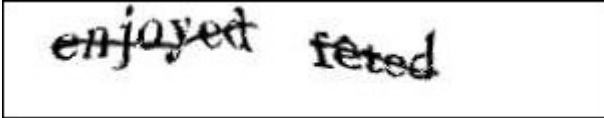
- ❖ General types

- Text
- Image
- Audio



- ❖ reCaptcha

reCaptcha



enjoyed feted

- ❖ Make use of Human Computing Power
- ❖ Take text from books that could not be deciphered with OCR.
- ❖ Repeat until enough users agree on the unknown text.
- ❖ This text is now known and book has been digitally encoded.

ImageHunter & Human Computing

59:60

Pick the Images with the same landmark.

Finish

Conclusion

- ❖ The first thing of Human Computing research is finding a clear **PURPOSE**
- ❖ How your game or method to achieve the purpose

RDF

- ❖ Formats: microdata, microformats, or RDFa.
- ❖ Started with its own vocabulary
- ❖ <http://rdf.data-vocabulary.org/>
- ❖ Meanwhile supports other popular vocabularies like foaf or vCard
- ❖ Still sort of experimental – but with a high potential

Google search preview

The following errors were found during preview generation:

- Insufficient data to generate the preview.

Extracted Rich Snippet data from the page

Organization

Address

street-address = Zedernweg 85
locality = 53757 Sankt Augustin
region = Germany

Geo

latitude = 50.777097
longitude = 7.194886

url = <http://www.ict-media.de/>
name = ict-Media GmbH
tel = +49 2241 396415

VCard

Warnings : RDFa tree has unknown type 'VCard'.

Address

street-address = Zedernweg 85
locality = Sankt Augustin
postal-code = 53757
country-name = Germany

geo

latitude = 50.777097
longitude = 7.194886

url = <http://www.ict-media.de/>
tel = +49 2241 396415

RDF and Google

- ❖ Google is introducing what they call *rich snippets*.

Drooling Dog Bar B Q - Colfax, CA

★★★★☆ 15 reviews - Price range: \$\$

Drooling Dog has some really good BBQ. I had the pulled pork sandwich, Drooling Dog BBQ is a great place to stop at on your way up the hill to Tahoe ...

www.yelp.com/biz/drooling-dog-bar-b-q-colfax - 75k - [Cached](#) - [Similar pages](#)

“With rich snippets, webmasters with sites containing structured content—for example, review sites or business listings—can label their content to make it clear that each labeled piece of text represents a certain type of data ...”

- ❖ Currently only for review sites and social networking/people profile sites.

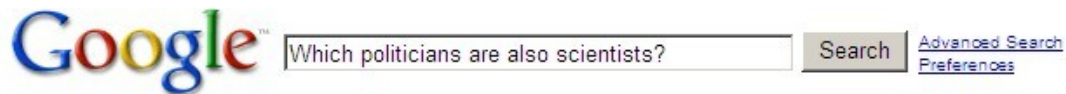
Why Google and Wikipedia Are Not Enough!

❖ Answer „Knowledge Queries” such as:

- proteins that inhibit proteases and other human enzymes
- connection between Thomas Mann and Goethe
- German Nobel prize winner who survived both world wars and all of his four children
- German universities with world-class computer scientists
- politicians who are also scientists

Why Google and Wikipedia Are Not Enough!

❖ Which politicians are also scientists?



Web

Results 1 - 10 of about 2,390,000

[Political science - Wikipedia, the free encyclopedia](#)

Political science **also** studies power in international relations and the theory of ... Political **scientists** may serve as advisers to specific **politicians**, ...

en.wikipedia.org/wiki/Political_science - 56k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Science vs. politics gets down and dirty - USATODAY.com](#)

Scientists and **politicians** have disagreed throughout history, of course, ... we must **also** be willing when necessary to reject the wrong ways," Bush said ...

www.usatoday.com/tech/science/2007-08-05-science-politics_N.htm - 59k -

[Cached](#) - [Similar pages](#) - [Note this](#)

[Religion vs. science vs. politics - Cosmic Log - msnbc.com](#)

20 Dec 2007 ... Druyan **also** has been working on a totally new TV series that would ... No **politician**, **scientist**, or preacher can tell you what to believe. ...

cosmiclog.msnbc.msn.com/archive/2007/12/20/528690.aspx - 84k -

[Cached](#) - [Similar pages](#) - [Note this](#)

[The Rockefeller University - Office of Communications and Public ...](#)

Mr. Lopate has been with WNYC since 1985, talking with **politicians**, **scientists**, poets, painters, novelists, filmmakers, actors, dancers and many others. ...

www.rockefeller.edu/politics/ - 27k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Amazon.com: Science, Money, and Politics: Political Triumph and ...](#)

Lay readers, however, will **also** find it of much interest. ... Greenberg combines archival research and interviews with **scientists** and **politicians** in the ...

www.amazon.com/Science-Money-Politics-Political-Triumph/dp/0226306348 - 246k -

[Cached](#) - [Similar pages](#) - [Note this](#)

NAGA Example



Score: 6.247457440558111E-7

"scientist" —means—> scientist_110560637
Benjamin_Franklin —type—> Massachusetts_politicians
"politician" —means—> politician_110451263
American_scientists —subClassOf—> scientist_110560637
Benjamin_Franklin —type—> American_scientists
Massachusetts_politicians —subClassOf—> politician_110451263

- \$@politician = politician_110451263
- \$@scientist = scientist_110560637
- \$X = Benjamin_Franklin

Score: 3.185850362140424E-7

"scientist" —means—> scientist_110560637
"politician" —means—> politician_110451263
Paul_Wolfowitz —type—> American_political_scientists
American_political_scientists —subClassOf—> scientist_110560637
Paul_Wolfowitz —type—> Jewish-American_politicians
Jewish-American_politicians —subClassOf—> politician_110451263

- \$@politician = politician_110451263
- \$@scientist = scientist_110560637
- \$X = Paul_Wolfowitz

Score: 1.121658976926192E-7

Angela_Merkel —type—> German_scientists
"scientist" —means—> scientist_110560637
German_Christian_Democrat_politicians —subClassOf—>
politician_110451263
Angela_Merkel —type—> German_Christian_Democrat_politicians
"politician" —means—> politician_110451263
German_scientists —subClassOf—> scientist_110560637

- \$@politician = politician_110451263
- \$@scientist = scientist_110560637
- \$X = Angela_Merkel

Query:

**\$x isa politician
\$x isa scientist**

Results:

**Benjamin Franklin
Paul Wolfowitz
Angela Merkel**

...

Question & Answer





Happy Hacking ;))

<http://tehlug.org>

