

Semantic Web 0 - Introduction

GEIST Research Group
<http://geist.agh.edu.pl>



AGH University of Science and Technology, POLAND

Using slides according to license from:

- P. Hitzler – “Knowledge Representation for the Semantic Web” *course based on*
- P. Hitzler, M. Krötzsch, S. Rudolph – Foundations of Semantic Web Technologies
- e-Lite: 01LHVIU - Semantic Web: Technologies, Tools, Applications



Outline

- 1** Introduction
- 2** Semantic Web
- 3** Course Overview
- 4** The End

Outline

1 Introduction

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**Today a person is subjected to
more new information in a day
than a person in the middle ages
in his entire life!**

Picture from: <http://www.octium.eu/en/index.php/information-systems>

Searching for information

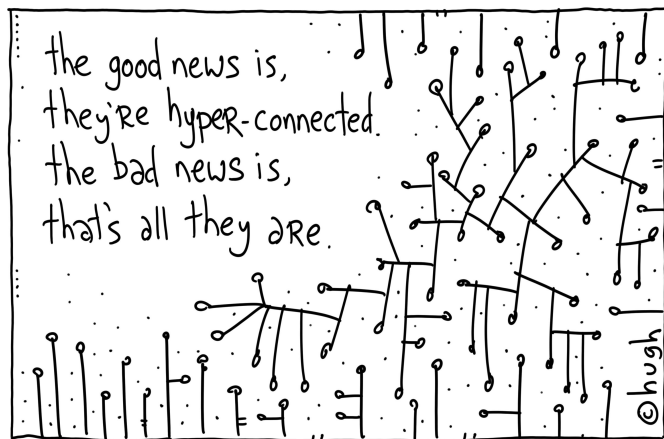


Getting information off the
Internet is like taking a
drink from a fire hydrant.

Mitchell Kapor

Adapted from <http://www.flickr.com/photos/jungledartoon/127758123>

Contents on the current Web



Hugh MacLeod's gapingvoid: <http://www.gapingvoid.com/>

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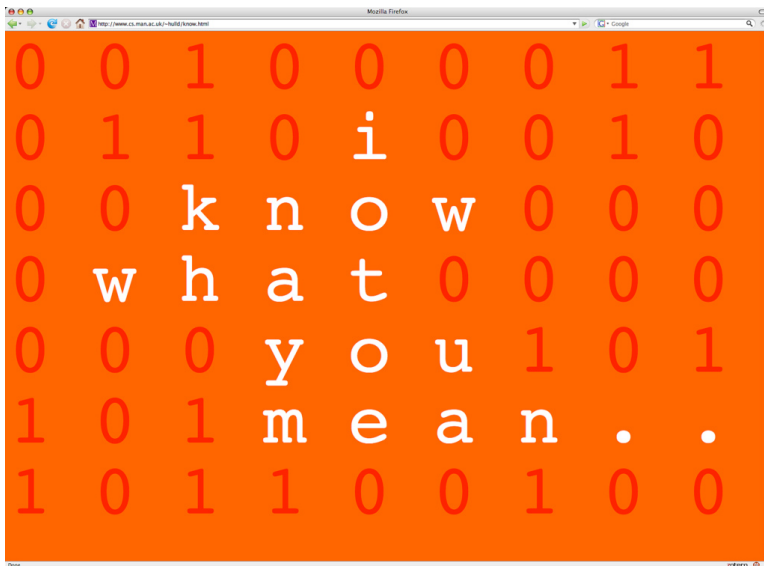
"Where are the visionaries...?"

Sir Tim Berners Lee's Vision

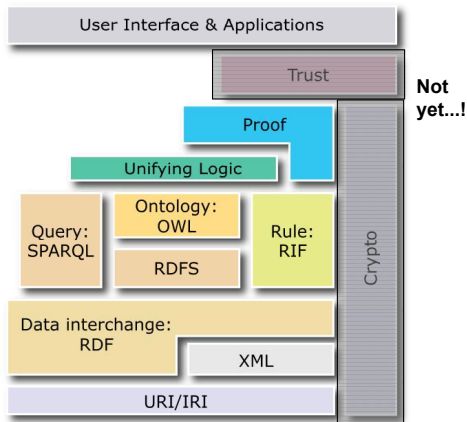
*I have a dream for the Web [in which **computers**] **become capable of analyzing all the data on the Web** – the content, links, and transactions between people and computers. A "Semantic Web", which should make this possible, has yet to emerge, but when it does, the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines. The "intelligent agents" people have touted for ages will finally materialize.–Tim Berners Lee, 1999*



Picture from: <http://masalai.wordpress.com/2007/03/23/in-search-of-the-best-search/>



The real world

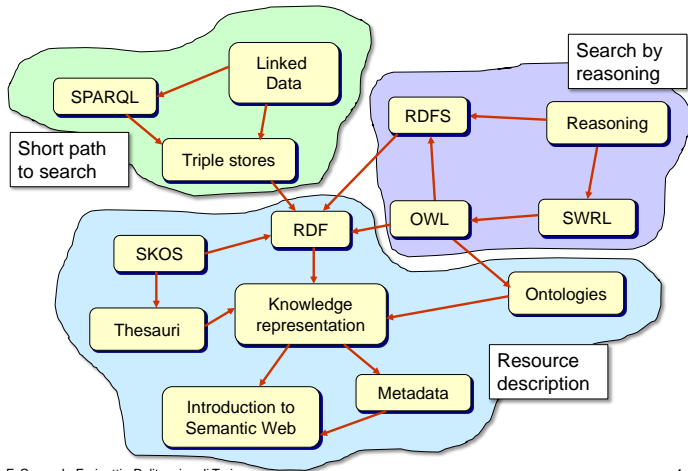


Outline

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Course overview



Course Schedule – Lectures

- 0 (Today) Organization
- 1 (Today) Introduction to the Semantic Web
- 2 RDF/S Modeling
- 3 RDF/S in Use (Querying, Storing etc.)
- 4 Ontologies (Languages, Elements of Ontology Engineering)
- 5 Description Logics
- 6 Reasoning on the Semantic Web
- 7 Semantic Web Applications and Programming

Course Schedule – Labs

- 1 Introduction to the Semantic Web
- 2 Modeling in RDF/S (2 labs)
- 3 RDF/S in Use
- 4 Ontologies (3 labs)
- 5 Semantic Web Reasoning
- 6 Semantic Web Applications
- 7 **Test 1**

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Grande Finale

Exam – 4 ECTS



**KEEP
CALM
AND**

**STUDY
FOR EXAMS**

Lab Grade

- Test / Reports (16 points)
- - Absences (10% each, despite the first one)
- = **Score** (passed if $\geq 50\%$)
- (+ Extra points)
- **Lab Grade**

Final Grade

based on **Lab Grade**, **Project** and **Exam**

Questions

Any questions?

Thank you

Thank you for your attention!

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