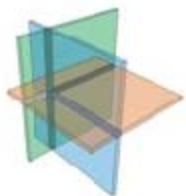


Semantic Web and Multimedia

- Motivation & Agenda -

Steffen Staab

<http://isweb.uni-koblenz.de>



UNIVERSITÄT
KOBLENZ · LANDAU



Semantic Aspects

Web Aspects

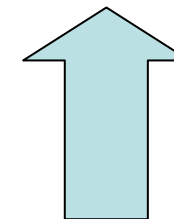
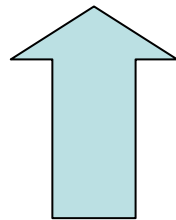
**Semantics in
Multimedia**

**Multimedia on the
Semantic Web**

Semiotics

Formal semiotics –
logics and probabilities
as core tools

Social dynamics – the
Web as an IT enabler



What is the meaning of some
multimedia data?

How are things interwoven,
i.e. networked?

Tasks & Purpose

Find me pictures about a boy on the beach

Find me cute pictures about Nico to show to my Mum

Find me pictures from Greece

Find me pictures from our common holiday

- ◆ with a resolution of
- ◆ with no other person in the foreground...

What does this mean?



Content semantics (general knowledge):

boy; beach; jet ski; sea; sky

Content semantics („private knowledge“):

Nico digging

Retrieval semantics:

cute picture to show

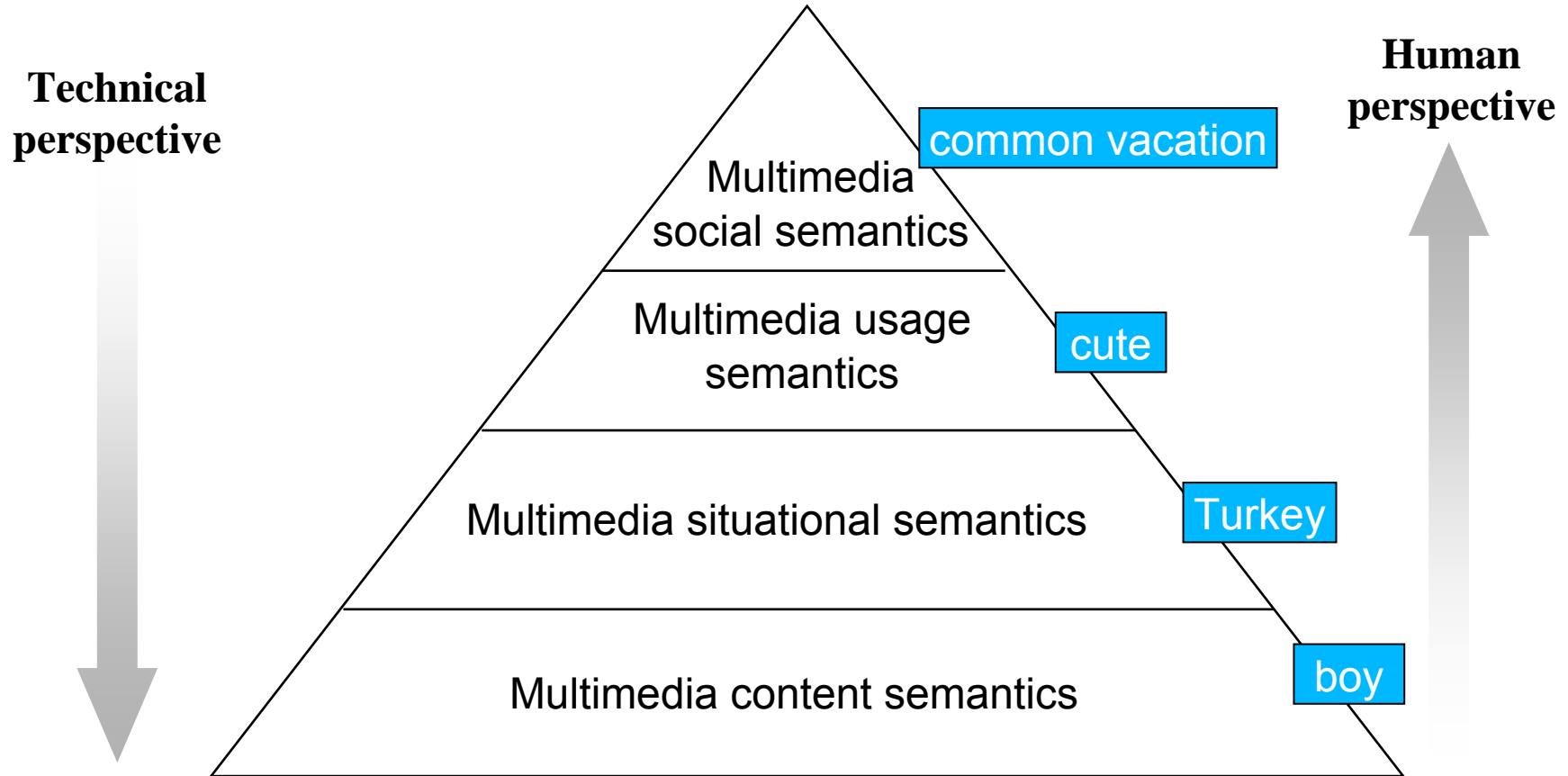
Situational semantics:

Chalkidiki, Greece, 2006

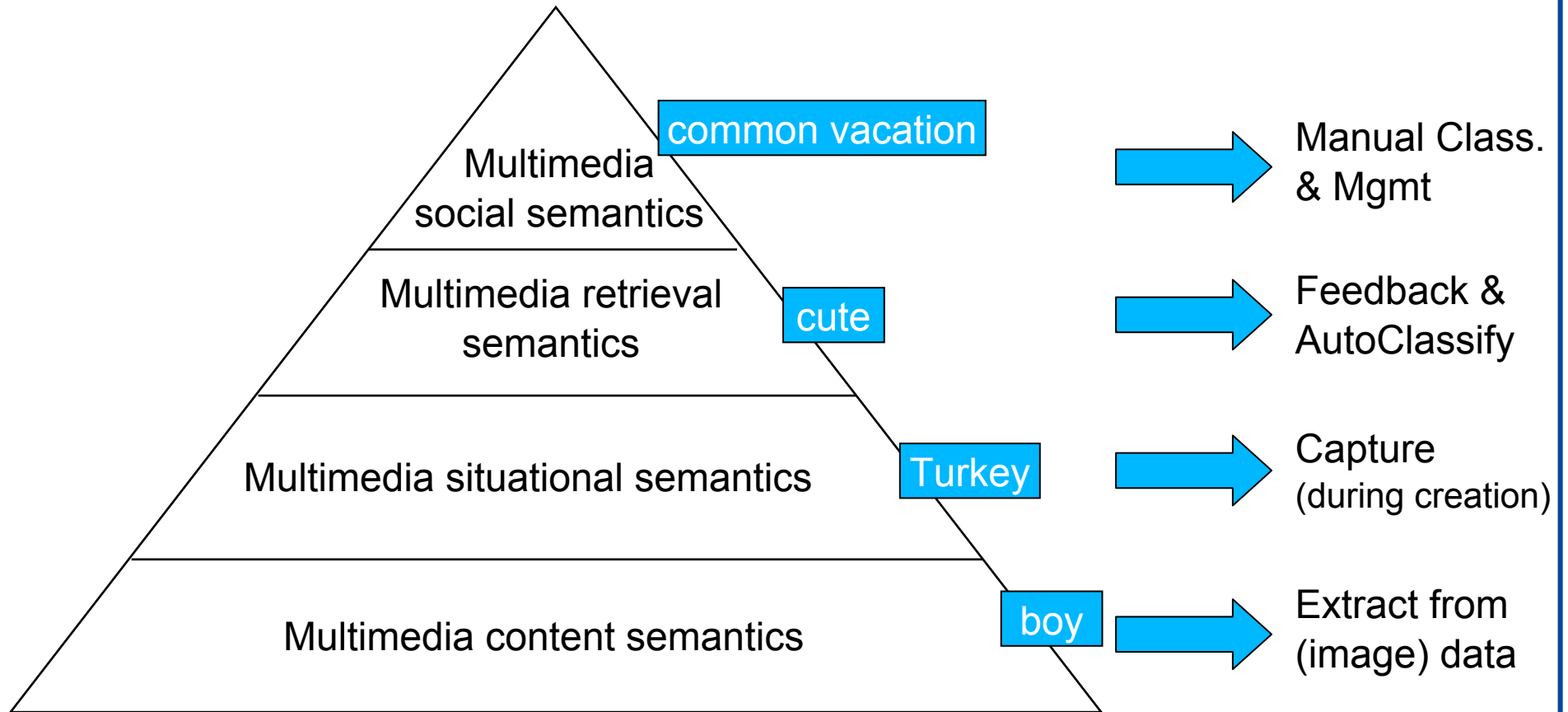
Social semantics:

SSMS 2006



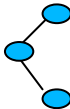


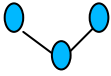
And semiotics will tell you that this list is incomplete...

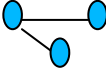


Find me a cute picture of Nico digging during our common vacation

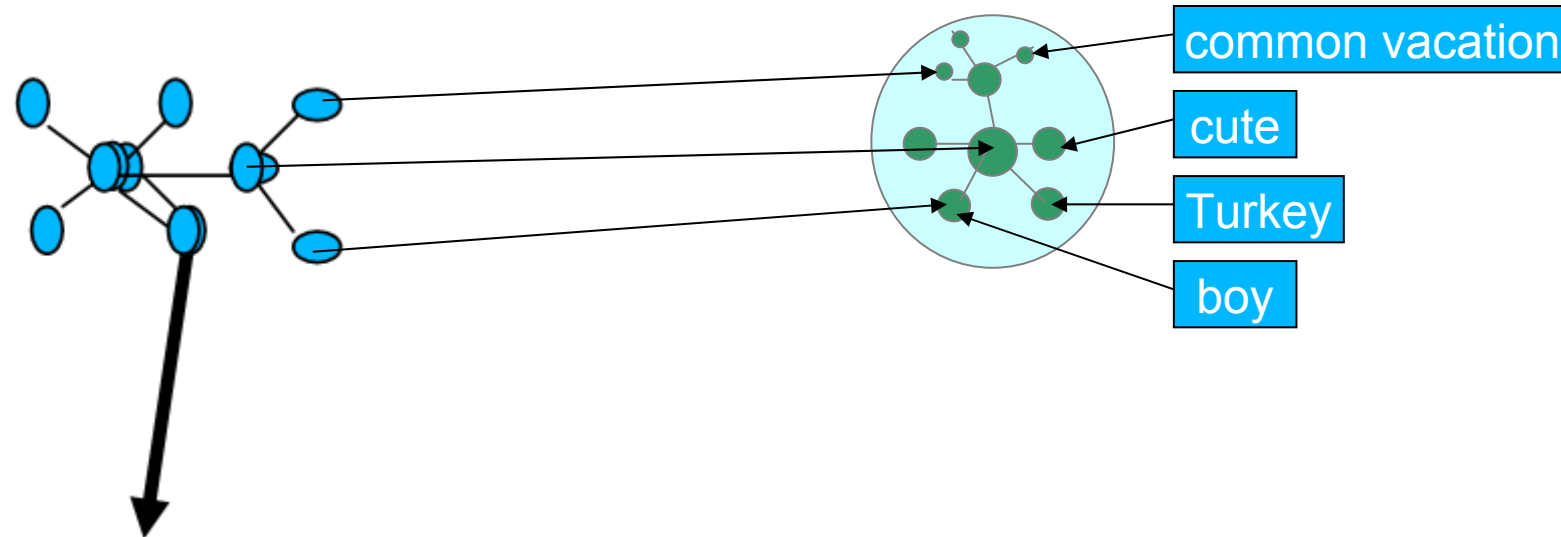
➔ Manual Class. & Mgmt 

➔ Feedback & AutoClassify 

➔ Capture (during creation) 

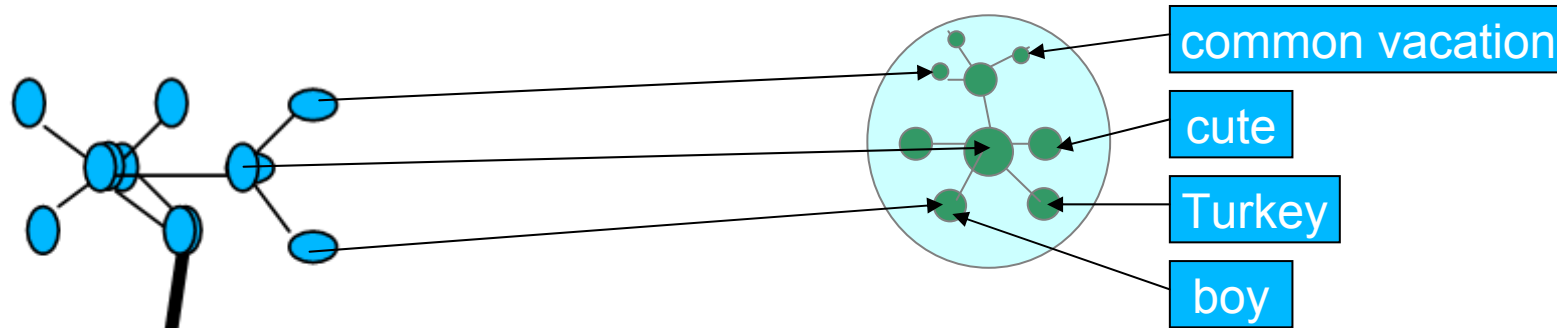
➔ Extract from (image) data 





"One Ring to rule them all,
One Ring to find them,
One Ring to bring them all and
in the darkness bind them."

Inscribed on the One Ring



Core Questions for Multimedia:
How to represent the ontology?
How to query the ontology?
Which ontology to construct how?
How to populate the ontology?

Task: Depict ISWeb People



Precision

20/20

Recall

20/23 (FTE) ☹

20/43 (all) ☹

Some are missing...you may find on Flickr

IMG_7896 auf Flickr - Fotosharing! - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://www.flickr.com/p

Meistbesuchte Seiten Aktuelle Nachrichten LEO English-German D... UniKO

Flickr: Suchen OberseminarISWeb ... IMG_7896 auf Fli...

flickr LOVES YOU™

Startseite Die Tour Registrieren Entdecken

IMG_7896

Suchen: k-ca

Abwärts Aufwärts Hervorheben Groß-/Klein

Fertig



Some are missing..

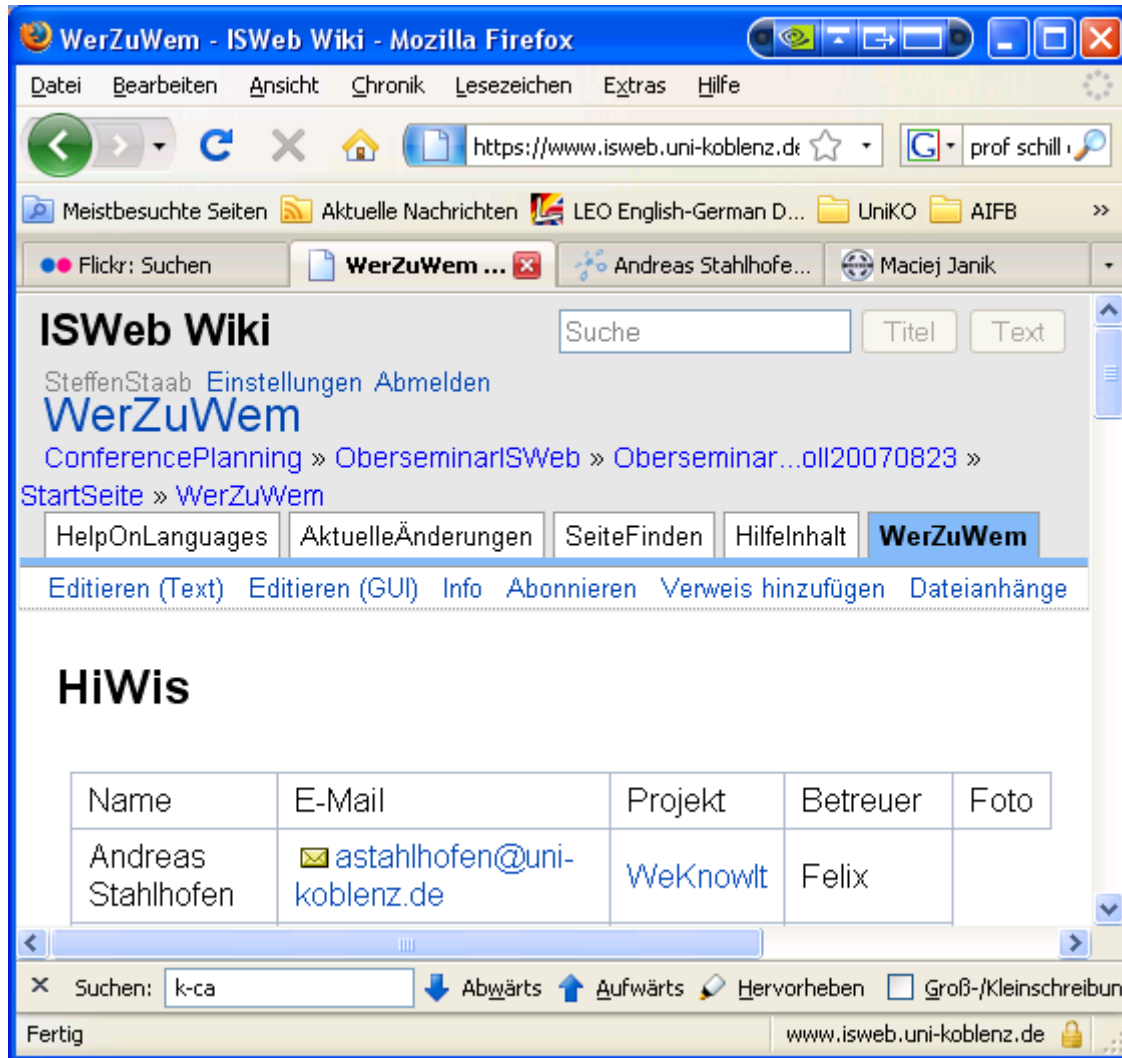
Students

- ◆ You may find on our group web page



Some are missing..

Students you may find by Wiki + social search:



Some are missing

New members I may find in my mail box:

RenataDividinoCV-1.pdf - Adobe Acrobat Standard

File Bearbeiten Anzeige Dokument Kommentare Formulare Werkzeuge Erweitert Fenster Hilfe

PDF erstellen Dateien zusammenführen Exportieren

1 / 2 79,5% Suchen

Notiz Textbearbeitung Einblenden

M. Sc. Renata Dividino

Personal Data

Privacy

Education

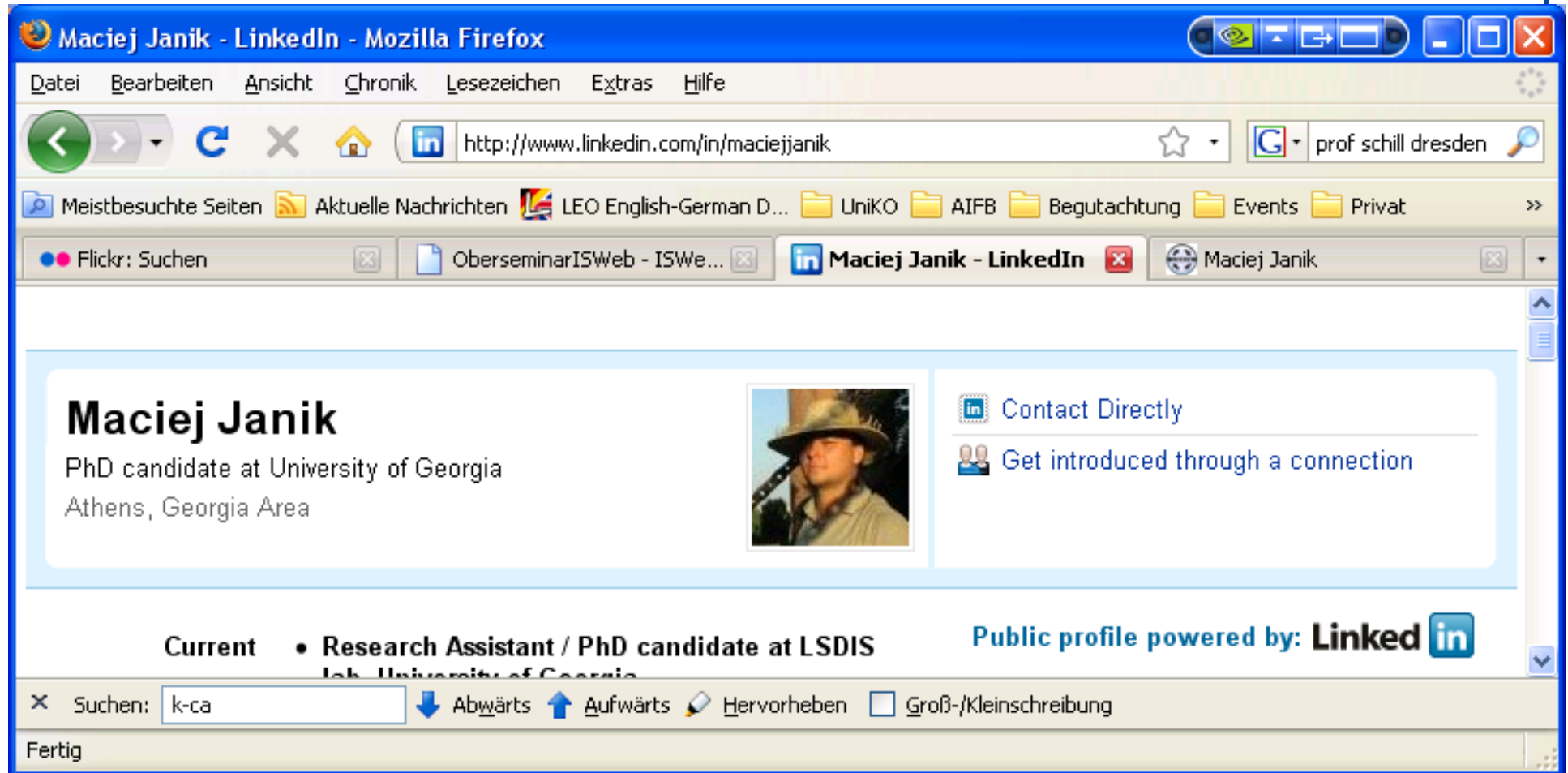
2007 - today

2004 - 2007

Privacy protected

Some are missing...

New members you may find on LinkedIn:



The Semantic Web: Tying it together

ISWeb

 SCIENTIFIC PHD ...

Mail

 RenataDividinoCV...

File

 Maciej Janik - Link...

Social
Site

 Friedrich Pfitzman...

Web
Page



<http://www.vimeo.com/1513562?pg=embed&sec=1513562>

How to represent Multimedia Data?

- ◆ Language
- ◆ Schema/Ontology/Standard

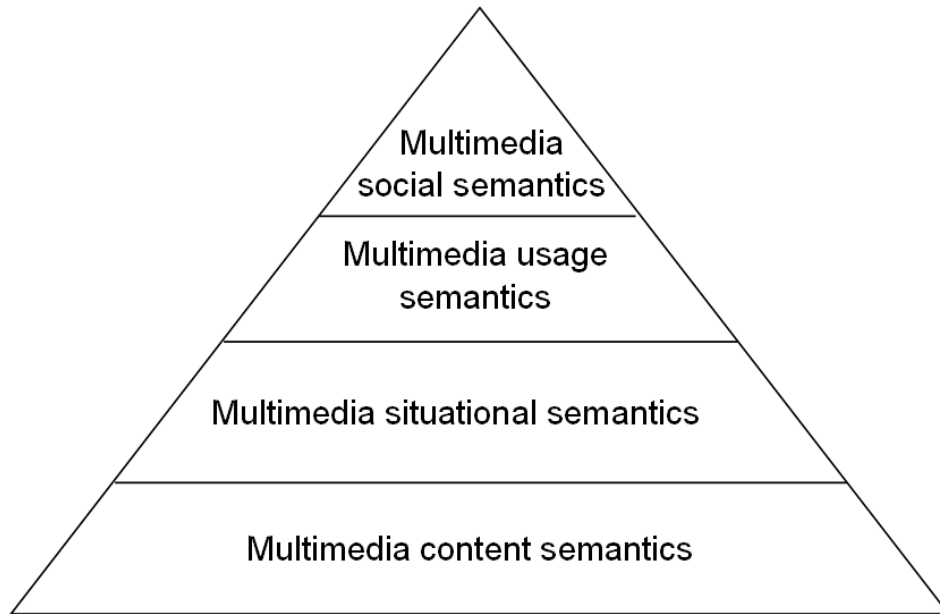
How to represent and access Multimedia Containers?

- ◆ E-mail
- ◆ Wiki
- ◆ Web pages (i.e. annotation)
- ◆ Documents
- ◆ Relational databases

How to link between different (Multimedia) Containers?

- ◆ E.g. staab@uni-koblenz.de and  refer to same person

How to query/search (Semantic) Data?



Not considered
in this tutorial!

Agenda Items

Ontology Representation
Languages

Ontology Query Languages

Multimedia Ontologies

Ontology-based

- ◆ annotation
- ◆ content recognition
- ◆ content creation
- ◆ retrieval and feedback
- ◆ metadata management
- ◆ ...