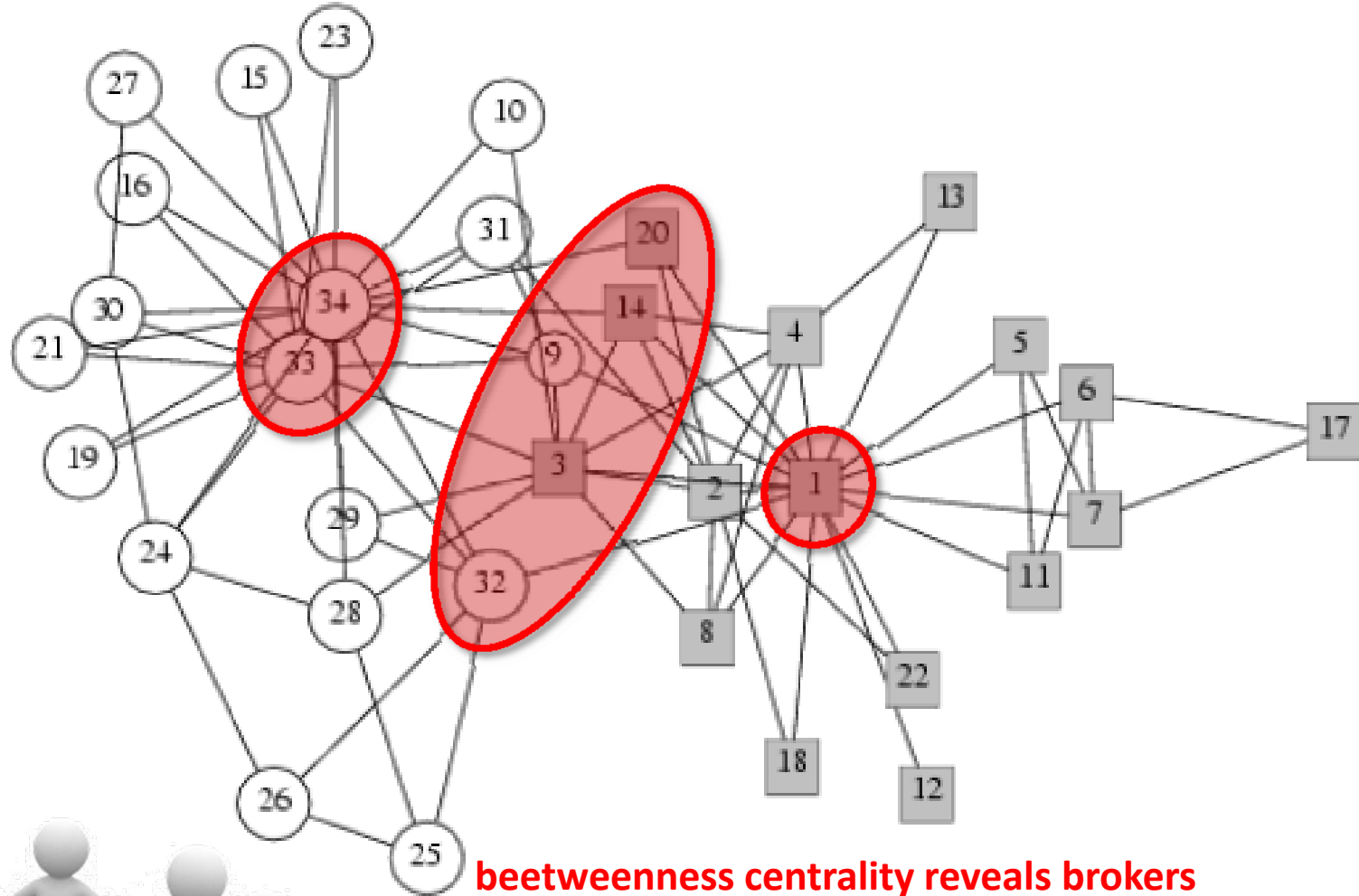


W3C Workshop on the Future of Social Networking
15-16 January 2009, Barcelona

Fabien Gandon, INRIA, 



betweenness centrality reveals brokers
« A place for good ideas » [Burt 1992] [Burt 2004]



sociograms and analysis

Web Applications

- XHTML
- SVG CDF
- SMIL
- XForms
- CSS XSL
- WICD

Mobile

- XHTML Basic
- Mobile SVG
- SMIL Mobile
- XForms Basic
- CSS Mobile
- MWI BP

Voice

- VoiceXML
- SRGS
- SSML
- CCXML
- EMMA

Web Services

- SOAP
- MTOM
- WSDL
- WS-CDL
- WS-A

Semantic Web

- OWL
- SKOS
- GRDDL
- RDFa
- POWDER
- RIF

Privacy, Security

- P3P
- APPEL
- XML Sig
- XML Enc
- XKMS

Web Accessibility / Internationalization / Device Independence / Mobile Access / Quality Assurance

XML, Namespaces, Schemas, XQuery/XPath, XSLT, DOM, XML Base, XPointer, RDF/XML, SPARQL

XML Infoset, RDF(S) Graph

Web Architectural Principles

URI/IRI, HTTP

One Web

Internet

Semantic Web

OWL

SKOS

GRDDL

RDFa

POWDER

RIF

XML, Namespaces, Schemas, XQuery/XPath, XSLT, DOM, XML Base, XPointer, RDF/XML, SPARQL

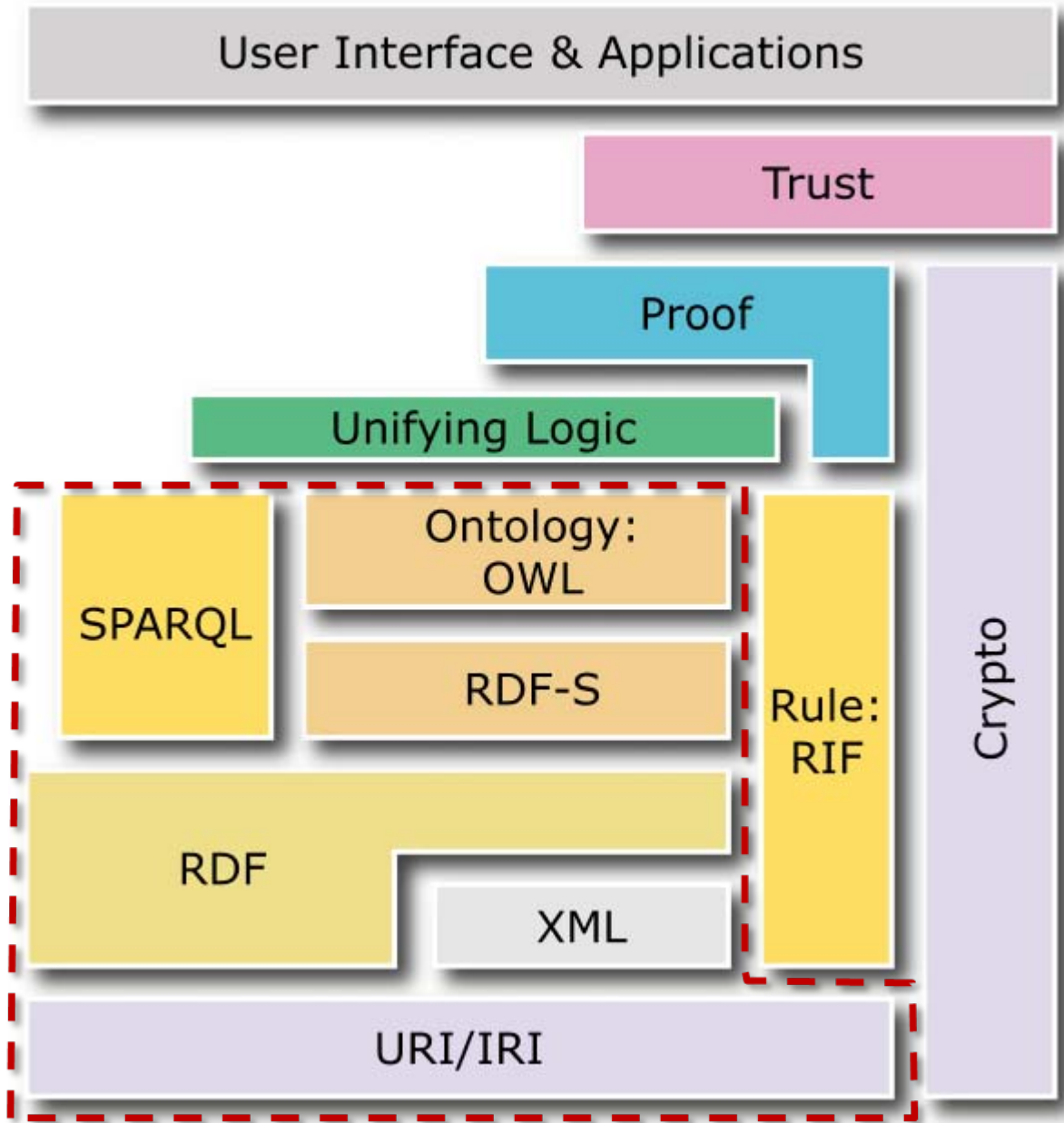
XML Infoset, RDF(S) Graph

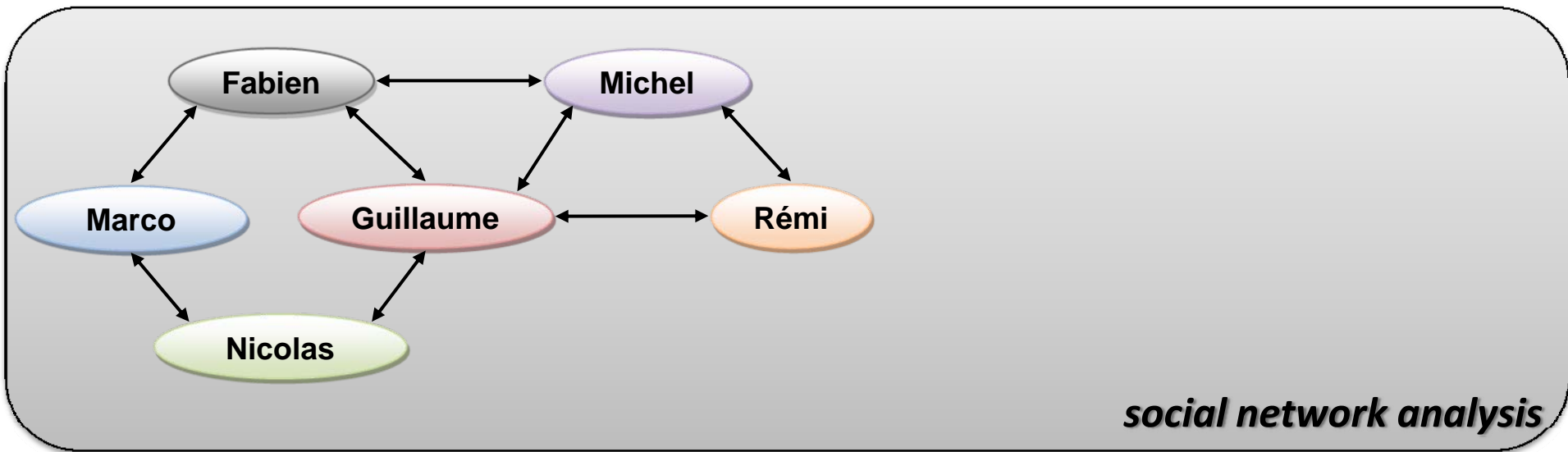
Web Architectural Principles

URI/IRI, HTTP

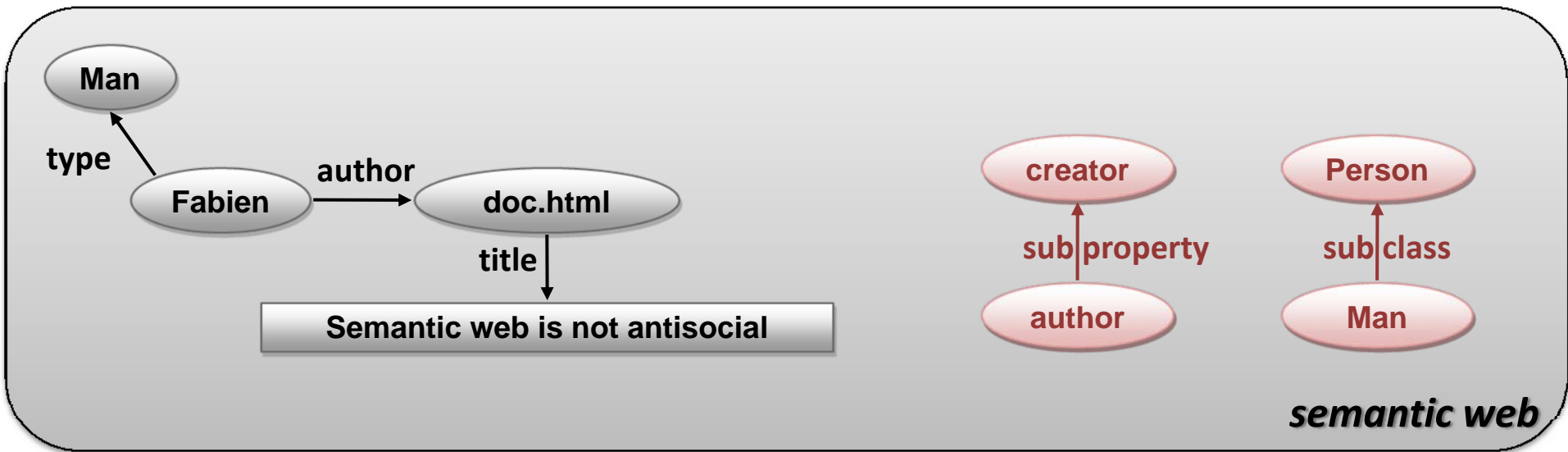
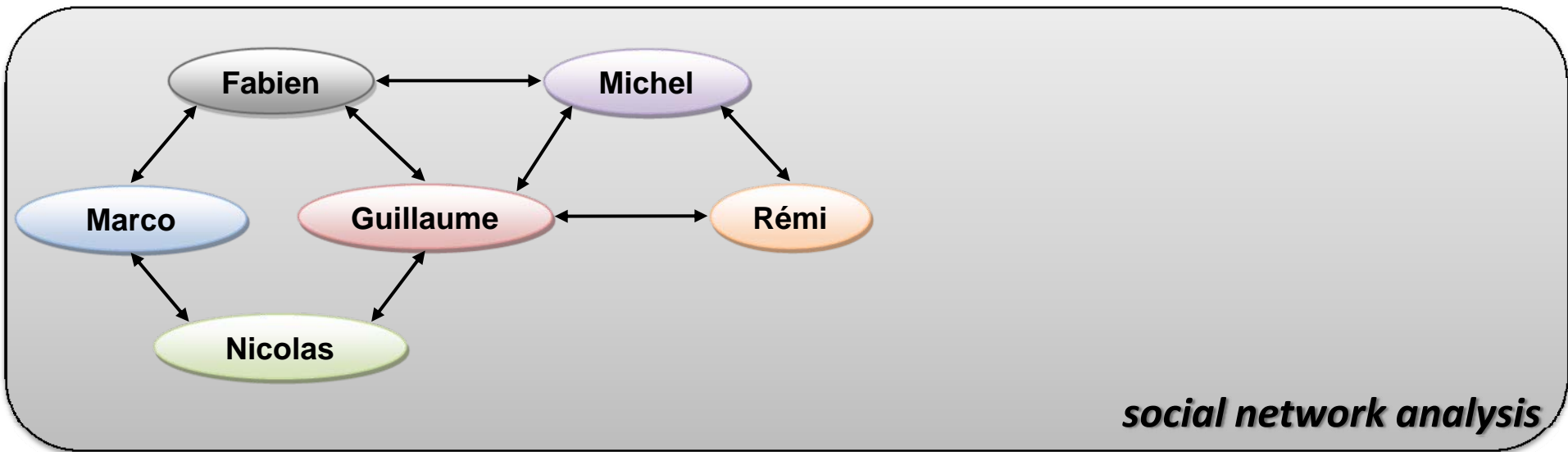
One Web

Internet

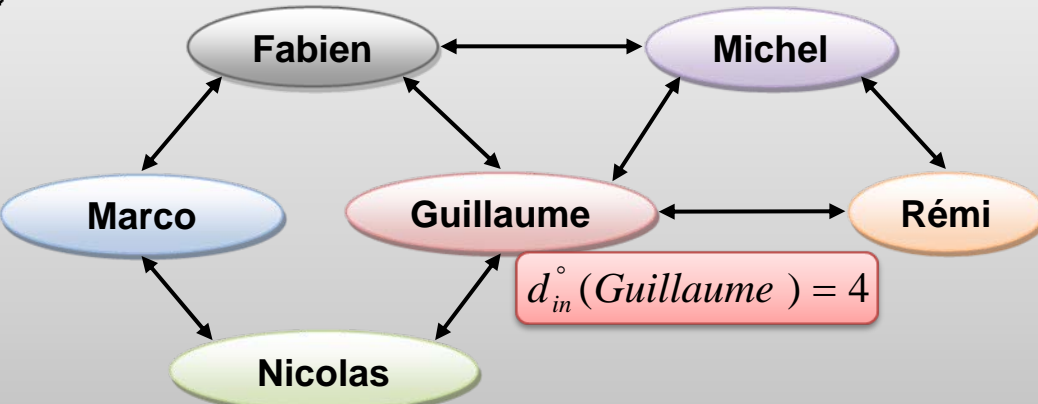




graphs, graphs, graphs, ...

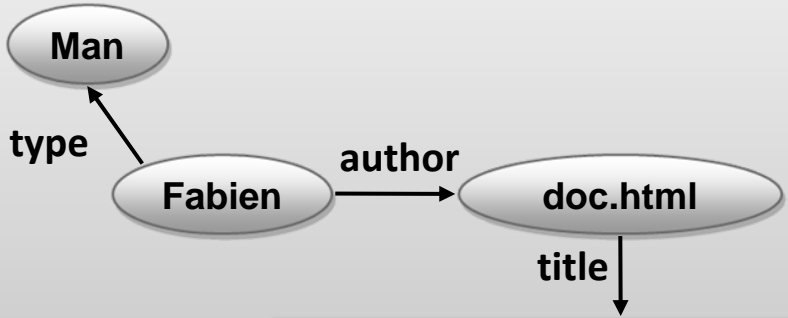


graphs, graphs, graphs, ...



$$d_{in}^{\circ}(p) = |\{x; rel(x, p)\}|$$

social network analysis

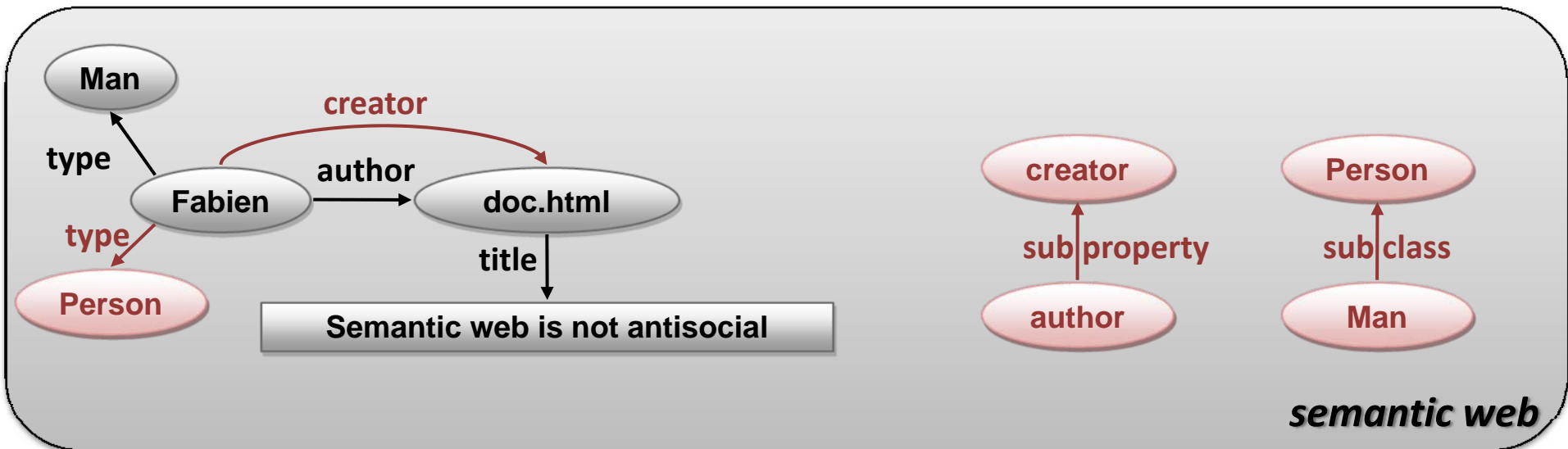
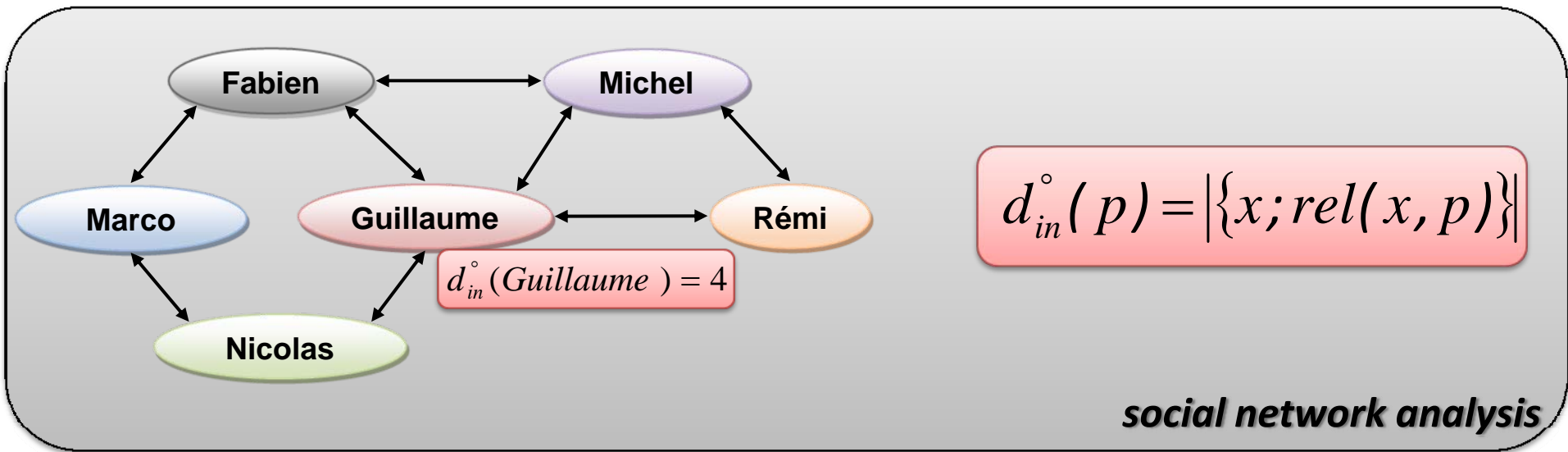


Semantic web is not antisocial



semantic web

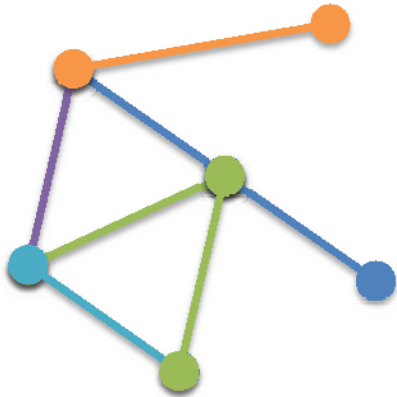
graphs, graphs, graphs, ...



graphs, graphs, graphs, ...

RDF

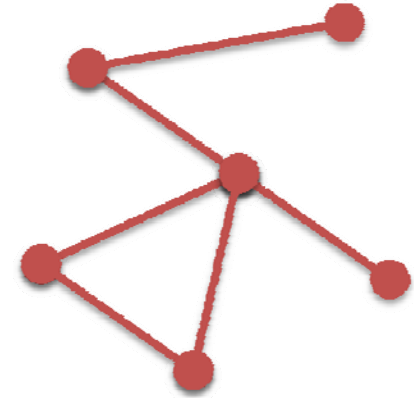
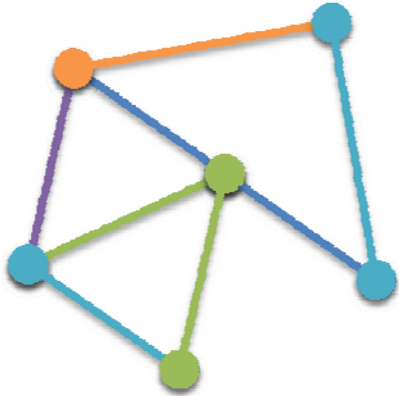
graph



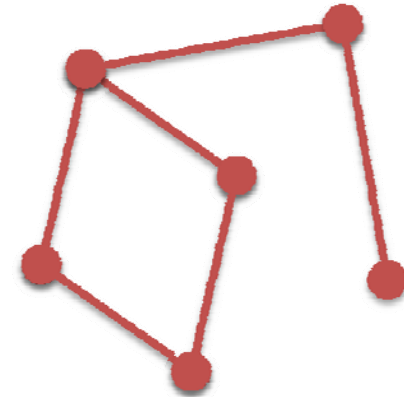
classic SNA on semantic web graphs

RDF

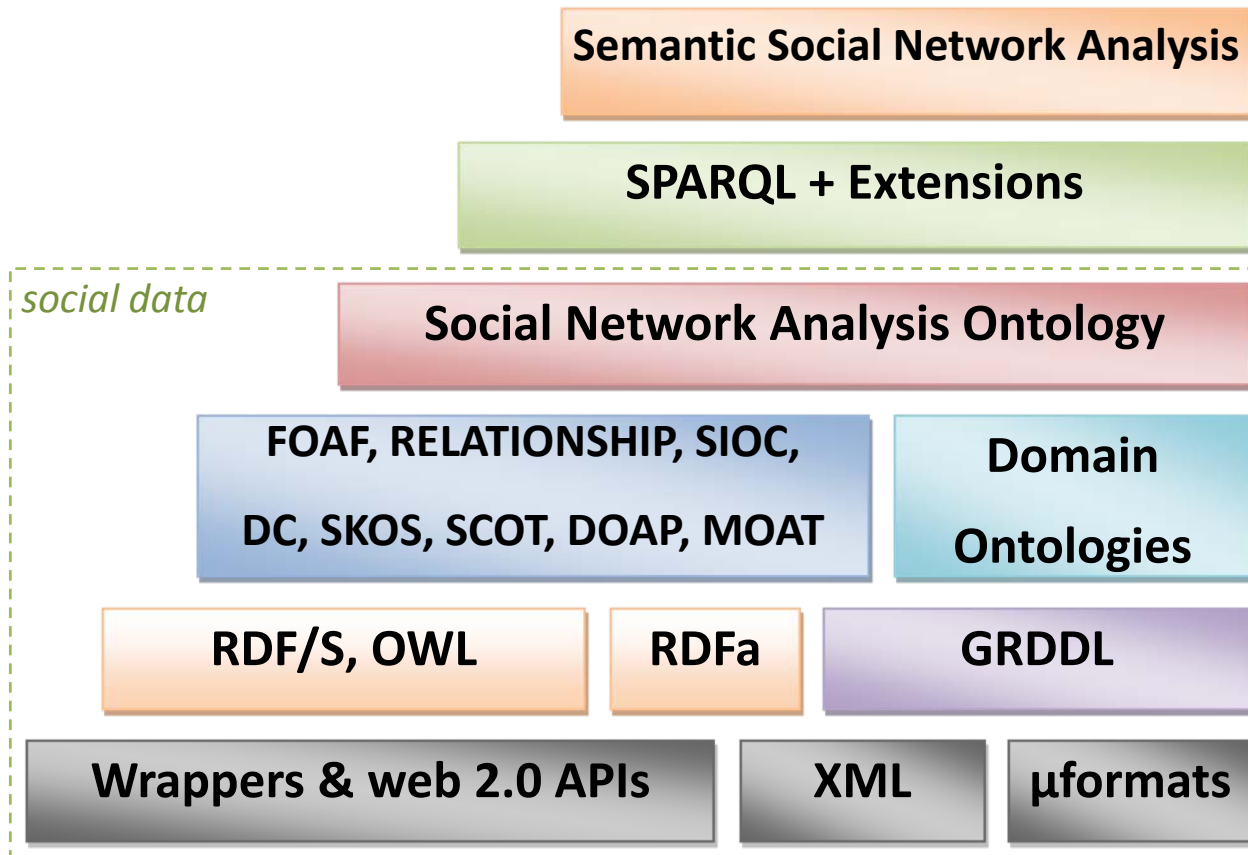
graph



non-typed graphs



classic SNA on semantic web graphs



leveraging the full semantic web stack

parameterized in-degree

$d_{in}^{\circ} \langle type, length \rangle (y)$



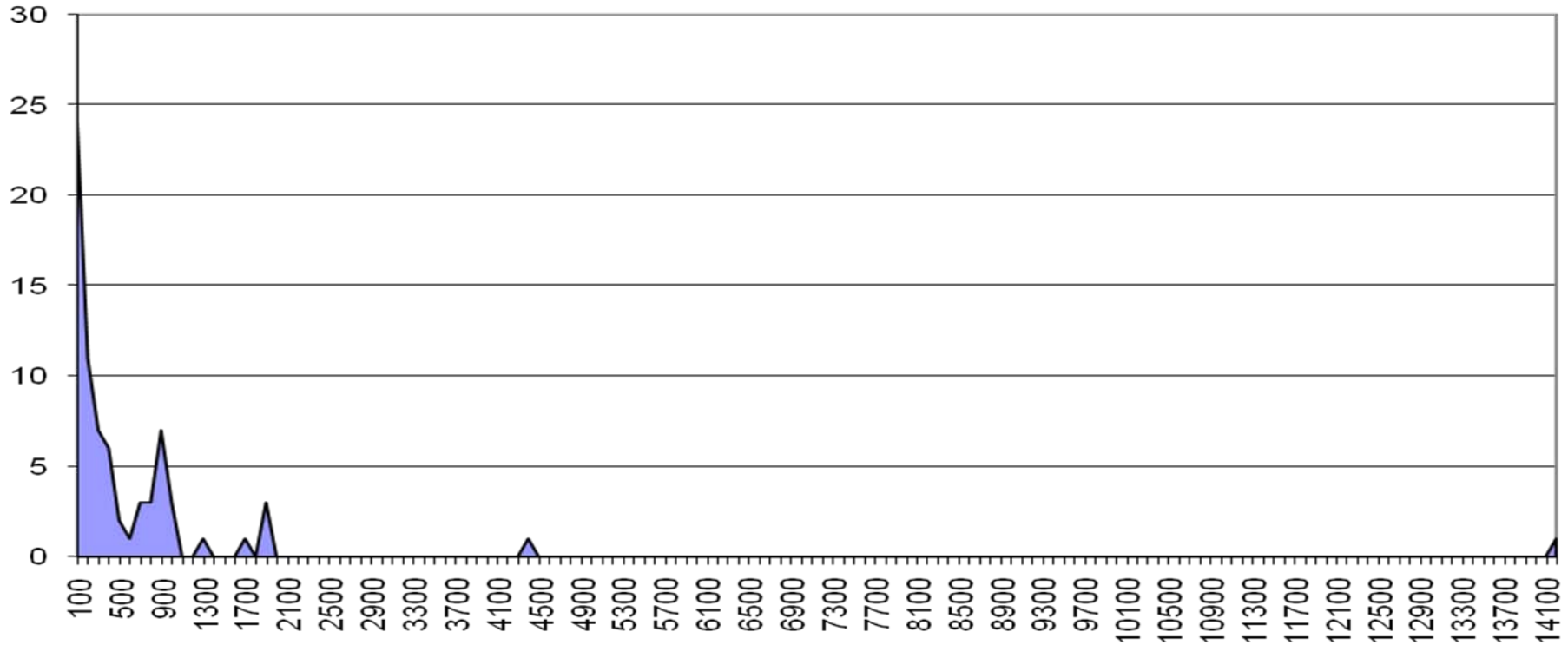
```

ADD {
  ?y semsna:hasInDegree _:b0
  _:b0 semsna:forProperty param[type]
  _:b0 rdf:value ?indegree
  _:b0 semsna:hasLength param[length]
}
SELECT ?y count(?x) as ?indegree {
  ?x $path ?y
  filter(match($path, star(param[type])))
  filter(pathLength($path) <= param[length])
} group by ?y

```

parameterized in-degree

$$d_{in}^o \langle type, length \rangle (y)$$

long tail distribution of the betweenness centralities

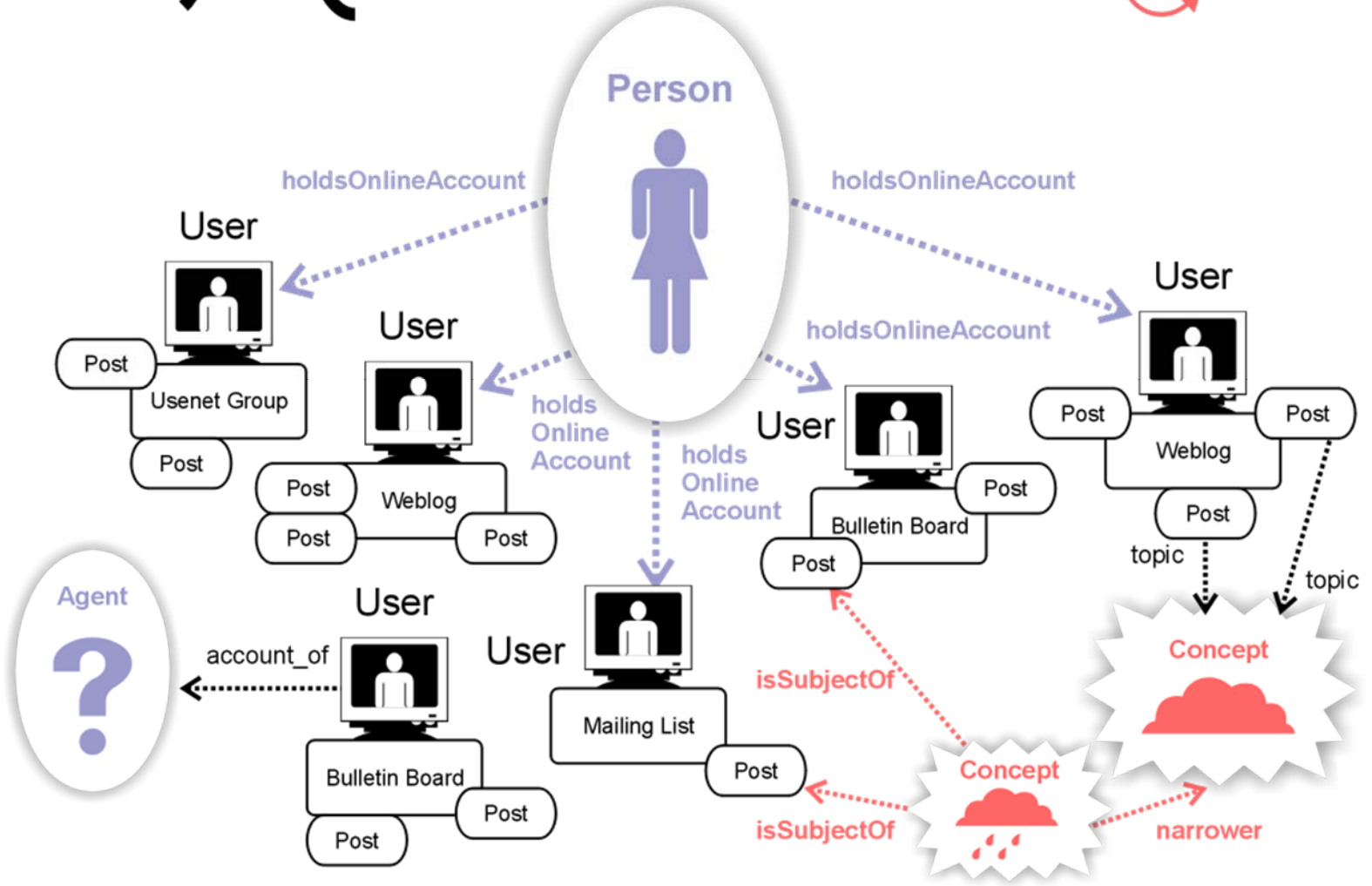
50 000 projections on 2020 FOAF profiles extracted from flickr.com

[Freeman, 1979]

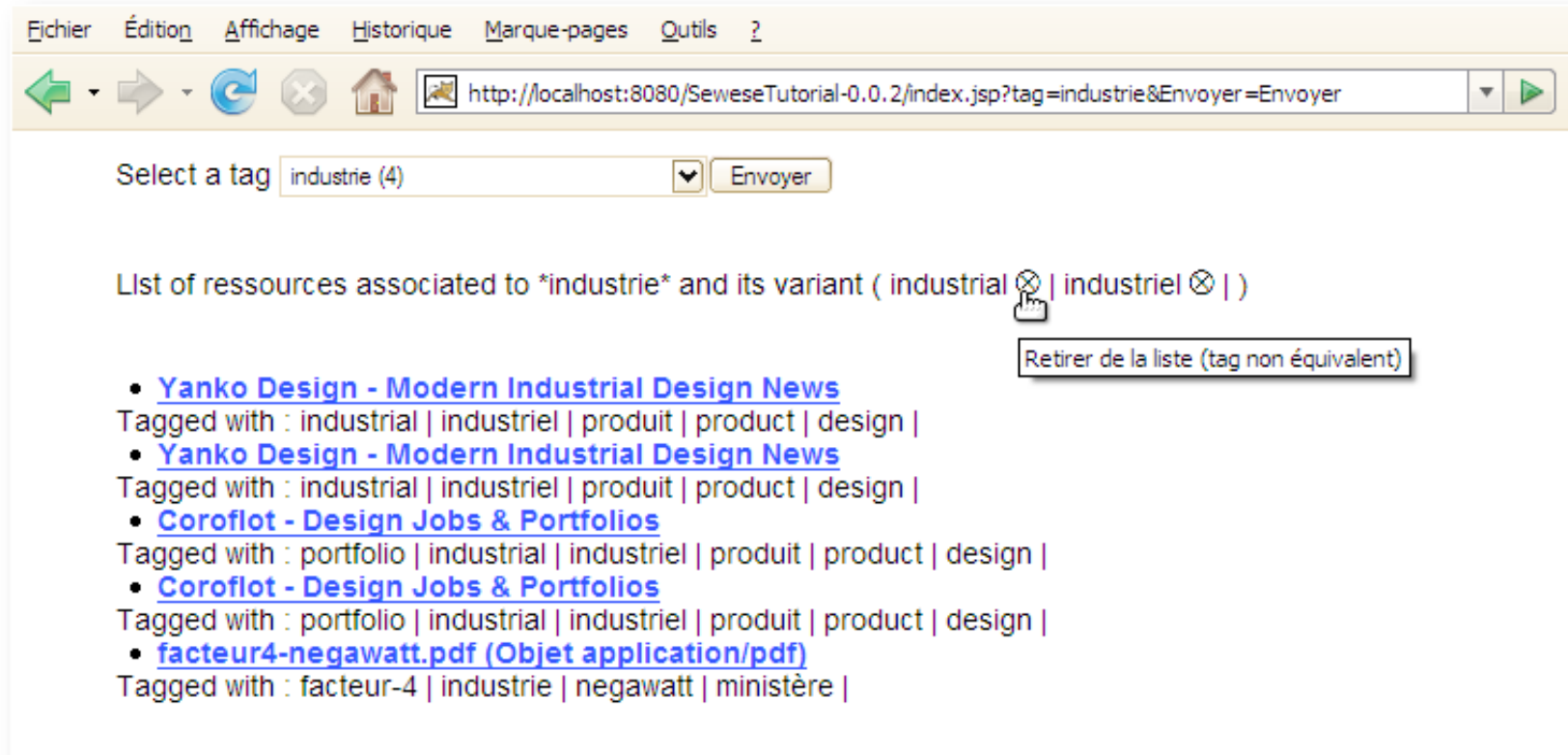


other graphs available too...

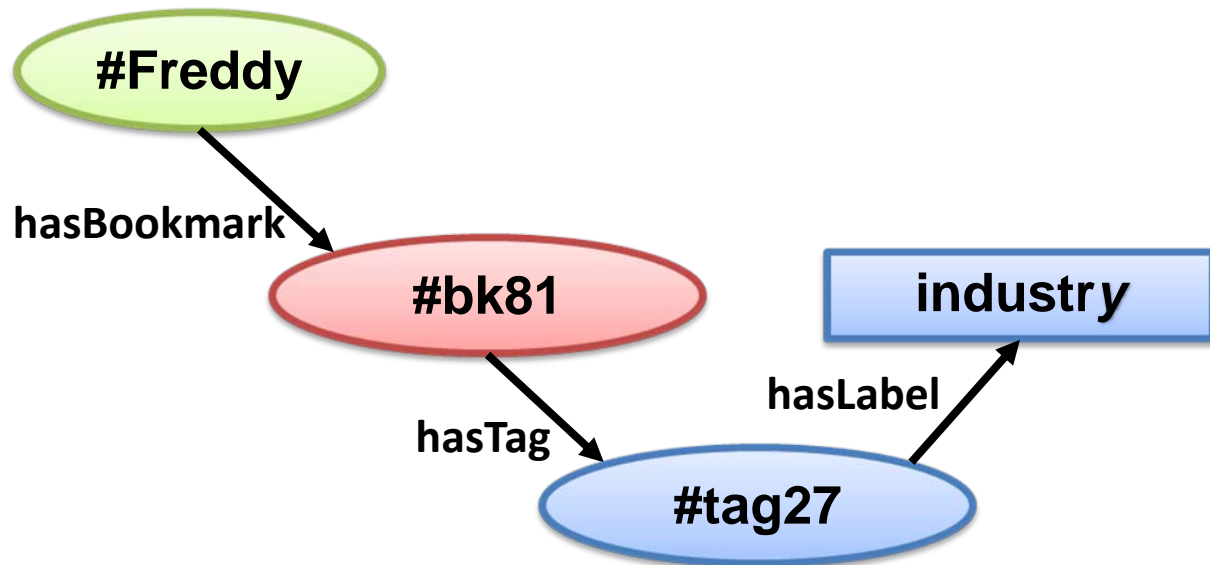
SIOC + FOAF + SKOS



e.g. capture **bookmarks** and their tags

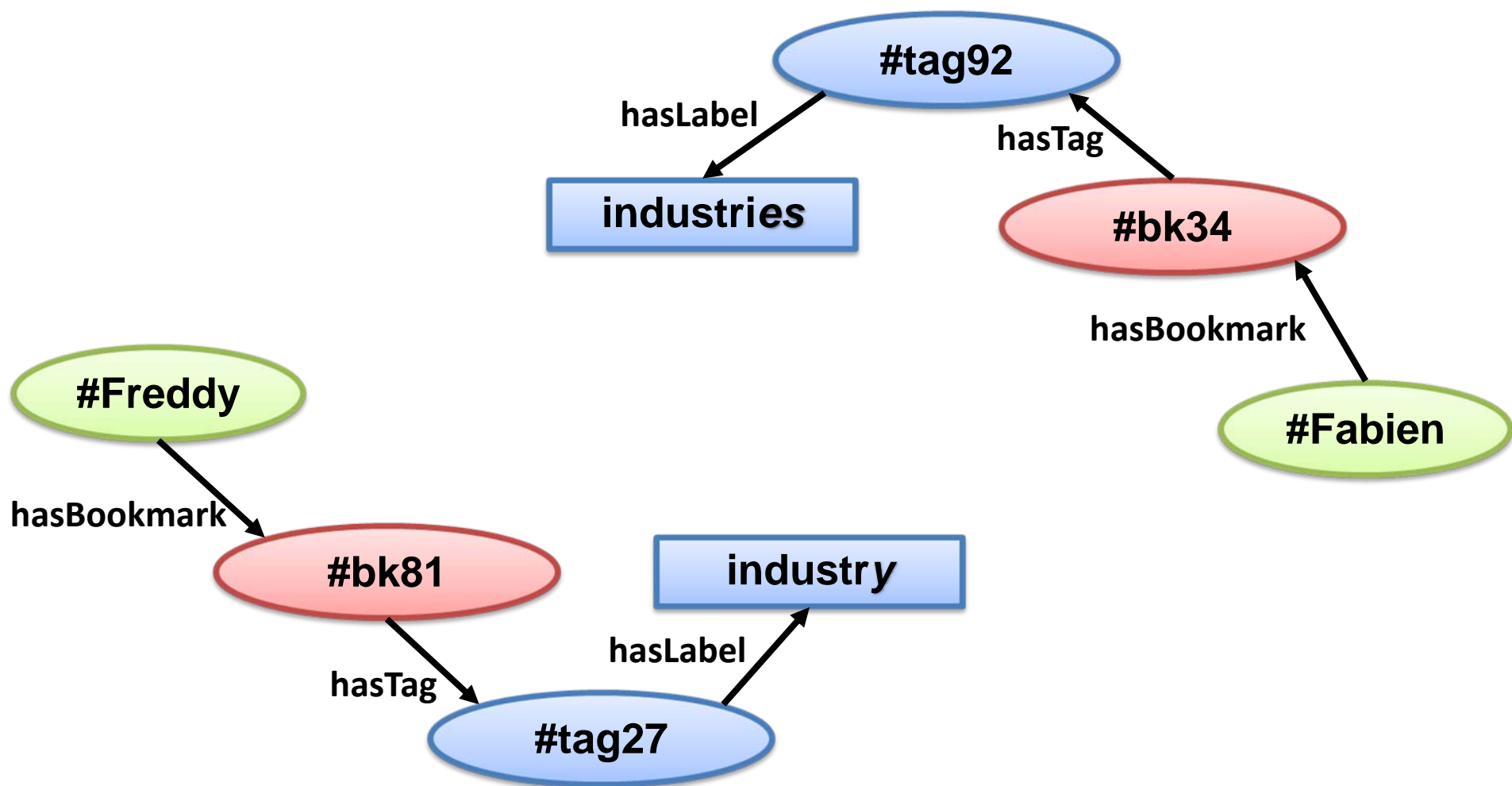


co-tags extracted from delicious for “ademe”
6054 **bookmarks**, 16 users, 5153 tags, 5969 resources



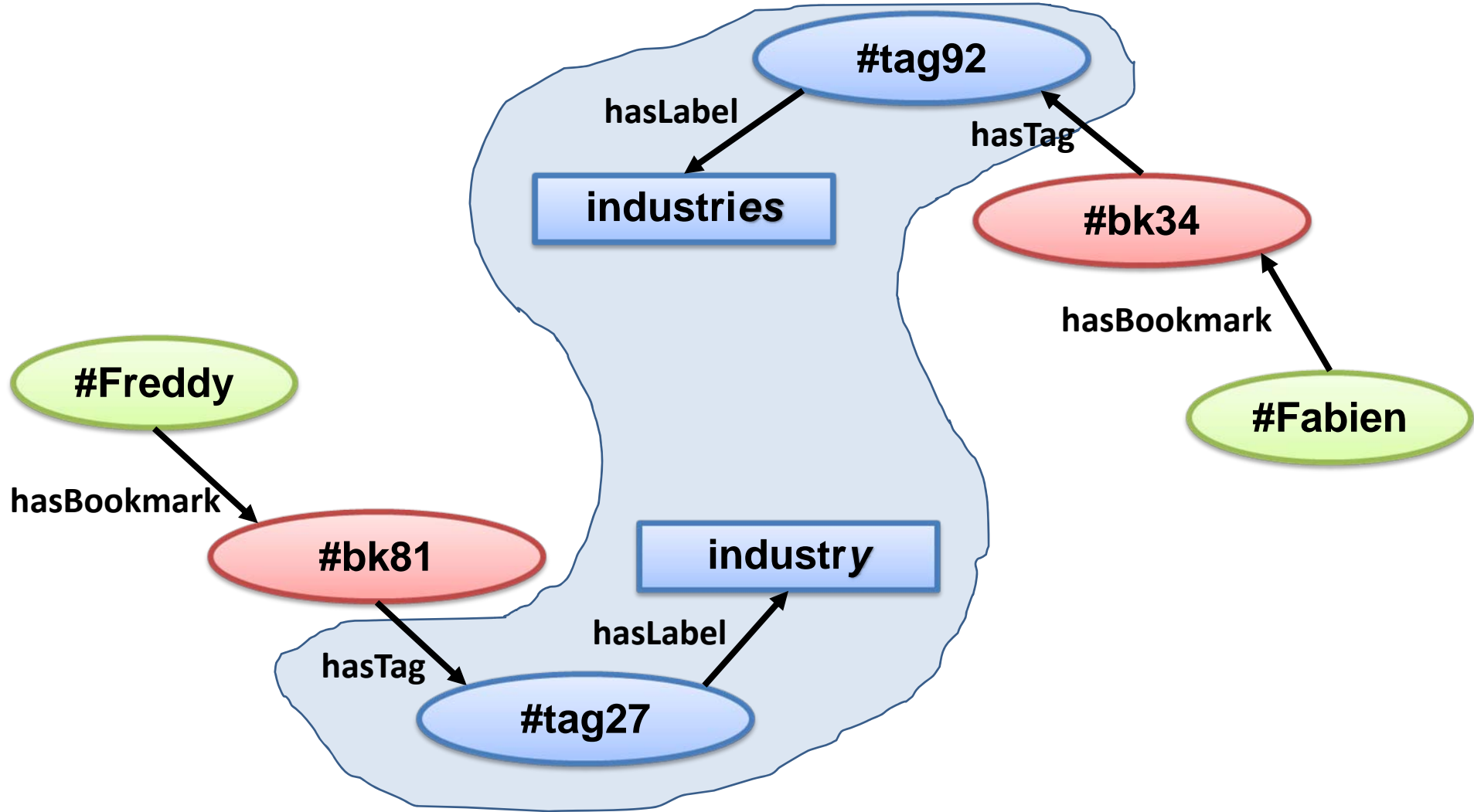
global giant graph

linking users, actions, knowledge, companies, etc.



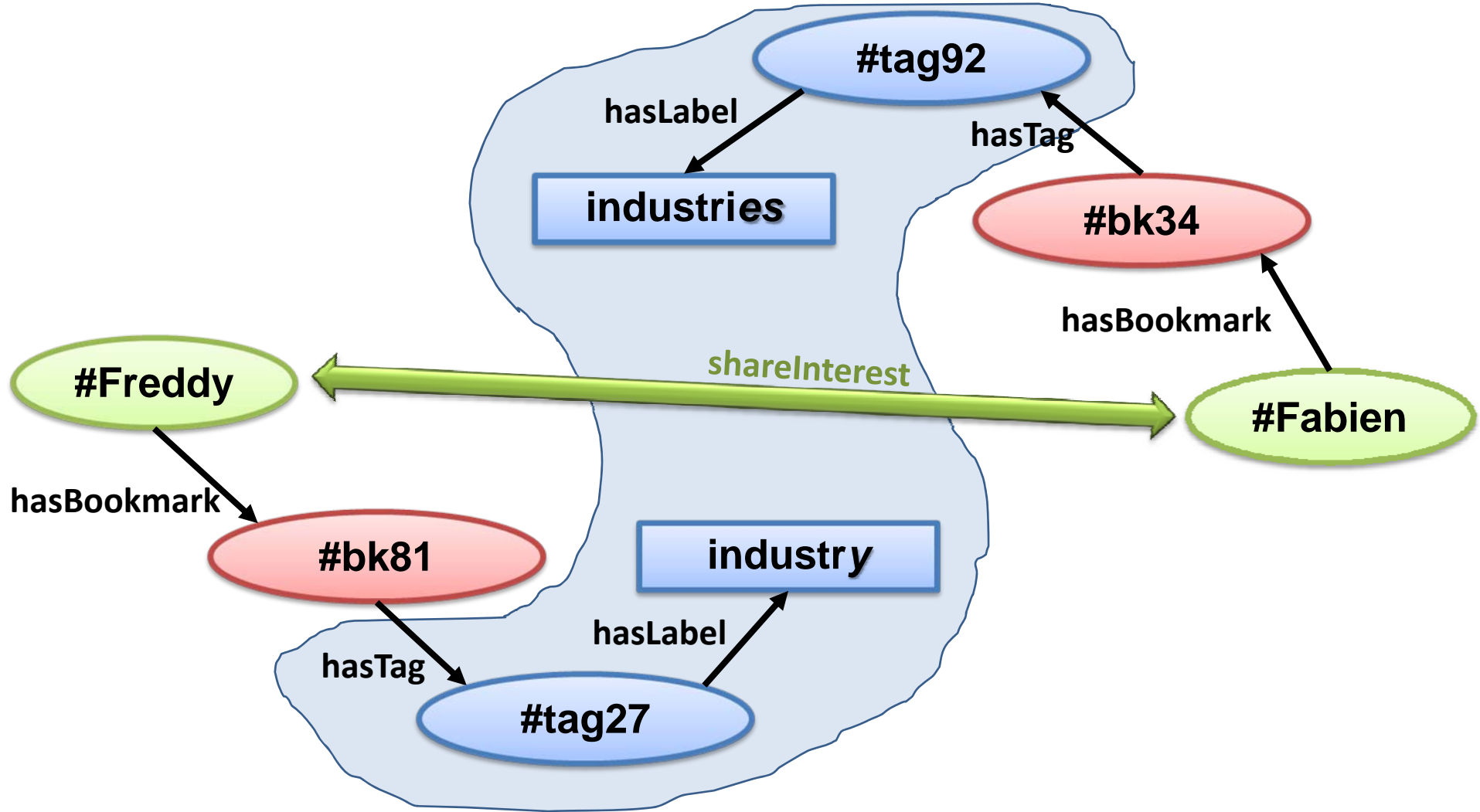
global giant graph

linking users, actions, knowledge, companies, etc.



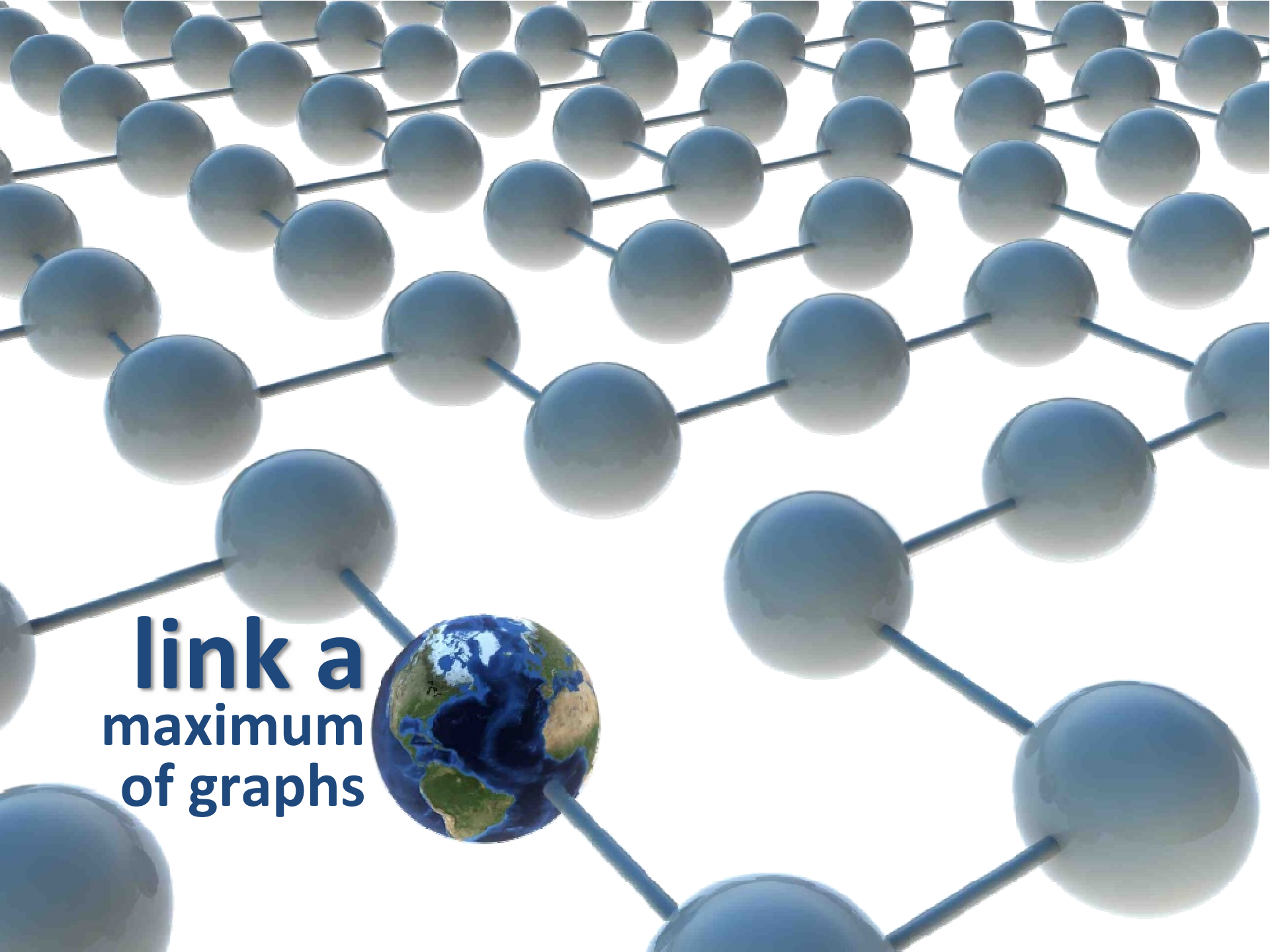
global giant graph

linking users, actions, knowledge, companies, etc.



global giant graph

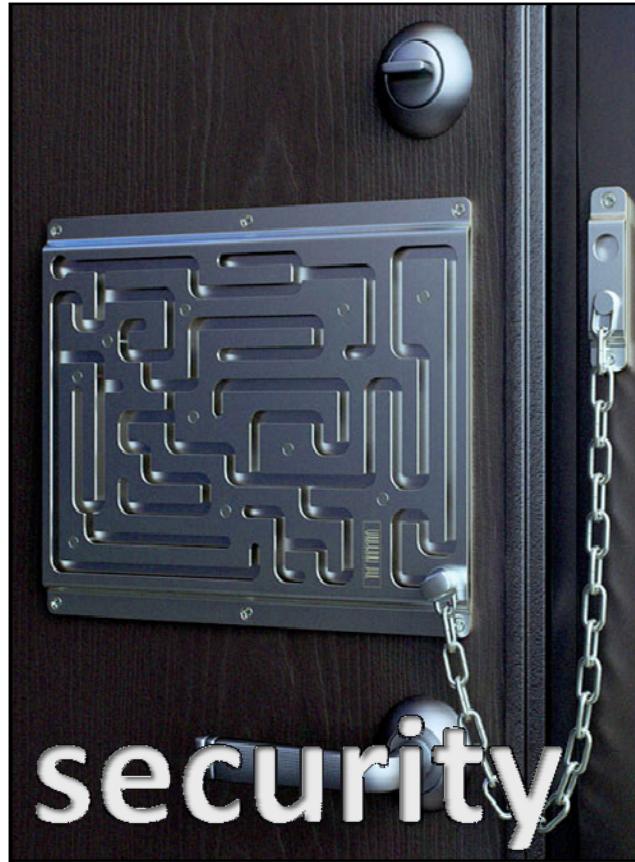
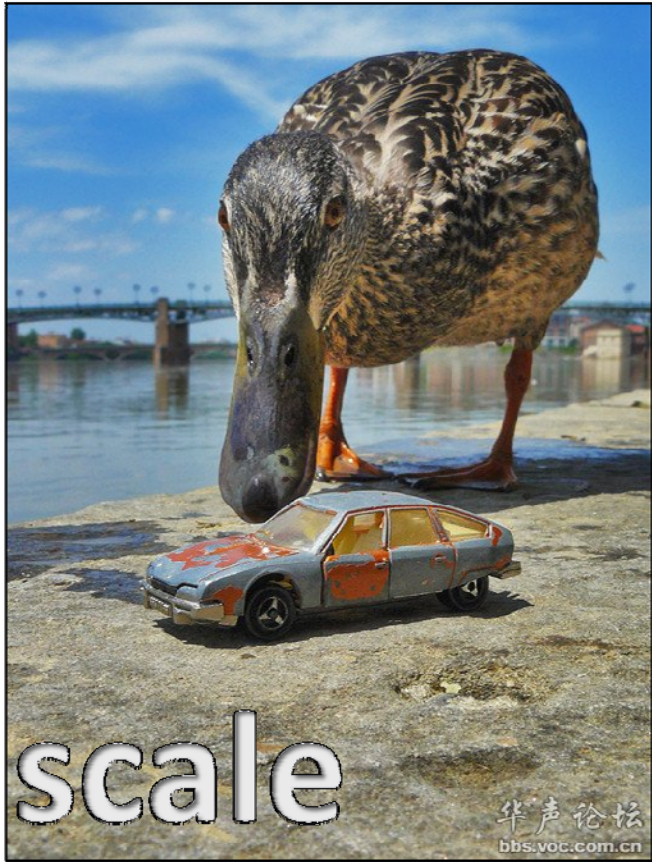
linking users, actions, knowledge, companies, etc.

The image features a 3D network of blue, semi-transparent spheres connected by thin blue lines. The spheres are arranged in a grid-like pattern that recedes into the background, creating a sense of depth. In the lower-left foreground, one sphere is replaced by a realistic globe of the Earth, showing continents and oceans. The text "link a maximum of graphs" is overlaid on the left side of the image in a bold, blue, sans-serif font.

**link a
maximum
of graphs**

closing
messages





open issues

**open
your data**



**mobile
web ok**



open
your data



+

mobile
web ok



=

open your
mobile web



some bridges already exist...



POWDER : information about web resource(s)
without retrieving the resource(s)

some bridges already exist...



POWDER : information about web resource(s)
without retrieving the resource(s)



Vocabularies : Device Description Vocabulary
(MWI), Delivery Context Ontology (UWA),
CC/PP Structure and Vocabularies

some bridges already exist...



POWDER : information about web resource(s)
without retrieving the resource(s)



Vocabularies : Device Description Vocabulary
(MWI), Delivery Context Ontology (UWA),
CC/PP Structure and Vocabularies



Semantic Web applications on mobiles:
DBPedia Mobile, i-MoCo (250 million triples),
myCampus

ISICIL project



social web applications and semantic web frameworks for corporate applications.

- enterprise social networking;
- business intelligence, watching, monitoring;
- communities of interest, of practice;
- web 2.0 & corporate processes integration;
- trust, privacy, confidentiality.

