Leveraging Social data with Semantics

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

sociograms and analysis
social network analysis
Fabien is the creator of the document. The social network analysis shows connections between people: Fabien, Marco, Guillaume, Michel, Nicolas, and Rémi.

The semantic web is represented by graphs, such as the graph showing the relationship between Fabien and the document "doc.html". The title of the document is "Semantic web is not antisocial".

The graph structure highlights the relationships and types, including the sub-property and sub-class relationships between different entities.
The provided image contains a social network analysis diagram with the following key elements:

- **Social Network Analysis**:
  - Nodes represent individuals: Fabien, Michel, Marco, Guillaume, Nicolas, Rémi.
  - Edges indicate relationships between individuals.
  - The in-degree of Guillaume is labeled as 4.

- **Semantic Web**:
  - Nodes include types such as Man, Person, and sub-class properties.
  - A graph with a title labeled "Semantic web is not antisocial." 

- **Mathematical Expression**:
  - The in-degree of a node $p$, denoted as $d_{in}(p)$, is defined as the set of nodes $x$ connected to $p$ by a relation $rel(x, p)$.

- **Graphical Elements**:
  - The diagram includes labeled arrows indicating relationships and properties.

The textual content extracted from the image includes:

- **Author**: Fabien
- **Creator**: Michel
- **Type**: Man
- **Title**: "Semantic web is not antisocial"

The semantic web is depicted with a set of graphs, indicating the interconnected nature of data and entities.
Fabien
creator
author
Man
type

graphs, graphs, graphs, graphs, ...

"semantic web is not antisocial"

\[ d_{in}(p) = \{x; rel(x, p)\} \]

social network analysis

\[ d_{in}(\text{Guillaume}) = 4 \]
RDF

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

\[ d_{in}^{o} \langle \text{type, length} \rangle (y) \]
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

$d^o_{in} <type,length> (y)$

[PhD Guillaume Erétéo]
long tail distribution of the betweenness centralities
50 000 projections on 2020 FOAF profiles extracted from flickr.com

[Freeman, 1979]
global

semantic

social

graphs
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.
link a maximum of graphs
closing messages
scale

security

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.