Bridging Folksonomies and Ontologies For Knowledge Sharing on the Social Web

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Social Software

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Interaction

Exchange

Sharing
Editing Madman Muntz

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This page is 34 kilobytes long.

---

{|infoBox Celebrity
| name = Earl William Muntz
| image = EarlMuntz.jpg
| caption = “Madman” Muntz in one of his many TV advertisement performances</small>
| birth_date = {{birth date|1914|1|3}}
| birth_place = [[Elgin, Illinois|Elgin]], [[Illinois]], <br />United States
| death_place = [[Rancho Mirage, California|Rancho Mirage]], [[California]], <br />United States
| occupation = [[Electrical Engineer]]<br />[[Businessman]]<br />[[Entrepreneur]]<br />[[Television Commercials Creator]]
| salary = -
| networth = -
| height = -
| children = James Muntz<br />Tee Vee “Teena” Muntz |
How to organize this wealth?
Social Tagging ?
Or mess of tags?
Objectives

1. Overcoming the limits of folksonomies
Objectives

1. Overcoming the limits of folksonomies
2. Semantic Web: interoperability across Social Platforms
Organizing / Structuring
Folksonomies
From folksonomies towards ontologies
(Mika, 2007)
Economic policy

Economic cooperation

Includes cooperative measures in banking, trade, industry etc., between and among countries.

Interdependence

Economic co-operation

European economic cooperation

European industrial cooperation

Industrial cooperation

prefix skos: <http://www.w3.org/2004/02/skos/core#>
From folksonomies towards ontologies (Mika, 2007)
From folksonomies towards ontologies (Mika, 2007)

Co-User Graph:
Overlapping of community of interest
From folksonomies towards ontologies (Mika, 2007)

Co-Utilization Graph
Co-occurrence on Resources
From folksonomies towards ontologies (Mika, 2007)
From folksonomies towards ontologies (Mika, 2007)

Broader/Narrower relations via sub-communities of users

<table>
<thead>
<tr>
<th>Broader</th>
<th>Narrower</th>
</tr>
</thead>
<tbody>
<tr>
<td>mac</td>
<td>iphoto</td>
</tr>
<tr>
<td>java</td>
<td>j2ee</td>
</tr>
<tr>
<td>google</td>
<td>gds</td>
</tr>
<tr>
<td>search</td>
<td>a9, engine</td>
</tr>
<tr>
<td>linux</td>
<td>ubuntu, gnome</td>
</tr>
<tr>
<td>flash</td>
<td>actionscript</td>
</tr>
<tr>
<td>flickr</td>
<td>licker, photoset</td>
</tr>
<tr>
<td>javascript</td>
<td>xmlhttprequest, dom, sarissa</td>
</tr>
</tbody>
</table>
Exploiting extra-information: Mapping with Ontologies

(Specia & Motta, 2007)
1. Clusters of co-occuring tags

2. Selecting ontologies

3. Mapping between tags and ontologies

4. Infering semantic links
Exploiting extra-information : Mapping with Ontologies
(Specia & Motta, 2007)

Example of a cluster (del.icio.us) :

- college
- commerce
- corporate
- course
- education
- high
- instructing
- learn
- learning
- lms
- school
- student
Exploiting extra-information: Mapping with Ontologies
(Specia & Motta, 2007)
Enriching Folksonomies
Guiding Tagging with Ontologies (Passant, 2007)

Limits of tags

Variability of spelling and language

new_york = newyork
music = musique
Guiding Tagging with Ontologies (Passant, 2007)

Limits of tags

Ambiguity:

toread ?
RDF =? Ressource Description Framework
RDF =? Rwanda Defense Forces
Guiding Tagging with Ontologies (Passant, 2007)

Limits of tags

« Flat » organization:

paris ? France ? Europe ? country
Guiding Tagging with Ontologies
(Passant, 2007)

Raising ambiguity thanks to ontologies
Raising ambiguity thanks to ontologies

Guiding Tagging with Ontologies (Passant, 2007)
Guiding Tagging with Ontologies (Passant, 2007)

Raising ambiguity thanks to ontologies

2 concepts

1 tag
Keeping track of Tagging Info
Keeping track of Tagging Info

1 tag = 1 object (Gruber, 2005)

1. Tagged object
2. String of character
3. User
4. Domain of use
5. Time
Semantic Wikis

Sweet Wiki (Buffa et al, 2008)
Sweet Wiki (Buffa et al., 2008)

Editing and Tagging wiki pages

Using SPARQL with SweetWiki

Introduction

SPARQL is the query language of the semantic web.

First of all, if you don't know what the "semantic web means", what SPARQL, RDF or RDFS are, you'd better start reading this [semantic web tutorial](#).
Sweet Wiki (Buffa et al, 2008)

1 new tag =
  1 new concept
Sweet Wiki (Buffa et al, 2008)

1 new tag =
1 new concept

Conceptual scheme is collaboratively editable
Ontologies to Interlink Social Softwares
SIOC
(Breslin et al, 2005)

Semantically Interlinked Online Communities:
Semantically Interlinked Online Communities:

* Keeping track of social interactions
SIOC
(Breslin et al, 2005)

Semantically Interlinked Online Communities:

* Keeping track of social interactions
* Automatically generate semantic metadata
Good practices:

« Web of Linked Data »

(Berners Lee, 2006)
Good practices:

« Web of Linked Data »
(Berners Lee, 2006)

1. Http URIs to name
2. Provide extra info on each URIs
4. Linking URIs to other URIs
Revyu.com: sharing reviews on anything
(Heath & Motta, 2007)
Anything that has a name can be reviewed

Start a New Review

enter the name of the thing you would like to review

Start

How to Name Things You Are Reviewing

Not sure what style to use when naming something you're reviewing? The main thing to remember when choosing a name is to identify the thing clearly and unambiguously to others. Obviously you can use whatever style you choose, but it can be useful if certain types of thing follow particular patterns.

Example styles for common types of things:

- **Things with a location** (pubs, restaurants, hotels, tourist attractions, etc)
  - style: *Name of Thing, District or Neighbourhood, Region or City*
  - example: The Star Tavern, Belgravia, London
  - example: The Wheatsheaf, East Hendred, Oxfordshire

- **Books**
  - style: *Book Name, by Book Author*
  - example: Designing with Web Standards, by Jeffrey Zeldman

- **Music**
  - style: *Album or Track Name - Artist or Group*
  - example: Funeral - Arcade Fire

- **Films**
  - style: *Film Name*
  - example: Licence to Kill

- **Products**
  - style: *Brand Product Name*
  - example: Tesco Guacamole
Tags...

restaurant nice cote-d-azur france gastronom

Suggestions: gastronomy

Home Page...
The official home page of *Le Pourquoi Pas* is at...

http://

Other Links...
There is also information about *Le Pourquoi Pas* at...

http://
Deriving semantics with extra source of info

ex : tag 'book'

=> Check ISBN (Amazon.com ou autre)

=> add rdf:type #Book
Conclusions

- Perspectives
1. Overcoming the limits of folksonomies

Objectives
Organizing folksonomies

A. Analyzing Co-occurrence patterns (Mika, 2005)

>> How to augment precision of the links?
Organizing folksonomies

B. Exploiting extra-information
(Specia & Motta, 2007)

>> How to select relevant sources?
Objectives

1. Overcoming the limits of folksonomies

2. Semantic Web: interoperability across Social Platforms
Guiding tagging with ontologies
(Passant 2007)

>> How to "naturally" integrate structured knowledge?

>> Incentives to contribute?
Tags as "shareable" objects
(Gruber 2005, Passant 2008)

>> 1 tag = 1 URI ?

>> 1 tag = 1 wiki page ?

>> 1 tag = several share-able meanings ?
Towards Inter-operability
(SIOC, Web of Linked Data)

>> Developing "viral" plugins (SIOC)

>> Combining Social applications? Bookmark + WikiPedia?
Thank you!
Perspectives

>> Methods to select precisely the social data used for inference

>> Getting richer info about tagging

>> Exploiting acquaintance networks

>> Tools of monitoring/tuning of automatic treatments
Keeping track of Tagging Info

1 tag = several meaning (Passant, 2008)

MOAT : Meaning Of A Tag
C. Getting Users to contribute

>> Games with a Purpose?

espgame.org
ontogame.org
Tagging the Tags

(Tanasescu & Streibel, 2007)
Tagging the Tags
(Tanasescu & Streibel, 2007)
Tagging the Tags
(Tanasescu & Streibel, 2007)