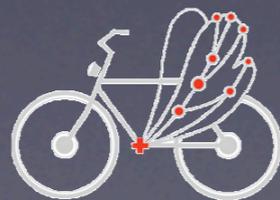


“데이터를 웹으로”

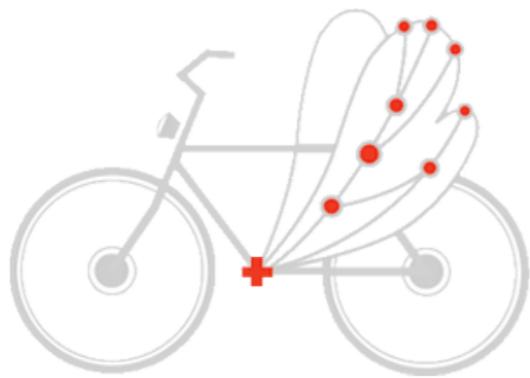
시맨틱웹 세미나

NHN 시맨틱웹TF팀
김광섭



BIKE
Biomedical Knowledge
Engineering Laboratory
Seoul National University

Thanks to ...



BIKE

Biomedical Knowledge
Engineering Laboratory
Seoul National University



기묘

seminar planning group



Seoul National University
Engineering Laboratory
Biomedical Knowledge



seminar planning group

김광섭

nhn. 시맨틱웹 Task Force

2주

Mission

시맨틱 웹을 ...

지금의 Mission

시맨틱웹의...



2008년 7월 17일 목요일

Data Link (Linked Data)

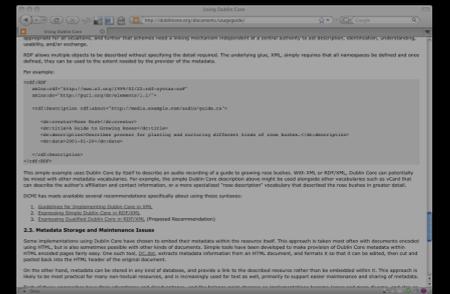
Vocabularies

Applications

Data Link on the Web

기존의 링크는 뭐지?
뭐가 문제지?

Links of Documents



현재상영작 | 박스오피스 | 별점순정렬 | 개봉예정작

NAVER hot MOVIE

찰리 바틀렛

★★★★★ 9.50



코미디 드라마 | 97분
개봉 2008.07.10

평점주기

- 그의이름은찰리바틀렛!-찰리바틀렛리뷰 14
- 지난주출발비디오여행에서김... 3
- 신나면서도감동적인영화 3
- 영화리뷰-찰리바틀렛CharlieBartlett 1

잘못된 만남

★★★★☆ 8.05

소림소녀

초강력 코믹 액션 <소림소녀>
웃음만발! 액션작렬! 예고편

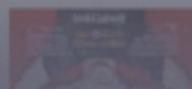


NAVER PC그린

내게 맞는
백신엔진을 직접고른다!

하우리 | 카스퍼스키

PC그린 정식오픈





한콕

Hancock, 2008

예매하기

네티즌평점

7.29

기본정보 액션, 판타지, 코미디, 드라마 | 미국 | 92 분 | 개봉 2008.07.02

감독 피터 버그

출연 윌 스미스 (존 한콕), 샤를리즈 테론 (메리 엠브리), 제이슨 베이트먼 (레이 엠브리)... 더보기

등급 국내 12세 관람가 해외 PG-13 ?

공식사이트 http://www.hancock.co.kr/, http://blog.naver.com/ilovehancock

http://sonypictures.com/movies/hancock/

포토

전체보기

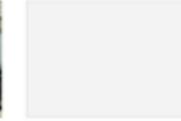
동영상

예고편

인터뷰

메이킹

전체보기



메인정보

상세정보

포토·동영상

평점·리뷰

명대사

한 핏줄 영화

줄거리

까칠한 슈퍼 히어로

X맨, 슈퍼맨, 배트맨, 스파이더맨이 가지고 있던 모든 능력에 누구도 건드릴 수 없는 독특한 성격을 겸비한 슈퍼 히어로 '한콕(윌 스미스)'. 그는 위험에 처한 사람들을 도와주는 슈퍼 히어로지만 과격하고 예측 불가능한 행동으로 사람들에게 까칠한 슈퍼 히어로로 낙인 찍힌다. 사람들의 기피대상 1호로 떠오른 한콕은 어느 날, PR 전문가 레이 엠브레이(제이슨 베이트먼)의 목숨을 구하게 되고, 그는 한콕의 추락하는 이미지를 회복시켜 주기로 약속한다. 그러던 중, 한콕은 레이의 아내 메리(샤를리즈 테론)가 자신이 탄생하게 된 비밀의 열쇠를 쥐고 있음을 알게 되고 설상가상으로 메리와 가까이 있을 수록 자신의 초능력이 점점 약해져가고 있다는 사실을 깨닫게 되는 데...

변하지 않는 情을 전하세요!



영화인기검색어

박스오피스

1 한콕

- 0

한콕

- 0

영화인기검색어

박스오피스

한



헨콕

Hancock, 2008

예매하기

네티즌평점

7.29

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공식사이트 http://www.hancock.co.kr/, http://blog.naver.com/ilovehancock

http://sonypictures.com/movies/hancock/

http://movie.naver.com/movie/bi/mi/basic.nhn?code=68944

전체보기



메인정보

상세정보

포토·동영상

평점·리뷰

명대사

한 찰흙 영화

줄거리

까칠한 슈퍼 히어로

X맨, 슈퍼맨, 배트맨, 스파이더맨이 가지고 있던 모든 능력에 누구도 건드릴 수 없는 독특한 성격을 겸비한 슈퍼 히어로 '헨콕(윌 스미스)'. 그는 위험에 처한 사람들을 도와주는 슈퍼 히어로지만 과격하고 예측 불가능한 행동으로 사람들에게 까칠한 슈퍼 히어로로 낙인 찍힌다. 사람들의 기피대상 1호로 떠오른 헨콕은 어느 날, PR 전문가 레이 엠브레이(제이슨 베이트먼)의 목숨을 구하게 되고, 그는 헨콕의 추락하는 이미지를 회복시켜 주기로 약속한다. 그러던 중, 헨콕은 레이의 아내 메리(샤를리즈 테론)가 자신이 탄생하게 된 비밀의 열쇠를 쥐고 있음을 알게 되고 설상가상으로 메리와 가까이 있을 수록 자신의 초능력이 점점 약해져가고 있다는 사실을 깨닫게 되는 데...

변하지 않는 **情** 을 전하세요!



영화인기검색어

박스오피스

1 헨콕

1 헨콕

영화인기검색어

박스오피스

문제가 보이십니까?

잘 쓰고 있거등

Document 중심의 Link

나만의 일회성 데이터

데이터 처리 불편

Semantic Web

Linked Data

Semantic Web

is common **framework** that allows **data** to be **shared** and **reused** across application, enterprise, and community boundaries.

is based on the **R**esource **D**escription **F**ramework

is a web of **data**

* <http://www.w3.org/2001/sw>

How to **Share, Reuse** data in the **web**?

RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터라면 가능

Linked Data

Linked Data

is **method** of exposing, sharing, and connecting
data on the Semantic Web

* http://en.wikipedia.org/wiki/Linked_Data

Linked Data

is **method** of exposing, sharing, and connecting
data on the Semantic Web

Finally

* http://en.wikipedia.org/wiki/Linked_Data

Linked Data

is **method** of exposing, sharing, and connecting
data on the Semantic Web

is that **person** or **machine**
can explore the web of data

* http://en.wikipedia.org/wiki/Linked_Data

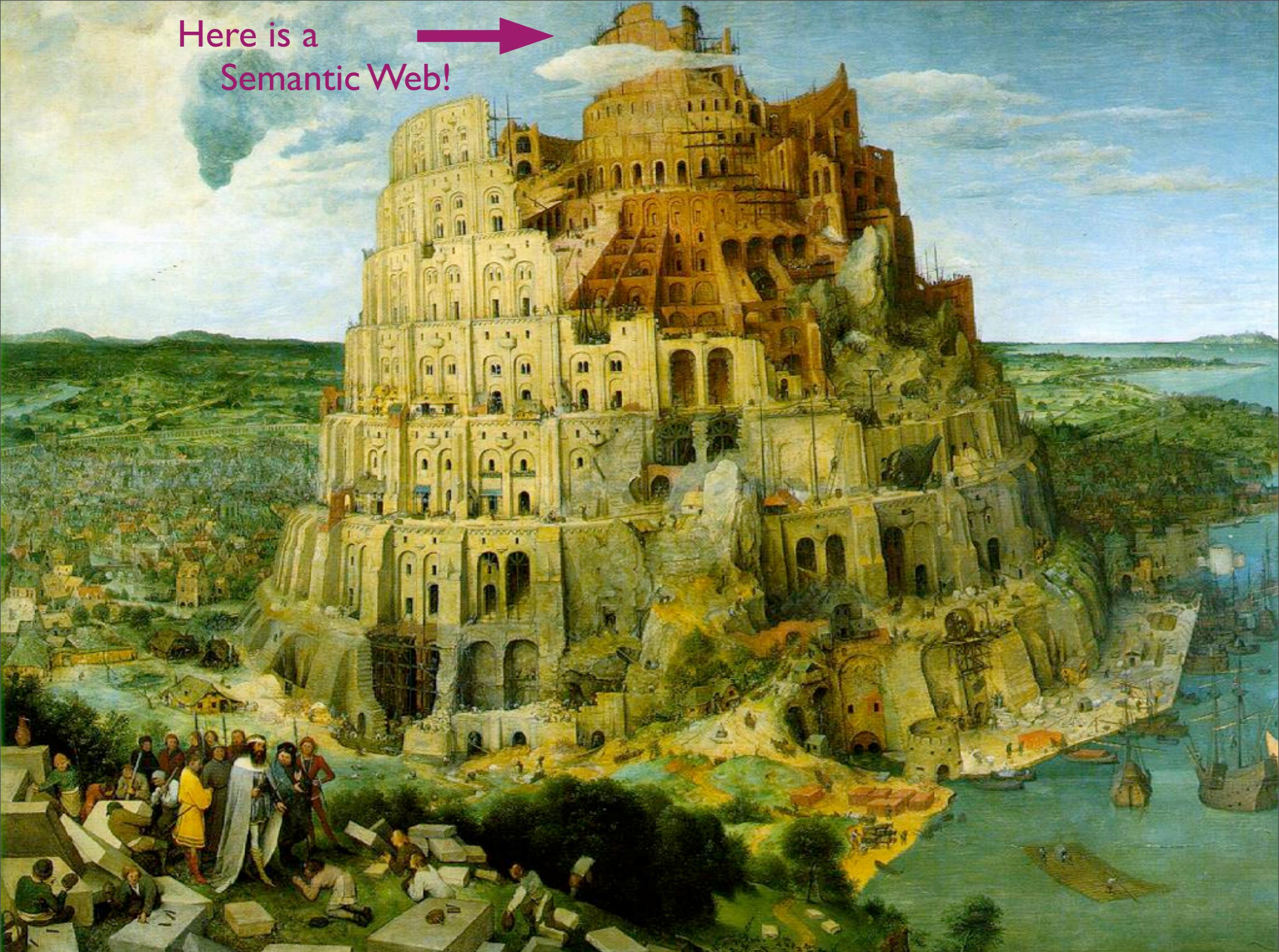
RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터라서 가능

Here is a
Semantic Web!



이제 쫌 보이니?



헉! 그럼 기존의 웹을 다 변경!!?



OTL

Breaking them does not destroy anything...
but **misses** an **opportunity**
to make **data interconnected**. -TBL





기회를 잡으러?



비용을 줄여?

나 사용자

시
맨
틱
웹

사용자 만족?

다크서클

샤방
샤방~



Linked Data



RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터라면 가능

Data Link (Linked Data)

Vocabularies

Applications

데이터모델을 다 만들어야!?!?해..요?

있는거



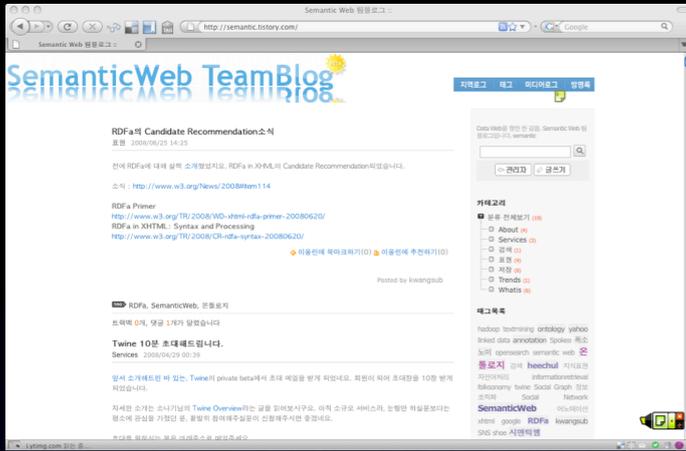
Really Simple **Syndication** (RSS 2.0)

RDF Site Summary (RSS 1.0 & RSS 0.9)

Rich Site Summary (RSS 0.91)

“블로그, 뉴스등의 매체를 **발행**하고
구독하기 위해 약속한 **스팩**”

http://semantic.tistory.com/rss



 RSS 발행



```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet href="/style/rss/style.xsl" type="text/xsl" media="screen"?>
<rss version="2.0">
  <channel>
    <title>Semantic Web 팀블로그</title>
    <link>http://semantic.tistory.com/</link>
    <description>Data Web을 향한 한 걸음. Semantic Web ..
    팀블로그입니다.</description>
    <language>ko</language>
```

```
<pubDate>Wed, 25 Jun 2008 14:27:05 +0900</pubDate>
<generator>Tistory 1.1</generator>
<managingEditor>semantic</managingEditor>
```

```
<item>
  <title>RDFa의 Candidate Recom...</title>
  <link>http://semantic.tistory.com/19</link>
```

```
<description>RDFa에 대해 ...</description>
```

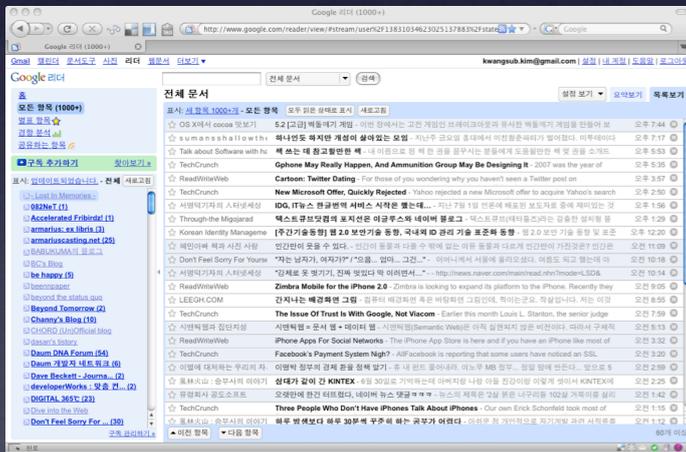
```
</item>
```

```
... ..
```

```
</channel>
```

```
</rss>
```

 RSS 구독



“블로그, 뉴스등의 매체를 발행하고

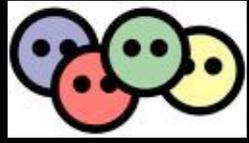
구독하기 위해 약속한 스팩”

RDF

URI

HTTP

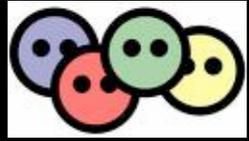
URI를 통해 어디서든 연결할수 있는 데이터



FOAF Friend-of-a-Friend

Person
about ... Relations
Groups

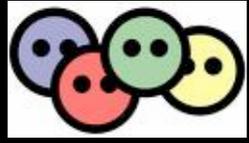
제 여자친구를 소개합니다.



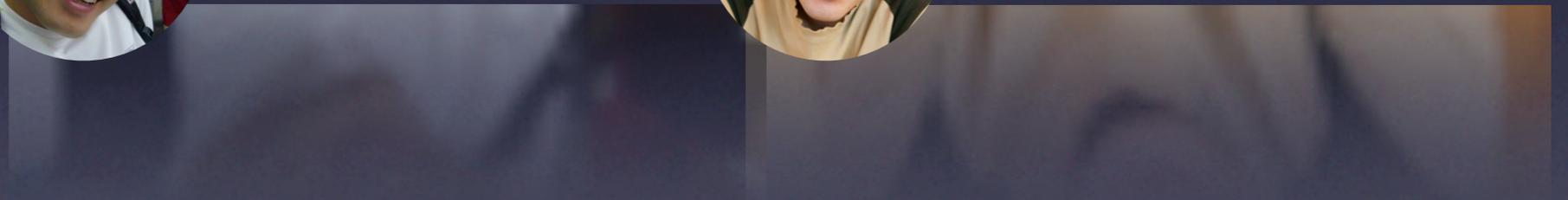
FOAF Friend-of-a-Friend

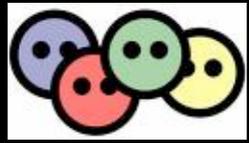
태순이유~



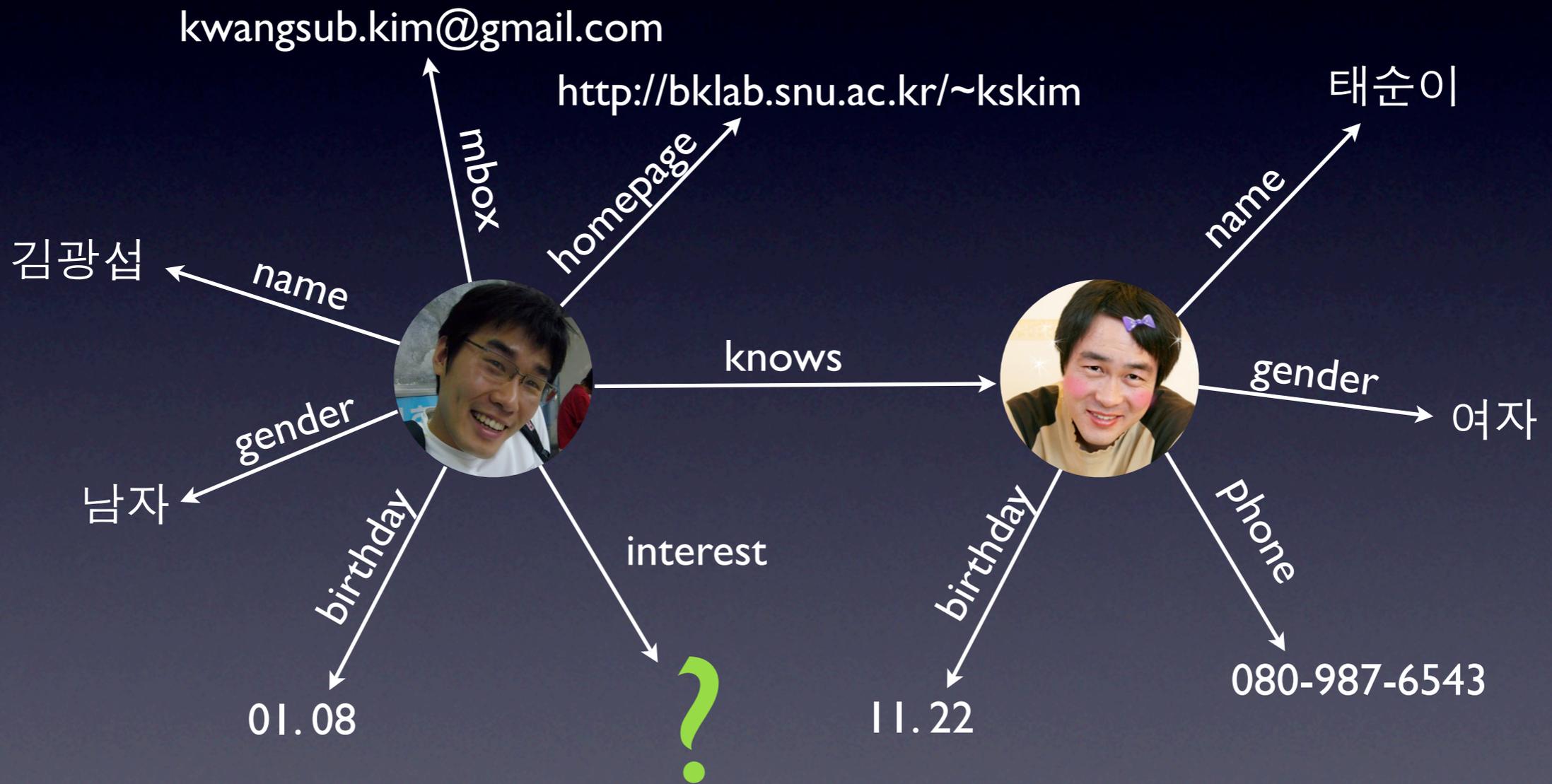


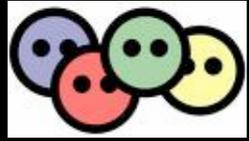
FOAF Friend-of-a-Friend





FOAF Friend-of-a-Friend





FOAF Friend-of-a-Friend

Person

Document

Organization

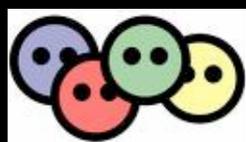
Group

Agent

OnlineAccount

name
firstname
givenname
nick
gender
birthday
mbox
phone
homepage
weblog
img
depiction
thumbnail
...
knows
interest
member

<http://www.foaf-project.org>



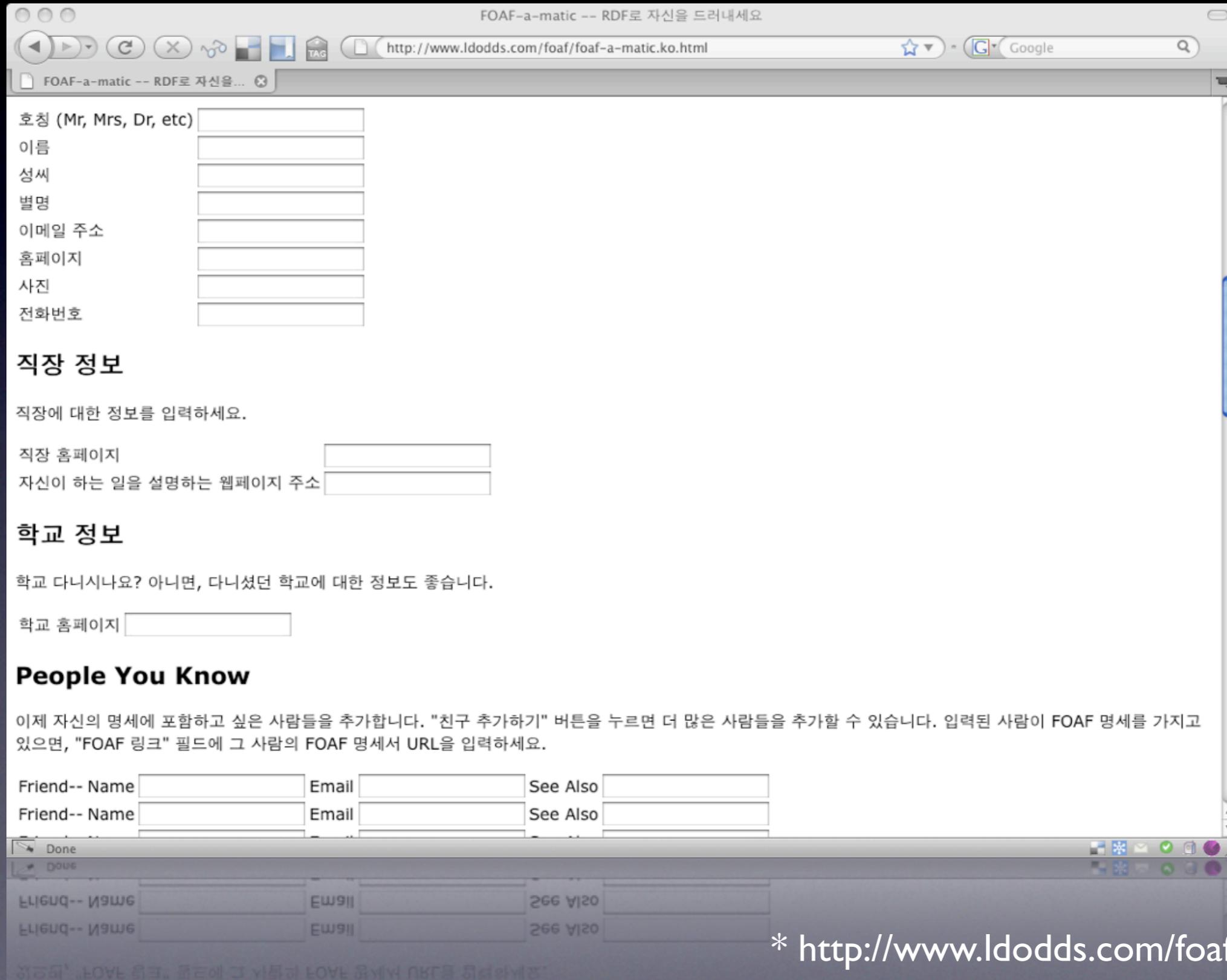
FOAF Friend-of-a-Friend

```
foaf.html
1 <foaf:Person>
2   <foaf:name>김광섭</foaf:name>
3   <foaf:mbox rdf:resource="mailto:kwangsub.kim@gmail.com" />
4   <foaf:homepgae rdf:resource="http://bklab.snu.ac.kr/~kskim"
5     ...
6   <foaf:knows>
7     <foaf:Person>
8       <foaf:mbox rdf:resource="mailto:taesoon@example.com" />
9       <foaf:name>태순이</foaf:name>
10      ...
11     </foaf:Person>
12   </foaf:knows>
13 </foaf:Person>
```

Line: 13 Column: 15 HTML Tab Size: 4

가까이 하기엔 너무 먼 당신

FOAF generator



* <http://www.ldodds.com/foaf/foaf-a-matic>

Dublin Core

“비디오, 음악, 그림, 웹문서 등의 **디지털 매체**를
표현하기 위해 약속된 **스팩**”

Dublin Core

title

creator

subject

description

publisher

contributor

date

type

format

identifier

source

language

relation

coverage

rights

Dublin Core

나 인터넷 매체

Using Dublin Core

appropriate for all situations, and further that schemes need a linking mechanism independent of a central authority to aid description, identification, usability, and/or exchange.

RDF allows multiple objects to be described without specifying the detail required. The underlying glue, XML, simply requires that all namespaces be defined and once defined, they can be used to the extent needed by the provider of the metadata.

For example:

```
<rdf:RDF
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:dc="http://purl.org/dc/elements/1.1/">

  <rdf:Description rdf:about="http://media.example.com/audio/guide.ra">

    <dc:creator>Rose Bush</dc:creator>
    <dc:title>A Guide to Growing Roses</dc:title>
    <dc:description>Describes process for planting and nurturing different kinds of rose bushes.</dc:description>
    <dc:date>2001-01-20</dc:date>

  </rdf:Description>
</rdf:RDF>
```

This simple example uses Dublin Core by itself to describe an audio recording of a guide to growing rose bushes. With XML or RDF/XML, Dublin Core can potentially be mixed with other metadata vocabularies. For example, the simple Dublin Core description above might be used alongside other vocabularies such as vCard that can describe the author's affiliation and contact information, or a more specialized "rose description" vocabulary that described the rose bushes in greater detail.

DCMI has made available several recommendations specifically about using these syntaxes:

1. [Guidelines for Implementing Dublin Core in XML](#)
2. [Expressing Simple Dublin Core in RDF/XML](#)
3. [Expressing Qualified Dublin Core in RDF/XML](#) (Proposed Recommendation)

2.3. Metadata Storage and Maintenance Issues

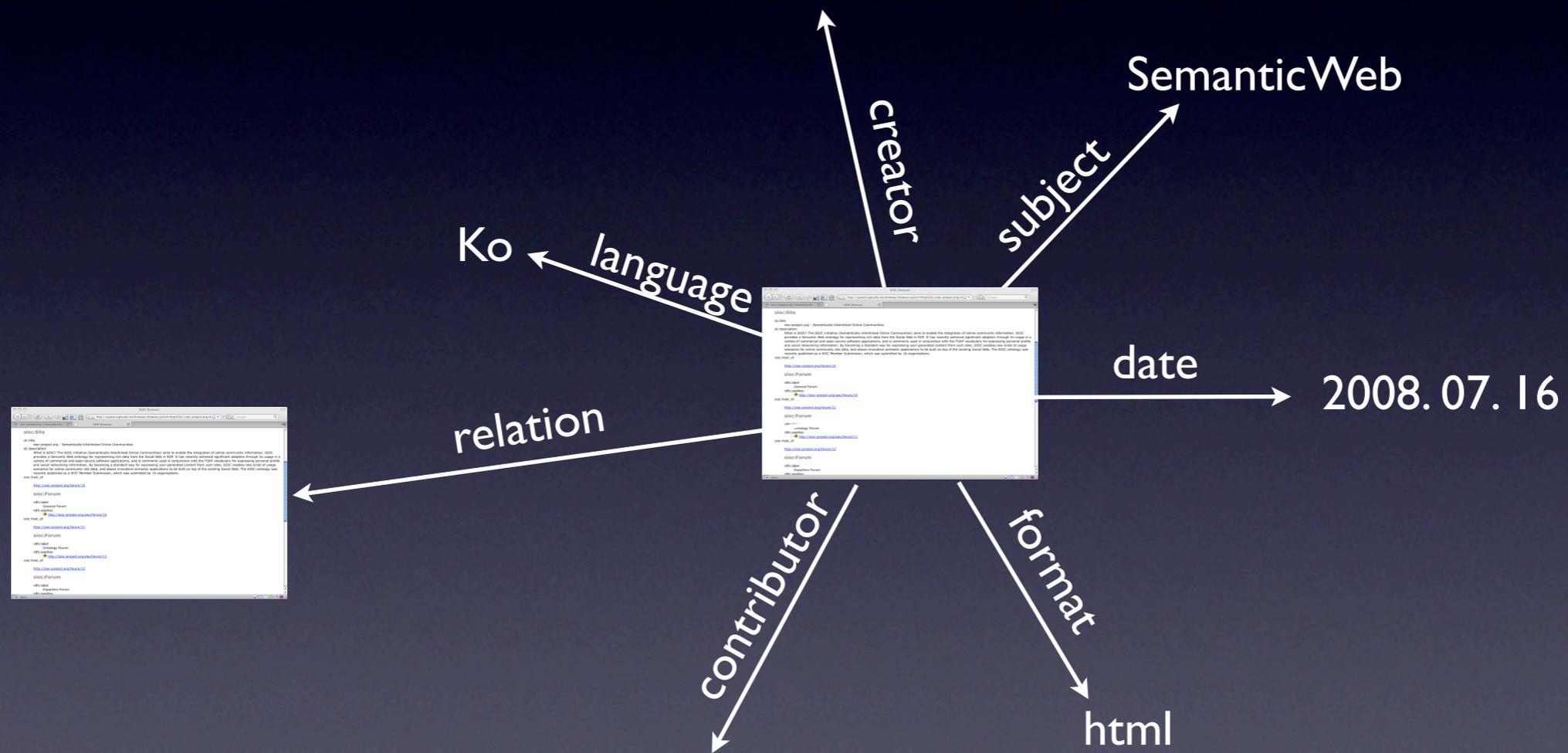
Some implementations using Dublin Core have chosen to embed their metadata within the resource itself. This approach is taken most often with documents encoded using HTML, but is also sometimes possible with other kinds of documents. Simple tools have been developed to make provision of Dublin Core metadata within HTML encoded pages fairly easy. One such tool, [DC.dot](#), extracts metadata information from an HTML document, and formats it so that it can be edited, then cut and pasted back into the HTML header of the original document.

On the other hand, metadata can be stored in any kind of database, and provide a link to the described resource rather than be embedded within it. This approach is likely to be most practical for many non-textual resources, and is increasingly used for text as well, primarily to support easier maintenance and sharing of metadata.

Each of these approaches have their advantages and disadvantages, and the balance point changes as implementations become larger and more diverse, and also as

Dublin Core

<http://bklab.snu.ac.kr/~kskim/foaf.rdf#me>



<http://example.com/foaf.rdf#taesoon>

Dublin Core



<http://bklab.snu.ac.kr/~skim/foaf.rdf#me>

SemanticWeb

creator

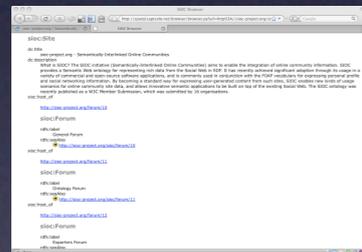
subject

Ko language

date

2008.07.16

relation



contributor

format

html

<http://example.com/foaf.rdf#taesoon>



RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터



SIOC Semantically-Interlinked Online Communities

“온라인 커뮤니티의
의미적 연결을 위해 약속된 스파크”



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SIOC Semantically-Interlinked Online Communities

온라인 커뮤니티



SIOC Semantically-Interlinked Online Communities

온라인 커뮤니티

등산
동호회
사이트



SIOC Semantically-Interlinked Online Communities

온라인 커뮤니티

등산
동호회
사이트

등산 후기 게시판

사진 게시판

... ..



SIOC Semantically-Interlinked Online Communities

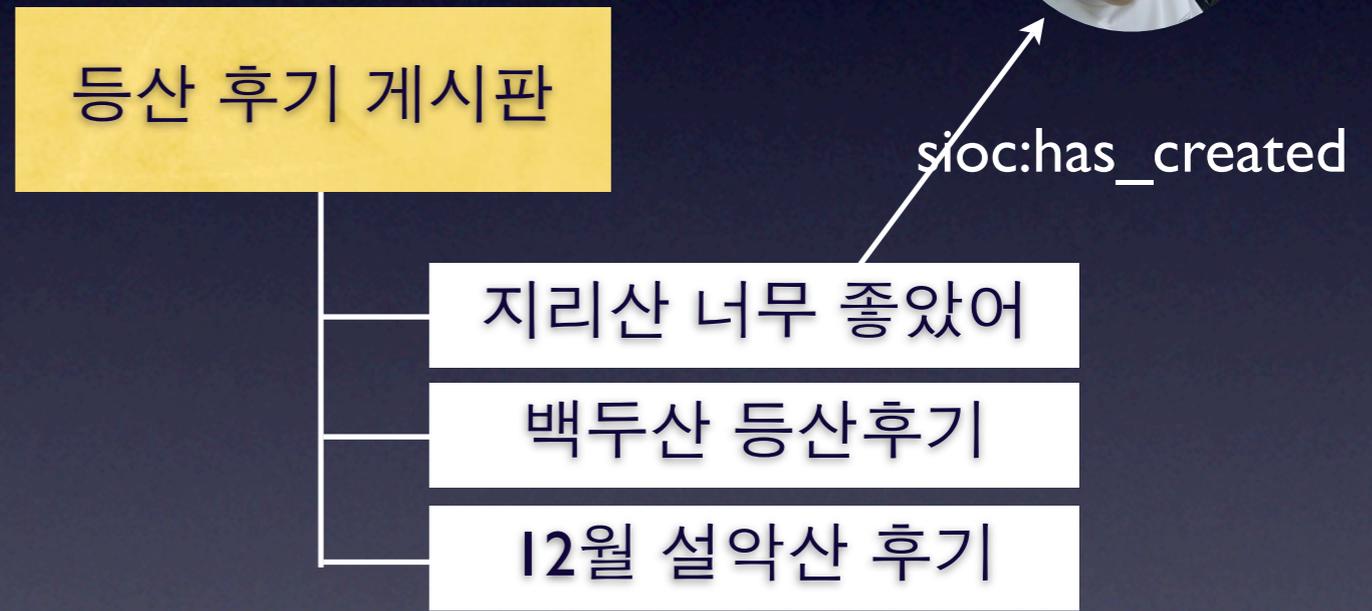
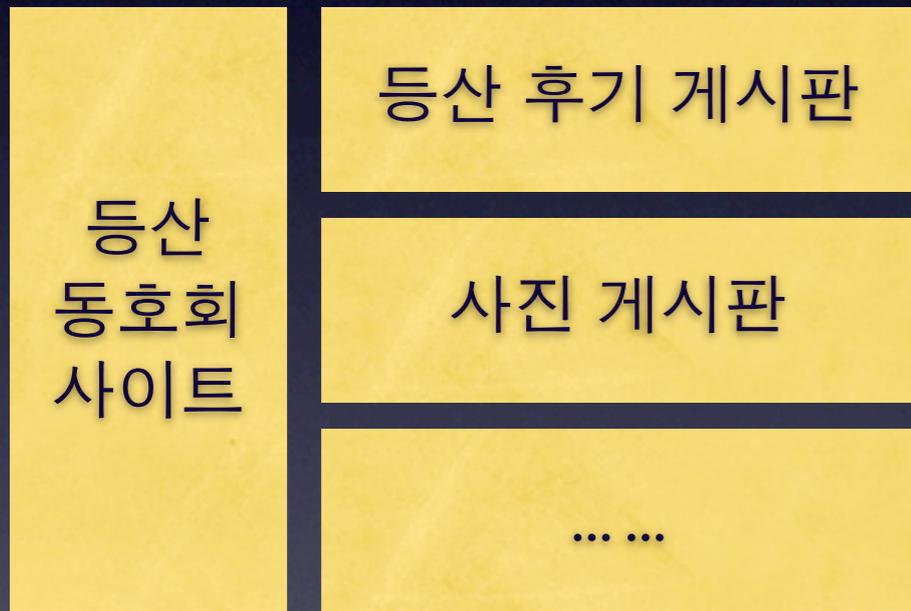
온라인 커뮤니티





SIOC Semantically-Interlinked Online Communities

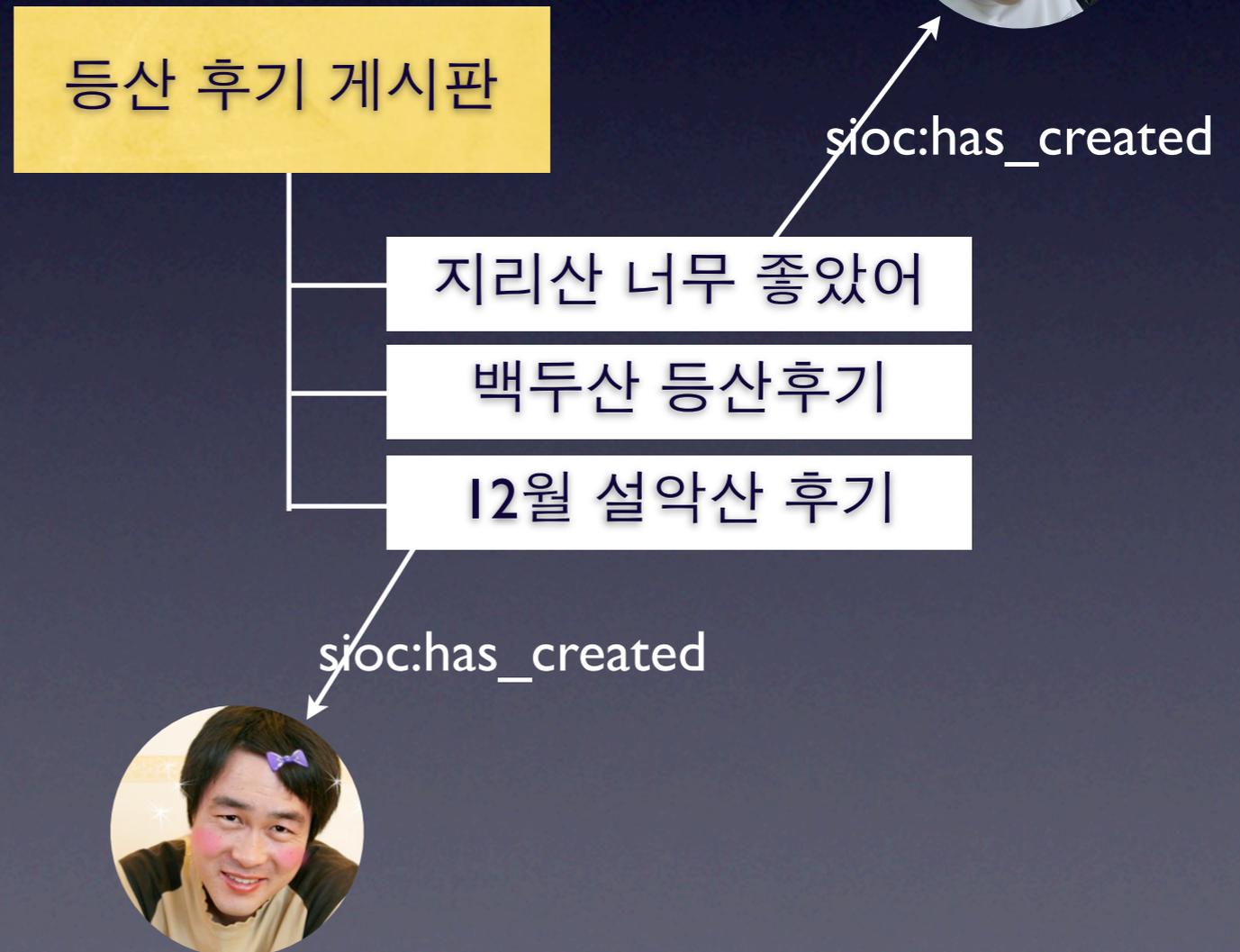
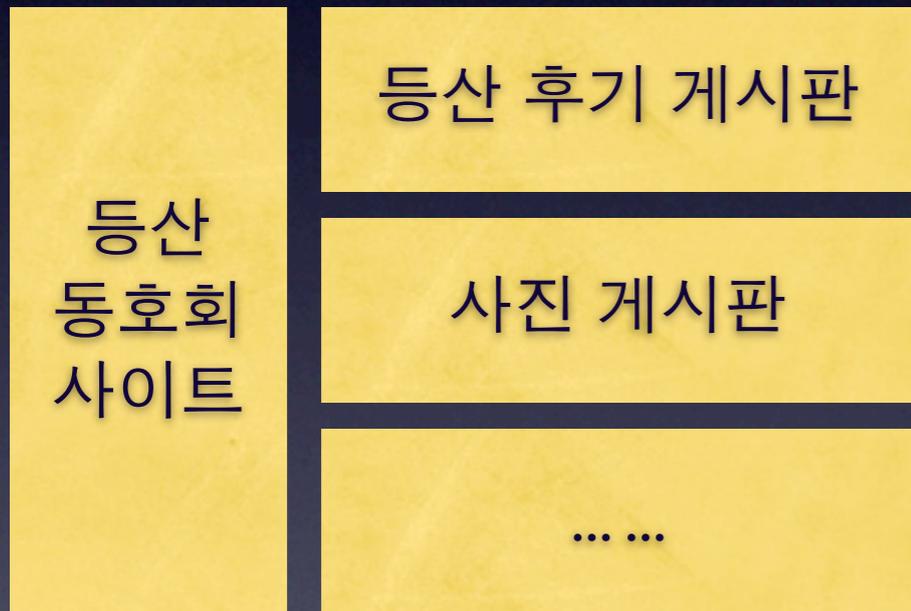
온라인 커뮤니티





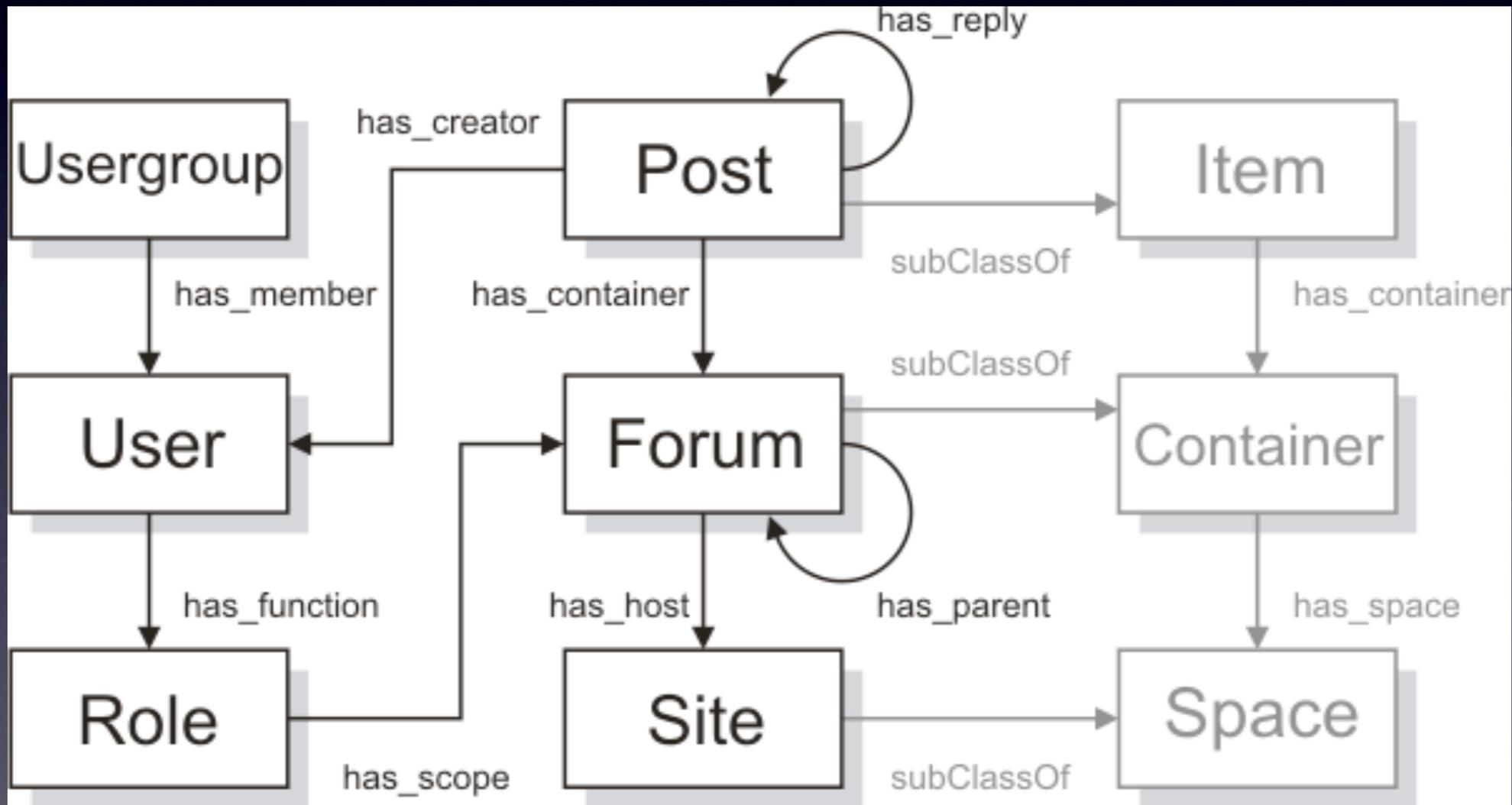
SIOC Semantically-Interlinked Online Communities

온라인 커뮤니티





SIOC Semantically-Interlinked Online Communities



* <http://sioc-project.org>



SIOC Applications

WordPress SIOC Exporter

Dotclear SIOC Exporter

b2evolution SIOC Exporter

Drupal SIOC Exporter

phpBB Exporter

+

Query SIOC data

Crawling SIOC data

Browsing SIOC data

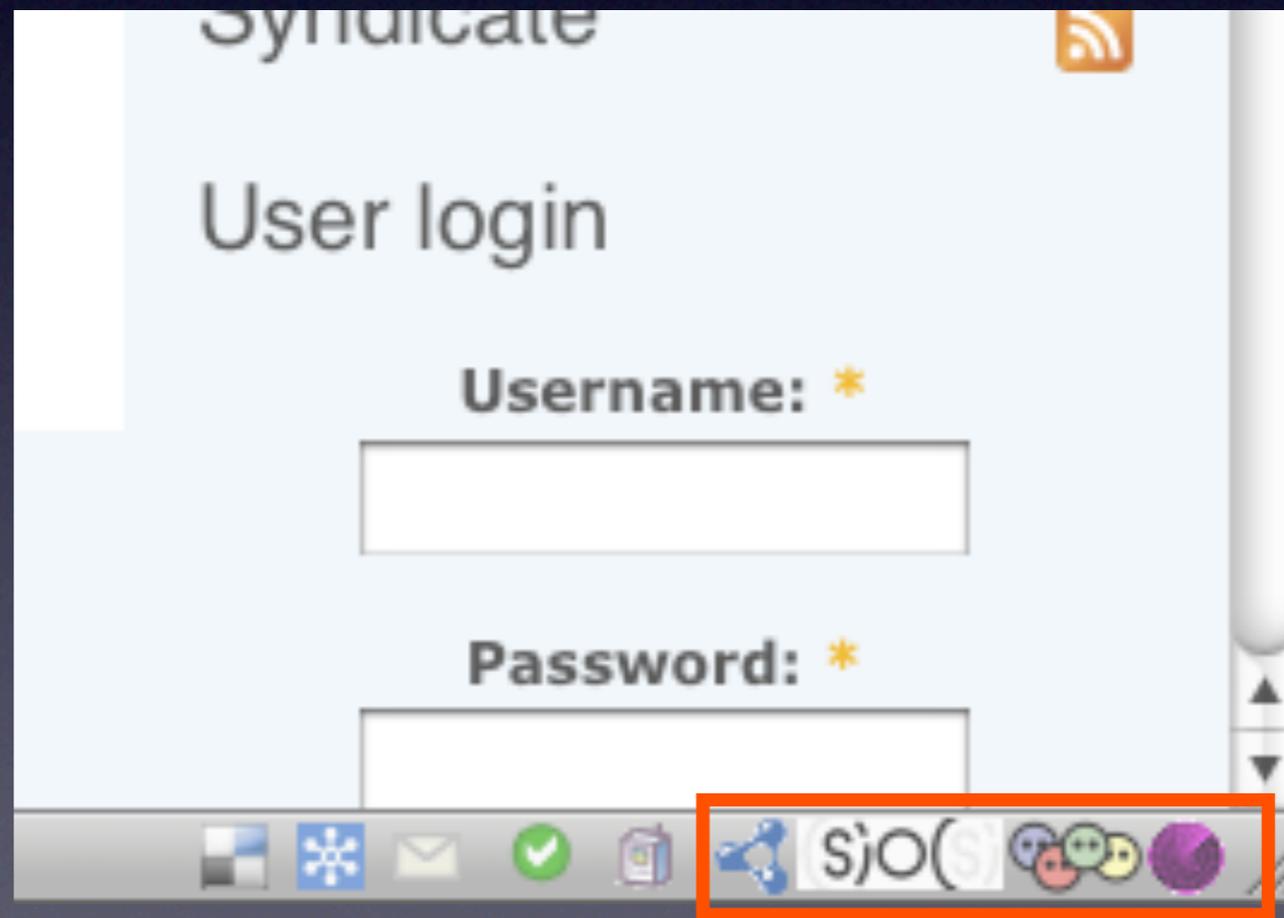
etc...

* <http://rdfs.org/sioc/applications/>



Semantic Radar for Firefox

<http://sioc-project.org/firefox>





Semantic Radar for Firefox

SIOC Browser

http://sparql.captsolo.net/browser/browser.py?url=http%3A//sioc-project.org/si...

sioc-project.org | Semantically...

sioc:Site

dc:title
sioc-project.org - Semantically-Interlinked Online Communities

dc:description
What is SIOC? The SIOC initiative (Semantically-Interlinked Online Communities) aims to enable the integration of online community information. SIOC provides a Semantic Web ontology for representing rich data from the Social Web in RDF. It has recently achieved significant adoption through its usage in a variety of commercial and open-source software applications, and is commonly used in conjunction with the FOAF vocabulary for expressing personal profile and social networking information. By becoming a standard way for expressing user-generated content from such sites, SIOC enables new kinds of usage scenarios for online community site data, and allows innovative semantic applications to be built on top of the existing Social Web. The SIOC ontology was recently published as a W3C Member Submission, which was submitted by 16 organisations.

sioc:host_of
<http://sioc-project.org/forum/10>

sioc:Forum

rdfs:label
General Forum

rdfs:seeAlso
<http://sioc-project.org/sioc/forum/10>

sioc:host_of
<http://sioc-project.org/forum/11>

sioc:Forum

rdfs:label
Ontology Forum

rdfs:seeAlso
<http://sioc-project.org/sioc/forum/11>

sioc:host_of
<http://sioc-project.org/forum/12>

sioc:Forum

rdfs:label
Exporters Forum

rdfs:seeAlso

Done

Done

rdfs:seeAlso

Exporters Forum

rdfs:label

RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터

SKOS

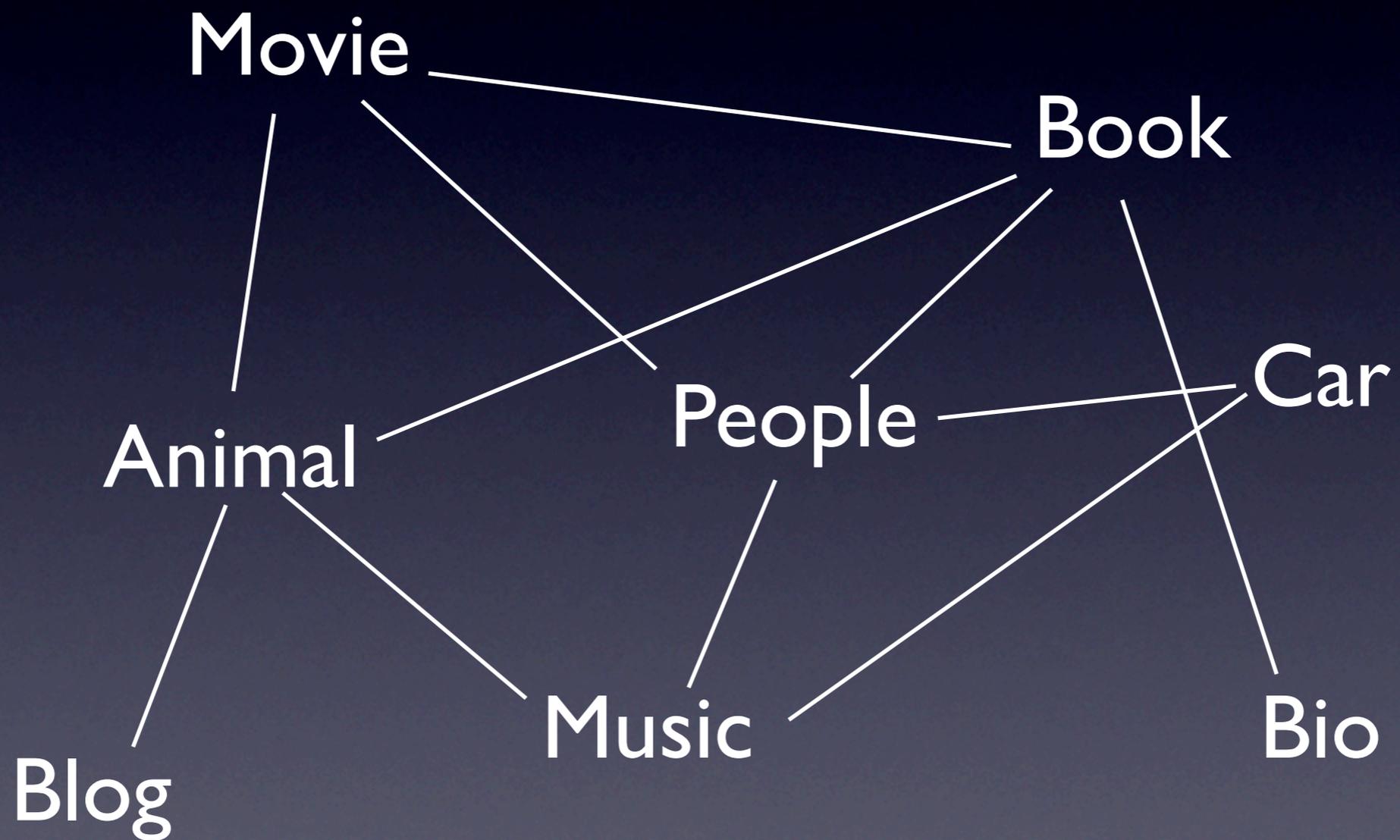
Simple Knowledge Organization System

SKOS

“Thesaurus, classifications, subjects, taxonomies, folksonomies 등의 기 구축된 지식시스템내의

Concept들을 **표현, 연결, 조합**하기 위해 약속된 스펙”

Pre-defined Knowledge System

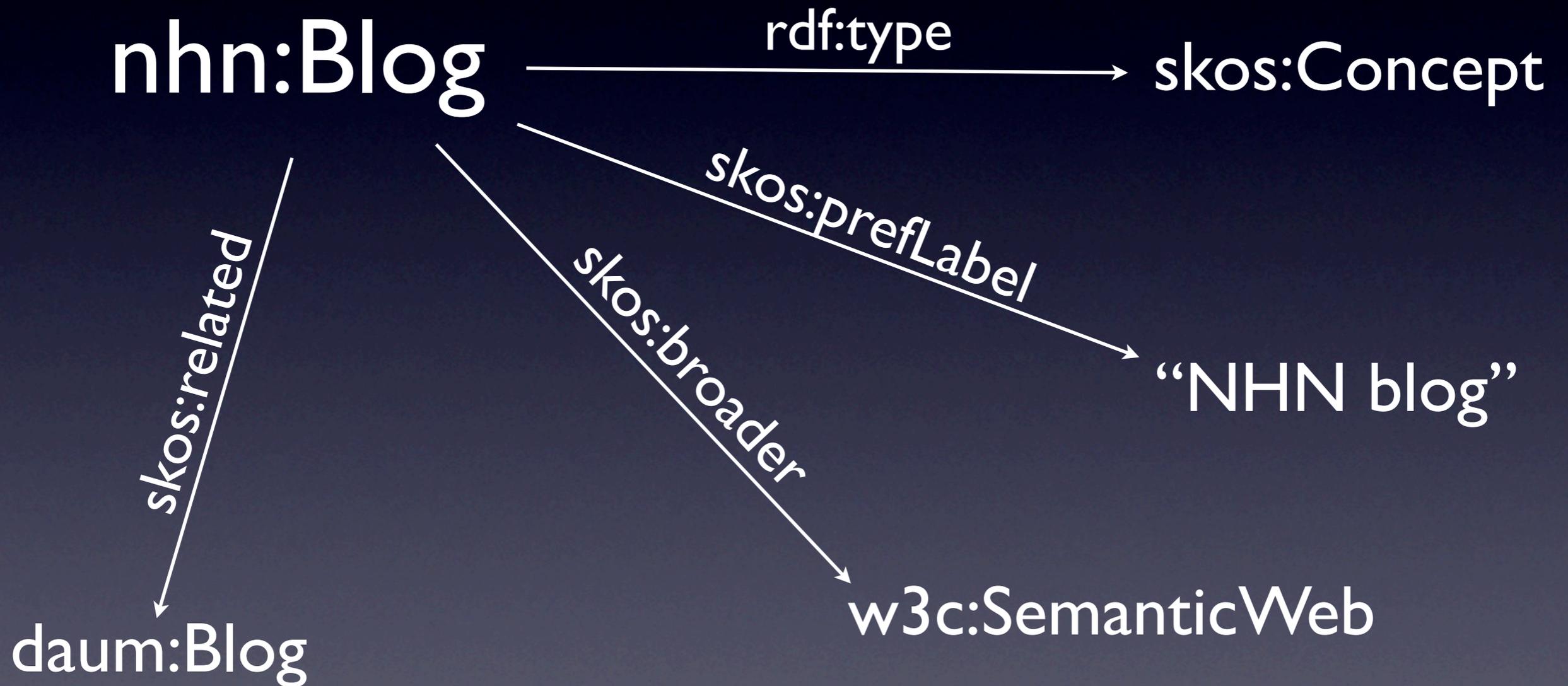


SKOS

skos:Concept
skos:ConceptScheme

skos:prefLabel
skos:altLabel
skos:hiddenLabel
...
skos:note
skos:definition
...
skos:broader
skos:narrower
skos:related

SKOS



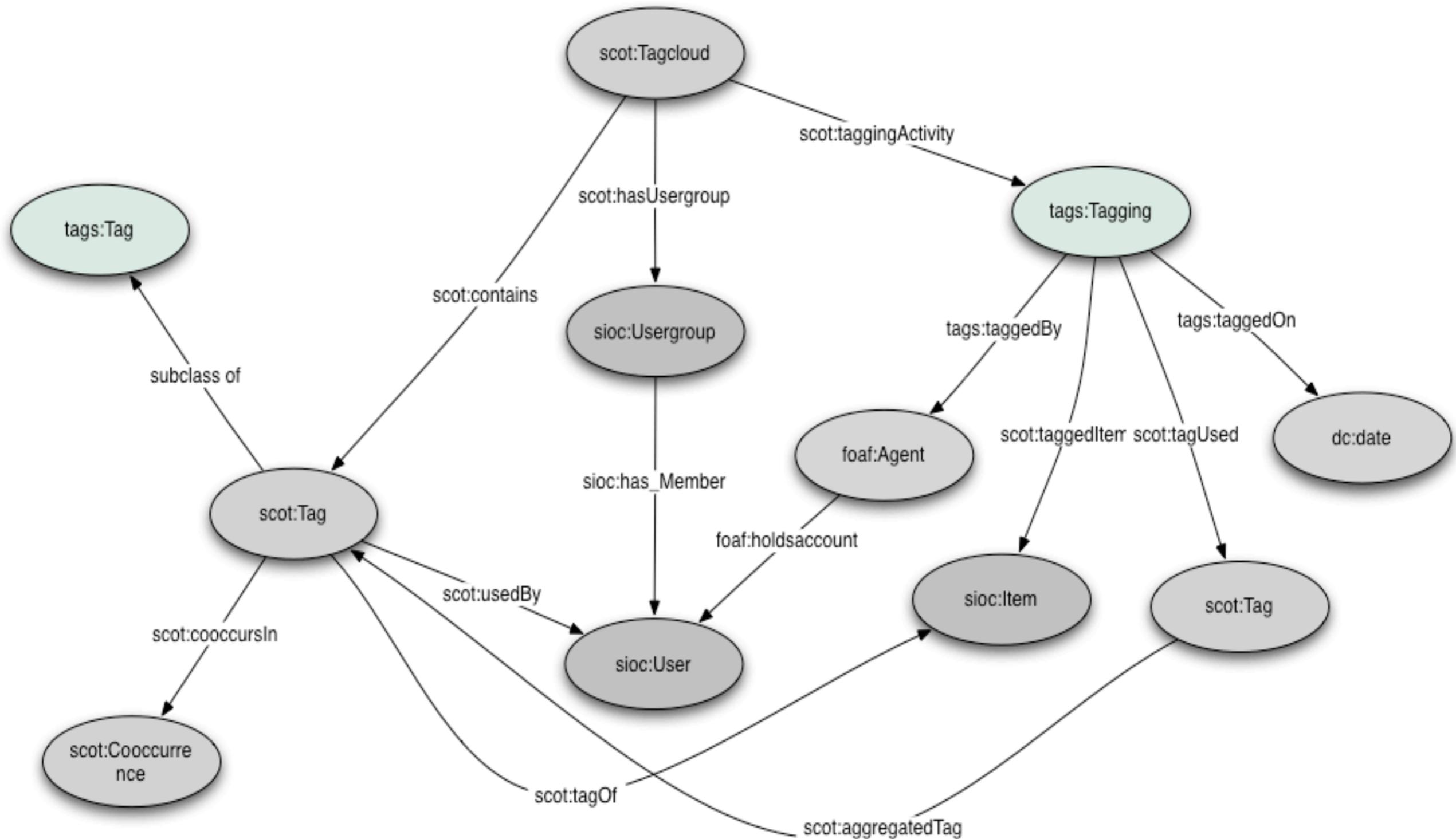
SCOT

SCOT

to **describe** the structure and the semantics
of **tagging data**

to provide social structure of tagging for seamless
tag sharing across **heterogeneous users,**
applications or sources

Simple Overview of SCOT





semantic web search

log in join about us help

Results 1 - 10 of about 137 for semantic web

Tagcloud for 'magnum'

Top tags : semantic heterogeneity similarity semantics routing emergent pdms
created by magnum | 1 member | 6 items | 7 tags | 3 cooccurrences
RDF SCOT http://int.ere.st/cite/tagcloud/1558 | 6kb | 1 fans | tag spaces

My Scot for mdzbor

Top tags : visualization knowledge information software engineering cognition ontology web semantic acquisition
created by mdzbor | 1 member | 456 items | 211 tags | 307 cooccurrences
RDF SCOT http://int.ere.st/scot/101 | 403kb | 2 fans | tag spaces

Tagcloud for 'larry'

Top tags : web semantic introduction basic topic maps kr rdf developer very
created by larry | 1 member | 7 items | 11 tags | 5 cooccurrences
RDF SCOT http://int.ere.st/cite/tagcloud/1195 | 5kb | 1 fans | tag spaces

test-my-interests

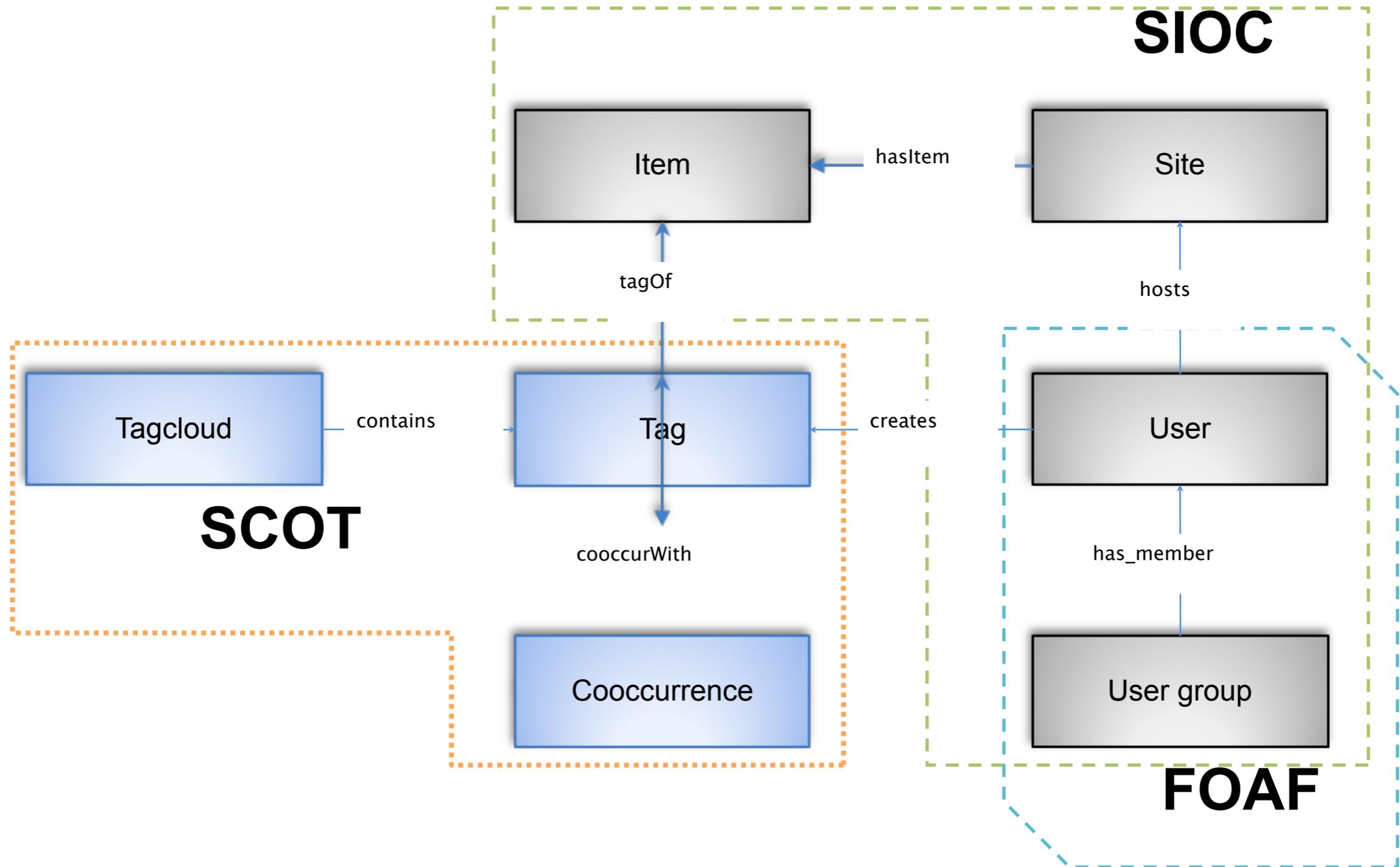
Top tags : visualization knowledge information software engineering cognition ontology web acquisition semantic
created by mdzbor | 3 member | 453 items | 211 tags | 307 cooccurrences
RDF SCOT http://int.ere.st/user/7509/tagcloud/20080304112143 | 402kb | 0 fans | tag spaces

My Scot for dhyoo

Top tags : life web visualization knowledge information software engineering cognition ontology semantic
created by dhyoo | 1 member | 2001 items | 234 tags | 321 cooccurrences
RDF SCOT http://int.ere.st/scot/95 | 510kb | 0 fans | tag spaces

RDF SCOT http://int.ere.st/scot/95 | 510kb | 0 fans | tag spaces

Linked Data



DOAP Description of a Project

“오픈 소스(소프트웨어) 프로젝트
를 표현하기 위해 약속된 스펙”

그 밖의 Vocabularies

Review Vocabulary

Music Ontology

Creative Commons

BIO Biography

...

<http://www.schemaweb.info>

Data Link (Linked Data)

Vocabularies

Applications

RDFa
GRDDL

SMOB

RDFa



Hancock, 2008

예매하기

네티즌평점

7.29

기본정보 액션, 판타지, 코미디, 드라마 | 미국 | 92 분 | 개봉 2008.07.02

감독 피터 버그

출연 윌 스미스 존 핸콕, 샤를리즈 테론(메리 엠브리), 제이슨 베이트먼(레이 엠브리)... 더보기

등급 국내 12세 관람가 해외 PG-13

공식사이트 http://www.hancock.co.kr/, http://blog.naver.com/ilovehancock http://sonypictures.com/movies/hancock/

포토

전체보기

동영상

예고편

인터뷰

메이킹

전체보기



메인정보

상세정보

포토·동영상

평점·리뷰

명대사

한 찰흙 영화

즐거리

까칠한 슈퍼 히어로

X맨, 슈퍼맨, 배트맨, 스파이더맨이 가지고 있던 모든 능력에 누구도 건드릴 수 없는 독특한 성격을 겸비한 슈퍼 히어로 '한콕(윌 스미스)'. 그는 위험에 처한 사람들을 도와주는 슈퍼 히어로지만 과격하고 예측 불가능한 행동으로 사람들에게 까칠한 슈퍼 히어로로 낙인 찍힌다. 사람들의 기피대상 1호로 떠오른 한콕은 어느 날, PR 전문가 레이 엠브레이(제이슨 베이트먼)의 목숨을 구하게 되고, 그는 한콕의 추락하는 이미지를 회복시켜 주기로 약속한다. 그러던 중, 한콕은 레이의 아내 메리(샤를리즈 테론)가 자신이 탄생하게 된 비밀의 열쇠를 쥐고 있음을 알게 되고 설상가상으로 메리와 가까이 있을 수록 자신의 초능력이 점점 약해져가고 있다는 사실을 깨닫게 되는 데...

변하지 않는 情을 전하세요!



영화인기검색어

박스오피스

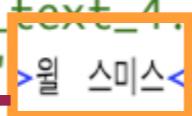
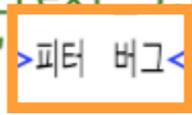
1 한콕

2 한콕

영화인기검색어

박스오피스

```
summary.htm
href="/movie/sdb/browsing/bmovie.nhn?open=20080702">07.02</a></dd>
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
<em>국내</em> <a href="/movie/sdb/browsing/bmovie.nhn?grade=1001002">12세
관람가</a>
Line: 15 Column: 79 HTML Tab Size: 4
File: T2 Column: 33 HTML Line Size: 4
```



RDFa

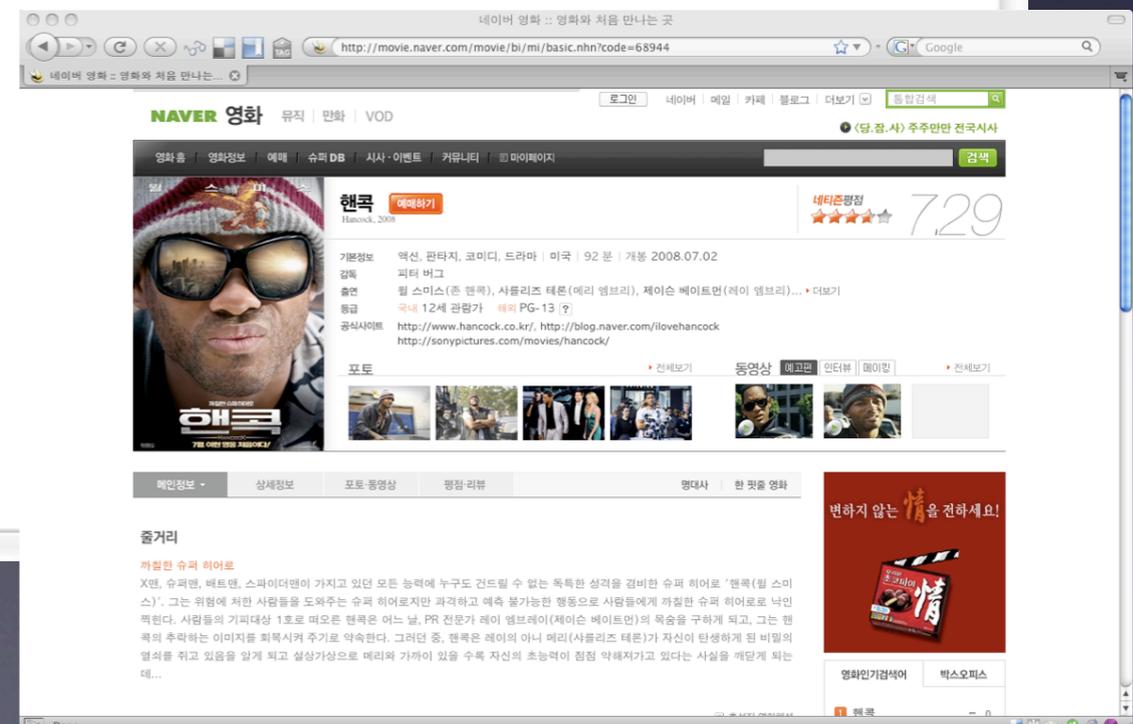
RDF in HTML Attributes

How to add it?

```

1
2 <html xmlns="http://www.w3.org/1999/xhtml"
3   xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
4   xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#"
5
6 <body about="nhnmovie#movie_68944" typeof="nhnmovie#Movie">
7   <dd><a href="/movie/bi/pi/basic.nhn?code=1232"
8     property="nhnmovie:hasDirectors">피터 버그</a></dd>
9   ...
10  <a href="/movie/bi/pi/basic.nhn?code=1626"
11    property="nhnmovie:hasActors">윌 스미스</a> (존 핸콕)
12  ...
13
14 </body>
15 </html>
16

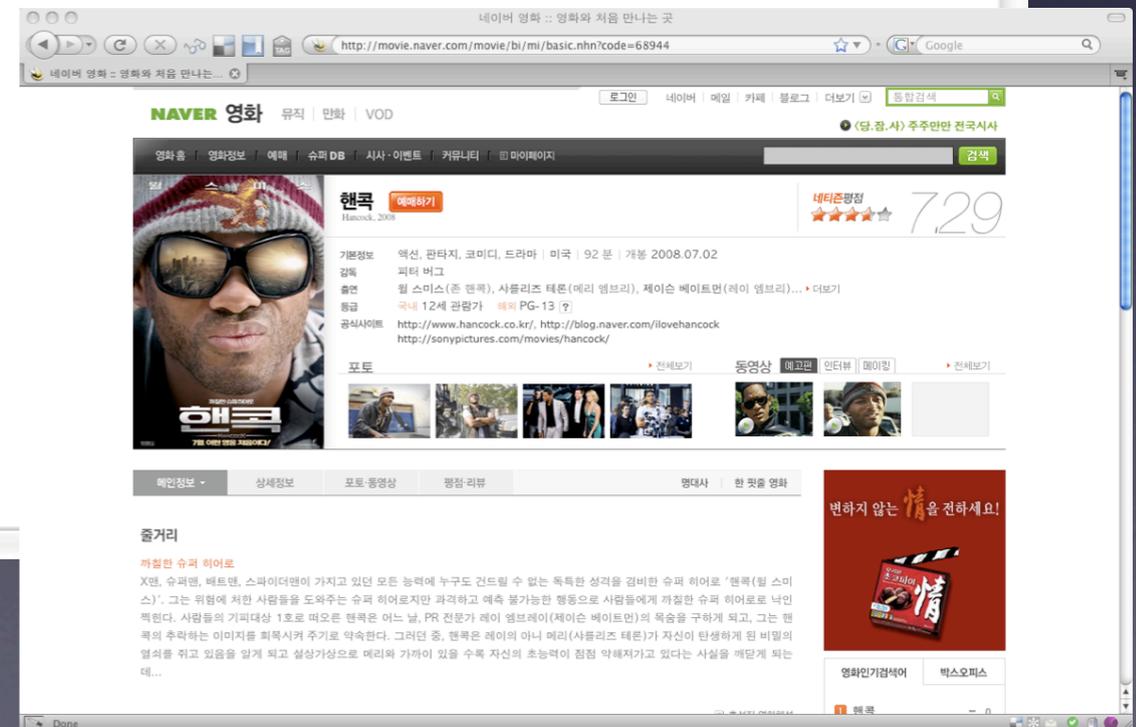
```



```

1  <
2  <html xmlns="http://www.w3.org/1999/xhtml"
3  >
4  >
5  >
6  >
7  >
8  >
9  >
10 >
11 >
12 >
13 >
14 >
15 >
16 </html>

```

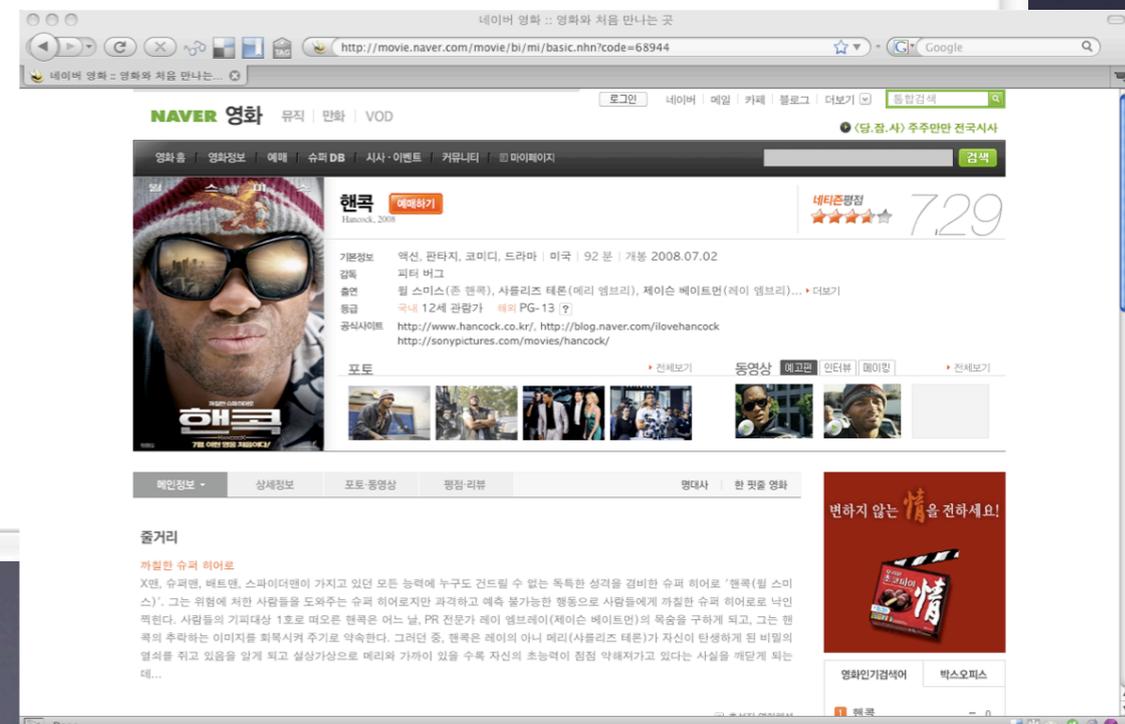


```

1  <
2  <html xmlns="http://www.w3.org/1999/xhtml"
3  >
4  >
5  >
6  >
7  >
8  >
9  >
10 >
11 >
12 >
13 >
14 >
15 >
16 </html>

```

`<body about="nhnmovie#movie_68944" typeof="nhnmovie#Movie">`
`<dd>피터 버그</dd>`
`윌 스미스 (존 핸콕)`



nhnmovie#movie_68944







```
1  -
2  <html xmlns="http://www.w3.org/1999/xhtml" -
3  >
4  >
5  >
6  >
7  >
8  >
9  >
10 >
11 >
12 >
13 >
14 >
15 >
16 >
```

```
<html xmlns="http://www.w3.org/1999/xhtml" -
  xmlns:xsd="http://www.w3.org/2001/XMLSchema#" -
  xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#">
  <body about="nhnmovie#movie_68944" typeof="nhnmovie#Movie">
    <dd><a href="/movie/bi/pi/basic.nhn?code=1232"
      property="nhnmovie:hasDirectors">피터 버그</a></dd>
    ...
    <a href="/movie/bi/pi/basic.nhn?code=1626"
      property="nhnmovie:hasActors">윌 스미스</a> (존 핸콕)
    ...
  </body>
</html>
```

Line: 16 Column: 8 HTML Tab Size: 4



nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors

“윌 스미스”



윌 스미스

Will Smith

다른이름 **Willard Christopher Smith Jr.**
 생년월일 **1968. 9. 25**
 출생지 미국 펜실베이니아 필라델피아
 최근 수상경력 제30회 세자르영화제 공로상

기본정보 ▾

필모그래피

바이오그래피

영화인 리뷰

명대사

프로필

성별 **남**

가족사항 배우자 - 제이다 핀켓 스미스

딸 - 윌로우 스미스

```
1  -
2  <html xmlns="http://www.w3.org/1999/xhtml" -
3  >  xmlns:xsd="http://www.w3.org/2001/XMLSchema#" -
4  >  xmlns:foaf="http://xmlns.com/foaf/0.1/" -
5  >  xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#"> -
6  >  -
7  >  <body about="nhnmovie#actor_1626" typeof="nhnmovie#Actor"> -
8  >  >  -
9  >  >  다른이름 : <label property="nhnmovie:altname"> -
10 >  >  >  Willard Christopher Smith Jr. -
11 >  >  >  </label> -
12 >  >  ... -
13 >  >  생년월일 : <label property="foaf:birthday" -
14 >  >  >  >  datatype="xsd:datetime"> -
14 >  >  >  >  1968. 9. 25 -
15 >  >  >  </label> -
16 >  >  ... -
17 >  >  -
18 >  </body> -
19 </html>
```

```
1  -
2  <html xmlns="http://www.w3.org/1999/xhtml" -
3  >  xmlns:xsd="http://www.w3.org/2001/XMLSchema#" -
4  >  xmlns:foaf="http://xmlns.com/foaf/0.1/" -
5  >  xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#"> -
6  >  -
7  >  <body about="nhnmovie#actor_1626" typeof="nhnmovie#Actor"> -
8  >  >  -
9  >  >  다른이름 : <label property="nhnmovie:altname"> -
10 >  >  >  Willard Christopher Smith Jr. -
11 >  >  >  </label> -
12 >  >  ... -
13 >  >  생년월일 : <label property="foaf:birthday" -
14 >  >  >  >  datatype="xsd:datetime"> -
14 >  >  >  >  1968. 9. 25 -
15 >  >  >  </label> -
16 >  >  ... -
17 >  >  -
18 >  </body> -
19 </html>
```

```
1  -
2  <html xmlns="http://www.w3.org/1999/xhtml" -
3  >  xmlns:xsd="http://www.w3.org/2001/XMLSchema#" -
4  >  xmlns:foaf="http://xmlns.com/foaf/0.1/" -
5  >  xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#"> -
6  >  -
7  >  <body about="nhnmovie#actor_1626" typeof="nhnmovie#Actor"> -
8  >  >  -
9  >  >  다른이름 : <label property="nhnmovie:altname"> -
10 >  >  >  Willard Christopher Smith Jr. -
11 >  >  >  </label> -
12 >  >  ... -
13 >  >  생년월일 : <label property="foaf:birthday" -
14 >  >  >  >  datatype="xsd:datetime"> -
14 >  >  >  >  1968. 9. 25 -
15 >  >  >  >  </label> -
16 >  >  ... -
17 >  >  -
18 >  </body> -
19 </html>
```



nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors

“윌 스미스”



nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors

nhnmovie#actor_1626



nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors

nhnmovie#actor_1626



nhnmovie:hasDirectors →

“피터 버그”

nhnmovie:hasActors →





nhnmovie:hasDirectors → “피터 버그”

nhnmovie:hasActors →





nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors



```
1 <html xmlns="http://www.w3.org/1999/xhtml"
2   xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
3   xmlns:foaf="http://xmlns.com/foaf/0.1/"
4   xmlns:nhnmovie="http://www.naver.com/semanticweb/movie#"
5   >
6   <body about="nhnmovie#actor_1626" typeof="nhnmovie#Actor"
7     >
8     <label property="nhnmovie:altname"
9       >
10      > Willard Christopher Smith Jr.
11      </label>
12      ...
13     <label property="foaf:birthday"
14       >
15       > 1968. 9. 25
16       </label>
17     ...
18   </body>
19 </html>
```



nhnmovie:hasDirectors

“피터 버그”

nhnmovie:hasActors



nhnmovie:altname

Willard Christopher Smith Jr.

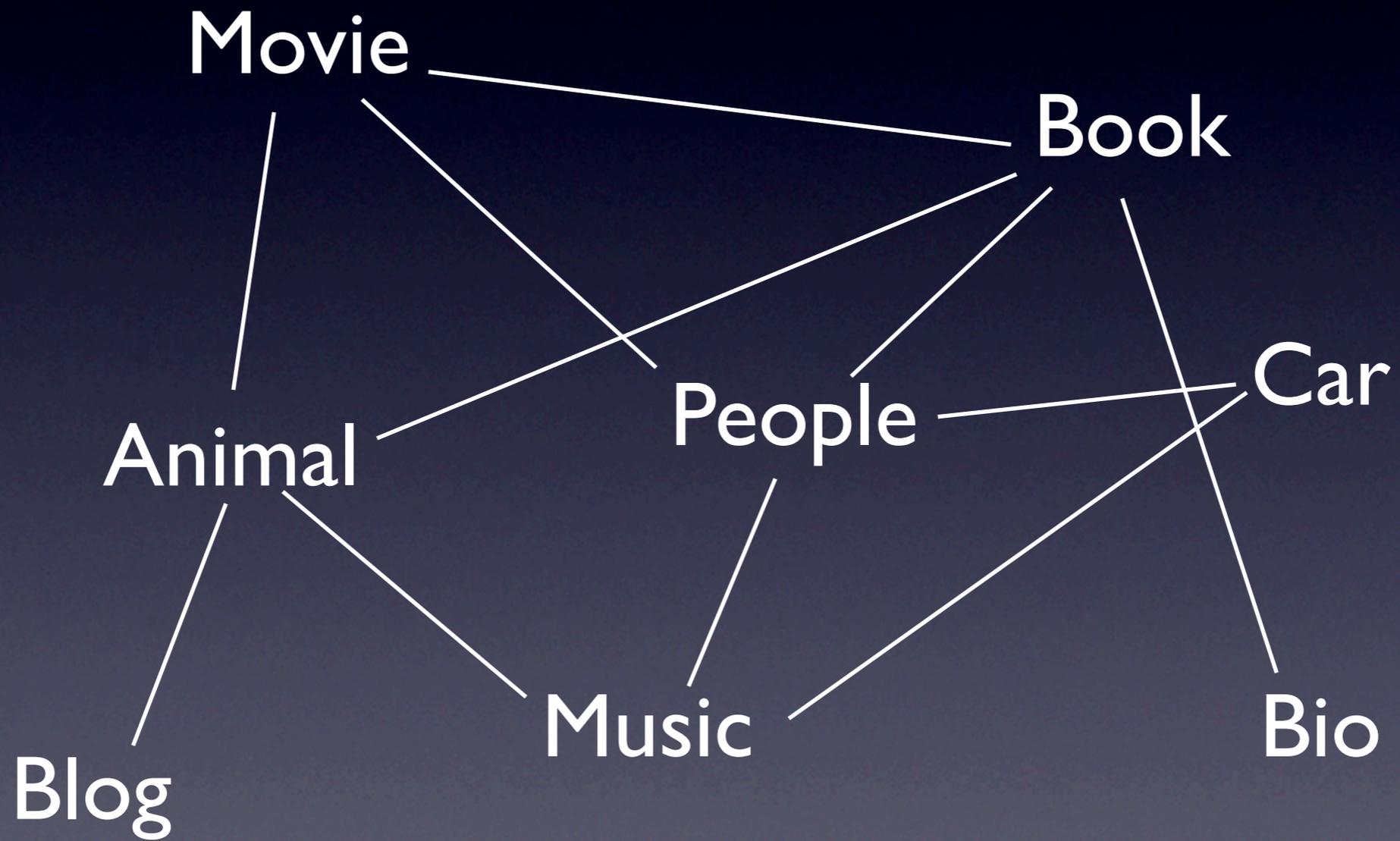
foaf:birthday

1968. 9. 25

rdf:type

xsd:datetime

연결



이제 시작입니다.



상상해보세요



These namespaces are used to describe entities in X number of documents

| Namespaces <i>(577 know namespaces)</i> | Number of documents |
|---|---------------------|
| http://xmlns.com/foaf/0.1/ | 970, 194 |
| http://blogs.yandex.ru/schema/foaf/ | 583, 631 |
| http://www.w3.org/2003/01/geo/wgs84_pos# | 152, 274 |
| http://rdfs.org/sioc/ns# | 119, 624 |
| http://rdfs.org/sioc/types# | 108, 058 |
| http://www.w3.org/2002/07/owl# | 38, 485 |
| http://semantic-mediawiki.org/swivt/1.0# | 29, 885 |
| http://usefulinc.com/ns/doap# | 18, 285 |
| http://www.geonames.org/ontology# | 5, 413 |
| http://smw.ontoware.org/2005/smw# | 4, 304 |
| http://sydneydirectory.org/index.php/Spe... | 4, 218 |
| http://www.w3.org/1999/02/22-rdf-syntax-... | 3, 680 |
| http://purl.org/rss/1.0/ | 3, 650 |
| http://purl.org/vocab/bio/0.1/ | 3, 183 |
| http://www.w3.org/2004/12/q/contentlabel... | 3, 172 |
| http://ontoworld.org/wiki/Special:URIRes... | 2, 802 |
| http://semanticweb.org/id/ | 2, 377 |
| http://wecowi.org/view/Spezial:URIResolv... | 2, 041 |
| http://wecowi.net/view/Spezial:URIResolv... | 1, 880 |

...

Stats

| | |
|----------------------|-------------|
| Pings requested: | 4, 955, 878 |
| Pings updated: | 587, 673 |
| Total RDF resources: | 1, 029, 021 |
| RDF Data Format | |
| XML: | 1, 023, 994 |
| N3/Turtle: | 5, 027 |

[All stats about Namespaces](#)

[All stats about Types](#)

*<http://pingthesemanticweb.com>

상상해보세요



GRDDL

Gleaning Resource Descriptions from Dialects of Languages

GRDDL

“Dialect로 부터 Resource Description을
수집하는 메카니즘”

FOAF

SKOS

SIOC

SCOT

GRD ... **Dialects**... L

CC

Microformat

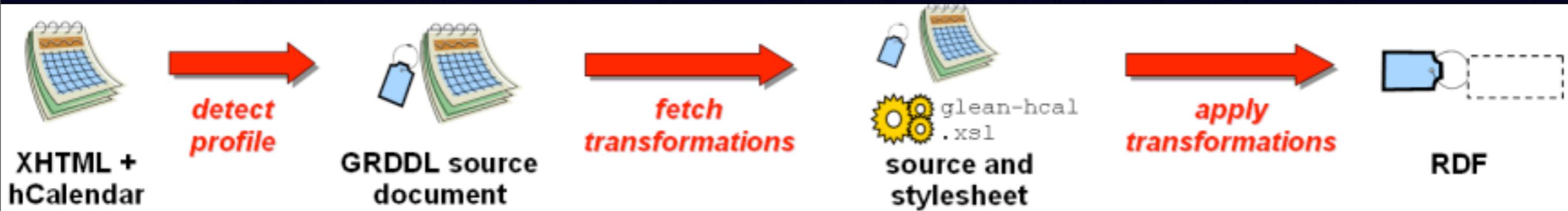
Dublin Core

DOAP

RDF/S

OWL

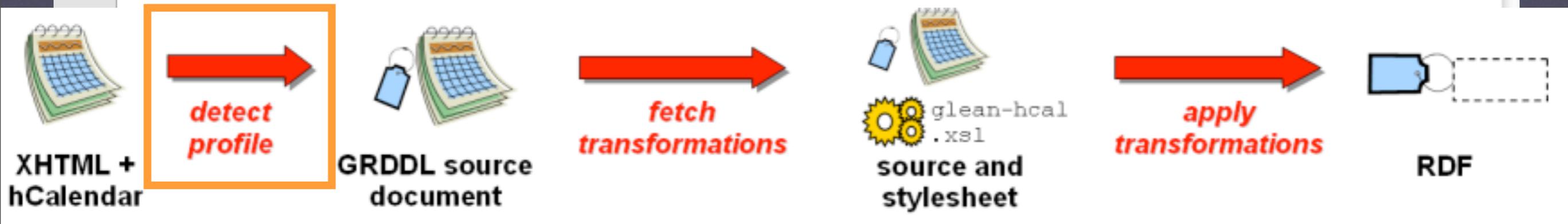
GRDDL



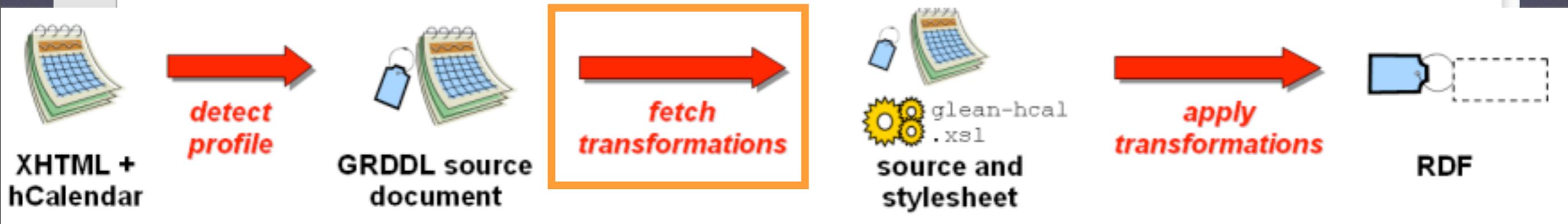
```

1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
2 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
3 <head profile="http://www.w3.org/2003/g/data-view">
4   <title>Robin's Schedule</title>
5   <link rel="transformation" href="http://www.w3.org/2002/12/cal/glean-hcal"/>
6 </head>
7 <body>
8   <ol class="schedule">
9     <li>2007
10     <ol>
11       <li class="vevent">
12         <strong class="summary">Web Design Conference</strong> in
13         <span class="location">Edinburgh, UK</span>:
14         <abbr class="dtstart" title="2007-01-08">Jan 8</abbr> to
15         <abbr class="dtend" title="2007-01-11">10</abbr>
16       </li>
17       <li class="vevent">
18         <strong class="summary">Board Review</strong> in
19         <span class="location">New York, USA</span>:
20         <abbr class="dtstart" title="2007-02-23">Feb 23</abbr> to
21         <abbr class="dtend" title="2007-02-25">24</abbr>
22       </li>
23     </ol>
24   </li>
25 </ol>
26 </body>
27 </html>

```



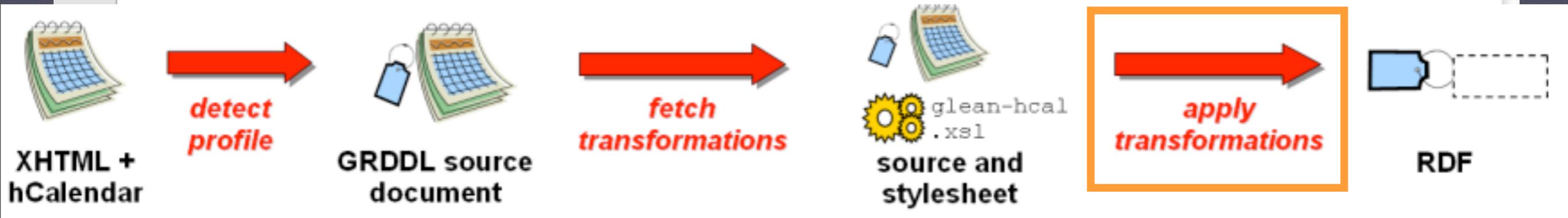
```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
2 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
3 <head profile="http://www.w3.org/2003/g/data-view">
4 <title>Robin's Schedule</title>
5 <link rel="transformation" href="http://www.w3.org/2002/12/cal/glean-hcal"/>
6 </head>
7 <body>
8 <ol class="schedule">
9 <li>2007
10 <ol>
11 <li class="vevent">
12 <strong class="summary">Web Design Conference</strong> in
13 <span class="location">Edinburgh, UK</span>:
14 <abbr class="dtstart" title="2007-01-08">Jan 8</abbr> to
15 <abbr class="dtend" title="2007-01-11">10</abbr>
16 </li>
17 <li class="vevent">
18 <strong class="summary">Board Review</strong> in
19 <span class="location">New York, USA</span>:
20 <abbr class="dtstart" title="2007-02-23">Feb 23</abbr> to
21 <abbr class="dtend" title="2007-02-25">24</abbr>
22 </li>
23 </ol>
24 </li>
25 </ol>
26 </body>
27 </html>
```



```

1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
2 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
3 <head profile="http://www.w3.org/2003/g/data-view">
4   <title>Robin's Schedule</title>
5   <link rel="transformation" href="http://www.w3.org/2002/12/cal/glean-hcal"/>
6 </head>
7 <body>
8 <ol class="schedule">
9   <li>2007
10   <ol>
11     <li class="vevent">
12       <strong class="summary">Web Design Conference</strong> in
13       <span class="location">Edinburgh, UK</span>:
14       <abbr class="dtstart" title="2007-01-08">Jan 8</abbr> to
15       <abbr class="dtend" title="2007-01-11">10</abbr>
16     </li>
17     <li class="vevent">
18       <strong class="summary">Board Review</strong> in
19       <span class="location">New York, USA</span>:
20       <abbr class="dtstart" title="2007-02-23">Feb 23</abbr> to
21       <abbr class="dtend" title="2007-02-25">24</abbr>
22     </li>
23   </ol>
24 </li>
25 </ol>
26 </body>
27 </html>

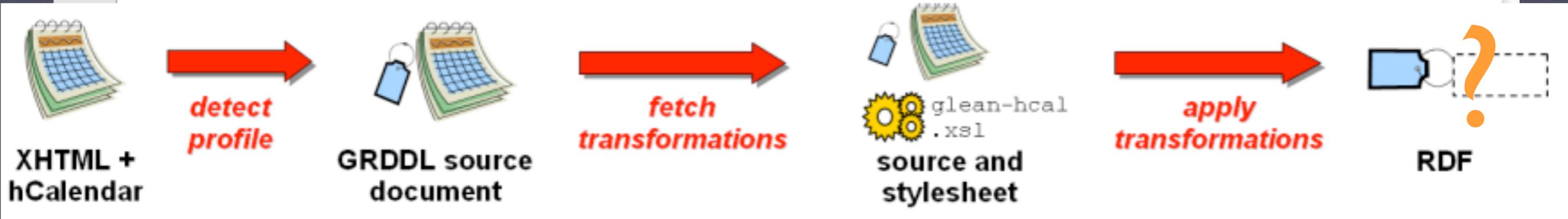
```



```

1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
2 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
3 <head profile="http://www.w3.org/2003/g/data-view">
4   <title>Robin's Schedule</title>
5   <link rel="transformation" href="http://www.w3.org/2002/12/cal/glean-hcal"/>
6 </head>
7 <body>
8   <ol class="schedule">
9     <li>2007
10     <ol>
11       <li class="vevent">
12         <strong class="summary">Web Design Conference</strong> in
13         <span class="location">Edinburgh, UK</span>:
14         <abbr class="dtstart" title="2007-01-08">Jan 8</abbr> to
15         <abbr class="dtend" title="2007-01-11">10</abbr>
16       </li>
17       <li class="vevent">
18         <strong class="summary">Board Review</strong> in
19         <span class="location">New York, USA</span>:
20         <abbr class="dtstart" title="2007-02-23">Feb 23</abbr> to
21         <abbr class="dtend" title="2007-02-25">24</abbr>
22       </li>
23     </ol>
24   </li>
25 </ol>
26 </body>
27 </html>

```



Minefield

http://www.w3.org/TR/grddl-primer/robin-hcal-grddl.rdf

http://www.w3.o...hcal-grddl.rdf

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

- <rdf:RDF>
- <rdf:Description rdf:nodelD="jTCXOri6">
  <_6:location xml:lang="en">Cologne, Germany</_6:location>
  <rdf:type rdf:resource="http://www.w3.org/2002/12/cal/icaltzd#Vevent"/>
  <_6:url rdf:resource="http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html"/>
  <_6:summary xml:lang="en">New line review</_6:summary>
  <_6:dtstart rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-10-26</_6:dtstart>
  <_6:dtend rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-10-28</_6:dtend>
</rdf:Description>
- <rdf:Description rdf:nodelD="jTCXOri5">
  <_6:location xml:lang="en">Paris, France</_6:location>
  <rdf:type rdf:resource="http://www.w3.org/2002/12/cal/icaltzd#Vevent"/>
  <_6:url rdf:resource="http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html"/>
  <_6:summary xml:lang="en">Fashion Expo</_6:summary>
  <_6:dtstart rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-10-20</_6:dtstart>
  <_6:dtend rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-10-23</_6:dtend>
</rdf:Description>
- <rdf:Description rdf:nodelD="jTCXOri7">
  <_6:location xml:lang="en">Rome, Italy</_6:location>
  <rdf:type rdf:resource="http://www.w3.org/2002/12/cal/icaltzd#Vevent"/>
  <_6:url rdf:resource="http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html"/>
  <_6:summary xml:lang="en">Clothing 2006</_6:summary>
  <_6:dtstart rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-12-01</_6:dtstart>
  <_6:dtend rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-12-06</_6:dtend>
</rdf:Description>
- <rdf:Description rdf:nodelD="jTCXOri4">
  <rdf:type rdf:resource="http://www.w3.org/2002/12/cal/icaltzd#Vcalendar"/>
  <_6:component rdf:nodelD="jTCXOri5"/>
  <_6:component rdf:nodelD="jTCXOri8"/>

```

Done

Done

<_6:component rdf:nodelD="jTCXOri8"/>

<_6:component rdf:nodelD="jTCXOri5"/>

<_6:dtstart rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-12-01</_6:dtstart>

<_6:dtend rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2006-12-06</_6:dtend>

- <rdf:Description rdf:nodelD="jTCXOri4">

<_6:component rdf:nodelD="jTCXOri5"/>

<_6:component rdf:nodelD="jTCXOri8"/>

Tabulator Extension for Firefox

http://www.w3.org/TR/grddl-primer/robin-hcal-grddl.rdf

http://www.w3.org/TR/grddl-primer/robin-hcal-grddl.rdf

http://www.w3.org/TR/grddl-primer/robin-hcal-grddl.rdf

| | |
|----------------|---|
| ... type | Vcalendar |
| component type | Vevent |
| dtend | 2006-12-06 |
| dtstart | 2006-12-01 |
| location | Rome, Italy |
| summary | Clothing 2006 |
| url | http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html |
| type | Vevent |
| dtend | 2007-01-11 |
| dtstart | 2007-01-08 |
| location | Edinburgh, UK |
| summary | Web Design Conference |
| url | http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html |
| type | Vevent |
| dtend | 2007-02-25 |
| dtstart | 2007-02-23 |
| location | New York, USA |
| summary | Board Review |
| url | http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html |
| type | Vevent |
| dtend | 2006-10-28 |
| dtstart | 2006-10-26 |
| location | Cologne, Germany |
| summary | New line review |
| url | http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html |
| type | Vevent |
| dtend | 2006-10-23 |
| dtstart | 2006-10-20 |
| location | Paris, France |
| summary | Fashion Expo |
| url | http://www.w3.org/2001/sw/grddl-wg/doc29/robin-hcal-grddl.html |
| prodid | -//connolly.w3.org//palmagent 0.6 (BETA)//EN |
| version | 2.0 |

Done

Done

4 Errors

4 Errors

GRDDL Agent

GRDDL Scraper

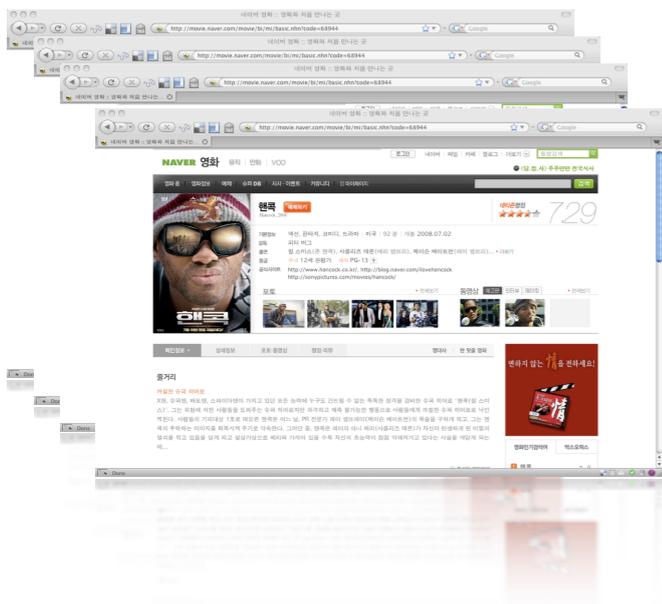
Jena GRDDL Reader

Jena GRDDL Reader

```
grddl.java
1 Model m = ModelFactory.createDefaultModel();
2
3 RDFReader reader = m.getReader("GRDDL");
4 reader.setProperty("grddl.rdfa", true);
5 reader.read(m, "http://movie.naver.com/movie/bi/mi/basic.nhn?code=68944");
6
7 StmtIterator iter = m.listStatements();
8
9 while (iter.hasNext()){
10     Statement stmt = iter.nextStatement();
11
12     System.out.println(stmt);
13 }
```

[nhnmovie:movie_68944] - [rdf:type] - [nhnmovie:Movie]
[nhnmovie:movie_68944] - [nhnmovie:title] - "헨콧"
[nhnmovie:movie_68944] - [nhnmovie:hasActors] - [nhnmovie:actor_1626]
[nhnmovie:movie_68944] - [nhnmovie:hasDirectors] - [nhnmovie:director_3847]
...

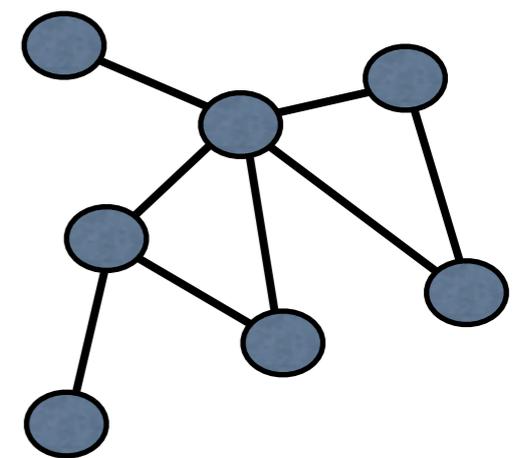
Line: 13 Column: 2 Java Tab Size: 4
File: grddl.java Column: 5 Line: 13



데이터를 담고 있는 웹



에이전트



그리고, 연결

아까보듯 더...



SMOB

Semantic MicroBlogging

MicroBlog

쓰기도 귀찮고
쓸말도 없고



SMOB

Semantic MicroBlogging



Semantic Microblogging

is distributed microblogging system

is built on RDF and Semantic Tech
(mainly **SIOC** and **FOAF**)



Semantic Microblogging

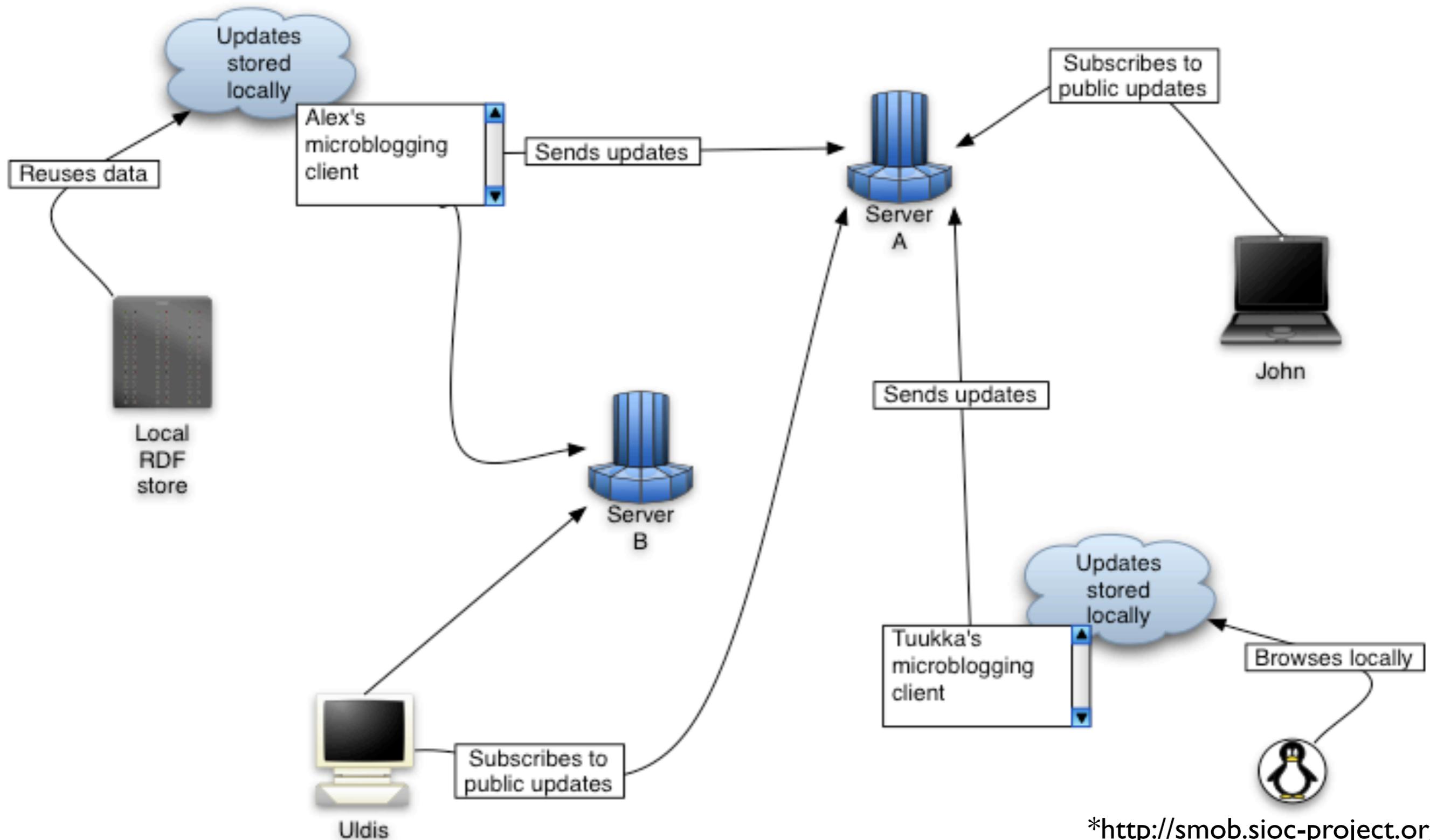
SMOB client

- a **personal** microblog **publishing** service

SMOB server

- a microblog **aggregating** service

SMOB architecture



*<http://smob.sioc-project.org/>

Semantic MicroBlogging - demo timeline

TILES • TIMELINE • MAP

41 MicroBlogPost

sorted by: [date](#); [then by...](#) • grouped as sorted

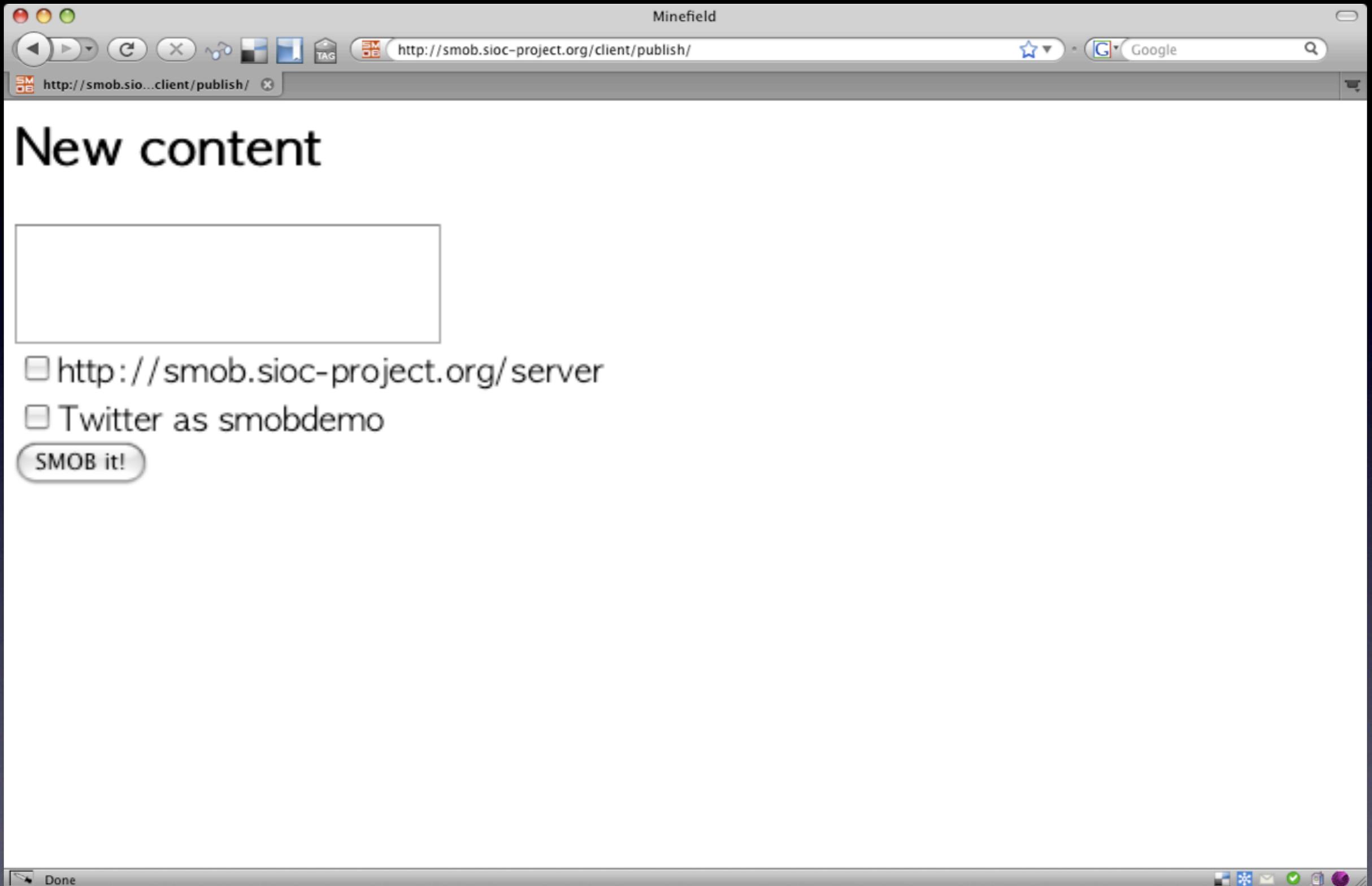
1.  Tuukka Hastrup
After nice and happy days of jazz festivals in [#geo:Montreux](#) with Darragh and in [#geo:Wien](#) with Benja, heading to [#geo:Frankfurt](#).
2008-07-11T09:46:09+03:00
 2.  Tuukka Hastrup
[#geo:Bergamo](#) is warm but cloudy...
2008-07-06T19:10:51+03:00
 3.  Tuukka Hastrup
Leaving in heavy rain for [#geo:Jyväskylä](#) for studies and midsummer.
2008-06-17T19:15:23+03:00
 4.  Tuukka Hastrup
now in [#geo:Ivalo](#), on the way back down to [#geo:Helsinki](#).
2008-06-12T12:54:09+03:00
 5.  Tuukka Hastrup
Enjoying the midnight sun at a creek in the forest, after days of snowing on and off.
2008-06-10T23:43:17+03:00
 6.  Tuukka Hastrup
Although I hear it's 30 °C in Southern Finland, we have a bright and fresh day with 10° in [#geo:Rovaniemi](#).
2008-06-06T12:25:21+03:00
-  John Breslin

- Date**
- 1 2008-05-09
 - 1 2008-05-10
 - 1 2008-05-11
 - 2 2008-05-12
 - 4 2008-05-13
 - 3 2008-05-14

- Name**
- 6 John Breslin
 - 5 Thomas Schandl
 - 30 Tuukka Hastrup

- Topic**
- 27 (missing this field)
 - 1 dbp:DERI
 - 1 logo
 - 1 n810
 - 1 nuig
 - 4 SMOB
 - 8 smob

- Location**
- 30 (missing this field)
 - 1 Bergamo



Publishing your message...

- Telling <http://smob.sioc-project.org/server> about <http://smob.sioc-project.org/client/data/2008-07-15T17:56:57+01:00.rdf>... Done.
- Telling <http://smob.sioc-project.org/server> about http://smob.sioc-project.org/anon_foaf.turtle... Done.
- Relaying your message to Twitter as [smobdemo](#).

New content

- <http://smob.sioc-project.org/server>
- Twitter as smobdemo

SMOB it!

Publishing your message...

- Telling <http://smob.sioc-project.org/server> about <http://smob.sioc-project.org/client/data/2008-07-15T17:56:57+01:00.rdf>... Done.
- Telling <http://smob.sioc-project.org/server> about http://smob.sioc-project.org/anon_foaf.turtle... Done.
- Relaying your message to Twitter as [smobdemo](#).

New content



- <http://smob.sioc-project.org/server>
- Twitter as smobdemo

SMOB it!

▼ SIOC profile for ""

| | | |
|---|-----------------|--|
| SIOC profile for "" | Description | A SIOC profile describes the structure and contents of a community site (e.g., weblog) in a machine processable form. For more information refer to the SIOC project page |
| | Title | SIOC profile for "" |
| | Generator Agent | SIOC profile for "" |
| | type | http://wiki.sioc-project.org/index.php/PHPExportAPI?version=1.01 |
| | primary Topic | http://xmlns.com/foaf/0.1/Document |
| 2008-07-15T17:56:57+01:00 | Title | 2008-07-15T17:56:57+01:00 |
| | Date Created | 2008-07-15T17:56:57+01:00 |
| | encoded content | 시맨틱웹세미나에 오신 여러분 반갑습니다 -kwangsub (http://www.gimyo.co.kr/semanticweb/) |
| | has_creator | http://smob.sioc-project.org/client/user/anon |
| | type | Post Microblog Post |
| http://smob.sioc-project.org/client/user/anon | maker | http://smob.sioc-project.org/anon_foaf.turtle#me |
| | type | User |
| | seeAlso | http://smob.sioc-project.org/client/data/type=user&user_id=anon |
| http://smob.sioc-project.org/anon_foaf.turtle#me | type | http://xmlns.com/foaf/0.1/Person |
| | seeAlso | http://smob.sioc-project.org/anon_foaf.turtle |

SIOC profile for ""

http://smob.sioc-project.org/client/data/2008-07-15T17:56:57+01:00.rdf

SIOC profile for ""

SIOC

| | | |
|---|-----------------|---|
| SIOC profile for "" | Description | A SIOC profile describes the structure and contents of a community site (e.g., weblog) in a machine readable format. For more information refer to the SIOC project page |
| | Title | SIOC profile for "" |
| | Generator Agent | SIOC profile for "" |
| | type | http://wiki.sioc-project.org/index.php/PHPExportAPI?version=1.01 |
| 2008-07-15T17:56:57+01:00 | primary Topic | http://xmains.com/foaf/0.1/Document |
| | Title | 2008-07-15T17:56:57+01:00 |
| | Date Created | 2008-07-15T17:56:57+01:00 |
| | encoded content | 시맨틱웹세미나에 오신 여러분 반갑습니다 -kwangsub (http://www.gimyo.co.kr/semanticweb/) |
| http://smob.sioc-project.org/client/user/anon | has_creator | http://smob.sioc-project.org/client/user/anon |
| http://smob.sioc-project.org/client/user/anon | type | Post Microblog Post |
| | maker | http://smob.sioc-project.org/anon_foaf.turtle#me |
| | type | User |
| | seeAlso | http://smob.sioc-project.org/client/data/type=user&user_id=anon |
| | type | http://xmains.com/foaf/0.1/Person |
| | seeAlso | http://smob.sioc-project.org/anon_foaf.turtle |

Done

Done

Semantic MicroBlogging - demo timeline

TILES · TIMELINE · MAP

204 MicroblogPost

sorted by: [date](#); [then by...](#) · grouped as sorted

1.  Anonymous
 시맨틱웹세미나에 오신 여러분 반갑습니다 -kwangsub [<http://www.gimyo.co.kr/semanticweb/>]
2008-07-15T17:56:57+01:00
 2.  Gunnar AAstrand Grimnes
 Hmm - Civ4 - and weekend gone taking over the world. And some biking.
2008-07-14T10:15:09+02:00
 3.  Anonymous
 awesome ... from korea 와우
2008-07-13T07:47:20+01:00
 4.  Gunnar AAstrand Grimnes
 Accidentally deleted the kde build it took me three days to build - doing it again...
2008-07-11T14:36:36+02:00
 5.  Tuukka Hastrup
 After nice and happy days of jazz festivals in [#geo:Montreux](#) with Darragh and in [#geo:Wien](#) with Benja, heading to [#geo:Frankfurt](#).
2008-07-11T09:46:09+03:00
 6.  Gunnar AAstrand Grimnes
 Building KDE4 in a virtual machine on my macbook waiting... waiting... [02%]
2008-07-10T17:35:35+02:00
- Anonymous

Date

| | |
|----|------------|
| 7 | 2008-05-09 |
| 1 | 2008-05-10 |
| 1 | 2008-05-11 |
| 6 | 2008-05-12 |
| 14 | 2008-05-13 |
| 4 | 2008-05-14 |
| 7 | 2008-05-15 |

Name

| | |
|----|---------------------|
| 3 | Alexandre Alapetite |
| 23 | Alexandre Passant |
| 73 | Anonymous |
| 1 | Asko Soukka |
| 5 | CharlesNepote |
| 1 | Cyril Fait |
| 8 | Gautier Poupeau |

Topic

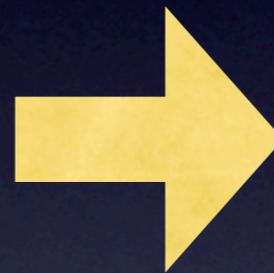
| | |
|-----|----------------------|
| 177 | (missing this field) |
| 1 | dbp:Beer |
| 1 | dbp:DERI |
| 1 | dbp:Semantic_Web |
| 1 | dmb |
| 1 | eswc |
| 1 | fing |

Location

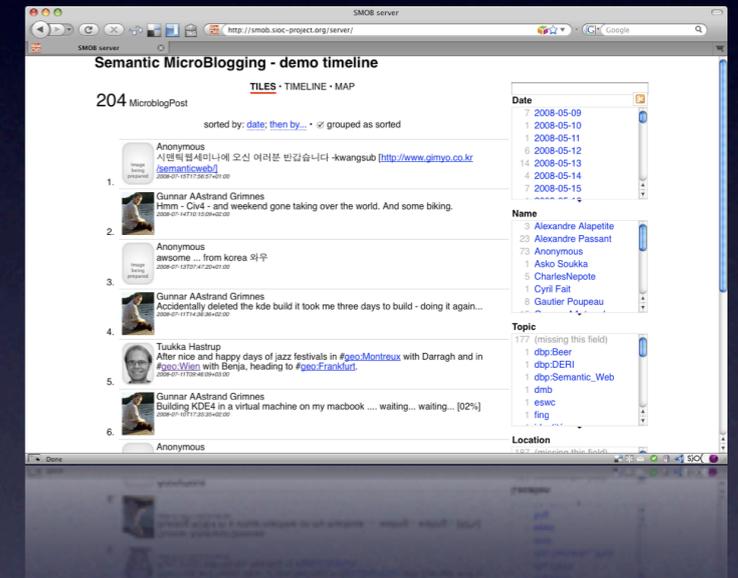
| | |
|-----|----------------------|
| 127 | (missing this field) |
|-----|----------------------|

<http://smob.sioc-project.org/client/data/2008-07-15T17:56:57+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-14T17:55:34+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-13T12:43:23+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-12T17:32:11+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-11T09:56:50+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-08T11:32:22+01:00.rdf>
<http://smob.sioc-project.org/client/data/2008-07-05T03:02:11+01:00.rdf>

...



필터링



RDF

URI

HTTP

URI를 통해 어디서든 연결할수 있는 데이터

Linked Data

배포 ————— 수집 ————— 검색

똑똑한 데이터들이 나오고 있습니다.

배포 ————— 수집 ————— 검색

Crawling 방법도 변하고 있습니다.

배포 ————— 수집 ————— 검색

Textfield 검색? **검색방법**도 바뀌고 있습니다.

아직도

..., but **misses** an **opportunity**
to make **data interconnected**. -TBL

아주 감사합니다.

시맨틱웹팀블로그 : <http://semantic.tistory.com>

개인블로그 : <http://bklab.snu.ac.kr/blog/kwangsub>



BIKE
Biomedical Knowledge
Engineering Laboratory
Seoul National University