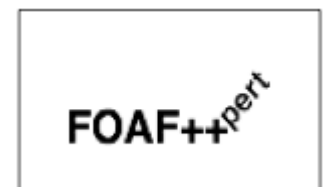


FOAF & SKOS for ExpertFinding

Dan Brickley <danbri@danbri.org>



- Started FOAF with Libby Miller
- & SWAD-Europe (SKOS, t-shirts, ...)
- Edited RDFS, co-chaired RDFCore
- 6 years at W3C SemWeb
- chair W3C SW Interest Group
- Asemantics S.R.L., SpyPixel, ...



<<http://danbri.org/foaf.rdf>>

Overview

- A few words on FOAF and SKOS
- Problems, goals, challenges etc.
- Sneaking up on the mainstream...
- Thoughts for the future

Axel: “Vocabulary Framework”

- devise a “Vocabulary Framework”
- ...rather than a new ontology
- Specify useful combinations of vocabularies
- Dublin Core community “application profiles”
- *Hypothesis: use SPARQL queries*
- *Link use cases to producer/consumer apps*
- *A directory (wiki?) of well known queries?*

Software Experts via FOAF + Geo

Where are we all?

[Home](#)
[Committer Map](#)
[Calendar](#)
[Events](#)
[Gallery](#)
[Projects](#)
[Resources](#)
[Weblogs](#)

[Managing Your Details](#)

[Committer List](#)
[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#)
[J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#)
[R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#)
[Z](#)

This map shows locations of those committers within the ASF that have added their locations.

Predefined views: [Worldwide](#) [Europe](#) [North America](#)



Weblog finding: my.opera.com



OPERA COMMUNITY
Simply the Best Internet Experience

Home Blogs Photos Groups Forums Custom

Opera SPARQL Query Engine

This experimental server supports the [SPARQL Query language for RDF](#). It has a partial [SPARQL Protocol](#) implementation, i.e. it supports the HTTP access method. On the backend, it uses the latest release of [Redland/Rasqal](#) and so, inherits the [capabilities and limitations](#) of that library.

The model is built from the [Opera Community](#) public data and consists of 15368882 triples.

SPARQL Query

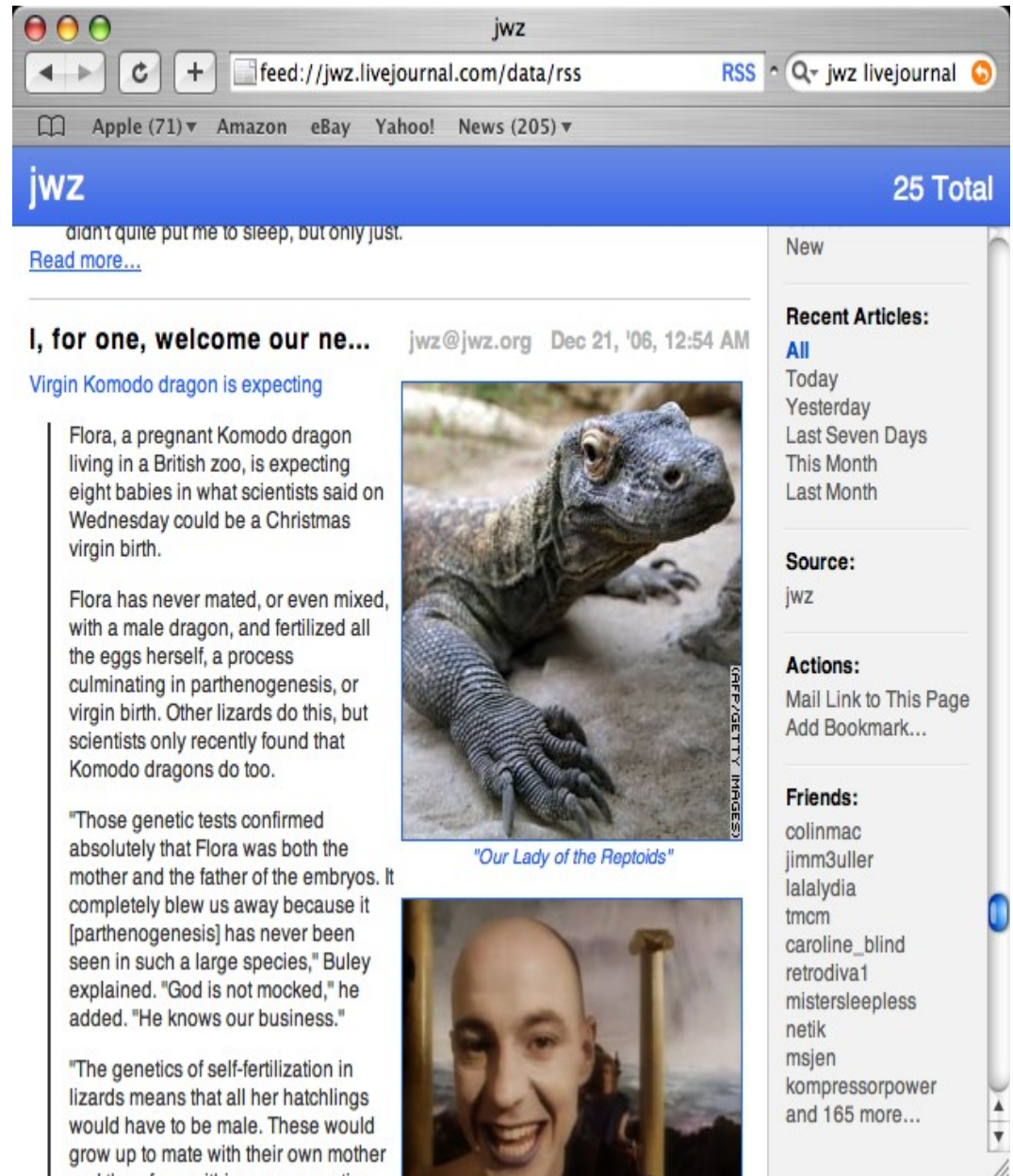
Enter your query:

```
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
SELECT ?blog WHERE
{ ?user foaf:nick "chaals" .
  ?user foaf:weblog ?blog . }
```

Opera Browser and SemWeb

- my.opera.com blog profiles in FOAF
- Software widgets in DOAP
- Browser addons (eg. RDF navigator) in .js
- Queryable SPARQL web service to their RDF
- Aim – bring users to the service, build community around the browser
- No topic descriptions yet but will review ExpertFinder recommendations

MacOS X / Safari RSS



The screenshot shows a Safari browser window displaying an RSS feed for 'jwz'. The address bar shows the URL 'feed://jwz.livejournal.com/data/rss'. The page title is 'jwz' and the feed contains 25 items. The main article is titled 'I, for one, welcome our ne...' and is dated Dec 21, '06, 12:54 AM. The article text discusses a pregnant Komodo dragon named Flora that is expected to give birth to eight babies, a virgin birth. A photograph of a Komodo dragon is included, with the caption 'Our Lady of the Reptoids'. Below the main text, there is a quote from Buley explaining the genetic tests and another quote about the genetics of self-fertilization in lizards. A small image of a man's face is visible at the bottom right of the article content. The right sidebar contains navigation links for 'Recent Articles' (All, Today, Yesterday, Last Seven Days, This Month, Last Month), 'Source' (jwz), 'Actions' (Mail Link to This Page, Add Bookmark...), and 'Friends' (colinmac, jimm3uller, lalalydia, tncm, caroline_blind, retrodiva1, mistersleepless, netik, msjen, kompressorpower, and 165 more...).

jwz

feed://jwz.livejournal.com/data/rss RSS jwz livejournal

Apple (71) Amazon eBay Yahoo! News (205)

jwz 25 Total

didn't quite put me to sleep, but only just.
[Read more...](#)

I, for one, welcome our ne... jwz@jwz.org Dec 21, '06, 12:54 AM


[Virgin Komodo dragon is expecting](#)

Flora, a pregnant Komodo dragon living in a British zoo, is expecting eight babies in what scientists said on Wednesday could be a Christmas virgin birth.


Flora has never mated, or even mixed, with a male dragon, and fertilized all the eggs herself, a process culminating in parthenogenesis, or virgin birth. Other lizards do this, but scientists only recently found that Komodo dragons do too.

"Those genetic tests confirmed absolutely that Flora was both the mother and the father of the embryos. It completely blew us away because it [parthenogenesis] has never been seen in such a large species," Buley explained. "God is not mocked," he added. "He knows our business."

"The genetics of self-fertilization in lizards means that all her hatchlings would have to be male. These would grow up to mate with their own mother and therefore, within one generation



"Our Lady of the Reptoids"



Recent Articles:
All
Today
Yesterday
Last Seven Days
This Month
Last Month

Source:
jwz

Actions:
Mail Link to This Page
Add Bookmark...

Friends:
colinmac
jimm3uller
lalalydia
tncm
caroline_blind
retrodiva1
mistersleepless
netik
msjen
kompressorpower
and 165 more...

LiveJournal FOAF

```
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
xmlns:foaf="http://xmlns.com/foaf/0.1/"
xmlns:ya="http://blogs.yandex.ru/schema/foaf/"
xmlns:geo="http://www.w3.org/2003/01/geo/wgs84_pos#"
xmlns:dc="http://purl.org/dc/elements/1.1/">
<foaf:Person>
  <foaf:nick>jwz</foaf:nick>
  <foaf:name>jwz</foaf:name>
  <ya:country dc:title="US" rdf:resource="http://www.livejournal.com/directo
opt_sort=ut&s_loc=1&loc_cn=US"/>
  <ya:city dc:title="San+Francisco" rdf:resource="http://www.livejournal.com
directory.bml?opt_sort=ut&s_loc=1&loc_cn=US&loc_st=&loc_ci=San
+Francisco"/>
  <foaf:mbox_sha1sum>4c0750476fcc79ca7d6a4df4a0db7e7a26feaf17</foaf:mbox_shc
  <foaf:img rdf:resource="http://www.livejournal.com/userpic/5887295/515656"
  <foaf:page>
    <foaf:Document rdf:about="http://jwz.livejournal.com/profile">
      <dc:title>LiveJournal.com Profile</dc:title>
      <dc:description>Full LiveJournal.com profile, including information su
interests and bio.</dc:description>
    </foaf:Document>
  </foaf:page>
  <foaf:aimChatID>yes that jwz</foaf:aimChatID>
  <foaf:jabberID>jwz@livejournal.com</foaf:jabberID>
  <ya:blogActivity>
    <ya:Posts>
      <ya:feed rdf:resource="http://jwz.livejournal.com/data/foaf"
      . . . . .
```

Lessons here

- Mainstream? Kinda...
- MacOS X Safari mainly LiveJournal FOAF
- Uses an XML not RDF parser - fragile
- ...its information expectations are not clear
- RDFS/OWL don't help make them clear
- Implementors work from example instances
- RDF parsing still an issue (RDFa? GRDDL?)
- Blog readers could get a lot smarter
- Exposing full SPARQL expensive, profiles help

Aside: “Information Expectations”?

- What is the difference between XML and RDF?
- XML schemas talk about types of XML document, and their substructure
- RDFS/OWL talks about *the things those documents talk about* – people, places, ideas, organisations, ie. open world data
- RDF doesn't restrict what you say with it
- This is a **blessing** and a **curse**
- **Flexible, extensible, decentralised, chaotic...**

Wikipedia & BBC Catalogue

```
<foaf:Person>
  <foaf:name>John Peel</foaf:name>
  <foaf:homepage rdf:resource="http://open.bbc.co.uk/catalogue/infax/contributor/1724"/>
  <foaf:isPrimaryTopicOf rdf:resource="http://en.wikipedia.org/wiki/John_Peel"/>
  <foaf:made>
    <bbc:Programme rdf:about="http://open.bbc.co.uk/catalogue/infax/programme/BHUN717T_E">
      <dc:type>Image.Moving.TV</dc:type>
      <dc:title>LOOK NORTH - 26 April 2006</dc:title>
      <rdfs:seeAlso rdf:resource="http://open.bbc.co.uk/catalogue/xml/programme/BHUN717T_E"/>
    </bbc:Programme>
  </foaf:made>
</foaf:Person>
```

- How do we identify specific people?
- How do we bind together datasets? eg. WikiPedia, BBC Programme Catalogue?
- What did these experts **do**?
- What RDF vocabulary patterns can we ever expect across diverse datasources?

FOAF Project Status

- After RDF/RDFS and Dublin Core in top 10
- Lots of data out there – too much to harvest
- Fewer consumer apps
- SPARQL is helping simplify consumer apps
- FOAF is only fun when mixed with other vocabs: eg. Geo, DC, Creative Commons, SIOC, vCard, SKOS...
- We haven't documented those combinations

Current FOAF terms

Classes

Agent | Document | Group | Image | OnlineAccount | OnlineChatAccount |
OnlineEcommerceAccount | OnlineGamingAccount | Organization | Person |
PersonalProfileDocument | Project

Properties

accountName | accountServiceHomepage | aimChatID | based_near | birthday |
currentProject | depiction | depicts | dnaChecksum | family_name | firstName |
fundedBy | geekcode | gender | givenname | holdsAccount | homepage |
icqChatID | img | interest | isPrimaryTopicOf | jabberID | knows | logo | made |
maker | mbox | mbox_sha1sum | member | membershipClass | msnChatID |
myersBriggs | name | nick | page | pastProject | phone | plan | primaryTopic |
publications | schoolHomepage | sha1 | surname | theme | thumbnail | tipjar |
title | topic | topic_interest | weblog | workInfoHomepage | workplaceHomepage |
yahooChatID

FOAF priorities

- Various open issues with the vocabulary
- Scoping vs. vCard-in-RDF and I18N names
- 2006 - infrastructure issues (dns, hosting, lists)
- Edd Dumbill hosts new lists.foaf-project.org
- Subversion repository for translations
- Longevity arrangements for xmlns.com docs
- 2007 should be busy. W3C Incubator Group?

SKOS

- Simple Knowledge Organization Systems
- Roughly: thesaurus-like hierarchies in RDF
- Many domains (currently or historically) are modelled this way, rather than ontologically
- Simple hierarchy used in many apps
- SKOS bridges these to RDF world

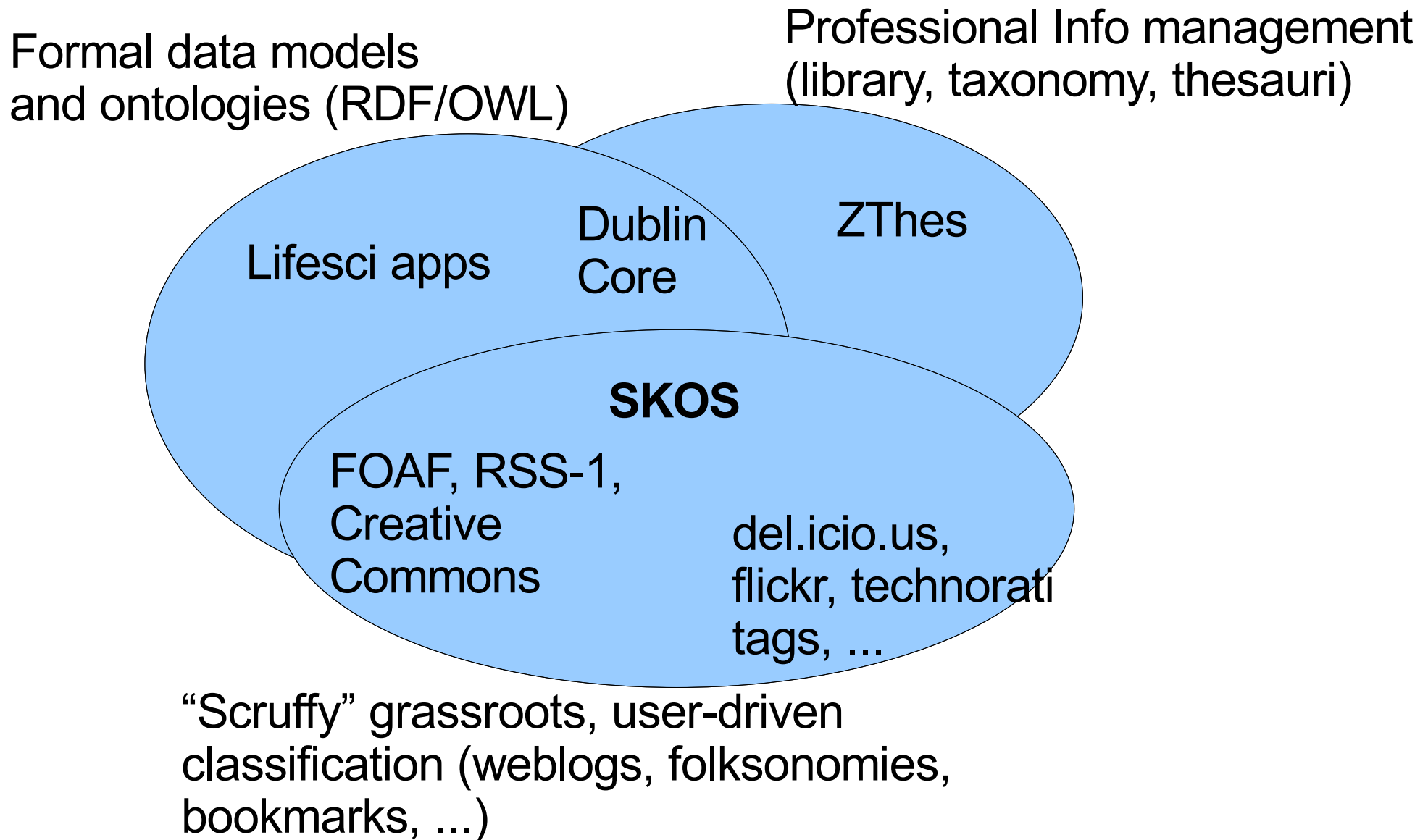
What is it?

- - Main Purpose: Subject Metadata & IR
 - E.g. 'this document is about romantic love'.
 - E.g. 'this document is about the cure of tuberculosis by x-ray in India in the 1950s'.
 - Based on 'traditional' wisdom ...
 - ... thesauri, classification schemes, subject heading systems, taxonomies ...
 - ... applied to distributed information ...
 - ... SKOS Core is built on RDF.

What's it good for?

- - Bring the power of a thesaurus, classification scheme, or taxonomy, as an **information retrieval tool** to your **distributed metadata**.
 - Low-cost **migration** of existing thesauri/classification schemes/taxonomies/... to **RDF**.

SKOS - formal, professional and scruffy?



SKOS Status

- New W3C Semantic Web Deployment Working Group
- Chartered to create a W3C Recommendation
- Beginning with work of SWBPD WG
- Collecting *use cases and practical experience*
- *The WG is publically visible, friendly and needs your help!*
- *SKOS is well suited for describing topics, in varying levels of formality... get involved!*

On “Expertise” ...

- Credibility on long-term topic (eg. Thesaurus category in SKOS) or entity or place
- Eyewitness accounts, citizen journalists, primary sources...
- Special abilities and powers (speaks Spanish? Reads COBOL? Knows ISO process?)
- Close ties to Educational metadata standards (Dublin Core is a good community crossroads)
- Not all experts want to be found by everyone
- Data provenance is key (eg. work history, medics...) explore PGP? XMLSig?

Practical focus?

- Academic, journalistic and technology expertise (Open Archives, blogs, software ...)
- Each has active publishers, and forms of peer review
- Expert-finding needs more than person, topic and “level” metadata
- Start with blogs? Make a better aggregator...

Conclusions

- See public-esw-thes@w3.org list for SKOS
- New foaf-dev@lists.foaf-project.org for FOAF
- Focus on multi-vocabulary (query?) patterns that bind data sources to practical applications
- Help! Use cases for SKOS spec. Incubator W3C group for FOAF. Common query list?
- Links will be in ExpertFinder wiki