A Matter of Semantics?
Intelligence, Open Data and the Future of ERM

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So, who are we?
Before we really begin, let me tell you a story that will hopefully introduce the idea behind our presentation.

Several months ago . . .
Jon and Mason were contemplating recreating their database A-Z list from the ground up.

(Not just how it looked, but how each database was described . . . )
The “Perfect” DB Record

• Title
• Alternate Titles
• Description
• Full-text coverage
• Content Types Included (journals, newspapers, etc.)
• Features (RSS, Alerts, Refworks, etc.)

But this takes work to maintain (update) . . .

E.G. Each database has a name, brief description, but also might include full-text coverage dates, publisher, feature list (Refworks? Alerts?), etc.

However ...
Who would do the work of maintaining this information?

Information that was duplicated in places like our ERMS, OpenURL Resolver, and Federated Search System.

Those systems, however, did not have features we wanted in our Database List.
Who?

- Librarians at FSU
- Librarians Outside FSU
- Publishers and Vendors
- All of the Above

All of the Above is selected.
### What?

<table>
<thead>
<tr>
<th>Option</th>
<th>✔️</th>
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<tbody>
<tr>
<td>Databases</td>
<td>✔️</td>
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<tr>
<td>Publishers/Providers</td>
<td>✔️</td>
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<tr>
<td>Journals</td>
<td>✔️</td>
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<tr>
<td>All of the Above</td>
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Now, that we had all these OTHER people maintaining this system, what information would we decide to include?

We also asked ourselves the question . . .
Why hasn’t anyone built a system like this already?
How we might build a system like this, if possible?
So, began our quest . . .

To answer these questions and make sense of this whole issue.

We don't claim to have answers to all these questions, but I do think we have a pretty decent grasp of the problem now.

So, w/ no further ado . . . I will hand things over to Mason.
So what is the problem?
Duplication of Data
Services require a Knowledge Base…

One place to put everything … where services can find this information.
…but the Reality is often a different beast

Each service has its own KB…..

Give example of single institution

TODO:

Add notes, if possible, next to each “service” (e.g. SFX, etc.)
CHANGE:: increasing # of institutions … show that each institution may use several knowledgebases in combination…

May share, but overall, there is great duplication of data.
Each service has its own KB.....

Give example of single institution

TODO:

Add notes, if possible, next to each “service” (e.g. SFX, etc.)
Who owns the data?

The idea that data is currently owned and updated by vendors
Some ways it’s not … lot of work!
Reliant on them for updating, accuracy, format (use??), and robustness of information provided. (They choose fields/attributes to describe various journals, databases, etc.)

Wouldn’t be great if we could --- if YOU could???
So, now we know what the problem is . . . Can we find a solution?
We are not the first ones to ask this question . . . Others much smarter than us have lead projects devoted to addressing aspects of this problem.
Jake

- Formerly at: http://jake.openly.com/

jointly administered knowledge environment
More recent project…

(show interface)

- Tied to their opensource CUFTS OpenURL service
- Maintained by SFU staff but exploring “collaborative model”
- Used to “sell” subscriptions to KB, but now free (business model??)
Registry Projects

- **IESR** ([http://iesr.ac.uk/](http://iesr.ac.uk/))
- **Combined Global Efforts**

Ockham (main one I am going to talk about)

Headed up by a # of libraries, but I spoke recently to Jeremy Frumkin…

Idea taken from British project (IESR) …

Way for machines and humans to “discover” new services ….

So, currently, nothing I can show you… but the way it would work is ….
“Theoretical” Perfect System
Library OKRA?
Library OKRA

“One Knowledgebase to Rule Them All
One Knowledgebase to Find Them
One Knowledgebase to Bring Them All
And In the Darkness Bind Them “

- The Lord of the … ERM?

JON>>
NOW THAT WE HAVE a fancy ACRONYM for it, what might this hypothetical system look like?
We CAN re-use…
We can ensure accuracy…
We can ensure relevance (of metadata)…

Institutions can choose to host locally customized instances of knowledgebase.

Also, openness is key to getting people to contribute to the KB, which is the next thing I would like to discuss…
Models
(For Sharing)

- Cooperative Cataloging
- Wikipedia
- Freebase.com (the website)
Machine readable
Define semantic web with examples – rdf, owl, etc then with actual use
Relationships between entities
Why this is useful
Semantic = Relationships

A very brief lesson

Subject → Predicate → Object

Publisher *publishes* Journal
Vendor *owns* Database
Article *has* author(s)

Triples

Subject – Predicate -- Object Slide (Relationships between objects)

“triples”

Publisher –owns – Journal
Database – provides – journal coverage

Company >> provides >> Interface
Interface >> includes >> Database
Database >> includes >> Journal XYZ/Coverage Date
= Company >> provides interface >> Journal XYZ/Coverage Date
Coverage Date >> Which Journals

Metadata can be incrementally improved … not based on individual records, set metadata scheme – but flexible, extensible, etc.
The Old (...current) Way

Item   Attributes

Journal  Name
         Publisher
         Subjects
         Frequency
         Etc..

Catalog Record

Title
Attributes...
.. Author
.. Publisher
.. Subjects

Titles on a subject, by an author

Subjects written by a particular author
Authors who write on a particular subject
Publishers publish on a particular...
Semantic Way

Author writes Book

Book has Publisher

Book has Subjects
What are you describing?  (Service oriented model of description… object themselves… reusable for multiple services)

Institution-specific data

How strict do you want the metadata?  (Even semantic stuff has standards… RDF, DC, etc.?)

Incentives?? (Why would an institution volunteer to contribute time and resources to maintaining this KB?)

The consensus (from the people we talked to)…
The “Killer App”
Other “Killer Apps”

Internet  ➔  E-mail

What is a “killer app”? 
Library

OKRA

? → ? → ?
Is there hope?

- Encourage Publishers to be more Open with Data
- Press Vendors to Uncouple Data and Services
- Support Open Source Library Software

Encourage publishers and library vendors to be more “open” w/ current data (and how its licensed or provided to libraries).

Support open source library software software and solutions… like CUFTS? (question: will os ILS’s like Koha and Evergreen have a ErM component … if so, they will need a KB.)

Don’t be satisfied w/ current opensource and commercial solutions … search for the killer app!

What are the current systems NOT doing?? If there is something, this might be a feature that LIBRARY OKRA (and its related apps) can exploit?
Continue this Discussion on:

LibraryOKRA.com