DCMI2013, Lisbon - 5th September 2013

Special Session: Why Schema.org

Extending Schema.org A view from the SchemaBibEx Group

Richard Wallis Technology Evangelist OCLC

@rjw richard.wallis@oclc.org



OCLC The world's libraries. Connected.

• Anyone can propose extension/change

- Anyone can propose extension/change
- Just propose to the public-vocabs list
 - http://lists.w3.org/Archives/Public/public-vocabs/
 - Web Schemas: http://www.w3.org/wiki/WebSchemas

- Anyone can propose extension/change
- Just propose to the public-vocabs list
 - http://lists.w3.org/Archives/Public/public-vocabs/
 - Web Schemas: http://www.w3.org/wiki/WebSchemas
- Domain interested groups carry weight

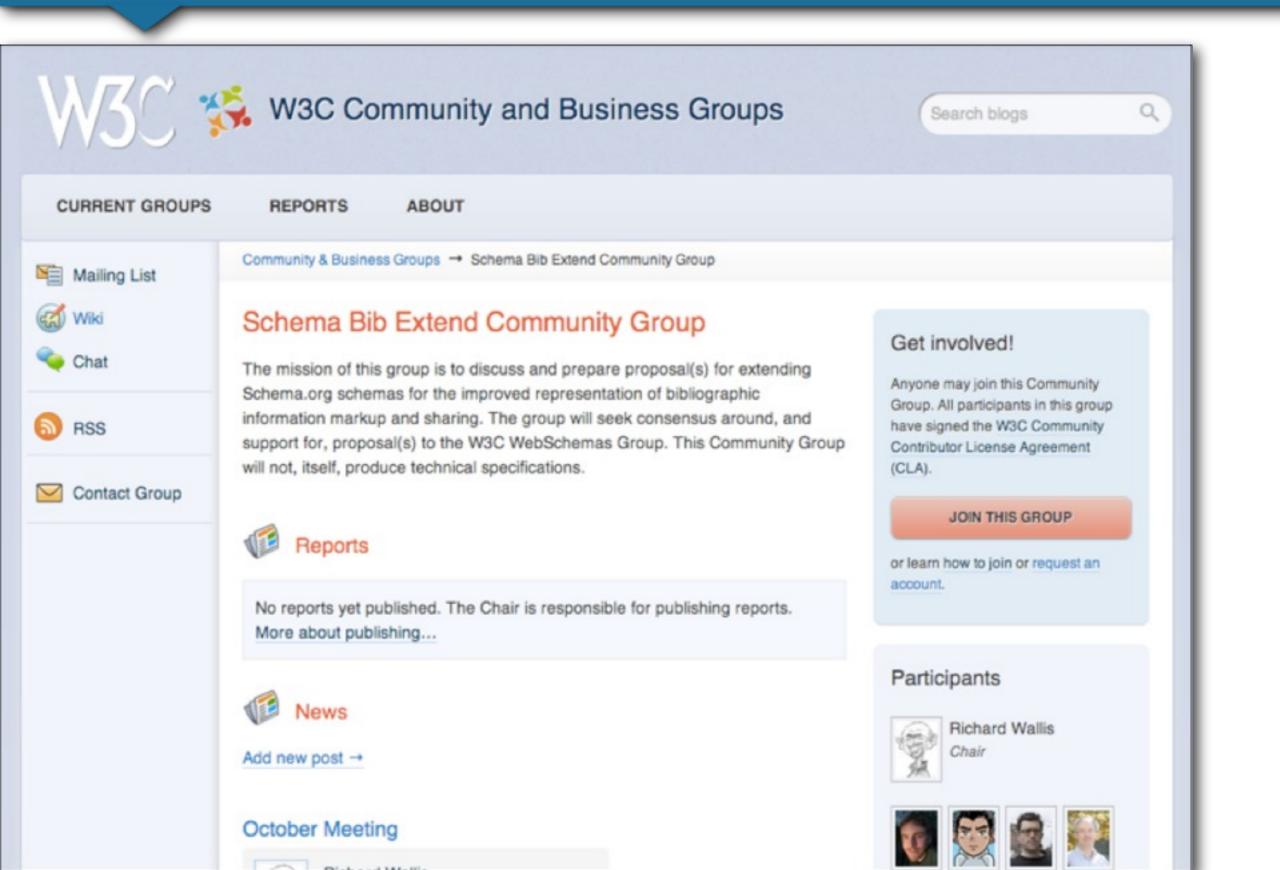
Who/What has extend Schema.org?

OCLC The world's libraries. Connected.

Who/What has extend Schema.org?

- IPTC News
- Genealogy historical-data.org
- E-commerce GoodRelations
- Learning/Education LRMI
- Medical/Health
- TV/Radio

The Schema Bib Extend Group



The Schema Bib Extend Group

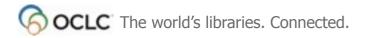
| W3C CURRENT GROUPS | W3C Community and Business Groups | Search blogs | | | | |
|---|---|--|--|--|--|--|
| Mailing List | Community & Business Groups → Schema Bib Extend Community Group Schema Bib Extend Community Group | Get involved! | | | | |
| The mission of this group is to discuss and prepare proposal(s) for extending Schema.org schemas for the improved representation of bibliographic information markup and sharing. The group will seek consensus around, and support for, proposal(s) to the W3C WebSchemas Group. The Community Group will not, itself, produce technical specifications. | | | | | | |
| | No reports yet published. The Chair is responsible for publishing reports. More about publishing | account. Participants Participants Image: Chair | | | | |
| | October Meeting | | | | | |



• Schema.org is already established

OCLC The world's libraries. Connected.

- Schema.org is already established
- It is for all domains



- Schema.org is already established
- It is for all domains
- You may not agree with class and property names

- Schema.org is already established
- It is for all domains
- You may not agree with class and property names
- You need to build on established classes

- Schema.org is already established
- It is for all domains
- You may not agree with class and property names
- You need to build on established classes
- Users may not be familiar with your domain





Don't:

OCLC The world's libraries. Connected.

Don't:

Hunt for your favorite classes and properties missing from Schema.

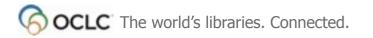


Don't:

Hunt for your favorite classes and properties missing from Schema.

Do:

Try to describe your resources using Schema to identify what is difficult/impossible



Don't:

Hunt for your favorite classes and properties missing from Schema.

Do:

Try to describe your resources using Schema to identify what is difficult/impossible

Reality check:

Will consumers of Schema care







- 300+ Million resources
- Schema.org
- Embedded RDFa
- Links to: Dewey, LCSH LCNAF, DOI, VIAF, FAST, ...
- License: ODC-BY
- Experimental June 2012
- Continuing development:
 - Vocabulary, Content-negotiation, Links, Works, ...

| 000 | World War I (Book, 2003) [WorldCat.org] | | | | |
|---|--|---|---------------------|--|---|
| 🅼 World War I (Book, 2003) [World | + | | | | |
| www.worldcat.org/title/world- | war-i/oclc/52541937&refe | rer=brief_results | ☆ ⊽ C ⁴ | Google | Q) 🍙 🤗 |
| Most Visited + 5 WorldCatorg: Th | 脊 RDFa 1.1 Distille | G Linked data at O | S Dev: Linked Dat | 5 WorldCat on Fac | Bookmarks |
| Home - Search - | | | 5 Create lists, | bibliographies and reviews: | Sign in or create a free account |
| (S WorldCat | | | | C | Search |
| S | Advanced Search | Find a Library | | | |
| << Return to Search Results | | | Cite/Export | 🚔 Print 🖂 E-mail | Share & Permalink |
| Add to list 🧼 Add tags 🔬 V | Vrite a review Rate this item: | ûnûnûnû | | | |
| WORLD WORLD WARL UNDER Edition/F Summar Rating: | Format: Book : English : ny: A visual guide to th | o., 2003. 1st American ed <u>View a</u> e causes, battles, and for rated) <u>10 with reviews - B</u> | ces of World War I. | Subj W W C U C U S | re like this jects /orld War, 1914-1918 Pictorial orks. ser tags ser lists imilar Items rrow / obtain a copy |
| You are connected to the OCL <u>Hide local services for this item</u> <u>GET IT from ILLiad</u> Check <u>Check for Electronic Rese</u> <u>Check 360-Link for full ter</u> Find a copy in the library Buy it | the sector secto | ES Check for Electro Check for Electronic R og of the OCLC Librar | esources Check for | C Illiad test server Electronic Resource CLC FirstSearch | es <u>RTM Request</u> |
| × Find: Q de | Next Previous O Hi | ghlight all 🗌 Match ca | se | | |
| × Find: Q de | (Next Previous) (O Hi | ghlight all 🗌 Match ca | NG | | |

| www.worldcat.org/title/v | vorld-war-i/oclc/5 | 2541937&refer | er=brief_results | ∰ ⊽ C | Google | ۹ 🝙 🖗 |
|--|--|---|--|-----------------------------|-------------------|----------|
| st Visited 🔹 🏷 WorldCat.o | rg: Th 🎁 RDF: | a 1.1 Distille | S Linked data at O | O Dev: Linked Dat | 5 WorldCat on Fac | Bookmark |
| Linked Data | | | | | | |
| More info about Linked Data | | | | | | |
| | | | | | | |
| <http: ocl<="" td="" www.worldcat.org=""><td>"682"</td><td></td><td></td><td></td><td></td><td></td></http:> | "682" | | | | | |
| library:holdingsCount | | | | | | |
| library:oclcnum | "52541937" | | | | | |
| library:placeOfPublication | rdf:type | schema:Place | | | | |
| in a fight of the second secon | schema:name | "New York :" | | | | |
| rdf:type | schema:Book | | | | | |
| | rdf:type | schema:Organi | zation | | | |
| schema:about | schema:name | "World War (19 | 14-1918)" | | | |
| | <http: dewey.info<="" td=""><td>/class/940/e22/</td><td>></td><td></td><td></td><td></td></http:> | /class/940/e22/ | > | | | |
| schema:about | rdf:type | skos:Concept | | | | |
| | skos:inScheme | <http: dewey.i<="" td=""><td>info/scheme/e22/></td><td></td><td></td><td></td></http:> | info/scheme/e22/> | | | |
| | <http: dewey.info<="" td=""><td>/class/940/e21/</td><td>></td><td></td><td></td><td></td></http:> | /class/940/e21/ | > | | | |
| schema:about | rdf:type | skos:Concept | | | | |
| | skos:inScheme | < <u>http://dewey.i</u> | info/scheme/e21/> | | | |
| schema:about | madsrdf:isldenti | ifiedByAuthority | <http: auth<="" id.loc.gov="" td=""><td>norities/subjects/sh8514823</td><td>36></td><td></td></http:> | norities/subjects/sh8514823 | 36> | |
| | rdf:type | | skos:Concept | | | |
| | schema:name | | "World War, 1914-19 | 18" | | |

Friday, August 30. 2013

RDFa and schema.org all the library things

TLDR: The Evergreen and Koha integrated library systems now express their record details in the schema.org vocabulary out of the box using RDFa. Individual holdings are expressed as Offer instances per the W3C Schema Bib Extension community group proposal to parallel commercial sales offers. And I have published a branch to give the same capabilities to the VuFind discovery layer, as well.

In the spring of 2012, I took my first steps in the structured data world by teaching Evergreen 2.2 how to express some record details in the <u>schema.org</u>. It was a small step towards taking the machine-readable data that we had made useful to humans on the record detail catalogue page and marking it up so that it was once again machine readable. At that time, Evergreen only knew how to map MARC data to two schema.org types (Book and MusicRecording--which should have been MusicAlbum, but I eventually fixed that) and a handful of attributes: name, ISBN, publisher, publication date, author, contributor, and keywords. Pretty barebones, but a start nonetheless.

I used the HTML5 microdata approach because I was new to structured data and microdata was what was demonstrated in all of the schema.org examples, so it seemed like the obvious choice. Over the last year, however, I realized that <u>RDFa</u> is a W3C standard for accomplishing the same goals as microdata, bolstered by an open community standards-making process, and featuring the ability to mix in properties and types from multiple vocabularies. I touched on this in my Evergreen 2013 conference presentation: <u>Structured data: making metadata matter for machines</u>. While <u>RDFa Lite</u> is extremely easy to get started with, I have been diving deeper into RDFa proper to make use of some of the more advanced properties, such as @about to work around unwanted chaining introduced by @href attributes.

Over the last few weeks, I was able to concentrate on improving the schema.org mapping for Evergreen-introducing holdings as instances of the http://schema.org/Offer class, providing much more granular author and contributor data--and cut over to RDFa. While the tools at <u>RDFa Tools</u> were quite useful for debugging my efforts, I also have to thank the denizens of the <u>#rdfa IRC channel (Manu Sporny</u> in particular) for patiently helping me understand some of my rookie mistakes. Ben Shum also kept me honest by patiently testing multiple iterations of my branches with the Google Rich Snippets tool and reporting any issues that he encountered; this led to my realization that using @resource and @about were necessary in some contexts.

Once I had worked out a decent mapping in Evergreen (a library system I have been contributing to for over six years now), I decided to tackle the VuFind discovery layer. VuFind uses a straightforward template system, and I was able to put together a branch that integrated schema.org as RDFa (details at <u>VuFind bug 425</u>), building on

Once I had worked out a decent mapping in Evergreen (a library system I have been contributing to for over six years now), I decided to tackle the VuFind discovery layer. VuFind uses a straightforward template system, and I was able to put together a branch that integrated schema.org as RDFa (details at <u>VuFind bug 425</u>), building on

realization that using @resource and @about were necessary in some contexts.

understand some of my rookie mistakes. Ben Shum also kept me honest by patiently testing multiple iterations of my branches with the Google Rich Snippets tool and reporting any issues that he encountered; this led to my

Quicksearch

About Me

>

I'm Dan Scott: barista, library geek, and free-as-infreedom software developer. I hack on projects such as the <u>Evergreen</u> open-source ILS project and PEAR's <u>File_MARC</u> package.

By day I'm the Systems Librarian for <u>Laurentian</u> <u>University</u>. You can reach me by email at dan@coffeecode.net.

License



This work is licensed under a <u>Creative Commons</u> <u>Attribution-Share Alike 2.5</u> <u>Canada License</u>.

Categories



| RDFa | and schem | a.org all | the librar | y things |
|-------------|------------------|-----------|------------|----------|
| | Code : Dan Scott | | | |

Friday, August 30. 2013

| Quicksearch | |
|-------------|--|
|-------------|--|

>

License

 (\mathbf{i})

Canada License.

Categories

X M L

XML

XML

XML

This work is licensed under

Attribution-Share Alike 2.5

Coffee (2)

Databases

DB2 (6)

MySOL (1)

MySQL(1)

PostareSOL (7)

PostgreSQL (7)

Apache Derby (6)

a Creative Commons

Android (3)

RDFa and schema.org all the library things

TLDR: The Evergreen and Koha integrated library systems now ex vocabulary out of the box using RDFa. Individual holdings are expl Bib Extension community group proposal to parallel commercial sa give the same capabilities to the VuFind discovery layer, as well.

I used the HTML5 microdata approach because I was new to structured data and microdata was what was demonstrated in all of the schema.org examples, so it seemed like the obvious choice. Over the last year, however, I realized that <u>RDFa</u> is a W3C standard for accomplishing the same goals as microdata, bolstered by an open community standards-making process, and featuring the ability to mix in properties and types from multiple vocabularies. I touched on this in my Evergreen 2013 conference presentation: <u>Structured data: making metadata matter for machines</u>. While <u>RDFa Lite</u> is extremely easy to get started with, I have been diving deeper into RDFa proper to make use of some of the more advanced properties, such as @about to work around unwanted chaining introduced by @href attributes.

Over the last few weeks, I was able to concentrate on improving the schema.org mapping for Evergreen-introducing holdings as instances of the http://schema.org/Offer class, providing much more granular author and contributor data--and cut over to RDFa. While the tools at <u>RDFa Tools</u> were quite useful for debugging my efforts, I also have to thank the denizens of the <u>#rdfa IRC channel (Manu Sporny</u> in particular) for patiently helping me understand some of my rookie mistakes. Ben Shum also kept me honest by patiently testing multiple iterations of my branches with the Google Rich Snippets tool and reporting any issues that he encountered; this led to my realization that using @resource and @about were necessary in some contexts.

Once I had worked out a decent mapping in Evergreen (a library system I have been contributing to for over six years now), I decided to tackle the VuFind discovery layer. VuFind uses a straightforward template system, and I was able to put together a branch that integrated schema.org as RDFa (details at <u>VuFind bug 425</u>), building on

Once I had worked out a decent mapping in Evergreen (a library system I have been contributing to for over six years now), I decided to tackle the VuFind discovery layer. VuFind uses a straightforward template system, and I was able to put together a branch that integrated schema.org as RDFa (details at <u>VuFind bug 425</u>), building on

http://coffeecode.net/archives/271-RDFa-and-schema.org-all-the-library-things.html

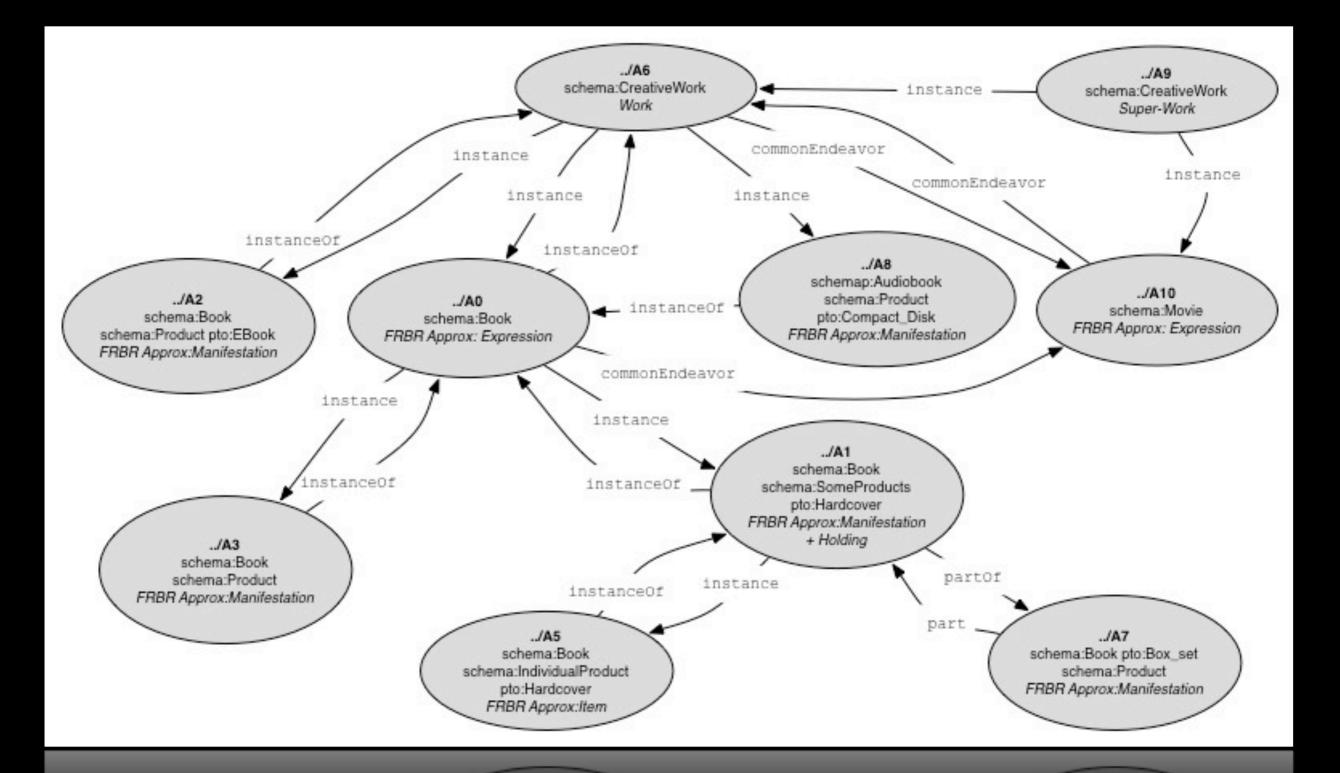
W3C S W3C Community and Business Groups

Search blogs

9

| CURRENT GROUPS | REPORTS ABOUT | | |
|-----------------------------|---|---|--|
| Mailing List | Community & Business Groups - Schema Bib Extend Community Group | | |
| Wiki Chat RSS Contact Group | Schema Bib Extend Community Group The mission of this group is to discuss and prepare proposal(s) for extending Schema.org schemas for the improved representation of bibliographic information markup and sharing. The group will seek consensus around, and support for, proposal(s) to the W3C WebSchemas Group. This Community Group will not, itself, produce technical specifications. | Get involved! Anyone may join this Community Group. All participants in this group have signed the W3C Community Contributor License Agreement (CLA). JOIN THIS GROUP | |
| | No reports yet published. The Chair is responsible for publishing reports. More about publishing | or learn how to join or request an account. | |
| | Wews Add new post → October Meeting | Participants Richard Wallis Chair | |
| | | | |

October Meeting



schema:Book pto:Box_set schema:Product FRBR Approx:Manifestation

Model to help discussion

FRBR Approx.Item







Citation - Accepted

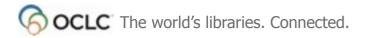




- Citation Accepted
- Collection/Parts Proposed



- Citation Accepted
- Collection/Parts Proposed
- AudioBook New type



- Citation Accepted
- Collection/Parts Proposed
- AudioBook New type
- Holdings Based on Offer

- Citation Accepted
- Collection/Parts Proposed
- AudioBook New type
- Holdings Based on Offer
- Modify Offer (descriptions) for non-commercial view

- Citation Accepted
- Collection/Parts Proposed
- AudioBook New type
- Holdings Based on Offer
- Modify Offer (descriptions) for non-commercial view
- Work Relationships

The Schema Bib Extend Group

