

National Chengchi University, Taipei, Taiwan

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BIBFRAME at
The George Washington University
What You Can Do Now With Linked Data



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GW Libraries

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@datapod

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Question From You

- 什麼是BIBFRAME?
- 用 BIBFRAME 與現在的 MARC 有何不同?
希望達到麼什麼成效?
- Linked Data 與 BIBFRAME ?
- 貴校如何開始? 如何進行? 新舊如何連結?

Today's Outline

- Environmental Scans
- Semantic Web & RDF
- Bibliographic Framework Initiative (BIBFRAME)
- GW Experimentation
- BF & Library Linked Data Projects
- NCCU's Data

Five Laws of Library Science

- Books are for use.
- Every reader his/her book.
- Every book its reader.
- Save the time of the reader.
- The library is a growing organism.

Five Laws of Library Science

- Resources are for use.
- Every user his/her resource.
- Every resource its user.
- Save the time of the user.
- The library is a growing organism.

Environmental Scans

Overly Connected Information Sphere



Image from N Fallgren

Library Community

- 2006 Bibliographic Control Working Group (BCWG) convened
- 2008 *On The Record* (BCWG)
4-year Recommendation
- 2009 RDA Testing
- 2011 Transforming Bib Framework
- 2013 RDA Implementation



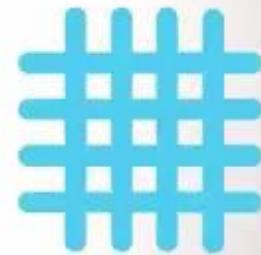
Metadata Standards



<http://www.dlib.indiana.edu/~jenrlile/metadata-map/>



Semantic Web



vimeo.com/36752317

Web with Data that are Linked

Linked data describes **a method of publishing structured data** so that it can be interlinked and become more useful.

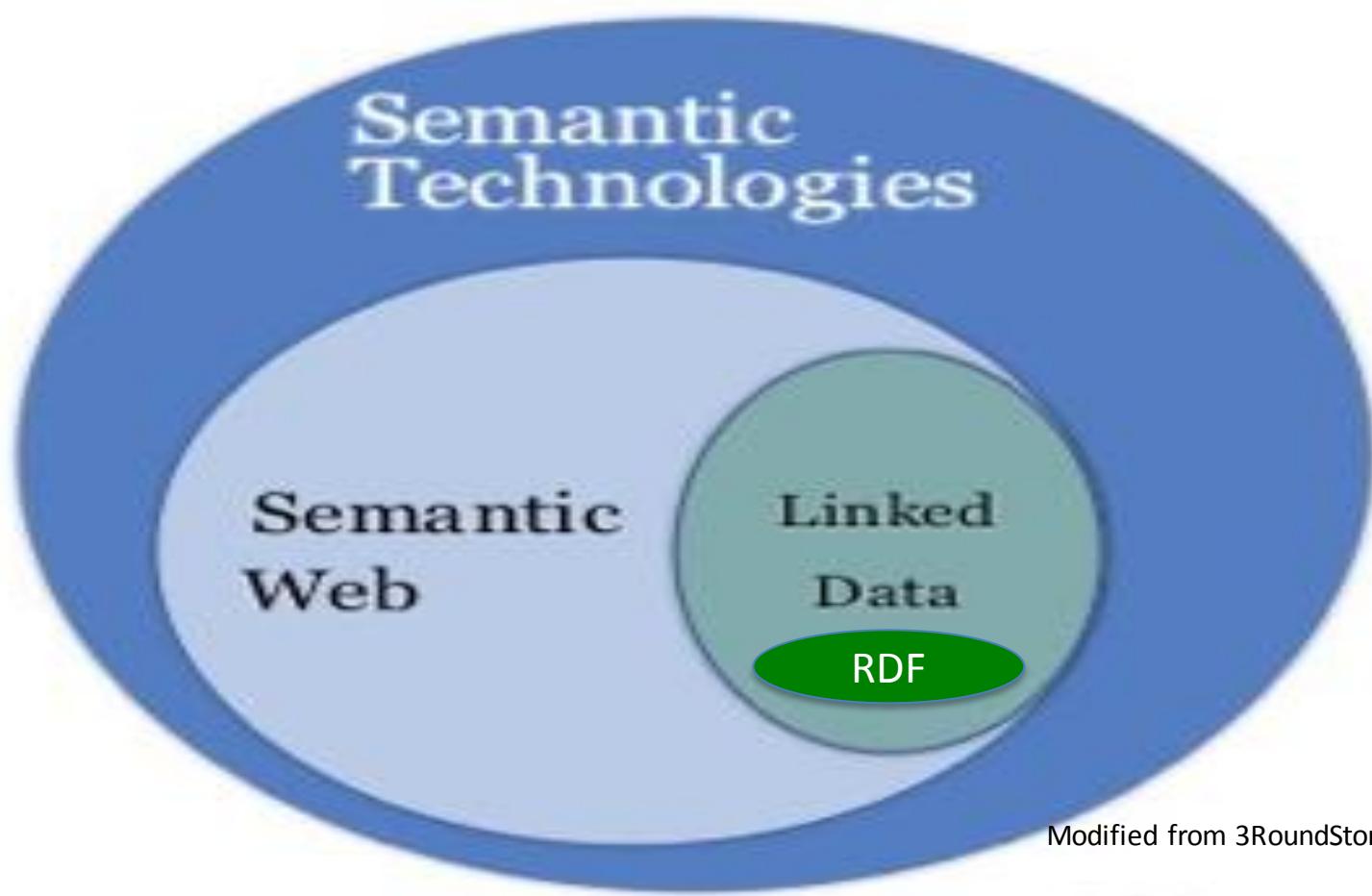
The Semantic Web isn't just about putting data on the web. It is about **making links**, so that a person or machine can **explore the web of data**. With linked data, when you have some of it, **you can find other, related, data**.

- A roadmap to the Semantic Web by Tim Berners-Lee



w3c.org/DesignIssues/LinkedData.htm

Semantic Technologies



Modified from 3RoundStones

Resource Description Framework

RDF

- Standard Model for Data Interchange
- Facilitates Data Merging
- Supports Schemas Evolution Over Time
- Extends Linking via URI (IRI) naming
Relationship

RDF Concept & Terms

- Resource (THING)
- RDF Triple
 - Subject == Predicate == Object
 - (Resource (Class) == Property == Value)
- RDFs
- Ontology
- Entity, Entitification
- Element
- Identifier (URI/IRI)
- Namespace

Key Concepts

- RDF Triple (Statement)
- Identifiers
- Things
- Representation in Context

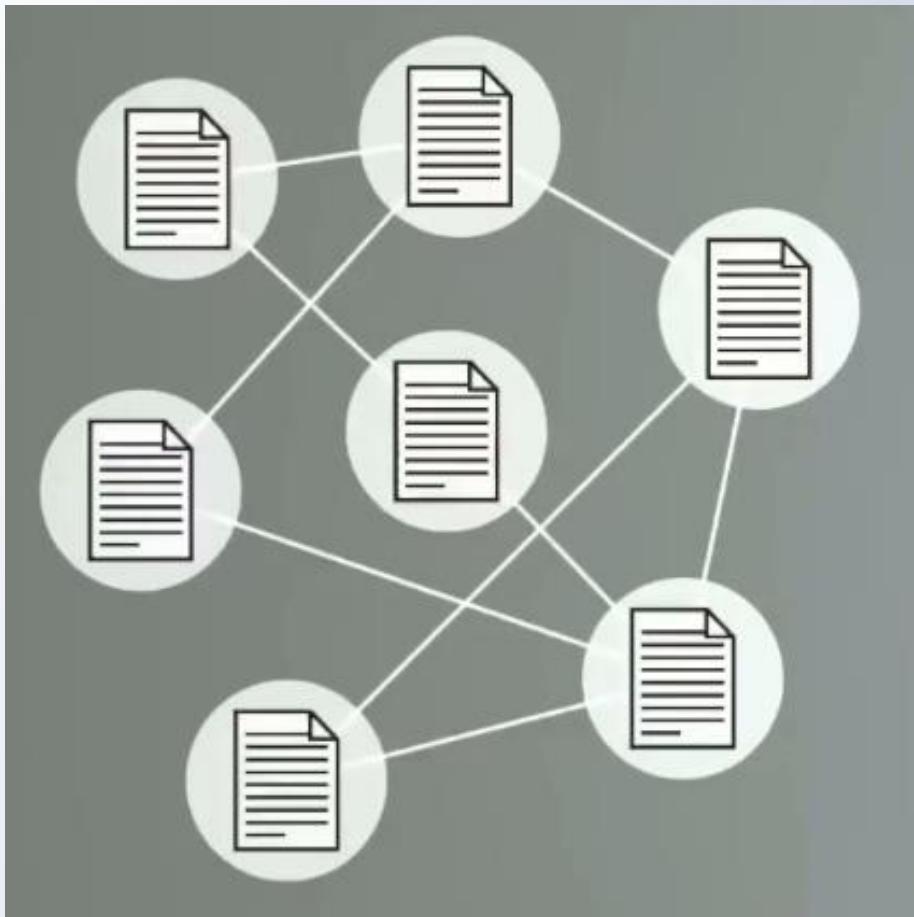
Learning Basics: Class & Property

- Class: a capital letter, always singular → bf:Work
- Property: a lower case letter
 - bf:creator ;
 - bf:creationDate
- Object property: has verb
 - bf:hasExpression ;
 - bf:hasAnnotation
- Data type: has noun → bf:isbn
- Camel case for more than one words
 - bf:otherPhysicalFormat
- Subclass and Subproperty

RDFs Example

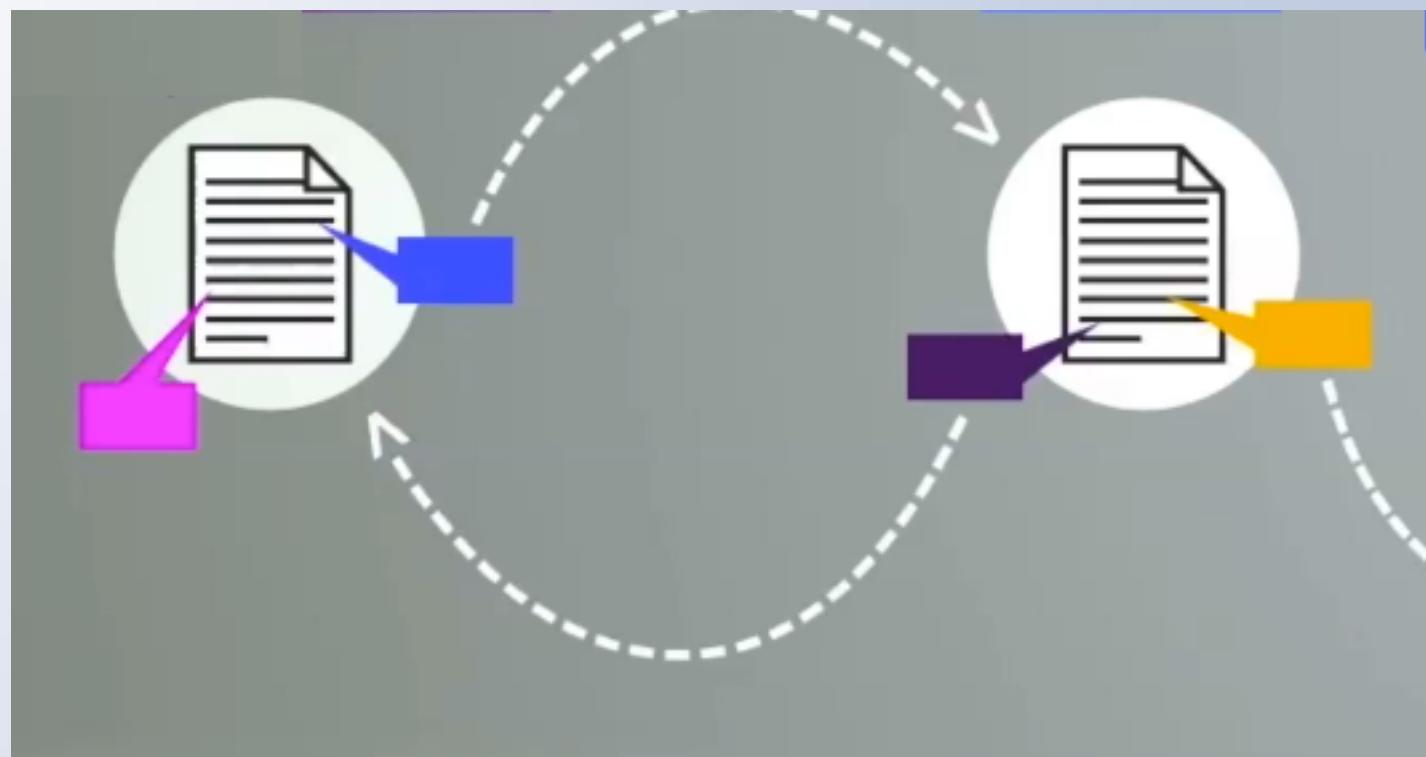
- Aspirin isOfType Painkiller
 - Painkiller subClassOf Drug
 - Aspirin isOfType Drug
- aspirin alleviates headache
 - alleviates range symptom
 - headache isOfType symptom

Record → Data



Images: Eneko Egaña,
vimeo.org/42962819

Record → Data



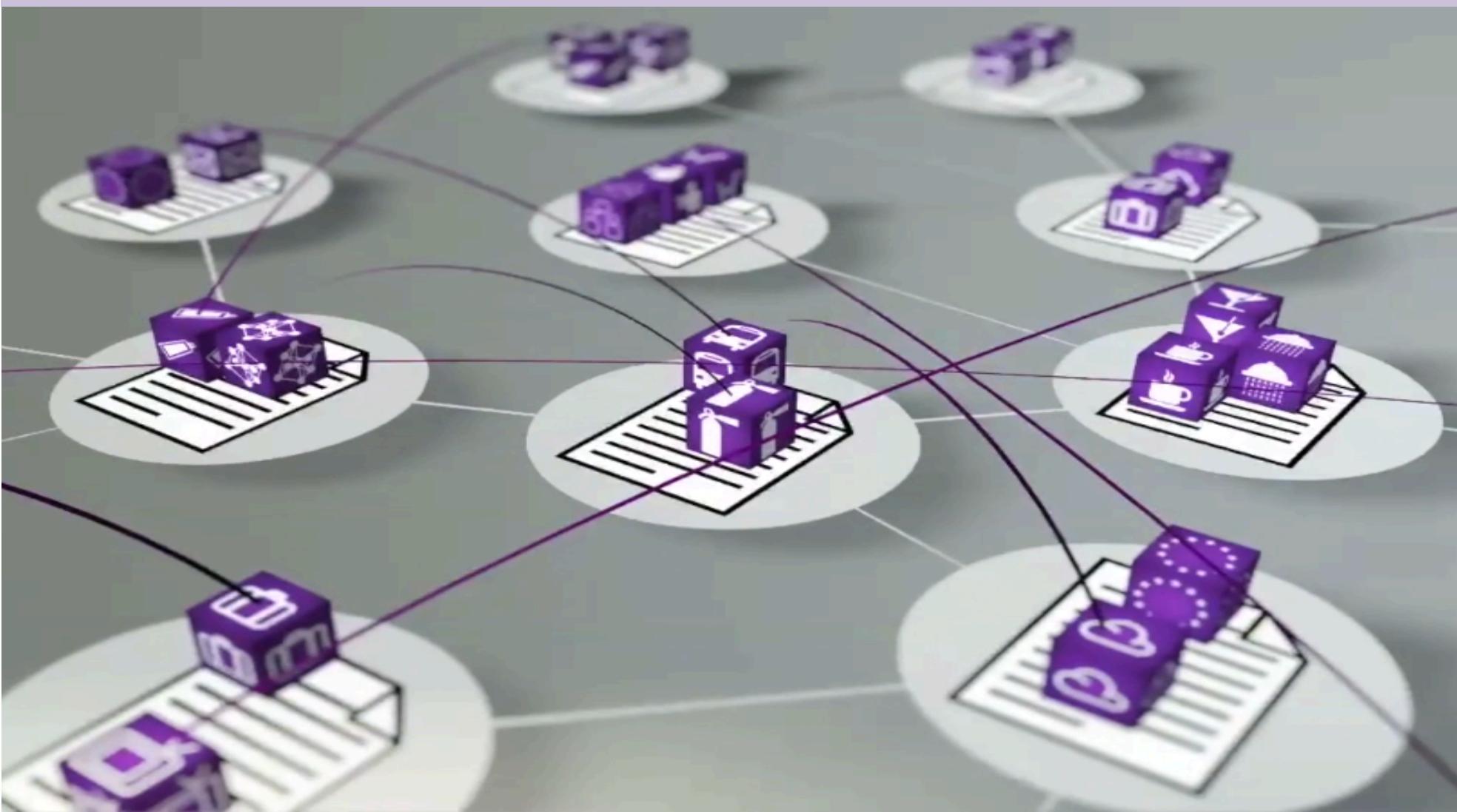
Images: Eneko Egaña, vimeo.org/42962819



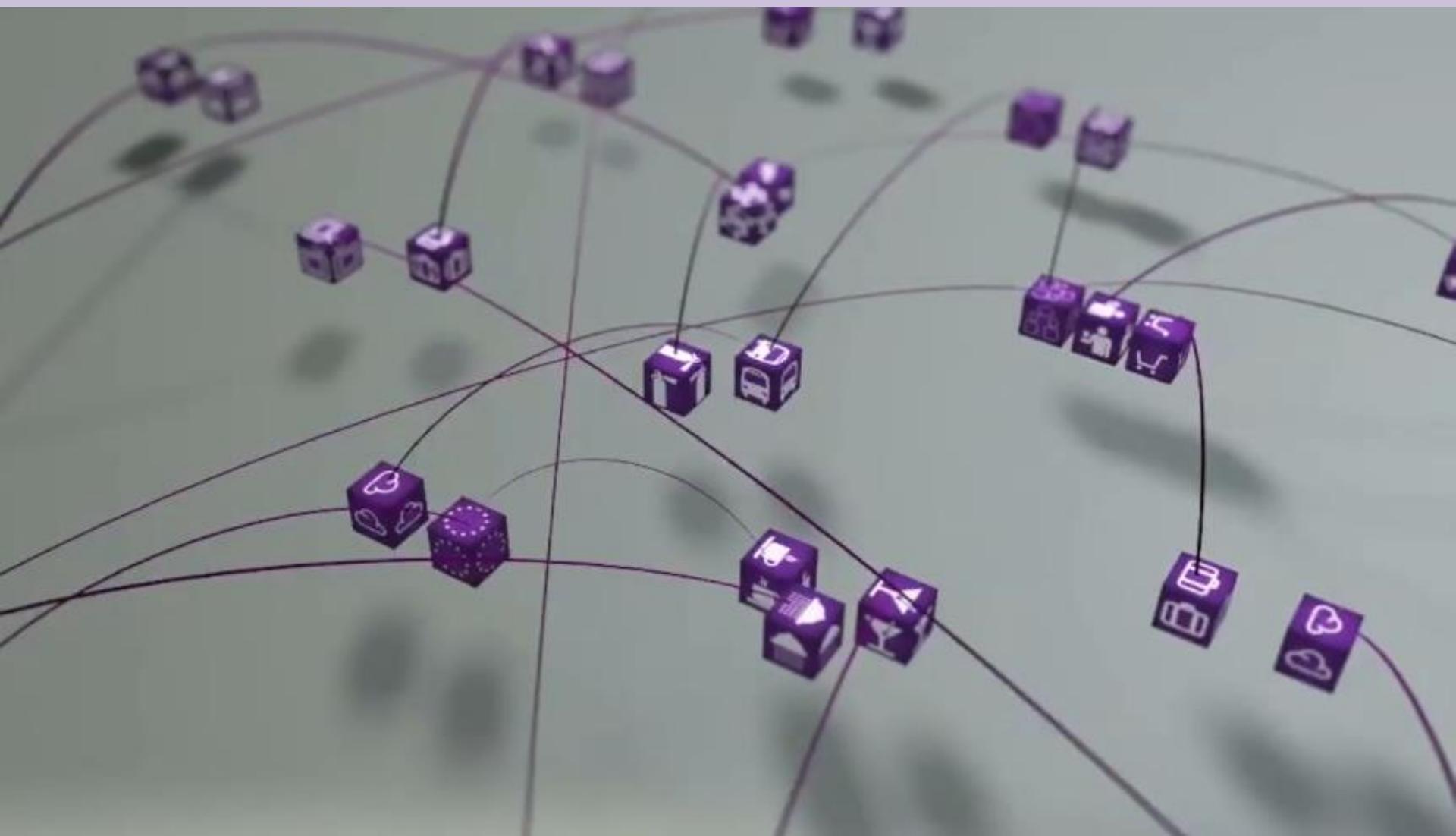
Record → Data



Data in Relationship



Data in Relationship



Example

Bib record (description)

Author: Austen, Jane, 1775-1817.

Title: Pride and prejudice

Content type: Spoken word

Carrier type: Audio disc

Subject Courtship--Fiction

Provenance: Donated by John Smith

Bib record (description)

Author:

Title: Pride and prejudice

Content type: Spoken word

Carrier type: Audio disc

Subject

Provenance: Donated by John Smith

Name authority record

Name: Austen, Jane, 1775-1817.

Identifier: ...

Subject authority record

Label: Courtship--Fiction

Identifier: ...

FRBR/RDA record

Work information

Author:

Subject

Expression information

Content type: Spoken word

Manifestation information

Title: Pride and prejudice

Carrier type: Audio disc

Item information

Provenance: Donated by John Smith

Name authority record

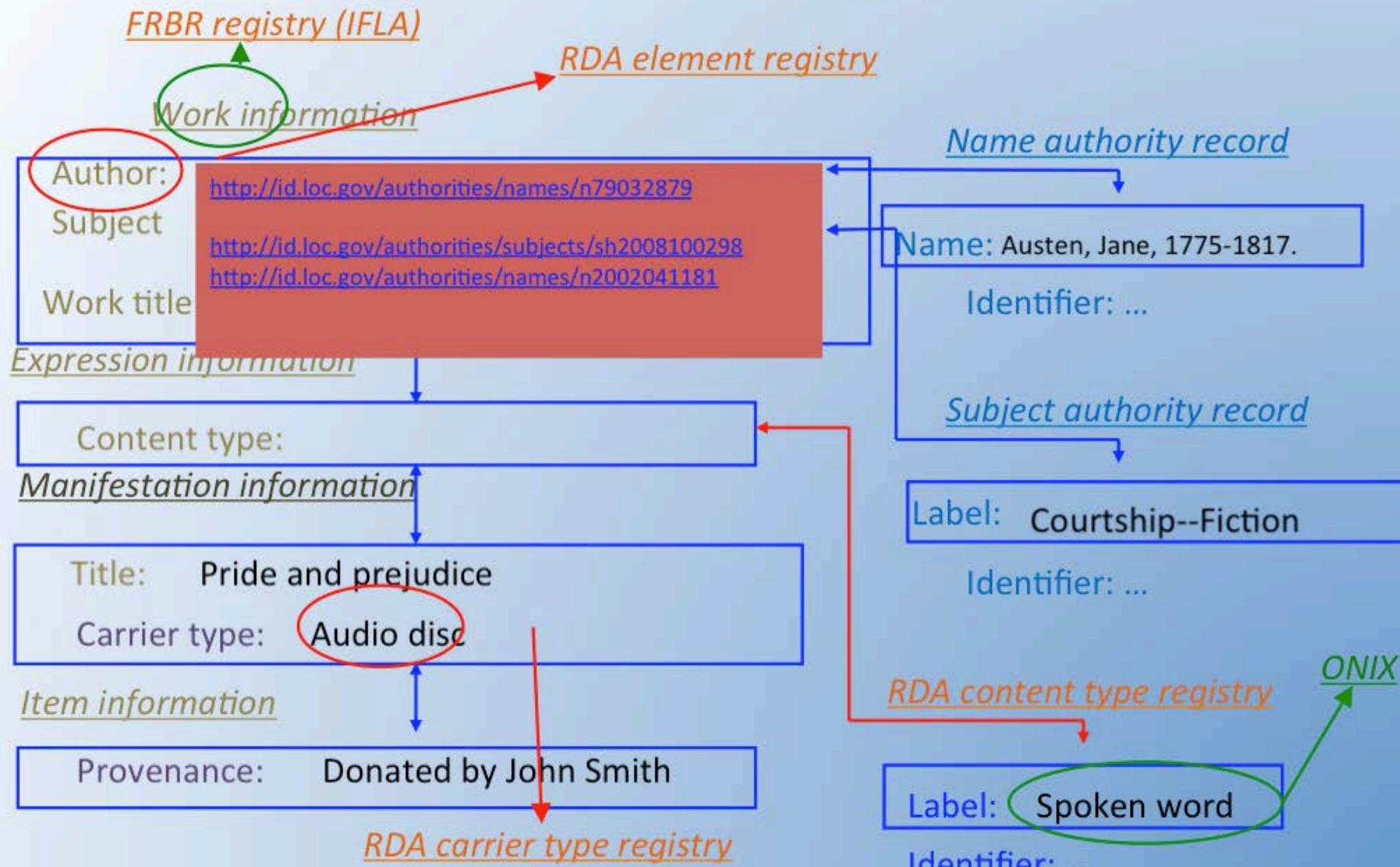
Name: Austen, Jane, 1775-1817.

Identifier: ...

Subject authority record

Label: Courtship--Fiction

Identifier: ...



Human Says



Pride and Prejudice

was created by



Jane Austen

<http://tobecomeaheroine.blogspot.com/2011/05/pride-and-prejudice-book-covers.html>

<http://wordhits.files.wordpress.com/2011/12/jane-austen-portrait.jpg>

Machine Understands



Pride and Prejudice

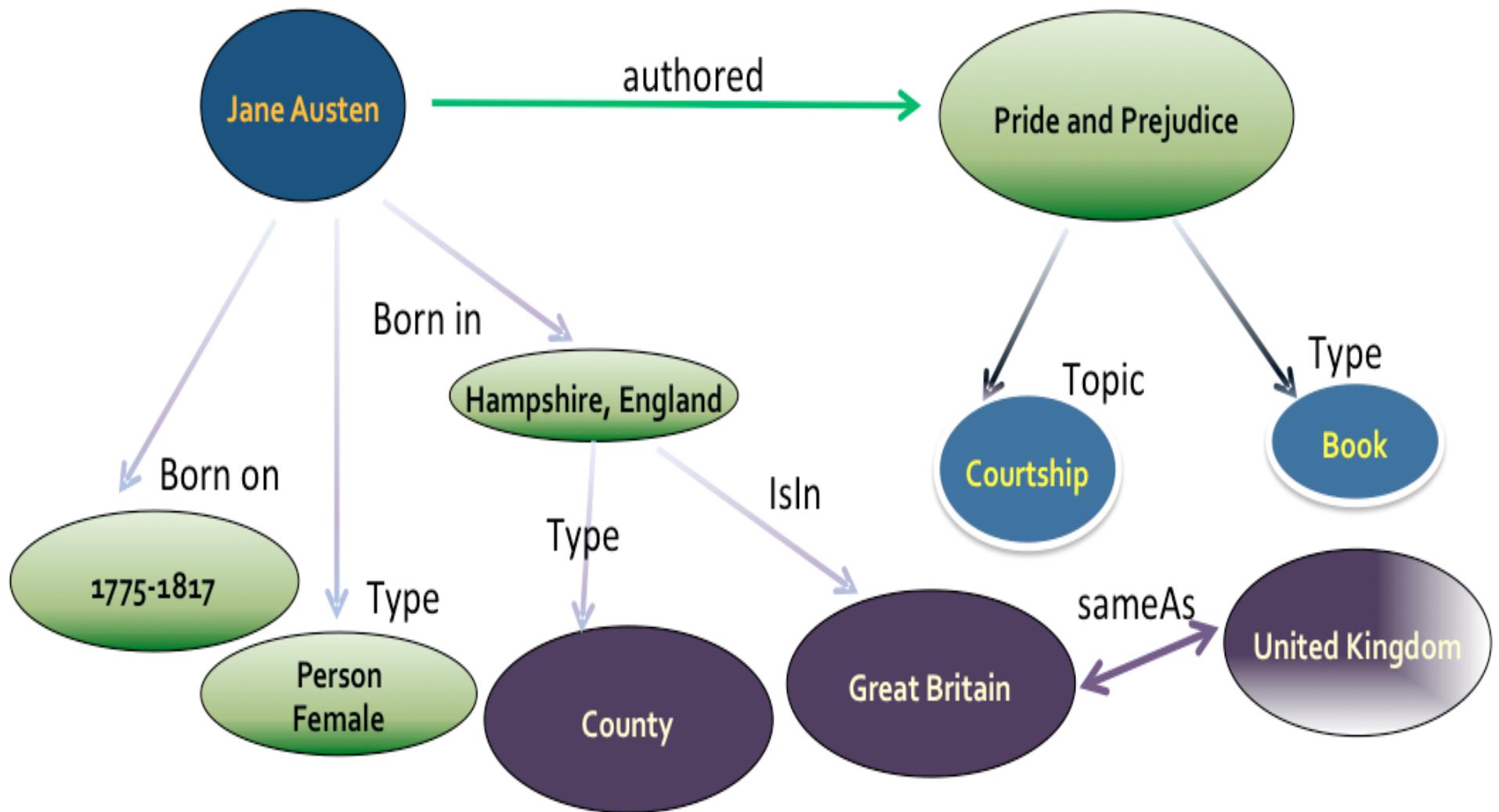


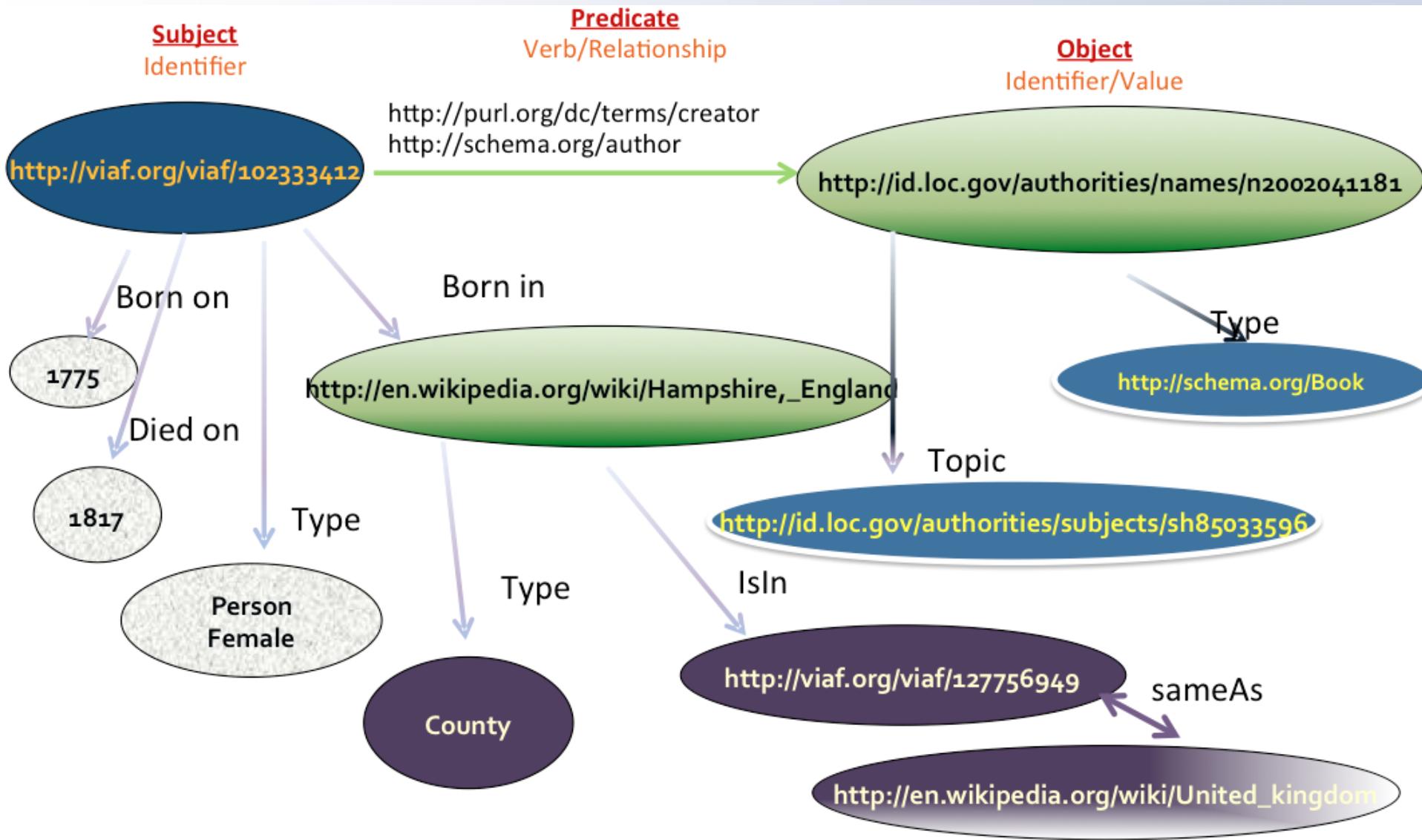
dcterms:creator

lccn:n2002041181



viaf:102333412





Bibliographic Framework Initiative

#bibframe



#bibframe

“The Initiative aims to re-envision and, in the long run, implement a **new bibliographic environment** for **libraries** that makes “**the network**” central and makes interconnectedness commonplace.”

<http://www.loc.gov/bibframe/pdf/marld-report-11-21-2012.pdf#page=3>



#bibframe Timeline

- 2011: Announcement & General plan
- 2012: Zepheira contracted & Model paper
- 2013: Vocab and bibframe.org, DPs & Primary Use Cases
- 2014: Vocab frozen for implementation experiments
- 2015: Web based search/retrieval, Profile Editor, Data Entry Pilot

- New Carrier Standard
- New Data Model & Profile
- New Vocab for Metadata
- New Bibliographic Description
- New Bibliographic Environment

<http://bibframe.org/>

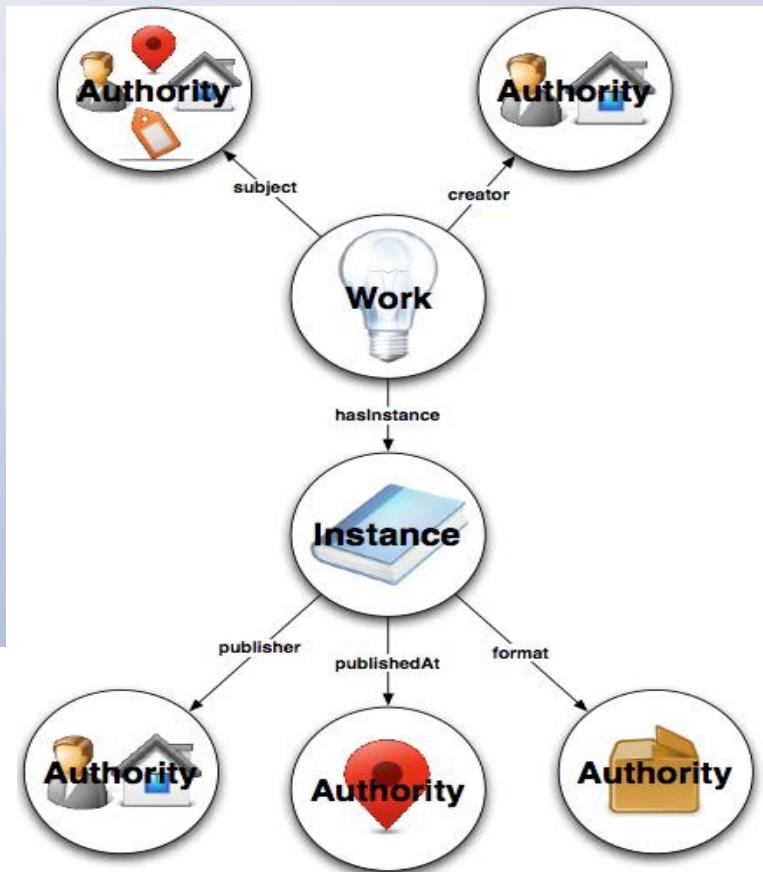


- Web Platform
- Rules Agnostic
- Applicable beyond Library

An internal format (Framework)
Translates concepts (Vocabularies)
Represents vocab meaningfully
(Profiles)

#bibframe

Resource Work Instance Authority Annotation

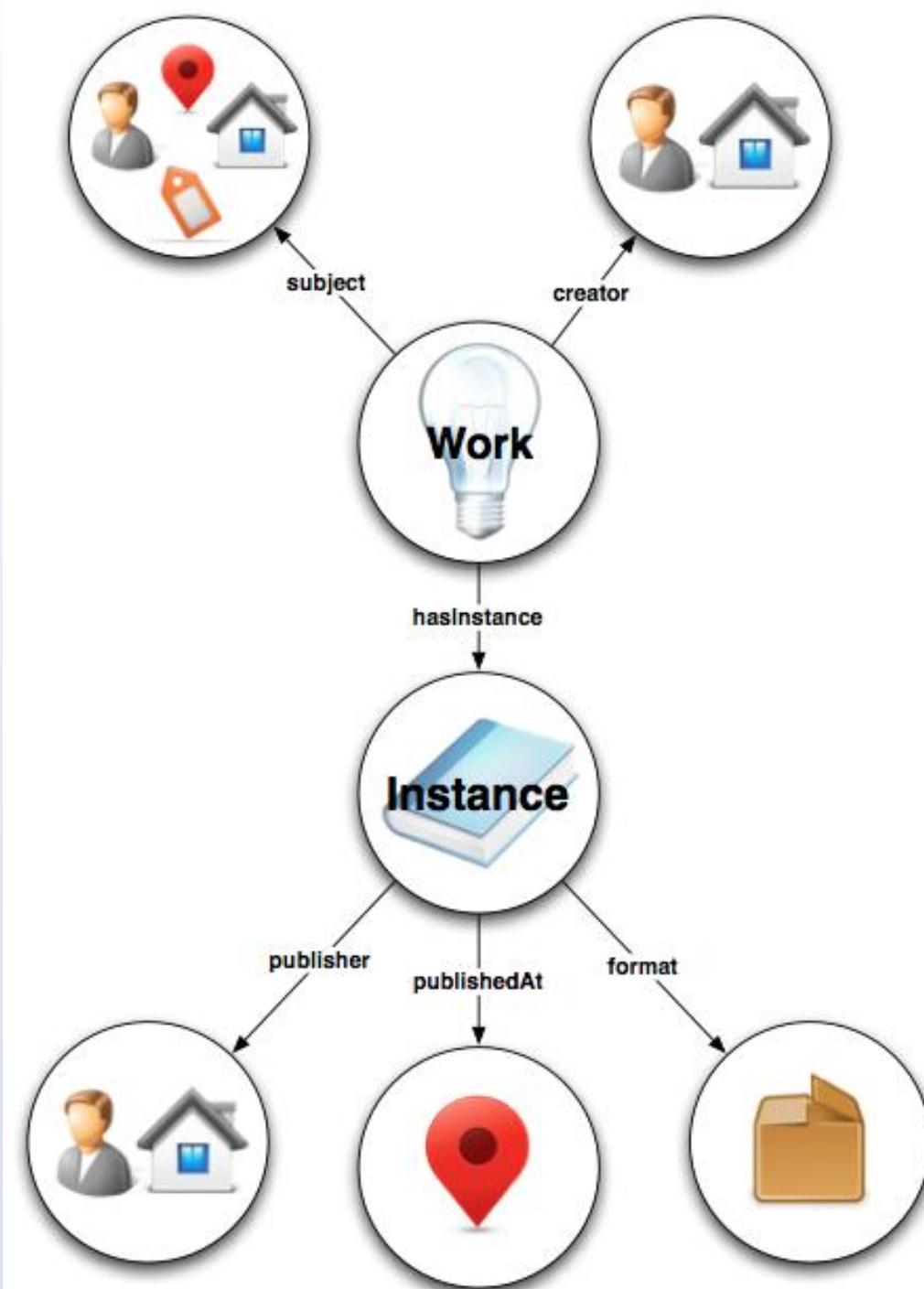


The BIBFRAME vocabulary uses a Linked Data model and thus leverages the RDF modeling practice of uniquely identifying as Web resources all entities, attributes, and relationships (i.e., properties) between entities.

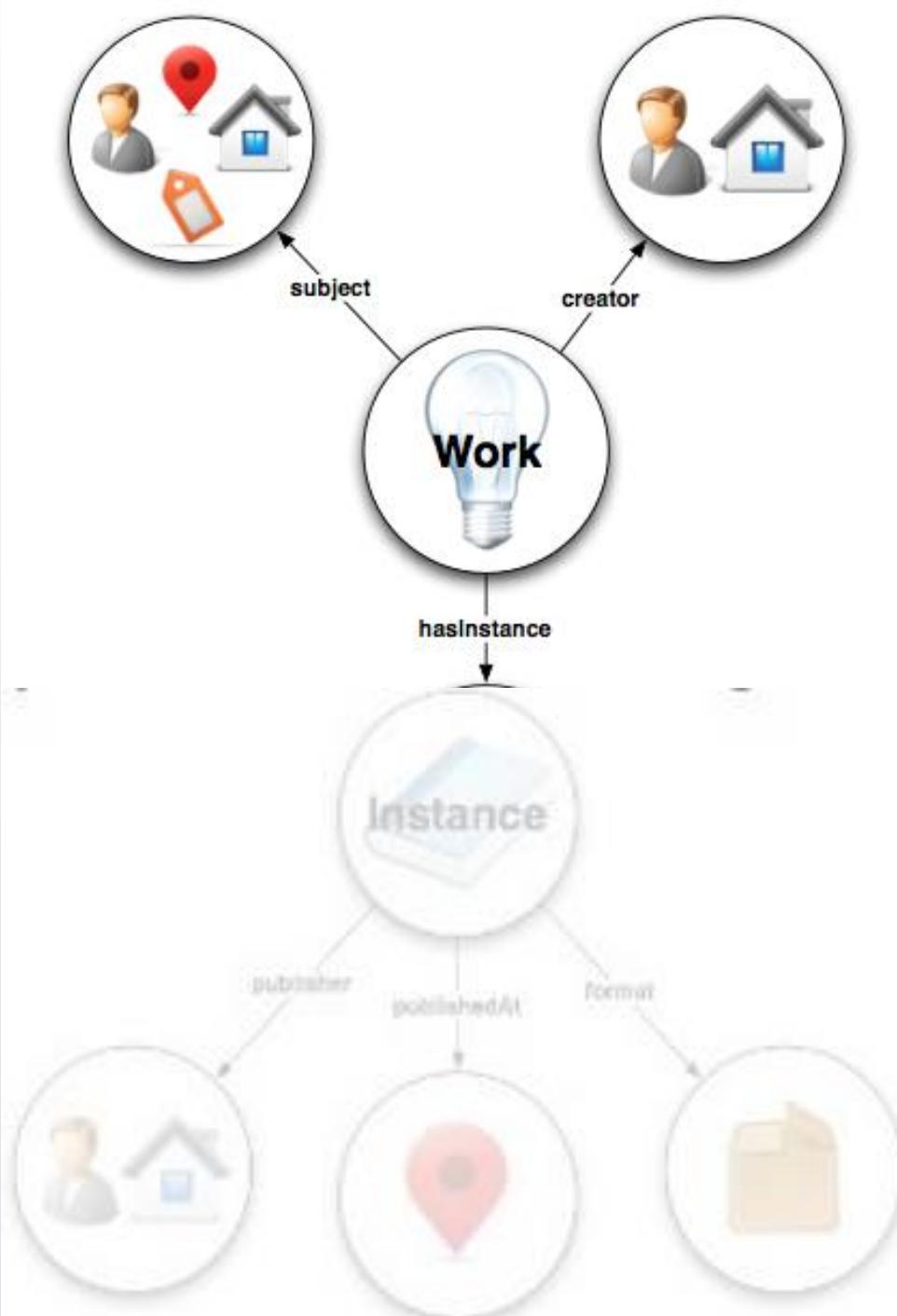
Terminology

- An *RDF class* is a type of thing.
- An *RDF property* is a relationship between entities. It provides attributes for an individual class.
- **BIBFRAME Resource** refers to a BIBFRAME Work, Instance, Authority, Annotation, or any subclass of these classes.
- **BIBFRAME cataloging resource** refers to the work or instance being described.
- **BIBFRAME Core Classes** are: Work, Instance, Authority and Annotation. The following are the BIBFRAME definitions for these entities. Any of the Core Classes may have subclasses, which may have their own properties.
 - **BIBFRAME Work** reflects a conceptual entity. A BIBFRAME Work is an abstract entity, as there is no single material object one can point to. The Work exists as a Web based control point that reflects both commonality of content between and among the various Instances associated with the Work as well as a reference point for other Works. Common properties of Works include contextual relationships to BIBFRAME Authorities related to the "subjectness" (topic, person, etc.) of the work as well as the entities (person, organization, jurisdiction, etc.) associated with its creation. Works can relate to other works reflecting specific relationships.
 - **BIBFRAME Instance** reflects an individual, material embodiment of a BIBFRAME Work that can be physical or digital in nature. A BIBFRAME Instance includes properties specific to the materialization information related to the publication, production, manufacture, and distribution of the material. Instances may relate to each other, to BIBFRAME Works, or to Authorities related to their physical or digital aspects.
 - **BIBFRAME Annotation** asserts information about a BIBFRAME Work, Instance, Authority or another Annotation. Annotations are asserted in order to:
 - Express opinions about a resource, for example a review.
 - Attach institution specific information, for example holdings.
 - Contribute enhancements to a resource description, for example cover art or summary descriptions.

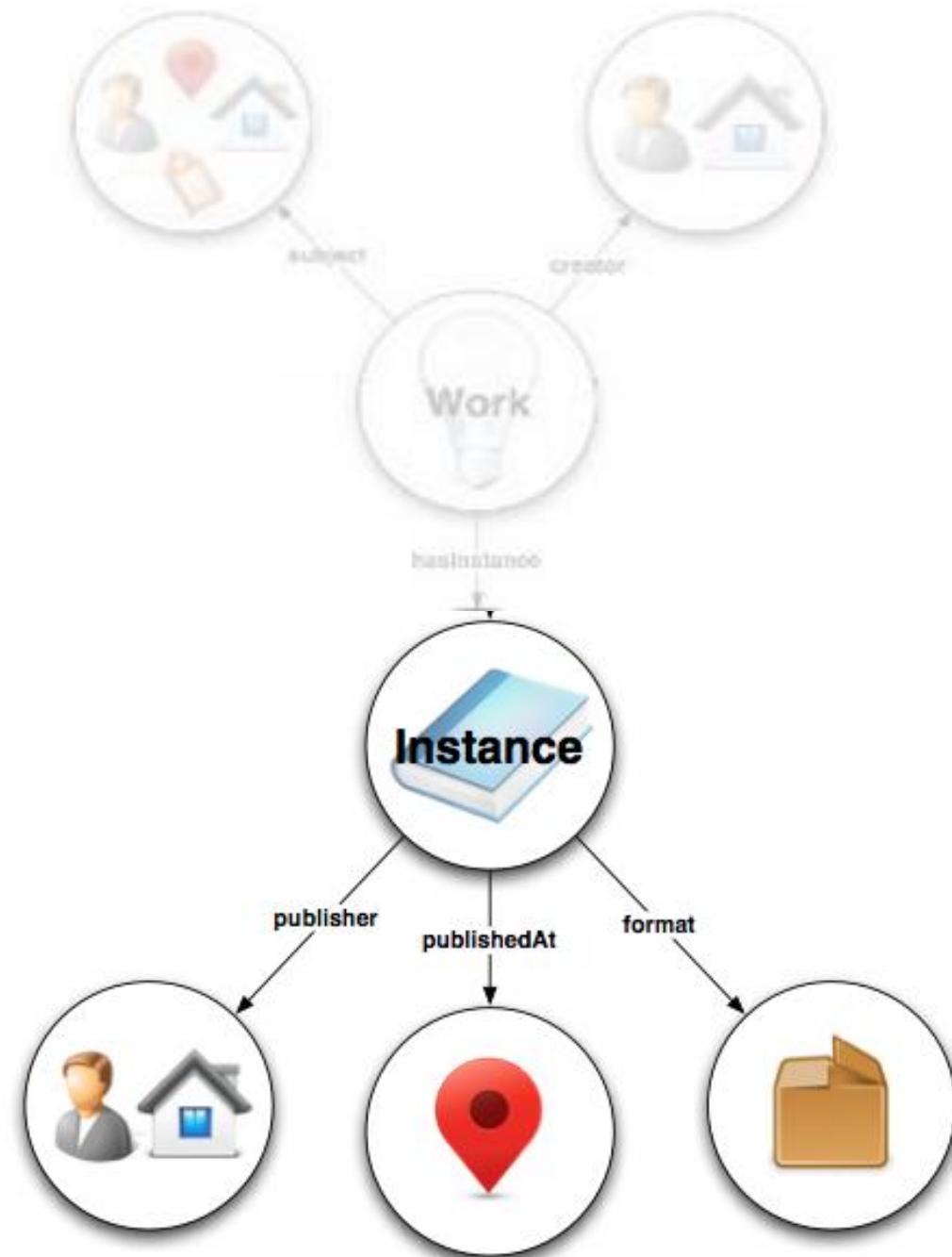
#bibframe



#bibframe



#bibframe



- MARC21 BIBFRAME
- Base BIBFRAME Works from Authorities
- Name>Title Authorities
- Title Authorities
- Raw transform (e.g. Splitting)

BFE Early Experimenters



Model Details and Discussion Papers

- BIBFRAME Annotations - Description and specification
- BIBFRAME Resource Types - Discussion Paper
- BIBFRAME Use Cases and Requirements
- On BIBFRAME Authority - Discussion paper
<http://bibframe.org/documentation/>

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3. Use Cases

3.1. Books near me (Identify holdings of Instance)

Alex is writing a book report on the "Phantom Tollbooth". Unfortunately, his copy has been inadvertently left on the bus never to be seen again and the report is due tomorrow. In an attempt to solve this "problem", Alex's mom is looking for a copy of this book held by a nearby library.

NOTE: The following use case has been annotated to provide a prose description associated with the same query and response data. This key is included as a means of helping explain this and subsequent use cases. Annotations are reflected through the following icon 

3.1.1. Query Pattern

Alex's Mom clicks on her "Books Near Me" application and knows her current location and has a

```
SELECT ?work ?inst ?lib
WHERE {
  ?work bf:title "Phantom Tollbooth"
  ?inst bf:instanceOf ?work
  ?holdings bf:holds ?inst
  ?holdings bf:heldBy ?lib
  ?lib gs:nearby(40.1583 83.0742 30) .
```

3.2. BIBFRAME Work

Search for BIBFRAME Works with the title of 'Phantom Tollbooth'. For all Works, return all of associated BIBFRAME Instances held by Libraries within 30 miles of my current location.

bibframe.org/documentation/bibframe-usecases/

2013 Early Experimenters

MARC to BIBFRAME Transformation Service

This service transforms a file of MARCXML records to BIBFRAME representation. Please note: files must be smaller than 2MB.

See also: [Comparison Service](#)

External URL File Transformation

[Paste-in MARCXML Transf](#)

URL for MARCXML File

Enter URL of MARCXML file

[Submit URL](#)

MARC to BIBFRAME Comparison Service

This service produces a comparison of a MARCXML record and its BIBFRAME representation. Currently it only accommodates Library of Congress MARC records. Enter the BIBID of a Library of Congress record into the box. The BIBID is carried in the MARC 001 of the Library of Congress record. (It is not the LCCN which is in the MARC 010.)

See also: [Transformation Service](#)

Library of Congress BIBID (MARC 001)

Enter BIBID

[Run Comparison](#)



BIBFRAME Editor

Get the code [here](#). In the meantime, select a Profile below to get started.

BIBFRAME -
Kitchen Sink
Profiles

Work

[New HeldItem](#)

Authorized access point

Authorized access point

Set

[New Instance](#)

Simple label

Simple label

Set

[New Work](#)

New Work,
Instance, &
HeldItem

Work title

Title Entity

BIBFRAME -
Simple Monograph

Any title

Any title

Set

[New Holding](#)

Title variation

Title Entity

[New Instance](#)

Associated agent

Person Organization Family Meeting Jurisdiction

[New Work](#)

Creator role

Person Organization Family Meeting Jurisdiction

New
monograph
(New Work,
Instance, and
Holding)

Contributor role

Person Organization Family Meeting Jurisdiction

BIBFRAME Profiles: Introduction and Specification

Draft — 5 May 2014

This document introduces and defines BIBFRAME Profiles, and describes how they are created, maintained, and used. It provides an overview of the purpose of BIBFRAME Profiles, describes how they can be used to support universal practices, and provides specific examples.

Status of this Document

- Draft for public review (5 May 2014)
- Please send general comments about this document to the listserv bibframe@loc.gov or to the mailing list www.loc.gov/bibframe/listserv.html.
- To the extent possible under law, the Library of Congress has waived all copyright and related rights to this document.

BIBFRAME Authorities

Draft Specification (28 April 2014)

This version:

<http://www.loc.gov/bibframe/docs/bibframe-authorities.html>

Status of this Document

- Draft for public review (28 April 2014)

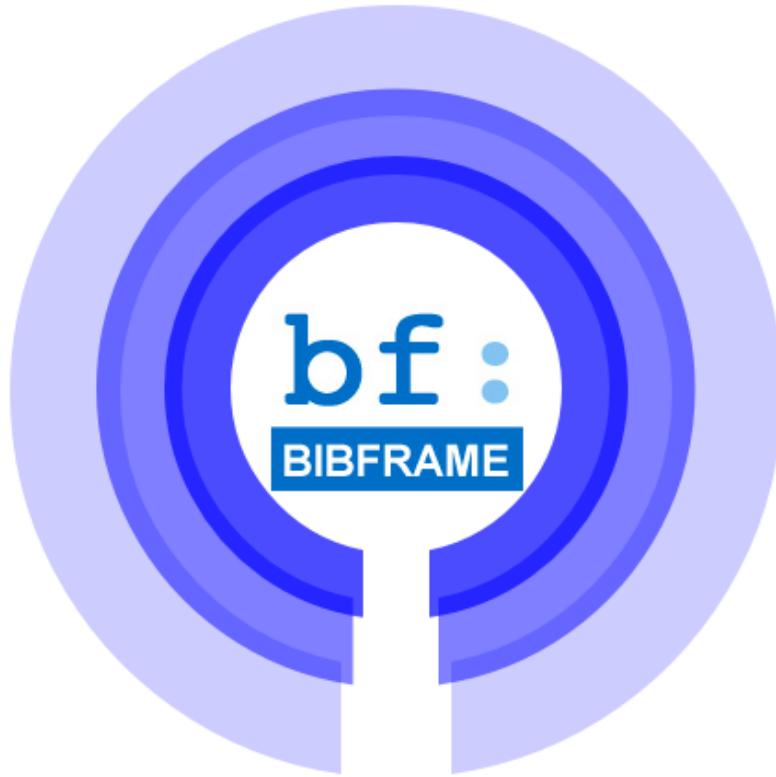
BIBFRAME Relationships

Draft Specification (25 April 2014)

Status of this Document

- Draft for public review (25 April 2014)
- Please send general comments about this document to the listserv bibframe@loc.gov or to the mailing list www.loc.gov/bibframe/listserv.html.
- To the extent possible under law, the Library of Congress has waived all copyright and related rights to this document.

Zepheira's BF



- Bibframe Lite
- Lite + Library
- Lite + Relation
- Lite + Annotation
- Lite + Library + Rare Materials
- Lite + Library + Archive

<http://bibfra.me>

Example

=LDR 00836cam a2200193la 4500
=001 3199156
=005 20130919132410.0
=008 990119r19811929pau|||||||000\0\eng\d
=035 \\\$a(OCOLOC)07492602
=035 \\\$a(OCOLOC)3199156
=040 \\\$aXBM\$cXBM\$dDGW
=090 \\\$aPR4034\$b.L6 1981
=049 \\\$aDGWW
=100 1\\\$aAusten, Jane,\$d1775-
1817.\$0http://id.loc.gov/authorities/names/n79032879\$0(LoC)n79032879\$0http://viaf.org/viaf/102333412\$0(viaf)102333412
=245 10\$aLove and freindship [sic] and other early works /\$cby Jane Austen ; with
a preface by G.K. Chesterton.
=260 \\\$a[Darby, Pa.] :\$bArden Library,\$c1981.
=300 \\\$axv, 140 p. ;\$c23 cm.
=500 \\\$aReprint of original published: London : Chatto and Windus, 1929.
=505 0\\\$aLove and freindship -- Lesley Castle -- The history of England -- Collection
of letters -- Scraps.

Example

```
@prefix ns2: <http://bibfra.me/vocab/marc/> .  
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .  
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .  
@prefix vb: <http://bibfra.me/vocab/lite/> .  
@prefix xml: <http://www.w3.org/XML/1998/namespace> .  
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .  
  
<0gfVzAFg> a vb:Instance ;  
    rdfs:label "Love and freindship [sic] and other early works / by Jane Austen ; with a preface by G.K.  
Chesterton." ;  
    vb:controlCode "3199156" ;  
    vb:dimensions "23 cm." ;  
    vb:extent "xv, 140 p.;" ;  
    vb:instantiates <fR_wrFOc> ;  
    vb:note "Reprint of original published: London : Chatto and Windus, 1929." ;  
    vb:title "Love and freindship [sic] and other early works /" ;  
    ns2:contentsNote "Love and freindship -- Lesley Castle -- The history of England -- Collection of letters  
-- Scraps." ;  
    ns2:publication <Nm6uN6Nu> ;  
    ns2:systemControlNumber "(OCOlc)07492602",  
        "(OCOlc)3199156" ;  
    ns2:titleStatement "by Jane Austen ; with a preface by G.K. Chesterton." .
```

Zepheira's Scribe

bf : BIBFRAME Scribe

Eric

Activity 3

Settings

Help

About

Audio:

➤ Vinyl Record

Bibliography:

➤ Electronic

➤ Print

Book:

➤ Electronic

➤ Print

Dissertation:

➤ Electronic

➤ Print

Painting:

➤ Image

Transcribed

Title

Set

Author

+ ↴

Editor

+ ↴

Contributor

+ ↴

Content

Category

+ ↴

text ✕

Contents

Add

Language

+ ↴

Notes

Add

LCC

Classification

Set

Subject

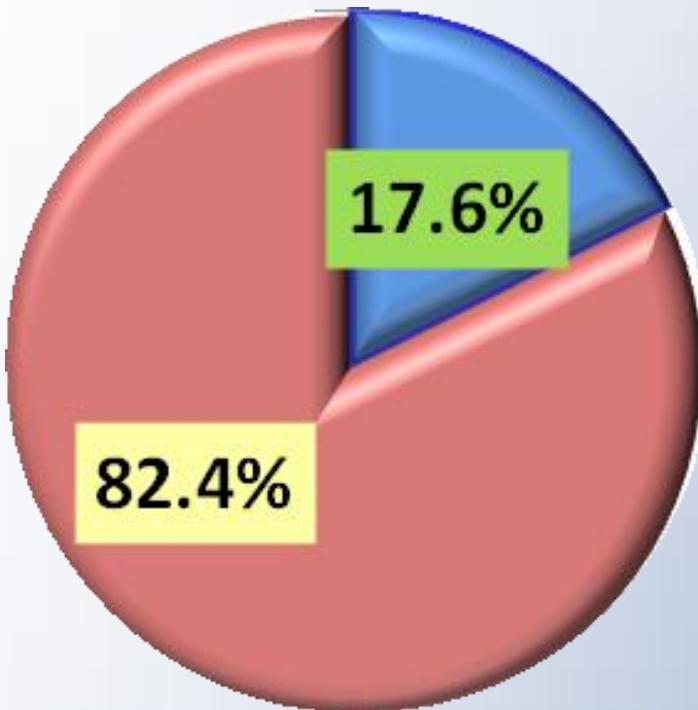
+ ↴

External Services

- AgroVoc
- FAST
- LC
- Local
- VIAF

GW Experimentation

Preparing Experimentation



- Selecting Datasets
- Analyzing Data
- Mapping Data
- Transforming Data
- Obsolete Fields
 - 011, 029, 039
 - 262, 350
 - 440, 503
 - 870-873

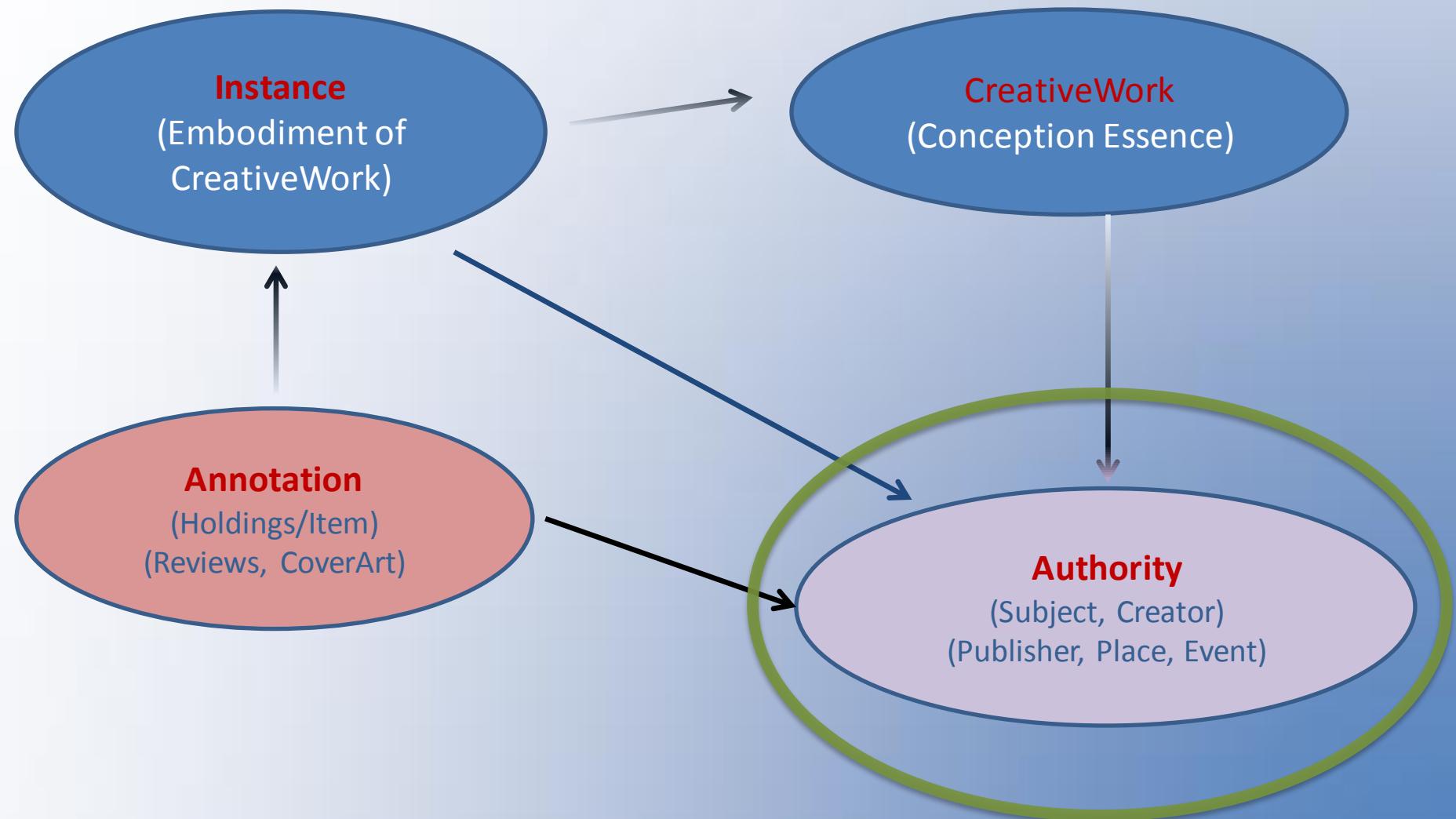
Data Selections

- Bibliographic Records First
- Simple Monographic Set
- Mixed Records of Creation Dates
- Omit Local Practice: Multi-Version
- Omit Authorities (for now!)
- Data Host: WRLC Server

Data Transformation

- MARC2BF
 - Data in place of String
- RDA in BF
- EAD and BF

Class Relationship



MARC to BF



008/06-17:q19501959 nyu

100: Smetana, Bedřich, †d 1824-1884.

240: Trio, †m piano, strings, †n op. 15, †r G minor

245: Trio in G minor, op. 15, for violin, cello, and piano.

‡h [Sound recording]

262: ‡b Westminster ‡c XWN 18175 (XTV 24439) ‡d [195-

?

500 Side 2 of the same LP, it also lists:

700: Dvořák, A. ‡t: Trio, piano & strings, no. 4, op. 90, E minor.

511: David Oistrakh, violin; Sviatoslav Knushevitzky, violoncello; Lev Oborin, piano.

700: Oistrakh, David Fedorovich, †d 1908-1974. ‡4 prf

700: Knushevitzky, Sviatoslav, †d 1908-1963 ‡4 prf

700: Oborin, Lev, †d 1907-1974. ‡4 prf

bf:resource	Case Study: sound recording	Data Resource
bf:work		
bf:namePersonal:composer bf:namePersonal:hasVIAFLink bf:preferredTitle bf:preferredTitle:hasVIAFLink bf:title bf:note bf:type:audio:audio musical bf:contributor:performer:instrumentalist bf:contributor:performer:instrumentalist:hasVIAFLink bf:contributor:performer:instrumentalist bf:contributor:performer:instrumentalist:hasVIAFLink bf:contributor:performer:instrumentalist bf:contributor:performer:instrumentalist:hasVIAFLink	Smetana, Bedřich, 1824-1884 http://viaf.org/viaf/95207407 Trio, piano, strings. op. 15, G minor http://viaf.org/viaf/178830615/ Trio in G minor, op. 15, for violin, cello, and piano Program notes by Sam Morgenstern on container.	
bf:relatedTo: bf:namePersonal:composer bf:namePersonal:hasVIAFLink bf:preferredTitle bf:preferredTitle:hasVIAFLink	David Oistrakh http://viaf.oclc.org/viaf/74038528/ Sviatoslav Knushevitzky http://viaf.oclc.org/viaf/79168467 Lev Oborin http://viaf.oclc.org/viaf/74038528	
SEPARATE WORK?		Dvorák, A. http://viaf.org/viaf/71577743 Trio, piano & strings, no. 4, op. 90, E minor http://viaf.org/viaf/182665922
bf:work bf:namePersonal:composer bf:namePersonal:hasVIAFLink bf:preferredTitle bf:preferredTitle:hasVIAFLink bf:title bf:type:audio:audio musical	Dvorák, A. http://viaf.org/viaf/71577743 Trio, piano & strings, no. 4, op. 90, E minor http://viaf.org/viaf/182665922 Trio in G minor, op. 15, for violin, cello, and piano	
bf:instance		(OCOLOC)03589460
bf:hasURI bf:addedTitle bf:publishedInPlace bf:provider:publisher:organization bf:publicationhasDate bf:type: bf:hasExtent bf:hasDimension bf:hasPlayingSpeed	Trio, piano & strings, no. 4, op. 90, E minor New York Westminster between 1950 and 1959 Analog audio 1 audio disc 12 in. 33 1/3 rpm	
bf:annotation		Media Center
bf:shelfLocation bf:callNumber	DC 447	

GW BFTeam

- Resource Description Group (3)
- Global Resource Center (1)
- Digital Archivist (1)
- Burns Law Library (First half of 2014)
 - Cataloging & Metadata Services (3)

Team Building

- Identify Talents and Strengths
- Foster and Encourage Independent Learning
- Nurture Relationships (Pair Up)
- Mentor Potential Leadership
- Develop Project Management Skills

Learn Process

- Webinars
- Classroom Instructions
- Study Halls
- Workshops

Reason Together via Use Cases

3.1.2. Sample Response

The search returns a BIBFRAME Work and Instance for the title "Phantom Tollbooth" found

```
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .  
@prefix bf: <http://bibframe.org/vocab/> .  
  
<http://local.library.org/examples/phantom-tollbooth/test001/w1> a bf:Monograph ;  
a bf:Work ;  
bf:author <http://bibframe.org/auth/person/norton_juster> ;  
bf:language <http://id.loc.gov/vocabulary/languages/eng> ;  
bf:subject <http://bibframe.org/auth/subject/adventure-novel> ;  
bf:subject <http://bibframe.org/auth/subject/modern-fairy-tale> ;  
bf:title "Phantom Tollbooth" ;  
bf:summary "The Phantom Tollbooth is a children's adventure novel  
written by Norton Juster." .  
  
<http://local.library.org/examples/juster/test001/i1> a bf:HardcoverBook ;  
a bf:Instance ;  
bf:ISBN "0-394-81500-9" ;  
bf:date "1961" ;  
bf:publisher <http://bibframe.org/auth/org/Random-house> ;  
bf:isInstanceOf <http://bibframe.org/examples/phantom-tollbooth/test001/w1> .
```

3.2. BIBFRAME Work

In BIBFRAME, Uniform Resource Identifiers (URI) are used to uniquely identify 'things' we want to talk about. This URI uniquely identifies this BIBFRAME Work.

'a bf:Monograph' indicates this type of BIBFRAME Work is a Monograph. The URIs following bf:author and bf:subject represent the unique BIBFRAME Authority authorized access points for this specific author and these specific subjects.

Reason Together via Use Cases

As a...

A linking service, e.g. ORCID

I want to...

Use your generated ORCID numbers to connect to other authorities generated elsewhere.

So that...

We can disambiguate those users with similar names, and connect different sources of information together to get a more complete picture of a creator's output.

Credit: B Bushman



2014 GW Implementation Overview

- Tested data: analyses, selection and transformation
- Established Wiki and Listserv to facilitate communication
- Implemented Local Instance: *Editor* (LC)
- LC BF Transformation Issue Tracking
 - <https://github.com/lcnetdev/marc2bibframe/issues>
- Expanded Training via Zepheira
- Thinking BF as routine... Almost there!



Main Page



The logo features the letters "GW" in a large, bold, dark blue font on the left, followed by "bf" in a smaller blue font with a colon, and "BIBFRAME" in a blue font at the bottom right.

Contents [hide]

- 1 GW-BIBFRAME Implementation Wiki Page
- 2 General Information
- 3 Membership Knowledge & Skills Survey Form
- 4 Membership
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- 7 BF Primer and Other Working Documents
- 8 BF Presentations (LC Based)
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- 13 GW BIBFRAME Experiments
- 14 GW BIBFRAME : Solr/Blacklight
- 15 MediaWiki Helps

GW-BIBFRAME Implementation Wiki Page

- GitHub forum  for MARC-to-BF transformation issues
- BIBFRAME Validation 

BF Primer and Other Working Documents [\[edit\]](#)

- Bibliographic Framework as Web of data 
- Discussion Paper: Resource Type 
- Discussion Paper: Authority 
- Description and specification: Annotations 

BF Presentations (LC Based) [\[edit\]](#)

- BIBFRAME Webcasts & Presentations 
- BIBFRAME and WWW 
- The BIBFRAME Model: High-level concepts and objectives 
- Transitioning from MARC to BIBFRAME: The Environment and the Format 
- When URIs become Authority 
- Activities  at the 2014 ALA Annual Conference and Exhibits

BF Use Cases [\[edit\]](#)

- Use Cases and Requirements 

BF Vocabulary [\[edit\]](#)

- Description 
- Terminology and Conventions 
- CreativeWork 
- Instance 
- Authority 
- Annotation: Holdings, Review, CoverArt 

Deploy URI In MARC Routinely

000 01255cam a2200301 a 45e

001 3792771

005 20130822135633.0

008 910418s1991 nyu 000 1 eng

010 __ |a 91052940

035 __ |a (OCOLOC)ocm15525100

040 __ |a DLC |c DLC |d DGW

019 __ |a 29774405

020 __ |a 0679405429

050 00 |a PR4034 |b .P7 1991

082 00 |a 823/.7 |2 20

049 __ |a DGWW

100 1__ |a Austen, Jane, |d 1775-1817. |0 http://id.loc.gov/authorities/names/n79032879 |0 http://viaf.org/viaf/102333412 |0 (viaf)102333412

245 10 |a Pride and prejudice / |c Jane Austen ; with an introduction by Peter Conrad.

260 __ |a New York : |b Knopf : |b Distributed by Random House, |c c1991.

300 __ |a xxxix, 368 p. ; |c 22 cm.

490 0__ |a Everyman's library ; |v 1

651 _0 |a England |v Fiction.

650 _0 |a Young women |z England |v Fiction. |0 http://id.loc.gov/authorities/subjects/sh2008124372

650 _0 |a Courtship |v Fiction. |0 http://id.loc.gov/authorities/subjects/sh2008100298

650 _0 |a Sisters |v Fiction. |0 http://id.loc.gov/authorities/subjects/sh2008111400

650 _0 |a Domestic fiction, English. |0 http://id.loc.gov/authorities/subjects/sh86004355

655 _7 |a Love stories. |2 gsafd

\$0 - Authority record control number or standard number

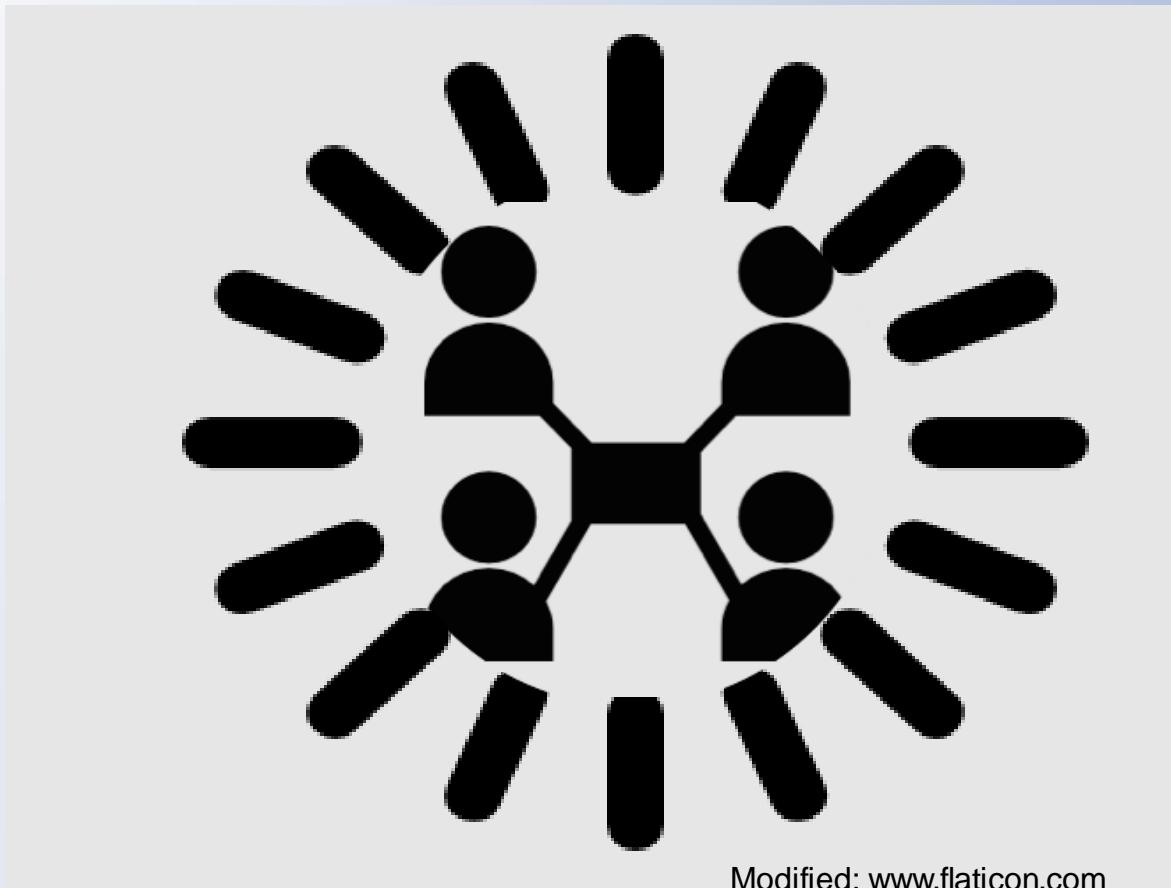
<http://www.loc.gov/marc/bibliographic/ecbdcntf.html>

Current Pipeline

- Systematically apply actionable identifier (HTTP URI)
- Work and Instance discernment
- Awareness of the global nature of GW local data
- Explore EAC-CPF & BF
- Transition PublicationStatement as an Event
- Collaboration, a new norm

COLLABORATION:

Community



Modified: www.flaticon.com

Molly Brown

The Denver Public Library team proposed the following concept:

Molly Brown (noun), a historic Denver resident (noun). It would be great to link the physical house in Denver to biographies in the catalog and information about the Titanic (she survived (verb) the sinking of the Titanic) or the Suffragist movement (noun) (she was (verb) one of the first women to run for political office in the US)

The house would be an authority resource for the place = The Molly Brown house

<http://www.mollybrown.org/>

<http://www.history.com/topics/titanic>

The biography would be a work: *Molly Brown : sharing her good fortune*

<http://catalog.denverlibrary.org/search/title.aspx?ctx=1.1033.0.0.6&cn=386714>

A physical copy of the book would be an instance.

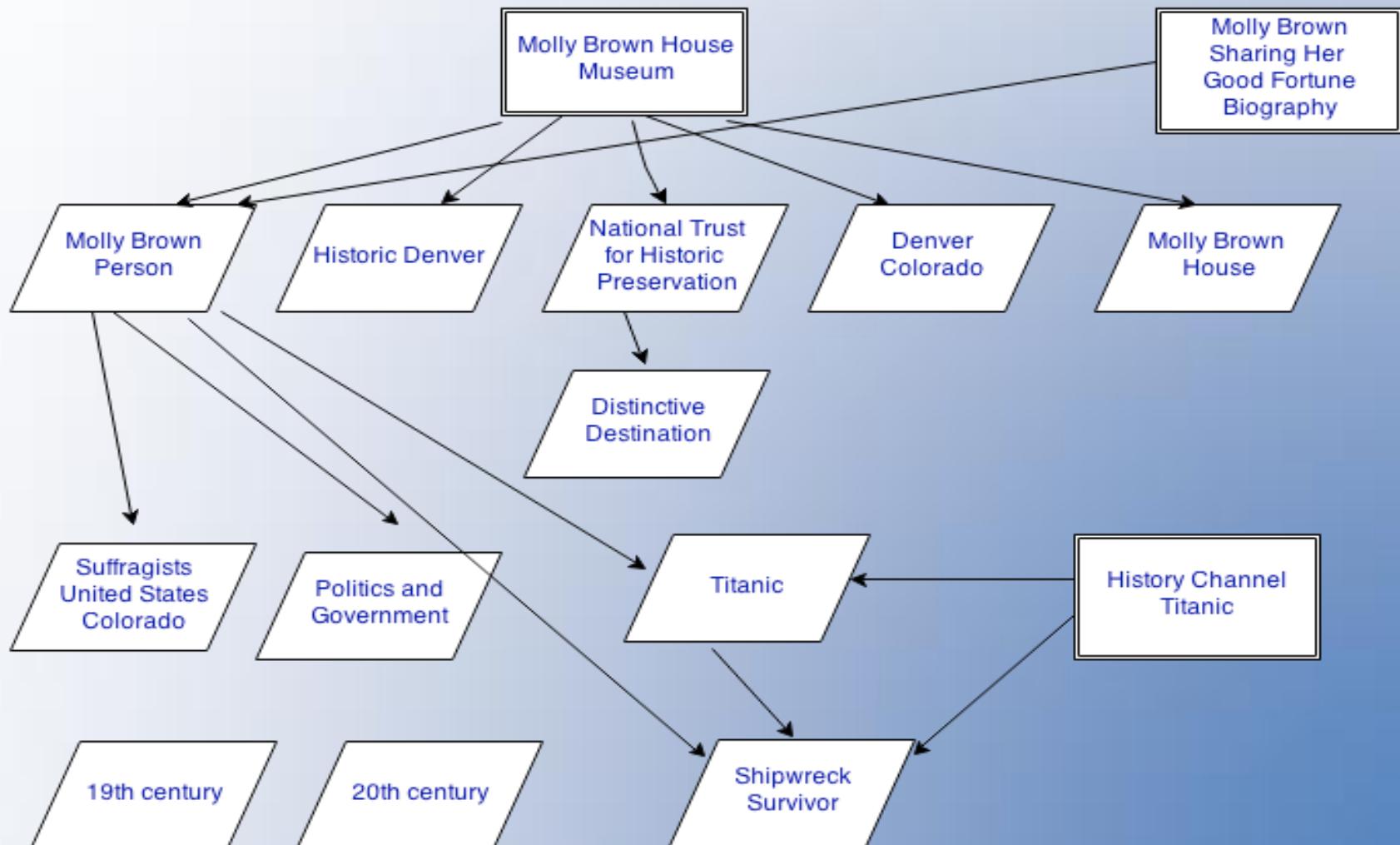
Molly Brown "is part of" the Suffragist movement



Entitification.....

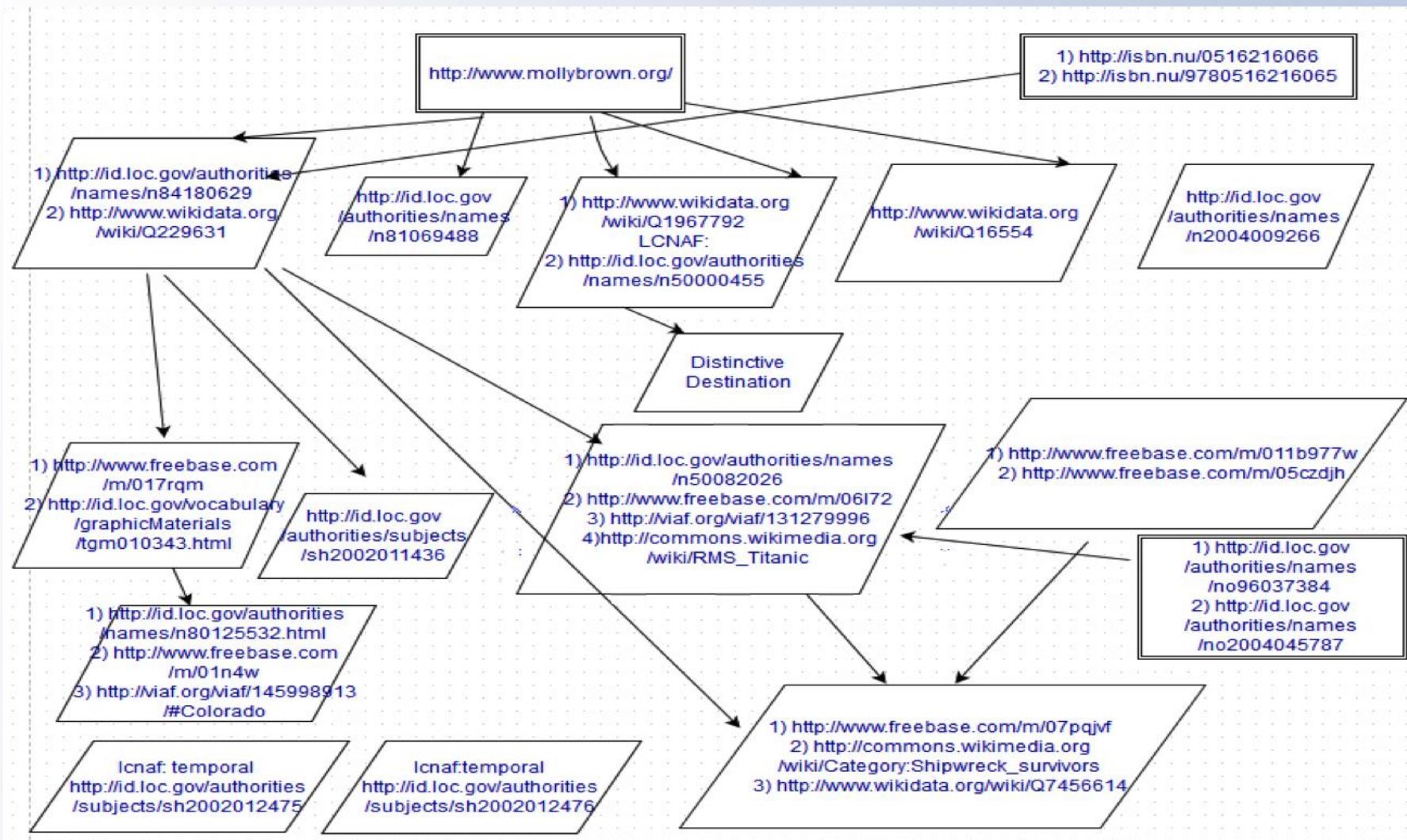
Molly Brown

GW BF Team brainstormed and produced this draft:



Entitification..... Molly Brown

GW BF Team brainstormed and produced this draft:



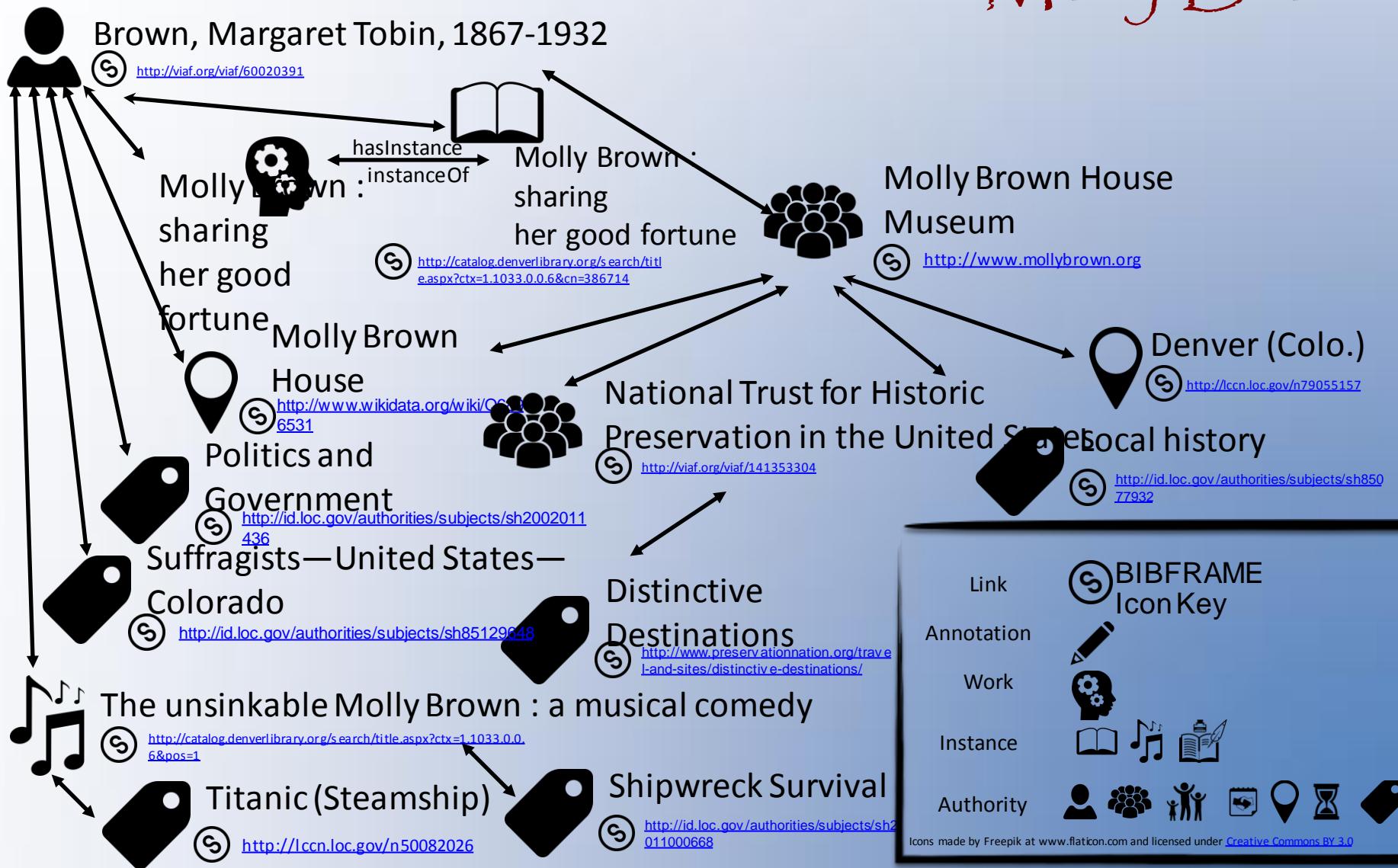
Then Zepheira Enhanced
GW's and Made

The Linkable.....
Molly Brown



Then Zepheira Enhanced GW's and Made

The Linkable..... Molly Brown



What to Expect Next?

2015 BF Projects

- Other BF Experimentations
- NLM Common Vocab elements
- LD4L (Linked Data for Libraries)
- LD4P (Linked Data for Production)
- BibFlow (BF+Kuali Ole)
- Schema.org
- BiblioGraph.net
- Libhub

NLM/GW Collaboration

- NLM BF Vocabulary Modeling
 - Zepheira Lite (bibfra.me)
 - PCC/RDA BIBCO Core Standard Record Metadata Application Profile
 - RDA RDF Vocabulary
 - Add/Revise definition

Defining Class

BF Class	Definition	Subclass of
Resource	A thing	
Work	A distinct intellectual or artistic creation	Resource
Instance	An individual embodiment of a Work	Resource
Event	A temporal occurrence or action associated with a resource	Resource
Agent	An entity (e.g. person, organization, etc.) associated with a resource.	Resource
Annotation	extended, decentralized data adding an additional layer of information	Resource
Authority	Controlled, standardized, and normalized data agreed upon and used by communities of practice	Resource
Topic	A subject term describing a general concept, event, or object	Category
Place	Geographic location	Resource
Person	An individual (alive, dead, undead, or fictional) in relation to a resource	Agent
Organization	A unit of people, e.g., an institution, an association, a corporate body, that is structured and managed to meet a need or to pursue collective goals	Agent
ProviderEvent	Event associated with the publication, printing, distribution, issue, release or production of an instance.	Event
Concept	Term describing the subject or aboutness of a resource	Resource
Form	Category or genre that describes what the resource is	Category
Category	Standard vocabulary lists of codes or words	Authority

Work & Its Properties

BF Lite property	Definitions	Property of
bf:title	Title of the resource	Work or Instance
bf:date	date associated with the resource	Resource
bf:language	language(s) associated with the resource	Resource
bf:creator	An entity (e.g., person, organization, etc.) associated with a resource	Work
bf:contributor	An entity (e.g., person, organization, etc.) associated with a resource	Work
bf:related	An IRI used to identify or access a resource related to the origin resource	Resource
bf:authority link	Unique identifier linking to an authoritative controlled vocabulary	Resource
bf:genre	The 'is-ness' of the resource	Work
bf:description	Description of the content of the resource	Resource
bf:subject	a term or alphanumeric code which captures the aboutness of a resource.	Work
bf:focus	The main subject of a resource, especially in a pre-coordinated subject string	Concept
bf:audience	Class of user for which the content of a resource is intended, or for whom the content is considered suitable.	Resource
Bf:link	IRI of a resource	Resource

Class on Zepheira

Agent

Annotation

Authority

Category

Collection

Concept

Event

Family

Form

Instance

Meeting

Organization

Person

Place

Provider Event

Resource

Topic

Work

Work on Zepheira

Attributes of Work

Property	Expected Value(s)	Description	Remark
<input type="checkbox"/> contributor	<input type="checkbox"/> Agent	Entity (or entities) who contribute to the origin resource	
<input type="checkbox"/> creator	<input type="checkbox"/> Agent	Entity (or entities) responsible with the creation of the origin resource	
<input type="checkbox"/> genre	<input type="checkbox"/> Form	A category of artistic composition characterized by similarities in form, style, or subject matter.	The 'is-ness' of a work
<input type="checkbox"/> subject	<input type="checkbox"/> Concept	Index term, subject term, subject heading, or descriptor, a term for information retrieval which captures the essence of the topic of a resource.	The 'about-ness' of a work
<input type="checkbox"/> title	Literal	Title of the resource.	

Attributes of Resource

Property	Expected Value(s)	Description	Remark
<input type="checkbox"/> audience	Literal	A specific group of people at which a resource is intended.	A target audience can be formed of people of a certain age group, gender, marital status, etc.. Other groups, although not the main focus, may also be interested. The value of this property is intended to be a code list.
<input type="checkbox"/> authority link	IRI	Link to an authority resource	Example identifiers include VIAF, LCNAF, ISNI, ORCID, etc.
<input type="checkbox"/> control code	Literal	An alphanumeric string or indicator used to find and identify the resource	A non-IRI based identifier reflecting local or community coding practices
<input type="checkbox"/> date	Literal	The date, date range or date designation associated with the resource	Recommended ISO 8601 date

Applying Vocab

The contributions of Rudolph Virchow (1821-1902) to obstetrics and...

Relevance: ●

Title: The contributions of Rudolph Virchow (1821-1902) to obstetrics and gynaecology / von Charles Abraham Greene.

Author(s)/Name(s): Greene, Charles Abraham, 1933-

Publisher: Basel : National-Zeitung, 1960.

Related Names: Universität Basel. Medizinische Fakultät.

Description: 32 pages ; 24 cm

Content Type: text

Media Type: unmediated

Carrier Type: volume

Language: eng

MeSH Subjects: Obstetrics --history

Gynecology --history

History, 19th Century

Academic Dissertations

Other Subject(s): Virchow, Rudolf, 1821-1902.

Dissertation Note: Doctoral Universität Basel 1960 Inaugural-Dissertation.

Notes: At head of title: From the Department of the History of Medicine of the University of Basel, Basel Switzerland.

NLM Unique ID: **101651411**

Applying Vocab

bf:Instance '<http://NLMInstance/NLMI1>' ;
 bf:title 'The contributions of Rudolph Virchow (1821-1902) to obstetrics and gynaecology' ;
 bf:transcribedAgent 'vorgelegt von Charles Abraham Greene' ;
 bf+library:publication '<http://NLMInstance/NLMI1PE1>' ;
 bf:medium '<http://rdaregistry.info/termList/RDAMediaType/1007>' ;
 bf:format '<http://rdaregistry.info/termList/RDACarrierType/1049>' ;
 bf:contentType '<http://rdaregistry.info/termList/RDAContentType/1020>' ;
 bf:extent '32 pages' ;
 bf:instantiates '<http://NLMWorkAuth/NLMW1>' ;
 bf:note 'At head of title: From the Department of the History of Medicine of the University of Basel, Basel, Switzerland' ;
 bf+library:bibliographyNote 'Includes bibliographical references (pages 31-32)' ;

bf:ProviderEvent '<http://NLMInstance/NLMI1PE1>' ;
 rdam:publicationStatement 'Basel : National-Zeitung, 1960.' ;
 bf:providerAgent '<http://NLMNameAuth/A3>' ;
 bf:providerPlace '<http://NLMGEOGAuth/NLMP1>' ;
 bf:providerPlace '<http://id.loc.gov/vocabulary/countries/sz>' ;
 bf:providerDate '1960' .

What Can You Do?

- Keep Learning
- Be Engaged in Activities
- Seek Collaboration
- Focus on Linking, Connectivity
- Insert \$0 in MARC Records NOW

Reading List

- *On The Record.* (2008) <http://www.loc.gov/bibliographic-future/news/lcwg-ontherecord-jan08-final.pdf>
- *Semantic Web Applications in Libraries: The Road to BIBFRAME.* (2014) <http://www.slideshare.net/BaltimoreNISO/ford-2014-nisobibframe>
- *BIBFRAME Vocabulary Navigator.* (2015) <http://bibfra.me>
- *The Hype Around Graph Databases And Why It Matters.* (2015) <http://t.co/v964s1VuG1>
- *Library Data [R]evolution: Applying Linked Data Concept.* (2015) http://www.oclc.org/en-US/events/2015/CI_SFPL_Feb_2015.html
- *Linked Data Design for the Visible Library.* (2015) http://www.asis.org/Bulletin/Apr-15/Bulletin_AprMay2015.pdf#page=23
- URIs in MARC: A Call For Best Practices. <http://tinyurl.com/uri2015pcc>

Thank you!

