

Developing BIBFRAME application profiles for a cataloging community

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SWIB 2020

The Vision

*The world enriched with library data;
libraries enriched with the world's data*

Assumptions

- library linked data will present a structured, well-crafted, useful, and predictable set of data about our resources
- as members of PCC:
 - focus on BIBFRAME as an ontology
 - focus on a cooperative cataloging ecosystem
- library linked data will interoperate with others' linked data, at least at a basic level
 - libraries can share their data with others (including other libraries!)
 - libraries can make use of data from other sources
- we have a way to create and share linked data!

The Present

- RDF is a very loose specification, open to many interpretations
- BIBFRAME is also very loosely formed
 - multiple possible modelings for the same entity
 - need for extended vocabularies to fill out requirements for cataloging
 - minimal “official” documentation
- No official mappings between RDA and BIBFRAME
- No “best practices” for library cataloging in a linked data environment
- Need to connect into a broader “ecosystem”

PCC Mission Statement & Standards

The PCC promotes the discovery and use of the world's knowledge by supporting metadata producers in library and other cultural heritage communities and by forging alliances with partners who share common goals. PCC members create trusted metadata and support its use and reuse by global communities.

- BIBCO Standard Record (BSR) RDA Metadata Application Profile (Monographs in RDA & MARC21)
- CONSER Standard Record (CSR) RDA Metadata Application Profile (Serials in RDA & MARC21)

PCC & Linked Data for Production (LD4P)

LD4P2 (Pathway to Production)

- Cohort of 22 PCC libraries working in Sinopia
- Affinity Groups
 - Profiles
 - Serials
 - Rare Materials
 - Non-Roman scripts

LD4P3 (Closing the Loop)

- development of PCC data pool in collaboration with OCLC & SHARE-VDE

PCC Sinopia-based Task Groups

- Sinopia Training TG
- Task Group to Support Expansion of PCC Cataloging in Sinopia
- Task Group on PCC Sinopia Application Profiles

TG on Sinopia Application Profiles

CHARGE:

Develop a PCC-approved set of application profiles to serve the PCC community in Sinopia as the BIBCO and CONSER standard records have served the PCC community in MARC, to support the expansion of the cohort of PCC members using Sinopia.

- evaluate existing Sinopia application profiles
- identify existing Sinopia profiles for monographs and serials that will serve as a basis for PCC-approved profiles and make revisions where necessary to bring those profiles into alignment with PCC policies
- issue a set of profiles specifically for use in Sinopia, using the Sinopia profile schema, to be submitted to the PCC Standing Committee on Standards for approval
- develop best practices for maintenance and enhancement of the PCC profiles
- provide feedback to the Sinopia development team on improvements to Sinopia that are needed to fully express PCC policies as linked data application profiles

Why PCC Templates?

- Create equivalents to the BSR & CSR for the linked data environment
 - Standardize modeling of BF
 - Standardize relationships between RDA & BF
 - Encourages use of particular vocabularies
- Provide “branding” of PCC cataloging in the linked data environment
 - PCC URIs
 - for the templates themselves
 - for BF work & instance entities described using the templates
 - Influence of PCC standards goes beyond the immediate PCC community in North America and beyond

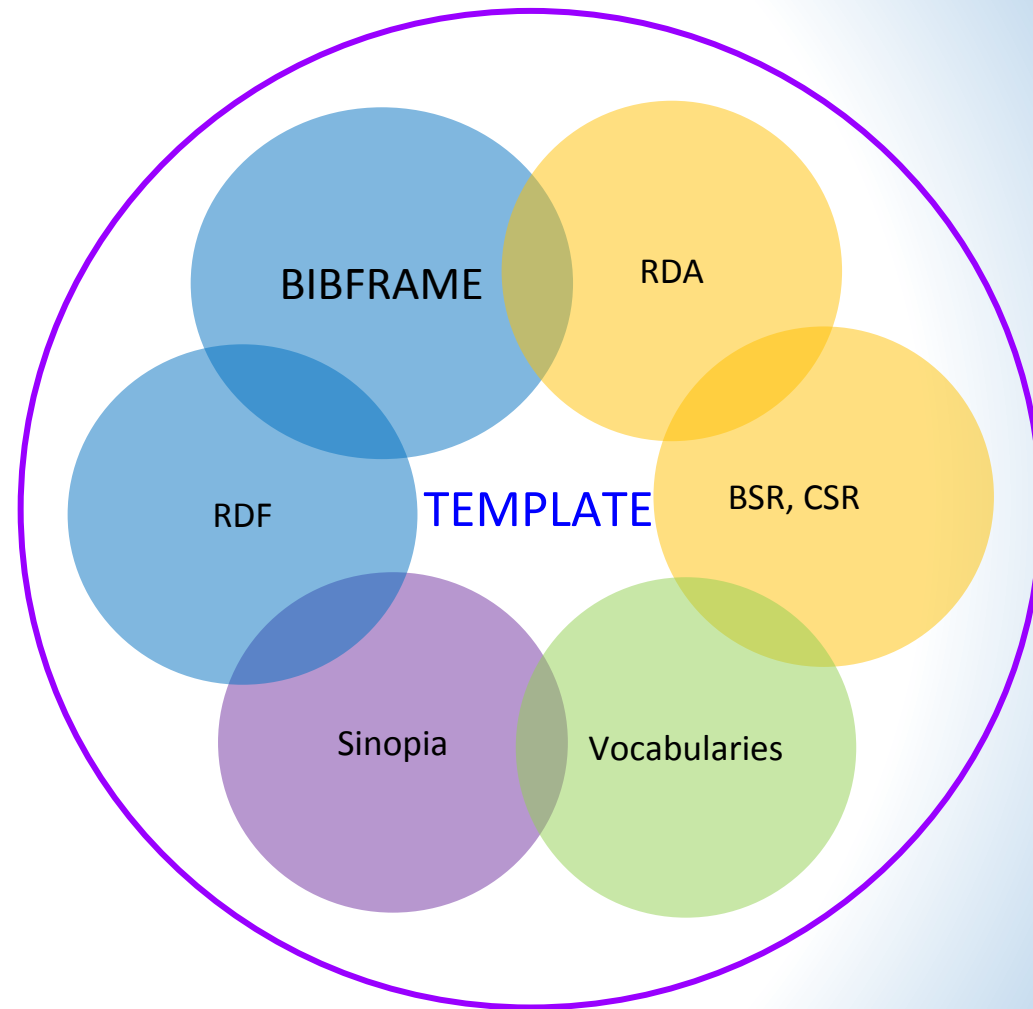
Developing Templates

Predecessors:

- Library of Congress BF Editor templates
 - developed initially for internal use at LC
- LD4 Profiles Affinity Group & LD4 Serials Affinity Group
 - made up primarily of members of the LD4P2 Cohort
 - created to develop practices for template design, re-use
 - concerned about template proliferation, modeling variances
 - developed concept of a single set of format-based Sinopia templates for use or adaptation by multiple institutions
 - encourages re-use & improves accessibility
 - brings about standardization through template constraints

Layers of Standards

- a cataloging template includes many layers of standards & restraints:
 - Base code on which templates are built (Sinopia)
 - Data models
 - RDF
 - BIBFRAME
 - Cataloging guidelines
 - RDA
 - BSR, CSR
 - Vocabularies



Components of a template

RESOURCE TEMPLATE

Class URI

Template label

Template ID

Author

Date

Remarks

PROPERTY TEMPLATE

Property label

Property URI

Remark

Remark URL

Property attributes (REQUIRED, REPETABLE, ORDERED)

Property Type:

- **LITERAL**
 - Literal attributes (default)
- **LOOKUP or URI**
 - URI attributes (default)
 - Lookup attributes (authority)
- **RESOURCE**
 - Resource attributes (resource template ID)

AUTHORITIES:

- Id.loc.gov
- Getty
- MESH
- OCLCFast

REAL WORLD OBJECTS:

- ISNI
- [GeoNames](#)
- Wikidata

REMARKS:

- RDA

LINKED DATA EDITOR - STAGE

[Dashboard](#)[Resource Templates](#)[Search](#)[Load RDF](#)[Exports](#)

Find a resource template:

> [Most recently used templates](#)

Label / ID	Resource URI	Author
PCC BF2 Admin Metadata pcc:bf2:AdminMetadata	http://id.loc.gov/ontologies/bibframe/AdminMetadata	PCC
PCC BF2 Instance (Monograph) pcc:bf2:Monograph:Instance	http://id.loc.gov/ontologies/bibframe/Instance	PCC
PCC BF2 Instance (Serial) pcc:bf2:Serial:Instance	http://id.loc.gov/ontologies/bibframe/Instance	PCC
PCC BF2 Item (Monograph) pcc:bf2:Monograph:Item	http://id.loc.gov/ontologies/bibframe/Item	PCC
PCC BF2 Item (Serial) pcc:bf2:Serial:Item	http://id.loc.gov/ontologies/bibframe/Item	PCC
PCC BF2 Work (Monograph) pcc:bf2:Monograph:Work	http://id.loc.gov/ontologies/bibframe/Work	PCC
PCC BF2 Work (Serial) pcc:bf2:Serial:Work	http://id.loc.gov/ontologies/bibframe/Work	PCC

[Contribution
\(Creator/Contributor\)](#)

Title Information

[Work Title](#)

[Work Title Variation](#)

[Form of Work](#)

[Date of Work](#)

[Place of Origin of the Work](#)

[In series](#)

[\(Geographic\) Coverage of
the Content](#)

[\(Time\) Coverage of the
Content](#)

[Intended Audience](#)

[Notes about the Work](#)

[Dissertation](#)

Title Information *

Work Title

[+ Add Preferred Title for Work](#)

[+ Add Part number](#)

[+ Add Part name](#)

[+ Add Note](#)

Work Title Variation

[+ Add Variant Title for Work](#)

[+ Add Note](#)

Form of Work

Enter lookup query

Date of Work

RDF Preview

If this looks good, then click Save

Save

Format: Table

Subject	Predicate	Object
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://sinopia.io/vocabulary/hasResourceTemplate	pcc:bf2:Monograph:Work:Un-nested
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://www.w3.org/1999/02/22-rdf-syntax-ns#type	http://id.loc.gov/ontologies/bibframe/Work
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://id.loc.gov/ontologies/bibframe/contribution	b81
b81	http://www.w3.org/1999/02/22-rdf-syntax-ns#type	http://id.loc.gov/ontologies/bfbc/PrimaryContribution
b81	http://id.loc.gov/ontologies/bibframe/agent	http://id.loc.gov/authorities/names/n78089035
http://id.loc.gov/authorities/names/n78089035	http://www.w3.org/2000/01/rdf-schema#label	Library of Congress
b81	http://id.loc.gov/ontologies/bibframe/role	http://id.loc.gov/vocabulary/relators/aut
http://id.loc.gov/vocabulary/relators/aut	http://www.w3.org/2000/01/rdf-schema#label	Author
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://id.loc.gov/ontologies/bibframe/title	b82
b82	http://www.w3.org/1999/02/22-rdf-syntax-ns#type	http://id.loc.gov/ontologies/bibframe/Title
b82	http://id.loc.gov/ontologies/bibframe/mainTitle	Card catalog [eng]
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://id.loc.gov/ontologies/bibframe/note	b83
b83	http://www.w3.org/1999/02/22-rdf-syntax-ns#type	http://id.loc.gov/ontologies/bibframe/Note
b83	http://www.w3.org/2000/01/rdf-schema#label	Includes bibliographical references (page 221) and index. [eng]
https://api.stage.sinopia.io/resource/c64947a7-220c-4dfd-9b02-62067557da4e	http://id.loc.gov/ontologies/bibframe/tableOfContents	b84
b84	http://www.w3.org/1999/02/22-rdf-syntax-ns#type	http://id.loc.gov/ontologies/bibframe/TableOfContents
b84	http://www.w3.org/2000/01/rdf-schema#label	Origins of the card catalog -- The enlightened catalog --

[Form of Work](#)

[Date of Work](#)

[Place of Origin of the Work](#)

[In series](#)

[\(Geographic\) Coverage of the Content](#)

[\(Time\) Coverage of the Content](#)

[Intended Audience](#)

[Notes about the Work](#)

[Dissertation](#)

[+ Add Part name](#)

[+ Add Note](#)

Work Title Variation

[+ Add another](#)

[+ Add Variant Title for Work](#) 

[+ Add Note](#)

Form of Work

novels

ä

Lookup

Add new literal: novels

x

[LOC all genres \(QA\) \(15\)](#)

[MESH publication types \(QA\) \(0\)](#)

[GETTY_AAT Objects__Object_Genres \(QA\) \(9\)](#)

Novels

Citation note: (novel: def. 2b: an invented prose narrative of considerable length and a certain complexity that deals imaginatively with human experience through a connected sequence of events involving a group of persons in a specific setting; def. 2c: the literary type constituted by such narratives)

Citation source: Merriam-Webster online, April 15, 2015:

Citation status: found

Broader: Fiction

Narrower: Sentimental novels, Novels in verse, Unfinished novels, Novelizations, Novels of manners, Cell phone novels

Type: <http://www.loc.gov/mads/rdf/v1#Authority>, <http://www.loc.gov/mads/rdf/v1#GenreForm>,
<http://www.w3.org/2004/02/skos/core#Concept>

Tool-Neutral Metadata Application Profile

A	B	C	D	E	F	G	H	
Resource template name	Resource template ID	Top Class	Property	Property Label in Sinopia	Mandatory?	Repeatable?	Ordered?	Remark
_PCC BF2 Monograph Work	pcc:bf2:Monograph:Work	bf:Work						
			bf:contribution	Contribution (Creator/Contributor)	FALSE	TRUE		
			bf:title	Title Information	TRUE	TRUE		
			bf:genreForm	Form of Work	FALSE	TRUE		
			bf:originDate	Date of Work	FALSE	TRUE		
			bf:originPlace	Place of Origin of the Work	FALSE	TRUE		
			bf:hasSeries	In series	FALSE	TRUE		URI for series as a work; another source
			bf:geographicCoverage	(Geographic) Coverage of the Content	FALSE	TRUE		
			bf:temporalCoverage	(Time) Coverage of the Content	FALSE	TRUE		
			bf:intendedAudience	Intended Audience	FALSE	TRUE		
			bf:note	Notes about the Work	FALSE	TRUE		
			bf:dissertation	Dissertation	FALSE	TRUE		
			bf:tableOfContents	Contents	FALSE	TRUE		
			bf:summary	Summary	FALSE	TRUE		
			bf:subject	Subject of the Work	FALSE	TRUE		
			bf:classification	Classification numbers	FALSE	TRUE		

Tool-Neutral Metadata Application Profile

A	B	C	D	E	F	G	H	
Resource template name	Resource template ID	Top Class	Property	Property Label in Sinopia	Mandatory?	Repeatable?	Ordered?	Remark
_PCC BF2 Monograph Work	pcc:bf2:Monograph:Work							
			<pre> { "data": [{ "@id": "NLH:RT:bf2:NLHClassification", "http://www.w3.org/2000/01/rdf-schema#label": [{ "@value": "NLH:RT:bf2:NLHClassification" }] }, { "@id": "_:b10", "@type": ["http://sinopia.io/vocabulary/LookupPropertyTemplate"], "http://sinopia.io/vocabulary/hasAuthority": [{ "@id": "urn:ld4p:qa:genres" }, { "@id": "urn:ld4p:qa:mesh:publication_type" }, { "@id": "urn:ld4p:qa:oclc_fast:form" }, { "@id": "urn:ld4p:qa:gettyaat:Objects__Object_Genres" }] }], "@id": "_:b12", "@type": ["http://sinopia.io/vocabulary/PropertyTemplate"], "http://www.w3.org/2000/01/rdf-schema#label": [{ "@value": "Date of Work" }], "http://sinopia.io/vocabulary/hasPropertyUri": [{ "@id": "http://id.loc.gov/ontologies/bibframe/originDate" }], "http://sinopia.io/vocabulary/hasPropertyAttribute": [{ "@id": "http://sinopia.io/vocabulary/propertyAttribute/repeatable" }], "http://sinopia.io/vocabulary/hasPropertyType": [{ "@id": "http://sinopia.io/vocabulary/propertyType/literal" }], "http://sinopia.io/vocabulary/hasRemarkUrl": [{ "@id": "http://access.rdatoolkit.org/6.4.html" }] } </pre>					
				tribution (Creator/Contributor)	FALSE	TRUE		
				Information	TRUE	TRUE		
				m of Work	FALSE	TRUE		
				e of Work	FALSE	TRUE		
				ce of Origin of the Work	FALSE	TRUE		
				eries	FALSE	TRUE		URI for series as a work; another source
				ographic) Coverage of the Content	FALSE	TRUE		
				ne) Coverage of the Content	FALSE	TRUE		
				nded Audience	FALSE	TRUE		
				es about the Work	FALSE	TRUE		
				ertation	FALSE	TRUE		
				tents	FALSE	TRUE		
				mary	FALSE	TRUE		
				ject of the Work	FALSE	TRUE		
				classification numbers	FALSE	TRUE		

Challenges

- Modelling issues
 - Primary Contribution & Contribution
 - Provision Activity
 - Series
 - rdfs:label vs. rdf:value
 - Administrative metadata
- System constraints
 - Version control
 - Property repeatability
 - Support for RDF lists
 - Subclass and property lookups

Expectations and Next Steps

- Transparency
 - Hoping for input from the broader cataloging community
 - Encouraging all implementers to make their modeling openly available
- Interoperability
 - How to best approach a common ground with other flavors of BIBFRAME?
 - SHARE-VDE, OCLC, non-PCC libraries
 - How to support BF2MARC conversions while not simply recreating MARC in RDF?
- Maintenance, requests and updates
 - PCC infrastructure for requesting enhancements, bug reports, new modeling, etc.
 - PCC Policy Committee will be meeting again in December to discuss recommendations for Sinopia and BF enhancements/changes

Links

Program for Cooperative Cataloging

<https://www.loc.gov/aba/pcc/>

Linked Data for Production

<https://wiki.lyrasis.org/pages/viewpage.action?pageId=187176106>

Sinopia Stage

<https://stage.sinopia.io/>

(type "pcc" in search box to filter to PCC templates only)

Members of the TG on Sinopia Application Profiles

- Paloma Graciani Picardo (Harry Ransom Center), Co-Chair
- Nancy Lorimer (Stanford University), Co-Chair
- Christine DeZelar-Tiedman (University of Minnesota)
- Nancy Fallgren (National Library of Medicine)
- Steven Folsom (Cornell University), Consultant
- Jodi Williamschen (Library of Congress), Consultant

Thanks!

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