PCC and BIBFRAME

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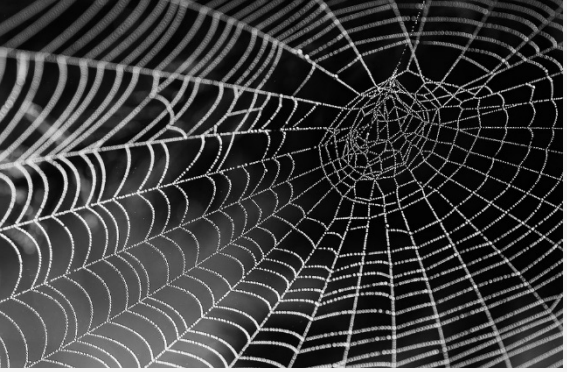
HOUSE
& home

Bibliographic Framework Initiative

- Commonly known as BIBFRAME or BF
- "… evolve bibliographic description standards to a linked data model, in order to make bibliographic information more useful both within and outside the library community."
  - Leverage ***linked data model*** for sharing resource description
    - Make use of controlled vocabularies and authoritative data sets published in RDF
    - Make explicit relationships within and among resources at a granular level
- Flexible/extensible web-based ***framework*** for adaptability and longevity



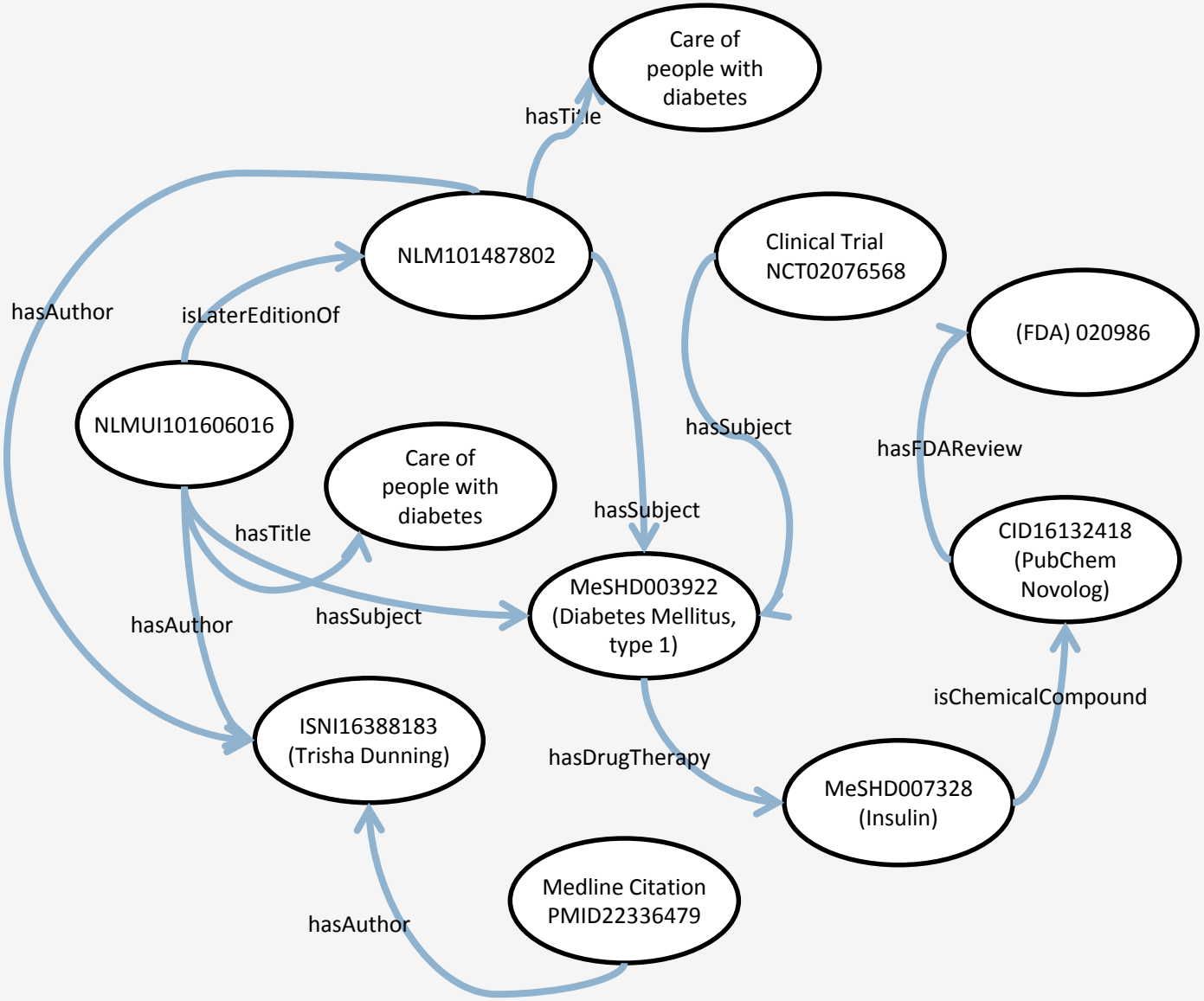
Resource Description Framework (RDF)

- The language of the Semantic Web
- Expressed in statements called *triples*

Subject > Predicate > Object

  - Triples must be true
  - Every triple must make sense independent of other data
- Designed for machine readability, not human readability
  - Subjects, Predicates, and Objects are represented by HTTP format unique identifiers to the extent possible, i.e., Uniform Resource Identifiers (URI) or Internationalized Resource Identifiers (IRI)

Subject	Predicate	Object
NLMUI101606016	hasTitle	Care of people with diabetes
NLMUI101606016	hasAuthor	https://viaf.org/viaf/49543649 (Actionable URI for Trisha Dunning)
NLMUI101606016	hasSubject	http://id.nlm.nih.gov/mesh/D003922 (Actionable URI for Diabetes Mellitus, type 1)
NLMUI101606016	isLaterEditionOf	NLM101487802
NLM101487802	hasTitle	Care of people with diabetes
NLM101487802	hasSubject	http://id.nlm.nih.gov/mesh/D003922 (Actionable URI for Diabetes Mellitus, type 1)


Care of people with diabetes
hasTitle
NLM101487802
Clinical Trial NCT02076568
(FDA) 020986
hasAuthor
isLaterEditionOf
NLMUI101606016
hasSubject
hasFDAReview
Care of people with diabetes
hasSubject
hasTitle
CID16132418 (PubChem Novolog)
MeSHD003922 (Diabetes Mellitus, type 1)
hasAuthor
hasSubject
isChemicalCompound
ISNI16388183 (Trisha Dunning)
hasDrugTherapy
MeSHD007328 (Insulin)
Medline Citation PMID22336479
hasAuthor

BIBFRAME Lite

www.bibfra.me

- Zepheira's independent work on BF
- BF Lite ontology 'suite'
  - Modular, layered vocabulary management
  - Focused on MARC transformation
- Library.Link Network (formerly LibHub Initiative)
  - Iterative transformations, revising data and displays as part of the learning process (agile development philosophy)
  - Clients include public and academic libraries
- Partnering with vendors and community stakeholders

Library Linked Data/BF Experimentation

LD4L

- https://www.ld4l.org/
- Grant funded LD projects spearheaded by Stanford University

BIBFLOW

- https://www.lib.ucdavis.edu/bibflow/
- Grant funded project to investigate how LD will change Library (esp. cataloging) workflows

BIBFRAME at the University of Illinois

- http://sif.library.illinois.edu/bibframe/
- Legacy MARC data transformations to BIBFRAME and Schema.org

PCC

Program for Cooperative Cataloging

BIBCO / CONSER / NACO / SACO

VISION

"The Program for Cooperative Cataloging (PCC) community is an influential source of metadata expertise, experimentation, and training. The PCC community's data are trusted, integrated, and valued in the global data environment. "

- NACO
- BIBCO
  - BIBCO Standard Record (BSR)
- CONSER
  - CONSER Standard Record (CSR)
- SACO

Standard Records

- BSR for monographs
- CSR for serials
- Define common required and recommended elements for bibliographic description
- Emphasize access
- Focus on user needs
- Organized by RDA element, with MARC field mappings

* General instruction; (T) Transcribed element; + PCC Core element; (R) PCC Recommended element

RDA INSTRUCTIONS & ELEMENTS	RDA NO.	NOTES	MARC ENCODING
Numbers expressed as words *	1.8.3	**Rare materials:** Generally record numbers in the form in which they appear on the source of information (see DCRM(S) 0G, 3A3).	Varies
Recording titles (T) +	2.3.1.4	**Rare materials**: Generally do not abridge titles.	Varies
Title proper (T)	2.3.2		245
Title in more than one form (T) +	2.3.2.5	Record initialisms/acronyms of the title proper not chosen as the title proper as variant titles in field 246 only, rather than as other title information. **Rare materials:** *Transcribe* initialisms/acronyms of the title proper as other title information in field 245 (see DCRM(S) 1B1.3, 1D) and record also in field 246 for access.	245, 246
Parallel title proper (T) +	2.3.3	Record all in 246. **Rare materials:** Record all parallel titles appearing on the same source as the title proper in 245 and record also in 246 for access.	245, 246
Other title information (T) +	2.3.4	Record if it provides clarification or support to the title proper that otherwise might appear misleading without the other title information. **Rare materials:** *Transcribe* other title information according to DCRM(S) 1D.	245
Variant title (T) (R) +	2.3.6	Record initialisms/acronyms of the title proper not chosen as the title proper as variant titles in field 246 only, rather than as other title information. PCC *recommends* additional variant titles that are deemed important to identification or access, according to cataloger judgment and/or local policy. PCC Core for **rare materials:** *Transcribe* initialisms/acronyms of the title	245, 246

PCC and Linked Data

https://www.loc.gov/aba/pcc/taskgroup/task-groups.html

- PCC Task Group on URIs in MARC
- PCC SCS/LDAC Task Group on the Work Entity
- PCC Linked Data Advisory Committee
- PCC BIBFRAME Task Group
  - CSR Mapping Group
  - BSR Mapping Group

PCC BIBFRAME Task Group

- Formed in June 2016
- Developing practices around the BIBFRAME Initiative and other linked data activities
- Monitor various communities and collaborative efforts for issues that impact PCC programs
- Identify issues that are of interest to PCC members to share and/or formulate responses on PCC's behalf

PCC BIBFRAME Task Group

- Subgroups:
  - Mapping BIBCO Standard Record to BIBFRAME
    - Beginning work Summer/Fall 2016
  - Mapping CONSER Standard Record to BIBFRAME
    - Pre-existing CONSER group started this work Fall 2015
    - Currently finalizing mapping and developing documentation

Mapping CSR to BIBFRAME

- Methodology
  - based on NLM's early mapping of PCC BIBCO Standard Record to Zepheira's BF Lite
  - match the RDA data elements in the CSR to BIBFRAME properties
  - develop mock-ups of sample coding in Turtle for each data element

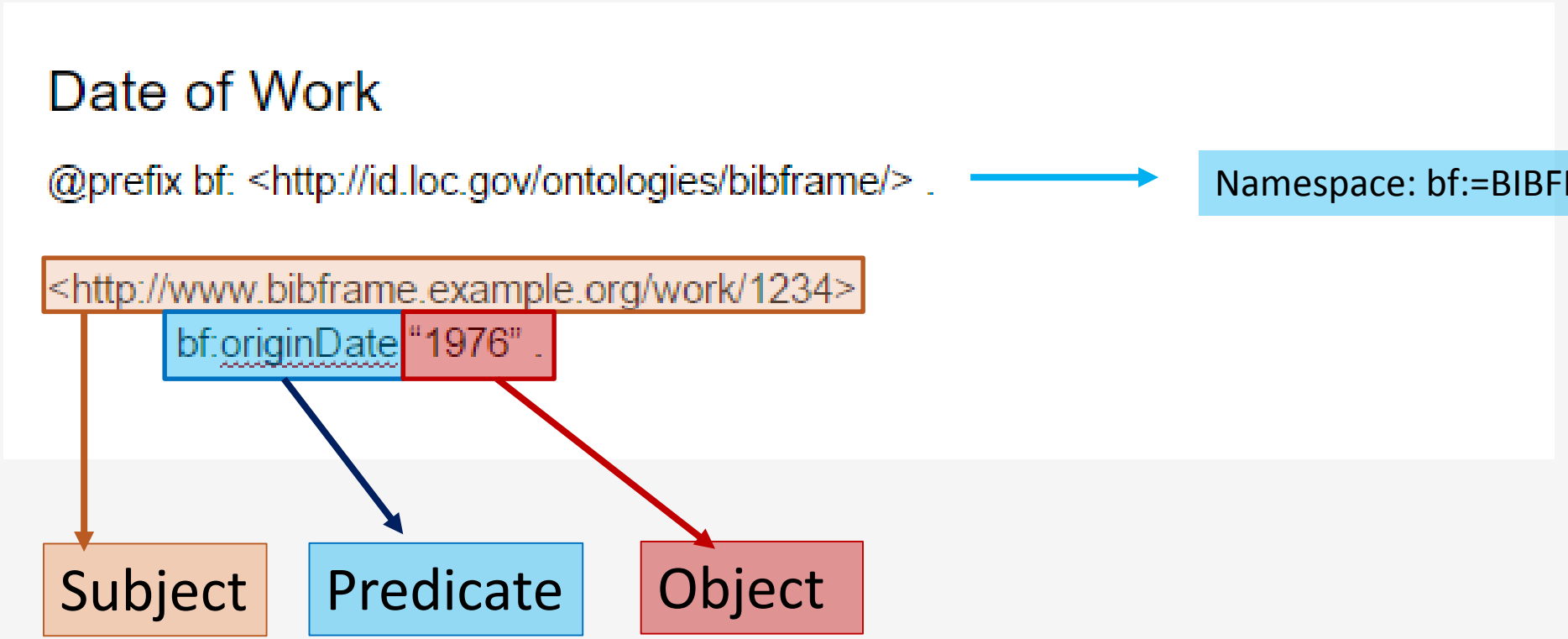
Mapping CSR to BIBFRAME

- Methodology
  - Identify CSR elements without matching BF properties
    - Investigate other LD vocabularies to extend BF if appropriate
  - Provide feedback to BF developers
  - Identify areas where CONSER can recommend best practices to the serials community

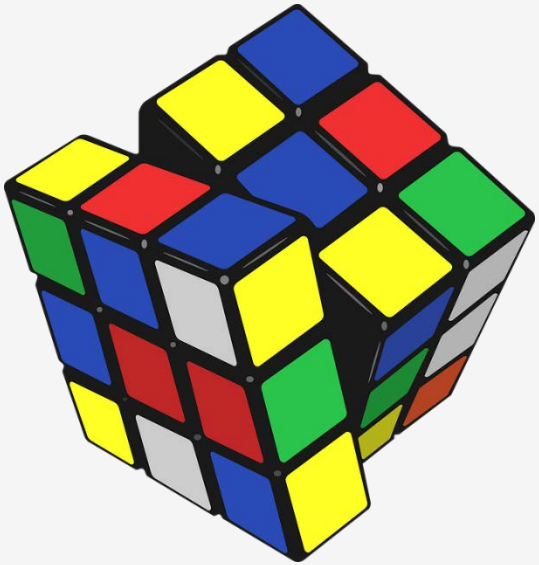
Mapping CSR to BIBFRAME

RDA Instructions & ElementsThe name of the RDA instruction or data element, as presented in the RDA Toolkit (http://access.rdatoolkit.org	**RDA-RDF property**The rda-rdf property, as defined by the RDA registry (http://www.rdaregistry.info/)	**BF 2.0 Property**The BIBFRAME property used to encode the RDA data element. JK: Joe Kiegel's mapping [http://faculty.washington.edu/kiegel/ld/rda-core-to-bibframe.pdf]	***Content*** each triple needed for the mapping listed separately: Subject > predicate > Object , indicates subclass/subproperty of the preceding class/property prefixes included for non-BIBFRAME properties/classes	**Used With** if BF allows multiple classes or says "undefined," the one actually used for CSR mapping in **bold**	**Expected Value** the type of value expected as the object of the rdf triple	**RDA instruction no.** The number of the RDA instruction, as presented in the RDA Toolkit (http://access.rdatoolkit.org/)	**MARC encoding** The MARC field used to encode the RDA data element
Title proper (T)	rdam:titleProper (p30156) (http://rdaregistry.info/Elements/m/P30156)	**mainTitle** with subject InstanceTitle	Instance > title > Title, InstanceTitle InstanceTitle > mainTitle > Literal	Title	Literal	2.3.2	245
Title proper: designation of part, section or supplement (T)	rdam:titleProper (p30156) (http://rdaregistry.info/Elements/m/P30156)	**partNumber** with subject InstanceTitle	Instance > title > Title, InstanceTitle InstanceTitle > partNumber > Literal	Title	Literal		
Title proper: title of part, section, or supplement (T)	rdam:titleProper (p30156) (http://rdaregistry.info/Elements/m/P30156)	**partName with subject InstanceTitle**	Instance > title > Title, InstanceTitle InstanceTitle > partName > Literal	Title	Literal		
Parallel title proper (T)	rdam:parallelTitleProper (P30203)	**mainTitle with subject ParallelTitle**	Instance > title > Title, VariantTitle, ParallelTitle ParallelTitle > mainTitle > Literal	Work, **Instance** or Item	Title (has subclass ParallelTitle) (will usually be a blank node?)	2.3.3	245, 246
Other title information (T)	rdam:otherTitleInformation (P30142)	**subtitle**	Instance > title > Title, InstanceTitle InstanceTitle > subtitle > Literal	Title	Literal	2.3.4	245
Variant title (T)	rdam:variantTitle (P30128)	**title** with object **VariantTitle** (and then VariantTitle has four subclasses as well as property variantType with expected value Literal for undefined types like "spine title")	Instance > title > Title, VariantTitle, [subclass of VariantTitle] [subclass of VariantTitle] > mainTitle > Literal [could also have partName, partNumber and/or subtitle] OR Instance > title > VariantTitle VariantTitle > mainTitle > Literal VariantTitle > variantType > Literal [could also have partName, partNumber and/or subtitle]	Work, **Instance** or Item	Title (has subclass VariantTitle) (will usually be a blank node?)	2.3.6	245246

Mapping CSR to BIBFRAME

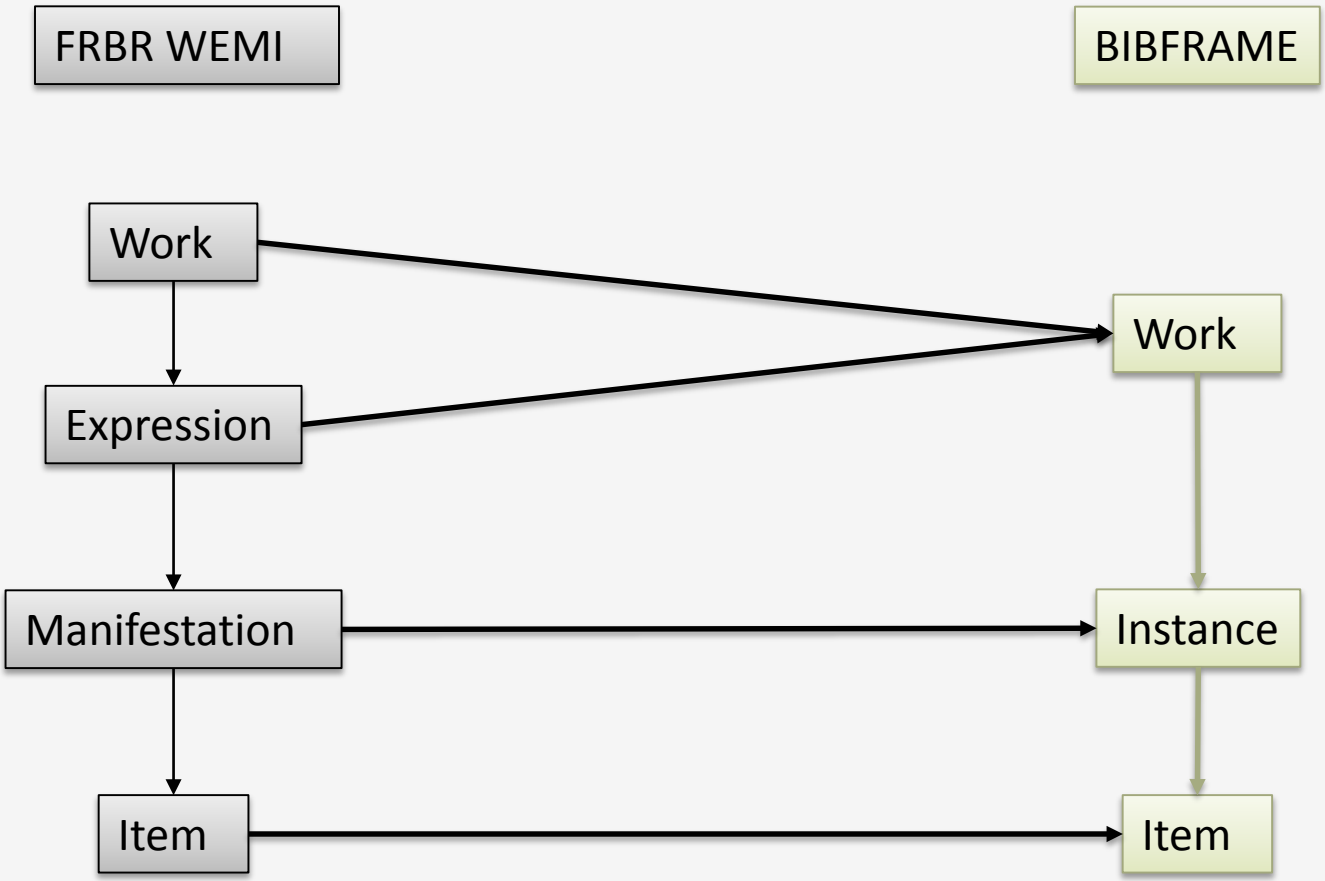


Mapping CSR to BIBFRAME



- Preliminary results
  - Most CSR elements have corresponding BF properties
  - Model misfits
    - BIBFRAME and FRBR

Model Misfits



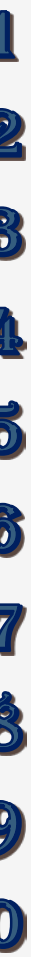
We Have Issues

- BIBFRAME
  - Information that changes over time
  - BIBFRAME **date** property
  - Extending BIBFRAME with other vocabularies
    - PRESSoo (http://www.ifla.org/node/10410)

We Have Issues

- Serials
  - Notes
    - BIBFRAME properties vs. textual notes
    - Intended audience for notes
      - Catalogers vs. end users
    - Mapping notes to the appropriate BF entity
      - Work level notes
      - Instance level notes
      - Item level notes

We Have Issues



- Serials
  - Enumeration/Chronology
    - Citations to specific issues (Vol. 2, no. 1 (1999)) are common in serials cataloging
    - Can we create a consistent way of representing enum/chron information?
      - For use in both bibliographic descriptions and holdings information
    - Balance between standardization and flexibility

We Have Issues

- Series
  - BIBFRAME provides mapping for transcribed series statements, enumeration, chronology, etc.
  - Relationships among series and the individual works that form them are more difficult to map

Interventions

- CONSER/PCC best practices
  - Community of practice
  - Multiple mapping possibilities
    - E.g. Representing creators
  - Representing information that changes over time
  - Converting existing data to BF

CSR Mapping Group

- Continue communication with BF developers
- Finalize mappings and submit to PCC BIBFRAME TG

PCC BF TG

- Vet and publish mappings
- Investigate other vocabularies that might supplement or extend BIBFRAME