

# RDA, LINKED DATA, & THE 3R PROJECT

Kathy Glennan

Head, Original & Special Collections Cataloging, University of Maryland

ALA Representative to NARDAC

Chair-Elect, RDA Steering Committee

# More Than Just Cataloging Rules

*“RDA is a package of data elements, guidelines, and instructions for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focussed linked data applications.”*

-- 2015 Statement from Committee of Principals for RDA

# Genesis of RDA Text

- Based largely on AACR2
  - AACR3 draft, Dec. 2004
- Also tied to the FRBR and FRAD models
- U.S. National Libraries Test Plan for RDA (completed 2011)
- Day 1 for PCC RDA Authority records: March 31, 2013

# Genesis of RDA as Linked Data

- Work started in 2007
  - DCMI/RDA Task Group formed
    - Participants from the JSC, DCMI, and W3C Semantic Web Deployment Working Group
  - First RDA vocabularies published in the Open Metadata Registry in 2011
  - RDA Registry launched in 2014

# Different “flavors” of RDA

- RDA is becoming more of a data dictionary
- Different pieces for different types of users
  - RDA Reference → Developers
  - RDA Vocabularies → Developers
  - RDA Registry → Application developers
  - RDA Toolkit → Catalogers
  - RIMMF → Trainers

# RDA Reference

- All RDA Elements, their definitions and any related scope notes, and all value vocabulary terms and definitions
- Stored in the Open Metadata Registry (OMR) in RDF linked data format
- Primary source of RDA Toolkit content
- Includes translations

# OMR Example - Researcher

## Element Sets: RDA Work properties

Elements: has researcher

Detail

Statements

History

### Metadata +

#### Detail

|                |   |
|----------------|---|
| Canonical URI: | <a href="http://rdaregistry.info/Elements/w/P10293">http://rdaregistry.info/Elements/w/P10293</a> (RDF)         |
| Label:         | has researcher  |
| Name:          | researcher  |
| Lexical Alias: | <a href="http://rdaregistry.info/Elements/w/researcher.en">http://rdaregistry.info/Elements/w/researcher.en</a> |
| Description:   | Relates a work to an agent who does research in support of the creation of a work.                              |
| Comment:       |   |
| Type:          | property  |
| Parent:        | <a href="#">has other agent associated with work</a>  |
| Domain:        | <a href="#">work</a>  |

# OMR Example – Translations

## Element Sets: RDA Work properties

### Elements: has researcher

Detail

Statements

History

| Profile property | Language   | Object   |
|------------------|------------|--|
| description      | Catalan    | Relaciona una obra amb un agent que fa recerca per donar suport a la creació d'una obra.                             |
| description      | Danish     | Relaterer et værk til en agent, der udfører forskning til støtte for skabelsen af et værk.                           |
| description      | German     | Setzt ein Werk mit einem Akteur, der Forschung betreibt, um die Schaffung eines Werks zu unterstützen, in Beziehung. |
| description      | Greek      | Συνδέει ένα έργο με έναν φορέα, ο οποίος διεξάγει έρευνα υποστηρικτικά της δημιουργίας ενός έργου.                   |
| description      | English    | Relates a work to an agent who does research in support of the creation of a work.                                   |
| description      | Finnish    | Liittää teoksen toimijaan, joka tukee teoksen syntymistä tutkimuksellaan.  |
| description      | French     | Met une œuvre en relation avec un agent qui effectue des recherches pour aider à la création d'une œuvre.            |
| description      | Vietnamese | Liên kết tác phẩm với tác nhân tiến hành nghiên cứu để hỗ trợ sáng tạo tác phẩm.                                     |
| domain           |            | <a href="http://rdaregistry.info/Elements/c/C10001">http://rdaregistry.info/Elements/c/C10001</a>                    |
| has element type |            | 2  |
| hasSubproperty   |            | <a href="http://rdaregistry.info/Elements/w/datatype/P10293">http://rdaregistry.info/Elements/w/datatype/P10293</a>  |



# RDA Vocabularies



- ❑ RDA Reference exported to a GitHub repository
- ❑ Published as a cumulative snapshot in discrete, releases with version control
- ❑ Allows applications to update and synchronize

# RDA Registry

- Provides links to download the individual element sets and value vocabularies in the current release of RDA Vocabularies
- Additional documentation and tools for RDA developers
  - Technical Guide
  - Examples of RDA linked data
  - Machine-actionable maps for transforming RDA data for use by non-RDA applications
- With each new release, sends updated data to RDA Vocabulary Server

# RDA Vocabulary Server

- ❑ Provides download management and linked data de-referencing services for machine applications
- ❑ Services available for
  - ❑ Language specific extractions
  - ❑ Individual Elements and Concept/Values extractions which provide RDF representations of specific IRIs

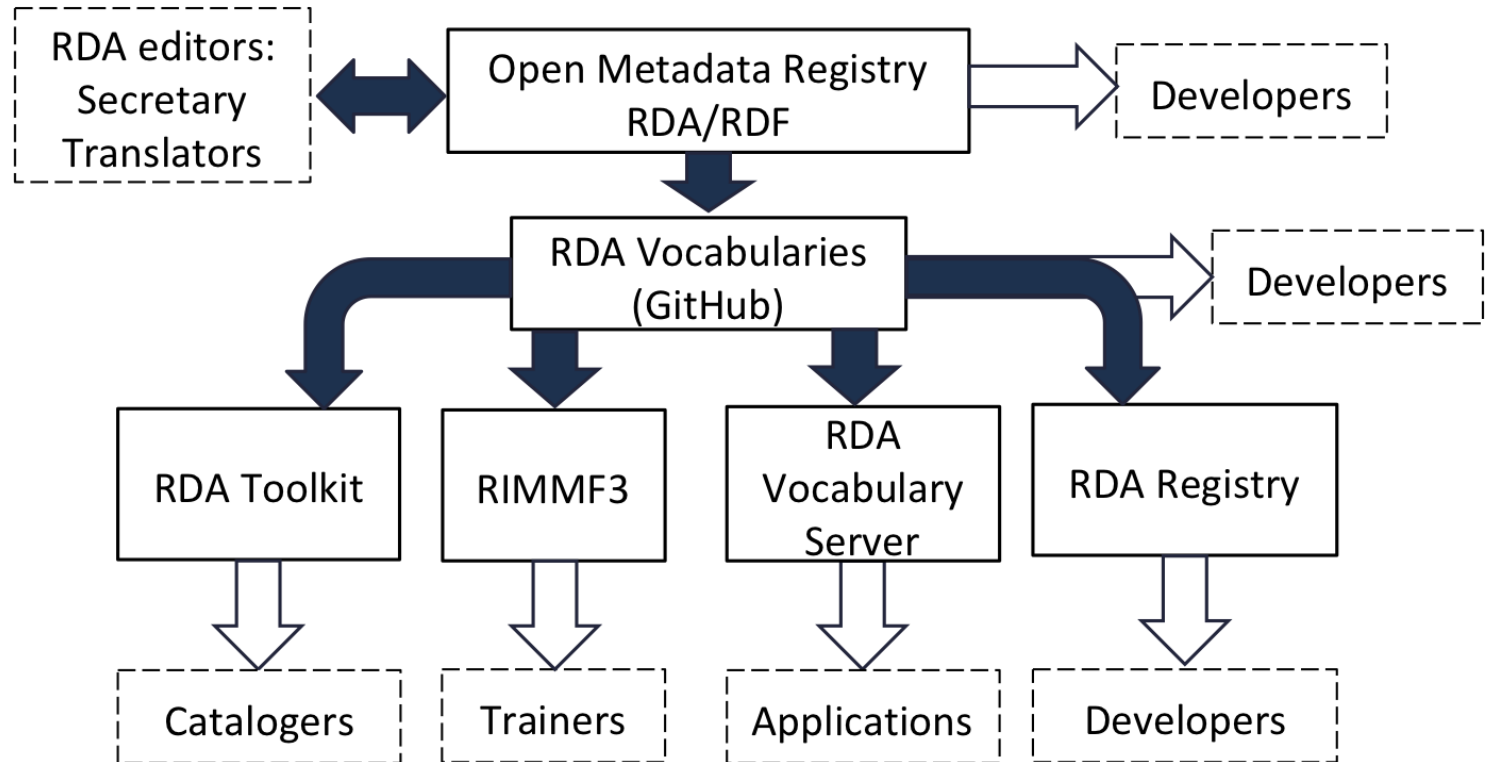
# RDA Toolkit

- An integrated, browser-based, online product that allows users to interact with a collection of cataloging-related documents and resources including *RDA: Resource Description and Access*
- The only part of “RDA” that is not freely available

# RIMMF3

- A visualization tool
- A cataloging training tool
- A prototype for what an RDA-based cataloging interface might look like
- Uses the RDA Vocabularies data to keep up-to-date
  - Now includes support for some translations

# RDA Reference Data Workflow



# RDA Implementation Scenarios

- ❑ Flat file (card catalogs)
- ❑ Linked authorized access points  
(e.g., OCLC Connexion)
- ❑ Relational or object database  
(fully linked at local level)
- ❑ Linked data (fully linked at global level)

# What Drives RDA Development?

- International standards & translation needs
- Description needs for cultural heritage organizations
- 3R Project
- Linked data and the Semantic Web
- User communities, including ALA, PCC, & NARDAC



# RDA – Connected to International Standards

- IFLA Library Reference Model (LRM), 2017
  - A consolidation and update of the 3 earlier functional requirements models (FRBR, FRAD, FRSAD)
- CIDOC Conceptual Reference Model (CRM), 2006
  - Developed for use by museums and cultural heritage institutions
  - FRBRoo is an object oriented extension of the CRM

# 3R Project Recap

- New version of the RDA Toolkit coming: June 2018
  - Not RDA 2.0 – instead, a new Expression
- Goals include:
  - Implement new LRM entities (Agent, Timespan, etc.)
  - Improve the interface and address long-standing problems
  - Generalize the instructions where possible
  - Offer more flexibility in choosing how to record a piece of information

# New Concepts Coming to the Toolkit

- Recording methods
- Manifestation statement
- Rethinking serial works
  - Diachronic works
- Redefinition of person
- Relationships preferred over attributes

# Recording Methods

- Entity chapters will present up to four different recording methods for capturing data
- Can use more than one
  - Unstructured description [on Manifestation]: *Denver, Colorado*
  - Structured description [LC/NACO NAF]: *Denver (Colo.)*
  - Identifier [Getty Thesaurus of Geographic Names]: 7013545
  - IRI [Wikidata]: <http://www.wikidata.org/entity/Q16554>

# Manifestation Statement

- How a resource represents itself
- Transcribed from the *Manifestation*
  - A more literal transcription than we've been doing
    - Capitalization, punctuation, etc. retained
  - Recording method = Unstructured description
- Fulfills the “identify” user task
- Also supports machine transcription derived from digitized and born-digital manifestations

# Reconceptualizing Serials via LRM

- Serial work = sequentially issued sequence of aggregate manifestations
  - The plan for the aggregating work, not the results
- Combination of both aggregate and whole/part works
  - Each issue is an aggregate of articles
  - Each issue has a whole/part relationship to the serial work
- Dynamic
  - Description not limited to the past; includes assumptions about the future

# Reconceptualizing Serials via LRM

- Regard *any* serial as a distinct instance of the *work* entity
  - Each serial work has only one expression and one manifestation, including:
    - Regional “editions”
    - Translations
    - Different formats (e.g., print vs. electronic)
- ISSN: Identifies an individual serial *work* (not a *manifestation*)
- ISSN-L: Identifies a relationship between two serial *works*

# Diachronic Works

- Planned to be embodied over time
  - Includes works with a planned end, and those without
- *Work* content changes over time
  - Revision / replacement – Single expression
    - May be done at regular intervals
  - Additions / accumulations – Successive expressions
    - Previous content retained
- Once content is completed, no longer a diachronic work



# Aggregating Works

- A plan for bringing together distinct *expressions* into one or more *manifestations*
  - Creator: the *agent* who came up with the plan
  - Relationships: hold true only for a single aggregating *work*
- For diachronic works: cataloging reflects the plan
- For static works: catalog the results

# Redefinition of Person

- Restricted to real persons who live or are assumed to have lived
  - Can have separate bibliographic identities
- Out of scope: fictional, literary, and legendary personas
  - These are valid concepts, but are not instances of the *Person* entity
- In a name-based authority file, this redefinition does not require a change in practice

# Implications for Name Authorities

- Do NARs control names (*Nomen*) or persons?
  - Nomen aspects: Separate NARs for Charles Dodgson and Lewis Carroll
  - Person aspects: Dodgson's/Carroll's birth place, birth date, associated institution, etc.
- Potential for confusion when different attribute values are assigned to the same person:
  - NAR for J. K. Rowling: 375 Females †2 lcdgt
  - NAR for Robert Galbraith: 375 Males †2 lcdgt

# Recording Methods: Identifier vs. IRI

- Identifier
  - Assigned by an agency/community, following a pattern (local/regional)
  - No preference for Nomen vs. Person approach – supports either one
- IRI/URI
  - Globally unique
  - In an LRM/RDA context, expect a single IRI for the Person
    - Rowling/Galbraith/Scamander/Whisp collectively
  - Problematic mapping to URI's for real world object agents in id.loc.gov
    - Rowling, J. K.: <http://id.loc.gov/rwo/agents/n97108433>
    - Galbraith, Robert: <http://id.loc.gov/rwo/agents/n2013043083>

# Relationships vs. Attributes

- LRM recasts attributes as relationships where possible
- In RDA,
  - *Timespan* will include relationships from an RDA entity to date of birth, date of publication, etc.
  - *Place* will include relationships from an RDA entity to address, location associated with a conference, etc.
  - *Nomen* will include the appellation relationship between
    - A work and its title
    - A person and his/her rank, honour, or office
    - A corporate body and its name

# Modeling Events

- While not an explicit entity, an event can be described through relationships to the following entities, as appropriate:
  - Place
  - Timespan
  - Agent
  - Nomen

# New Governance Structure - NARDAC

- North American RDA Committee – new!
  - Two representatives each from ALA, CCC, and LC
  - Should start its work before the end of February
  - One NARDAC rep to RSC
    - Other North American experts may be co-opted members of RSC
  - Change in proposal process
    - ALA → NARDAC → RSC

# Potential Next Steps for PCC

- Update/revise LC PCC PSs
  - As instructions become more general, more guidance will be needed at the policy level
- Training
  - On LRM?
  - On new RDA Toolkit?
    - ALA Publishing training will cover basics of using the Toolkit, but not application of the instructions



# A Toolkit for Today and Tomorrow

*“The 3R Project builds on RDA’s strengths to benefit institutions where they are today and where they would like to be tomorrow.”*

-- RDA Toolkit brochure, 2018

# More Information

- RDA Toolkit/ 3R Project website
  - <http://www.rdatoolkit.org/3Rproject>
- RDA Steering Committee – Presentations
  - <http://www.rda-rsc.org/rscpresentations>  
Includes recent presentations by various RSC members
- IFLA Library Reference Model
  - <https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017.pdf>
- Ask me:
  - [kglennan@umd.edu](mailto:kglennan@umd.edu)

# Questions?

