Cataloguing with RDA

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Overview

Library Reference Model
LRM and RDA Toolkit
Application profiles
Recording methods
Access and authority control
Aggregates
Diachronic works
Library Reference Model
“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.”

RDA Toolkit provides the user-focussed elements, guidelines, and instructions.

RDA Registry provides the infrastructure for well-formed, linked, RDA data applications.
LRM

2017: Library Reference Model
International Federation of Library Associations and Institutions (IFLA)

LRM consolidates the Functional Requirement family of models

1998: FR for Bibliographic Records (FRBR)
2009: FR for Authority Data (FRAD)
2010: FR for Subject Authority Data (FRSAD)
2011: Working Group on Aggregates report
LRM and RDA

RDA was based on most of FRBR, some of FRAD, all of FRSAD (but mostly out of scope), and none of WGoA

LRM is the opportunity to fill in gaps and reconcile incoherencies
Is LRM suitable for RDA?

LRM “a high-level conceptual model ... intended as a guide or basis on which to elaborate cataloguing rules”

RDA guidance, instructions, elements

“operates at a greater level of generality than FRBRoo, which seeks to be comparable in terms of generality with CIDOC CRM”

RDA cultural heritage communities

LRM “this model is developed very much with semantic web technologies in mind”

RDA linked data communities
LRM as a model

High-level conceptual model
   Entity-relationship structure

Intended for refinement by implementations
   By sub-typing entities, relationships, and attributes
LRM entities

Retained:
  Work, Expression, Manifestation, Item, Person**

Added:
  Agent, Collective Agent, Nomen, Place, Time-span
  + Res (super-class of other entities)
IFLA LRM and RDA entities

RDA Entity = Any RDA Thing
- Covers all other types of entity

- is created by
  - W
  - E
  - M
  - I
- is modified by
- is sub-class of

- has appellation*
- is sub-class of

- is associated with

- Res
- Nomen
- Place
- Time-span

Collective Agent
- P**
- F
- C

Cataloguing with RDA
LRM and RDA Toolkit
Beta RDA Toolkit

Foundational structure for the organization of elements, instructions, and guidance

Combines

• The organization of entities, attributes, and relationships in the IFLA Library Reference Model (LRM)
• The extension of RDA as an implementation of the LRM and resolution of gaps and inconsistencies in RDA
• Explicit provision of recording methods to improve support for RDA data applications
Elements

Element is the unit of focus in the new Toolkit
e.g. “performer” has a “page” all to itself

New elements for access points

Distinction between attribute and relationship elements is dependent on the recording method

New entities ✐ more relationships ✐ more inverses ✐ Many more elements
The numbers

<table>
<thead>
<tr>
<th>13 entities</th>
<th>1700+ elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>388</td>
</tr>
<tr>
<td>Expression</td>
<td>291</td>
</tr>
<tr>
<td>Manifestation</td>
<td>282</td>
</tr>
<tr>
<td>Item</td>
<td>70</td>
</tr>
<tr>
<td>Place</td>
<td>45</td>
</tr>
<tr>
<td>Timespan</td>
<td>54</td>
</tr>
<tr>
<td>RDA Entity</td>
<td>27</td>
</tr>
</tbody>
</table>
Modular structure

Instructions are grouped by element and recording method
   Finer granularity is more flexible for a wider range of applications

Every element page has the same basic structure

RDA Reference data are maintained and displayed separately from guidance and instructions
   Reference data are extracted from the RDA Registry
## Element page structure

<table>
<thead>
<tr>
<th>Definition and Scope</th>
<th>Element Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerecording</td>
<td></td>
</tr>
<tr>
<td>Recording</td>
<td></td>
</tr>
<tr>
<td>Recording an unstructured description</td>
<td></td>
</tr>
<tr>
<td>Recording a structured description</td>
<td></td>
</tr>
<tr>
<td>Recording an identifier</td>
<td></td>
</tr>
<tr>
<td>Recording an IRI</td>
<td></td>
</tr>
<tr>
<td>Related Elements</td>
<td></td>
</tr>
</tbody>
</table>
Application profiles
Instructions

There are no rules!

Most instructions are now optional
Accommodates local practice in a global framework

Instructions assigned to recording methods

Much more choice

 Федерации Flexibility 😊
 Federation How to choose? 😞
Optional instructions

Internationalization
No “one way” of describing and accessing a resource

Two or more recording methods are valid for many elements

No element is mandatory [except “nomen string”]
Same as original Toolkit

Most instructions are optional

Application profile is required to manage choice
Application profile

What elements must be recorded?
What elements should be recorded?
What elements may be repeated?
What vocabularies are used?
What recording methods are used?
What options are used?
Application profiles in RDA Toolkit

Multiple ways:
- Bookmarks and notes
- Policy statements
- Workflows and other user documentation
- External documents

Range of contexts, usage, and sharing
Note

place of publication

Use structured description only. Record no more than 3 values.

Definition and Scope

A place associated with the publication, release, or issuing of a published manifestation.
Conditions

Many instructions apply only when one or more conditions is met
• Kind of resource being described
• Specific characteristic of resource being described
• Existence of pre-recorded data
• Etc.

“Alternative” = option for the same set of conditions

“Exception” = different set of conditions
CONDITION

A manifestation embodies one or more expressions of one or more works.

OPTION

Record information about one or more of the expressions using Manifestation: note on manifestation.

OPTION

Relate the manifestation to each of one or more of the expressions using Manifestation: expression manifested.
**CONDITION**

A manifestation embodies one or more expressions of one or more works.

**OPTION**

Relate the manifestation to each of one or more of the expressions using Manifestation: expression manifested.
Using a Toolkit URL

External document:
Recording a manifestation that is an aggregate of expressions

Record the expressions separately and link.

Hyperlink with URL copied from Toolkit
Recording methods
RDA database scenarios

Flat-file data
Catalogue cards, printed bibliographies, etc.

Description and access
Bibliographic and authority records

Relational databases

Linked data in the Semantic Web
Recording methods

4 methods = “4-fold path”
Unstructured description
Structured description
Identifier
IRI

Extended to all elements
Confined to relationships in original Toolkit

Linked data “method” now explicit
Unstructured description

Transcribed data: what you see is what you get

Free text notes

Uncontrolled terminology for description

Non-standard metadata from non-professional sources or lacking provenance (authority)
Structured description

Data recorded in regular, standard, structured formats for human consumers

Sources of data have "authority"

Authorized and variant access points, or controlled terminology

Data from authority files, vocabulary encoding schemes, and knowledge organization systems
Identifiers

Coded labels intended for machine identification

Identification and disambiguation within a local domain

Authority control numbers, standard identifier schemes, machine-readable database keys, terminology and vocabulary notations
IRI/URI

Internationalized Resource Identifier > Uniform Resource Identifier

Identification within a global domain: the Semantic Web of linked data

Data for "smart" machine applications
Recording related data

RDA Entity 1 is related to

- "note or name of related entity"
- "access point for related entity"
- "identifier for related entity"

RDA Entity 2
Data integration

An RDA data element can (usually) accommodate all four types of data value

Multiple types can be assigned to a single element

Metadata from multiple sources can be used in integrated catalogues and other applications
Data applications

Unstructured: keyword extraction and indexing

Structured: authority and terminology control

Identifier: relational database applications

IRI: Semantic web and linked open data

RDA is for a smart future, not a dumb past
Access and authority control
Person

Definition and Scope
An individual human being.

Prerecording
Describe an entity by recording a metadata statements using one or more.
An element may be used more than once.
Record any elements that are deemed.
Record any elements that are specified.

For guidance, see Application profile.

Use one or more of the recording methods to identify or label a person.
Select one recording method to identify or label a related person.

Recording
Recording an unstructured description
Record an unstructured description as Person: name of person.
For guidance, see Recording methods: Recording an unstructured description.

Recording a structured description
Record a structured description as Person: access point for person.
For guidance, see Recording methods: Recording a structured description.

Recording an identifier
Record an identifier as Person: identifier for person.
For guidance, see Recording methods: Recording an identifier.

Recording an IRI
Record an IRI for the entity as a real-world object.
For guidance, see Recording methods: Recording an IRI.
name of person

Definition and Scope
An appellation of person in natural language and phrasing used in common discourse.

Recording an unstructured description
Use any source of information.

Transcribe the form found in the source of information.

OPTION
Transcribe the value using the RDA Transcription guidelines.

Record the source of information. For guidance, see Data provenance: Recording a source of metadata.

For guidance, see Recording methods: Recording an unstructured description.
Recording an entity 1

Person

name of person: “Inés Arredondo”

preferred name of person: “Inés Arredondo”
access point for person

Recording a structured description

OPTION

Use a vocabulary encoding scheme as a source of information.

Record the vocabulary encoding scheme as a source of information. For guidance, see Data.

Apply any of the following options for constructing an access point.

OPTION

Include a value that is based on Person: name of person.

OPTION

Construct an access point by applying a string encoding scheme to the values of one or more other elements.
Recording an entity 2

Person

name of person: “Inés Arredondo”
preferred name of person: “Inés Arredondo”
access point for person: “Arredondo, Inés”
authorized access point for person

Definition and format
An access point for Person is an expression of the name of a person;
encoding scheme.

Element Reference

Prerecording

Recording

Recording an un

Recording a structured
description

Apply any of the following options for constructing an authorized access point.

**OPTION**

Record a value that is based on Person: preferred name of person.

**OPTION**

Make additions to the name as instructed at Additional elements in authorized access point for person.

Record a value that is selected within a vocabulary encoding scheme as an authorized form of Person: access point for person.
Recording an entity 3

Person

name of person: “Inés Arredondo”

preferred name of person: “Inés Arredondo”

access point for person: “Arredondo, Inés”

authorized access point for person: “Arredondo, Inés 1928-1989” [BNE]
identifier for person

Definition and Scope
An appellation of person that consists of a code, number, or other string, usually independent of name of other person.

Prerecording
This element is used:

Recording
Record this element:

Recording an identifier

OPTION

Use a vocabulary encoding scheme as a source of information.

Record the identifier found in the source of information. Do not modify the identifier.

Record the vocabulary encoding scheme used as the source of information. For guidance, see Data provenance: Recording a source of metadata.

Recording a structured description
This recording method is not applicable to this element.
Recording an entity 4

Person

name of person: “Inés Arredondo”

preferred name of person: “Inés Arredondo”

access point for person: “Arredondo, Inés”

authorized access point for person: “Arredondo, Inés 1928-1989” [BNE]

identifier for person: “32041488” [VIAF]

IRI: http://viaf.org/viaf/32041488
Resource access

Manifestation:

title proper: “Historia Verdadera de una Princesa”

statement of responsibility relating to title proper: “Inés Arredondo ; ilustraciones Enrique Rosquillas”

Work:

author: “Arredondo, Inés 1928-1989”

author: “32041488”

author: http://viaf.org/viaf/32041488
Aggregates
Model for aggregates

2011: IFLA Working Group on Aggregates report
Do not implement before consolidation of FR models [2017]

LRM: “An aggregate is defined as a manifestation embodying multiple expressions ... every aggregate manifestation also embodies an expression of the aggregating work”
An aggregating work is a plan for aggregation.
An aggregating expression realizes the plan by packaging the expressions that are aggregated.

No whole/part relationships
Aggregate

RDA: A manifestation that embodies an aggregating work and one or more expressions of one or more works that realize the plan for aggregation.

AW: Work plan for *Obras completas*

AE: Expression of the plan ...

realizes

E1: Text in Spanish

embodies

E2: Text in Spanish

W1: La señal

realizes

W2: Río subterráneo

Obras completas (Inés Arredondo)

*Obras completas*

January 28, 2020
3 types of aggregation

Collection of expressions
  e.g. Works of Inés Arredondo

Augmentation
  e.g. Historia Verdadera de una Princesa, with illustrations

Parallel expressions of the same work
  e.g. Río subterráneo in Spanish and English

An aggregate may consist of more than one type
Diachronic works
5.8 Modelling of Serials

Serials are complex constructs that combine whole/part relationships and aggregation relationships:

- the complete serial *manifestation* has a whole/part relationship to its individual issues published over time (even though there are serials that happen to have only one issue released);
- and each individual issue is an aggregate of articles (even though there are serials that can occasionally have issues consisting of only one article).

**RDA:**

**diachronic work**

*A work that is planned to be embodied over time.*

RDA/ONIX Framework provides a sub-ontology for how content changes over time

e.g. succession vs integration
Recording a structured description

**OPTION**

Record a term from the following RDA vocabulary encoding scheme.

integrating determinate plan

integrating indeterminate plan

static plan

successive determinate plan

successive indeterminate plan

For a definition, scope note, and notation of a term, see [RDA Extension Plan](#).

**OPTION**

Record a term from another suitable vocabulary encoding scheme.
The WEM stack (FRBR)

- **Work**: 1 and only 1
- **Expression**: At least 1
- **Manifestation**: At least 1
- **Item**: At least 1

1 and only 1
At least 1
1 and only 1
At least 1
At least 1
A plan for diachronic content is locked into all three entities: a change in characteristic is a change in plan, and therefore a new Work.
If one of the carrier types ceases publication, it cannot imply that all carrier types have ceased.
Work groups

A set of works that are identified as a whole

- **Work**
  - has appellation of work group
    - “Appellation of work group”
  - has authorized access point for work group
    - “Authorized access point for work group” e.g. “New York Times…”
  - has identifier for work group
    - “Identifier for work group” e.g. ISSN-L
Serial work

A work intended to be realized in multiple distinct expressions embodied during a timespan with no ending.

Work-Work relationships
• LRM-R19 precedes [logical, not chronological]
• LRM-R22 was transformed into [by policy, etc.]

Expression-Expression relationship:
• LRM-R25 was aggregated by
transformed into

aggregated by

precedes

precedes
Other changes to RDA

Data provenance: When is changing, diachronic data valid?

- scope of validity; date of validity

Some elements moved from Manifestation to Work

- frequency; ISSN

Ongoing liaison with ISSN International Centre and ISBD Review Group
Conclusion

RDA is a package of data elements, guidelines, and instructions ...

A package that meets the resource description and access needs of the 21st century
Muchas gracias!

RDA Steering Committee
http://www.rda-rsc.org/

RDA presentations
http://www.rda-rsc.org/node/560

RDA Toolkit
https://www.rdataoolkit.org/