# 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



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### **RDA**

"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

Resource Description & Access

## 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, relation

By sub-typing entities, relationships, and attributes



## LRM entities

### Retained:

Work, Expression, Manifestation, Item, Person\*\*

### Added:

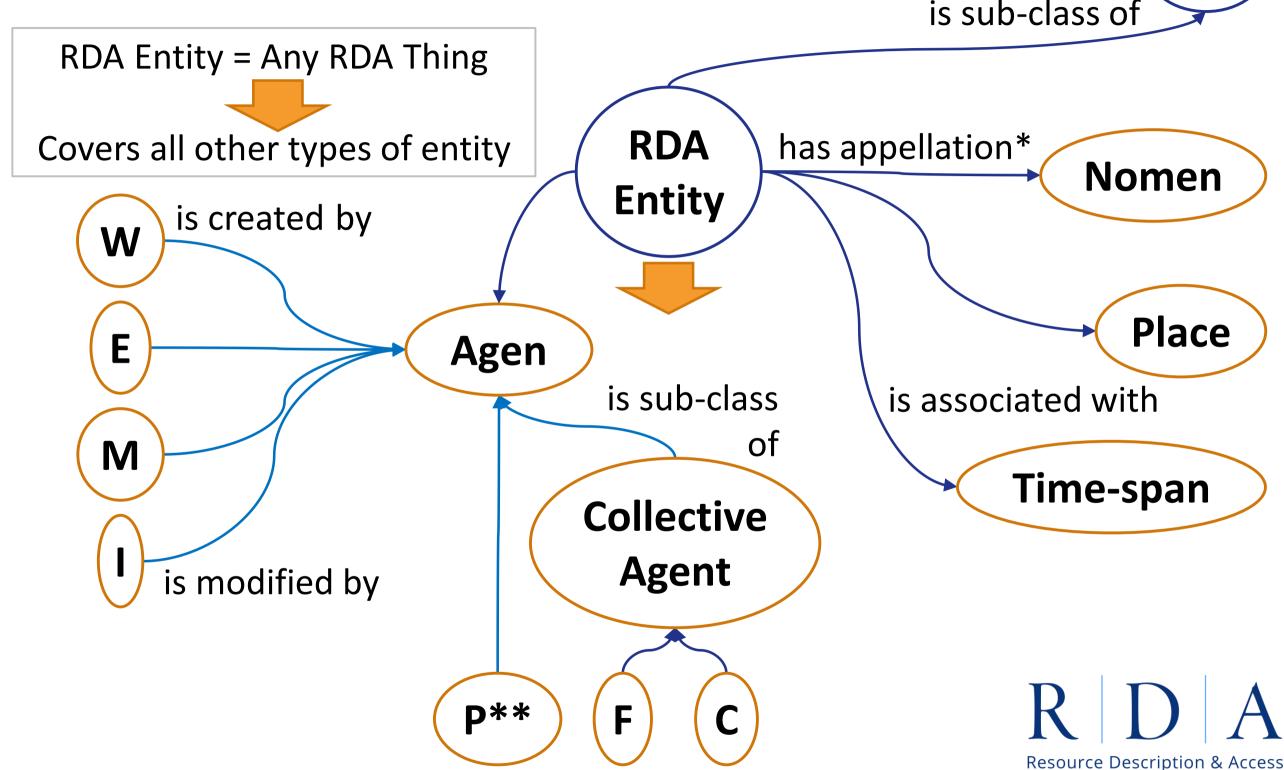
Agent, Collective Agent, Nomen, Place, Time-span

+ Res (super-class of other entities)



# IFLA LRM and RDA entities





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# 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

Resource Description & Access

# The numbers

13 entities | 1700+ elements

Work	388	Agent	175
Expression	291	Person	85
Manifestation	282	Collective Agent	34
Item	70	Corporate Body	84
Place	45	Family	46
Timespan	54	Nomen	169
RDA Entity	27		



# 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

**Definition and Scope** 

**Element Reference** 

Prerecording

Recording

Recording an unstructured description

Recording a structured description

Recording an identifier

Recording an IRI

**Related Elements** 

**Instructions** 

**RDA Reference** 



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## 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

- Flexibility ©
- 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



### Definition and Scope **I**

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



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# 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.

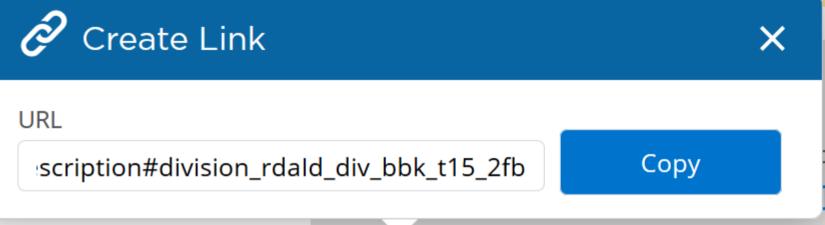
### **OPTION**

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





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



of the expressions using

### **OPTION**

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



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# 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



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## 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

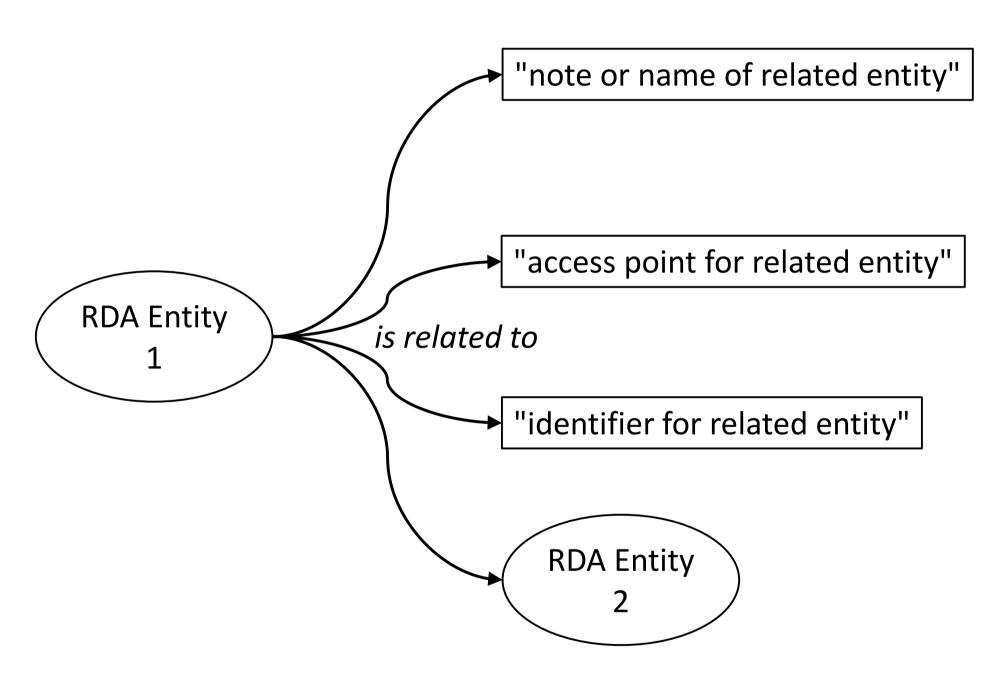
Internationalized Resource Identifier > Uniform Resource Identifier

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

Data for "smart" machine applications



# Recording related data





# 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



## **Cataloguing with RDA**





# Person

## **Definition and Scope**

An individual human being.

## Prerecording

metadata statements using one or moi

Record any elements that are specifie Recording an IRI

For guidance, see Application profile:

## 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.

Describe an entity by recording a meter For guidance, see Recording methods: Recording a structured description.

### Recording an identifier

An element may be used more than c Record an identifier as Person: identifier for person.

Record any elements that are deemed For guidance, see Recording methods: Recording an identifier

Record an IRI for the entity as a real-world object.

For guidance, see Recording methods: Recording an IRI

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.

Resource Description & Access

# 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

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

modify

#### **OPTION**

Record the vocab

guidance, see Dat

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.

Resource Description & Access

# 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 an**

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

An access point fo encoding scheme.



Element Ref

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

## Prerecording

### Recording

Record this eleme

### Recording an u

This recording me

### **OPTION**

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

### Recording a structured description

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 na person.

Recording an identifier

Element Refe

### **Prerecording**

This element is use

### Recording

Record this elemen

Recording an u

#### **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

This recording method is not applicable to this element.

### 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

structured identifier IRI



## **Cataloguing with RDA**



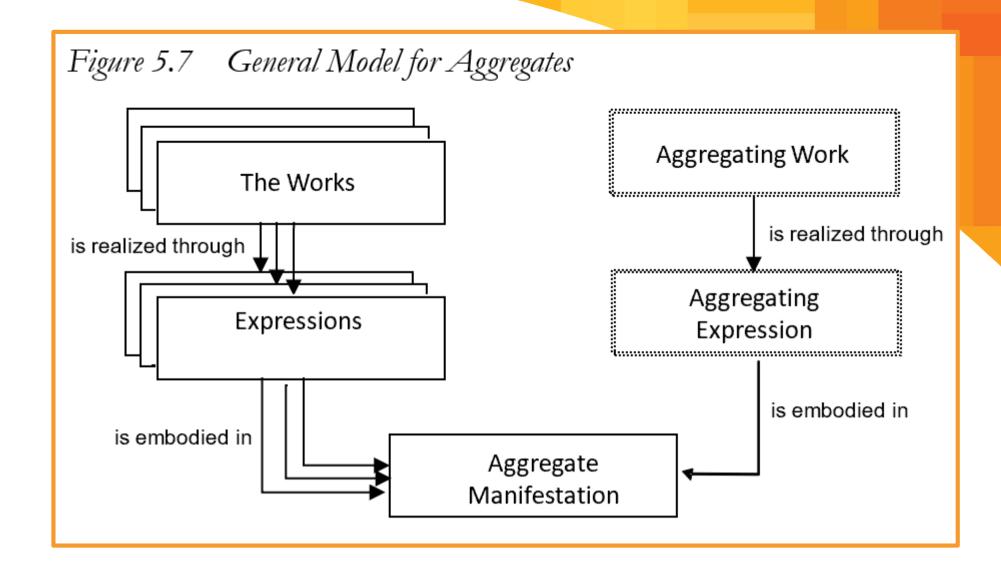


# Model for aggregates

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

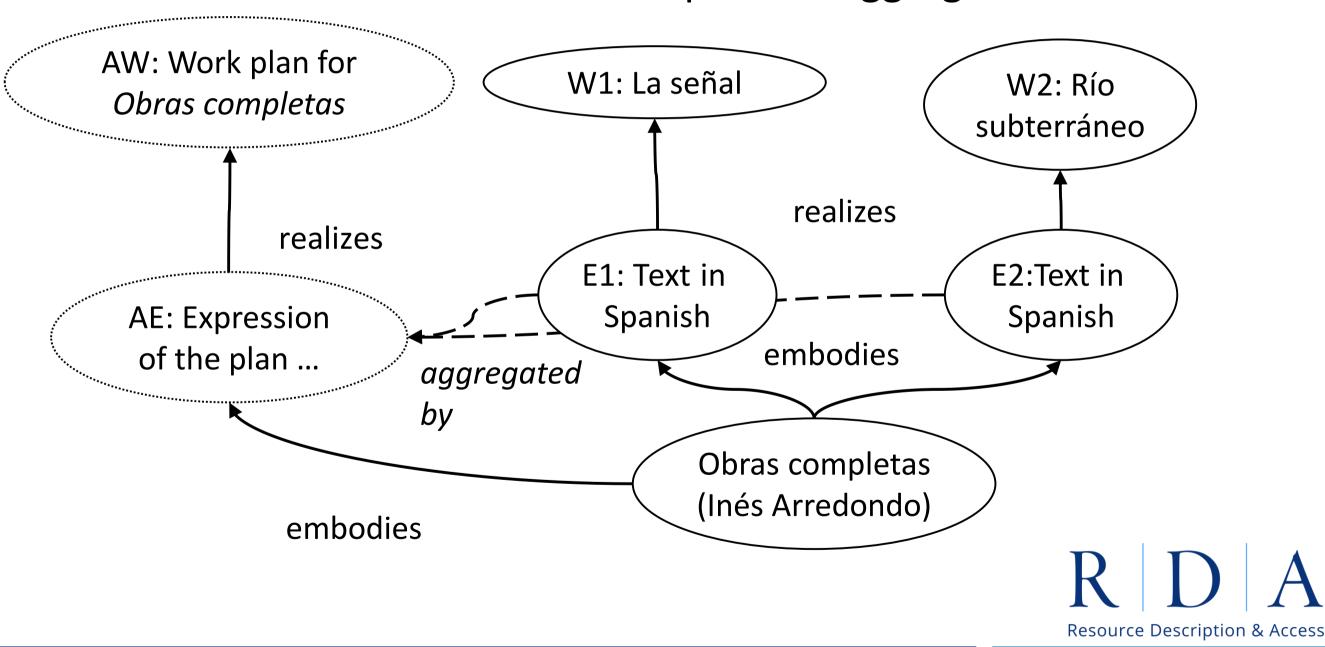
No whole/part relationships



# Aggregate

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



# 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



## **Cataloguing with RDA**





## 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

Resource Description & Access

### 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

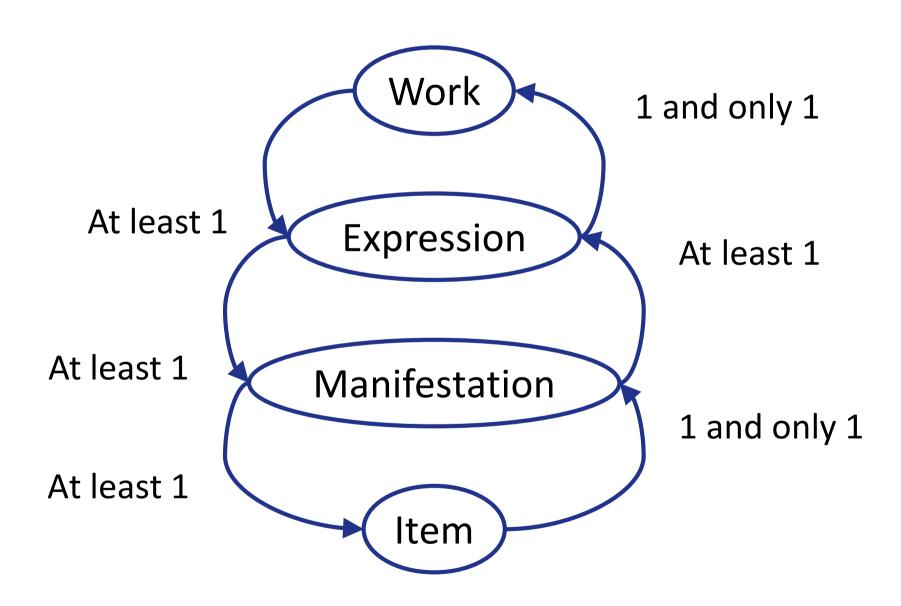
For a definition, scope note, and notation of a term, see RDA Extension Plan.

#### **OPTION**

Record a term from another suitable vocabulary encoding scheme.

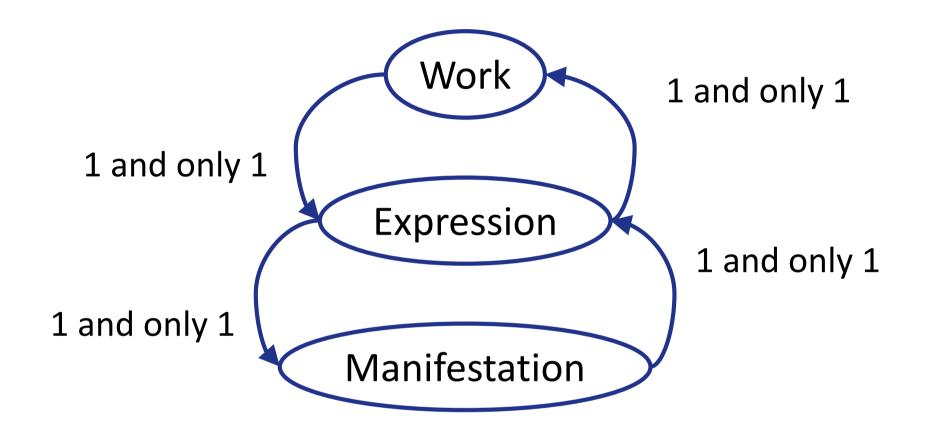


# The WEM stack (FRBR)



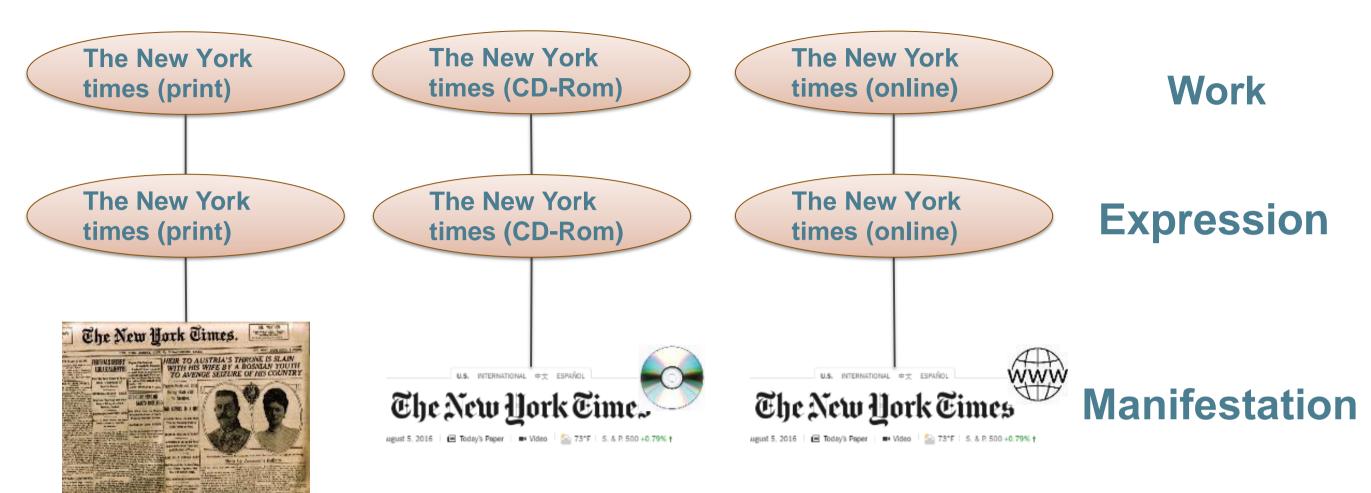


# The WEM lock (diachronic)



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

Resource Description & Access

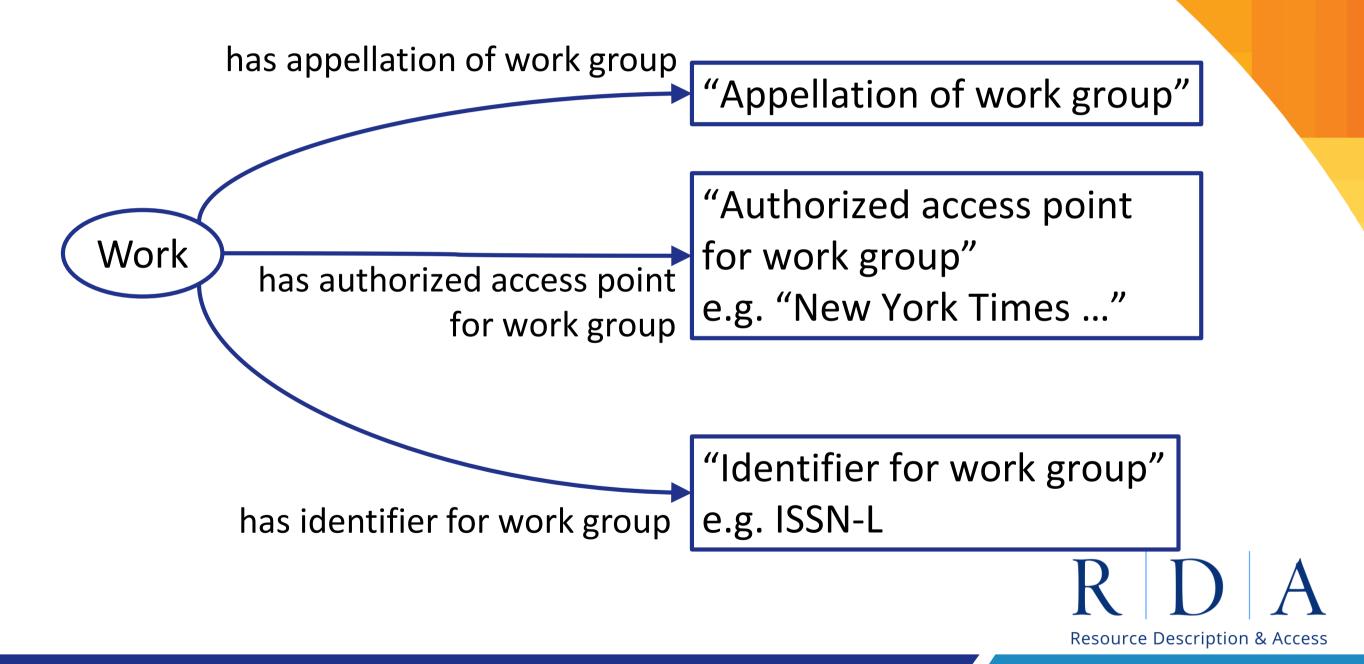


If one of the carrier types ceases publication, it cannot imply that all carrier types have ceased.



# Work groups

A set of works that are identified as a whole



# Serial work

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

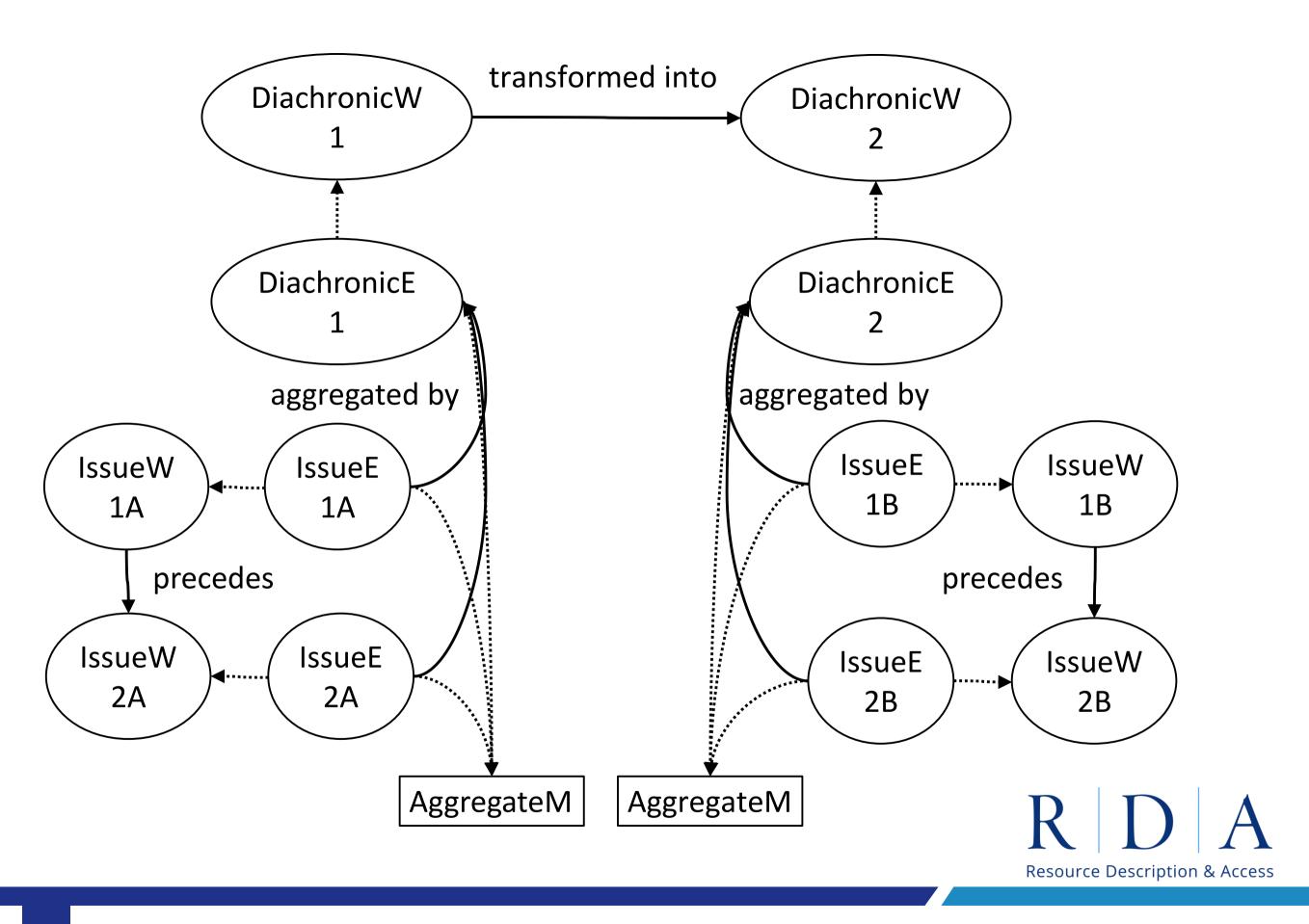
Work-Work relationships

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

Expression-Expression relationship:

LRM-R25 was aggregated by





# 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

Resource Description & Access

# 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.rdatoolkit.org/

