

To: Joint Steering Committee for Development of RDA
From: Gordon Dunsire, Chair, JSC RDA/ONIX Framework Working Group
Subject: JSC recommendations for extension and revision of the Framework

Abstract

This paper discusses specific JSC recommendations for extending and revising the RDA/ONIX Framework for Resource Categorization

Introduction

A task of the JSC RDA/ONIX Framework Working Group is to review the recommendations for the extension and revision of the RDA/ONIX Framework for Resource Categorization (ROF) contained in 6JSC/RDA/Categorization/rev, and to review the specific recommendations relevant to RDA and present the results to the JSC.

1. Projector/film roll

See 6JSC/ALA rep/1/rev [pt.1] issue #1.

RDA wishes to map the carrier type "film roll" with definition "A wound length of film" to the ROF, with *IntermediationTool* value "projector". It is not obvious that the ROF definition of "projector" is broad enough to include a light table or other similar device that would commonly be used to view a roll of photographic film.

JSC recommendation:

Revise the definition of "projector" in ROF:

Projector

Current: An optical device consisting of a light source, lens system, and image holder for projecting an image on a screen or other surface.

Proposed: An optical device containing a light source and lens system for projecting an image on a screen or other surface.

Discussion

The proposed definition removes the restriction of having an image holder, but it is not essential to the idea of a projector or projected carrier.

Outcome

The Working Group agrees with the proposal. The ROF definition of "projector" will be revised. The revision has been applied to the namespace data in 6JSC/ROFWG/1.

2. Volume/binding

See: 6JSC/ALA rep/1/rev [pt.1] issue #2.

The RDA carrier type "volume" has the definition "One or more sheets bound or fastened together to form a single unit". The ROF *HousingFormat* value "binding" is defined as "An outer cover affixed to a gathering of one or more sheets." The ROF definition requires an outer cover; the RDA type also includes sheets gathered by a fastening without an outer cover.

JSC recommendation

Option 1: Map RDA "volume" to both ROF "binding" and ROF "not applicable". This seems ambiguous, but may not be. The main problem seems to be how to interpret the two values: presumably JSC intends that either condition satisfies the definition ("or"), not that both conditions must be satisfied ("and").

Option 2: Divide "volume" into two RDA carrier type categories: RDA "bound volume" and RDA "unbound volume". The former would be mapped to ROF "binding"; the latter could be mapped to ROF "not applicable" — but it might be preferable to add an RDA-defined value "fastening," as that is the alternative to "binding" in the definition of "volume"; "fastening" would also distinguish "unbound volume" from "sheet". The ALA representative would recommend this option; note that JSC could add an RDA-defined sub-value without needing to make any changes to the ROF specifications.

JSC: The term "book" is commonly used to refer to an RDA "volume", but is too ambiguous to be included as a value for an RDA carrier type. This continues to engender controversy from RDA users and constituencies. What are the views of the Working Group?

Discussion

Option 1 should be avoided. It introduces too much complexity, and breaks the existing pattern of assigning only one value from each base attribute.

For Option 2, it is worth questioning the ROF values first:

Is the essence of "binding" the presence of a cover? Or is it the presence of a mechanism for gathering sheets together in a particular order? Is it the fixing of the order that is important? A loose-leaf "binder" may not have a cover. A case or wallet containing loose-leaf sheets does not physically fix the order. Even if every loose sheet is numbered to give a virtual order, it does not constitute a fixed gathering. Should the ROF definition be amended?

There is nothing to prevent the term "book" being added to the RDA carrier types. The ambiguity associated with the term should be resolved by the definition and scope note. It would have the same base carrier category as "volume"; see [9. Ambiguous mappings](#).

Outcome

The Working Group agrees that the presence of a cover is not essential to the intended meaning of "binding", and that there should be no requirement for RDA to take Option 2. The ROF definition will be revised:

binding

Current: An outer cover affixed to a gathering of one or more sheets.

Revised: A gathering of one or more sheets in a fixed order, with or without an affixed outer cover.

The revision has been applied to the namespace data in 6JSC/ROFWG/1.

Working Group recommendation to the JSC 1:

Map RDA "volume" directly to ROF "binding" (with the revised definition).

3. Object/storage medium format

See: 6JSC/ALA rep/1/rev [pt.1] issue #3.

The RDA carrier type "object" has no applicable ROF StorageMediumFormat value.

JSC recommendation

a) Add "Other" as a ROF ***StorageMediumFormat*** value: Gordon Dunsire points out that defining "other" here turns the vocabulary for Storage Medium Format into an exhaustive categorization and a closed list; it would no longer be possible to add new values to the list, because they would all have been covered by "other"! I [the ALA representative] don't think that is what we want, so I would not recommend this.

b) Add "Not applicable" as a ROF ***StorageMediumFormat***: Several JSC responses note that Storage Medium Format is definitely applicable to **objects**. Therefore, mapping to such a value would be a misstatement. So I [the ALA representative] don't recommend this either.

c) I [the ALA representative] see no alternative but to raise this issue with the ONIX community and jointly seek a solution. In the meantime, there would be no valid specifications for mapping RDA "object" to ROF.

JSC: Should this be a single category? Or should there be separate categories for artifacts and naturally-occurring objects? Are there even more specific types of objects that ought to be identified?

Discussion

The Working Group agrees that option a) is not desirable. The use of "other" in linked data vocabularies involves a latent semantic – other than what? The definition of "other" is dependent on the definitions of all other values, so it either changes when another value changes, or nothing can change. Neither choice is desirable.

The Working Group agrees that option b) ignores the issue.

Questions to be raised when considering the issue include:

- Is the surface of the object the storage medium?
- Is the shape of the object important? ("sphere" and "cylinder" are existing ROF values)
- At what point does the storage medium change from one value to another, as an object deforms? (A classic categorization question!)
- What are the relationships between the existing ROF values? Is a "cylinder" a rolled-out "strip"?

Outcome

The Working Group will investigate further, starting with the treatment of the category "object" in the CIDOC CRM.

4. Aperture card; Microfilm cartridge/microfilm reel

See: 6JSC/ALA rep/1/rev [pt.1] issue #4.

RDA carrier type "aperture card" is currently mapped to ROF *StorageMediumFormat* value "sheet". However, there is an RDA-defined sub-value for "card". I [the ALA representative] recommend that this category be mapped to "card".

RDA carrier types "microfilm cartridge" and "microfilm reel" are currently mapped to ROF *IntermediationTool* "microform reader". However, there is an RDA-defined sub-value for "microfilm reader" to which "microfilm cassette" has been mapped. I [the ALA representative] recommend that these two categories also be mapped to "microfilm reader."

Discussion

Using sub-values results in a ROF qualified carrier category. The RDA qualified carrier categories are given in Table 3 in the Appendix.

The mappings discussed by the JSC are consistent with the Framework refined by the RDA values given in Table 1 in the Appendix.

Outcome

The mappings will be included in the namespace mappings between RDA and ROF.

5. Computer as a Media type

Is the use of the term "computer" as a ROF *IntermediationTool* value correct?

Is "computer" as an RDA media type correct?

Discussion

An issue with the term "computer" is that it can be an adjective as well as a noun in English. The ROF *IntermediationTool* values are nouns that label the devices. The Working Group cannot find a specific reason to change the term in ROF, although there may be a more general need to review the terms and definitions.

The RDA media type values function as adjectives reflecting the first word of each RDA carrier category value for the specific intermediation tool; e.g. "microfilm cartridge", "audio disc", etc. This pattern is not used consistently (e.g. "audiocassette") or comprehensively (e.g. "aperture card"). The use of adjectives as values is not good practice. It causes problems for translations because of gender and other forms of inflection. It is better to use a noun or noun phrase, e.g. "microfilm device", "audio device", "computer device", etc.

Outcome

Working Group recommendation to the JSC 2:

The JSC should review the terminology used for RDA carrier category labels in the context of internationalization.

6. Playaway

JSC: There is a need to accommodate terms for specific types of carrier such as Playaways, and a need for an agile mechanism to manage the addition of and changes to values. A Playaway is a type of digital device that uses proprietary software and data formats rather than open formats. The Kindle is another example. Both are sub-types of the ROF *IntermediationTool* "computer".

Discussion

The JSC can develop a set of RDA sub-values for ROF *IntermediationTool* and create qualified carrier categories. This does not require changes to ROF, so JSC can develop its own maintenance infrastructure. Are appropriate sub-values available in another vocabulary? There are no codes for specific types in ONIX.

Outcome

Working Group recommendation to the JSC 3:

Develop a set of RDA sub-values for ROF *IntermediationTool* and create qualified carrier categories. The sub-values can be a separate vocabulary encoding scheme, as shown in Table 1, with a map to ROF *IntermediationTool* values.

7. Audio wire reel/Audio belt

Add "audio wire reel" and "audio belt" as RDA carrier type categories.

Discussion

The categories are included in the RDA carrier category spreadsheet. They need to be added to the RDA Carrier type value vocabulary, with definitions, to obtain their URIs. See [9. Ambiguous mappings](#).

The definitions proposed in 6JSC/ALA rep/1/rev [pt.1] require slight amendment:

audio belt: A loop of flexible plastic or magnetic film on which audio signals are mechanically recorded, commonly known under the trade name Dictabelt.

audio wire reel: A rReel or spool of steel or stainless steel wire upon which audio signals are magnetically recorded.

Outcome

Working Group recommendation to the JSC 4:

Add the categories for "audio belt" and "audio wire reel" with revised definitions to the RDA Glossary and RDA Registry.

The assigned URIs will be added to the namespace mappings based on Table 2.

8. Form/Genre

Version 1.0 of ROF recommended (#3) "That consideration be given to defining a subset of agreed values for Form/Genre to be used by both RDA and ONIX to construct QualifiedContentCategories for cartographic resources (e.g., cartographic image, cartographic object) and computer resources (e.g., computer data, computer program)." The terms "cartographic" and "computer" have been added as local RDA values to ROF ***FormGenre***.

JSC: Genre/form should not be just for cartographic and computer resources and we need to sort out the relationships with RDA ***Form of Work***.

Discussion

The qualified content categories are given in Table 5 in the Appendix.

It is not good practice to use adjectives as values because of gender and inflection issues in non-English languages. In this case, the explicit "cartographic forms" and "computer forms" might be better. See the discussion under [5. Computer as a Media type](#).

The Working Group notes that the ISBD Linked Data Study Group has discussed why "cartographic" is traditionally treated separately; e.g. why not also "medical", etc.? The

Working Group also notes that the IFLA Classification and Indexing Section has set up a Form/Genre Working Group.

A vocabulary encoding scheme for RDA **Form of Work** can also be the local RDA vocabulary for ROF **FormGenre**.

Outcome

Working Group recommendation to the JSC 5:

The JSC should develop the terminology used for RDA **Form of Work** in the context of internationalization, and consider if the same terminology can be used as the RDA values of ROF **FormGenre**.

9. Ambiguous mappings

Base categories are intended to be broad and finite, so duplicate mappings of different labels to the same base category can occur. ROF users have a choice:

1. Treat the labels as variants for the same category.
2. Create qualified categories for each label.

JSC: Do we wish to have unique ROF mappings for each RDA category? If so, appropriate RDA-defined sub-values need to be added to the RDA application of the Framework.

Discussion

RDA already uses the second approach, as shown by the RDA qualified categories in Table 3 and Table 5.

Table 2 in the Appendix gives the RDA base carrier categories and identifies those that are RDA qualified categories (given in Table 3) and those that are duplicate base categories with different labels.

Table 4 in the Appendix gives the RDA base content categories and identifies those that are RDA qualified categories (given in Table 3) and those that are duplicate base categories with different labels.

RDA qualified categories that are not duplicate base categories are a result of the use of RDA sub-values.

Sub-values of ROF **IntermediationTool** have already been used for RDA, e.g. "overhead projector". The duplicate categories mapped to **IntermediationTool** "audio player" can be disambiguated, following this example, by adding sub-values:

"audio belt player"
"audio wire player"
"audio roll player"

"audio tape player"
"audio soundtrack player"

The other approach is to add sub-values of ROF **StorageMediumFormat**. For example:

"audio belt" sub-value of "strip"
"audio roll" sub-value of "roll"

The two approaches are not mutually exclusive. The Working Group has no view as to whether one approach is better than the other.

The only other duplicates are the RDA content types "computer dataset" and "computer program", themselves disambiguated from "cartographic dataset" by the ROF **FormGenre** sub-values "computer" and "cartographic". If the sub-values are viewed as "computer forms", etc. (see discussion under [8. Form/Genre](#)), then is it useful to add sub-sub-values for "computer dataset" and "computer program" as forms? The two terms would be skos:narrower "computer [forms]".

Note that the "cartographic dataset" term indicates that "dataset" may be applicable across the ROF ontology rather than confined to hierarchical sub-typing. A case can be made that cartographic datasets are especially dependent on other RDA Work/Expression elements such as **Equinox** and are not, therefore, mere sub-types of computer datasets.

Outcome

Working Group recommendation to the JSC 6, 7, 8:

The JSC should use a consistent approach to disambiguating ROF base categories. RDA already disambiguates its categories by qualifying them with RDA sub-values and RDA local vocabularies.

The JSC should consider adding sub-values of **IntermediationTool** "audio player", and/or sub-values of **HousingFormat** values.

The JSC should consider the applicability of "dataset" to other RDA categories to inform future work of the ROF Working Group.

10. RDA interaction with ROF namespace

Table 1 in the Appendix shows RDA extensions or refinements to ROF value vocabularies.

These should be represented as linked data in a different namespace from ROF, such as the RDA value vocabularies namespace. The data in Table 1 is available in a format suitable for upload into the RDA Registry.

Table 2, Table 3, Table 4, and Table 5 represent mappings from RDA categories to ROF. The data in these tables is also available in a format suitable for upload into the RDA Registry.

Working Group recommendation to the JSC 9:

The JSC should approve the content of the tables in the Appendix and arrange for upload into the RDA Registry after the ROF namespace has been established.

Working Group recommendations to the JSC

- 1: Map RDA "volume" directly to ROF "binding" (with the revised definition).
- 2: The JSC should review the terminology used for RDA carrier category labels in the context of internationalization.
- 3: Develop a set of RDA sub-values for ROF **IntermediationTool** and create qualified carrier categories. The sub-values can be a separate vocabulary encoding scheme, as shown in Table 1, with a map to ROF **IntermediationTool** values.
- 4: Add the categories for "audio belt" and "audio wire reel" with revised definitions to the RDA Glossary and RDA Registry.
- 5: The JSC should develop the terminology used for RDA **Form of Work** in the context of internationalization, and consider if the same terminology can be used as the RDA values of ROF **FormGenre**.
- 6: The JSC should use a consistent approach to disambiguating ROF base categories. RDA already disambiguates its categories by qualifying them with RDA sub-values and RDA local vocabularies.
- 7: The JSC should consider adding sub-values of **IntermediationTool** "audio player", and/or sub-values of **HousingFormat** values.
- 8: The JSC should consider the applicability of "dataset" to other RDA categories to inform future work of the ROF Working Group.
- 9: The JSC should approve the content of the tables in the Appendix and arrange for upload into the RDA Registry after the ROF namespace has been established.

Appendix

Table 1: RDA ROF refinement value vocabularies

URI	skos:prefLabel	skos:definition	skos:scopeNote	skos:broader
Character				
rdarofch:T1001	movement	Content expressed in movement of the human body.		rofch:T1004
Form/Genre				
rdaroffg:T1001	cartographic	Content representing the whole or part of the Earth or any celestial body at any scale.		
rdaroffg:T1002	computer	Content consisting of digitally encoded data or instructions intended to be processed by a computer.		
Intermediation tool				
rdarofit:T1001	aperture card reader	A microform reader designed for use with aperture cards.		rofit:T1001
rdarofit:T1002	microfiche reader	A microform reader designed for use with microfiches.		rofit:T1001
rdarofit:T1003	microopaque reader	A microform reader designed for use with microopaques.		rofit:T1001
rdarofit:T1004	microfilm reader	A microform reader designed for use with microfilm.		rofit:T1001
rdarofit:T1005	filmstrip projector	A projector designed for use with filmstrips.		rofit:T1003
rdarofit:T1006	overhead projector	A projector designed for use with overhead transparencies.		rofit:T1003
rdarofit:T1007	slide projector	A projector designed for use with slides.		rofit:T1003
Storage medium format				
rdarofsf:T1001	card	A small sheet of opaque material.		rofsf:T1001

Table 2: RDA base carrier categories

CategoryLabel	StorageMedium	HousingFormat	IntermediationTool
object		not applicable	not required
computer chip cartridge	chip	cartridge	computer
audio cylinder	cylinder	not applicable	audio player
computer disc cartridge	disc	cartridge	computer
audio disc	disc	not applicable	audio player
videodisc	disc	not applicable	audiovisual player
computer disc	disc	not applicable	computer
stereograph disc	disc	not applicable	stereoscope
online resource	file server	not applicable	computer
audio cartridge	roll	cartridge	audio player
video cartridge	roll	cartridge	audiovisual player
computer tape cartridge	roll	cartridge	computer
*microfilm cartridge	roll	cartridge	microform reader
film cartridge	roll	cartridge	projector
audiocassette	roll	cassette	audio player
videocassette	roll	cassette	audiovisual player
computer tape cassette	roll	cassette	computer
*microfilm cassette	roll	cassette	microform reader
film cassette	roll	cassette	projector
audio belt	roll	not applicable	audio player
audio roll	roll	not applicable	audio player
*microfilm roll	roll	not applicable	microform reader
roll	roll	not applicable	not required
film roll	roll	not applicable	projector
**filmstrip	roll	not applicable	projector
audio wire reel	roll	reel	audio player
audiotape reel	roll	reel	audio player
sound-track reel	roll	reel	audio player
videotape reel	roll	reel	audiovisual player
computer tape reel	roll	reel	computer
*microfilm reel	roll	reel	microform reader
film reel	roll	reel	projector
volume	sheet	binding	not required
*microfiche cassette	sheet	cassette	microform reader
flipchart	sheet	flipchart	not required
computer card	sheet	not applicable	computer
*aperture card	sheet	not applicable	microform reader
**microfiche	sheet	not applicable	microform reader
**microopaque	sheet	not applicable	microform reader
microscope slide	sheet	not applicable	microscope

**card	sheet	not applicable	not required
sheet	sheet	not applicable	not required
*overhead transparency	sheet	not applicable	projector
**slide	sheet	not applicable	projector
stereograph card	sheet	not applicable	stereoscope
*filmstrip cartridge	strip	cartridge	projector
*microfilm slip	strip	not applicable	microform reader
filmslip	strip	not applicable	projector

*Qualified category; **Duplicate base category

Table 3: RDA qualified carrier categories

CategoryLabel	StorageMedium	HousingFormat	IntermediationTool
aperture card	<i>card</i>	not applicable	<i>aperture card reader</i>
card	<i>card</i>	not applicable	not required
filmstrip	roll	not applicable	<i>filmstrip projector</i>
filmstrip cartridge	strip	cartridge	<i>filmstrip projector</i>
microfiche	sheet	not applicable	<i>microfiche reader</i>
microfiche cassette	sheet	cassette	<i>microfiche reader</i>
microfilm cartridge	roll	cartridge	<i>microfilm reader</i>
microfilm cassette	roll	cassette	<i>microfilm reader</i>
microfilm reel	roll	reel	<i>microfilm reader</i>
microfilm roll	roll	not applicable	<i>microfilm reader</i>
microfilm slip	strip	not applicable	<i>microfilm reader</i>
microopaque	sheet	not applicable	<i>microopaque reader</i>
overhead transparency	sheet	not applicable	<i>overhead projector</i>
slide	sheet	not applicable	<i>slide projector</i>

RDA sub-values.

Table 4: Duplicate RDA base content categories

CategoryLabel	Character	SensoryMode	ImageDimensionality	ImageMovement
three-dimensional moving image	image	sight	three-dimensional	moving
**cartographic three-dimensional form	image	sight	three-dimensional	still
three-dimensional form	image	sight	three-dimensional	still
**cartographic moving image	image	sight	two-dimensional	moving
two-dimensional moving image	image	sight	two-dimensional	moving
**cartographic image	image	sight	two-dimensional	still
still image	image	sight	two-dimensional	still
**cartographic tactile three-dimensional form	image	touch	three-dimensional	still
tactile three-dimensional form	image	touch	three-dimensional	still
**cartographic tactile image	image	touch	two-dimensional	still
tactile image	image	touch	two-dimensional	still
spoken word	language	hearing	not applicable	not applicable
text	language	sight	not applicable	not applicable
tactile text	language	touch	not applicable	not applicable
performed music	music	hearing	not applicable	not applicable
notated music	music	sight	not applicable	not applicable
tactile notated music	music	touch	not applicable	not applicable
sounds	other	hearing	not applicable	not applicable
**cartographic dataset	other	none	not applicable	not applicable
**computer dataset	other	none	not applicable	not applicable
computer program	other	none	not applicable	not applicable
*notated movement	other	sight	not applicable	not applicable
*tactile notated movement	other	touch	not applicable	not applicable

*Qualified category; **Duplicate base category

Table 5: RDA qualified content categories

Category Label	Character	SensoryMode	ImageDimensionality	ImageMovement	FormGenre
cartographic dataset	other	none	not applicable	not applicable	cartographic
cartographic image	image	sight	two-dimensional	still	cartographic
cartographic moving image	image	sight	two-dimensional	moving	cartographic
cartographic tactile image	image	touch	two-dimensional	still	cartographic
cartographic tactile three-dimensional form	image	touch	three-dimensional	still	cartographic
cartographic three-dimensional form	image	sight	three-dimensional	still	cartographic
computer dataset	other	none	not applicable	not applicable	computer
computer program	other	none	not applicable	not applicable	computer
notated movement	<i>movement</i>	sight	not applicable	not applicable	
tactile notated movement	<i>movement</i>	touch	not applicable	not applicable	

RDA sub-values.