

Mapping BIBFRAME with RDA for Representative Expression of LRM

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Abstract

Library Reference Model (LRM) as a new conceptual model for constructing linked data in library has impact on RDA as content rules and BIBFRAME as encoding format. Among LRM attributes (or properties), especially, representative expression is a new one. RDA has expanded the attributes to reflect representative expression of LRM, BIBFRAME should also accept the RDA elements for representative expression because BIBFRAME should reflect RDA attributes as encoding format. This poster is to propose the BIBFRAME mapping with RDA representative expression.

Keywords: LRM; BIBFRAME; RDA; mapping; representative expression

1. Representative expression in LRM

Representative expression is a new attribute which is deemed essential in characterizing the work and whose values are taken from a representative or canonical expression of the work. This attribute is useful for describing and distinguishing a work. The values of a representative expression element can be used in the description of a work by copying them from a representative expression to the corresponding work element. When implementing, it would be needed to specify which attributes are considered significant for the identification of works and provide appropriate sub types for the representative expression attributes. The sub-types might be defined differently depending on the value of the category of what attribute (Riva, Bœuf, & Žumer, 2017).

But specific attributes are not defined in LRM, therefore content rules and encoding format must define the specific element to accept the representative expression attributes. RDA 2020 reflected the specific representative expression attributes, but BIBFRAME must be considered to accept representative expression attributes because BIBFRAME was published in 2016.

2. RDA 2020 reflection of Representative expression

Revised RDA 2020 has accepted LRM entities, attributes and relationship as content rules. Among them, a representative expression may be used to establish the values that are compared to determine if an expression that is being described is a realization of a new work. Any expression can be used as a representative expression. Optionally, a representative expression for an expression selected to represent a work could be recorded. The selection of a representative expression and the values to be recorded for a work are dependent on an application that uses the data. As a result, a work may be described using different representative expressions with different values for the same element. RDA specifies which expression elements are considered significant for the description and distinction of works and provides a corresponding set of Work elements. Record the value of an element of a representative expression using any of the following elements:

Aspect ratio of representative expression, colour content of representative expression, content type of representative expression, date of capture of representative expression, date of representative expression, duration of representative expression, extent of representative expression, intended audience of representative expression, key of representative expression, language of representative expression, medium of performance of choreographic content of representative expression, medium of performance of musical content of representative expression,

place of capture of representative expression, projection of cartographic content of representative expression, scale of representative expression, script of representative expression, sound content of representative expression (RDA toolkit, 2020).

For example, musical works, Beethoven Violin Concerto in D major op.61, have representative attributes such as D major as key and Violin as medium of performance that is different from textual work's representative attributes such as language and intended audience. These attributes' values are originated from the expressions of a work.

3. BIBFRAME mapping

BIBFRAME based on FRBR should consider how representative expression elements of RDA / LRM could be reflected in BIBFRAME. RDA had been transformed by LRM, BIBFRAME should be mapped with elements of RDA and especially, additional class or property of BIBFRAME should be developed to accept representative expression of LRM/RDA. Lee (2020) had mapped between RDA and BIBFRAME and suggested that BIBFRAME should develop new properties for script of representative expression and medium of performance of choreographic content of representative expression of RDA. But this study suggest the new mapping table between BIBFRAME and RDA as ontology style using class and property, and multi-path:

TABLE 1: mapping between RDA and BIBFRAME

LRM	RDA	BIBFRAME	Note
Representative expression	aspect ratio of representative expression	<bf:Work> or <bf:Instance> <bf:aspectRatio> <bf:AspectRatio>	Suggested use with Work or Instance.
	colour content of representative expression	<bf:Work> or <bf:Instance> or <bf:Item> <bf:colorContent> <bf:ColorContent>	Suggested use with Work or Instance or item.
	content type of representative expression	<bf:Work> <bf:content> <bf:Content>	Only Work class
	date of capture of representative expression	<bf:Work> or <bf:Instance> <bf:capture> <bf:Capture> <bf:date> <rdfs:Literal>	<bf:capture> + <bf:date>
	date of representative expression	<rdfs:Resource> <bf:date> <rdfs:Literal>	
	duration of representative expression	<bf:Work> or <bf:Instance> <bf:duration> <rdfs:Literal>	Suggested use with Work or Instance.
	extent of representative expression	<rdfs:Resource> <bf:extent> <bf:Extent>	<rdfs:Resource>
	intended audience of representative expression	<bf:Work> or <bf:Instance> <bf:intendedAudience> <bf:IntendedAudience>	Suggested use with Work or Instance.
	key of representative expression	<bf:Work> <bf:musicKey> <rdfs:Literal>	Only Work class
	language of representative expression	<rdfs:Resource> <bf:language> <bf:Language>	<rdfs:Resource>
	medium of performance of choreographic content of representative expression	<bf:Work> or <bf:Instance> <bf:notation> <bf:MovementNotation>	Suggested use with Work or Instance.

medium of performance of musical content of representative expression	<bf:Work> <bf:musicMedium> <bf:MusicMedium>	Only Work class
place of capture of representative expression	<bf:Work> or <bf:Instance> <bf:capture> <bf:Capture> <bf:place> or <bf:originPlace> <rdfs:Resource>	<bf:capture> + <bf:place>
projection of cartographic content of representative expression	<bf:Work> or <bf:Instance> <bf:cartographicAttributes> <bf:Cartographic> <bf:projection> <bf:Projection>	<bf:cartographicAttributes> + <bf:projection>
scale of representative expression	<bf:Work> or <bf:Instance> <bf:scale> <bf:Scale>	Suggested use with Work or Instance.
script of representative expression	<bf:Work> or <bf:Instance> <bf:notation> <bf:Script> subclass of Notation	Suggested use with Work or Instance.
sound content of representative expression	<bf:Work> or <bf:Instance> <bf:soundContent> <bf:SoundContent>	Suggested use with Work or Instance.

In mapping RDA representative expression elements to BIBFRAME, some considerations could be classified as followings:

First, properties using work class such as <bf:content>, <bf:musicKey>, <bf:musicMedium> could be regarded as representative expression properties because these properties could be qualified by work class. Second, properties using work or instance class such as <bf:aspectRatio>, <bf:colorContent>, <bf:duration>, <bf:intendedAudience>, <bf:scale>, <bf:soundContent> could be regarded as representative expression properties only under work class elements because these properties could be used in work class as well as instance class. Third, properties used under other property such as capture date (<bf:date> under <bf:capture>), projection (<bf:projection> under <bf:cartographicAttributes>), capture place (<bf:place> under <bf:capture>) could be used accurately only with qualification by other property. Fourth, properties using <rdfs:Resource> class such as <bf:date>, <bf:extent> could be used in all classes, therefore could not be identified as representative expression properties.

4. Additional element for representative expression in BIBFRAME

Among above 4 considerations, representative expression attributes by 1 and 2 are well identified, but properties by 3, 4 are not enough to identify the representative expression attributes. Therefore these properties could be developed as new properties such as capture date of representative expression, capture place of representative expression, date of representative expression, and extent of representative expression.

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