

To: RDA Steering Committee

From: Alan Danskin, Chair of the Application Profiles Working Group

Subject: Interim report of the Application Profiles Working Group

Abstract

This report reviews the provision for application profiles made in RDA Toolkit and:

- makes recommendations for improving guidance and instructions for application profiles in RDA Toolkit
- reports and makes recommendations on the utility of providing guidance on profiles for implementation scenarios
- reports and makes recommendation on relationship of “work boundaries” to the development and use of application profiles

The report makes recommendations for the provision of additional guidance and for the development of a suite of RDA application profiles following the model developed for RIMMF4 templates. No strong correlation has been identified between work boundaries and application profiles.

1 Introduction

As a consequence of his other commitments having delayed activation of the working group, the report has been prepared by the Chair with only limited opportunity for working group members to comment.

This is an interim report to RSC reporting progress on the following tasks:

1. Make recommendations for improving guidance and instructions for application profiles in RDA Toolkit. *Please submit initial recommendations by mid-March 2020 for consideration at the asynchronous RSC meeting in early April, and final recommendations by mid-September 2020 for consideration at the RSC in-person meeting.*
 - 1.1. Investigate and report on the utility of providing guidance on profiles for implementation scenarios.
2. Consider how work boundaries fit in to the development and use of application profiles. *Please submit initial recommendations by mid-March 2020 for consideration at the asynchronous RSC meeting in early April, and final recommendations by mid-September 2020 for consideration at the RSC in-person meeting.*

2 Improving guidance and instructions for application profiles in the RDA Toolkit

2.1 Background

RDA Defines an application profile as follows:

“application profile

A specification of the metadata that is used in an application.

A specification may include the entities, elements, and vocabulary encoding schemes that are used, and the mandatory and repeatable status of elements.”

Current guidance within RDA Toolkit comprises:

- Guidance Chapters
 - Application Profiles
 - Resource Description. Minimum descriptions of entities
 - Resource Description. Coherent descriptions of an information resource
- Instructions
- Documents

2.1.1 Guidance Chapters

The [guidance chapter](#) outlines the components of a generic application profile, including elements, cardinality, vocabulary encoding schemes, and relationships.

The chapter also specifies the requirements for an RDA application profile: entities; elements; recording methods; vocabulary encoding schemes; string encoding schemes.

Specific application profiles for [Minimum description of a resource entity](#) and [Coherent description of an information resource](#) are contained in the [Resource Description](#) guidance chapter.

2.1.2 Instructions

Each RDA entity has the following optional Instruction:

Record elements that are deemed useful for identification and access.

OPTION

Record elements that are specified by an **application profile**.

For general guidance, see Guidance: **Application profiles** .

Figure 1 RDA Toolkit optional instruction for manifestation entity

2.1.3 Methods

Methods for specifying an application profile within RDA Toolkit include:

- Annotation of entity, element or recording method

- Policy statements for optional instructions
- User created workflow
- User created document
- Linked data

2.1.4 Annotation

Users can annotate specific elements. An annotation could be used to indicate whether/when the element should be applied, including any exceptions; the annotation could also specify recording method, VES and SES if appropriate.

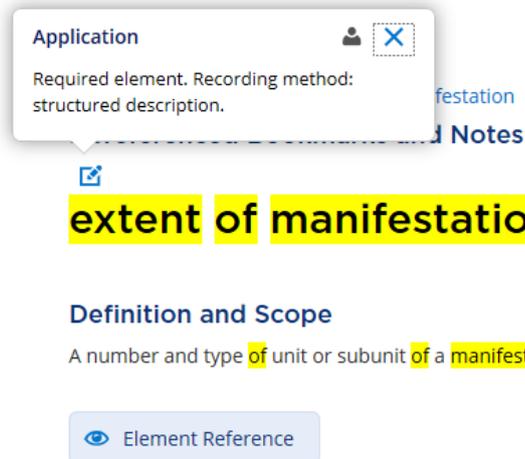


Figure 2 RDA Beta Toolkit annotation used to specify local application

This method would be very onerous and difficult to maintain and is only of use at the page level. It could have value as a means of highlighting exceptions from community practices, or for personal reminders. It would not be an efficient means of recording, communicating or maintaining dynamic information.

2.1.5 Policy Statements

Policy statements are used to record community or institutional policies. Policy statements are displayed in RDA Toolkit in line with the relevant RDA content. It would be possible to use policy statements to record decisions regarding cardinality, recording method, vocabulary encoding schemes, etc. by relating the statement to the element level, or by repeating the information in policies linked to specific instructions or options.

Based on current experience in developing policy statements, this would be a complex and expensive process, which may prove difficult to maintain over time. Updating is dependent on ALA release schedule.

2.1.6 User created document

RDA Toolkit includes an HTML editor for user contributed documents. Generic functions include the capability to create, edit and delete documents. Documents can be made available to private (default), local or global audiences. User created documents default to CC BY licence; other options are CC BY-NC and CC BY-SA.

“Application profile” is one of the categories of document available from the drop-down menu. There are currently no shared examples of user contributed application profiles in the Beta Toolkit. More extensive testing would be necessary to determine the efficiency of the HTML editor as a tool for maintaining application profiles.

The import facility enables a document, such as an Excel spreadsheet, to be imported into RDA Toolkit. Imported documents open and are edited in the native application, which limits their use as practical tools for cataloguers. A shared document can be saved to a local device.

Application profiles can be shared locally or globally. However, “local” restricts access to users at the same IP address. Consequently, community documents would require “global” access. Curation of multiple user-contributed application profiles within the Beta Toolkit could become complex.

There is no validation of any user contributed content within RDA Toolkit.

2.1.7 User created workflow

Workflows are a type of user contributed document. There are no current examples of globally available workflows in the Beta Toolkit. Workflows in the current RDA Toolkit provide a narrative to guide cataloguers to appropriate instructions for different types of resources and may include local examples. Workflows may also contain links to RDA instructions and to external documents, including the MARC manual.

Workflows are not application profiles, but workflows should be based on application profiles. Application profiles could be used to generate skeleton workflows for specific entities and content types.

2.1.8 Linked Data

The RDA Registry provides IRIs for every RDA entity, element, vocabulary encoding scheme, and vocabulary term.

Registry IRIs may be used in an application profile for linked data created in Resource Description Framework.

The Beta Toolkit does not provide an illustration of a linked data profile.

2.2 RIMMF4

RIMMF4 is a visualisation tool for RDA 3R. RIMMF is external to RDA Toolkit. [TMQ](#) conceived RIMMF4 templates as a type of application profile. RIMMF4 currently provides a suite of flexible and extensible input forms. A coherent description is created by selecting a basic template for an entity, which is enriched by layering templates to create an effective description of the resource; the description can be linked to other entities, or an appropriate template can be selected to create a new entity description.

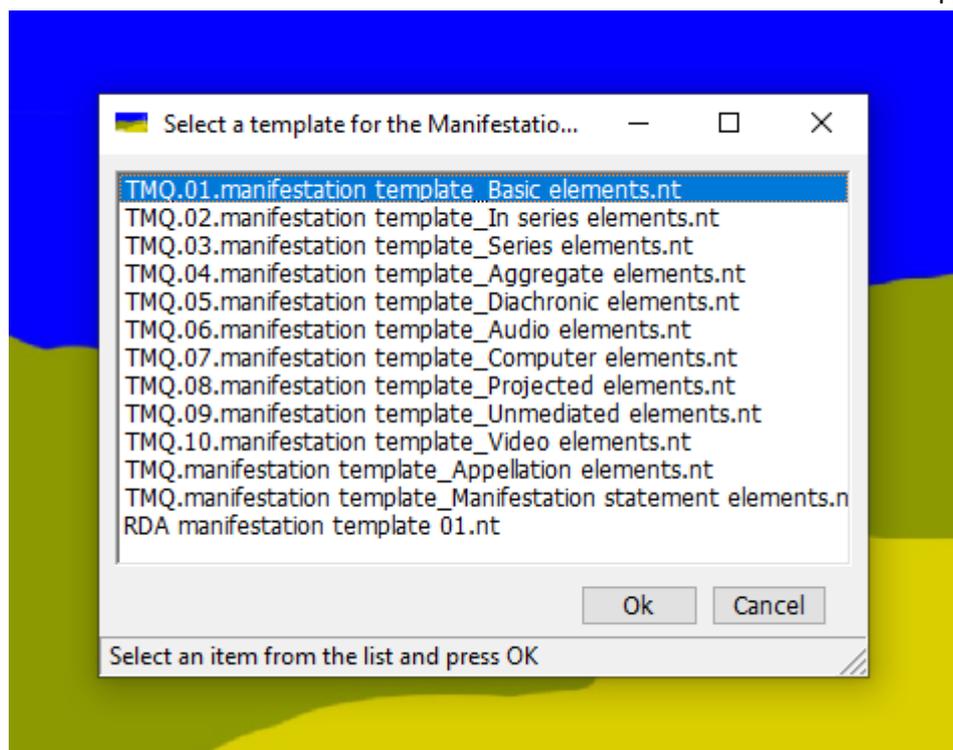


Figure 3 RIMMF4 Manifestation template pick list

RIMMF4 templates provide a model for development of RDA application profiles. The figure above illustrates the suite of TMQ templates available to describe different types of manifestation.

The RDA manifestation template at the end of the list is a comprehensive listing of all manifestation elements, from which other templates can be derived. Comprehensive listings are too large for most practical purposes, but may be of use for developers or systems librarians.

RDA Manifestation		
ELEMENT LABEL	TEXT	TK/LINK
Appellation of manifestation		rdam:P30277
▾ Title of manifestation		rdam:P30134
▾ Title proper		rdam:P30156
Designation of edition		rdam:P30133
Place of publication		rdam:P30088
Name of publisher		rdam:P30176
Date of publication		rdam:P30011
▾ Mode of issuance		rdam:P30003
RIMMF identifier	blard102	rilmfv:R1058
Media type		rdam:P30002
Carrier type		rdam:P30001
Note on manifestation		rdam:P30137
Identifier for manifestation		rdam:P30004
▾ Access point for manifestation		rdam:P30276
Authorized access point for manifestation		rdam:P30294
Statement of responsibility		rdam:P30117
Expression manifested		rdam:P30139

Figure 4 RIMMF4 Basic template for manifestation

Adaptation of the RIMMF4 templates into application profiles could be accomplished by the inclusion of columns for cardinality, Vocabulary Encoding schemes, etc. This would enable the application profiles to be populated with values required for RDA compliance.

Publishing “official” templates in the Beta Toolkit would create a resource for communities to copy, annotate and reuse for their own applications.

This approach would encourage compatibility between different community profiles and may be capable of supporting automated validation of profiles.

2.3 Evaluation

The current guidance appears mostly adequate to enable a community to produce an application profile and to validate that it is conformant with RDA. At present, there is no mechanism by which RSC could determine the validity of community profiles contributed to the RDA Toolkit. The introduction of RSC application profiles would provide a standard for community development and avoid duplication of effort. The work done by TMQ to develop the RIMMF4 templates provides a pattern for this activity.

Recommendations

1. Expand the explanation of what an application profile is and include examples of how an application profile may be used.
2. Supplement the textual specification of minimum and coherent application profiles by providing the same information in tabular form, supported by diagrams or other appropriate illustrative matter.
3. Promote RSC application profiles as the basis for development of community application profiles.
4. Develop RIMMF4 templates into RDA application profiles.
5. Publish RSC application profiles in RDA Toolkit for community reuse.

3 Investigation into the utility of providing guidance on profiles for implementation scenarios.

3.1 Background

The Guidance document: *RDA implementation scenarios* describes four implementation scenarios that illustrate the range of potential configurations of RDA data.

Scenario A: Linked open data

Scenario B: Relational or object-oriented data

Scenario C: Bibliographic/authority data

Scenario D: Flat file data

The scenarios reflect the structures that are commonly used for library and cultural heritage metadata. Scenario A has been introduced to bring the scenarios up to date. Scenarios 1-3 have accordingly been re-designated scenarios B-D.

3.2 Evaluation

At implementation most Library users are expected to be working in scenarios C-D. Scenarios A-B may be more commonplace in museum contexts.

Application profiles derived from RIMMF4 are based on RDA entities, but it is expected that communities working in scenarios B-D will be working with different data structures.

Useful guidance topics would include:

- How to adapt RDA application profiles to community schemas, e.g. MARC 21
- Use of RDA Mappings
- Identification of entities and elements which cannot be supported by specific implementation scenarios

Failure to provide guidance increases the risk that:

- Communities will judge the barrier to implementation too high and opt out of RDA
- Implementations will fail to conform and will become mutually incompatible

Recommendations

6. RDA guidance on application profiles should include information on how to adapt application profiles for specific implementation scenarios.
7. Prioritise guidance for scenarios C-D.

4 Consider how work boundaries fit in to the development and use of application profiles

4.1 Background

“A “work boundary” or “transformation boundary” is the set of criteria applied by an agent who creates the metadata to determine if a description of a new Work is required.”¹

“Bibliographic and cultural conventions play a crucial role in determining the exact boundaries between similar instances of works”². This implies that community policies influence work boundary decisions, but it need not follow from this that application profiles are an effective tool for that purpose.

What are the criteria to be applied by an agent in order to determine a work boundary?

- a) Does the expression to be described exhibit a significant degree of intellectual effort that is independent of the work described?
- b) Does the expression to be described constitute transformation from one form of expression to another?
- c) What is the comparison between the expression to be described and the representative expression of a static work?
- d) Is the described work a diachronic work?
- e) Is the described work an aggregating work?
- f) Is the described work a whole-part work?

¹ Dunsire. Gordon. *Work boundaries*. p.3

² IFLA. Library Reference Model. P.22 <https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017.pdf>

It does not appear that reference to an application profile would be very beneficial in reaching a decision. The focus of an application profile is on entities and elements, whereas the work boundary decision criteria are determined by the values assigned to entities and relationships.

There may be scope to use cardinality to validate the decisions taken. This would be most clear cut in relation to diachronic works and aggregating works. However validation would require that application profiles are implemented within a local system.

Recommendations

8. Principles for determining work boundaries belong in the guidance and not in application profiles.
9. Communities may choose to document local guidance in policy statements or workflows.

5 Conclusion

Application profiles mediate between the authoritative RDA Registry and community or local implementations. As exemplified by RIMMF4, application profiles underpin configuration, validation, workflow organization and data input. Publishing a suite of RDA application profiles in RDA Beta Toolkit would add value to RDA Toolkit and support community developments. Publication of the profiles should be complemented by additional guidance for their use in different implementation scenarios.

5.1 Summary of Recommendations

1. Expand the explanation of what an application profile is and include examples of how an application profile may be used. Consider whether the term “application profile” should be added to the glossary.
2. Supplement the textual specification of minimum and coherent application profiles by providing the same information in tabular form, supported by diagrams or other appropriate illustrative matter.
3. Promote RSC application profiles as the basis for development of community application profiles.
4. Develop RIMMF4 templates into RDA application profiles.
5. Publish RSC application profiles within RDA Toolkit.
6. RDA guidance on application profiles should include information on how to adapt application profiles for specific implementation scenarios.
7. Prioritise guidance and examples for implementation scenarios C-D.
8. Principles for determining work boundaries belong in the guidance and not in application profiles.
9. Communities may document local guidance in policy statements, or workflows.

6 Documents Consulted

Dunsire, Gordon. *A deeper dive into application profiles and policy statements*. 28 January, 2019
Seattle, USA.

<http://www.rda-rsc.org/sites/all/files/Dunsire%20Deeper%20Dive%20into%20application%20profiles%2028%20Jan.pdf>

Dunsire, Gordon. *Work boundaries*. 4 October, 2019. Revised to remove typos, 19 December 2019.

<http://www.rda-rsc.org/sites/all/files/Work%20boundaries%20briefing%20paper.pdf>

IFLA. *Library Reference Model*

<https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017.pdf>

PCC Task Group on Metadata Application Profiles. *Report to Pcco*. October 2019

https://www.loc.gov/aba/pcc/taskgroup/MetadataAppProfiles_Oct2019report.pdf

RDA Steering Committee *Minutes of the October 2019 Meeting*

<http://www.rda-rsc.org/sites/all/files/RSC-Minutes-Public-159-204.pdf>

RDA Toolkit (Beta)

<https://beta.rdatoolkit.org>

RSC/Chair/2019/3 RSC Application Profiles Working Group, 2020-2021

<http://www.rda-jsc.org/sites/all/files/RSC-Chair-2019-3%20final.pdf>

TMQ *RIMMF4*

<https://www.marcofquality.com/wiki/rimmf4/doku.php>