MARC/RDA Working Group: Final Report

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Table of Contents

1   Introduction

1.1   Report Overview

This report describes the purpose, business and outputs of the MARC/RDA Working Group (MRWG) during its period of activity between 2019 and 2022. It sets out the background against which the group was established, its charge, membership, schedule of work and guiding principles. It continues by detailing those changes to MARC 21 which the MRWG proposed in response to outcomes of the RDA Toolkit Restructure and Redesign Project (3R). For wider context, the report details those changes which the MRWG considered, but ultimately chose not to pursue for various reasons. In conclusion, it provides an overall analysis of the limitations associated with implementing 3R in MARC 21 as well as the scope for further developments going forward.

1.2   Background

The 3R Project led to a new RDA Toolkit being released in June 2018. Following a period of beta testing, this RDA Toolkit became official in December 2020 and superseded the Original RDA Toolkit. The Official RDA Toolkit includes the new entities and elements necessary to implement the IFLA Library Reference Model (LRM). As the body responsible for maintaining MARC 21 bibliographic format mappings in the Original RDA Toolkit, the British Library undertook a gap analysis to identify the most significant aspects of the Official RDA Toolkit that were not covered in the MARC 21 formats. It then approached the RDA Board to recommend that the RDA Steering Committee (RSC) liaise with the Network Development and MARC Standards Office (NDMSO) at Library of Congress to reconvene the RDA/MARC Working Group. This group was first established in 2008 to collaborate on developing proposals for changes to the MARC 21 formats following publication of the Original RDA Toolkit. In December 2019, the Network Development and MARC Standards Office (NDMSO) at Library of Congress set up a MARC/RDA Working Group (MRWG) at the RDA Board's request.

1.3   Charge, Membership and Schedule of Work

The MRWG was charged with the following tasks:

- Evaluate the scope and impact of the extensions to RDA arising from the RDA 2019 revision in relation to MARC 21
- Identify and prioritize possible changes to MARC 21 to support compatibility with the RDA extensions and ensure effective data exchange into the future
- Prepare discussion papers and proposals for the MARC Advisory Committee (MAC)

The MRWG's membership was drawn from the MARC 21 and RDA communities. It included representatives from NDMSO, the RDA Steering Committee (RSC) and the MARC Steering Group (MSG) as well as a number of vendors and cataloguing specialists (see Appendix for further details).

Between December 2019 and January 2022 the MRWG completed five schedules of work in co-ordination with the meetings of MAC which occur twice a year:

- December 2019: Preparation of initial discussion papers.
- January 2020: ALA Midwinter MAC meeting; presentation of discussion papers.
- January – April 2020: Working group meetings.
- April – June 2020: Preparation of proposals and discussion papers.
- June 2020: MAC Annual meeting; presentation of proposals and discussion papers.
- July – October 2020: Working group meetings.
- November – December 2020: preparation of proposals and discussion papers.
- January 2021: MAC Midwinter meeting; presentation of proposals and discussion papers.
- February – April 2021: Working group meetings.
- April – June 2021: Preparation of proposals and discussion papers.
- June 2021: MAC Annual meeting; presentation of proposals and discussion papers.
- August – October 2021: Working group meetings.
- November – December 2021: preparation of remaining proposals.
- January 2022: MAC Midwinter meeting; presentation of remaining proposals.

1.4   Guiding Principles

The MRWG's frame of reference for recommending changes to MARC 21 in support of RDA extensions was broken down into the following four sets of criteria:

- New RDA entities, elements, concepts and vocabulary encoding schemes
- Choice of format to implement change
- Granularity and consistency of change
- Feasibility and utility of change

The British Library's gap analysis was used as an initial basis for identifying potential MARC 21 changes in response to 3R. However, the MRWG's wider membership also contributed to the scope of its work. Updates to the Official RDA Toolkit's content continued during the MRWG's period of activity, but by the end of 2019 it was sufficiently stable to propose selected alignments with MARC 21. RDA will continue to evolve and completion of the MRWG's work does not preclude the possibility of further alignments being proposed by the wider MARC 21 community in future.

After due consideration, the MRWG rejected a number of prospective MARC 21 changes on the following grounds:

- Insufficient use-case at the present time
- Incompatibility of MARC 21
- Ongoing development of RDA

See Section 3 for further details.

2   Summary of MRWG Change Proposals

2.1   Change Proposals Overview

During its period of activity, the MRWG submitted eight discussion papers and eight proposals to MAC for consideration. To assist MAC's decision-making process, some papers proposed multiple options for change. These changes are summarised below, using the following structure:

- Overall description of RDA extension
- Official RDA Toolkit glossary definition
- Basis for recommending MARC 21 changes*
- Associated MARC 21 paper reference numbers
- MARC 21 change(s) agreed and related format(s)
- Related MARC 21 update
- Related MARC 21 code(s) where applicable
- Examples of MARC 21 change

*See associated MARC 21 papers for more in-depth descriptions of the use-cases that support each change.

2.1.1   Manifestation Statements

Official RDA Toolkit glossary definition:

Manifestation statement:

"A statement appearing in a manifestation and deemed to be significant for users to understand how the manifestation represents itself."

Basis for recommending MARC 21 changes:

The Official RDA Toolkit introduces the LRM concept "manifestation statement". It encompasses a high-level element "manifestation statement" and a list of new element sub-types. New content designation for manifestation statements in MARC 21 will allow for the encoding of whole or partial title page content, etc. using scanned data (e.g. recorded using a light pen). It will also allow for exact transcription of statements appearing on manifestations for early printed resources (e.g. complex publication / distribution and manufacture statements).

MARC 21 paper reference numbers: 2020-DP06 ; 2020-06

MARC 21 change agreed: Field 881 – Manifestation Statements (Bibliographic)

MARC 21 update: 31

Examples of MARC 21 change:

Example 1

881 **##$a**CROSSING THE CHASM Marketing and Selling Disruptive Products to Mainstream Customers THIRD EDITION Geoffrey A. Moore HARPER BUSINESS An Imprint of HarperCollinsPublishers Copyright © 1991, 1999, 2002, 2014 by Geoffrey A. Moore Printed in the United States of America Originally published in hardcover in 1991 by HarperBusiness, an imprint of HarperCollins Publishers. 2014 ISBN: 978-0-06-229298-8 USA $19.99 A BUSINESSWEEK BESTSELLER

Example 2

881 **##$c**THE Opening of Heauen gates, Or The ready way to euer-lasting life. Deliuered in a most Familier Dia-logue, betweene Reason and Religion, touching Prædestination, Gods word, and Mans Free-will, to the vnderstan-ding of the vveakest Capacitie, and the confirming of the more strong.\\**$d**The second edition.**$c**By ARTHVR DENT, Preacher of the word of GOD, at South-shoobery in Essex.\\**$f**Imprinted at London for Iohn Wright,**$g**and are to bee sold at his shop at Christ-Church gate.\\**$f**1611.

2.1.2   Extension Plan

Official RDA Toolkit glossary definition:

Extension plan:

"A categorization that reflects an intention to extend the content of a work."

Basis for recommending MARC 21 changes:

The concept of diachronic works is introduced by the Official RDA Toolkit. The new element "extension plan" is used to express this concept by describing the intended method for extending the content of a work over time. New content designation for "extension plan" in MARC 21 will enable statements to be made regarding the anticipated behaviour of diachronic works in the future as well as their actual behaviour demonstrated in the past and present (e.g. serials, multiparts and integrating resources). These statements can be used to inform library management processes, including selection policy and inventory control. They can also serve to rationalize a catalogue record creation process for continuing resources which is both transitory and dynamic in nature. The element "extension plan" can be described using a controlled vocabulary and identified by IRIs sourced from the RDA Registry. These offer the means to enhance the functionality of information recorded in a MARC 21 environment and also to exploit it for linked data purposes.

MARC 21 paper reference numbers: 2020-DP07 ; 2020-07

MARC 21 change agreed: Field 335 – Extension Plan (Authority, Bibliographic)

MARC 21 update : [31](#)

MARC 21 source code: rdaep ([Genre/Form Code and Term Source Codes](#))

Examples of MARC 21 change:

Example 1

335 **##$a**static plan**$2**rdaep

Example 2

335 **##$a**successive determinate plan**$2**rdaep

Example 3

335 **##$a**successive indeterminate plan**$2**rdaep

2.1.3   Mode of Issuance

Official RDA Toolkit glossary definition:

Mode of issuance:

"A categorization that reflects whether a manifestation is issued in one or more units."

Basis for recommending MARC 21 changes:

The element "mode of issuance" is defined in the Original RDA Toolkit, but the definition in the Official RDA Toolkit has been refined to make a clear distinction between "mode of issuance" and the new "extension plan" element. The Official RDA Toolkit re-scopes "mode of issuance" to only describe whether a resource consists of one or more units, whereas "extension plan" describes how a resource is intended to develop over time. New content designation for "mode of issuance" in MARC 21 will enable statements to be made as to whether a resource is an aggregation or not at its most fundamental level. The element "mode of issuance" can be described using a controlled vocabulary and identified by IRIs sourced from the RDA Registry. These offer the means to enhance the functionality of information recorded in a MARC 21 environment and also to exploit it for linked data purposes.

MARC 21 paper reference numbers: [2020-DP16](#) ; [2021-09](#)

MARC 21 change agreed: Field 334 – Mode of Issuance ([Bibliographic](#))

MARC 21 update: [32](#)

MARC 21 source code: rdami ([Genre/Form Code and Term Source Codes](#))

Examples of MARC 21 change:

Example 1

334 ##**$a**single unit**$2**rdami

Example 2

334 ##**$a**multiple unit**$2**rdami

2.1.4   Type of Binding

Official RDA Toolkit glossary definition:

Type of binding:

"A method used to bind a published or unpublished manifestation."

Basis for recommending MARC 21 changes:

The element "type of binding" is introduced by the Official RDA Toolkit. This element could already be recorded in MARC 21. However, the scope of qualifying information recorded in bibliographic format fields which encode manifestation identifiers (e.g. 020 - International Standard Book Number) only allowed an unstructured value for "type of binding" to be expressed. The same applied when recording a value for "type of binding" in notes fields (e.g. 563 - Binding Information). New content designation for "type of binding" will support more recording methods than MARC 21 previously allowed for. The element can be described using a controlled vocabulary and identified by IRIs sourced from the RDA Registry. These offer the means to enhance the functionality of information recorded in a MARC 21 environment and also to exploit it for linked data purposes.

MARC 21 paper reference numbers: 2020-DP17 ; 2021-10 ; 2021-16

MARC 21 change agreed: Subfield $l "Binding" added to Field 340 – Physical Medium (Bibliographic)

MARC 21 update : 33

MARC 21 source code: rdatb (Genre/Form Code and Term Source Codes)

Examples of MARC 21 change:

Example 1

 340 ##**$l**saddle stitch binding**$2**rdatb

Example 2

340   ##**$3**teacher edition**$l**case binding**$2**rdatb
340   ##**$3**coursebook**$l**perfect binding**$2**rdatb
340   ##**$3**workbook**$l**spiral binding**$2**rdatb

2.1.5   Scale

Official RDA Toolkit glossary definition:

Scale:

"A ratio of the dimensions of an expression of an image or three-dimensional form to the dimensions of the thing that is represented.

Scale can apply to horizontal, vertical, angular, or other measurements represented in an expression."

Basis for recommending MARC 21 changes:

The element "scale" occurs in both the Official RDA Toolkit and the Original RDA Toolkit. This element could already be recorded in MARC 21. However, the scope of field 507 in the bibliographic format (Scale Note for Graphic Materials) was too narrow to encompass the range of resources for which a scale value might be recorded in line with the Official RDA Toolkit's definition. The re-labelling and re-scoping of field 507 will address this inconsistency.

MARC 21 paper reference numbers: 2021-DP11 ; 2022-03

MARC 21 change agreed: Field 507 – Scale Note for Visual Materials (Bibliographic)

MARC 21 update: 34

Examples of MARC 21 encoding:

Example 1

507   ## **$a** Scale 40 feet to 1 inch**.**

Example 2

507   ## **$a** Scale 1/4"=1'-0."

2.1.6   Representative Expressions

Official RDA Toolkit glossary definition:

Representative expression:

"An expression that is considered a canonical source of data for identifying a work."

Basis for recommending MARC 21 changes:

The Official RDA Toolkit introduces the LRM concept "representative expression". Various elements identifying Expression entities, as scoped by RDA, could already be recorded in MARC 21. However, information about the representative expression of a work, which would assist the identification of work boundaries, could not be explicitly encoded. The MRWG presented MAC with several options for how representative expression characteristics could be encoded in MARC 21. MAC decided on a composite solution to meet the needs of the music cataloguing community as well as other communities. This approach would be applied in both the bibliographic and authority formats. New content designation for representative expressions will allow statements to be made about those characteristics which identify them as canonical (e.g. the expression of a work over which a creator exercised the most creative control). These characteristics can be used in order to refine catalogue search strategies and help the bibliographic researcher in tracing the history of a work's development over time.

MARC 21 paper reference numbers: 2021-DP12 ; 2022-04

MARC 21 changes agreed: Field 387 – Representative Expression Characteristics (Authority; Bibliographic)

First indicator 2 – "Medium of performance of musical content of representative expression" added to Field 382 – Medium of Performance (Authority; Bibliographic)

First Indicator 3 – "Partial medium of performance of musical content of representative expression" added to Field 382 – Medium of Performance (Authority; Bibliographic)

First indicator 2 – "Key of representative expression" added to Field 384 – Key (Authority; Bibliographic)

MARC 21 update: 34

Examples of MARC 21 encoding:

Example 1

387 **##$f**034600

[Field models element "duration of representative expression" with a value "034600" in subfield $f]

Example 2

382 **2#$a**piano**$n**1**$a**flute**$n**1**$a**cello**$n**1**$s**3**$2**lcmpt

[Field models element "Medium of performance of musical content of representative expression in first indicator value "2"]

Example 3

384 **2#**$aG major

[Field models element "Key of representative expression in first indicator value "2"]

2.1.7 Data Provenance

Official RDA Toolkit glossary definition:

Data provenance:

"Information about the metadata recorded in an element or set of elements.

Metadata about metadata, or metametadata."

Basis for recommending MARC 21 changes:

The concept of data provenance is introduced by the Official RDA Toolkit. Various data provenance related elements could already be recorded in MARC 21. However, for the most part, data provenance information could not be encoded in an unambiguous and granular way. The MRWG presented MAC with several options for how data provenance could be encoded in MARC 21 going forward. MAC chose one which involved the creation of new subfields to record data provenance values in combination with data provenance category and data provenance relationship code lists. This approach would be applied in both the bibliographic and authority formats. New content designation for data provenance will allow this information to be recorded in a more comprehensive way than was previously possible. It can serve library staff engaged in collection-related cataloguing activities as well as patrons whose goal it is to access holdings. Besides these more traditional functions, data provenance information also supports the development of emerging products and services which are based on the selective transformation of cataloguing metadata into non-MARC formats.

MARC 21 paper reference numbers: 2021-DP06 ; 2021-DP10 ; 2022-05

MARC 21 changes agreed: Subfield $7 "Data provenance" added to the following fields and ranges of fields (Authority):

024 – Other Standard Identifier
034 – Coded Cartographic Mathematical Data
043 – Geographic Area Code
1XX – Heading Information Fields
065 – Other Classification Number
260 – Complex See Reference – Subject
3XX – Heading Information Fields
4XX – See From Tracing Fields
5XX – See Also From Tracing Fields
670 – Source Data Found
672 – Title Related to the Entity
675 – Source Data Not Found
677 – Definition
678 – Biographical or Historical Data
680 – Public General Note
7XX – Heading Linking Entry Fields

Subfield $e "Data provenance" added to the following field (Authority):

856 – Electronic Location and Access

Subfield $7 "Data provenance" added to the following fields and ranges of fields (Bibliographic):

041 – Language Code
082 – Dewey Decimal Classification Number
083 – Additional Dewey Decimal Classification Number
084 – Other Classification Number
1XX – Main Entry Fields
210 – Abbreviated Title
240 – Uniform Title
245 – Title Statement
246 – Varying Form of Title
247 – Former Title
250 – Edition Statement
255 – Cartographic Mathematical Data
256 – Computer File Characteristics
264 – Production, Publication, Distribution, Manufacture, and Copyright Notice
300 – Physical Description

335 – Extension Plan
336 – Content Type
348 – Notated Music Characteristics
370 – Associated Place
377 – Associated Language
380 – Form of Work
381 – Other Distinguishing Characteristics of Work or Expression
382 – Medium of Performance
383 – Numeric Designation of Musical Work
384 – Key
385 – Audience Characteristics
386 – Creator/Contributor Characteristics
387 – Representative Expression Characteristics
388 – Time Period of Creation
490 – Series Statement
500 – General Note
501 – With Note
502 – Dissertation Note
505 – Formatted Contents Note
508 – Creation/Production Credits Note
510 – Citation/References Note
515 – Numbering Peculiarities Note
518 – Date/Time and Place of an Event Note
520 – Summary, etc.
546 – Language Note
550 – Issuing Body Note
555 – Cumulative Index/Finding Aids Note
583 – Action Note
600 – Subject Added Entry - Personal Name
610 – Subject Added Entry - Corporate Name
611 – Subject Added Entry - Meeting Name
630 – Subject Added Entry - Uniform Title
648 – Subject Added Entry - Chronological Term
650 – Subject Added Entry - Topical Term
651 – Subject Added Entry - Geographic Name
653 – Index Term – Uncontrolled
655 – Index Term - Genre/Form
700 – Added Entry - Personal Name
710 – Added Entry - Corporate Name
711 – Added Entry - Meeting Name
751 – Added Entry - Geographic Name

Subfield $l "Data provenance" added to the following range of fields (Bibliographic):

76-78X – Linking Entry and Description Fields

Subfield $y "Data provenance" added to the following fields (Bibliographic):

533 – Reproduction Note
800 – Series Added Entry - Personal Name
810 – Series Added Entry - Corporate Name
811 – Series Added Entry - Meeting Name
830 – Series Added Entry - Uniform Title

Subfield $e "Data provenance" added to the following field (Bibliographic):

856 – Electronic Location and Access

MARC 21 data provenance code lists (Authority): Appendix H – Data Provenance Subfields

MARC 21 data provenance code lists (Bibliographic): Appendix J - Data Provenance Subfields

MARC 21 update: 34

Examples of MARC 21 encoding:

Example 1

245 10**$a**Asʾila ḥaula 'l-marʾa wa-'l-masǧid**$b**fī ḍauʾ nuṣūṣ aš-šarīʿa wa-maq ṣidih**$c**d. sir ʿAuda**$7**(dpesc)DIN 31635:2011

[Field 245 models data provenance element "source consulted" with value for transliteration standard "DIN 31635:2011" in subfield $7 relating to other subfields in the same string.]

Example 2

700   1#**$0**(DE-588)103331727**$a**Michajlova,Natal'ja I.**$4**aut**$7**(dpes/dpsfa)Latn

[Field 700 models data provenance element "script" with value "Latn" in subfield $7 relating to subfield $a in the same string.]

Example 3

856   40**$u**http://nbn-resolving.de/urn:nbn:de:bsz:25-freidok-146567**$x**Resolving-System**$e**(dpeaa)DE-101

[Field 856 models data provenance element "author agent" with value "DE-101" (for Deutsche Nationalbibliothek) in subfield $e relating to other subfields in the same string.]

3   Summary of Outstanding Issues

3.1   Outstanding Issues Overview

The MRWG chose not to pursue changes in relation to other RDA extensions. These decisions were based on consultations with various stakeholders, including members of RSC and MAC. Outstanding issues are summarized blow, using the following structure:

- Overall description of RDA extension
- Official RDA Toolkit glossary definition of extension
- Basis for not recommending MARC changes

3.1.1   RDA Entity

Official RDA Toolkit glossary definition:

RDA Entity:

"An abstract class of key conceptual objects in the universe of human discourse that are a focus of interest to users of RDA metadata in a system for resource discovery. An RDA entity includes an agent, collective agent, corporate body, expression, family, item, manifestation, nomen, person, place, timespan, and work."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to support the high-level semantics expressed by RDA's entity structure; the entities and groups of entities represented by MARC 21 records are more granular in nature. Implementing the RDA Entity at the record level may cause significant disruption to existing MARC 21 authority files with little practical benefit. However, a limited use-case might be established for its accommodation. For example, the RDA Entity provides the only means to encompass the concepts of non-human and fictitious entities in the Official RDA Toolkit. There is scope for accommodating the description of such entities using current MARC21 content designation. Indeed, the PCC Task Group for Coding non-RDA Entities in NARs : Final Report sets out a framework for doing so. It recommends the establishment of new codes for use in authority format 040 subfield $e (Description conventions) and 075 $2 (Type of entity) to designate non-human and fictitious entities. A new description conventions code "pccrda" and type of entity code "pccent" have been recently defined for this purpose. Given such developments, the recommendation of new fields or subfields to accommodate the RDA Entity in MARC 21 may be considered unnecessary.

3.1.2 Agent

Official RDA Toolkit glossary definition:

Agent: "An entity who is capable of deliberate actions, of being granted rights, and of being held accountable for its actions. An agent includes a collective agent and a person."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to support the high-level semantics expressed in RDA's entity structure; the entities and groups of entities represented by MARC 21 records are more granular in nature. Implementing the Agent entity at the record level may cause significant disruption to existing MARC 21 authority files with little practical benefit. However, some Agent elements can already be encoded in MARC 21 and a limited use-case might be established for their further accommodation. For example, a situation could arise in which bibliographic metadata is generated by automated means rather than human input (e.g. using object character recognition software). Under these circumstances, it might be possible to identify patterns of character strings which distinguish agents from works, expressions, manifestations, etc., but not with sufficient accuracy to distinguish persons, corporate bodies and families. An increased reliance on automated means to generate bibliographic metadata may warrant the definition of new encoding to support it. Nevertheless, further analysis of the benefits to be drawn from this approach would be desirable before any recommendations are made.

3.1.3 Collective Agent

Official RDA Toolkit glossary definition:

Collective Agent: "An agent who is a gathering or organization of two or more persons that bears a particular name and that is capable of acting as a unit. A collective agent includes a corporate body and a family."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to support the high-level semantics expressed in RDA's entity structure; the entities and groups of entities represented by MARC 21 records are more granular in nature. Implementing the Collective Agent entity at the record level may cause significant disruption to existing MARC 21 authority files with little practical benefit. However, some Collective Agent elements can already be encoded in MARC 21 and a limited use-case might be established for their further accommodation. For example, a situation could arise in which bibliographic metadata is generated by automated means rather than human input (e.g. using object character recognition software). Under these circumstances, it might be possible to identify patterns of character strings which distinguish collective agents from works, expressions, manifestations, etc., but not with sufficient accuracy to distinguish corporate bodies and families. An increased reliance on automated means to generate bibliographic metadata may warrant the definition of new encoding to

support it. Nevertheless, further analysis of the benefits to be drawn from this approach would be desirable before any recommendations are made.

3.1.4 Nomen

Official RDA Toolkit glossary definition:

Nomen: "A label for any RDA entity except a nomen. A nomen includes a name, title, access point, or identifier."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to separate nomens from the entities to which they are related; in principle, each Nomen which relates to a Person, Family, Corporate Body, Work, Expression, Manifestation, etc. would require a separate record with its own unique identifier if this approach were to be implemented. MARC 21 currently conflates nomens with the entities to which they relate, rather than treating them as entities in their own right. Separating nomens from the entities to which they relate would allow elements associated with the former and latter to be recorded comprehensively and unambiguously. This could be useful from the perspective of generating management information and supporting research. However, in practice, accommodation may be too disruptive to the current structure of MARC 21 authority files. Although there may be insufficient benefit to implementing the Nomen entity at the record level in MARC 21, a more limited use-case could be established for its accommodation. Indeed, some Nomen elements can already be encoded in MARC 21. However, it is also noteworthy that the RDA Action Plan 2021-2023 lists the Nomen entity as being the subject of further development; therefore any move to further accommodate it in MARC 21 at the present time may be considered premature.

3.1.5 Timespan

Official RDA Toolkit glossary definition:

Timespan: "A finite period of time."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to separate timespans from the entities to which they relate; in principle, each Timespan which relates to a Person, Family, Corporate Body, Work, Expression, Manifestation, etc. would require a separate record with its own unique identifier if this approach were to be implemented. MARC 21 currently encodes timespans as subject relationships to and from works, rather than treating them as entities in their own right. Separating timespans from the entities to which they relate would allow elements associated with the former and latter to be recorded comprehensively and unambiguously. This could be useful from the perspective of generating management information and supporting research. However, in practice, accommodation may be too disruptive to the current structure of MARC 21 authority files. Although there may

be insufficient benefit to implementing the Timespan entity at the record level in MARC 21, a more limited use-case could be established for its accommodation. Indeed, some Timespan elements can already be encoded in MARC 21. However, it is also noteworthy that the RDA Action Plan 2021-2023 lists the Timespan entity as being the subject of further development. Therefore, any move to further accommodate it in MARC 21 at the present time may be considered premature.

3.1.6 Place

Official RDA Toolkit glossary definition:

Place: "A given extent of space."

Basis for not recommending MARC changes:

No content designation is present in MARC 21 at the record level to separate places from the from the entities to which they relate; in principle, each Place which relates to a Person, Family, Corporate Body, Work, Expression, Manifestation, etc. would require a separate record with its own unique identifier if this approach were to be implemented. MARC 21 currently either encodes places as subject relationships to and from works or conflates places with corporate bodies, rather than treating them as entities in their own right. Separating places from the entities to which they relate would allow elements associated with the former and latter to be recorded comprehensively and unambiguously. This could be useful from the perspective of generating management information and supporting research. However, in practice, accommodation may be too disruptive to the current structure of MARC 21 authority files. Although there may be insufficient benefit to implementing the Place entity at the record level in MARC 21, a more limited use-case could be established for its accommodation. Indeed, some Place attributes and relationships can already be encoded in MARC 21. However, it is also noteworthy that the RDA Action Plan 2021-2023 lists Place / jurisdiction issues as being the subject of further development. Therefore, any move to further accommodate the Place entity in MARC 21 at the present time may be considered premature.

3.1.7 Concept Specific Issues

Basis for not recommending MARC changes:

Concept specific extensions to the Official RDA Toolkit are, for the most part, relatively stable in nature. However, the MRWG did find there to be some exceptions. For example, the concept of extent is still the subject of ongoing work according to the RDA Action Plan 2021-2023. On this basis, although the MRWG proposed changes to MARC 21 in support of recording representative expression characteristics, it chose to omit support for the individual element "extent of representative expression". Equally, it chose not to recommend any changes to MARC 21 in support of recording values from the Official RDA Toolkit's vocabulary encoding scheme "Carrier Extent Unit" or the IRIs which identify those values from the RDA Registry.

Besides those limitations which the MRWG placed on the scope of its own work, MAC opted to place limitations on the scope of certain changes which were proposed by the MRWG. Hence, it was decided that a granular implementation of data provenance should only correspond to the specific use-case set out by the German cataloguing community. MAC agreed that recording data provenance at the field / subfield level should occur selectively rather than routinely in the bibliographic and authority formats and not at all in the other formats. In addition, only selected categories of data provenance should be recorded using MARC 21's data provenance category codes as opposed to the full range of categories which is set out by the Official RDA Toolkit.

4   Conclusions

A number of recurrent themes emerged from the work undertaken by the MRWG. Extensions to MARC 21 reflective of the Official RDA Toolkit's new entity structure appeared too disruptive to justify their incorporation. In several cases these new entities also appeared to be the subject of ongoing development by RSC. As a consequence, the MRWG's discussion papers and change proposals mainly focused on new concepts introduced by the Official RDA Toolkit as well as their associated elements and vocabulary encoding schemes. In addition, conceptual changes could be implemented on a more granular and selective basis than structural changes.

Following the completion of its five schedules of work the MWRG will not be reconstituted. However, as was the case following the Original RDA Toolkit's introduction, additional MARC 21 changes in support of the Official RDA Toolkit may be brought forward by the wider community in future. The impetus for such developments may include RDA's recent implementation of the Collections Model which occurred in March 2022. This has occurred since the new Toolkit became official in December 2020.

Throughout the MRWG's period of activity, members of the RSC and its associated working groups provided advice and assistance with the drafting of discussion papers and proposals. It may be that feedback from the MARC 21 development process leads to changes being proposed to RDA itself. RDA will not adapt to MARC 21 record structures if these break its relationships to the LRM. However, it is noteworthy that, as with the FR family of conceptual models which underpinned the Original RDA Toolkit, the LRM too may be subject of future development.

5   Appendix

Details of the MRWG's membership and affiliations are listed below:

NDMSO

Sally McCallum – NDMSO Chief, Library of Congress

RSC

Ebe Kartus – RSC liaison, University of New England, New South Wales (2019-2021)

Charlene Chou – RSC liaison, New York University Division of Libraries (2021-2022)

MSG

Thurstan Young – British Library

John Zagas – Library of Congress

Reinhold Heuvelmann – Deutsche Nationalbibliothek

Bill Leonard – Library and Archives Canada (2019)

Hong Cui – Library and Archives Canada (2019-2022)

Vendors

Wayne Schneider – Indexdata

Nathan Putnam – OCLC (2019-2020)

Jay Weitz – OCLC (2020-2022)

Hayley Moreno – OCLC (2020-2022)

Specialists

Matthew Wise – MAC Chair (2019-2021)

Catherine Gerhart – Audiovisual specialist / MAC Chair (2021-)

Susan Moore – Cartographic specialist / MAGIRT rep to MAC

Tina Shrader – Serials specialist

kalan Knudson Davis – Rare books / manuscripts specialist (2020-2021)

Jackie Parascandola – Rare books / manuscripts specialist / RBMS rep to MAC (2021-2022)

Karen Peters – Music specialist / MLA rep to MAC