EX LIBRIS SOLUTION OVERVIEW FOR RESOURCE DESCRIPTION AND ACCESS (RDA)

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Web address: http://www.exlibrisgroup.com

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1 Executive Summary

RDA (Resource Description and Access) was developed to replace the Anglo-American Cataloguing Rules as a new cataloging standard for describing library resources. RDA aims to enable users of library catalogues and other systems of information to find, identify, select, and obtain resources appropriate to their information needs.

Many prominent libraries, including several national libraries, have begun to implement RDA, and many more libraries around the world will begin implementing RDA over the coming months. As a result, libraries who are Ex Libris customers are interested in learning about the support for RDA in Ex Libris' products.

The implementation of RDA is not a milestone event, but rather an on-going effort. With millions of legacy records in thousands of library catalogues, the implementation of RDA means that library catalogues will contain a mix of AACR2 and RDA records for the foreseeable future.

Across the Ex Libris product suite, we have updated MARC tag validation and help files, added and updated indexes, created new search limits for staff and end-users, and modified normalization rules and display configurations. We have also published new documentation and produced Knowledge Base articles to help customers configure their systems appropriately to support RDA.

The pages that follow describe the preparations Ex Libris has made in support of RDA, and acknowledge the ongoing effort that will be made to continue to monitor the implementation of RDA and to further improve our products to support libraries in this endeavor.

2 Background

RDA: Resource Description and Access was developed by the Joint Steering Committee for Development of RDA (JSC)[1] as part of its strategic plan (2005-2009) to replace the Anglo-American Cataloguing Rules, 2nd Edition Revised, which were first published in 1978.

RDA provides a comprehensive set of guidelines and instructions covering all types of content and media with the aim of enabling users of library catalogues and other systems of information organization to find, identify, select, and obtain resources appropriate to their information needs.

The Library of Congress decided to fully implement RDA on March 31, 2013, providing RDA records encoded in MARC[2]. LC's partner national libraries (National Agricultural Library and National Library of Medicine; and British Library, Library & Archives Canada, Deutsche Nationalbibliothek (DNB), and National Library of Australia) were apprised of LC's plans and — with the exception of DNB, which plans to implement in mid-2013 — also planned to target the end of the first quarter of 2013 as their RDA implementation date[3]. Many libraries around the world will begin implementing RDA over the coming months, and are interested in learning about the support for RDA in Ex Libris' products.

Ex Libris wishes to underscore its support for this new standard and detail its plans for addressing the issues and opportunities associated with it. Below is a listing of activities that Ex Libris has undertaken to support RDA in various products.

3 RDA Support in Aleph

The support for RDA in Aleph is based on the ability to encode RDA data in MARC 21 records. Ex Libris has included numerous revisions to the MARC configuration files in Aleph 20.2 and Aleph 21. MARC 21 Updates 9, 10, 11, 13, 14, and 15 include all changes to MARC for use with RDA approved through 2012. The Aleph MARC validation tables and codes.lng configuration files have all been updated with the changes described below. Ex Libris will continue to monitor updates to MARC 21[4] and will update Aleph as necessary.

Changes were made in the default USM tables in Aleph. No changes have been made to live setup files of libraries (i.e. changes have been made to the "a" tree and not to the "u" tree). MARC fields that were new were added, and obsolete fields have been removed. Libraries can make the desired changes on live configuration files as they see fit.

Changes to **codes.eng** reflected in $data_root/pc_tab/catalog/codes.eng

Field	Description	Type of Change
083	Additional Dewey Classification Number (R)	New field
085	Synthesized Classification Number Components (R)	New field
257	Country of Producing Entity (R)	Removed "for Archival films" from title
264	Production, Publication, Distribution, Manufacture, and Copyright Notice (R)	New field
336	Content Type (R)	New field
337	Media Type (R)	New field

Field	Description	Type of Change
338	Carrier Type (R)	New field
363	Normalized Date and Sequential Designation (R)	New field
380	Form of Work (R)	New field
381	Other Distinguishing Characteristics of Work or Expression (R)	New field
382	Medium of Performance (R)	New field
383	Numeric Designation of Musical Work (R)	New field
384	Key (NR)	New field
440	Series Statement/Added Entry – Title	Added [OBSOLETE] to description
542	Information Relating to Copyright Status (R)	New field
588	Source of Description Note (R)	New field
787	Other Relationship Entry (R)	Renamed from "Nonspecific Relationship Entry"

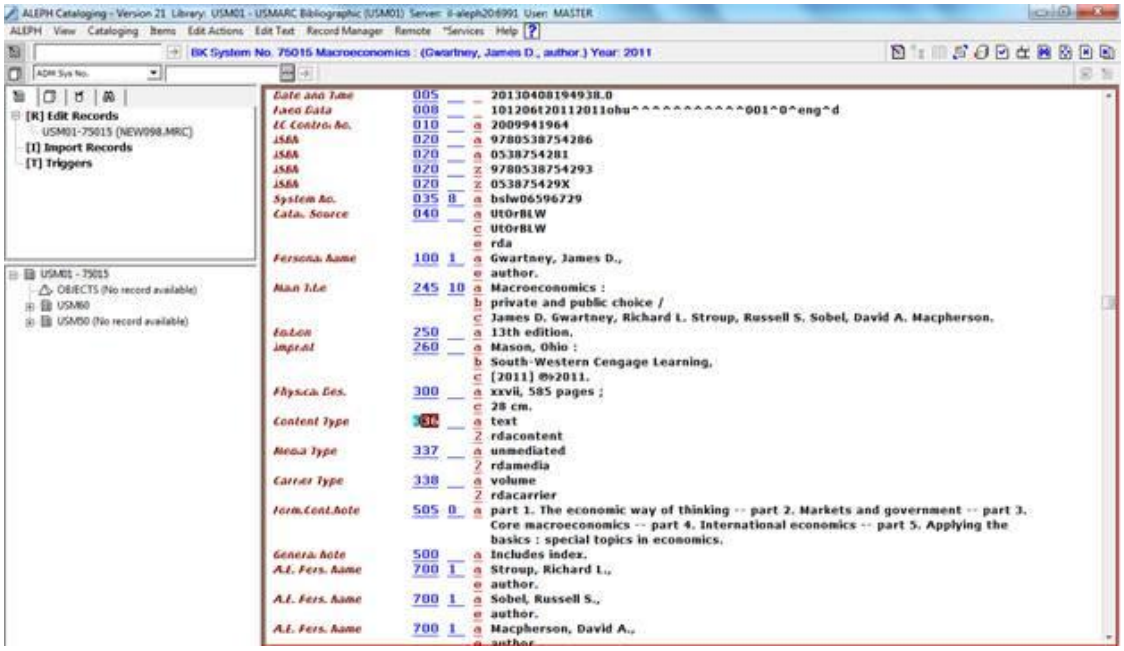
Changes to **marc_exp.dat** reflected in $data_root/pc_tab/catalog/marc_exp.dat

Field	Description	Type of Change
017	Copyright or Legal Deposit Number (R)	Added subfields diz2
033	Date/Time and Place of an Event (R)	Added subfields p2
034	Coded Cartographic Mathematical Data (R)	Added subfield 3
082	Dewey Decimal Classification Number (R)	Added subfields mq
257	Country of Producing Entity (R)	Added subfield 2
490	Series Statement (R)	Added subfield 3
502	Dissertation Note (R)	Added subfields bcdgo

Field	Description	Type of Change
510	Citation/References Note (R)	Added subfield u
534	Original Version Note (R)	Added subfields o3
700	Added Entry - Personal Name (R)	Added subfield i
710	Added Entry - Corporate Name (R)	Added subfield i
711	Added Entry - Meeting Name (R)	Added subfield i
730	Added Entry - Uniform Title (R)	Added subfield i
760	Main Series Entry (R)	Added subfield 4
762	Subseries Entry (R)	Added subfield 4
765	Original Language Entry (R)	Added subfield 4
767	Translation Entry (R)	Added subfield 4
770	Supplement/Special Issue Entry (R)	Added subfield 4
772	Supplement Parent Entry (R)	Added subfield 4
773	Host Item Entry (R)	Added subfield 4
774	Constituent Unit Entry (R)	Added subfield 4
775	Other Edition Entry (R)	Added subfield 4
776	Additional Physical Form Entry (R)	Added subfield 4
780	Preceding Entry (R)	Added subfield 4
785	Succeeding Entry (R)	Added subfield 4
786	Data Source Entry (R)	Added subfield 4
787	Other Relationship Entry (R)	Added subfield 4
800	Series Added Entry - Personal Name (R)	Added subfields 35
810	Series Added Entry - Corporate Name (R)	Added subfields 35
811	Series Added Entry - Meeting Name (R)	Added subfields 35
830	Series Added Entry - Uniform Title (R)	Added subfields 35

In addition, related help files have been changed in **$data_root/pc_tab/catalog/html_eng**. Changes have also been made to **$data_tab/check_doc_line** as necessary.

Below is an example of a MARC record containing RDA fields as displayed in the Aleph Cataloguing module.



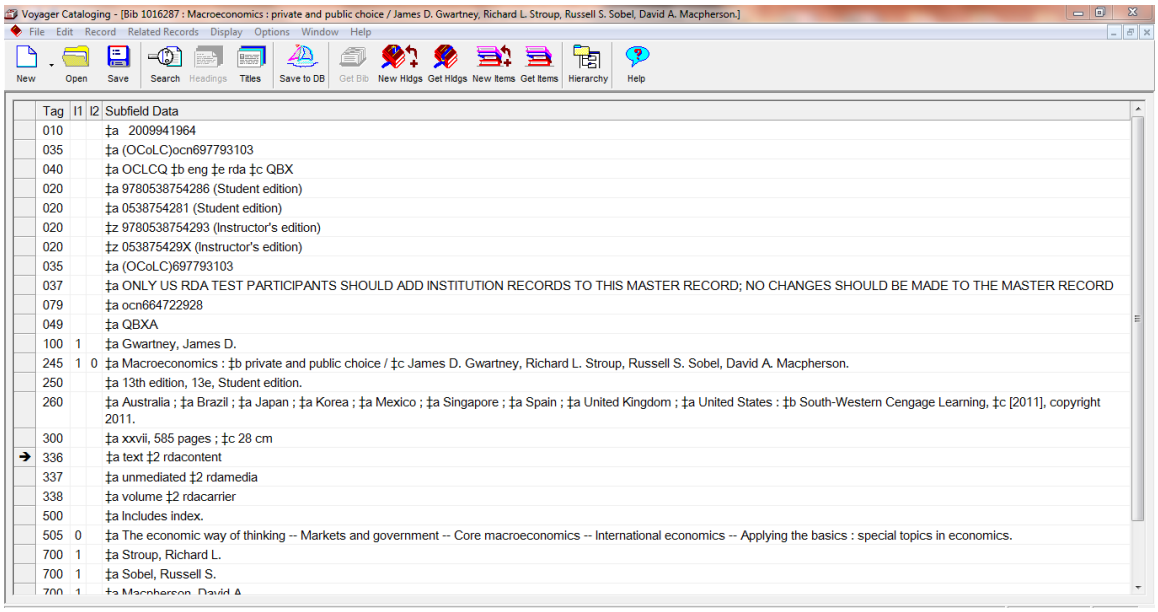
Ex Libris anticipates changes to some of the indexing rules used by our current library systems will be needed to support RDA. Aleph customers can currently make changes to the Aleph indexes as needed.

Finally, libraries may choose to enrich their OPAC displays with RDA-specific information. RDA fields have not been added to any OPAC display files by default, but customers can easily add new fields as desired. Ex Libris has provided information about customizing Web OPAC displays in the user documentation. Customers who are using Primo as their discovery interface should refer to the information below.

4 RDA Support in Voyager

The support for RDA in Voyager is based on the ability to encode RDA data in MARC 21 records. We have included several revisions to the MARC tag tables in various versions of Voyager, including Voyager 7.2, Voyager 7.2.3, Voyager 8.0, and Voyager 8.2. MARC 21 Updates 9, 10, 11, 13, and 14 include all changes to MARC for use with RDA approved through April 2012. We continue to monitor updates to MARC 21[4] and will update Voyager as necessary.

Below is an example of a MARC record containing RDA fields as displayed in the Voyager Cataloging module.

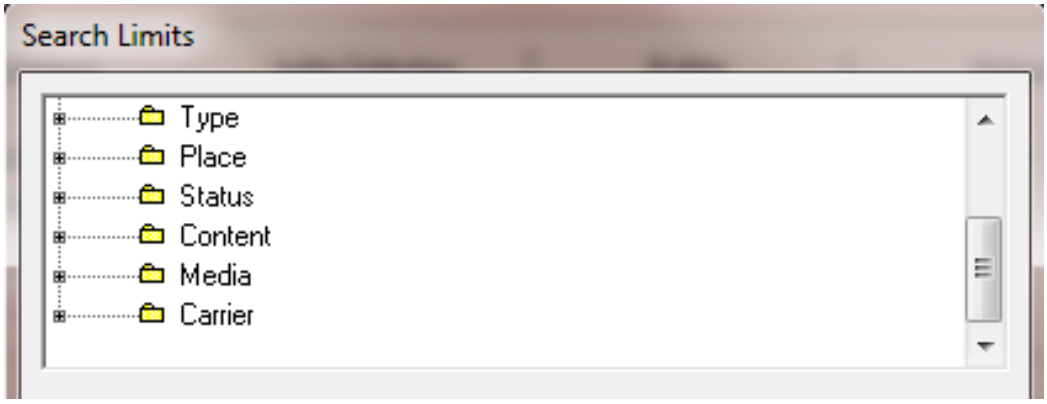


Tag	I1	I2	Subfield Data
010			‡a 2009941964
035			‡a (OCoLC)ocn697793103
040			‡a OCLCQ ‡b eng ‡e rda ‡c QBX
020			‡a 9780538754286 (Student edition)
020			‡a 0538754281 (Student edition)
020			‡z 9780538754293 (Instructor's edition)
020			‡z 053875429X (Instructor's edition)
035			‡a (OCoLC)697793103
037			‡a ONLY US RDA TEST PARTICIPANTS SHOULD ADD INSTITUTION RECORDS TO THIS MASTER RECORD; NO CHANGES SHOULD BE MADE TO THE MASTER RECORD
079			‡a ocn664722928
049			‡a QBXA
100	1		‡a Gwartney, James D.
245	1	0	‡a Macroeconomics : ‡b private and public choice / ‡c James D. Gwartney, Richard L. Stroup, Russell S. Sobel, David A. Macpherson.
250			‡a 13th edition, 13e, Student edition.
260			‡a Australia ; ‡a Brazil ; ‡a Japan ; ‡a Korea ; ‡a Mexico ; ‡a Singapore ; ‡a Spain ; ‡a United Kingdom ; ‡a United States : ‡b South-Western Cengage Learning, ‡c [2011], copyright 2011.
300			‡a xxvii, 585 pages ; ‡c 28 cm
336			‡a text ‡2 rdacontent
337			‡a unmediated ‡2 rdamedia
338			‡a volume ‡2 rdacarrier
500			‡a Includes index.
505	0		‡a The economic way of thinking -- Markets and government -- Core macroeconomics -- International economics -- Applying the basics : special topics in economics.
700	1		‡a Stroup, Richard L.
700	1		‡a Sobel, Russell S.
700	1		‡a Macpherson, David A.

Ex Libris determined that changes to some of the indexing rules used by our current library systems are needed to support RDA. Inasmuch, Voyager 8.2 includes numerous changes to the Voyager indexes, with nearly 100 indexes

added or updated in this release. A detailed description of the index changes made to Voyager 8.2 in support of RDA is described below. Further information about the index changes can be found in the document titled *Voyager Index Changes* on the Ex Libris Documentation Center[5]. Additionally, customers may create new keyword indexes on any of the bibliographic fields as desired, using current capabilities in the System Administration module.

Ex Libris has provided search limit options in both the staff clients and WebVoyáge (Tomcat) based on the content type, media type, and carrier type values (MARC 336, 337, and 338 respectively). These limits were added in the Voyager 8.2 release.



As part of the Voyager 8.2 release, Ex Libris also added publication data in the 264 fields to the BIB_TEXT table, alongside the publication data from the 260 fields. This allows the publication data to be properly coded according to various RDA or AACR2 rules, and enables its use in bibliographic displays and acquisitions records alike.

Finally, libraries may choose to enrich their OPAC displays with RDA-specific information. RDA fields have not been added to any OPAC display files by default, but customers can easily add new fields as desired. Ex Libris has provided information about customizing WebVoyáge displays in the user documentation. Customers who are using Primo as their discovery interface should refer to the information below.

New and Updated Indexes

Numerous changes have been made to the Voyager indexes. Ninety-seven indexes have been added or updated in this release. Many of these are new left-anchored indexes created to support MARC fields added to implement RDA.

The indexes cover a range of authority and bibliographic fields, along with updates to two bibliographic composite indexes, four bibliographic keyword indexes, and six headings indexes in Voyager.

New Authority Left-Anchored Indexes

Index Name	Index Code	Subfields Indexed
Auth ISSN (022a)	A22A	022 a
Auth ISSN (022y): Incorrect	A22Y	022 y
Auth ISSN (022z): Canceled	A22Z	022 z
Auth ISSN-L (022l)	A22L	022 l
Auth ISSN-L (022m): Canceled	A22M	022 m
Auth Other Std. Ident.(024a)	A24A	024 a
Auth Other Std. Ident.(024z): Canc/Invld	A24Z	024 z
Auth Geographic Area Code (043a)	A43A	043 a
Auth Birth Date (046f)	A46F	046 f
Auth Death Date (046g)	A46G	046 g
Auth Begin or single date (046k)	A46K	046 k
Auth End Date (046l)	A46L	046 l

Index Name	Index Code	Subfields Indexed
Auth Content Type Term (336a)	A36A	336 a
Auth Content Type Code (336b)	A36B	336 b
Auth Place of Birth (370a)	A70A	370 a
Auth Place of Death (370b)	A70B	370 b
Auth Associated Country (370c)	A70C	370 c
Auth Place of Resid/Hqrs (370e)	A70E	370 e
Auth Other Assoc Place (370f)	A70F	370 f
Auth Place of Origin of Work (370g)	A70G	370 g
Auth Field of Activity (372a)	A72A	372 a
Auth Associated Group (373a)	A73A	373 a
Auth Occupation (374a)	A74A	374 a
Auth Type of Family (376a)	A76A	376 a
Auth Language Code (377a)	A77A	377 al
Auth Form of Work (380a)	A80A	380 a
Auth Other Distinguishing Char (381a)	A81A	381 a
Auth Medium of Performance (382a)	A82A	382 a
Auth Key (384a)	A84A	384 a
Auth Personal Name (700)	A700	700 abcdefghjklmnopqrstvxyz2
Auth Corporate Name (710)	A710	710 abcdefghklmnoprstvxyz2
Auth Meeting Name (711)	A711	711 acdefghjklnpqstvxyz2

Index Name	Index Code	Subfields Indexed
Auth Uniform Title (730)	A730	730 adfghklmnoprstvxyz2
Auth Chronological Term (748)	A748	748 avxyz2
Auth Topical Term (750)	A750	750 abvxyz2
Auth Geographic Name (751)	A751	751 avxyz2
Auth Genre/Form Term (755)	A755	755 avxyz2
Auth General Subdivision (780)	A780	780 vxyz2
Auth Geographic Subdivision (781)	A781	781 vxyz2
Auth Chronological Subdivision (782)	A782	782 vxyz2
Auth Form Subdivision (785)	A785	785 vxyz2
Auth Complex Linking Entry (788)	A788	788 a2

Note: Searching the authority left-anchored indexes in the Cataloging client shows the indexed field and the corresponding authorized heading in the results list.

New Bibliographic Left-Anchored Indexes

Index Name	Index Code	Subfields Indexed
ISSN, Linking (022L) <	022L	022 l
ISSN, Linking/Incorrect (022M) <	022M	022 m
Geographic Area Code (043A) <	043A	043 a
Content Type: Term (336A) <	336A	336 a
Content Type: Code (336B) <	336B	336 b

Index Name	Index Code	Subfields Indexed
Media Type: Term (337A) <	337A	337 a
Media Type: Code (337B) <	337B	337 b
Carrier Type: Term (338A) <	338A	338 a
Carrier Type: Code (338B) <	338B	338 b
Subject: Hierarchical Place (6620) <	6620	662 abcdefgh24
Subject: Hierarchical Place (6621) <	6621	662 bcdefgh24

Updated Bibliographic Left-Anchored Indexes

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Personal Name	100H	100 abcdefgklnpqtu	100 j4	100 abcdefgjklnpqtu4
Conference	111H	111 abcdefgklnpqtu	111 j4	111 abcdefgjklnpqtu4
Subject: Name	600H	600 abcdfgklmnopqrtvxyz	600 ehjsu24	600 abcdefghjklmnopqrstuvxyz24
Subject: Conference	611H	611 abcdefgklnpqstvxyz	611 hju24	611 abcdefghjklnpqstuvxyz24
Subject: Title	630H	630 adfgklmnoprsvxyz	630 eht24	630 adefghklmnoprstvxyz24
Subject: Chronological	648H	648 avxyz	648 2	648 avxyz2

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Subject: LCSH	6500	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: Children's LCSH	6501	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: MESH	6502	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: NAL	6503	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: Unspecified	6504	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: Canadian English	6505	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: Canadian French	6506	650 abcdvxyz	650 e4	650 abcdevxyz4
Subject: Other	6507	650 abcdvxyz	650 e24	650 abcdevxyz24
Subject: Geographic	651H	651 abvxyz	651 e24	651 abevxyz24
Subject: Faceted	654H	654 abvxyz	654 ce4	654 abcevxyz4
Personal Name AE	700H	700 abcdefghklmnopqrstu	700 jx4	700 abcdefghjklmnopqrstux4
Conference AE	711H	711 abcdefghklnpqstu	711 jx4	711 abcdefghjklnpqstux4
Series AE: Personal <	8000	800 t	800 fghklmnoprsvx	800 fghklmnoprstvx

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Personal Name Series AE	800H	800 abcdefghklmnopqrstuv	800 jx4	800 abcdefghjklmnopqrstuvx4
Series Corporate: Title (8100) <	8100	810 t	810 dfghklmnoprsvx	810 dfghklmnoprstvx
Corporate Name Series AE <	810H	810 abcdefghklmnoprstuv	810 x4	810 abcdefghklmnoprstuvx4
Series AE: Conference <	8110	811 t	811 fghklnpsvx	811 fghklnpstvx
Conference Series AE	811H	811 abcdefghklnpqstuv	811 jx4	811 abcdefghjklnpqstuvx4
Series AE: Uniform Title <	8300	830 adfghklmnoprstv	830 x	830 adfghklmnoprstvx

New Bibliographic Composite Indexes

Index Name	Index Code	Indexes Added
LCCN-ISBN-ISSN (STNO) <	STNO	010A 010Z 020A 020N 020R 020Z 022A 022L 022M 022Y 022Z ISB3

Updated Bibliographic Composite Indexes

Index Name	Index Code	Expected Index Definition	Indexes Added	New Index Definition
ISSN (022a|y|z)	ISSL	022A 022Y 022Z	022L 022M	022A 022L 022M 022Y 022Z
Subjects	SALL	600H 610H 611H 630H 6500 6501 6502 6503 6504 6505 6506 6507 651H 654H 655H	648H 6620	600H 610H 611H 630H 648H 6500 6501 6502 6503 6504 6505 6506 6507 651H 654H 655H 6620

Updated Bibliographic Keyword Indexes

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Journal Title	JKEY	130 adfklmnoprs	773 q	130 adfklmnoprs
		210 ab	800 x	210 ab
		222 ab	810 x	222 ab
		240 adfklmnoprs	811 x	240 adfklmnoprs
		243 adfklmnoprs	830 x	243 adfklmnoprs
		245 abh		245 abh
		246 abfnp		246 abfnp
		247 abfnp		247 abfnp
		400 knptv		400 knptv
		410 knptv		410 knptv
		411 knptv		411 knptv
		440 anpv		440 anpv
		490 av		490 av
		700 knpt		700 knpt
		710 knpt		710 knpt
		711 knpt		711 knpt
		730 adfklmnoprs		730 adfklmnoprs
		740 anp		740 anp
		773 abst		773 abqst
		776 abst		776 abst
		780 abst		780 abst
		785 abst		785 abst
		800 knptv		800 knptvx
		810 knptv		810 knptvx
		811 knptv		811 knptvx
		830 anpv		830 anpvx

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Author Name	NKEY	100 acdq 110 abcdefgkl 111 acdefgklnpq 400 acd 410 abcdefgkl 411 acdefgkl 700 aqcd 710 abcdefgkl 711 acdefgkl 800 acdq 810 abcdefgkl 811 acdefgkl	100 j 800 j 811 j	100 acdjq 110 abcdefgkl 111 acdefgklnpq 400 acd 410 abcdefgkl 411 acdefgkl 700 aqcd 710 abcdefgkl 711 acdefgkl 800 acdjq 810 abcdefgkl 811 acdefgjkl
Subject	SKEY	600 abcdfgklmnopqrstvxyz 610 abcdfgklmnoprstvxyz 611 abcdefgklnpqstvxyz 630 adfgklmnoprstvxyz 650 abcdvxyz 651 abvxyz 653 a 655 abcvxyz 690 abvxyz 691 abvxyz	600 j 611 j 630 e4 648 avxyz2 650 24 651 e4 654 abcevyz24 662 abcdefgh02468	600 abcdfgjklmnopqrstvxyz 610 abcdfgklmnoprstvxyz 611 abcdefgjklnpqstvxyz 630 adefgklmnoprstvxyz4 648 avxyz2 650 abcdvxyz24 651 abevxyz4 653 a 654 abcevyz24 655 abcvxyz 662 abcdefgh02468 690 abvxyz 691 abvxyz

Index Name	Index Code	Expected Index Definition	Subfields Added	New Index Definition
Title	TKEY	130 adfklmnoprs	773 q	130 adfklmnoprs
		210 ab	800 x	210 ab
		222 ab	810 x	222 ab
		240 adfklmnoprs	811 x	240 adfklmnoprs
		243 adfklmnoprs	830 x	243 adfklmnoprs
		245 abh		245 abh
		246 abfnp		246 abfnp
		247 abfnp		247 abfnp
		400 knptv		400 knptv
		410 knptv		410 knptv
		411 knptv		411 knptv
		440 anpv		440 anpv
		490 av		490 av
		700 knpt		700 knpt
		710 knpt		710 knpt
		711 knpt		711 knpt
		730 adfklmnoprs		730 adfklmnoprs
		740 anp		740 anp
		773 abst		773 abqst
		776 abst		776 abst
		780 abst		780 abst
		785 abst		785 abst
		800 knptv		800 knptvx
		810 knptv		810 knptvx
		811 knptv		811 knptvx
		830 anpv		830 anpvx

Updated Headings Indexes: OPAC and Staff Name/Title Headings (AHED/AUTH) Indexes – Bibliographic Fields

Field	Expected Index Definition – Name	Expected Index Definition – Title	Subfields Added	New Index Definition – Name	New Index Definition – Title
100	abcdkq	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps	100 g	abcdgkq	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps
110	abcdgkn	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps		abcdgkn	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps
111	abcdegknq	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps		abcdegknq	240 adfgklmnoprs 243 adfgklmnoprs 245 afgknps
130	adfgklmnoprs	245 afgknps		adfgklmnoprs	245 afgkpns
400	abcdkq	tnplkgf		abcdkq	tnplkgf
410	abcdgkn	tnplkgfd		abcdgkn	tnplkgfd
411	abcdegknq	tnplkgfd		abcdegknq	tnplkgfd
700	abcdkq	tnprsolkgmd	700 g	abcdgkq	tnprsolkgmd
710	abcdgkn	tnprsolkgmd		abcdgkn	tnprsolkgmd

Field	Expected Index Definition – Name	Expected Index Definition – Title	Subfields Added	New Index Definition – Name	New Index Definition – Title
711	abcdegknq	tfgklnps		abcdegknq	tfgklnps
800	abcdkq	tnprsolkgfm	800 g	abcdgkq	tnprsolkgfm
810	abcdgkn	tnprsolkgfmd		abcdgkn	tnprsolkgfmd
811	abcdegknq	tfgklnps		abcdegknq	tfgklnps

Updated Headings Indexes: OPAC and Staff Name/Title Headings (AHED/AUTH) Indexes – Authority Fields

Field	Expected Index Definition – Name	Expected Index Definition – Title	Subfields Added	New Index Definition – Name	New Index Definition - Title
100	abcdkq	tnprsolkgfm	100 g	abcdgkq	tnprsolkgfm
110	abcdgkn	tdfgklmnoprs		abcdgkn	tdfgklmnoprs
111	abcdegknq	tfgklnps		abcdegknq	tfgklnps
400	abcdkq	tnprsolkgfm	400 g	abcdgkq	tnprsolkgfm
410	abcdgkn	tdfgklmnoprs		abcdgkn	tdfgklmnoprs
411	abcdegknq	tfgklnps		abcdegknq	tfgklnps
500	abcdkq	tnprsolkgfm	500 g	abcdgkq	tnprsolkgfm
510	abcdgkn	tdfgklmnoprs		abcdgkn	tdfgklmnoprs

Field	Expected Index Definition – Name	Expected Index Definition – Title	Subfields Added	New Index Definition – Name	New Index Definition - Title
511	abcdegknq	tfgklnps		abcdegknq	tfgklnps

Updated Headings Indexes: OPAC and Staff Name Headings (NHED/NAME) Indexes – Bibliographic Fields

Field	Expected Index Definition	Subfields Added	New Index Definition
100	abcdkq	100g	abcdgkq
110	abcdgkn		abcdgkn
111	abcdegknq		abcdegknq
400	abcdkq		abcdkq
410	abcdgkn		abcdgkn
411	abcdegknq		abcdegknq
700	abcdkq	700g	abcdgkq
710	abcdgkn		abcdgkn
711	abcdegknq		abcdegknq
800	abcdkq	800g	abcdgkq
810	abcdgkn		abcdgkn
811	abcdegknq		abcdegknq

Updated Headings Indexes: OPAC and Staff Subject Headings (SHED/SUBJ) Indexes – Bibliographic Fields

Field	Lead Subfields Expected	Title Sub-fields Expected	Sub-divisions	Sub-fields Added	New Lead Sub-fields	New Title Sub-fields	Sub-divisions
600	abcdkq	tfgklmnopsr	vxyz	600g	abcdgkq	tfgklmnopsr	vxyz
610	abcdgkn	tfgklmnoprsd	vxyz		abcdgkn	tfgklmnoprsd	vxyz
611	abcdegknq	tfgklnps	vxyz		abcdegknq	tfgklnps	vxyz
630	adfgklmnoprs		vxyz		adfgklmnoprs		vxyz
650	ab		vxyz		ab		vxyz
651	ab		vxyz		ab		vxyz
654	ab		vxyz		ab		vxyz
655	a		vxyz		a		vxyz

Refer to Appendix A of the *Voyager System Administration User's Guide* for a complete description of all of the indexes included in Voyager.

New Search Limits

New limits have been added to Voyager to filter results by content type, media type, and carrier type. These limits display both in WebVoyáge and in the Voyager staff clients.

The limits are preconfigured in the *limits.ini* for the Voyager staff clients (c:\Voyager\Misc\limits.ini). For WebVoyáge, new limit groups have been

added to the *limits.xml* file and new configurations have been added to *webvoyage.properties*.

Refer to the *Voyager WebVoyáge Basic User's Guide*, the *Voyager WebVoyáge Architecture Overview and Configuration Models* guide, and the *Voyager Cataloging User's Guide* for more information.

5 RDA support in Alma

Alma's metadata management environment features support for multiple metadata schemas. Support for the MARC 21 and Dublin Core standards allows Alma to manage the range of resources in a library's collection. The metadata management infrastructure allows adding additional formats, providing a sustainable platform for future changes in cataloging standards.

As such, as of Q3 2013, Alma will fully support RDA encoded in MARC in which the RDA entities (WEMI) will be all encoded in single bibliographic and authority records. Details of the implementation are described below.

Following is the list of changed fields in the Bibliographic, Authority and Holdings records in Alma.

Bibliographic:

Field	Description	Type of Change
028	Publisher Number (R)	New subfield - q
264	Production, Publication, Distribution, Manufacture, and Copyright Notice (R)	New field
336	Content Type (R)	New field
337	Media Type (R)	New field
338	Carrier Type (R)	New field
340	Physical Medium (R)	New subfields – jkmno02368
344	Sound Characteristics (R)	New field
345	Projection Characteristics of Moving Image (R)	New field
346	Video Characteristics (R)	New field

Field	Description	Type of Change
347	Digital File Characteristics (R)	New field
377	Associated Language (R)	New field
380	Form of Work (R)	New field
381	Other Distinguishing Characteristics of Work or Expression (R)	New field
382	Medium of Performance (R)	New field
383	Numeric Designation of Musical Work (R)	New field
384	Key (NR)	New field

Authority:

Field	Description	Type of Change
046	Special Coded Dates (R)	New field
336	Content type (R)	New field
368	Other Attributes of Person or Corporate Body (R)	New field
370	Associated Place (R)	New field
371	Address (R)	New field
372	Field of Activity (R)	New field
373	Associated Group (R)	New field
374	Occupation (R)	New field
375	Gender (R)	New field
376	Family Information (R)	New field
378	Fuller Form of Personal Name (NR)	New field
377	Associated Language (R)	New field
380	Form of Work (R)	New field
381	Other Distinguishing Characteristics of Work or Expression (R)	New field
382	Medium of Performance (R)	New field
383	Numeric Designation of Musical Work (R)	New field
384	Key (NR)	New field

Holdings:

Field	Description	Type of Change
337	Media Type (R)	New field
338	Carrier Type (R)	New field

The following fields will be searchable in Alma:

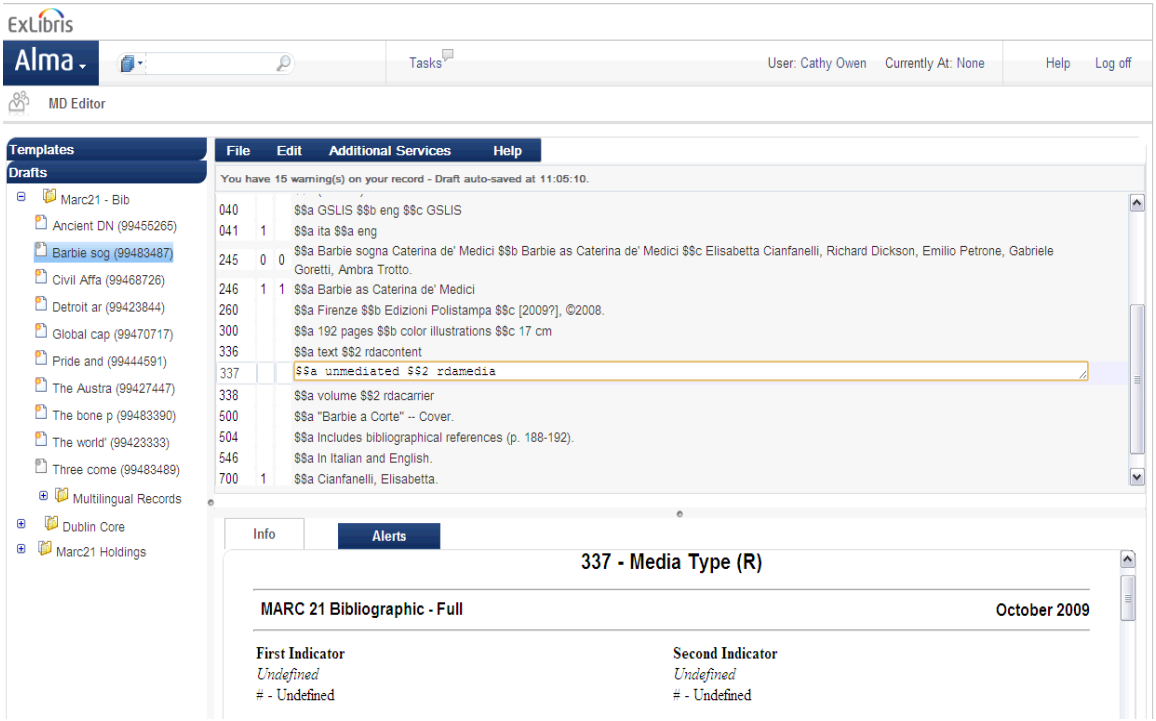
Field	Index
336 $$b	content_type
337 $$b	media_type
338 $$b	carrier_type
264 $$a	publisher_location
264 $$b	publisher
264 $$c	date_of_publication

The following fields will be displayed in Alma:

Field	Index
336 $$b	content_type
337 $$b	media_type
338 $$b	carrier_type
264 $$a	place_of_publication
264 $$b	Publisher
264 $$c	date_of_publication
344 $$abcdefgh	sound_characteristics
345 $$ab	projection_characteristics_of_moving_image

Field	Index
346 $$ab	video_characteristics
347 $$abcdef	digital_file_characteristics
380 $$a	form_of_work
382 exclude numeric	medium_of_performance

Below is an example of a MARC record containing RDA fields as displayed in the Alma Metadata Editor.



Customers who are using Primo as their discovery interface should also refer to the information below for information about the impact of RDA on library users.

Ex Libris will be closely watching the industry adaptation of RDA as an entity-relationship model (composed of entities, their attributes, and the relationships between them) in which the entities are represented by individual separated records. As the industry adopts separate records representing a WEMI approach for RDA, Alma will support the metadata management of such records.

6 RDA Support in Primo

Primo is a discovery and delivery system that harvests data from many different systems and metadata formats and normalizes and enriches the data to the Primo Normalized XML record – the PNX.

Primo normalizes the records using flexible normalization rules via the normalization editor in the Primo Back Office. Primo has out of the box template record in MARC as well as other formats. The normalization process ensures that the original metadata is optimized for Primo functionality by creating a separate section in the PNX for the different aspects of Primo functionality, including:

- Display – this section contains the data intended for display in the Primo Front End
- Links – this section contains links to related information and services (e.g. to a Table of Contents or Full text).
- Search – this section contains all the data indexed in the Primo Search engine for Front End discovery
- Facet – this section includes all the data elements that will be added as facets
- Sort – this section contains sort keys
- Browse – this section contains headings that will display in the Primo Browse lists. There are browse lists for authors, titles and subjects as well

as call numbers. Authors and Subjects can include cross-references which will display in the Front End.

- Dedup – this section contains the data Primo uses to match and dedup records

- FRBR - FRBR is a key concept in RDA. After matching records at the manifestation level and deduping them to create a merged record for display, Primo groups related records based on the principles published by IFLA in *Functional requirements for bibliographic records: final report / IFLA Study Group on the Functional Requirements for Bibliographic Records.* The grouping process is based on creating one or more vectors of author-title combinations (a 130 will create a title only key) for every record. The vectors are matched to create groups.

  In the Front end there are two display options:

  1. Display of a preferred record

     Primo will dynamically select one of the records from the group for display in the brief results list – this is the "preferred" record. The preferred record is the most highly ranked record from the results set. From the preferred record, the system displays a link to the additional records in the group.

  2. Display of a generic record

     Primo will display a generic record including only Work level metadata fields. A link displays the records included in the group.

In preparation for the release of RDA-encoded MARC, Ex Libris worked with several customers to understand how Primo can make use of the changes in the MARC record and, as a result, some changes have been made to the OTB MARC templates.

Updates to the MARC out-of-the-box normalization rules templates to support RDA-encoded MARC records are described below.

All the changes provide support for the use of the MARC 264 tag for publication information. Where applicable, all of the rules for 260 have been duplicated for 264. In addition, rules have been added to make use of the 1st indicator in the 260 tag to give preference to the current publication information. The changes are explained in general terms below. Refer to the out-of-the-box Generic MARC template to see the complete set of rules.

1. Field: display/publisher
Description:
All the rules were re-worked. Priority is given to following tags: 520, 260-3 (current publisher). 264-31 (current publication information), with 260 and 264 without indicator used as defaults. There is an "OR" between all rules. The rules for 880 have been moved to the end – they are added with a MERGE and with a condition to prevent multiple entries.

2. Field: display/creationdate
Description:
Rules now use following priority with OR between them:
260-3, 26431, 260, 264, 008.

3. Field: search/creationdate
Description:
The rule for 260 was duplicated for 264. Since all dates are added (the action is "ADD") there is no hierarchy in this set of rules.

4. Fields: search/startdate and search/enddate
Description:
Duplicated rules for 260-3 and 264-31 and added rules for 260 and 264 as defaults.

5. Field: search/general
Description:
The rule for 260 was duplicated for 264. Since all dates are added (the action is "ADD") there is no hierarchy in this set of rules.

6. Field: facets/creationdate
Description: added rules for 2603 and 264. Rules now use following priority with OR between them: 008, 260-3, 26431, 260, 264.
7. Field: dedup/c4
Description: added rules for 2603 and 264 for format=serials. Rules now use following priority with OR between them: 260-3, 26431, 260, 264.

8. Field: dedup/f6
Description: added rules for 2603 and 264. Rules now use following priority with OR between them: 008, 260-3, 26431, 260, 264.

10. Field: dedup/f10
Description: duplicated rules for both serial and non-serial formats. Rules now use following priority with OR between them: 260-3, 26431, 260, 264.

11. Field: addata/date:
Description: Fixed rule to use "OR" and not "ADD" (only 1st date is used) and added rules for 2603 and 264. . Rules now use following priority with OR between them: 260-3, 26431, 260, 264.

12. Fields: addata/risdate
Description: Added rules for 2603 and 264. Rules now use following priority with OR between them: 260-3, 26431, 260, 264.

7 What Should Customers Do To Implement RDA?

Customers can make sure they are ready to implement RDA by reviewing the following list of recommendations and reacting accordingly.

- The first step is to take a deep breath. With millions of legacy records in library catalogs, the implementation of RDA requires a plan and purposeful changes to your library's workflows over time.
- Make sure that your system configuration files, check files, tag tables, tag help files, and indexes are up to date with the latest changes. If you have upgraded to a recent release of Ex Libris software where these changes have already been incorporated, you should have all of the necessary updates. Any local customizations to these files should be reviewed and adjustments made as necessary.
- Create or modify any fix routines as necessary to accommodate the changes to MARC fields and subfields.
- Create or modify cataloging templates to include RDA fields as desired.
- Create any new search limits that you may want staff or end-users to use with the new MARC fields and subfields.
- Add new fields to the discovery interface or Web OPAC display (e.g. MARC 264 or 336-338) so that your users will see them.
- Periodically check the Library of Congress web site for RDA news and updates (http://www.loc.gov/marc/). Changes to the MARC standard will most likely be published here before the changes are implemented in Ex Libris' software.
- Develop and/or share training materials. Your library may want to adapt training materials shared by other libraries or create training materials from scratch.

- Review and decide on cataloging policy changes that you want to make in your library.
- Decide if you are planning to convert any authority or bibliographic records to RDA. If so, decide on workflows to manage bulk updates to your records.
- If you get records from a vendor or bibliographic utility, make sure that your library's profile is updated to reflect any changes in cataloguing rules or policy decisions made as a result of implementing RDA.
- Finally, remember that RDA is going to require change over an extended period of time. Most libraries that decide to implement RDA will be managing records in a hybrid environment for many years to come.

8 Summary

Most library catalogs have been created over the course of many years, even decades. Over that time, cataloging rules have changed, and changed again. RDA is simply the latest set of cataloging rules to be used to describe resources in library catalogs.

One of the chief benefits of RDA is that it is extensible, enabling the description of new types of resources that are becoming an increasingly important part of what libraries manage. As the statement from the Library of Congress, "Transforming our Bibliographic Framework"[6] illustrates, the library community continues to adapt to the changing environment of bibliographic control. This includes investigating the ongoing efficiency of cataloging standards such as RDA and encoding standards such as MARC 21.

Based on Ex Libris' discussions and work with many of our customers, we are confident that the changes made to Ex Libris' systems will allow libraries to implement RDA cataloging rules within their library systems and take advantage of many of the benefits that RDA has to offer. As RDA develops further and as more libraries implement RDA to describe the materials in library collections, the Ex Libris library management and discovery solutions will continue to evolve.

Questions regarding RDA support in Ex Libris products may be sent to rda@exlibrisgroup.com.

9 References

[1] More information about RDA is available from the RDA Joint Steering Committee web site: http://www.rda-jsc.org/.

[2] The results of the implementation testing of RDA are available from the Library of Congress web site: http://www.loc.gov/aba/rda/.

[3] Final U.S. RDA Implementation Update from the U.S. RDA Test Coordinating Committee (January 4, 2013): http://www.loc.gov/aba/rda/rda_implementation_updates.html.

[4] More information about MARC 21 changes is available from the Library of Congress web site: http://www.loc.gov/marc/RDAinMARC.html.

[5] Voyager Index Changes: http://www.customercenter.exlibrisgroup.com (Ex Libris Documentation Center > Voyager > Upgrade Release Planning > 8.2.0 > Voyager Index Changes).

[6] "Transforming our Bibliographic Framework: A statement from the Library of Congress": http://www.loc.gov/marc/transition/news/framework-051311.html.