Linked Data Support in Alma

Agenda

- **Linked Data Enrichment**

- **RDA/RDF**

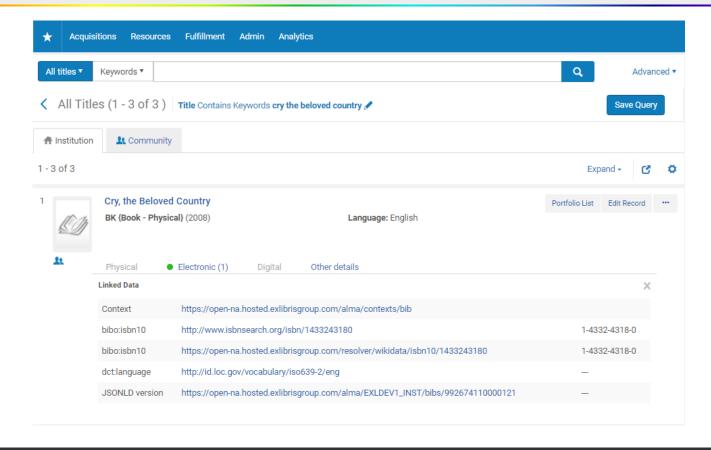- **Roadmap**

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Enrichment

- LD elements are usually not part of the bibliographic record itself –elements are generated automatically
- Alma generates LD elements for known attributes upon:
  - Publishing bibliographic records to discovery systems
  - LD API retrieval of bibliographic/authority record
- LD elements of a bibliographic record are presented in Alma repository staff search and MD editor

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Enrichment

- Alma can enrich bibliographic records with links to well known URIs, including:
  - Language
  - Identifiers
  - Links to Wikidata
  - Authors and subjects – according to the relevant authorities:
    - Library of Congress
    - GND (from the German Gemeinsame Normdatei)
    - MESH
    - Virtual International Authority File (VIAF®)
  - Links to local Authorities

  https://developers.exlibrisgroup.com/alma/integrations/linked_data

Repository Staff Search

JSON LD APIs

- Alma provides LD APIs for enriched bibliographic and authority records

  https://developers.exlibrisgroup.com/alma/integrations/linked_data/jsonld

```
{
    "@context": "https://open-na.hosted.exlibrisgroup.com/alma/contexts/bib",
    "@id": "https://open-na.hosted.exlibrisgroup.com/alma/01ABC_INST/bibs/1234.jsonld",
    "@type": "book",
    "title": "Harry Potter and the Sorcerer's Stone",
    "date": "1998",
    "place_of_publication": "England",
    "publisher": "Turtleback Books",
    "language": "http://id.loc.gov/vocabulary/iso639-2/eng",
    "creator": [
        {   "@id": "http://id.loc.gov/authorities/names/n97108433",
            "label": "Rowling, J. K.",
            "sameAs": "http://viaf.org/viaf/sourceID/LC%7Cn97108433"},
        {   "@id": "http://id.loc.gov/authorities/names/n83318879",
```

List of creators, with link to relevant authorities (in this example to Library of Congress and VIAF)

Publishing

- Publish bibliographic records to Primo with LD elements

- Published xml includes URIs in the following fields:
  - ISSN
  - ISBN
  - OCLC number
  - Creator
  - Subject

- URI are added in subfield 0 with no (URI) prefix per LC update

- Examples:

  022 |a 0028-0836 |0 http://worldcat.org/issn/0028-0836

  035 |a (OCoLC)1586310 |0 http://www.worldcat.org/search?q=no:1586310

  700 1 |a Lockyer, Norman, |c Sir, |d 1836-1920.
          |0 http://id.loc.gov/authorities/names/n86860325
          |0 http://viaf.org/viaf/sourceID/LC|n86860325

  650 0 |a Science |v Periodicals. |0 http://id.loc.gov/authorities/subjects/sh85118580

RDA/RDF Background

- RDA/RDF defines a hierarchy of library data resources: Work – Expression – Manifestation – Item. This hierarchy is usually referred to as "WEMI".
  - **Work** - a distinct intellectual or artistic creation
  - **Expression** - the intellectual or artistic realization of a work
  - **Manifestation** - the physical embodiment of an expression of a work
  - **Item** - a single exemplar of a manifestation, reflect physical form

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RDA/RDF Background

- Example:
  - Work= Romeo and Juliet by William Shakespeare.
  - Expression = Illustrated edition of Romeo and Juliet written by Shakespeare
  - Manifestation =1989 Penguin edition.
  - Item = actual book, sitting on the shelf, with a call number and barcode.

RDA/RDF API's

- Alma supports the following API's:
  - Retrieval of a **manifestation** in RDA/RDF format
  - Retrieval of a **work** in RDA/RDF format

- Manifestation level is parallel to the Alma bibliographic record level. The API returns:
  - **Work** fields with work URI
  - Links to all manifestations that are related to that work.
  - **Expression** fields
  - **Manifestation** fields
  - **Item** barcodes

RDA/RDF API's

- Work - Alma groups multiple BIB records into a single Work record. Grouping logic is based on the same logic used for discovery:
  - Normalized uniform title
  - Permutations of author + title

- The API returns:
  - **Work** fields with work URI
  - Links to all manifestations that are related to that work

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Short Term Roadmap

- Libraries will be able to use MD editor to catalog LD elements

  - In MD editor, type field content and click alt+F3 to display a list of vocabulary resources that are supported for this field.

  - Choose a vocabulary resource – e.g. geonames

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Short Term Roadmap

- Planned support for representing MARC bibliographic records in BIBFRAME 2.0 format
  - Publish MARC bibliographic records in BIBFRAME format
  - View a MARC record as a BIBFRAME record
  - Expose MARC bibliographic records as BIBFRAME via API

- In addition libraries will be able to publish their catalog to linked data consumer applications in RDA/RDF format

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Long Term Roadmap

- Support for native cataloging in BIBFRAME starting with a proof of concept version.

- Support a triple store service for linked data in Alma.

- It will be possible to import records into the Alma catalog using BIBFRAME

THANK YOU