Fostering BIBFRAME collaboration: interoperability and data curation with the Share Family

Library of Congress July 2024 BIBFRAME Update Forum
Monday, July 1, 2024

https://www.share-family.org/
https://wiki.svde.org
info@svde.org
Abstract

Share-VDE was the first system to make a major commitment to BIBFRAME and has been active with BIBFRAME since 2016. The several Share Family projects all maintain standardization of BIBFRAME linked data as defined by the Library of Congress and the presentation will emphasize how standard BIBFRAME is a key to our community's integrated environments as systems proliferate, from both the interoperability and the data curation point of view.
Share Family background
The Share Family is a global community built on collaboration that brings together libraries, archives, museums, consortia and Library Service Platforms (LSPs) to join their knowledge in an ever-widening network of interconnected bibliographic data.

For further details please refer to https://www.share-family.org and the dedicated Share-VDE wiki section.
Stepping stones

2016
Share Catalogue online

2017
Share-VDE prototype

2018
2017-2019: Share-VDE members' and LD4P members' data from MARC21 to BIBFRAME

2019
Share Family embraces all LOD Platform initiatives

2020
2019-2021 Share-VDE - environment for library LOD

2021
2021-ongoing PCC data pool

2022
Share-VDE 2.0 new Linked Data Management System and Entity Discovery Portal

2023
2021-ongoing NatBib WG and shared discovery environment

2024
BNB in LOD progresses towards production (beta)

LILLIT launch

LOD Platform 3.0.0
Share Family processes and output

DATA INPUT FROM INSTITUTIONS

- MARC21 bib. and holding
- MARC21 aut.
- UNIMARC
- RDF/BIBFRAME
- Other formats (eg. FOLIO)

LOD PLATFORM SERVICES

- Mapping
- URI Enrichment
- Reconciliation
- Creation of Linked Data Entities
- Conversion to RDF-based BIBFRAME

RESULTS

[Data Publication]
- End user discovery portals for each initiative of the Share Family
- Search APIs for data consumption (GraphQL, REST, SPARQL)

[Data Distribution]
- API / protocols for third parties integration (eg. local LSPs and data editor such as Wikidata, Sinopia BIBFRAME editor, FOLIO etc.)
- Downloadable datasets (BIBFRAME/RDF, MARC enriched records)

[Shared Data Management]
- Editing of Share Family entities with JCricket
- Reuse of Share Family BIBFRAME data in local library systems
- Reuse of Share Family MARC representations in local library systems

[Additional Services]
- Authority control in MARC and BIBFRAME-based workflows
- SFI - Share Family Index: registry of entity URIs

{Mapping URI Enrichment Reconciliation Creation of Linked Data Entities Conversion to RDF-based BIBFRAME}
Metadata management and output

Original library metadata

- Entity resolution and clusterization
- Data enrichment and BIBFRAME conversion

POSTgres RDBMS

- Solr index
- Triple store

Entity discovery portal

API layer

Deliverables

noSQL db
Metadata management and output

Original library metadata

- Entity resolution and clusterization
- Data enrichment and BIBFRAME conversion

Sapientia Cluster Knowledge Base

noSQL db

Entity discovery portal

API layer

Deliverables
The data lake as a source of living data

ongoing automatic metadata updates

Sapientia Cluster Knowledge Base

manual data curation
Entity discovery portal as an point of access for data curation

Rowling, J. K.
British author and philanthropist (born 1965). Born in Yate.
Joanne Rowling, known by her pen name J. K. Rowling, is a British author and philanthropist. She wrote Harry Potter, a seven-volume fantasy series published from 1997 to 2007. The series has sold over 500 million copies, been translated into 84 languages, and spawned a global media franchise including films and video games. The Casual Vacancy (2012) was her first novel for adults. She writes Cormoran Strike, an ongoing crime fiction series, under the alias Robert Galbraith. - Wikipedia

More options

Rowling, J. K.
with works by her, publications, works about her
The editor: collaboratively manage entity metadata

Step 1: Search on Share-VDE Main Portal

Step 2: Enter the entity details page

Step 3: Click on the edit action and enter the JCricket UI
JCricket for living data curation
2016-2024
Lesson learned
“Harry Potter and the Philosopher’s stone” (1999 edition)

Metadata

Basic info

URI

https://bvde.org/instances/10650

Title

Harry Potter and the Philosopher’s stone
Harry Potter and the philosopher’s stone

Year of publication

1999

Contributor

Buena Vista Home Entertainment

Provision Activity
- Contributor (publisher)
- Place of publication
- Year of publication

Buena Vista Home Entertainment : Burbank, 1999
The Cluster Knowledge Base – Depth granularization

Es. record NLF id 017484714

[...]
<datafield tag="502" ind1=" " ind2=" ">
<subfield code="a">Väitöskirja :</subfield>
<subfield code="c">Aalto-yliopisto, teknillisen fysiikan laitos,</subfield>
<subfield code="d">2020.</subfield>
<subfield code="9">FENNI&lt;KEEP&gt;</subfield>
</datafield>
[...]

LC BIBFRAME ConvSpecs (with Share extension)

<table>
<thead>
<tr>
<th>Subfield Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$a - Dissertation note (NR)</td>
<td>Opus - dissertation - Dissertation</td>
</tr>
<tr>
<td>$b - Degree type (NR)</td>
<td>## - degree - literal</td>
</tr>
<tr>
<td>$c - Name of granting institution (NR)</td>
<td>## - grantingInstitution - Agent rdfs:label</td>
</tr>
<tr>
<td>$d - Year of degree granted (NR)</td>
<td>## - date - literal</td>
</tr>
</tbody>
</table>
[...]
The Cluster Knowledge Base – Depth granularization

- **Current CKB**

- **dissertation Label:** Väitöskirj

- **dissertation granting institution:** Aalto-yliopisto, teknillisen fysiikan laitos, 2020

- **dissertation date:** 2020

- **Granularized CKB (in progress)**
The Cluster Knowledge Base – Grouping

Es. record NLF id 010468136
[...]
<datafield tag="264" ind1=" " ind2="1">
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  <subfield code="b">Nauka i izkustvo ;</subfield>
  <subfield code="a">Moskva :</subfield>
  <subfield code="b">Russkij âzyk,;</subfield>
  <subfield code="c">1980.</subfield>
</datafield>
[...]

**LC BIBFRAME ConvSpecs**

<table>
<thead>
<tr>
<th>Subfield Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$a - Place</td>
<td>Place of production, publication, distribution,</td>
</tr>
<tr>
<td>$b - Name</td>
<td>Name of producer, publisher, distributor,</td>
</tr>
<tr>
<td>$c - Date</td>
<td>Date of production, publication, distribution,</td>
</tr>
<tr>
<td></td>
<td>manufacture, or copyright notice (R)</td>
</tr>
</tbody>
</table>

[...]
The Cluster Knowledge Base – Grouping

| publication year | 1980 |
| publisher place  | Sofià |
| publisher place  | Moskva |
| publisher name   | Nauka i izkustvo |
| publisher name   | Russkij âzyk |

Provision Activity 1

| publisher place | Sofià |
| publisher name  | Nauka i izkustvo |
| publication year | 1980 |

Provision Activity 2

| publisher place | Moskva |
| publisher name  | Russkij âzyk |
| publication year | 1980 |

Current CKB

Granularized CKB (in progress)
SVDE Ontology designed in the dedicated Sapientia Entity Identification Working Group as an extension of BIBFRAME.

Core model:

- `svde:Work`
- `svde:Opus`
- `svde:hasExpression`
- `svde:hasOpusType`
- `svde:inHub`

preliminary version

https://doi.org/10.5281/zenodo.8332350
The inclusion of the bf:Hub to guarantee the interoperability

The inclusion of the bf:Hub will guarantee full compliance with the «standard» BIBFRAME flavour
Flexibility and elasticity are key concepts for broader participation in the Share Family initiative: collecting and responding to the needs of a large community must not mean moving away from the standard and benefits (in terms of interoperability) that a "common language" guarantees.
Flexibility & Elasticity for Interoperability

<marc:datafield tag="264" ind1="" ind2="1">
  <marc:subfield code="a">Napoli : </marc:subfield>
  <marc:subfield code="b">Graus edizioni, </marc:subfield>
  <marc:subfield code="c">[2022] </marc:subfield>
</marc:datafield>

Other BIBFRAME shapes

LC BIBFRAME shape

SHARE BIBFRAME shape
Get involved!

Becoming part of the global Share Family means sharing data and co-operating with the greater international library community.

The family continues to expand as more and more libraries worldwide embrace the opportunity to be involved in an international network of information, creating dialogue, participation and partnership.

Get in touch with us to find out more about how the Share family can help your library:

info@svde.org
https://share-family.org
https://wiki.svde.org/
Thank you!

Tiziana Possemato

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