The Share Family initiative to bring Linked Open Data into practice

Tiziana Possemato

IFLA Midterm Meeting, Vatican City
22nd March 2024

https://www.share-family.org/
https://wiki.svde.org
info@svde.org
Share-VDE background and the Share Family
Stepping stones

- **2016**: Share Catalogue online
- **2017**: Share-VDE prototype
- **2018**: Share-VDE 2.0 - new Linked Data Management System and Entity Discovery Portal
- **2019**: Share-VDE - environment for library LOD
- **2020**: LILLIT launch
- **2021**: Share Family embraces all LOD Platform initiatives
- **2022**: Share Family - towards production
- **2023**: BNB in LOD progresses towards production (beta)

**Timeline Events**

- **2017-2019**: Share-VDE members' and LD4P members' data from MARC21 to BIBFRAME
- **2017-ongoing**: NatBib WG and shared discovery environment
- **2019-2021**: Share-VDE - environment for library LOD
- **2020-ongoing**: Share Family embraces all LOD Platform initiatives
- **2021-ongoing**: Parsifal launch
- **2022**: Share-VDE 2.0 - new Linked Data Management System and Entity Discovery Portal
- **2023**: BNB in LOD progresses towards production (beta)
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.
Share-VDE - Virtual Discovery Environment

Berkeley Law Library - 600,000 bib.
Duke University - 5,5 million bib.
Library of Congress - 12 million bib. + 11 million aut.
National Library of Finland - 16 million bib. + 220,000 aut.
National Library of Norway - 2,3 million bib. + 2,3 million aut.
National Taiwan University Library - 6 million bib. + 300,000 aut.
New York University - 6 million bib.
Smithsonian Libraries and Archives - 900,000 bib.
Stanford University - 9 million bib.
University of Alberta / NEOS Library Consortium - 6,3 million bib.
University of Chicago - 12 million bib.
University of Michigan Ann Arbor - 1 million bib.
University of Pennsylvania - 6,5 million bib.
Yale University - 13 million bib.

https://www.svde.org
97,1 million bib. records
13 million aut. records
Share Catalogue: Scholarly Heritage and Access to Research

Università degli Studi di Napoli Federico II
Università degli Studi della Basilicata
Università degli Studi del Sannio
Università degli Studi di Salerno
Università degli Studi di Napoli Parthenope
Università degli Studi del Salento
Università degli Studi di Napoli L'Orientale
Università degli studi della Campania Luigi Vanvitelli
Università degli Studi Suor Orsola Benincasa

Share Catalogue discovery portal
5 million records
National Bibliographies in Linked Open Data

The aggregation of data from National Bibliographies in a shared entity discovery environment; the first of these is the BNB - British National Bibliography, soon to go into production.

The linked open data BNB beta website is available at

https://bl.natbib-lod.org/

https://natbib-lod.org/

5 million records
The Share Family hosts a dedicated tenant for the data of the PCC - Program for Cooperative Cataloging, to provide PCC-quality BIBFRAME data housed in an ad hoc data pool.

https://pcc-lod.org/
5 million records
Parsifal - The URBE Integrated Catalogue in Linked Open Data

Accademia Alfonsiana
Centro Pro Unione
Pontificia Facoltà di Scienze dell'Educazione "Auxilium"
Pontificia Facoltà Teologica "Marianum"
Pontificia Università Antonianum
Pontificia Università della Santa Croce
Pontificia Università di San Tommaso d'Aquino (Angelicum)
Pontificia Università Gregoriana
Pontificia Università Lateranense
Pontificia Università Urbaniana
Pontificio Ateneo Sant'Anselmo
Pontificio Istituto Biblico
Pontificio Istituto Orientale
Pontificio Istituto Teologico "Giovanni Paolo II" per le Scienze del Matrimonio e della Famiglia
Pontificium Institutum Patristicum Augustinianum
Università Pontificia Salesiana

https://parsifal.urbe.it/parsifal/?l=en
3 million records
Share Art, Share Music, Share MIA

Three pilot projects for shared Linked Open Data environments in the domains of Art, Music and Manuscripts, Incunabula and Ancient books
Share Family and Share-VDE liaisons

- PCC liaison: Nancy Fallgren, NLM-NIH
- PCC BIG group
- National Bibliographies
- IFLA Bibliography Section liaison: Maud Henry, KBR - Royal Library of Belgium
- SHARE Catalogue liaisons: Roberto Delle Donne and Claudio Forziati, Università degli Studi di Napoli Federico II
- Kubikat-LOD pilot project in the art domain
Metadata management and outputs

Original library metadata

- entity resolution and clusterization
- data enrichment and RDF conversion

POSTgres RDBMS
Solr index
Triple store
Entity discovery portal
API layer
Deliverables
Share-VDE and Share Family – Linked Data Ecosystem: Processes

**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/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
Herman Melville in Share-VDE, with works by him, publications, works about him
Moby Dick

1851 novel by Herman Melville. Academic theses/biography/fiction/novel.

Moby-Dick, or, The Whale is an 1851 novel by American writer Herman Melville. The book is the sailor Ishmael’s narrative of theedition quest of Ahab, captain of the whaling ship Pequod, for vengeance against Moby Dick, the giant white sperm whale that bit off his leg on the ship’s previous voyage. A contribution to the literature of the American Renaissance, Moby-Dick was published to mixed reviews, was a commercial failure, and was out of print at the time of the author’s death in 1891. Its reputation as a Great American Novel was established only in the 20th century, after the 1919 centennial of its author’s birth. William Faulkner said he wished he had written the book himself, and D. H. Lawrence called it "one of the strangest and most wonderful books in the world" and "the greatest book of the sea ever written".

Its opening sentence, “Call me Ishmael”, is among world literature’s most famous. - Wikpedia

This is part of the series Wright American fiction, Wright American fiction, 1855-1925, Digital e-books collection.


More options

Moby Dick work in Share-VDE
Entity discovery portal

Moby Dick, or, The whale

Volume. Published in English in 2000 in New York.

Contributors: Herman Melville (author), Barry Moser (artist), Lefroy Newman (artist), Fred Benessas (editor), Sarah E. Jones (editor), Hershel Parker (editor), Harrison Hayford (editor), G. Thomas Tanselle (editor), Tony Tanner (editor), and Amazon Mechanical Turk (translator).

ISBN: 067978327X
Identifiers: p1041656873703306
Notes: ill.;
Bibliographic level: Monograph
Cataloging source: DLC
Credits: Read by Paul Boehmer.
Descriptive cataloging form: AACR
Dimension: 21 cm.
Encoding level: Full
Extent: xi, 851 p.;
Record status: Corrected or revised
Responsibility statement: Herman Melville; introduction by Elizabeth Hardwick; illustrated by Rockwell Kent.
Series statement: The Modern Library classics.
System control number: (OCoLC)ecm4547812

This section provides a comprehensive collection of documents detailing the various APIs integral to the Share Family ecosystem. These APIs serve platform, facilitating seamless integration, data retrieval, and interaction with Share Family services and resources.

Please contact info@svde.org@ for any additional information.
Deliverables

Linked Data Descriptions and Enriched MARC Records

- The Library catalogue is converted in linked data entities according to BIBFRAME 2.0. The entities are then enriched both with native and persistent SVDE URIs and URIs from external sources.
- MARC records from the original library catalogue are enriched both with native SVDE URIs and URIs from external sources.

Authoritative Services

- Innovative solutions that facilitate and improve authority control through automatic and manual procedures.
- Libraries to receive constantly updates on their bibliographic and authority records from authoritative sources.
- Authority Services currently available for MARC-based workflows offer automated URI enrichment, reconciliation and validation of library data.
Data retention policies and item data treatment

https://id.loc.gov/vocabulary/preservation.html
Metadata policies

Share-VDE Open Metadata Policy

Approved by the Share-VDE Advisory Council on March 15th, 2023

Share-VDE strives to encourage open access to data, and support diversity by freely sharing information. We are committed to making our metadata as open as possible to enhance the discovery of library and cultural heritage resources and allow users to repurpose metadata with clearly defined license conditions.

- Share-VDE data, including participant data hosted by Share-VDE may be used under an CC0 license unless expressly stated otherwise.

- Listed below are tenants adhering to other open data policies:
  - PCC Data Pool: CC BY-NC 4.0
  - If using data from one of these tenants, one must attribute the source of the metadata as outlined in the appropriate policy.

Share-VDE data are hosted and maintained by supported systems, which also benefit from the network effects of a data quality community. The Share-VDE Open Metadata Policy ensures access to Share-VDE data to the wider community. The Share-VDE Open Metadata Policy does not give access to tools and services developed by the Share-VDE membership.

For further information on Share-VDE please see our Executive Summary.

The Entity Management System
The data lake as a source of **living data**

ongoing automatic metadata updates

Sapientia Cluster Knowledge Base

manual data curation

[Diagram showing the flow from data lake to Sapientia Cluster Knowledge Base and back to manual data curation.]

---

22
The Editor: work together to take care of your data

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
Work together to take care of your data

The JCricket editor is an example of how the LOD Platform technology, within the Share Family Linked Data Ecosystem, is pursuing a new way of managing library cataloguing in a cooperative way:

★ aggregation of data from multiple sources
★ managed through standard protocols (linked data)
★ in a collaborative and integrated environment
★ that makes available open data and resources
★ to end users and professionals (researchers, scholars etc.)
★ for reuse in the library community and beyond
Share-VDE and Share Family – Linked Data Ecosystem: Principles

**CO-OPERATIVE**

Cooperation is the founding principle of the initiative. The community of experts meet regularly to discuss theories and practices of the application of semantic web technologies, and to study and create new cooperative tools.

**INTEROPERABLE**

By implementing the BIBFRAME data model and facilitating interoperability with different data models and data pools, bibliographic information can be transformed into Linked Data, increasing the visibility of research and encouraging greater engagement with library, archive and museum collections.

**SUSTAINABLE**

The Share Family opens the door to a flexible, sustainable, interoperable and co-operative approach to bibliographic data, with time, expertise and costs shared across the community for the benefit of all members.

**OPEN**

The Share initiative aims to encourage free access to data and supports diversity by sharing information freely. Libraries implement and support open metadata policies as part of their efforts to improve the discovery of library resources and cultural heritage.

**FLEXIBLE**

Enriched and structured data can be re-used in local and external systems, across library types and ILS/LSPs, enabling each institution to maintain control of its own catalogue data.

**AUTHORITATIVE**

The quality of data is guaranteed both through advanced technical processes and through collaborative data modeling, enrichment and sharing, handled collectively by member organizations.
Thank you!

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