Share-VDE:
Library Linked Open Data in Action

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Share-VDE Overview
Active Participating Institutions in Share-VDE

Libraries members of SVDE and Share Family working groups, and parallel projects are constantly contributing with their Subject Matter Experts to requirements gathering, functional analysis and providing feedback on developments.
Share-VDE Groups
PCC Data Pool

- Open pool of PCC-quality BIBFRAME data
- Converted and hosted by the Share Family initiative
- Collaboration via PCC liaison
- [https://pcc-lod.org/](https://pcc-lod.org/)
Share-VDE Suite of Tools and Services

- Data conversion service: MARC to BIBFRAME
- Member-developed data model
- Sapientia Cluster Knowledge Base
- JCricket Editor
- Entity-based BIBFRAME catalog [https://www.svde.org/](https://www.svde.org/)
Comparison IFLA-LRM/BIBFRAME/Share-VDE

IFLA LRM

**Work**

is realized through

realizes

Expression

is embodied in

embodies

**Manifestation**

is exemplified by

exemplifies

Item

Item

BIBFRAME

**Hub**

**Work**

bf:hasExpression

bf:expressionOf

**Instance**

bf:hasInstance

bf:instanceOf

Item

Item

Share-VDE

**svde:Opus**

**svde:Work**

bf:hasExpression

bf:expressionOf

**bf:Instance**

bf:hasItem

bf:ItemOf

svde:Item

svde:Item
Share-VDE model (simplified version)

AGENT CLUSTER (CREATOR)
William Shakespeare
example ID 63931

AGENT CLUSTER (TRANSLATOR)
Marcel Pagnol

WORK
French translation
[text]

OPUS
Hamlet [text]
example ID 10834

WORK
audiobook
[sound recording]

WORK
French translation
[text]

INSTANCE
Hamlet, Prince de Danemark
1947
ID STANFORD
ID DUKE

INSTANCE
Hamlet, Édition bilingue
1945
ID NYU
ID UMICH

PUBLISHER CLUSTER
Nagel

PUBLISHER CLUSTER
Pantheon books

INSTANCE
Hamlet [196-?]
ID DUKE
ID NYU

ITEM

ITEM

ITEM
JCricket is an entity editor that carries out the transition from Marc to a real Entity Management System.

JCricket acts on the entity database (CKB) created through Entity Resolution and clustering processes.

"The more, the merrier" is a perfect vision in a collaborative community. But each library also has local needs: the architecture of JCricket allows to operate locally or centrally, creating a collaborative group that does not forget local specificities.
What JCricket is

- it’s a linked data entity / authority editor
- it applies to linked data entities created within all tenants of the Share Family (svde.org, pcc-lod.org, natbib-lod.org)
- it’s a manual application that manages properties (attributes, relations and links) of entities in the CKB - Cluster Knowledge Base
- it’s a collaborative tool shared across member institutions
- it can be a new tool for copy cataloging in LOD
What JCricket is not

❌ not a traditional bibliographic data editor
❌ not an original cataloguing tool
❌ not in contrast with Sinopia or Marva
❌ not impacting original data that reside in member libraries’ systems (unless libraries want to use ad hoc APIs for entity updates both in SVDE and in their systems)
Penn’s Involvement in Share-VDE
Penn's involvement

- Participant since the initial 2016 pilot project
- Serving on Advisory Council and other teams
- Partnering with SVDE to develop a Penn skin
  https://penn.svde.org/
- Linked Data vision:
  https://guides.library.upenn.edu/linked-data
SVDE integrations for Penn’s local services

Integration with local services, e.g. connection to Alma APIs for Penn circulation services
Penn UX testing

Civil rights movement
1954–1968 U.S. social movement against institutional racism

Martin Luther King Jr.
American civil-rights activist and leader (1929–1968)

Selma, Alabama (USA)
City in and county seat of Dallas County, Alabama, United States

“Selma is a city in and the county seat of Dallas County, in the Black Belt region of south central Alabama and extending to the west. Located on the banks of the Alabama River, the city has a population of 17,971 as of the 2020 census. About 80% of the population is African-American.” — Wikipedia
Penn’s Future Plans
Share Family: initiatives beside Share-VDE
Common priorities, challenges and concerns

- By adopting BIBFRAME as main ontology, take advantage of the potentials of linked data to facilitate interoperability among data pools, in coexistence with MARC.
- Transform library catalogs in research tools providing structured access and visibility to research in original languages in all disciplines.
- Apply and support open metadata policies.
- Be independent of local practices and of local choices of ILS/LSP.
- Open up a new level of international cooperation to maintain the wealth of information that will continue to grow.
- By serving as an authoritative data source, contribute to a new bibliographic ecosystem where data modeling, data enrichment and data sharing are handled collectively.
The Share Family initiatives

For further details please refer to the following section of the wiki: About the Share Family.
The map with the names of the participant institutions can be consulted on this dedicated web page.

Further information are available on the wiki.
The configurable components

Share Family Components (*)

- TECHNOLOGY
  - Advanced API layer
    - GraphQL technology with advanced architecture and search API layer

- SERVICE
  - Triple store indexing
    - Linked data descriptions created from the original MARC records and the clusters of entities in the ODI are published on a triple store and can be queried through the SHARE endpoint

- APPLICATION
  - J.Cricket Editor
    - J.Cricket editor for updating and modifying linked data entities

LOD Platform Technology

- TECHNOLOGY
  - Advanced entity model
    - Advanced 4-layered entity model, based on BIBFRAME 2.0 and interoperable with multiple schemes (BIBFRAME, IFLA-URM etc.)

- SERVICE
  - Integration with other systems
    - Development of APIs for interoperability and cooperation with third parties (e.g., LODAP - Linked Data for Production)

- APPLICATION
  - Discovery Portal 1.0
    - Interface for the standard discovery system

- APPLICATION
  - Discovery Portal 2.0
    - Advanced entity discovery system based on BIBFRAME
      - Customised UI (skinned)
      - Integration with local APIs
      - Site mapping with additional meta-tagging
      - Data conversion to Schema.org

DATA

- Deliverable D1
  - The library catalogue is converted according to BIBFRAME 2.0 (including additional vocabularies and ontologies as needed)
  - The linked data descriptions created in the conversion are recorded and linked to original Share UIRs, and published on the discovery portal

- Deliverable D2
  - The library receives the file from the Cluster Knowledge Base with the clusters of linked data entities in coding original Share UIRs, UIRs from external sources and variant forms
  - The data from the Cluster Knowledge Base is published on the discovery portal and on the triple store

- Deliverable D3
  - The original library records are converted to BIBFRAME 2.0 (including other vocabularies and ontologies as needed), enriched with UIRs from external sources and delivered to the library

- Deliverable D4
  - The MARC records from the library catalogue are enriched with original Share UIRs and UIRs from external sources, and published on the discovery portal

(*) Please consider the list indicative, to be adapted to each single context, and subject to change.
Deliverables

Data, enriched with information (URIs and values) from external authoritative sources and converted following the BIBFRAME data model, are available for the publication on the Share portal and for other library projects, both in Marc 21 enriched and in RDF.

Data can be enriched with specific sources selected by each library, following their special and local needs.
A different simple search configuration: the BNB

Simple search default configuration on Natbib tenant and the BNB - British National Bibliography skin* is set to Publications search, instead of the SVDE default.

This was done to comply with a different requirement whereby for the data stored in this tenant (ie. national bibliographies) it’s meaningful to direct users to publications. Different communities or types of institutions might need customised features.

(*) Note: the skin for the British National Bibliography is a preview of a beta site.
Enhanced Authority Services

The next step is to make Authority Services available also for linked data-based workflows - a truly new generation of features for authority control.

Innovative solutions that facilitate and improve authority control through automatic and manual procedures.

Libraries will 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.
SVDE data are open and accessible through an open endpoint, allowing retrieval in RDF format through SPARQL queries.

The core of SVDE integrated catalogue, ie. the Cluster Knowledge Base of linked data entities created from SVDE institutions’ data, is published on a public query interface.
Advanced API layer to facilitate the data consumption

SVDE 2.0 back-end infrastructure leverages an advanced API layer that orchestrates queries to SVDE data from the web discovery portal and from machine-to-machine applications.

- Two API protocols: GraphQL API and REST API
- All Share-VDE entities are exposed through (read-only) API
- Search API provide several shapes / context behaviour (e.g. simple, advanced search, partial or full match, exact matches suggestions, terms modifiers, results explanation)
- Three query languages: TermsQL, SVDEQL, StructQL

The API layer is designed to handle the increasingly complex search logic, the update to the entity model and the enhancement to the Cluster Knowledge Base.
Lewis Carroll => *Alice’s Adventures in Wonderland*

Charles Lutwidge Dodgson => *The game of logic*
Profile: the information unit that expresses the identity of a particular and unique entity

Pasolini director

Pier Paolo Pasolini

Pasolini writer
Share-VDE Cluster: the Prism

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(links)

- sameAs: http://dbpedia.org/resource/Alice%27s_Adventures_in_Wonderland
  (Dbpedia)
- sameAs: https://www.wikidata.org/wiki/Q189875
  (Wikidata)
- sameAs: https://data.bnf.fr/ark:/12148/cb358500385#about
  (bnf)
Share-VDE: linked data for libraries

Share-VDE is a library-driven initiative that brings together the bibliographic catalogues and authority files of a community of libraries in a shared discovery environment based on linked data. Share-VDE expanded its scope to embrace a wider community of over thirty institutions also from the art and music domains, building the Share Family.

From September 2021, the new version Share-VDE 2.0 is live at https://svde.org with an enhanced Entity Discovery Portal and Linked Data Management System. The previous version at https://share-vde.org will be progressively dismissed. The load of Share-VDE libraries' data is being done progressively and currently the new web portal hosts a subset of the data available on the previous version. If you want to discover the advanced functions of Share-VDE 2.0, the web portal at https://svde.org is the place to go.

The press release announcing Share-VDE 2.0 is available, along with the explanation of position of Share-VDE that is outlined in the Share-VDE Statement 2021 and in the more recent Executive Summary. Share-VDE also adopts an Open Metadata Policy, approved by its Advisory Council.

The collaborative endeavour, based on the requirements and perceptions of libraries, is promoted by Casalini Libri, International bibliographic agency and member of the Program for Cooperative Cataloging, i&c Cult, provider of II-S, Discovery tools and Semantic Web solutions for the cultural heritage sector, with input and active participation from an international group of national and research libraries and influenced by the vision of the LD4P project.

After two successful research & development phases launched in 2016 and with the cooperation of the Library of Congress, Share-VDE and the Share Family are now going progressively into production connecting the catalogues of libraries in the US, Canada and Europe. The collaborative initiative is potentially open to any library and is steered by the library community.

### Contents

1. How it works
2. Main areas of focus
3. Benefits
4. Being part of Share-Art, Share-Music, Share-Catalogue
5. Info and contacts

### How it works

For an overview of the entity discovery portal, see the demo of the Share-VDE entity discovery portal with an introduction on the Share-VDE user experience and user interface design process; supporting slides are also available.
Thank you.

Please reach out for any question.
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https://wiki.svde.org/
www.svde.org
info@svde.org