



BIBFRAME-based SVDE ontology

[BIBFRAME Workshop in Europe 2022](#)

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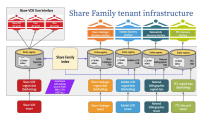


**BIBFRAME
Workshop
in Europe**

Where we stand and a look ahead



Major achievements since September 2021



Release of **Share Family tenants** (beta version): Kubikat-LOD, Natbib-LOD, PCC-LOD



New release of the Entity Discovery Portal 2.0 supporting an enhanced CKB, including (among others):



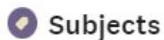
Instance as entity



Default simple search configuration



Skin portals supporting features specific to the individual skin (e.g. the [British National Bibliography skin](#) within the [Natbib-LOD tenant](#))



Initial version of **Subject management**, including various subject schemes (e.g. National Library of Finland subjects) linked subject strings and the display of concepts



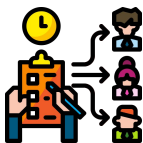
Major achievements since September 2021



New system infrastructure migrated to **AWS - Amazon Web Services**



Start of developments of **J.Cricket** Entity Editor



In progress: refinement of **project coordination**
(e.g. aggregated release notes, issue tracking system)



Iterations of clustering process on svde.org: currently approx. **73** MARC authority and bibliographic records processed and approx. **139 millions entities created**

now online: Duke University, Library of Congress, National Library of Finland, National Library of Norway, New York University, Smithsonian Institution, Stanford University Libraries, University of Alberta, University of Pennsylvania

Goals for the next future

2022, Q3-Q4

J.Cricket developments

Back-end: planned to be completed in October.
Front-end: end of back-end feature + ≥ 1 month. Features are being developed one by one, to enable testing iterations

2022, Q3-Q4

Change management module

AKA "delta update" module, to enable regular imports of MARC records for continuous update of SVDE data

2022, Q3-Q4

RDFizer (evolution of the LOD Platform RDF conversion tool)

It will support (among others) the import of Sinopia data to close this loop

2022, Q3-Q4

Third parties' tools and protocols

Tools/Protocols for third parties' usage and data harvesting
Including APIs, OAI-PMH, Atom feeds and Activity stream

2023, Q1

Share Family Index

Set-up of interconnections among tenants

2023, Q1

Item as entity

Creation of entity clusters of items

Continuous enhancement of the
Share Family Entity Discovery Portals



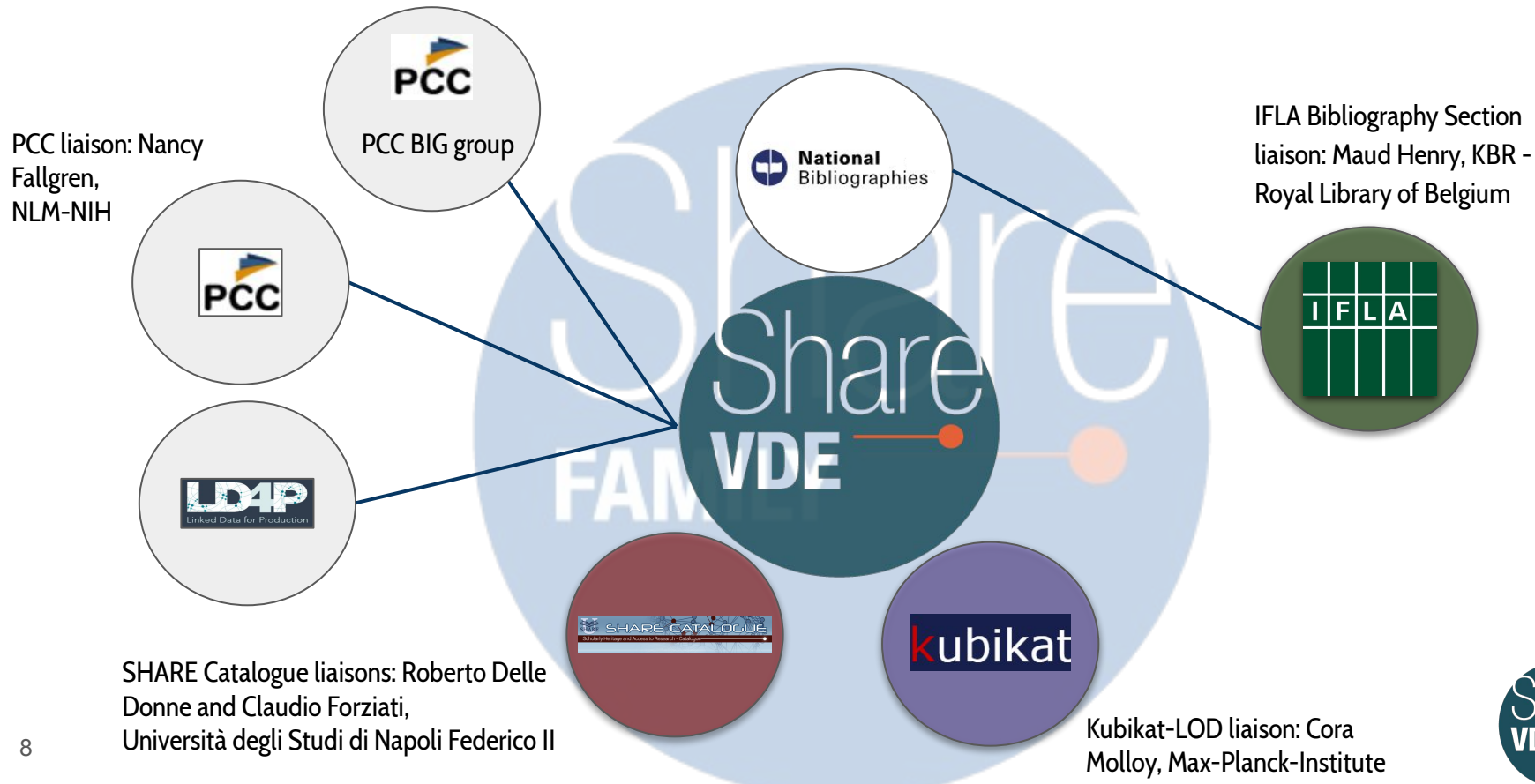
First part: context on BIBFRAME data creation in SVDE



Interoperability - The Share-VDE entity model

- The Share-VDE entity model is based on the BIBFRAME ontology, integrating it in its original form to represent entities found in classic MARC encoded records.
- There are exceptions when it comes to representing information that is not expressed in BIBFRAME, or that has not been translated from MARC to BIBFRAME, or that needs further modelling to allow for improved discoverability with the SVDE catalogue.
- Share-VDE might apply extensions to the entity model to support such cases: a typical example is the creation, identification and modelling of the svde:Opus (that is, in Share-VDE, *the highest level of abstraction of a creative work*).
- This results in a "*BIBFRAME-based SVDE ontology*", that is the standard BIBFRAME ontology extended in specific cases to support interoperability with various models (e.g. IFLA LRM), at the same time retaining compliance with the standard BF.

Share Family and Share-VDE liaisons



Sapientia Entity Identification WG

The [SEI WG](#) reviews use of entities, identifiers, and associated modelling in the Sapientia CKB; reviews and refine processes for Sapientia entity clustering in Share-VDE and the creation of associated open and stable URI for use in Share-VDE and the library community; reviews MARC to BIBFRAME and BIBFRAME to MARC conversion; engage with the library community to identify and/or develop best practices for use of Sapientia identifiers in BIBFRAME and MARC data.

Latest outcomes: [svde:Instance as entity](#)

- 4 layers in [SVDE entity model](#): svde:Opus | svde:Work | svde:Instance | svde:Item;
- svde:Opus and svde:Work are types of bf:Work → this ensures interoperability;
- consolidating the definition of svde:Instance entity properties;
- review of clustering and conversion rules.

Focus on entity model

Share-VDE as a BIBFRAME node to put BIBFRAME into practice:

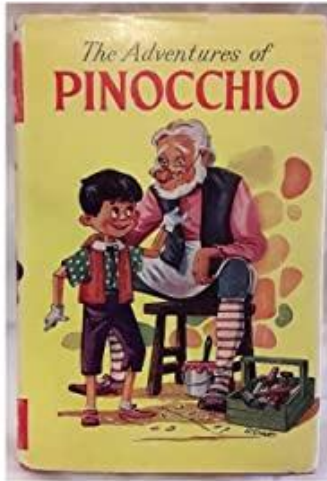
- Share-VDE provides enriched data that is [interoperable](#) with other BIBFRAME nodes and with other models;
- the Share-VDE working groups have reviewed algorithms and processed, and expanded the BIBFRAME model to meet real-world needs;
- focus on cooperation also in the IFLA context: the mapping UNIMARC-BIBFRAME is being prepared and a formal liaison with SVDE has been approved by the IFLA Bibliography Section Standing Committee.

BIBFRAME: the lack of an apical element



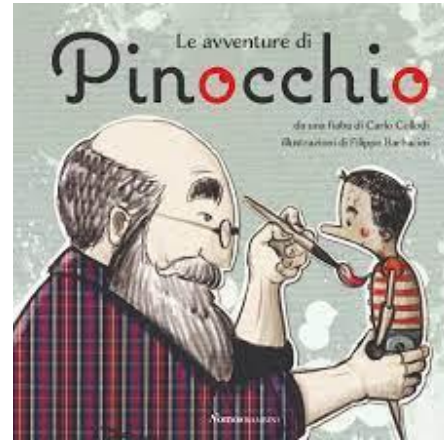
bf:Work 1

bf:translationOf



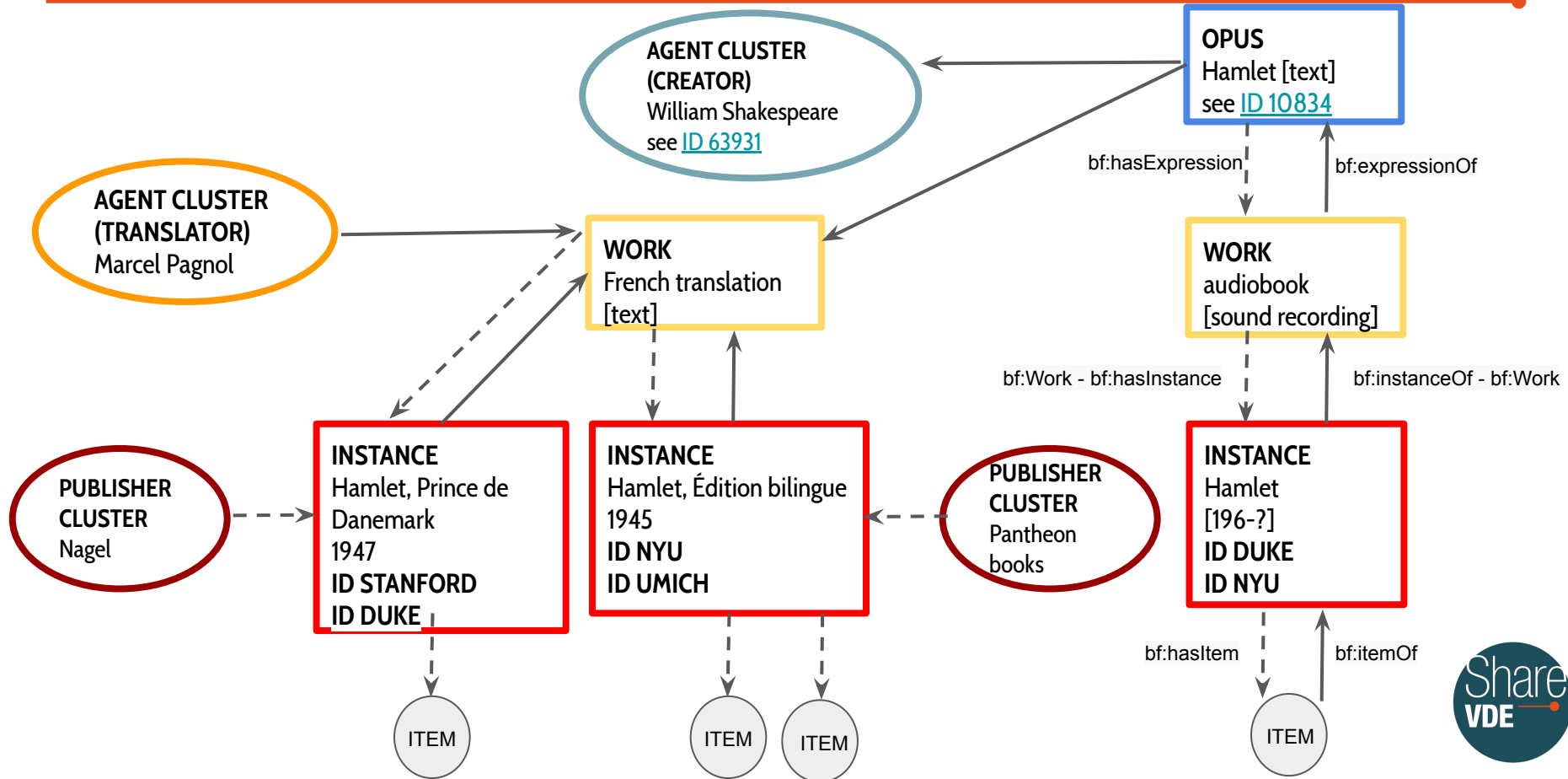
bf:Work 2

bf:translationOf

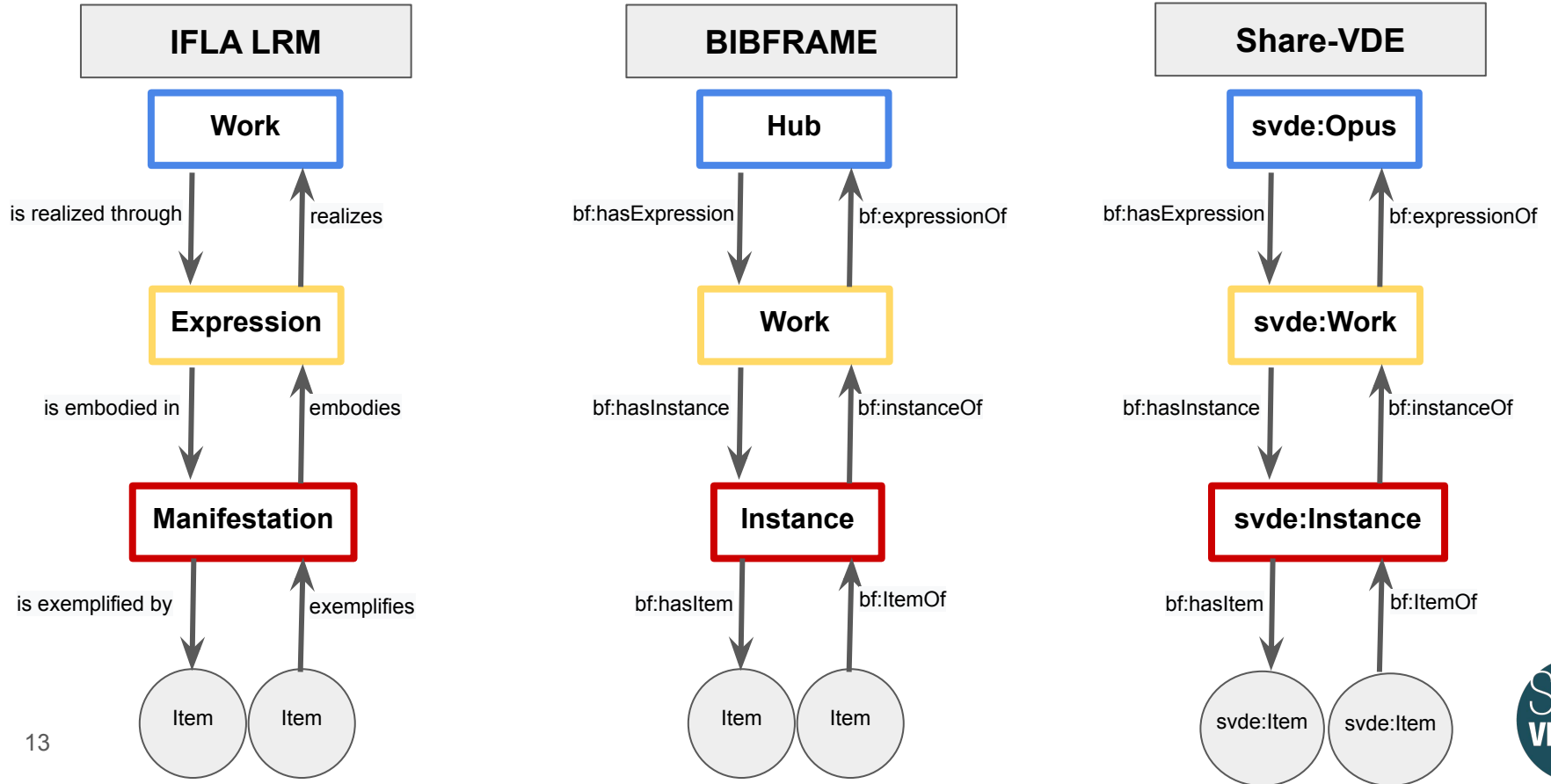


bf:Work 3

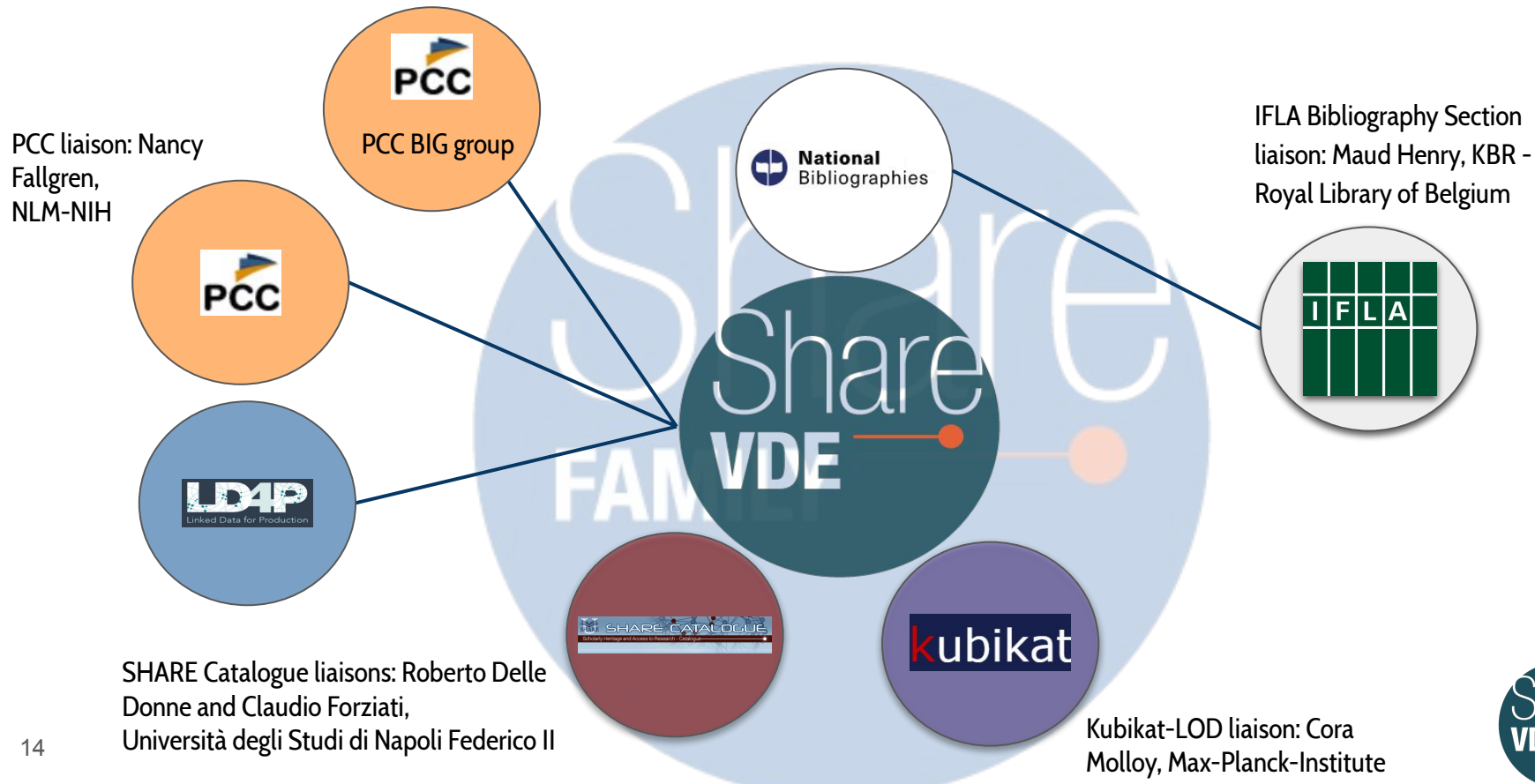
Share-VDE model (simplified version)



Comparison IFLA-LRM/BIBFRAME/Share-VDE



Share Family and Share-VDE liaisons



SVDE network and collaborations (1)

The Library of Congress - Network Development and MARC Standards Office (LS/NDMSO)

for exchange of ideas and principles bringing BIBFRAME into practice

Linked Data for Production (LD4P), 2016-2018

Linked Data for Production: Pathway to Implementation (LD4P2), 2018-2020

Linked Data for Production: Closing the Loop (LD4P3), 2020-2023

for LD4P's vision that intertwined SVDE activities for example interacting with

- Sinopia User Group
- Best Practices for Authoritative Data Working Group



SVDE network and collaborations (2)

PCC BIBFRAME Data Exchange Meeting

held online September 9-10, 2021

<https://www.loc.gov/aba/pcc/bibframe/PCC-BIBFRAME-Data-Exchange-Summary.pdf>

This meeting established two temporary working groups:

- Use Cases working group chaired by Philip Schreur (Stanford) that delivered its report in December 2021
[Use Case Working Group Final Report](#)
- Data Exchange working group chaired by Nathan Putnam (OCLC), in course

and one permanent group:

- PCC BIBFRAME Interoperability Group (BIG)
<https://www.loc.gov/aba/pcc/bibframe/TaskGroups/BIG/BIG-TOR.pdf>

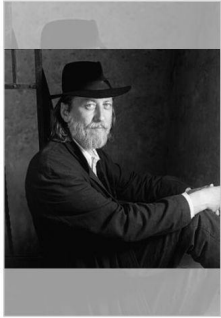
OCLC & Casalini - Data Exchange Collaboration

for PCC's quality data collected and received in MARC21 from OCLC, processed and distributed in BIBFRAME by SVDE.



How the svde:Opus works on the discovery portal

ShareVDE BETA ← László Krasznahorkai search Search all content... Options ▾



Person ⓘ

László Krasznahorkai

Hungarian novelist and screenwriter. Born in 1954 in Gyula (Hungary).

László Krasznahorkai is a Hungarian novelist and screenwriter known for difficult and demanding novels, often labeled postmodern, with dystopian and melancholic themes. Several of his works, notably his novels Satantango and The Melancholy of Resistance, have been turned into feature films by Hungarian film director Béla Tarr. – Wikipedia

More options ▾

Original works by Publications by Original works about

Filter original works... Creator Genre

38 results

No.	Title	Year	Genre	Creators
1	Utolsó farkas			László Krasznahorkai (author)
2	Herman, a vadór			László Krasznahorkai (author)
3	Rombolás és bánat az Ég alatt		Biography	László Krasznahorkai (author)

How the svde:Opus works on the discovery portal

ShareVDE BETA

← László Krasznahorkai search Search all content... Options

László Krasznahorkai > "Ellenállás melankóliája"

Volume 1

Ellenállás melankóliája

Fiction/novel written by László Krasznahorkai.

Also known as: [Az ellenállás melankóliája](#); [Ellenállás melankóliája](#); [Ellenállás melankóliája](#); [Melancholy of resistance](#)

This is part of the series [New Directions paperback](#).

More options

Publications of this

Related agents

Filter publications...



Publication year

Publication place

Contributor

Type

Language

11 results

Sort by (A - Z)

1 [The melancholy of resistance \(Volume in English, published in 2016.\)](#)

Contributors:

- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [Tuskar Rock Press](#) (publisher)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

2 [The melancholy of resistance \(Volume in English, published in 1998.\)](#)

Contributors:

- [Quartet Books](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [George Szirtes](#) (translator)

Sort by (A - Z)

5 [Az ellenállás melankóliája \(Volume in Hungarian, published in 1989.\)](#)

Contributors:

- [László Krasznahorkai](#) (author)
- [Magvető Könyvkiadó](#) (publisher)

6 [The melancholy of resistance \(Volume in English, published in 1998.\)](#)

Contributors:

- [Quartet Books](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

7 [Motståndets melankoli \(Volume in Swedish, published in 2014.\)](#)

Contributors:

- [Norstedts](#) (publisher)
- [Daniel Gustafsson Pech](#) (translator)
- [László Krasznahorkai](#) (author)

8 [The melancholy of resistance \(Volume in English, published in 2016.\)](#)

Contributors:

- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [Tuskar Rock Press](#) (publisher)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

9 [Melanholija soprotivlenija : roman \(Volume in Russian, published in 2020.\)](#)

Contributors:

- [Izdatel'stvo AST](#) (publisher)
- [Vjatšeslav Sereda](#) (translator)

10 [Az ellenállás melankóliája \(Volume in Hungarian, published in 1989.\)](#)

Contributors:

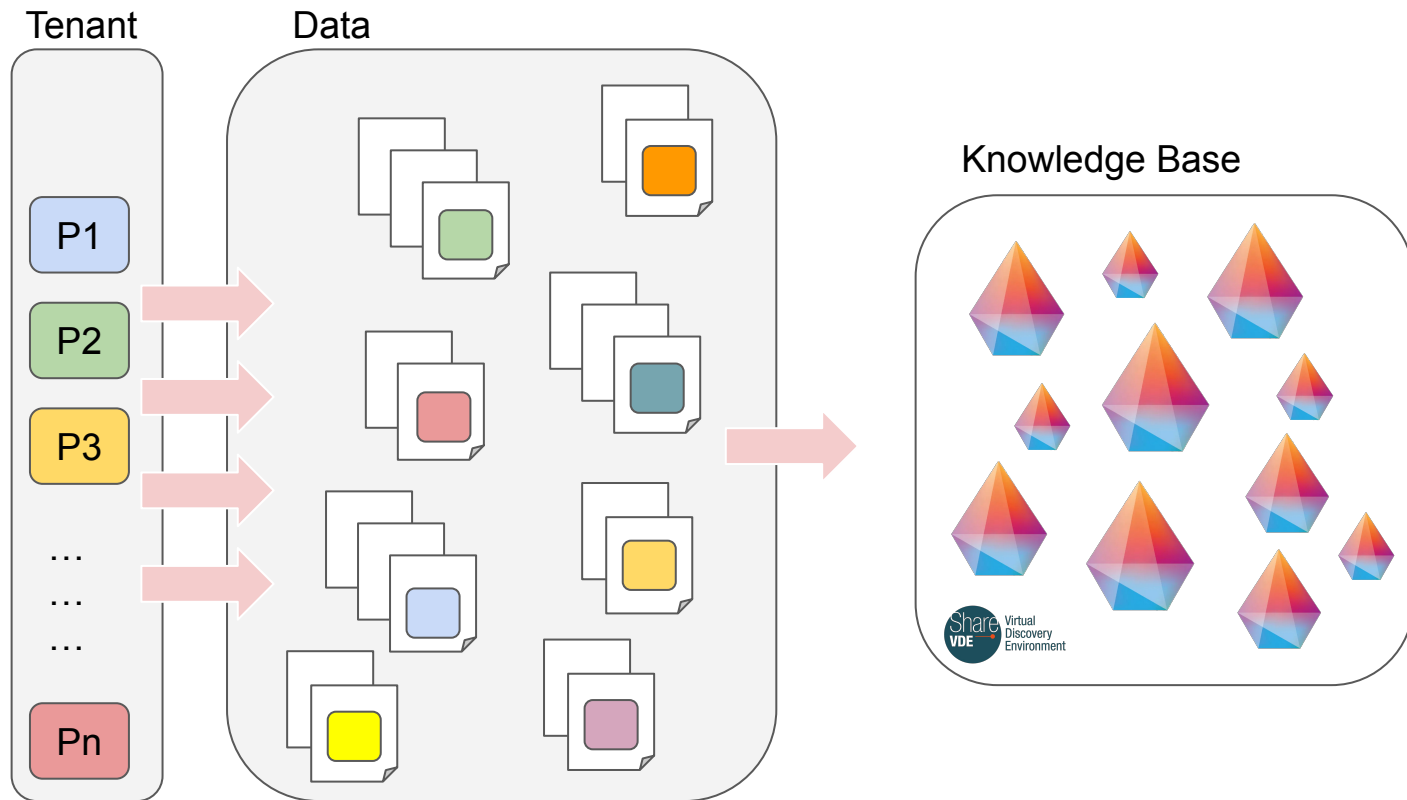
- [László Krasznahorkai](#) (author)
- [Magvető Könyvkiadó](#) (publisher)

11 [The melancholy of resistance \(Volume in English, published in 2000.\)](#)


Contributors:


- [New Directions](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)

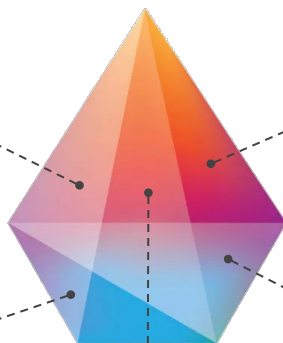
Share-VDE: How does it work?




Share-VDE Cluster: the Prism

 P1	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201

 P2	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201



 P3	
title	Alice in wonderland

 P4	
title	Alice's adventures under ground
titleAlternative	Journeys in Wonderland
author	https://svde.org/people/201

		
sameAs	http://dbpedia.org/resource/Alice&#39;s_Adventures_in_Wonderland	Dbpedia
sameAs	https://www.wikidata.org/wiki/Q189875	Wikidata
sameAs	https://data.bnf.fr/ark:/12148/cb358500385#about	bnf

How the Instance-as-entity works

László Krasznahorkai > "Ellenállás melankóliája" > "The melancholy of resistance" (2000 editio...

Publication ⓘ

The melancholy of resistance

Volume. Published in English in 2000 in New York by New Directions and New Directions Book.

Contributors

[Gotham Book Mart Collection \(University of Pennsylvania\)](#) and [George Szirtes \(translator\)](#)

ISBN: 0811214508

Identifier: p25871656664412460

Notes: illustrations ;; kuvitettu

Bibliographic level: Monograph, Monograph

Cataloging source: DLC

Descriptive cataloging form: AACR, ISBD, ISBD

Dimension: 21 cm.

Encoding level: Abbreviated, Core, Full

Extent: 314 p. ;

Record status: Corrected or revised, Corrected or revised

Responsibility statement: László Krasznahorkai ; translated from the Hungarian by George Szirtes., László Krasznahorkai ; translated from the Hungarian by George Szirtes., László Krasznahorkai ; translated from the Hungarian by George Szirtes.

Series statement: New Directions paperback ; NDP936, New Directions paperback ; NDP936

System control number: (FI-MELINDA)006456809, (FI-MELINDA)007229541, ocm44413926

Available at 3 libraries ▾

More options ▾

Library of Congress ↗

University of Alberta Library ↗

NLF ↗

Filter agents...



Start

Keynote

Location

Type

In case we were to relate the instance-as-entity to every description that contributed to its creation, we would not have in the standard BIBFRAME a proper property (something like "has a description"): this is one of the cases where an extension it's necessary



Share-VDE Ontology

Share-VDE 2.x

Share-VDE 3.x

Dictionary tables

- provide **minimal** information about **types** and **properties**
- provide **redundant** information about **types** and **properties**
- are used in **queries** (**building** and **validation**)

- define **properties ownership**
- define **domain, range, cardinality** information
- define minimal **semantic relationships** like ***inverseOf*** and **singular/plurals** forms
- allows to associate comments to a property

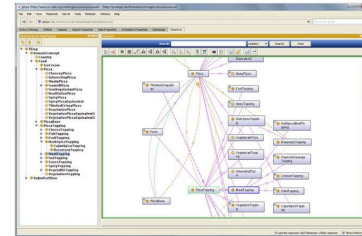


+

=



svde.owl



The RDFizer tool: how data is handled to become BIBFRAME data

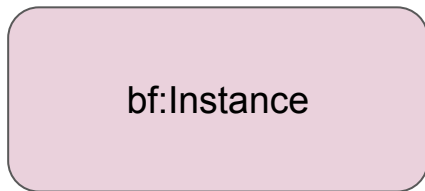
RDFizer tool is in charge of converting data in RDF, using ontologies such as Bibframe 2.0, MADSrdf, RDA, to produce N-Quad files output. It is based on Hadoop Map Reduce framework.

The conversion process is based on Library of Congress Conversion specifications (published on [Bibframe website](#)), adapted for ShareVDE model.

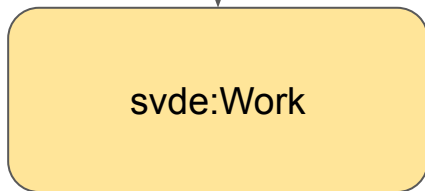
Currently we are working on updating our mapping to incorporate recent LC specification update (from version R2 to 1.7/2.0)

Difference between models

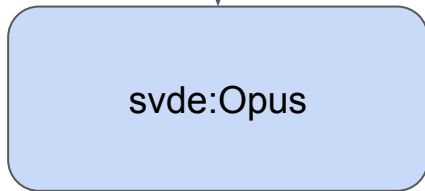
Share-VDE



bf:instanceOf

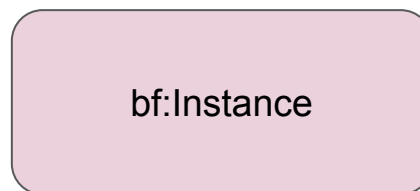


bf:expressionOf

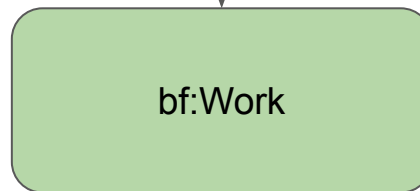


bf:Work

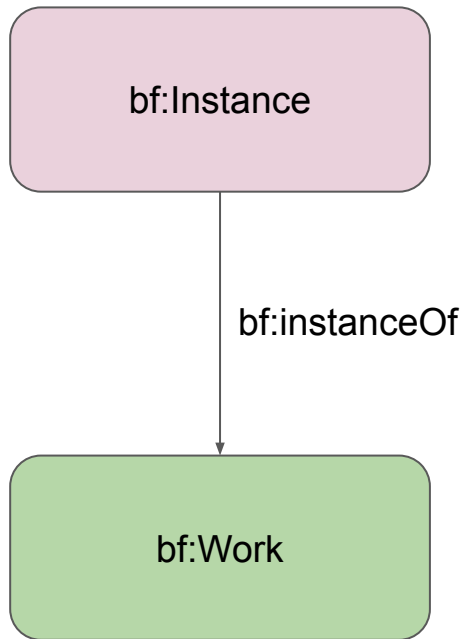
BIBFRAME



bf:instanceOf

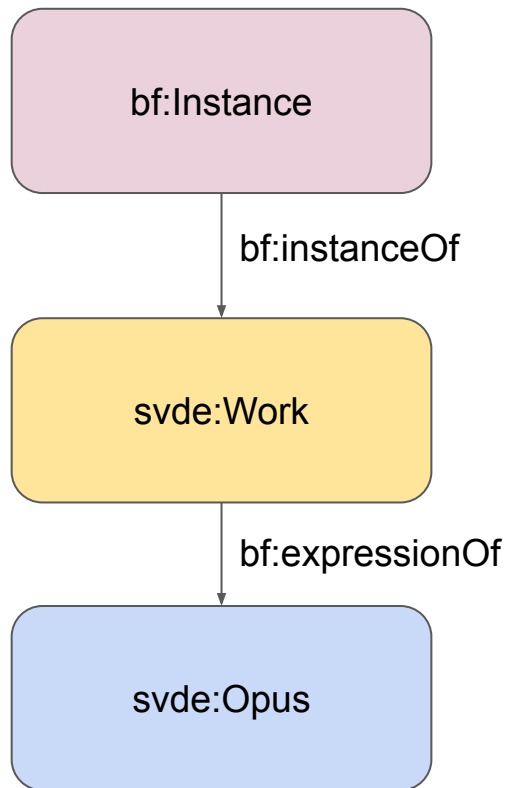


Bibframe standard model



```
<https://svde.org/bfWorks/1> rdf:type bf:Work .  
<https://svde.org/bfWorks/1> bf:hasInstance <https://svde.org/instances/3> .  
  
<https://svde.org/bfWorks/1> bf:language loc_language:fre .  
...  
<https://svde.org/bfWorks/1> bf:geographicCoverage loc_geo:e-fr .  
...
```

Share-VDE model

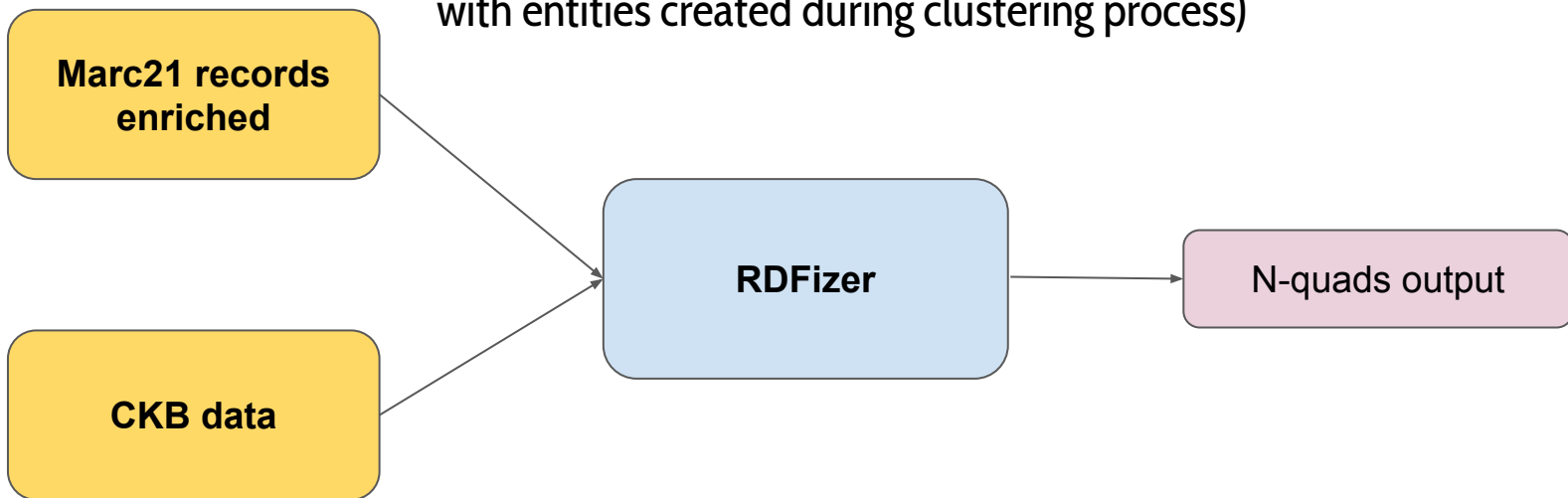


```
<https://svde.org/opuses/1> rdf:type svde:Opus .  
<https://svde.org/opuses/1> rdf:type bf:Work .  
<https://svde.org/opuses/1> bf:hasExpression <https://svde.org/works/11> .  
<https://svde.org/works/11> bf:expressionOf <https://svde.org/opuses/1> .  
<https://svde.org/works/11> bf:hasInstance <https://svde.org/instances/3> .  
  
<https://svde.org/works/11> bf:language loc_language:fre .  
...  
<https://svde.org/opuses/1> bf:geographicCoverage loc_geo:e-fr .  
...
```

Conversion pipeline

The tool accepts two kinds of input:

- **CKB data** (data obtained by the clustering process)
- **Enriched Marc21 records** (the records from every institution, enriched with entities created during clustering process)



CKB data conversion - input

Input data

cluster_id character varying	v1 character varying	v2 character	v4 character varying	v5 character varying
1621654886494046	encodingLevel	dut	Full not examined	UPENN
1621654886494046	recordStatus	dut	Corrected or revised	UPENN
41654263096168	altLabel	eng	Горад Мадрыд (Spain)	SYSTEM
971654264143536	nameAlternative	und	Hayaseca, Jorge	LOC
971654264143536	birthDate	eng	1832	LOC
11654262831406	label	nob	Tekst	SYSTEM
1621654886494046	systemControlNumber	dut	(OCoLC)65359121	UPENN
nc	label	nob	Bind	SYSTEM
41654263096168	altLabel	eng	Madūridū (Spain)	SYSTEM
971654264143536	nameAlternative	und	Echegaray, Jose	NLF
971654264143536	deathDate	eng	1916	LOC
33171658220582132	41	2	1541654889800543	UALBERTA
971654264143536	337	10	691654263833439	LOC
41654263096168	altLabel	eng	Mageritah (Spain)	SYSTEM
41654263096168	altLabel	eng	Madril (Spain)	SYSTEM
41654263096168	altLabel	eng	Mayrit (Spain)	SYSTEM
1621654886494046	systemControlNumber	dut	(OCoLC)ocm65359121	UPENN
1621654886494044	mainTitle	dut	Un milagro en Egipto	UPENN
971654264143536	name	und	Echegaray, José	UPENN
971654264143536	name	und	Echegaray, José	UALBERTA

CKB conversion - output

<<https://svde.org/agents/971654264143536>> rdf:type bf:Person svdeProv:SYSTEM .
<<https://svde.org/agents/971654264143536>> rda:P60119 "Hayaseca, Jorge" svdeProv:LOC .
<<https://svde.org/places/41654263096168>> rdfs:label "Madriddo (Spain)" svdeProv:SYSTEM .
<<https://svde.org/agents/971654264143536>> madsrdf:birthPlace <<https://svde.org/places/41654263096168>> svdeProv:LOC .
<<https://svde.org/opuses/1621654886494044>> bf:title <<https://svde.org/title/4546-6756-454>> svdeProv:UPENN .
<<https://svde.org/title/4546-6756-454>> rdf:type bf:Title svdeProv:UPENN .
<<https://svde.org/title/4546-6756-454>> bf:mainTitle "Un milagro en Egipto" svdeProv:UPENN .
<<https://svde.org/opuses/1621654886494044>> rda:P60588 "Milagro en Egipto" svdeProv:UPENN .
<<https://svde.org/opuses/1621654886494044>> bf:hasExpression <<https://svde.org/works/1621654886494070>>
svdeProv:UALBERTA .
<<https://svde.org/opuses/1621654886494044>> bf:hasExpression <<https://svde.org/works/1621654886494070>>
svdeProv:UPENN .

....

....



Marc21 Conversion - input

```
<record>
  <leader>00801cam a22002411 4500</leader>
  <controlfield tag="001">1513721</controlfield>
  <controlfield tag="003">CaAEU</controlfield>
  <controlfield tag="008">920820s1883 sp0 spa o</controlfield>
  <datafield tag="035" ind1=" " ind2=" ">
    <subfield code="a">ocn978146159</subfield>
  </datafield>
  <datafield tag="040" ind1=" " ind2=" ">
    <subfield code="b">eng</subfield>
  </datafield>
  <datafield tag="049" ind1=" " ind2=" ">
    <subfield code="a">AEU</subfield>
    <subfield code="b">eng</subfield>
  </datafield>
  <datafield tag="090" ind1=" " ind2=" ">
    <subfield code="a">PQ 6609 C51 M63 1883</subfield>
    <subfield code="b">AEU</subfield>
  </datafield>
  <datafield tag="100" ind1="1" ind2=" ">
    <subfield code="a">Echegaray, José,</subfield>
    <subfield code="d">1832-1916.</subfield>
    <subfield code="1">
      <a href="https://svde.org/agents/971654264143536">https://svde.org/agents/971654264143536</a>
      <subfield code="4"><a href="https://svde.org/roles/aut">https://svde.org/roles/aut</a></subfield>
    </subfield>
  </datafield>
  <datafield tag="245" ind1="1" ind2="3">
    <subfield code="a">Un milagro en Egipto;</subfield>
    <subfield code="b">
      estudio trágico en tres actos y en verso.</subfield>
  </datafield>
  <datafield tag="250" ind1=" " ind2=" ">
    <subfield code="a">3. ed.</subfield>
  </datafield>
  <datafield tag="260" ind1=" " ind2=" ">
    <subfield code="a">Madrid,</subfield>
    <subfield code="b">Imprenta de Cosme Rodríguez,</subfield>
    <subfield code="c">1883.</subfield>
    <subfield code="9">
      <a href="https://svde.org/agents/1541654889800543">https://svde.org/agents/1541654889800543</a></subfield>
    </subfield>
</record>
```

Marc21 conversion - output

<https://svde.org/instances/33171658220582132> bf:provisionActivity <https://svde.org/prov-act/324-4332>
svdeProv:UALBERTA .
<https://svde.org/prov-act/324-4332> rdf:type bf:ProvisionActivity svdeProv:UALBERTA .
<https://svde.org/prov-act/324-4332> rdf:type bf:Publication svdeProv:UALBERTA .
<https://svde.org/prov-act/324-4332> rdf:date "1883" svdeProv:UALBERTA .
<https://svde.org/prov-act/324-4332> bf:agent <https://svde.org/agents/1541654889800543>
svdeProv:UALBERTA .
<https://svde.org/agents/1541654889800543> rdf:type bf:Agent svdeProv:UALBERTA .
<https://svde.org/agents/1541654889800543> rdfs:label "Imprenta de Cosme Rodriguez," svdeProv:UALBERTA .
<https://svde.org/works/1621654886494070> rdf:type <https://share-vde.org/Work> svdeProv:UALBERTA
. <https://svde.org/works/1621654886494070> rdf:type bf:Work svdeProv:UALBERTA .
<https://svde.org/instances/33171658220582132> bf:instanceOf <https://svde.org/works/1621654886494070>
<https://svde.org/agents/UALBERTA> .

.....

Second part: SVDE model interoperability



SVDE and the BIBFRAME interchange structure

Pre-recorded video by Jim Hahn from the University of Pennsylvania

- focus on the compatibility of SVDE BIBFRAME output with other BIBFRAME nodes in the library community

- enjoy the video!



Thank you!

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