

# Modus Operandi

Creating the SuperWork in Share-VDE and the Opus Level of Description



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With many thanks to the Work ID Working Group



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# The Story Begins: RDA Implementation

The importance of description of work elements and the identifier for work

## 0.6.6 Section 2: Recording Attributes of Work and Expression

When recording data identifying a work, include as a minimum the following elements that are applicable and readily ascertainable.

Preferred title for work

Identifier for work

A preferred title for work is a basis for an authorized access point representing the work. When constructing the access point, combine an authorized access point for an agent, if appropriate, and a preferred title for work.

If a preferred title for work is the same as or similar to a title for a different work, or to a name for an agent, differentiate them by recording as many of the additional identifying elements in the following list as necessary. Record these elements as separate elements, as parts of the authorized access point representing the work, or as both.



# Initial attempts

Where do we put the work identifiers in MARC and what do we use?

<b>Identifier for the work</b>	024 1# \$a7822183031  024 7# \$a <a href="http://experiment.worldcat.org/entity/work/data/1840249565">http://experiment.worldcat.org/entity/work/data/1840249565</a> \$2uri  See <a href="http://www.loc.gov/standards/sourcelist/standard-identifier.html">http://www.loc.gov/standards/sourcelist/standard-identifier.html</a> for standard identifier source codes for subfield 2.
<b>Preferred title of the work</b>	130 0# \$aGreat Gatsby (Motion picture : 2013)\$0 <a href="http://viaf.org/viaf/300876477">http://viaf.org/viaf/300876477</a>
<b>Preferred title of the work</b>	240 10 \$aSchneewittchen\$0 <a href="http://d-nb.info/gnd/4116406-4">http://d-nb.info/gnd/4116406-4</a>
<b>Title of a work</b>	710 22 \$aNational Geographic Society (U.S.).\$bCartographic Division.\$tEarth's fractured surface.\$0 <a href="http://worldcat.org/entity/work/id/1090078494">http://worldcat.org/entity/work/id/1090078494</a>

# PCC Task Group on URI in MARC: Field 758

## MARC PROPOSAL NO. 2017-09

**DATE:** May 16, 2017

**REVISED:**

**NAME:** Defining Field 758 (Resource Identifier) in the MARC 21 Bibliographic Format

**SOURCE:** PCC Task Group on URIs in MARC, Program for Cooperative Cataloging (PCC)

**SUMMARY:** This paper proposes establishing a new field 758 in the MARC 21 Bibliographic format to identify related resources.

**KEYWORDS:** Field 758 (BD); Resource Identifier (BD)

**RELATED:** [2017-DP02](#)

### STATUS/COMMENTS:

05/16/17 – Made available to the MARC community for discussion.

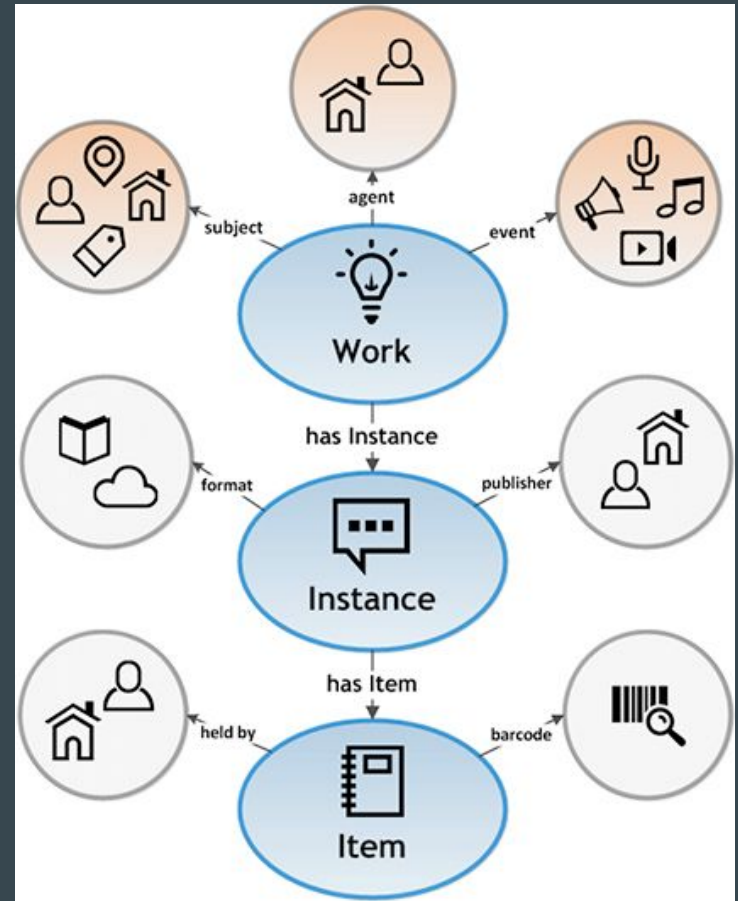
06/24/17 – Results of MARC Advisory Committee discussion: Approved, with the amendment that subfield \$1 will be added to field 758; the first sentence of the field definition will be amended to read “An identifier for a resource that is either the resource described in the bibliographic record or a resource to which it is related.” It was noted that, while the inclusion of an explicit relationship in field 758 may be desirable, the MARC formats do not mandate the use of specific subfields in field definitions; the application of field 758 would need to be developed as a matter of best practice by the community.

08/07/17 - Results of MARC Steering Group review - Agreed with the MAC decision.



# BIBFRAME (as you know it)

- Three core levels of abstraction
  - **Work**
  - **Instance**
  - Item
- Additional key concepts
  - Agents
  - Subjects
  - Events
- Consists of RDF classes and properties
  - members of a class share certain characteristics and may have subclasses
  - properties describe characteristics of resources as well as relationships among resources



# For BIBFRAME primary resource identifiers are critical infrastructure

1. What URI vocabularies are available for primary resource types that:
  - a. Can be clearly identified with a predicate
    - i. For RDA, what identifiers can be used that match range definitions?
    - ii. For BIBFRAME, what identifiers can be defined as  
`http://id.loc.gov/ontologies/bibframe/instanceOf`
  - b. Have universal, or at least wide application / work in an international context
  - c. Be able to create them for use in MARC, original BIBFRAME description, and through conversion from MARC to BIBFRAME
  - d. Generally we need to have identifiers and places to put them

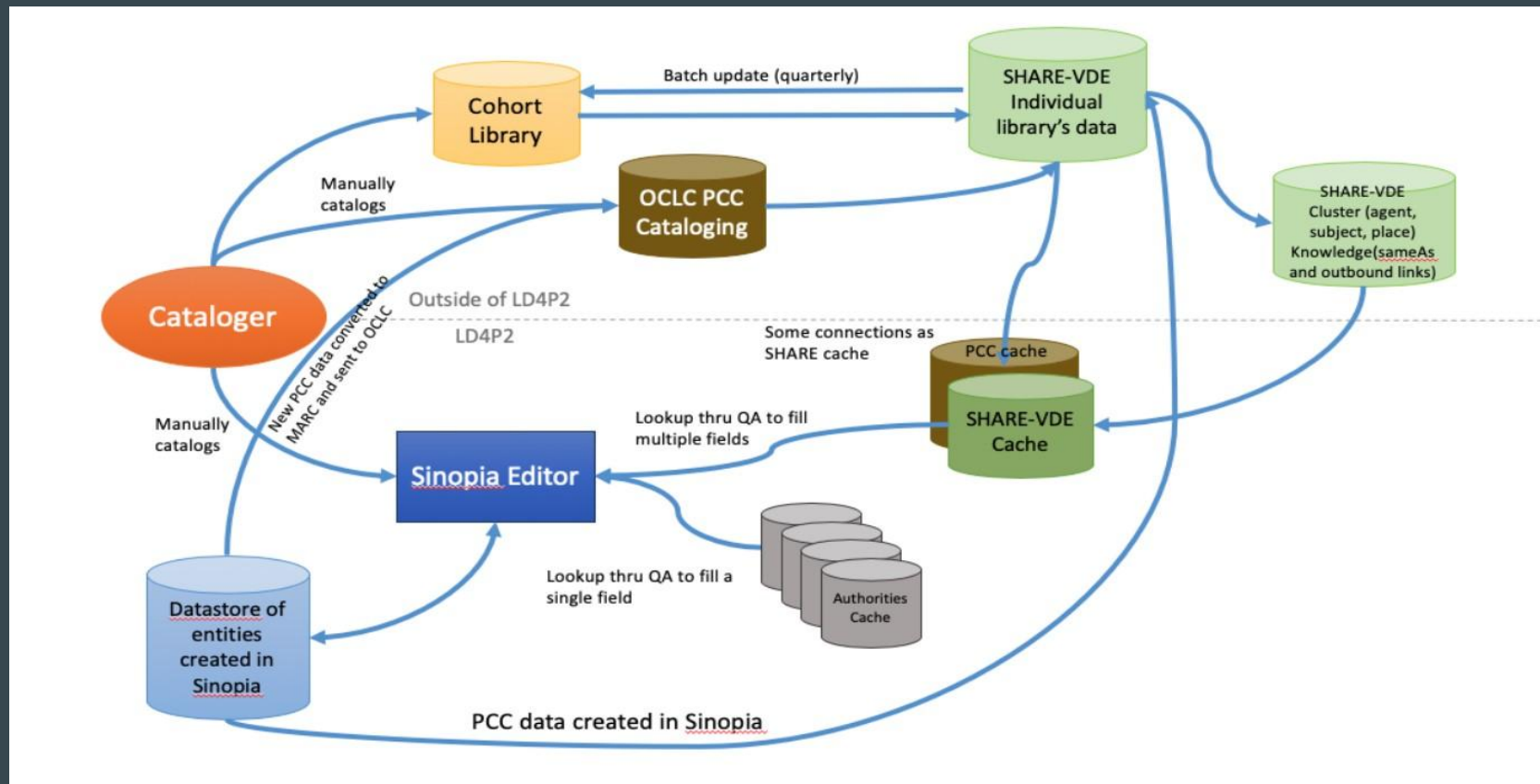


# LC bf: example from marc2bibframe2

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:bf="http://id.loc.gov/ontologies/bibframe/"
  xmlns:bflc="http://id.loc.gov/ontologies/bflc/"
  xmlns:madsrdf="http://www.loc.gov/mads/rdf/v1#">
  <bf:Work rdf:about="http://example.org/6020396#Work">
    <bf:adminMetadata>
      <bf:AdminMetadata>
        <bf:generationProcess>
          <bf:GenerationProcess>
            <rdfs:label>DLC marc2bibframe2 v1.3.0-SNAPSHOT</rdfs:label>
          </bf:GenerationProcess>
        </bf:generationProcess>
        <bf:status>
          <bf:Status>
            <bf:code>p</bf:code>
          </bf:Status>
        </bf:status>
      </bf:AdminMetadata>
    </bf:adminMetadata>
  </bf:Work>
</rdf:RDF>
```



# LD4P3 Data Flow: For this to work we need identifiers





# Share Participation

## Share VDE Full Members

Duke University  
New York University  
Stanford University  
University of Alberta – NEOS consortium  
University of Chicago  
University of Michigan at Ann Arbor  
University of Pennsylvania  
Yale University

## National Libraries

Library of Congress  
National Library of Medicine  
National Library of Norway  
National Library of Finland

## LD4P Cohort

Cornell University  
Frick Art Reference Library  
Harry Ransom Center  
Harvard University  
Northwestern University  
Princeton University  
UC Davis  
UC San Diego  
University Colorado at Boulder  
University of Minnesota  
University of Texas A&M  
University of Washington

## Share-Catalogue Institutions

Università Degli Studi di Napoli "Federico II"  
Università degli Studi della Basilicata  
Università Degli Studi di Napoli L'Orientale  
Universita' degli Studi di Napoli Parthenope  
Università del Salento  
Università degli Studi di Salerno  
Università degli Studi del Sannio RCost  
Università degli Studi della Campania "Luigi Vanvitelli"

## Share Art

Kunsthistorisches Institut in Florenz -  
Max-Planck-Institut  
Central Institute of Art History  
Deutsches Forum für Kunstgeschichte Paris /  
Centre allemand d'histoire de l'art Paris  
Biblioteca Hertziana



# The Share-VDE Work ID Working Group

At the LD4 Workshop at Stanford University in May of 2018 conversations identified the need for a group to work on refining the creation of work identifiers for the Share Virtual Discovery Environment (SVDE). In the months following members of the Work ID Working Group (WIDWG) were identified from within stakeholder institutions and based on relevant expertise.

## Charge:

1. Review the Share work clustering outline and submit feedback on potential improvements or optimizations
2. Review the use of primary resource identifiers in the Share-VDE data set and provide feedback as appropriate
3. Engage with the PCC to identify and/or develop best practices for use of these identifiers in BIBFRAME and MARC data



# Existing Vocabularies?

## OCLC Work ID

- Challenges with technical methods of inclusion for non OCLC members
- schema:exampleOfWork, but no open outline of how the identifiers are created or defined
  - Can these be used as BIBFRAME works?
- Until recently OCLC works were still considered experimental
  - Could be another step for enrichment of SVDE data
  - It would be interesting to compare approaches and come to a standard for creation of primary resource identifiers through algorithmic processes. Look forward to hearing more on how OCLC intends to solve the work as entity problem with their recent Mellon grant.

## Library of Congress Work ID (Kevin can discuss Hubs and updated processes for Work generation at LC)

- Based on LCCN
  - Example: [<http://id.loc.gov/resources/works/c010579972>]
- Or making use of nametitle authorities
  - Example: [<http://id.loc.gov/resources/works/no98044787>]
- Not of universal applicability, and at the time was not ready for use in Share-VDE



# Defining Works

## LRM

Definition: “The intellectual or artistic content of a distinct creation”<sup>2</sup>

Scope note: “A work is an abstract entity that permits the grouping of expressions that are considered functional equivalents or near equivalents. A work is a conceptual object, no single material object can be identified as the work. The essence of the work is the constellation of concepts and ideas that form the shared content of what we define to be expressions of the same work. A work is perceived through the identification of the commonality of content between and among various expressions.”<sup>2</sup>

## BIBFRAME

“The highest level of abstraction, a Work, in the BIBFRAME context, reflects the conceptual essence of the cataloged resource: authors, languages, and what it is about (subjects).”<sup>3</sup>

There are differences in definition, and this has been a subject of discussion for many years, but the WIDWG needed a practical solution in a short period of time. We wanted to keep an open mind about the definition of “Work”, and how work identifiers are created in Share-VDE.

2. Riva, P., Le Boeuf, P., Žumer, M., & IFLA FRBR Review Group. (2017). IFLA Library Reference Model: A conceptual model for bibliographic information. Den Haag, Netherlands : IFLA.

3. Library of Congress. (2017). Overview of the BIBFRAME 2.0 model. Retrieved from <https://www.loc.gov/bibframe/docs/bibframe2-model.html>



# SuperWork!

## Are Work to Work Relationships Sufficient?

1. While Work -> Expression relationships can currently be expressed in BIBFRAME, these are ultimately Work-Work relationships, and determining the initial or primary work, or hierarchical relationships between works may prove difficult with this structure.
2. Through conversion from MARC to BIBFRAME, or automatic work ID generation based on BIBFRAME elements, unless we can define a difference (a fingerprint for each cluster or constellation) between Work and SuperWork elements then these relationships (work-expression) cannot be captured through conversion or automated processing. With the scale of data conversion underway, not doing this would seem like a missed opportunity. Once a separate fingerprint is defined for this primary work, it needs a name, thus the creation of SuperWork.

Opus discussion paper. Share-VDE Advisory Council, WIDWG. n.d.



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# Defining Share VDE Work and SuperWork

## Share VDE Work

- Is equivalent to a BIBFRAME Work, but is no longer the highest level of abstraction
- Identifiers for Share VDE Work are created algorithmically based on unique constellations of elements for BIBFRAME Works (including RDA work and expression level elements)
- The types of Share VDE Work and the definitions for which elements are used in its creation are outlined in the Work ID Cluster Mapping

## Share VDE SuperWork

- The highest level of abstraction in Share VDE, the new SuperWork class is meant to aggregate or group functional or near equivalent bf:Work clusters
- Identifiers for Share VDE SuperWork are created algorithmically based on unique constellations of elements for BIBFRAME Works, minus RDA expression level elements



# BIBFRAME today

- Four core levels of abstraction
  - *Opus (Hub, SuperWork)*
  - *Work*
  - *Master Instance*
  - *Item*
- Additional key concepts
  - Agents
  - Subjects
  - Events
- Consists of RDF classes and properties
  - members of a class share certain characteristics and may have subclasses
  - properties describe characteristics of resources as well as relationships among resources

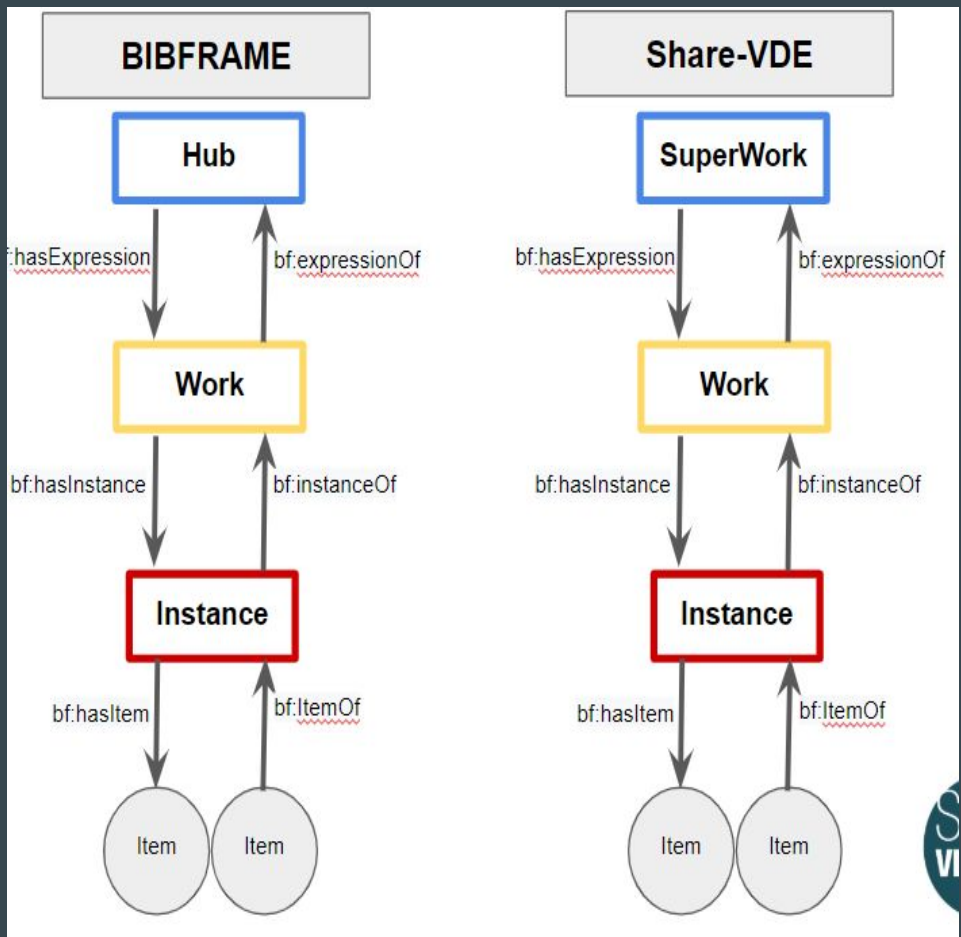


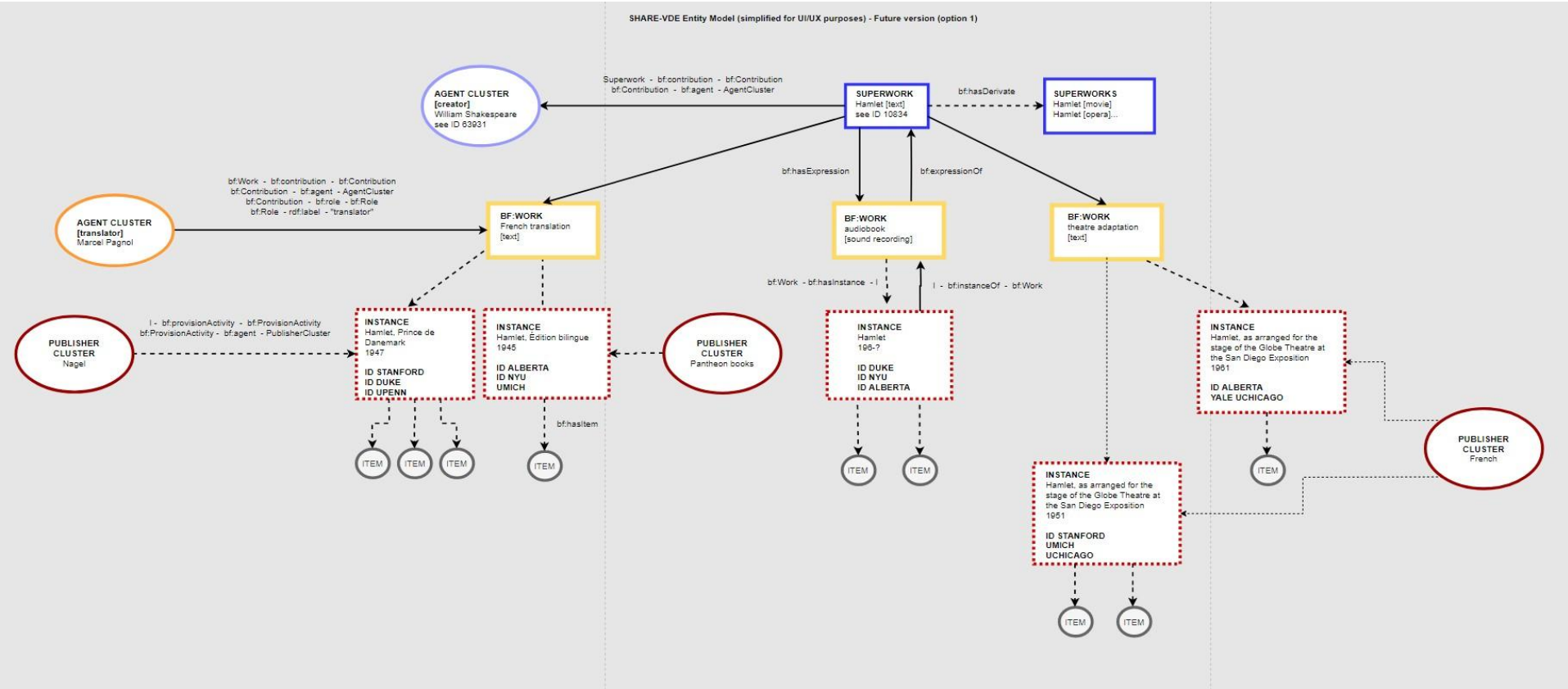
Image courtesy Anna Lionetti and Share VDE



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# The current SHARE-VDE entity model

SHARE-VDE Entity Model (simplified for UI/UX purposes) - Future version (option 1)





# The SuperHub Conundrum...

- January 2019: New SuperWork class was introduced in Share-VDE and LD4P data.
- ALA Annual 2019: LC introduced the Hub to their data.

LC is a member of Share-VDE and was participating in the Work ID Working Group, but wanted to develop in parallel to confirm results. SuperWork and Hub are very similar, but not the same, and need to be differentiated as separate vocabularies.

This creates a new family of elements that are a close match, hereafter referred to as the **Opus** in this discussion



# Opus vs Work

*Opus (bf: SuperWork, Hub):*

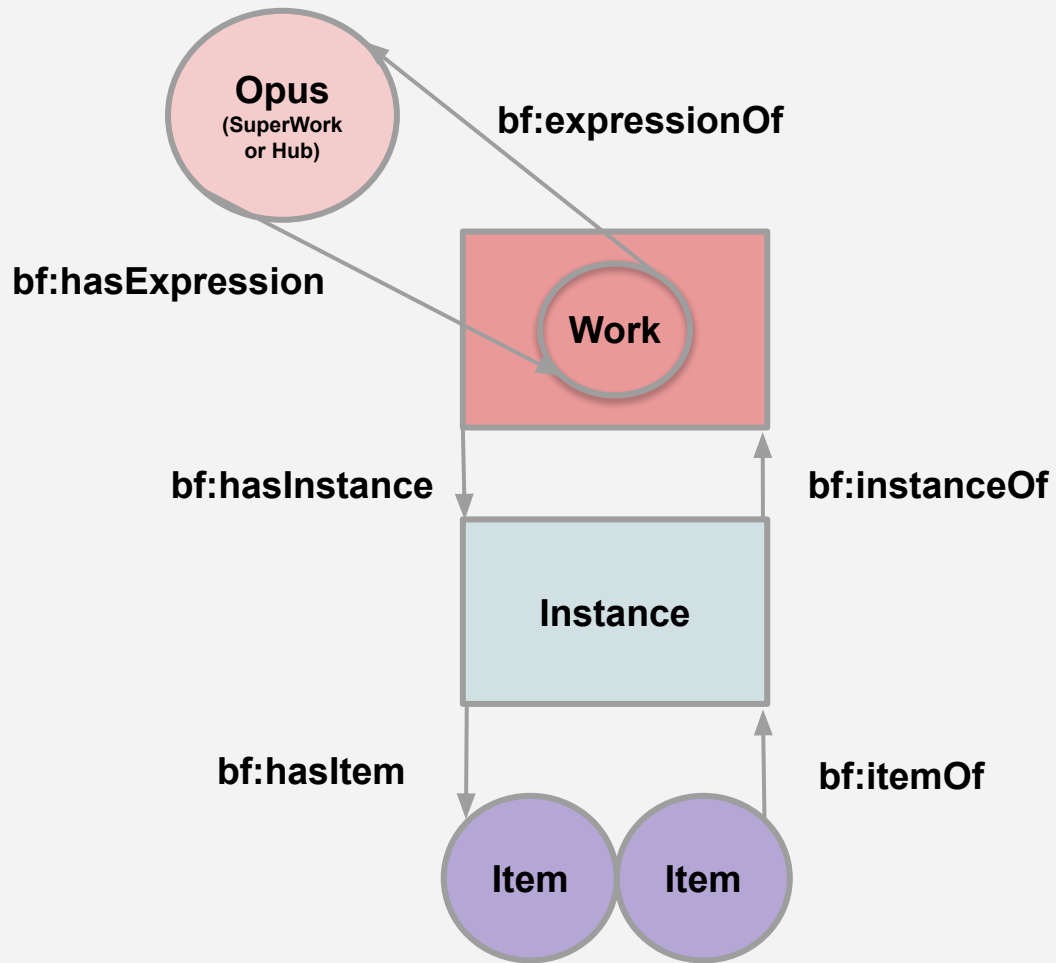
The bf:Opus is an entity that permits the grouping of works that are considered functional or near equivalents. The opus is defined by a constellation of elements that form the shared content of BIBFRAME works.

*Work:*

A work is a resource reflecting the conceptual essence of a cataloguing resource. A work is defined by a constellation of elements representing the specific intellectual or artistic form that an opus takes each time it is “realized”, paired with related elements required to define the conceptual essence of said realization.

\*Really these definitions are still being discussed and refined





# Work from the Machine: Work ID Cluster Mapping

<a href="#">Conversion specifications for SVDE MARC to BIBFRAME processes can be found here</a>				
	Field	Indicators	Subfields	
<b>SuperWork</b>				
W1		130	\$a\$d\$f\$g\$k\$m\$n\$r\$t\$p	\$n may or may not indicate a part; \$p is a part (portion of a work)
W2		240 1XX and 7XX	\$a\$d\$f\$g\$k\$m\$n\$r\$t\$p	\$n may or may not indicate a part; \$p is a part (portion of a work) <a href="#">Used for clustering - Outline here</a>
W3		245 1XX and 7XX	\$a\$n\$p	Only if no W1 or W2 identified* <a href="#">Used for clustering - Outline here</a>
W4		700/710/711	\$a\$d\$f\$g\$k\$m\$n\$r\$t\$p	Note differentiation in relationships based on 2nd indicator 2 (analytic) or "blank" (related work)
W5		730	\$a\$d\$f\$g\$k\$m\$n\$r\$t\$p	Note differentiation in relationships based on 2nd indicator 2 (analytic) or "blank" (related work)
W6		758	\$a\$4\$0\$1	As a separate work or clustered in conjunction with other work types. Use identifiers and relationships in SVDE data
W7		780	\$a\$g\$s\$t\$w	Note 2nd indicator values for relationship assignment (0-7) ; also only use \$w if the identifier is for a work ID (LCCN, Work URI ...)
W8		785	\$a\$g\$s\$t\$w	Note 2nd indicator values for relationship assignment (0-8) ; also only use \$w if the identifier is for a work ID (LCCN, Work URI ...)

# What we have and what needs development

What we have:

- Working definition of SuperWork
- Conceptual and data model
- Share-VDE data with the SuperWork (BIBFRAME created through MARC conversion)
- SuperWork (along with other entities) in the Sapiientia Knowledge Base, and being utilized in Sinopia through QA

Next steps?



# Sinopia, QA, Sapiientia, and the J.Cricket Editor

## UAL Monograph Opus

Opus Identifier

linked data and user

**SHAREVDE ALBERTA work (QA)**

**Linked data and user interaction**  
*Title:* Linked data and user interaction  
*Type:* <http://id.loc.gov/ontologies/bf1c/Hub>, <http://id.loc.gov/ontologies/bibframe/Work>  
*Contributor:* Cervone, H. Frank., Svensson, Lars G.,1966-, Svensson, Lars G.,

**Linked data and user interaction**  
*Title:* Linked data and user interaction  
*Type:* <http://id.loc.gov/ontologies/bibframe/Text>, <http://id.loc.gov/ontologies/bibframe/Work>

**SHAREVDE STANFORD work (QA)**

**Linked data and user interaction**  
*Title:* Linked data and user interaction  
*Type:* <http://id.loc.gov/ontologies/bf1c/Hub>, <http://id.loc.gov/ontologies/bibframe/Work>  
*Contributor:* Svensson, Lars G.,1966-, Cervone, H. Frank,

SHARE-VDE

### Move this publication

Original work  
**Lord of the flies**  
Written by William Golding in 1954 in English.

Publication  
**Lord of the flies [KnowledgeNotes Student Guide]**

Original work  
**Lord of the flies [KnowledgeNotes]**  
Written by KnowledgeNotes and William Golding in 2010 in English

Other associated publications to this original work:

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[Go back](#) [Move publication](#)



# Work ID Working Group currently working on:

1. Identifying SuperWork properties and relationships in BIBFRAME such that
  - a. We have an appropriate BIBFRAME extension that we can use
  - b. The SuperWork is modeled appropriately in our data
2. Incorporating these updates into application profiles for BIBFRAME in Sinopia
  - a. We need to be able to work with data from MARC to BIBFRAME conversion, and that created in BIBFRAME - Refining toolings

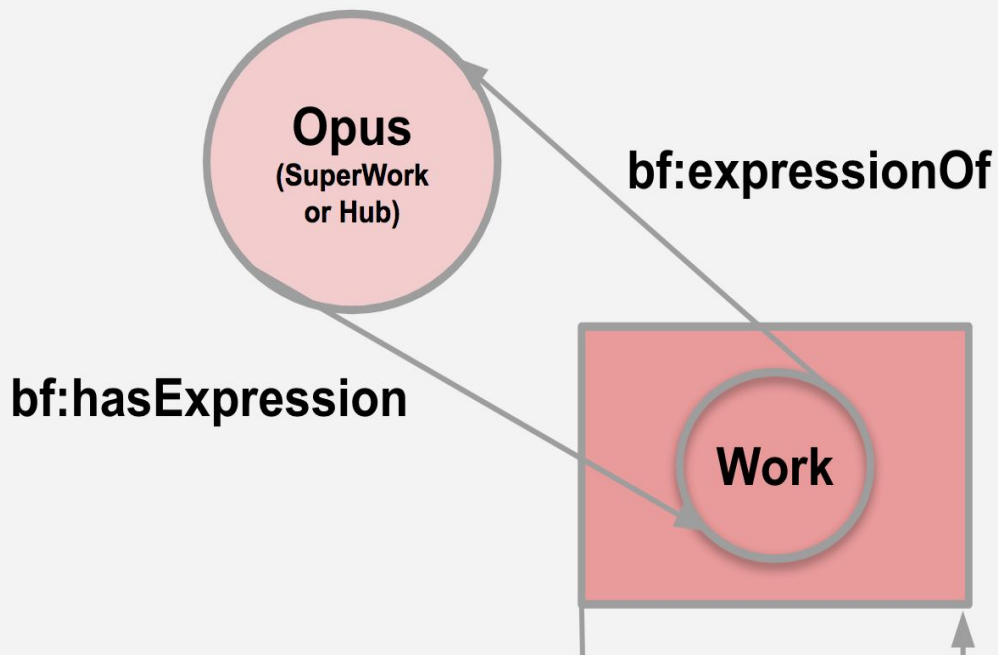
The screenshot shows a metadata form for a 'UAL Monograph Work'. The form is organized into several sections, each with a title bar and a '+ Add' button. The sections are:

- Work Identifier** (+ Add)
- Contribution (Creator/Contributor)** (+ Add)
- Title Information \***
  - Work Title** (+ Add another)
    - + Add Preferred Title for Work
    - + Add Part number
    - + Add Part name
    - + Add Note
  - Work Title Variation** (+ Add another)
    - + Add Variant Title for Work
    - + Add Note
- Form of Work** (+ Add)
- Date of Work** (+ Add)
- Place of Origin of the Work** (+ Add)
- (Geographic) Coverage of the Content** (+ Add)
- (Time) Coverage of the Content** (+ Add)
- Intended Audience** (+ Add)
- Notes about the Work** (+ Add)
- Dissertation** (+ Add)
- Contents** (+ Add)
- Summary** (+ Add)
- Subject of the Work** (+ Add)
- Classification numbers** (+ Add)



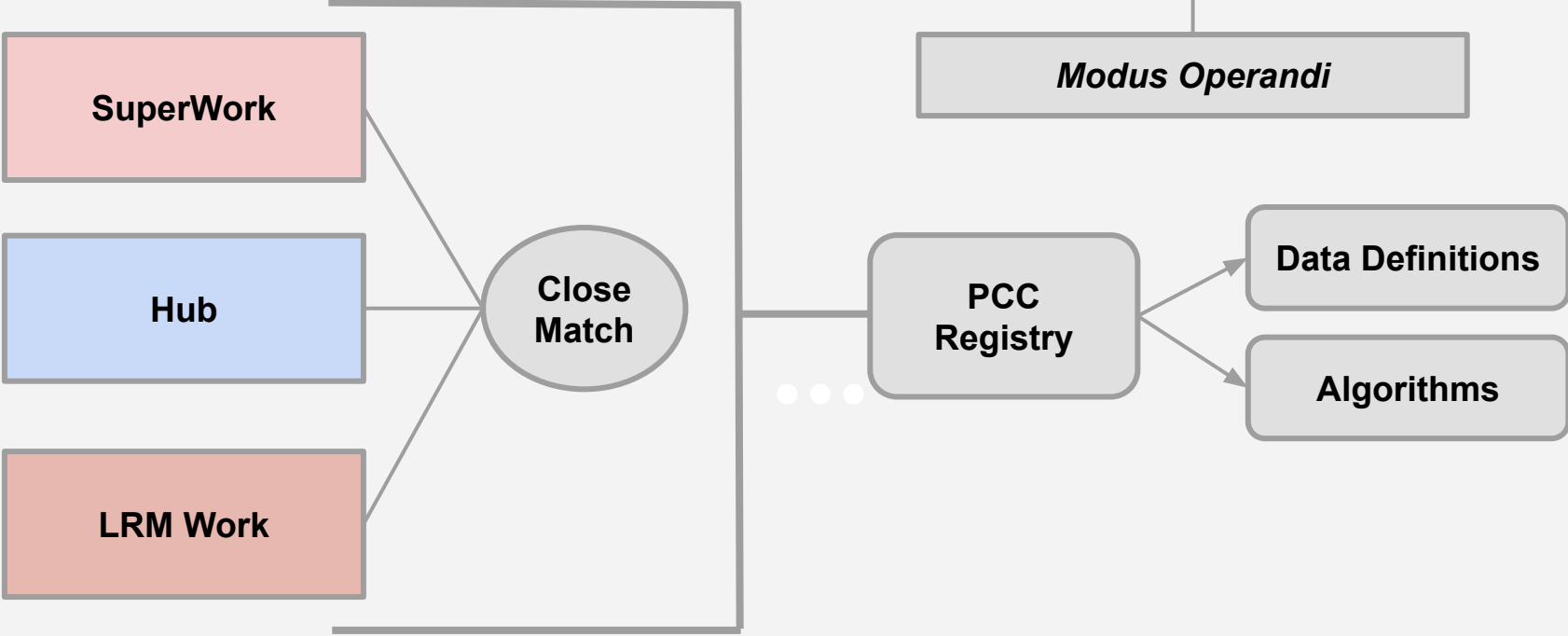
Key to cataloguing workflows in this regard:

1. How do you setup these profiles given the unusual nature of the opus type? SuperWork is made up of elements of bf:Work ...
2. How much should the cataloguer interact with SuperWork, and how much is automated. Also, what work is done in Sinopia vs. J. Cricket?





# Opus Types



# Thanks - Over to Kevin to discuss Hubs



Everything

The Library of Congress > [Linked Data Service](#)

## Refined by:

Hubs

shakespeare, william

Results: 1-20 of 1,434

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) ...

## Refine your results

### Scheme

Hubs

### Type

Hub 1,434

Work 1,434

### Collection

No values

### Created Date

2010s 1,434

### Modified Date

	Label	Vocabulary	Concept	Subdivision	Identifier
1.	Shakespeare, William, 1564-1616 Plays. Selections	Hubs	Work		254f0f53...
	Shakespeare, William, 1564-1616 Hollywood immortals perform Shakespeare ; Shakespeare, William, 1564-1616 Seven comedies ; Shakespeare, William, 1564-1616 Four comedies ; Shakespeare, William, 1564-1616 Pericles, Prince of Tyre ; Cymbeline ; The two noble kinsmen ; Shakespeare, William, 1564-1616 Hi...				
2.	Shakespeare, William, 1564-1616 Plays	Hubs	Work		c4c931d7...
	Shakespeare, William, 1564-1616 Plays of William Shakespeare ; Shakespeare, William, 1564-1616 Dramatic works of William Shakespeare ; Shakespeare, William, 1564-1616 Complete plays of William Shakespeare ; Shakespeare, William, 1564-1616 Contemporary Shakespeare series (University Press of America ...				
3.	Shakespeare, William, 1564-1616 Sonnets. Selections	Hubs	Work		19cd1943...