

# BIBFRAME: Recent and Future Activities at the Library of Congress

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# BIBFRAME activities

- Infrastructure improvements
  - Additional servers
  - MarkLogic (database software) update
- Revised MARC-to-BIBFRAME data conversion specifications and updated conversion software to match changes in the BIBFRAME 2.0 vocabulary
- New BIBFRAME editor profiles

# BIBFRAME activities

- Converted entire LC MARC catalog to BIBFRAME
  - 17 million MARC bibliographic records converted to BIBFRAME Works, Instances, and Items
  - 1.2 million uniform title authority records converted to BIBFRAME Works
  - Matching and merging of BIBFRAME Works
  - Daily updates from Voyager ILS system to id.loc.gov and BIBFRAME database
  - The entire processes has been reviewed and changed several times and records have been re-converted, re-loaded and re-merged



# BIBFRAME activities

- 40 catalogers from BIBFRAME 1.0 pilot continued participation, and 20 new catalogers and technicians joined the BIBFRAME 2.0 pilot
- Training for new and continuing participants from May-July
- Catalogers started to enter metadata in the BIBFRAME editor in June
- Ongoing meetings with catalogers to improve editor profiles

# BIBFRAME editor

Home / Editor

## Bibframe Editor Workspace

Browse Editor Load

### Create Resource

- Monograph ▾
- Notated Music ▾
- Serial ▾
- Cartographic ▾
- Sound Recording: Audio CD ▾
- Moving Image: BluRay DVD ▾
- Moving Image: 35mm Feature Film ▾
- Prints and Photographs ▾
- Rare Materials ▾
- Authorities ▾

- Format-specific editor profiles

## Create Resource

Monograph ▾

Instance

Work

- Can begin with either Instance or Work

# BIBFRAME editor

Integrated searching of works

BIBFRAME Work (RDA Work Elements) ×

BIBFRAME Work (RDA Work Elements)

Lookup

german historical|Museum : German history in pictures a

works

**German Historical Museum : German history in pictures and documents**

**German historical** prints and photographs, 1840-1900

**German historical** prose,

**German historical** source material in United States universities,

**German Historical** Institute (Washington, D.C.) Guide to inventories and finding aids at the **German Historical** Institute, Washington, D.C. /

**German Historical** Institute (Washington, D.C.) The **German Historical** Institute, 1987-1997 : a ten-year report /

Creator of Work  
(RDA 19.2)

Title Information

Form of Work

Date of Work (RDA

Date of Work (RDA 6.4)

+

# BIBFRAME editor

Integrated searching of authorized access points

For names ...

The screenshot shows the BIBFRAME editor interface. At the top, there is a window titled "Person" with a close button (X). Below this, the word "Person" is displayed. A "Lookup" field contains the text "Dickens, Charles| 1719-1793". Below the lookup field, a dropdown menu is open, showing a list of results under the heading "LCNAF". The first result is highlighted in blue: "Dickens, Charles, 1719-1793". Other results include "Dickens, Charles, 1812-1870", "Dickens, Charles, 1812-1870. American notes", "Dickens, Charles, 1812-1870. American notes. Dutch", "Dickens, Charles, 1812-1870. American notes. German", "Dickens, Charles, 1812-1870. Bagman's story", "Dickens, Charles, 1812-1870. Bagman's story. German & English", and "Dickens, Charles, 1812-1870. Barnaby Rudge. French". To the right of the list, there are two buttons with a plus sign (+). Below the list, there is a tab labeled "Agents: Other Identifying Attributes". On the left side of the interface, there are several labels: "Preferred Name for Person (RDA 9.2.2) CORE ELEMENT", "Fuller Form of Name (RDA 9.5) CORE IF ...", and "Other Identifying Attributes".

# BIBFRAME editor

... and form/genre/subject authorized access points

Current vocabularies in integrated search

## LCNAF

- Personal, Corporate, Conference, Family names

## LCSH

- Library of Congress Subject Headings

## LCGFT

- Library of Congress Genre/Form Terms

## LCMPT





- Library of Congress Medium of Performance Thesaurus

The screenshot shows the 'Subject of Work' editor interface. At the top, there is a search bar labeled 'Lookup' containing the text 'Goethe family'. Below the search bar, a dropdown menu displays search results. The results are organized by vocabulary: LCSH and LCNAF. Under LCSH, the first result 'Goethe family' is highlighted in blue. Other results include 'Goethe, Johann Wolfgang von, 1749-1832--Characters', 'Goethe, Johann Wolfgang von, 1749-1832--Characters--Homunculus', 'Goethe-Schiller-Denkmal (Weimar, Thuringia, Germany)', and 'Goethepreis der Stadt Frankfurt am Main'. Under LCNAF, the results are 'Goethe & company' and 'Goethe Bicentennial Foundation'. At the bottom of the interface, there are two buttons: 'Cancel' and 'Save changes'.







# BIBFRAME editor

- Some standard values are pre-supplied and are specific to each format

Media type (RDA 3.2)	Media type (RDA 3.2)	
	unmediated  	
Extent (RDA 3.4)	Extent (RDA 3.4)	+
Dimensions (RDA 3.5)	Dimensions (RDA 3.5)	+
Carrier Type (RDA 3.3)	Carrier Type (RDA 3.3)	
	volume  	

Media type (RDA 3.2)	Media type (RDA 3.2)	
	audio  	
Carrier Type (RDA 3.3)	Carrier Type (RDA 3.3)	
	audio disc  	
Extent (RDA 3.4)	Extent (RDA 3.4)	+
Dimensions (RDA 3.5)	Dimensions (RDA 3.5)	+

# BIBFRAME editor

- Drop-down vocabularies included for some fields

Configuration of Playback Channels (RDA 3.16.8)

Special Playback Characteristic (RDA 3.16.9)

File Type (RDA 3.19)

Encoding Format (RDA 3.19.3)

File Size (RDA 3.19.4)

Configuration of Playback Channels (RDA 3.16.8)

mp playback Characteristic (RDA 3.16.9)

mixed .19)

monaural

multichannel (RDA 3.19.3)

stereophonic

19.4)

Configuration of Playback Channels (RDA 3.16.8)

Configuration of Playback Channels (RDA 3.16.8)

stereophonic  



# Initial adjustments

- Different catalogers have different needs and the BIBFRAME editor can be easily customized
- Examples:
  - Cartographic catalogers always create a new work
  - Rare book catalogers need more specific item-level information
  - Music catalogers are focused on relationships between existing works

# Initial adjustments

Standard Monograph work profile (in part)

## BIBFRAME Work (RDA Work Elements)

Creator of Work (RDA 19.2)

Primary Contribution

Title Information

Work Title

Work Title Variation

Transcribed Title

Form of Work

Form of Work

Date of Work (RDA 6.4)

Date of Work (RDA 6.4)

Place of Origin of the Work (RDA 6.5)

Place Associated with a Resource

Nature of Content (RDA 7.2)

Nature of Content (RDA 7.2)

(Geographic) Coverage of the Content (RDA 7.3)

(Geographic) Coverage of the Content (RDA 7.3)

(Time) Coverage of the Content (RDA 7.3)

(Time) Coverage of the Content (RDA 7.3)

Intended Audience

Intended Audience

Other Agent Associated with Work (RDA 19.3)

Contribution

Subject of the Work (RDA Chapter 23)

Subject of Work

Notes about the Work

Note

# Initial adjustments

Cartographic Work profile with cataloger-requested specifications:

- Work Title Variation removed
- Transcribed Title removed
- Date of Work removed
- Place of Origin of Work removed
- Nature of Content removed
- Coordinates of Cartographic Content included



## BIBFRAME Work (RDA Work Elements)

<b>Creator of Work (RDA 19.2)</b>	Primary Contribution
<b>Title Information</b>	Work Title
<b>Form of Work</b>	Form of Work
<b>(Geographic) Coverage of the Content (RDA 7.3)</b>	(Geographic) Coverage of the Content (RDA 7.3)
<b>(Time) Coverage of the Content (RDA 7.3)</b>	(Time) Coverage of the Content (RDA 7.3)
<b>Coordinates of Cartographic Content (RDA 7.4)</b>	Cartographic Coordinates
<b>Intended Audience (RDA 7.7)</b>	Intended Audience (RDA 7.7)
<b>Other Person, Family, or Corporate Body Associated With a Work (RDA 19.3)</b>	Contribution
<b>Subject of the Work (RDA Chapter 23)</b>	Subject of Work
<b>Notes about the Work</b>	Note
<b>Classification numbers</b>	Library of Congress Classification   Dewey Decimal Classification
<b>Related Works (RDA Chapter 25 and Appendix J)</b>	Related Work
<b>Contents (LC-PCC PS 25.1)</b>	Contents note

# Initial adjustments

Standard Monograph Item profile (in part)

## BIBFRAME Item (RDA Item)

<b>Holding for</b>	Holding for	+
<b>Held by</b>	Held by	+
	DLC  	
<b>Electronic location</b>	Electronic location	+
<b>Held in sublocation</b>	Held in sublocation	+
<b>Barcode</b>	Barcode	
<b>Circulation status</b>	Circulation status	+
<b>Notes about the Item</b>	Note	
<b>Shelf Location</b>	Shelf Location	+
<b>Lending, Reproduction, and Retention Policies</b>	Usage and Access Policy	
<b>LCC call number</b>	LCC call number	+
<b>DDC call number</b>	DDC call number	+

# Initial adjustments

Rare Materials Item profile includes field to add agents at the item level (donor, owner, others)

BIBFRAME Item (RDA Item) ×

BIBFRAME Item (RDA Item)

Held by

Held by

+

DLC



Location

Location

+

Agents associated with Item

Contribution

Custodial History (RDA 2.18)

Custodial History (RDA 2.18)

+

Immediate Source of Acquisition (RDA 2.19)

Immediate Source of Acquisition (RDA 2.19)

+

Notes about the Item

Note

Barcode

Barcode

Shelfmarks

Shelfmarks

Usage and access policy

Usage and access policy

+

Cancel

Save changes



# Initial adjustments

- Challenge to build relationships between works
  - How to handle aggregate works or bound-with titles
    - Many work descriptions linked to a single instance?
    - One collective work with many related works?
  - Related work and Related instance sections of editor profiles may need to be adjusted



# Initial adjustments

- Subject strings and URIs can be constructed in different ways

Subject of Work ×

Subject of Work

Lookup

OR

**Subject + Subdivision string**

**Subject source**

**Components**

# Initial adjustments

Subject of Work ×

Subject of Work

Lookup

LCSH

- Baseball players--United States
- Baseball players--United States--Anecdotes
- Baseball players--United States--Biography**
- Baseball players--United States--Biography--Juvenile literature
- Baseball players--United States--Interviews
- Baseball players--United States--Statistics

Subject + Subdivision string

Subject source

LCNAF

Components [No suggestions found for bas

```
<bf:Work rdf:nodeID="bnodefsyWJhp51cXTJTJThyNhWAES">
  <bf:subject rdf:resource="http://id.loc.gov/authorities/subjects/sh2007101902"/>
</bf:Work>
</bf:instanceOf>
</bf:Instance>
<bf:Topic rdf:nodeID="bnodeePzK2ei4VdowCqbcqhATMb">
  <rdfs:label xml:lang="en">Baseball players--United States--Biography</rdfs:label>
</bf:Topic>
<bf:Topic rdf:about="http://id.loc.gov/authorities/subjects/sh2007101902"/>
```

# Initial adjustments

Subject of Work ✕

Subject of Work

Lookup  Save changes

OR

Subject + Subdivision string

Subject source

Components

Topic	Temporal	Genre/Form	Geographic
Baseball players ✓		United States ✓	
Biography ✓			

```
<bf:subject>
  <bf:Topic rdf:nodeID="bnode4CW8njr26rm4JV5w2BGdTK">
    <mads:componentList rdf:resource="http://id.loc.gov/authorities/names/n78095330"/>
    <mads:componentList rdf:resource="http://id.loc.gov/authorities/subjects/sh85012045"/>
    <mads:componentList rdf:resource="http://id.loc.gov/authorities/subjects/sh99001237"/>
  </bf:Topic>
</bf:subject>
</bf:Work>
<mads:Topic rdf:nodeID="bnode6kei2ZKWGbEZVACc62meJr">
  <rdfs:label xml:lang="en">Baseball players</rdfs:label>
</mads:Topic>
<mads:GenreForm rdf:nodeID="bnode23rnYNE1ZuGStKMUdMdqNo">
  <rdfs:label xml:lang="en">Biography</rdfs:label>
</mads:GenreForm>
<mads:Geographic rdf:nodeID="bnodevRaTGvzb1M8d7SYDpAGyps">
  <rdfs:label xml:lang="en">United States</rdfs:label>
</mads:Geographic>
<mads:Topic rdf:about="http://id.loc.gov/authorities/subjects/sh85012045"/>
<mads:GenreForm rdf:about="http://id.loc.gov/authorities/subjects/sh99001237"/>
<mads:Geographic rdf:about="http://id.loc.gov/authorities/names/n78095330"/>
```

Cancel Save changes

# Initial adjustments

Subject of Work ×

Subject of Work

Lookup

**Save changes**

OR

**Subject + Subdivision string**  **+**

**Subject source**

**Components**

```
<bf:Topic rdf:nodeID="bnodeePzK2ei4VdowCqbcqhATMb">  
  <rdfs:label xml:lang="en">Baseball players--United States--Biography</rdfs:label>  
</bf:Topic>
```

# Initial adjustments

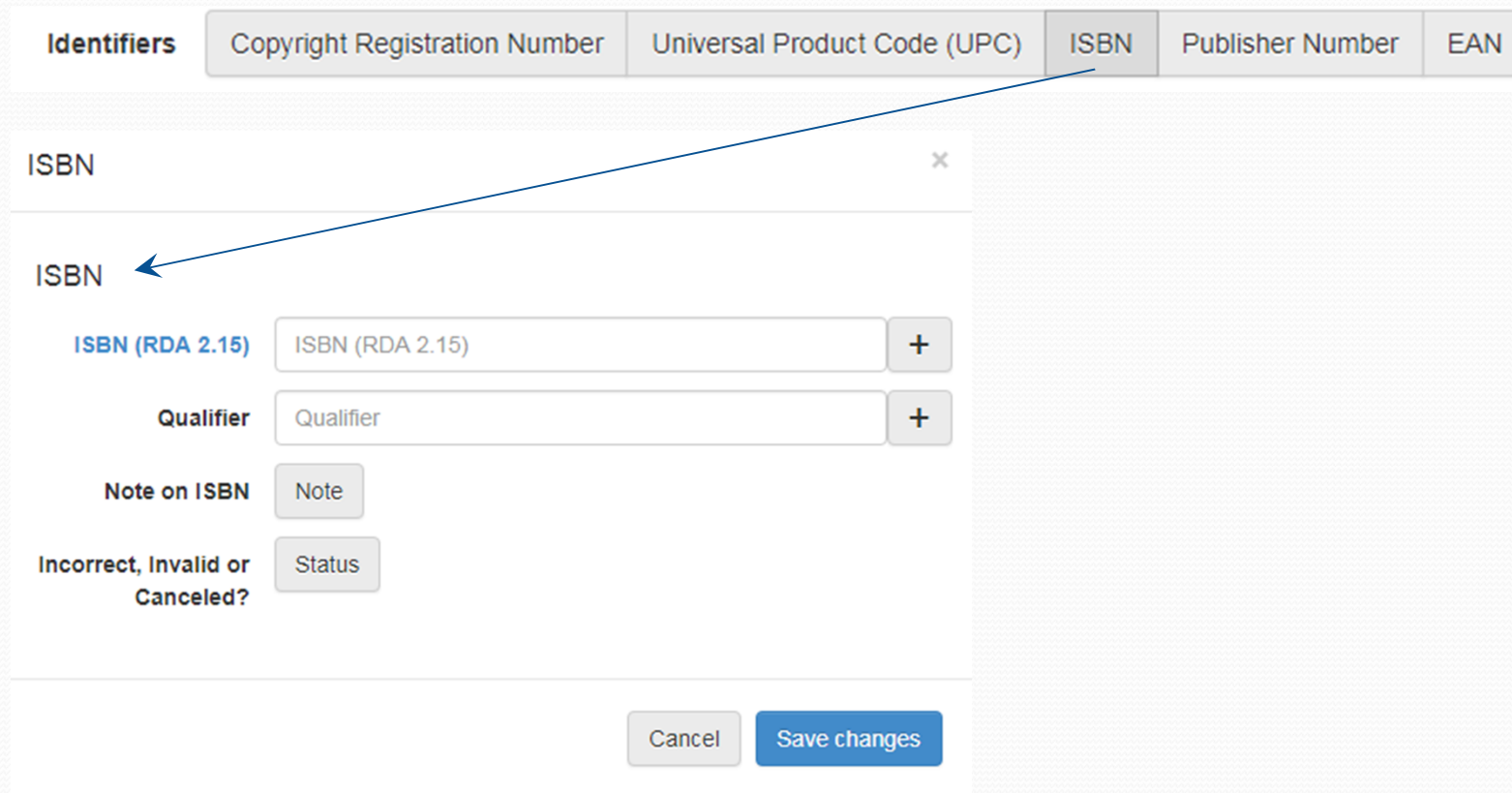
- Treatment of series statements
  - Include as a literal?
  - Relate to a work?
- Character set mapping
  - Some catalogers used special keyboards to input vernacular data
  - BIBFRAME uses Unicode; LC's Voyager ILS does not

# Initial adjustments

- It's harder than expected to create good RDF data
  - Property
    - Sub-property
      - Class
        - Sub-class
          - Label or value
- Editor needs to “remember” classes, properties and formatting from menus in the hierarchy

# Initial adjustments

- Creating desired RDF output data has necessitated multiple layers of menus in the BIBFRAME editor



The screenshot displays the BIBFRAME editor interface. At the top, a horizontal menu bar contains several tabs: 'Identifiers', 'Copyright Registration Number', 'Universal Product Code (UPC)', 'ISBN', 'Publisher Number', and 'EAN'. The 'ISBN' tab is currently selected. Below this menu, a modal window titled 'ISBN' is open. This window contains several input fields and buttons: a text field labeled 'ISBN (RDA 2.15)' with a '+' button to its right; a text field labeled 'Qualifier' with a '+' button to its right; a button labeled 'Note' under the heading 'Note on ISBN'; and a button labeled 'Status' under the heading 'Incorrect, Invalid or Canceled?'. At the bottom of the modal, there are two buttons: 'Cancel' and 'Save changes'. A blue arrow points from the 'ISBN' tab in the top menu to the 'ISBN' modal window.

ISBN

x

ISBN

ISBN (RDA 2.15)

ISBN (RDA 2.15)

+

978123456789



Qualifier

Qualifier

+

Note on ISBN

Note

Incorrect, Invalid or  
Canceled?

Status

Cancel

Save changes

Note

x

Note

Note text

Note text

+

Cancel

Save changes



ISBN

x

ISBN

ISBN (RDA 2.15)

ISBN (RDA 2.15)

+

978123456789



Qualifier

Qualifier

+

Note on ISBN

Note

Note on ISBN



Incorrect, Invalid or  
Canceled?

Status

Cancel

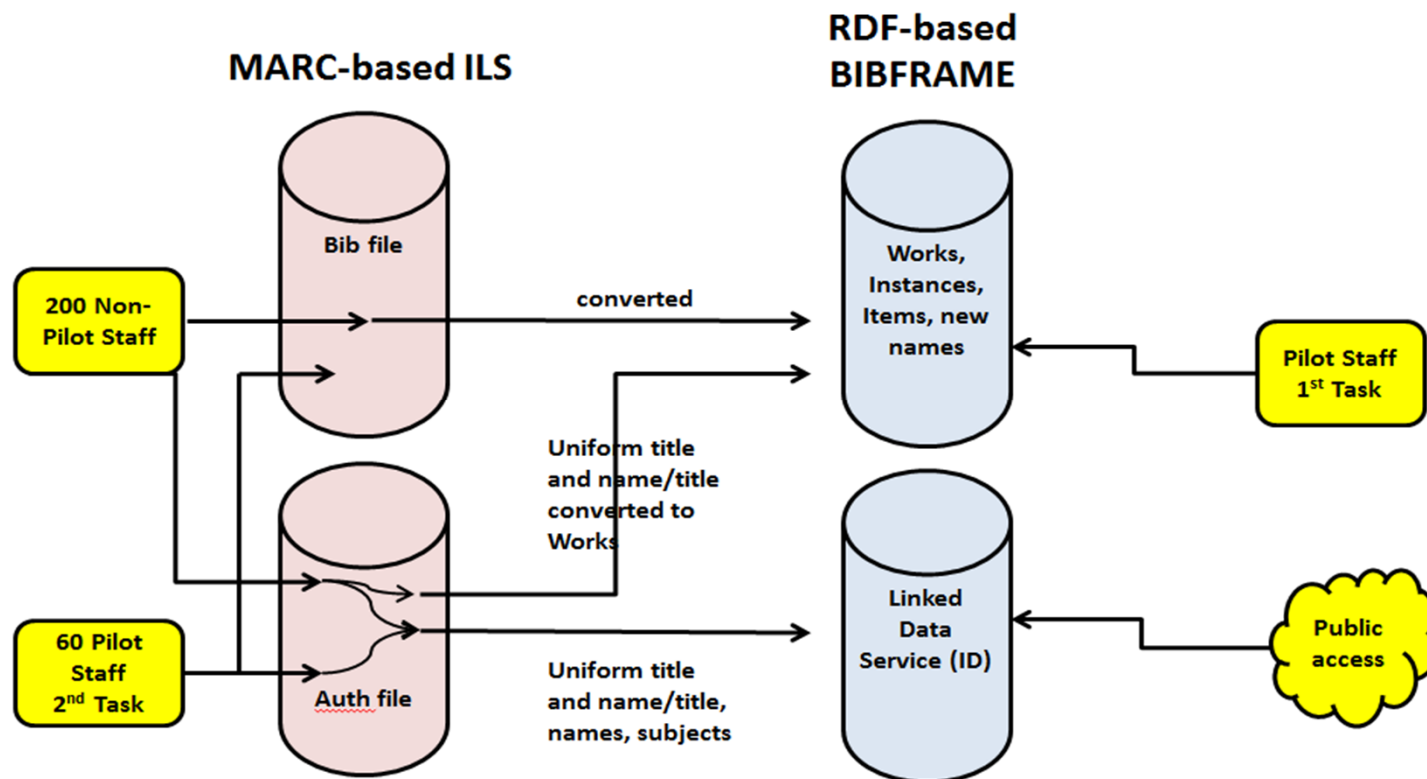
Save changes



```
<bf:identifiedBy>  
  <bf:Isbn rdf:nodeID="bnodeeQmPc6RoHVkbSg8EfZGXiA">  
    <bf:note>  
      <bf:Note rdf:nodeID="bnodeMNHZdxMefYpnHDyepjnbAF">  
        <rdfs:label>Note on ISBN</rdfs:label>  
      </bf:Note>  
    </bf:note>  
    <rdf:value>978123456789</rdf:value>  
  </bf:Isbn>  
</bf:identifiedBy>
```

# Next steps

- Begin publishing (saving) metadata created in BIBFRAME editor into the BIBFRAME database





# Improving the editor

- Enhance display in BIBFRAME editor to facilitate proofreading and editing of data
- Refine recall of data from BIBFRAME database into the appropriate format-specific profile in the BIBFRAME editor
- Test and evaluate copy cataloging workflow(s)

# Next steps

- Review and possibly incorporate LD4P specialized ontologies into BIBFRAME vocabulary
  - Performed music
  - Art
  - Rare materials
- Evaluate impact of FRBR-LRM on BIBFRAME
  - One-to-many relationships between instances (manifestations) and works

# Next steps

- Continue to refine MARC-to-BIBFRAME conversion software
- Continue to evaluate indexing, normalization and display of BIBFRAME data in a discovery environment
- BIBFRAME-to-MARC conversion?

# Editor explorations

- Review BIBFRAME editor and profiles
  - Flatten the hierarchical structure?
  - Put more RDF coding into the software instead of the profile?
  - Review the current configuration of the format-based profiles
    - Instead of format-specific profiles, should there be a core set of elements that are always required?
    - Add the ability to insert a property or class on-the-fly?

# Additional information

<http://www.loc.gov/bibframe/>

<http://id.loc.gov>

<https://github.com/lcnetdev>

# Thank you

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