Differentiating Libraries through Enriched User Searching; FRBR as the next dimension in meaningful Information Retrieval

ALCTS Back to the Future Preconference 2004 ALA Annual Conference Orlando

Overview of Presentation

- Design Considerations in FRBR
- Virtua Releases and FRBR
- FRBR Examples in Virtua Catalog
- FRBR Benefits
- Preparing for a FRBR Catalog
Design Considerations in FRBR

- Design is a matter of choices; Good design is a matter of good choices
- Five key questions
  - Store FRBR records?
  - Have a pure or mixed FRBRized catalog?
  - What tools are needed to support cataloging?
  - How to display FRBR records?
  - What features would users like?

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Store FRBR records (or FRBRize at display)?

- Records are cataloged once assessed many times; FRBRizing at access was not optimal
- Collocation was easier for stored FRBR records
- Validations checks for works, expressions and manifestations was cleaner for stored records
- Cataloging was simpler and easily understood
- Linking was obvious to catalogers
## Design Considerations in FRBR

### Have a pure or mixed FRBRized catalog?

- Studies at VTLS and OCLC showed that about 18% of catalog records would gain by FRBRizing.
- Pure catalogs would be easier to display but would require more effort to convert.
- Mixed catalogs would take less overhead and provide for gradual (over time) implementation.
- Mixed catalogs would provide for selective FRBRization if necessary.

### What tools are needed to support cataloging?

- **FRBRize** button – converts any record to FRBR.
- Automatic linking between W-E-M records.
- Context sensitive validation for W-E-M records.
- Copying “whole” FRBR tree from catalog to catalog.
- Analyze catalog for FRBR candidates.
- Batch FRBRize the whole catalog (as in LC music).
- Unfrbrize records for distribution & error correction.
- Authority control for FRBR records.
### Design Considerations in FRBR

#### How to display FRBR records?
- FRBR expandable tree structure
- Use of Icons
- FRBR reverse tree structure
  - Music collections
  - Bound with
- See examples that follow later

### Design Considerations in FRBR

#### What features would users like?
- Record sensitive displays – standard records display different form FRBR display
- Collocation
- Navigation – hence reverse tree
- Holds at W-E-M levels
- Multilingual access based on FRBR data
VTLS - Virtua Releases and FRBR

Current Virtua Release is Release 44
Starting at Release 41

- Important Split for users
  - Choose to implement FRBR
  - Choose to ignore FRBR
  - Have a mixed catalog with FRBR records and non-FRBR records

- Mapping from regular cataloging to FRBR
  - One record to three linked records
  - Initial mapping done independently by LC (Tom Delsey) and by VTLS (John Espley) – there was little difference

FRBR Examples

Implementation

- VTLS continues to create examples to demonstrate the use of FRBR in library catalogs
- Links to 11 examples on following slide
- 6 examples to be viewed during this presentation
  - General Example (1)
  - OPAC (3)
  - Super Work (4)
  - Art example (10)
  - Circulation Requests by users (11)
  - Cataloging Procedures (2)
**FRBR Examples in Virtua Catalog**

Click Corresponding button for example

<table>
<thead>
<tr>
<th>VTLS Implementation</th>
<th>Cataloging</th>
<th>OPAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related Works and Super Works</td>
<td>Multi-Volume Set</td>
<td>Series</td>
</tr>
<tr>
<td>Collected or Selected Works</td>
<td>Music Analytics</td>
<td>Journal Indexing</td>
</tr>
<tr>
<td>Art example</td>
<td>Circulation Requests at Work/Expression</td>
<td>Questions/Comments</td>
</tr>
</tbody>
</table>

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**FRBR Benefits**

**For Librarians**

- Collocation
  - Better organization to catalog
- Easier cataloging
- Reduction in cataloging load
  - Work only cataloged once for all expressions under it
  - Expression only cataloged once for all manifestations under it
  - Item cataloging (already simple) remains the same
## FRBR Benefits

### Greater Benefits For Users

- Collocation
- Easier to find information
  - Single search retrieves all related materials even if cataloged in different languages or different subject headings
- Easier to see the different expressions of a single work
  - Gives a better global picture
- Easier to find all manifestations

### FRBR Benefits

- Place holds at “Work” or “Expression” level rather than only at manifestation level
- Better understanding of relationships between related works or expressions
## FRBR Preparation

### Library Task List
- Read FRBR documentation
- Study FRBR implementations to see benefits for library
- If there is preliminary interest, start a FRBR program
- Have your vendor run “FRBR Analysis Program” to determine what percentage of database records are good FRBR candidates
  - General results: 5-18 % range

## FRBR Preparation

### Library Task List
- Decide to implement FRBR
- Schedule FRBR cataloging training (one day)
- Automatically convert selected records to FRBR using appropriate software programs
- Check and correct auto conversion
- Open FRBR catalog to public
- Let the fun begin
- Live happily ever after!!
FRBR

For further information or a copy of this presentation, please send an email to:
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FRBR Implementation

www.ala.org/alcts
**FRBR Demonstration**

- **Beethoven Example**
  - Search on Author Beethoven
  - Select Symphonies no. 6
  - View record and notice FRBR hierarchy

- **Things to pay attention to now**
  - Notice the 001 and 004 tags
  - Notice the 990 tag

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**Beethoven Example**

To begin a browse search of the library catalog:
1. Choose the type of search by clicking the arrow in the first box.
2. Then click in the empty box.
3. Type a whole or partial last name, subject, title, call number or other entry appropriate to the type of search you are doing.
4. Click the Search button or press the ENTER key on your keyboard.

**Search for Beethoven**
Beethoven Example

Select 6th Symphony. (Could also select 5 Beethoven and then 6th Symphony)

Result is a FRBR Work record. (Expand tree by clicking on the plus sign)
Beethoven Example

Tree is expanded to display FRBR Expressions. The 004 tag is the 001 of the Work.

Expanding the tree again displays the FRBR Manifestations.
<table>
<thead>
<tr>
<th>VTLS FRBR Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single database can have FRBR and non-FRBR records</td>
</tr>
<tr>
<td>Display of FRBR records are in tree structure</td>
</tr>
<tr>
<td>System is “aware” of record type and changes displays as needed</td>
</tr>
<tr>
<td>Local level fields have values of W, E, and M to indicate type of FRBR record</td>
</tr>
<tr>
<td>001 and 004 used as linking tags</td>
</tr>
</tbody>
</table>

**FRBR Cataloging**

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FRBR Cataloging

Creating an Original Record

- Use FRBR work forms
- VTLS provides three default work forms
  - Frbrwork.wfm
  - Frbexpr.wfm
  - Frbrmanifest.wfm
- Users can create their own work forms
- In traditional cataloging the focus is on cataloging the manifestation as material on hand is the manifestation
  - VTLS is studying the cataloging practices to see if this remains true for FRBR

Creating an Original Record

- In the present implementation, the reverse order works better
- It is best to create a “work” record first, then right click to create expression; save; right click to create a manifestation
- Add item records to manifestations
- Example follows
Creating an Original Record

Create Record

Select appropriate work form

File name: libwork.wfn
Files of type: User Work form (*.wfn)

Create an Original Record

Fill in appropriate data.
Add or delete any tags.
Creating an Original Record

Once record is completed, save it to the database.

Creating an Original Record

The result is a FRBR Work record

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Creating from an Existing Record

Creation from existing MARC record is simple

- Two methods
  - Create FRBR records using “one button”
  - FRBRizing icon
  - Always create FRBR records using Load Option

Creating from an Existing Record

“One Button” Method

- Find record and display “View Record” window
- Click on FRBRize icon
- Results are Work, Expression, & Manifestation records
Creating from an Existing Record

[Image of software interface showing a list of records with options to view, page up, page down, skip, or delete.]

Display the View Bibliographic Record window
Click on the “FRBRize” icon
Tool tip for icon

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Creating from an Existing Record

[Image of a screen showing a bibliographic record]

Creating from an Existing Record

[Image of a screen showing another bibliographic record]

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Creating from an Existing Record

Load Options Method

- Bring record into editor
- Change profile to “split record”
- Save record
- Virtua automatically creates three records – W, E and M records from the one original record
- The next example (Rowling) shows the process
Load Options Method

To begin a browse search of the library catalog, follow these steps:
1. Select the type of search by clicking the arrow in the first box.
2. Then click in the empty box.
3. Type a whole or partial last name, subject, title, call number or other entry appropriate to the type of search you are doing.
4. Click the search button or press the ENTER key on your keyboard.

LIBRARY NOTICE
Put your customized library message here and on every other tab

Search for Rowling

Select Rowling from scan list

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Load Options Method

Full record display for Rowling

Load Options Method

Marc record display for Rowling

Click edit button to edit record

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Load Options Method
Load Options Method

Set Load Options for FRBR Splitting

Save record to database
Load Options Method

Virtua will automatically convert all records into FRBR

The Manifestation record is shown with tree expanded

Load Options Method

The Expression record
Load Options Method

Duplicate Control

When creating FRBR records from traditional bibliographic records, you need duplicate control and merge functions for Works and Expressions.
Duplicate Control

Duplicate Control

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Duplicate Control

The French language record

The FRBRization of the French record resulted in adding an expression (for the French) to the already existing work record.
Adding Expressions or Manifestations

- Bring up Work record (or Expression record)
- Right Click
- Select “Create Expression Record” (or select “Create Manifestation Record”)
- Example follows

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Display Work record. Right click and select Create Expression Record.
Adding Expressions or Manifestations

Bib Id of Work record is automatically placed in 004 of an Expression work form

A different language requires a new Expression record
Adding Expressions or Manifestations

A new Expression record

To add a new Manifestation, display the Expression. Right click and select Create Manifestation Record.

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Adding Expressions or Manifestations

Bib Id of Expression record is automatically placed in 004 of a Manifestation work form

Adding Expressions or Manifestations

After adding/deleting tags to make the Manifestation record, save the record to the database.

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Adding Expressions or Manifestations

The result is a new Manifestation record

Rules Based Validation

- Procedure for MARC “content designation” validation of Work, Expression, and Manifestation records is same as validating non-FRBR records
- Three new validation files for FRBR with new rules
- Rules can be modified by users by editing text file
- Examples follow

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Rules Based Validation

Validate an Expression record

Subfield \( \backslash (L) \) is not a valid subfield for tag 245 in an Expression record
Rules Based Validation

Validate a Manifestation record

Tag 245 is required in a Manifestation record

Subfields $a and $c are not valid subfields for tag 240 in a Manifestation record

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FRBR OPAC

Screen captures of Virtua’s Web OPAC, VECTORS, are presented to show user displays of a FRBR catalog.
FRBR OPAC

The Library
Basic Search

There are no browse selections in your history.

Browse for Beethoven

Select 6th Symphony
FRBR OPAC

The Item record for the Manifestation

FRBR Related Works and Super Works
Work to Work Links

“... when the modification of a work involves a significant degree of independent ... effort, the result is ... a new work.”  FRBR, final report

Work to Work Links

Types of different works:

- Paraphrases
- Rewritings
- Adaptations for children
- Musical variations on a theme
- Abstracts, digests, and summaries
- Adaptations from one form to another
  - Dramatizations (book to movie, play, etc.)
  - One graphic art medium to another
Super Work

A Super (or Supra) Work is a record that has other works (sub works) related to it

- For example, the novel Beau Geste by P. C. Wren is one FRBR Work, and the several movies that have been created from the book are also separate FRBR Works. The Super work is an artificial creation that links all these related works together.
Super Work

The tree expanded to show the “sub works” of the Super Work

The Work record for the novel (a sub work of the Super Work)

Super Work

The Work record for the 1939 movie (a sub work of the Super Work)
Super Work
Super Work

The tree expanded to show the Manifestations of the 1926 movie

The Expression record for the 1926 movie

Super Work

The tree expanded to show the Expression and Manifestations for the music (a sub work) of the 1926 movie

The Manifestation record for the music of the 1926 movie

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### FRBR Music Analytics

![Logo](image)

### Music Analytics

#### Component Parts

- Quite often music sound recordings (like CD or tape) are composed of several different works
  - All works by one composer
  - Works by several different composers
- Example as follows

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Music Analytics

Search for Mozart's Concerto no. 2

The Work record

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Music Analytics

The tree expanded to display the Expressions and the full display of a selected Expression

Music Analytics

Notice this Manifestation has three 004 tags indicating that this record is linked to three different Expression records

This Manifestation has more than one Work. Besides Concerto no. 20, there is Concerto no. 12 the Rondo, K.382
Music Analytics

Notice the three 004 tags in this Manifestation record indicating that this record is linked to three different Expression records.

Music Analytics

Search for and Select the Rondos, K.382
Music Analytics

FRBR Circulation Requests
Circulation Requests

- With a traditional system when you had multiple editions of a particular title (Work) you had to place individual requests on each edition (Manifestation).

- With a FRBR system, you only have to place a request at the Work or Expression level, and ANY item of ANY Manifestation will satisfy the request.
Circulation Requests

The Work Record for Action and Passion

The Expression record with the tree Expanded to show multiple Manifestations. You do not care which Manifestation you read. You just want one.

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Circulation Requests

The Manifestations in the next few examples show that items exist in different locations. This location is the Main Library.

This location is the Mann Library.
## Circulation Requests

### This copy is in Green Valley

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Location</th>
<th>Status</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>--------------</td>
<td>----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>Green Valley</td>
<td>Available</td>
<td>20300904</td>
<td></td>
</tr>
</tbody>
</table>

### This Manifestation has two copies: One each in the Main and Law Libraries.

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Location</th>
<th>Status</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Library</td>
<td>Available</td>
<td>20300906</td>
<td></td>
</tr>
<tr>
<td>Law Library</td>
<td>Available</td>
<td>20300906</td>
<td></td>
</tr>
</tbody>
</table>
Circulation Requests

Instead of placing a Bib level request at each Manifestation request, place the request on the Expression.

The Request “wizard” is invoked by clicking on the “Add” button.
Circulation Requests

Once the request is made, the next time a qualifying item is encountered, it will be trapped. In this example, an item is being discharged from circulation.

The Circulation module responds to the Check-in with a message that the item has a request on it.

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Circulation Requests

The Check-in window displays the items that have been checked in and their status.

To verify that this is the right item (in our FRBR request example) we can either search for Action and Passion or right click and select to view the item record.
Circulation Requests

The trapped item is for the title Action and Passion.

We can look at the FRBR bibliographic information by right clicking and selecting Bibliographic Record.
Circulation Requests

The FBBR tree for Action and Passion with the Manifestation of the trapped item