

FRBRized discovery and cataloging

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MLA 2010 Annual Meeting

March 23, 2010

San Diego, CA

What if a catalog could answer questions like...

- Which recordings can I listen to with Vladimir Ashkenazy as a conductor, rather than a pianist?
- How scores of Chopin's E major etude Op. 10 No. 3 can I compare?
- Who was playing bass with Benny Goodman on this particular take?
- What pieces can I as a cellist perform with my friend the soprano? Or my other friend the violinist?
- And even...
 - What works were composed by women in Vienna in the 18th century?
 - What recordings do you have with other people singing songs that Bob Dylan wrote?

Can the catalog become a *research* tool rather than just a *finding* tool?



LIBRARIES

INDIANA UNIVERSITY

Bloomington

IU WorldCat

beethoven piano sonata

Libraries to search Indiana University libraries in Bloomington[Advanced Search](#)

WorldCat's FRBRization – it's a start.

Search results for '[beethoven piano sonata](#)' > '[Sound Recording](#)' limited to **Indiana University libraries in Bloomington**

Refine Your Search

Author

[Ludwig Van Beethoven](#)
(116)

[Johann Sebastian ...](#) (9)

[Janos Starker](#) (8)

[Wolfgang Amadeus ...](#) (7)

[Fritz Magg](#) (6)

[Show more ...](#)

Format

[All Formats](#)

Sound Recording

[Cassette recording](#)
(154)

[LP recording](#) (146)

[CD audio](#) (134)

Year

[1999](#) (40)

[1990](#) (39)

[1989](#) (36)

[1988](#) (36)

[1981](#) (35)

[Show more ...](#)

Language

Results **1-10** of about **922** (.44 seconds)

[Select All](#) [Clear All](#)

Save to: [New List]

- | | | | |
|--------------------------|----|--|---|
| <input type="checkbox"/> | 1. | | <p>Piano sonata, no. 3, op. 2, no. 3 <input checked="" type="checkbox"/></p> <p>by Ludwig van Beethoven; Artur Rubinstein; Franz Schubert <input checked="" type="checkbox"/></p> <p> Musical CD : Sonatas</p> <p>Language: No Linguistic Content</p> <p>Publisher: New York : RCA Red Seal, 1999. <input checked="" type="checkbox"/></p> <p>Database: WorldCat.org</p> <p>Libraries that own this item: Indiana University libraries in Bloomington</p> <p>View all editions and formats <input checked="" type="checkbox"/></p> |
| <input type="checkbox"/> | 2. | | <p>Sonata no. 26, op. 81a (Les adieux)</p> <p>by Ludwig van Beethoven; Van Cliburn; Wolfgang Amadeus Mozart</p> <p> Musical LP : Sonatas</p> <p>Language: No Linguistic Content</p> <p>Publisher: New York : RCA Victor, ©1966.</p> <p>Database: WorldCat.org</p> <p>Libraries that own this item: Indiana University libraries in Bloomington</p> <p>View all editions and formats</p> |
| <input type="checkbox"/> | 3. | | <p>Sonata no. 8 in G major, op. 30, no. 3</p> <p>by Ludwig van Beethoven; Henryk Szeryng; Artur Rubinstein; Johannes Brahms</p> <p> Musical LP : Sonatas</p> |

Variations/FRBR project

- Funded by an Institute of Museum and Library Services National Leadership Grant
 - October 1, 2008 - September 30, 2011
 - Staff from IU Digital Library Program, Music Library, and Technical Services contributing
- In “Demonstration” category
 - Primary mission: provide a model for other FRBRized catalogs
 - Secondary mission: provide a useful and sustainable discovery system for music at IU

First goal: *FRBRize* Variations

- Provide a public and concrete testbed for FRBR
 - with real data
 - in a production environment
 - as a response to the call in the LC WG on the Future of Bibliographic Control report
- Follow through on long-standing vision for improved Variations searching
- Provide a sustainable path for Variations metadata outside of our local catalog

Other project goals

- To provide an openly-accessible web search interface to the FRBRized data in Variations, for community analysis;
- To make supporting data, including data model documentation and FRBRized data, available to the community for analysis; and
- To apply innovative, evidence-based interface design techniques to Variations cataloging and search interfaces to make the most of the FRBR-compliant data model.

Search system - early decisions

- Sometimes users want Works, sometimes Manifestations
- Give results right away with easy mechanisms to refine
- Starting with only recordings to reduce complexity
- This is a VERY early working version - lots of things to overlook or imagine!

IU MUsic SEarch ← Ignore that**Search**

Creator/Composer:

bach

Work Title:

sonatas

Performer/Conductor:

Recording/Score Title:

Media Format:
recording selected]]

[[Need recording and score radio buttons here with

 Online Only↑ And
that**Information**

Lorem...

← And that

IU Music Search

bach as creator/composer AND sonatas as work title.

Browse Results By:

People

Bach, Johann Sebastian (170)
 Bach, Carl Philipp Emanuel (46)
 Bach, Wilhelm Friedemann (6)
 Magg, Fritz (5)
 Pank, Siegfried (4)
 Bach, Johann Christian (4)

More

Instrumentation

harpsichord (114)
 continuo (67)
 flute (66)
 viola da gamba (60)
 violin (44)
 organ (31)

More

228 works matching bach as creator/composer AND sonatas as work title.

1. Sonatas, op. 18. No. 5-6 Bach, Johann Christian

← Sort by # of hits?
 Alphabetically?
 Something else?

← Ignore that

Christian

6 Bach, Johann Christian

4. Sonatas, flute, H. 562, A minor Bach, Carl Philipp Emanuel

Show

5. Sonatas, flute, H. 562, A minor Bach, Carl Philipp Emanuel

Show

Show

105 results for bach as creator/composer

1. Sonatas for piano forte or harpsichord, op. 5 Johann C

Contents: Sonatas, keyboard instrument, W. A 1-6

People: Bach, Johann Christian

Access: IUCAT Record

Faculty recital music of J.S. Bach. [sound recording] :

Contents: Trio sonatas, violins, continuo, BWV 1036, D minor; Trio sonatas, violins, continuo, BWV 1037, C major

People: Bach, Johann Sebastian; Bach, Johann Sebastian

Access: Variations Access: IUCAT Record

3. Sonaten für Glöte [sic] und Generalbass Wq 134, 124, 127, 129, 128, 133 Sonatas for flute and continuo

Contents: Sonatas, flute, continuo, H. 564, G major

People: Bach, Carl Philipp Emanuel

Access: IUCAT Record

4. Trio sonatas C.P.E. Bach. sound recording

Contents: Trio sonatas, flute, violin, continuo, H. 567-571

People: Bach, Carl Philipp Emanuel

↑ Which facets
 to include?

What details to
 display here? ↓

IU Music Search

bach as creator/composer AND sonatas as work title.

Browse Results By:

People

Remove Bach, Johann Sebastian

170 works matching bach as creator/composer AND sonatas as work title.

1. Sonatas, violin, harpsichord, BWV 1014-1019, Bach, Johann Sebastian
[Show](#)
2. Sonatas, violin, harpsichord, BWV 1014-1019, Bach, Johann Sebastian
[Show](#)
3. Sonatas, violin, harpsichord, BWV 1014-1019, Bach, Johann Sebastian
[Show](#)
4. Sonatas, violin, harpsichord, BWV 1014-1019, Bach, Johann Sebastian
[Show](#)
5. Sonatas, violin, op. 31, no. 2, Bach, Johann Sebastian
[Show](#)

90 results for bach as creator/composer

1. Trio sonatas, BWV 1038, 1039 & 1079 J.S. Bach. [sound recording]
Contents: Trio sonatas, flutes, continuo, BWV 1039, G major; Musikalisches Opfer
People: Bach, Johann Sebastian; Bach, Johann Sebastian
Access: IUCAT Record
2. Sonates en trio Johann Sebastian Bach. [sound recording]
Contents: Trio sonatas, flutes, continuo, BWV 1039, G major; Trio sonatas, violins, continuo, BWV 1037, C major; Trio sonatas, flutes, continuo, BWV 1039, G major; Musikalisches Opfer
People: Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian
Access: IUCAT Record
3. Works for organ. Leipzig mastery
Contents: Choräle von verschiedener Art, BWV 651-668; Einige canonische Veränderungen; Sonatas, organ, BWV 528, E minor; Präludium und Fuge, organ, BWV 544, B minor; Sonatas, organ, BWV 529, C major; Präludium und Fuge, organ, BWV 548, E minor
People: Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian
Access: IUCAT Record
4. Italian concerto : BWV 971 ; French ouverture : BWV 831 ; Sonata, D minor, BWV 964 ; Adagio, G major, BWV 968 Johann Sebastian Bach. [sound recording]
Contents: Italienisches Konzert; Französische Ouvertüre, B minor; Sonatas, harpsichord, BWV 964, D minor; Adagios, harpsichord, BWV 968, G major
People: Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian
Access: IUCAT Record
5. Ruggiero Ricci [sound recording]
Contents: Sonaten und Partiten, violin, BWV 1001-1006, no. 3; Sonaten und Partiten, violin, BWV 1001-1006, no. 3; Sonaten und Partiten, violin, BWV 1001-1006, no. 3; Sonaten und Partiten, violin, BWV 1001-1006, no. 3; Sonatas, violin, op. 31, no. 2
People: Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian; Bach, Johann Sebastian
Access: IUCAT Record
6. 6 trio sonatas, BWV 525-530 Johann Sebastian Bach. [sound recording]
Contents: Sonatas, organ, BWV 528, E minor
People: Bach, Johann Sebastian

Metadata creation

- Remember, this is a model for moving forward to next-generation catalogs
- Our workflow:
 - FRBRize MARC as best we can; (multi-)work identification is most important part and nobody has done this well
 - Enhance (as necessary, and with appropriate priorities) the imported records
- Good FRBR-aware metadata creation interfaces will be necessary in the future as the data becomes more FRBRized
- Good algorithms to pull FRBR data from MARC will also be necessary
- Strong need for statistics on time/\$ to upgrade and create new records

What should a FRBRized metadata creation interface look like?

- Hide the complexity of the model whenever possible
 - New Manifestation -> New Expression -> New Work not three separate actions
 - Easy to apply the same performer, etc to a bunch of Expressions on the same Manifestation
- Don't assume 1 entity = 1 window or 1 form
- Make it easy to find entities that already exist in the system
- Automatically get metadata from as many sources as possible
- Fair warning: we haven't actually built this yet

IU Header

*v/frbr-ct***EDIT Item (/Container)** [\[show all fields\]](#)

Record Number: ABC123456

Record Status: STATUS ▼

Title/Description [\[hide\]](#)

Title: Oklahoma! [sound recording] : original cast album.

Type: Sound Recording ▼ [\[other titles...\] \(0\)](#) [\[series titles\] \(0\)](#)**Publication Information** [\[hide\]](#)

Publisher: Decca Broadway

Edition:

Description: 1 sound disc : digital; 4 3/4 in.

Format: CD ▼ [\[Publisher/Plate Numbers...\] \(1\)](#) [\[Languages...\] \(0\)](#)

Date of Copyright: 2000

Date of Publication: 1943, 1945; 2000

Place of Publication: New York, NY

Contributors [\[show\]](#)**Structure** [\[show\]](#)[\[delete\]](#)[\[ok\]](#) [\[cancel\]](#)

Contributors [\[hide\]](#)

1. Andie McKaie (1973-). Producer/Reissuer [\[edit contribution\]](#) [\[remove\]](#)
2. Ron O'Brien (1940-2008). Producer. [\[edit contribution\]](#) [\[remove\]](#)
[\[add contributor\]](#)

*

Contributors [\[hide\]](#)

1. Andie McKaie (1973-). Producer/Reissuer [\[edit contribution\]](#) [\[remove\]](#)
2. Ron O'Brien (1940-2008). Producer. [\[edit contribution\]](#) [\[remove\]](#)

[\[link\]](#) [\[link\]](#) [\[link\]](#) [\[link\]](#) [\[link\]](#)Name: [\[create new\]](#) [\[new search\]](#) [\[search\]](#)

*

Contributors [\[hide\]](#)[\[Variations \(1\)\]](#) [\[IUCAT\(0\)\]](#) [\[MusicBrains \(1\)\]](#) [\[...\]](#)Name: [\[create new\]](#) [\[new search\]](#) [\[search\]](#)**Variations (1)**[hide](#) | [zoom](#)

1. [Preno, Max \(1957-\)](#)

[\[link\]](#)**IUCAT (0)**[hide](#) | [zoom](#)**MusicBrainz (1)**[hide](#) | [zoom](#)

1. [Preno, Max \(1957-\)](#)

[\[import & link\]](#)

*

IU Header

*v/frbr-ct***EDIT Item (/Container)** [\[show all fields\]](#)

Record Number: ABC123456

Record Status: STATUS ▼

Title/Description [\[hide\]](#)

Title: Oklahoma! [sound recording] : original cast album.

Type: Sound Recording ▼ [\[other titles...\] \(0\)](#) [\[series titles\] \(0\)](#)**Publication Information** [\[show\]](#)**Contributors** [\[hide\]](#)

1. [Andie McKaie](#) (1973-).
 2. [Ron O'Brien](#) (1940-2008).
 3. [Max Preedo](#) (1957-).
- [\[add another contributor\]](#)

Role: Producer ▼

Role: Producer ▼

Role: Producer ▼

*

Structure [\[show\]](#)[\[delete\]](#)[\[ok\]](#) [\[cancel\]](#)

Contents [\[hide\]](#)

- 1. Expression #1 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)
- 2. Expression #2 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)
- 3. Expression #3 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)

//Work Data//

Work Title:

Composer:

Date of Composition:

Resource

- [Variations](#) [n]
- [IUCAT](#) [n]
- [MusicBrainz](#) [n]
- [Other Resource](#) [n]
- ...

Composer

- [Composer1](#) (Dates)
- [Composer2](#) (Dates)
- [Composer3](#) (Dates)

Date of Composition

- [Before X](#)
- [X+0Y's](#)
- [X+1Y's](#)
- [X+2Y's](#)
- [X+3Y's](#)
- [X+4Y's](#)
- [Since X+5Y](#)

Language

- [English](#)
- [German](#)
- [Urdu](#)

Instrumentation

- [Cello](#)
- [Spoons](#)
- [Kazoo](#)
- [*](#)

Variations (5)

[hide](#) | [zoom](#)

- 1. [Work Title](#). [Composer](#) (Dates). [\[select\]](#)
- 2. [Work Title](#). [Composer](#) (Dates). [\[select\]](#)
- 3. [Work Title](#). [Composer](#) (Dates). [\[select\]](#)
- 4. [Work Title](#). [Composer](#) (Dates). [\[select\]](#)
- 5. [Work Title](#). [Composer](#) (Dates). [\[select\]](#)

IUCAT (7)

[hide](#) | [zoom](#)

- 1. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 2. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 3. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 4. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 5. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 6. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)

MusicBrainz (6)

[hide](#) | [zoom](#)

- 1. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 2. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 3. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 4. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 5. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)
- 6. [Work Title](#). [Composer](#) (Dates). [\[import & select\]](#)

//Expression Data//

Contents [\[hide\]](#)

1. Expression #1 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)
2. Expression #2 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)
3. Expression #3 Title. [Other...] [\[view/edit\]](#) [\[copy\]](#) [\[remove\]](#)

▼ **//Work Data//**Work Title: Composer: Date of Composition: ▼ **//Expression Data//**Performance Date: Performance Place: Instrumentation: Genre: [\[add new\]](#)Languages: [\[add new\]](#)Contributors: [\[add new\]](#)Notes: [\[add new\]](#)Notation (Scores): Copyright Decl.: [\[create new work\]](#)[\[new search\]](#) [\[search\]](#)

IU Header

Variations

Song/Work

Recording/Score

Person/Group

Other metadata creation use cases

- Clean up batch loaded data
- Systematically enhance a set of Person, Work, etc. records
- Probably many more!

What next?

- Obviously we still have a long way to go
- Release search system to end-users and music library staff
- Start programming work on cataloging interface
- FRBRized XML Schema release
- Stay tuned – we'll need your help!

For more information

- These presentation slides:
<http://www.dlib.indiana.edu/~jenrile/presentations/mla2010/frbr/rileyFRBR.pptx>
- Project home page: <http://www.dlib.indiana.edu/project/vfrbr>
- Subscribe to project RSS feed
- I'm here and love to talk about this stuff.
jenrile@indiana.edu