



## FRBRIZING EXISTING MARC RECORDS AT EXPRESSION AND MANIFESTATION LEVELS

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## PRESENTATION OUTLINE

### FRBRization

1. Work Level
2. Beyond Work Level
  - Expression Level
  - Manifestation Level
3. Issues and Challenges

## 1. FRBRIZATION AT WORK LEVEL

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## WORK-LEVEL FRBRIZATION PROCEDURE

- The FRBRization procedures for identifying and grouping works for our project are based on the OCLC FRBR work-set algorithm (Hickey & Toves, 2005).
  - The original source of the algorithm is:
    - Hickey, T. B., & Toves, J. (2005). *FRBR Work-Set Algorithm*. Available at:  
<http://www.oclc.org/research/software/frbr/default.htm>
  - Based on several rounds of evaluations, the KSU FRBR team has added to and refined some of the algorithm's steps.

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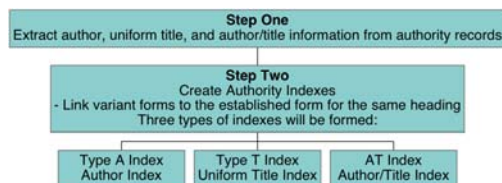
## THE COLLECTION

- For this experiment, the collection used was extracted from WorldCat for LoC records at the end of December 2007.
- This collection includes:
  - **13,624,251** bibliographic records
  - **7,283,635** authority records

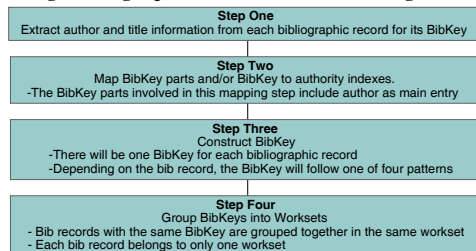
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## OVERALL IMPLEMENTATION PROCEDURES

- The OCLC work-set algorithm essentially covers two major processes:
  - Processing Authority Records



- Processing Bibliographic Records and Creating Work-sets



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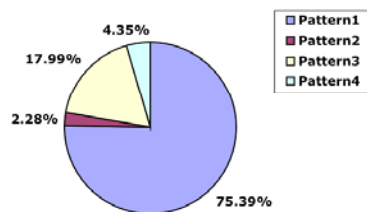
## THE BIBKEY PATTERNS

○ There are four basic BibKey Patterns:

- Pattern 1: <author>/<title>
- Pattern 2: <uniform title>
- Pattern 3: <title>/<name(s)>
- Pattern 4: <title>/<control number>

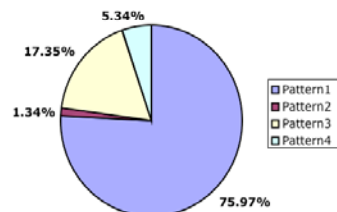
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## THE LoC COLLECTION: BIBLIOGRAPHIC RECORDS BY PATTERN



Pattern	BibKey Count	Percent
Pattern 1	10,271,186	75.39%
Pattern 2	310,259	2.28%
Pattern 3	2,450,668	17.99%
Pattern 4	592,138	4.35%
Total	13,624,251	100.00%

Note that the KSU LoC BibKey pattern distribution is similar to the one reported in the 2005 OCLC Work-set Algorithm paper, shown below.



Pattern	BibKey Count	Percent
Pattern 1	41,654,567	75.97%
Pattern 2	736,020	1.34%
Pattern 3	9,513,007	17.35%
Pattern 4	2,927,095	5.34%
Total	54,830,689	100.00%

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## LoC WORK-SETS BY PATTERN

Pattern	Overall		Single-record workset		
	Count	Percent	Count	Percent within pattern	Percent of total worksets
Pattern 1	8,477,369	73.21%	7,424,329	87.58%	64.12%
Pattern 2	242,713	2.10%	221,975	91.46%	1.92%
Pattern 3	2,267,440	19.58%	2,125,564	93.74%	18.36%
Pattern 4	592,138	5.11%	592,138	100.00%	5.11%
Total	11,579,660	100.00%	10,364,006	n/a	89.50%

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## 2. FRBRIZATION BEYOND WORK LEVEL

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## WORK-SET SAMPLE FOR FURTHER FRBRIZATION

- From the multiple-record work-sets, we selected those that contained at least 10 records to explore FRBRization at the expression and manifestation levels
- Sample size:
  - **12,579** work-sets (1% of the multiple-record work-sets)
  - **273,866** records (2% of the entire LoC collection bib records)

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## PREVIOUS WORK AND BASIS

- Mapping and importance ratings of attributes and MARC fields on user tasks:
  - Functional Analysis of the MARC 21 Bibliographic and Holdings Formats by Network Development and MARC Standards Office, Library of Congress
  - IFLA FRBR Report, Tables 6.1-6.4
  - KSU FRBR project evaluation based on cataloging standards & practice
- MARC records analysis
- FRBR work-set analysis

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## BACKGROUND PROCESS FOR ALGORITHM DEVELOPMENT

- Mapping FRBR attributes to MARC codes
- Mapping User Tasks to Attributes & Relationships & MARC codes
  - Analysis is based on FRBR User Tasks (e.g. the LoC “search” was mapped to FRBR “find”)
- Evaluation of the importance of each attribute/MARC mapping in finding, identifying or selecting Group 1 entities with a focus on Expression & Manifestation
  - Evaluation & rating scale based on:
    - FRBR evaluation of Attributes & Relationships – primary rating
    - LoC analysis of MARC fields, mapping to FRBR attributes & relationships and value of importance – secondary rating
    - KSU FRBR project evaluation based on standards & practice

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## 2.1. FRBRIZATION AT EXPRESSION LEVEL

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## EXPRESSION LEVEL FRBRIZATION – ATTRIBUTES (1)

### ○ EA1: Form of expression

Defined based on the values in Leader/06 and Leader/07:

1. Book
2. Collection
3. Continually updated resource
4. Electronic resource
5. Kit
6. Manuscript
7. Map
8. Mixed materials
9. Music score
10. Musical sound recording
11. Nonmusical sound recording
12. Object
13. Serial
14. Visual material

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## EXPRESSION LEVEL FRBRIZATION – ATTRIBUTES (2)

### ○ EA2: Language of expression

- 008/35-37 for language code
- 041 \$a for language code
- Form a language array

### ○ EA3: Music – Arranged statement for music

- 130 \$o
- 240 \$o

If data contains “arr” “arranged” or “arrangement”, the attribute value is “Arranged”

### ○ EA4: Music – Type of score

For music scores, find type of score in 008/20 in coded data:

- |  |                              |
|--|------------------------------|
| a - Full score                               | h - Chorus score             |
| b - Full score, miniature or study size      | i - Condensed score          |
| c - Accompaniment reduced for keyboard       | j - Performer-conductor part |
| d - Voice score                              | m - Multiple score formats   |
| e - Condensed score or piano-conductor score | n - Not applicable           |
| g - Close score                              | u - Unknown                  |

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## EXPRESSION LEVEL FRBRIZATION – ATTRIBUTES (3)

### EA5: Serials - Extended frequency of issue

For serials, extract frequency from 008/18, and 008/19

### EA6: Cartographic – Scale

For maps, extract data in 034 \$b

### EA7: Cartographic - Projection

For maps, use 255 \$b for display description, not for grouping.

18 - Frequency	19 - Regularity
# - No determinable frequency	n - Normalized irregular
a - Annual	r - Regular
b - Bimonthly	u - Unknown
c - Semiweekly	x - Completely irregular
d - Daily	- No attempt to code
e - Biweekly	
f - Semiannual	
g - Biennial	
h - Triennial	
i - Three times a week	
j - Three times a month	
k - Continuously updated	
m - Monthly	
q - Quarterly	
s - Semimonthly	
t - Three times a year	
u - Unknown	
w - Weekly	
z - Other	
- No attempt to code	

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## EXPRESSIONS PER WORK-SET DISTRIBUTION

### Expression

- The merged expression string (EA1-6) for each record serves as a basis for evaluating how many different expressions are in a work.
- Individual forms of expression and language elements serve as a basis for display.

Expressions-per-workset	Number of worksets	%	Cumulative %
1	3,794	30.2%	30.2%
2	2,918	23.2%	53.4%
3	1,480	11.8%	65.1%
4	1,227	9.8%	74.9%
5	927	7.4%	82.2%
6	610	4.8%	87.1%
7	423	3.4%	90.5%
8	302	2.4%	92.9%
9	225	1.8%	94.6%
10	154	1.2%	95.9%
11	103	0.8%	96.7%
12	74	0.6%	97.3%
13	56	0.4%	97.7%
14	48	0.4%	98.1%
15	35	0.3%	98.4%
16	37	0.3%	98.7%
17	31	0.2%	98.9%
18	21	0.2%	99.1%
19	20	0.2%	99.3%
20	17	0.1%	99.4%
>=21	77	0.6%	100.0%
Total	12,579	100.0%	

Overall distribution in the sample

Minimum	Maximum	Average
1	276	3.64

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## FORMS OF EXPRESSION PER WORK-SET DISTRIBUTION

Forms-per-work-set	Number of work-sets	%
1	7,972	63.4%
2	3,915	31.1%
3	652	5.2%
4	35	0.3%
5	4	0.0%
6	1	0.0%
<b>Total</b>	<b>12,579</b>	<b>100%</b>

Overall distribution in the sample

Minimum	Maximum	Average
1	6	1.42

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## LANGUAGE EXPRESSIONS PER WORK-SET DISTRIBUTION

Varied Language Es per-work-set	Number of work-sets	%	Cumulative %
1	6,202	49.3%	49.3%
2	2,101	16.7%	66.0%
3	1,272	10.1%	76.1%
4	886	7.0%	83.2%
5	592	4.7%	87.9%
6	399	3.2%	91.0%
7	273	2.2%	93.2%
8	219	1.7%	95.0%
9	141	1.1%	96.1%
10	103	0.8%	96.9%
11	80	0.6%	97.5%
12	59	0.5%	98.0%
13	43	0.3%	98.3%
14	31	0.2%	98.6%
15	30	0.2%	98.8%
16	20	0.2%	99.0%
17	27	0.2%	99.2%
18	13	0.1%	99.3%
19	21	0.2%	99.5%
>=20	67	0.5%	100.0%
<b>Total</b>	<b>12,579</b>	<b>100.0%</b>	

Overall distribution in the sample

Minimum	Maximum	Average
1	261	2.91

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## 2.2. FRBRIZATION AT MANIFESTATION LEVEL

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## MANIFESTATION LEVEL FRBRIZATION - ATTRIBUTES

- **Manifestation:**
  - Identifier
  - Manifestation title
  - Form of carrier
  - Series statements
  - Statement of reasonability
  - Serials – Numbering
  - Edition/issue designation
  - Date of publication/distribution
  - Publisher/distributor
  - Visual material – Presentation format
  - Microform – Reduction ration
  - Microform/projection – Generation
  - Microform/projection – Polarity
  - Extent of carrier
  - Image – Color
  - Physical medium
  - Dimensions of carrier
  - Capture mode
  - Electronic resources – System requirements
  - Electronic resources – File characteristics
  - Electronic resources – Mode of access

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## MANIFESTATIONS PER EXPRESSION DISTRIBUTION

Number of Ms in an E	Frequency	%	Cumulative %
1	20,496	44.8%	44.8%
2	5,915	12.9%	57.7%
3	2,890	6.3%	64.0%
4	1,865	4.1%	68.1%
5	1,337	2.9%	71.0%
6	1,111	2.4%	73.4%
7	962	2.1%	75.5%
8	996	2.2%	77.7%
9	1,090	2.4%	80.1%
10	1,872	4.1%	84.2%
11	1,326	2.9%	87.1%
12	1,007	2.2%	89.3%
13	717	1.6%	90.8%
14	556	1.2%	92.1%
15	439	1.0%	93.0%
16	359	0.8%	93.8%
17	307	0.7%	94.5%
18	249	0.5%	95.0%
>=19	2,281	5.0%	100.0%
<b>Total</b>	<b>45,775</b>	<b>100%</b>	

Overall distribution in the sample

Minimum	Maximum	Average
1	3,395	6.0

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## 3. FRBRIZATION ISSUES AND CHALLENGES

1. Algorithm related
2. Legacy data, current cataloging practices and standards related
3. Display related

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### 3.1 ALGORITHM RELATED CHALLENGES

- Existing work-set algorithm decisions & modifications undocumented
- Relationships have not been explored; limited to attributes
- Algorithm basis: each bib record can belong to only one work-set:  
Bib record  $\longleftrightarrow$  Work-set
- Source of data
  - Coded data vs. free text. E.g.,  
008 vs. 041 vs. 240 \$l  
008 vs. 260 \$c
- Processing titles for works
  - Trailing “English”, “Tragedy of” and “Comedy of” in titles
  - Partial matching
- Other titles not used in mappings of works
  - E.g. 730, 740, 7xx \$t
- Work identifiers

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### 3.1 ALGORITHM RELATED CHALLENGES

(CONT.)

- Non-mapped and mis-mapped FRBR elements to existing data. E.g.,
  - *form* and *context* of work, *title* of expression
  - Edition (250 field)
    - *Edition* of manifestation
    - *Other distinguishing characteristic* of expression
- Additional FRBR elements applying only to special types of materials – one complex algorithm or multiple algorithms
- Definition of an expression
  - *Form* or *language*
  - *Form* + *language*
  - *Form* + *language* + *special material characteristics* (*scale, frequency, etc.*)

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### 3.1 ALGORITHM RELATED CHALLENGES

(CONT.)

#### ○ Processing *form* of expression

- Leader 06 & 07 combinations; groups vs. all. E.g.,

Leader06	Leader07	Leader-06.meaning	Leader-07.meaning
o	a	Kit	Monographic component part
o	b	Kit	Serial component part
o	c	Kit	Collection
o	d	Kit	Subunit
o	i	Kit	Integrating resource
o	m	Kit	Monograph/Item
o	s	Kit	Serial

#### ○ Processing *language* of expression

- Source: 008 vs. 041 vs. 240 \$1
- Multiple languages: treat each as a separate expression or as one?

bibslID	worksetID	leader06	leader07	language
3751493	13952	a	m	lat heb grc syr sam ara arc gez pal

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### 3.1 ALGORITHM RELATED CHALLENGES

(CONT.)

#### ○ Processing Manifestations

- The work-set algorithm cannot recognize duplicate records, and therefore duplicates are considered separate manifestations
- Assumption that each current bib record describes one manifestation
- No further processing for grouping by “manifestation” set
- Current record fields are all used as manifestation information

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### 3.2 LEGACY DATA RELATED CHALLENGES

- Typos and coding problems
- Multiple identifiers
- Missing important elements
  - 240s in AT pattern
  - 130s in bibliographic records
  - Incorrect or missing language indication
  - Missing, incomplete, incorrect 041s for translated works
  - Relator codes or other “relationships”
- Current cataloging practice
  - Collocating uniform titles
    - Musical works and other Genre headings
    - Selections, Works, etc.
  - Inconsistent use of uniform titles, e.g., TV and radio programs

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

#### ○ FRBR displays – WEM

Using the hierarchy of Group 1 as basis:

- **W**ork level display of results and refinement
  - Author search
  - Title search
  - Subject search
- **E**xpression level display of results and refinement
  - Form as primary, language as secondary
  - Language as primary, form as secondary
- **M**anifestation display and refinement

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

- FRBR displays – WEM

Using: Kent State FRBR Catalog Prototype

Search results for author 'wolf, hugo' = 144 results (What do these results mean?)

**Refine search**

**Limit to**  
Currently available (1)  
All items (2)

**Authors**  
Wolf, Hugo, 1860-1903... (7)

**Wolf, Hugo, 1860-1903.**

**Eichendorff lieder by Wolf, Hugo,**  
10 results

**Type of materials**  
Music score (8)  
Music sound recording (2)  
>>See all

**Language**  
English (8)  
German (10)  
>>See all

**Goethe lieder by Wolf, Hugo,**  
16 results

**Type of materials**  
Music sound recording (13)  
Music score (3)  
>>See all

**Language**  
German (15)  
No linguistic content (1)  
>>See all

**Italienische serenade by Wolf, Hugo,**  
10 results

**Type of materials**  
Music sound recording (8)  
Music score (2)  
>>See all

**Language**  
No linguistic content (10)

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

- FRBR displays – WEM

Using: Kent State FRBR Catalog Prototype

Search results for title "trials" = 233 results (What do these results mean?)

**Refine search**

**Limit to**  
Currently available (1)  
All items (2)

**Authors**  
Butler, Francis, (1)  
Cervantes Saavedra, ... (1)  
Chandler, Peleg W. (1)  
Cicero, Marcus Tullius... (1)  
Gregory, John, (1)  
Mather, Cotton, (1)  
Muir, Thomas, (1)  
Spee, Friedrich von, ... (1)  
Wilde, Oscar, (1)

**Account of the trial of thomas muir esq younger of huntershill by Muir, Thomas, 1765-1798.**  
(Contains title trials)  
12 results

**Type of materials**  
Book (12)

**Language**  
English (12)

**American criminal trials by Chandler, Peleg W. 1816-1888.**  
10 results

**Type of materials**  
Book (10)

**Language**  
English (10)

**Cautio criminalis by Spee, Friedrich von, 1501-1635.**  
(Contains title trials)  
10 results

**Type of materials**  
Book (10)

**Language**  
English (1)  
German (8)  
Latin (5)  
>>See all

**Fathers legacy to his daughters by Gregory, John, 1724-1773.**  
(Contains title trials)  
32 results

**Type of materials**  
Book (32)

**Language**  
English (31)  
Russian (1)

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

- FRBR displays – WEM

Using

The screenshot displays the 'Kent State FRBR Catalog Prototype' interface. At the top, a search bar shows 'Author' and a 'Search catalog' button. Below the search bar, the text 'Search results for subject "solar system" » 42 results (What do these results mean?)' is visible, with 'solar system' circled in red. To the left, a 'Refine search' sidebar includes sections for 'Limit to' (Currently available (1), All items (2)), 'Authors' (Copernicus, Nicolaus... (1), Galilei, Galileo, (2)), and 'Language' (English (8), Italian (6), Latin (9)). The main content area shows three result groups: 1. 'Dialogo dei massimi sistemi by Galilei, Galileo, 1564-1642.' with 12 results, showing 'Type of materials' as 'Book (12)' and 'Language' as 'English (6), Italian (6)'. 2. 'Revolutionibus orbium caelestium by Copernicus, Nicolaus, 1473-1543.' with 20 results, showing 'Type of materials' as 'Book (20)' and 'Language' as 'English (8), Latin (9)'. 3. 'Solar system -- Early works to 1800' with 10 results, showing 'Type of materials' as 'Book (10)' and 'Language' as 'English (8), Italian (2), German (1), and/or see all'. Each result group has a 'Select a language' button and a '>>See all' link. A red circle highlights the 'Solar system' subject heading in the first result group.

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

- FRBR displays – WEM

Using the hierarchy of Group 1 as basis:

- Work level display of results and refinement
  - Author search
  - Title search
  - Subject search
- Expression level display of results and refinement
  - Form as primary, language as secondary
  - Language as primary, form as secondary
- Manifestation display and refinement

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

#### FRBR displays – WEM

Using

W

E

M

Kent State FRBR Catalog Prototype

Search for Author 'wolf, hugo' = 'Italienisches Liederbuch'

Author: 1 Search catalog

Refine search

Limit to

Currently available (1)

All items (2)

Authors

Allen, Thomas, 1944- (1)

Arnold, Ely (3)

Balwin, Dalton (3)

Barenboim, Daniel, 1... (2)

Barger, Ema, 1900-1... (2)

See more

Languages

German (23)

English (2)

Types of materials

Music sound recording... (21)

Music score (2)

Series

Songs (2)

Celebrity series (1)

Publication Dates

1991 (1)

1985 (1)

1982 (1)

1979 (2)

1978 (1)

See more

Topics

Songs (high voice) w... (16)

Songs (Medium voice) ... (11)

Hayes, Paul, (8)

See more

Types of material: Select a Material: 1

Language: Select a language: 1

English (2)

Music score (2)

Songs on Italian lyrics by Hayes and Gabel : for voice and piano : German and English texts : Original key / [English translation by Lily Henkel] ; [Collective title: Italienisches Liederbuch] ; New York : International Music Co., [1948]

Songs on Italian lyrics by Hayes and Gabel : for voice and piano (German and English texts) / Hugo Wolf ; [English translation by Lily Henkel] ; [Collective title: Italienisches Liederbuch] ; Original key ; New York : International Music Co., c1948

German (23)

Music sound recording (21)

Aus dem Italienischen Liederbuch / Hugo Wolf ; [text von] Paul Hayes ; [Collective title: Italienisches Liederbuch] ; [Netherlands] : Philips, p1968

Aus dem Italienischen Liederbuch (nach Paul Hayes). Zwei Motette-Lieder : Mausfallen-Sprüchlein [und] Nimmermüde Liebe ; [Collective title: Italienisches Liederbuch]

From "The Italian song book" / Hugo Wolf ; [texts by] Hayes ; [Collective title: Italienisches Liederbuch] ; [United States?] : Angel, [1961]

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

#### FRBR displays – WEM

Using

W

Ex

M

Search for Title 'Turco in italia' = 'Turco in italia'

Types of material: Select a Material: 1

Language: Select a language: 1

Refine search

Limit to

Currently available (1)

All items (2)

Authors

Addison, Adele (2)

Alaimo, Simone (1)

Andreoli, Florindo... (1)

Angelos Peters, Mari... (1)

Angeloni, Kalia (1)

See more

Languages

Italian (11)

English (4)

Types of materials

Music sound recording... (8)

Music score (5)

Book (2)

Series

Libretti d'opera (M... (1)

Records: opera vocal ... (1)

Works (1)

Publication Dates

2000 (1)

1988 (1)

1988 (1)

1987 (1)

1985 (1)

See more

Topics

Operas (8)

Operas (5)

Music (1)

Places

Music sound recording (6)

English (3)

The Turk in Italy / Gioacchino Rossini ; [Collective title: Turco in Italia] ; 1877

The Turk in Italy / Gioacchino Rossini ; [Collective title: Turco in Italia] ; - 1948

The Turk in Italy / Gioacchino Rossini ; [Collective title: Turco in Italia] ; - 1948

Italian (3)

Il Turco in Italia / Rossini ; [S.l.] : Angel, [1955?] ;

Il Turco in Italia / Gioacchino Rossini ; Bologna : Bongiovanni, [1985?]

Il Turco in Italia : dramma buffo in due atti / Gioacchino Rossini ; [testo] di Felice Romani ; Milano : Movimento musica : Made and distributed by WEA Italiana, p1983

Music score (5)

English (1)

Il turco in Italia : dramma buffo per musica in due atti = The Turk in Italy : dramma buffo in music in two acts / di Felice Romani ; [musica di] Gioacchino Rossini ; [English translation by Andrew Porter ; additional translation by Kate Singleton] ; riduzione per canto e pianoforte condotta sull'edizione critica della partitura edita dalla Fondazione Rossini di Pesaro a cura di Margaret Bent ; [Collective title: Turco in Italia] ; Milan : Ricordi, c2000

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

#### ○ FRBR displays – WEM

Using the hierarchy of Group 1 as basis:

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  - Subject search
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  - Form as primary, language as secondary
  - Language as primary, form as secondary
- **M**anifestation display and refinement

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

#### ○ FRBR displays – WEM

Kent State FRBR Catalog Prototype

Choose an option  Search catalog

Author search for 'freud' » 'Freud, Sigmund, 1856-1939.' » 'Traumdeutung' » 'Interpretation of dreams'

 The interpretation of dreams / Sigmund Freud ; translated by Joyce Crick ; with an introduction and notes by Ritchie Robertson  
Freud, Sigmund, 1856-1939.  
Oxford ; New York : Oxford University Press, 1999

Status Available  
ISBN 0192100491 (alk. paper)  
9780192100498 (alk. paper)  
0192823523 (pbk.)  
9780192823526 (pbk.)  
Additional titles Traumdeutung.  
Contributors Crick, Joyce.  
Subjects Dream interpretation  
Psychoanalysis  
Description liv, 458 p. : ill. ; 23 cm.  
Notes Includes bibliographic references (p. xviii-xlix) and indexes.  
LC class number BP1078.F72 1999  
Dewey class number 154.6/3

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### 3.3 FRBR DISPLAYS RELATED CHALLENGES

(CONT.)

- Summarizing group results
- Navigating between levels
- Contextualizing refinements and facets

The screenshot displays a library catalog interface for a search on 'Freud, Sigmund, 1856-1939.'. The main results area shows 'Traumdeutung by Freud, Sigmund, 1856-1939.' with 27 results. A 'Refine search' sidebar on the left includes filters for 'Limit to' (Currently available (1), All items (2)), 'Authors' (Freud, Sigmund, 1856-1939. (1)), 'Languages' (English (17), German (8), Urdu (1), French (1)), 'Types of materials' (Book (27)), 'Series' (SAMP early 20th-cent... (1), Barnes & Noble Class... (1), Rosenfield/Levin... (1)), and 'Publication Dates' (2009 (1), 1999 (2), 1989 (1), 1988 (1)). The right pane shows a list of results for 'Traumdeutung', including 'Dream psychology: psychoanalysis for beginners / by Sigmund Freud. With an introduction by Andrei Tridon. New York: J.A. McCann, 1921.' and 'The interpretation of dreams / Sigmund Freud ; translated by Joyce Crick ; with an introduction and notes by Reuben Robertson. [Collective title: Traumdeutung] Oxford : New York : Oxford University Press, 1999.'

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### FUTURE WORK AND CHALLENGES

- Authority data in OPAC
- Algorithms to process legacy data & integrate with new FRBR and/or RDA data
- RDA elements – FRBR attribute relationship
- RDA testing results
- Legacy AACR2/MARC data – RDA data relationship

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Thanks!!

Questions and Suggestions?



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