



THE STRANGEST SUPER-HEROES OF ALL!



1  
SEPT.

IND.

OCLC  
Grid  
Services

the X-ID

super FRBR powers!

IN THE  
SENSATIONAL  
FANTASTIC  
FOUR  
STYLE!

X-MEN  
VERSUS  
MAGNETO  
EARTH'S MOST  
POWERFUL  
SUPER VILLAIN!!





## xID Web Services

(xISBN, xOCLCnum, xISSN)

FRBR grouping of editions and formats

Tim McCormick  
Product Manager, Grid Services  
[mccormit@oclc.org](mailto:mccormit@oclc.org)

Xiaoming Liu  
Software Developer  
[liux@oclc.org](mailto:liux@oclc.org)

# Presentation Overview



# Presentation Overview

1. What is the problem?

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata
3. xOCLCnum: includes *everything*

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata
3. xOCLCnum: includes *everything*
4. xISSN - serials formats, history

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata
3. xOCLCnum: includes *everything*
4. xISSN - serials formats, history
5. xISBN Bookmarklets

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata
3. xOCLCnum: includes *everything*
4. xISSN - serials formats, history
5. xISBN Bookmarklets
6. xID projects out there

# Presentation Overview

1. What is the problem?
2. xISBN - BOOK grouping & metadata
3. xOCLCnum: includes *everything*
4. xISSN - serials formats, history
5. xISBN Bookmarklets
6. xID projects out there
7. Future Work



# What is the problem?

In many contexts, we want to find or link to or describe *alternate versions of something*:



# What is the problem?

In many contexts, we want to find or link to or describe *alternate versions of something*:

- any edition of Hamlet
- a copy of Bloom's Critical Edition
- the 1972 paperback
- my copy of that



# What is the problem?

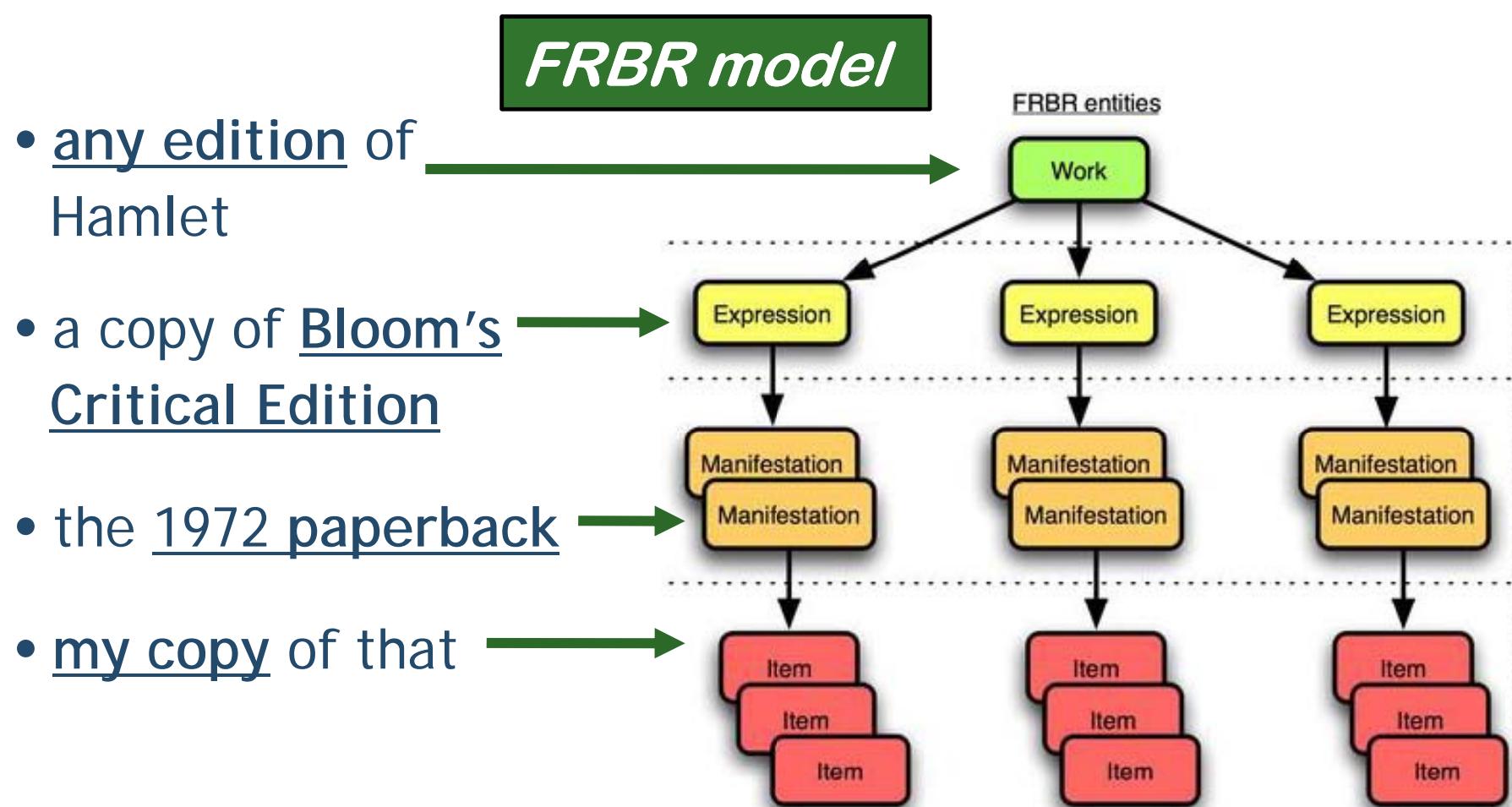
The FRBR model helps us analyze the types of version:  
Work, Expression, Manifestation, Item.

- any edition of  
Hamlet
- a copy of Bloom's  
Critical Edition
- the 1972 paperback
- my copy of that



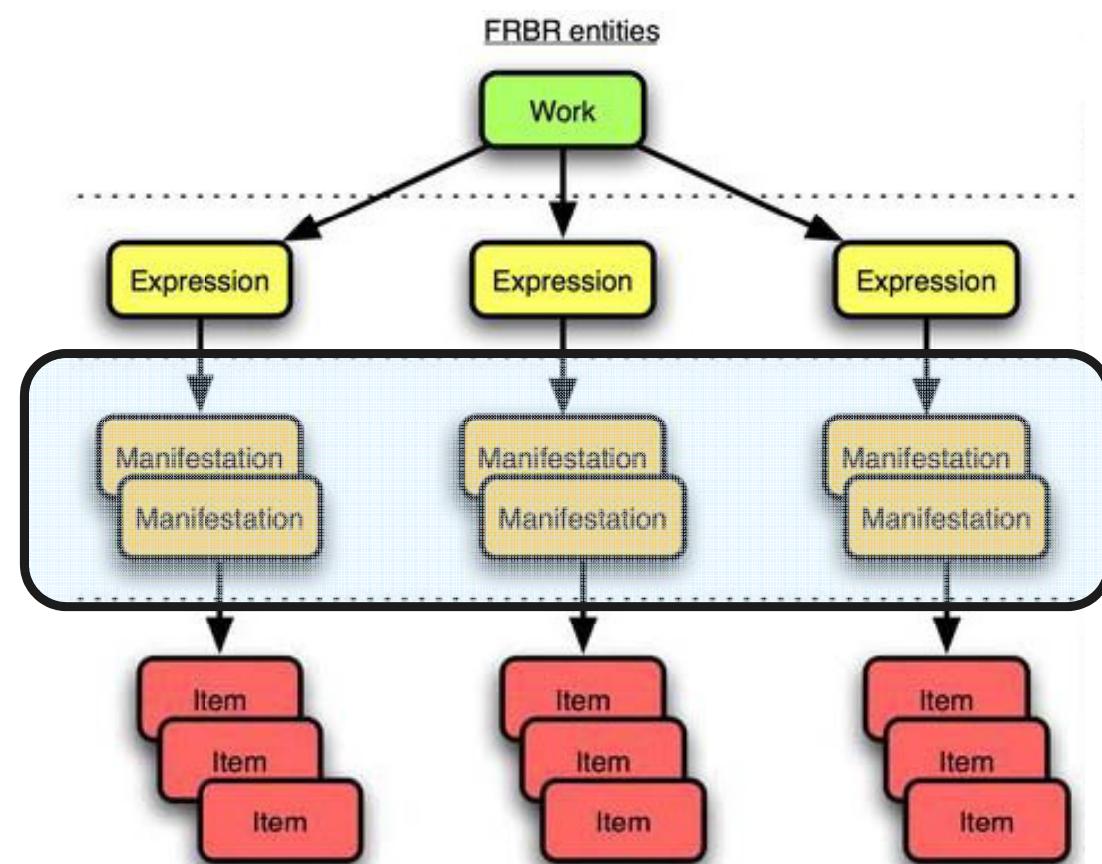
# What is the problem?

The FRBR model helps us analyze the types of version:  
Work, Expression, Manifestation, Item.



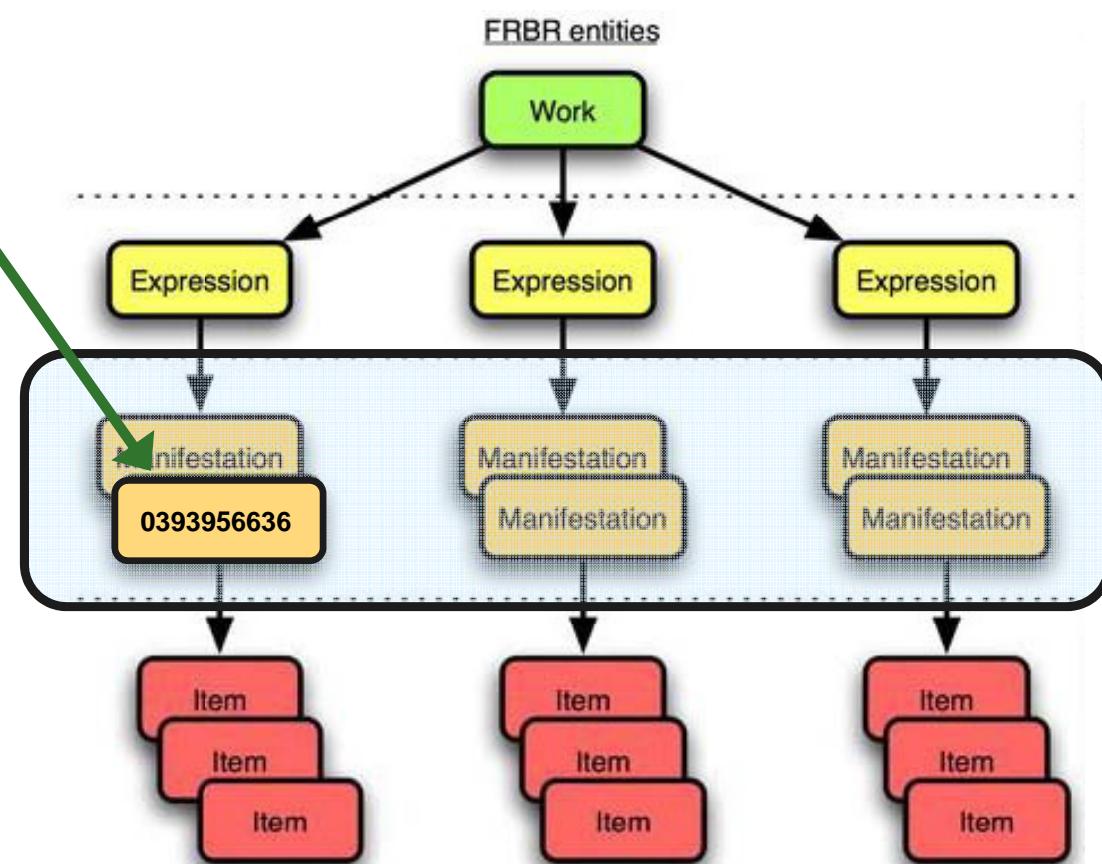
xISBN addresses *part* of this problem:  
“work grouping” of manifestations, i.e. all editions.

xISBN addresses *part* of this problem:  
“work grouping” of manifestations, i.e. all editions.



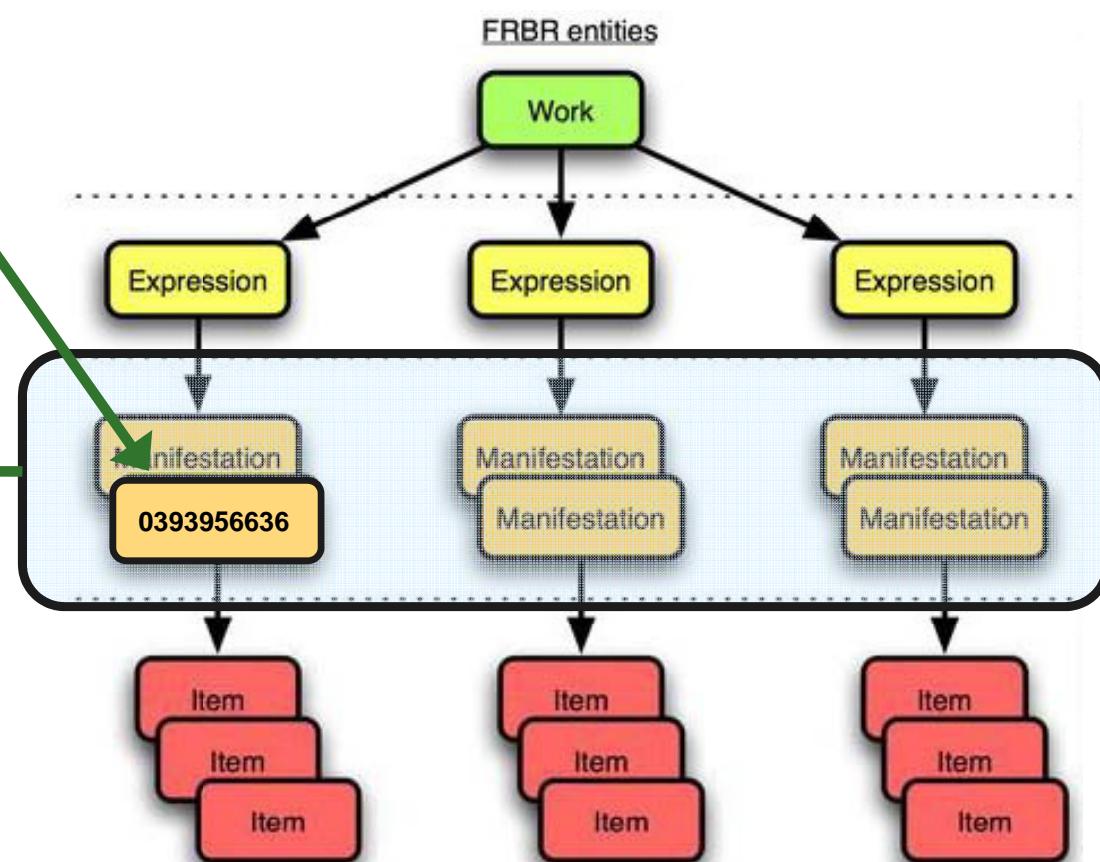
xISBN addresses *part* of this problem:  
“work grouping” of manifestations, i.e. all editions.

- You give xISBN a manifestation identifier (ISBN) representing, say, 1972 hardback of Bloom's Critical Edition of *Hamlet*.



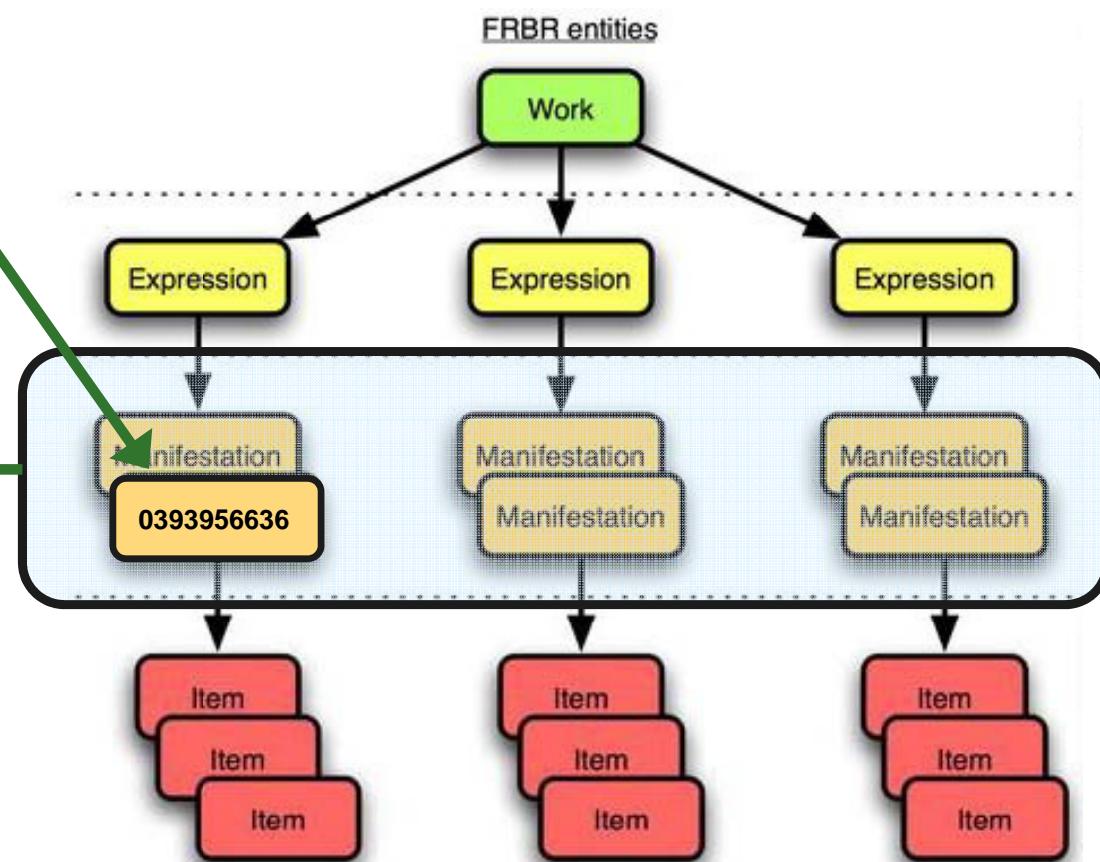
xISBN addresses *part* of this problem:  
“work grouping” of manifestations, i.e. all editions.

- You give xISBN a manifestation identifier (ISBN) representing, say, 1972 hardback of Bloom's Critical Edition of *Hamlet*.
- It returns all other ISBNs we know about that represent other manifestations of *Hamlet*, i.e. are the same work.



xISBN addresses *part* of this problem:  
“work grouping” of manifestations, i.e. all editions.

- You give xISBN a manifestation identifier (ISBN) representing, say, 1972 hardback of Bloom's Critical Edition of Hamlet.
- It returns all other ISBNs we know about that represent other manifestations of *Hamlet*, i.e. are the same work.
- It can also return other identifiers for these, such as OCLCnums and LCCNs.





***xOCLCnum***

like xISBN, but for all of WorldCat

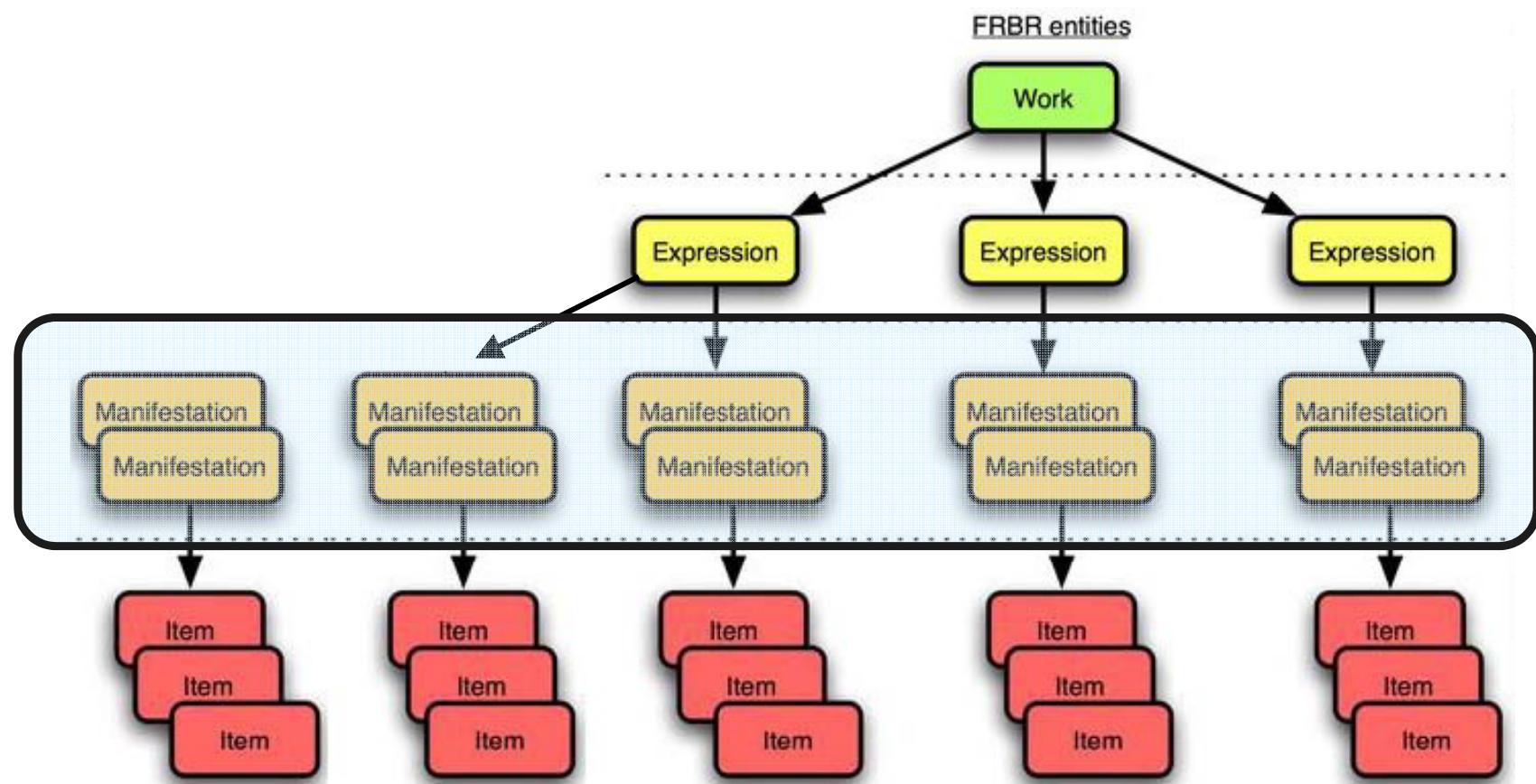
**xOCLCnum** can find *any* item we know about, not just those with ISBNs.



*xOCLCnum*

like xISBN, but for all of WorldCat

xOCLCnum can find *any* item we know about, not just those with ISBNs.

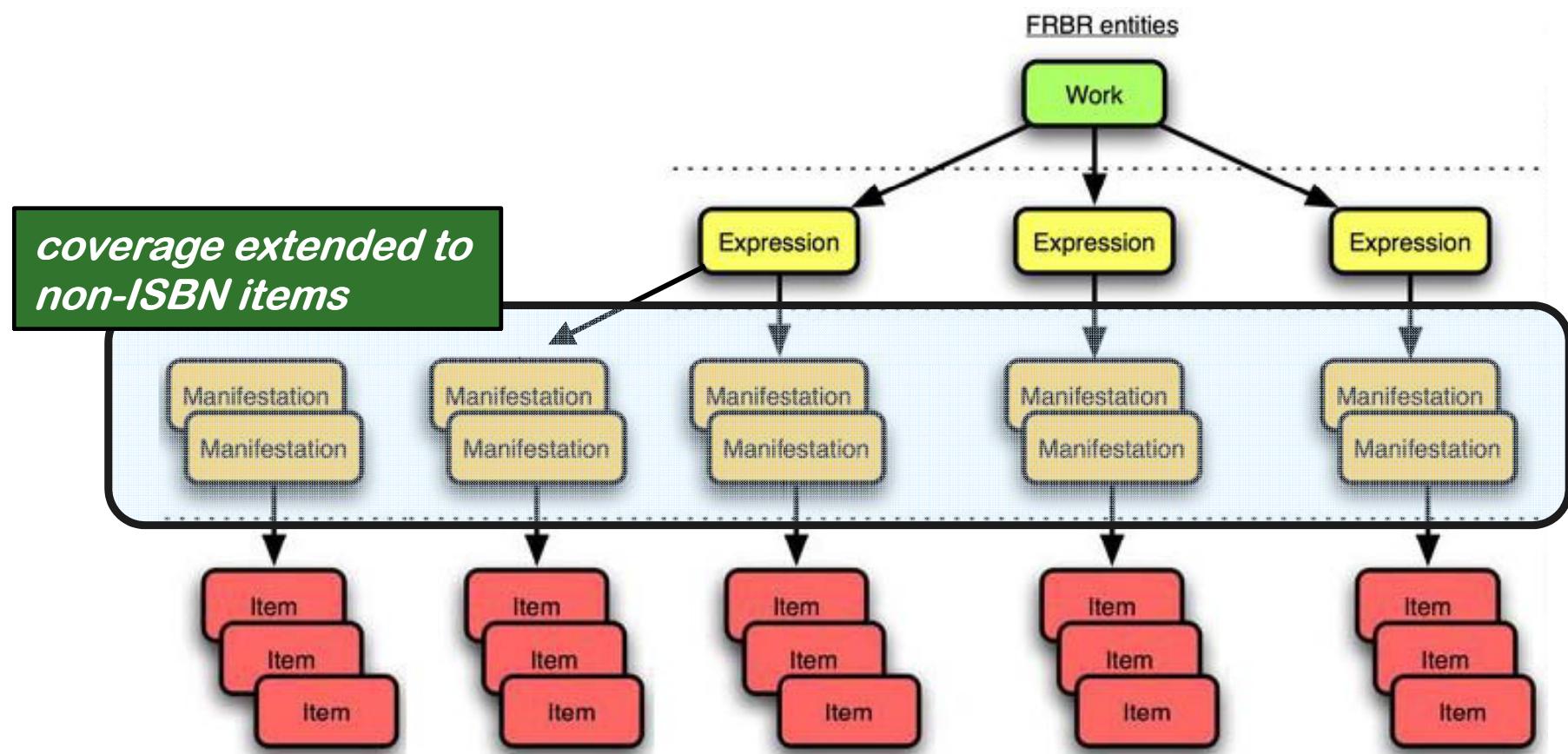




*xOCLCnum*

like xISBN, but for all of WorldCat

xOCLCnum can find *any* item we know about, not just those with ISBNs.



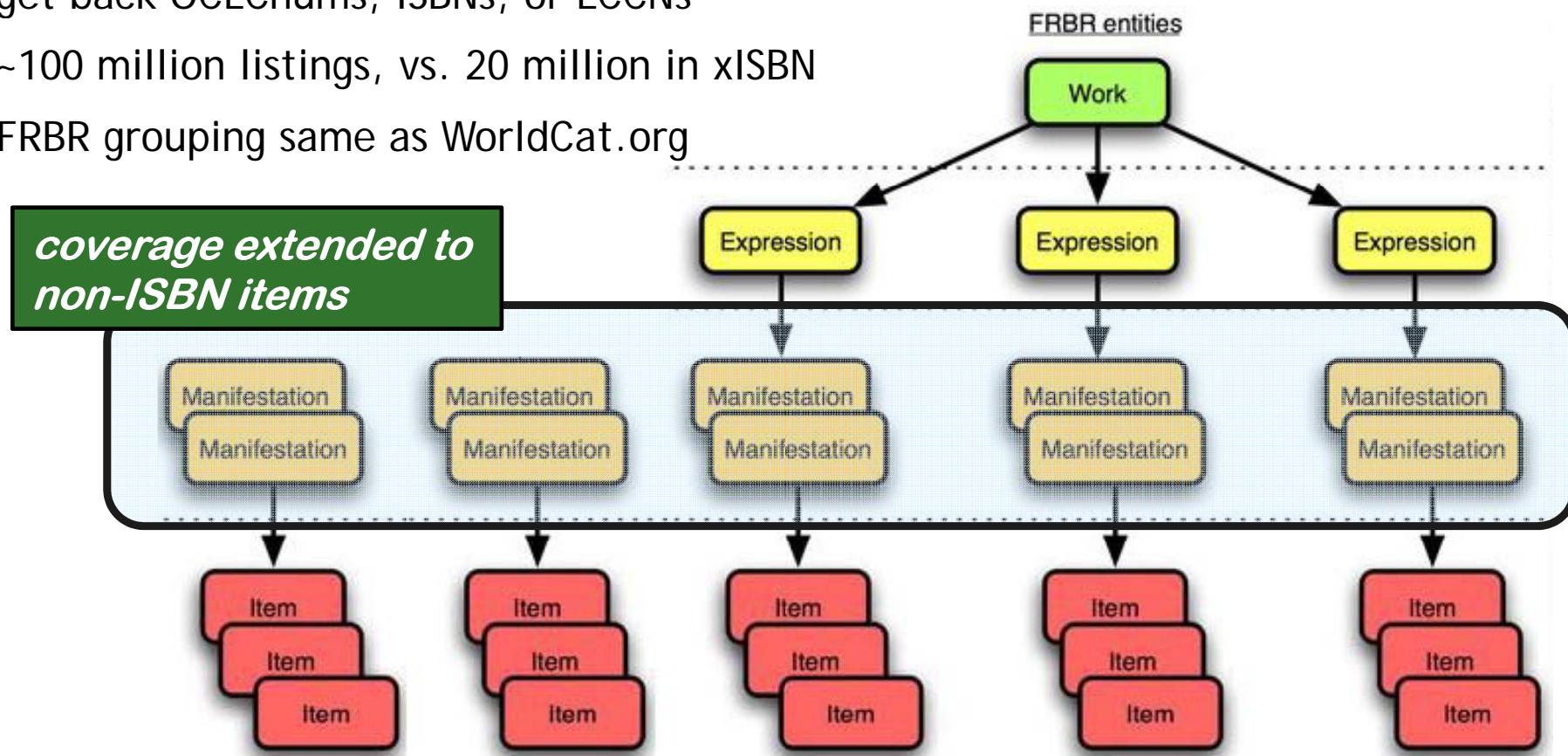


*xOCLCnum*

like xISBN, but for all of WorldCat

**xOCLCnum** can find *any* item we know about, not just those with ISBNs.

- query with OCLCnum or LCCN
- get back OCLCnums, ISBNs, or LCCNs
- ~100 million listings, vs. 20 million in xISBN
- FRBR grouping same as WorldCat.org



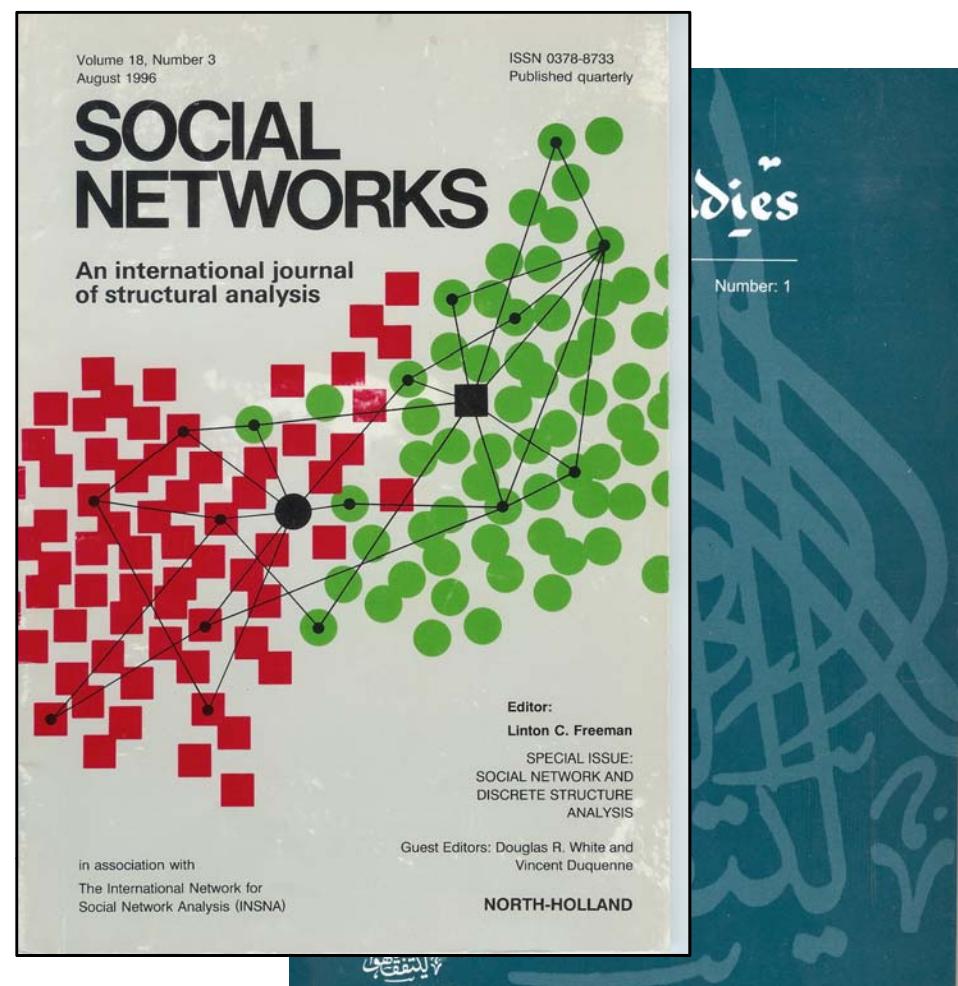


xISSN

for serials

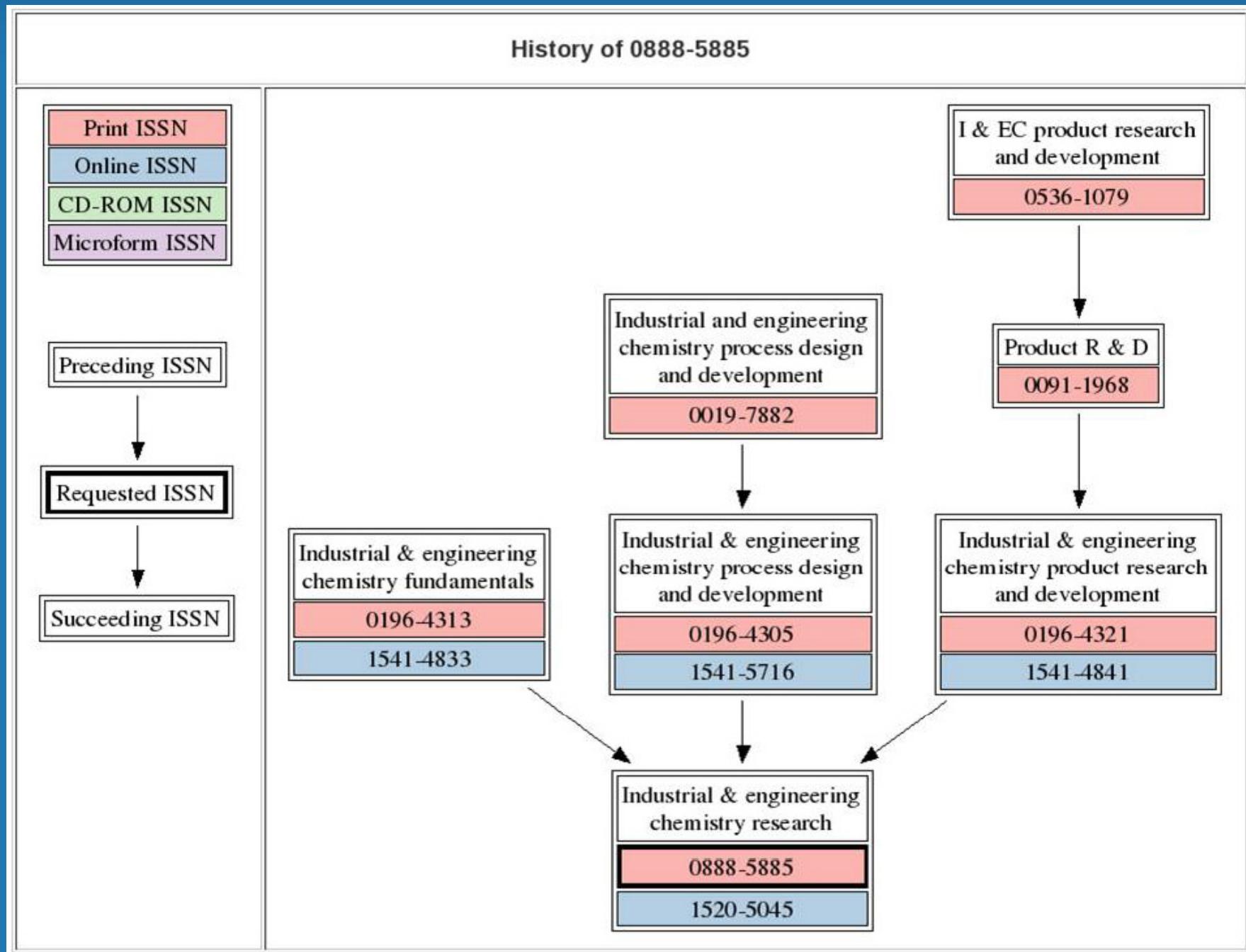
xISSN relates alternate editions of serials.  
*somewhat* like xISBN work-grouping:

- Alternate formats:  
e.g. print/electronic
- Predecessor, successor  
relationships
- Title merges, splits
- also, returns serials metadata



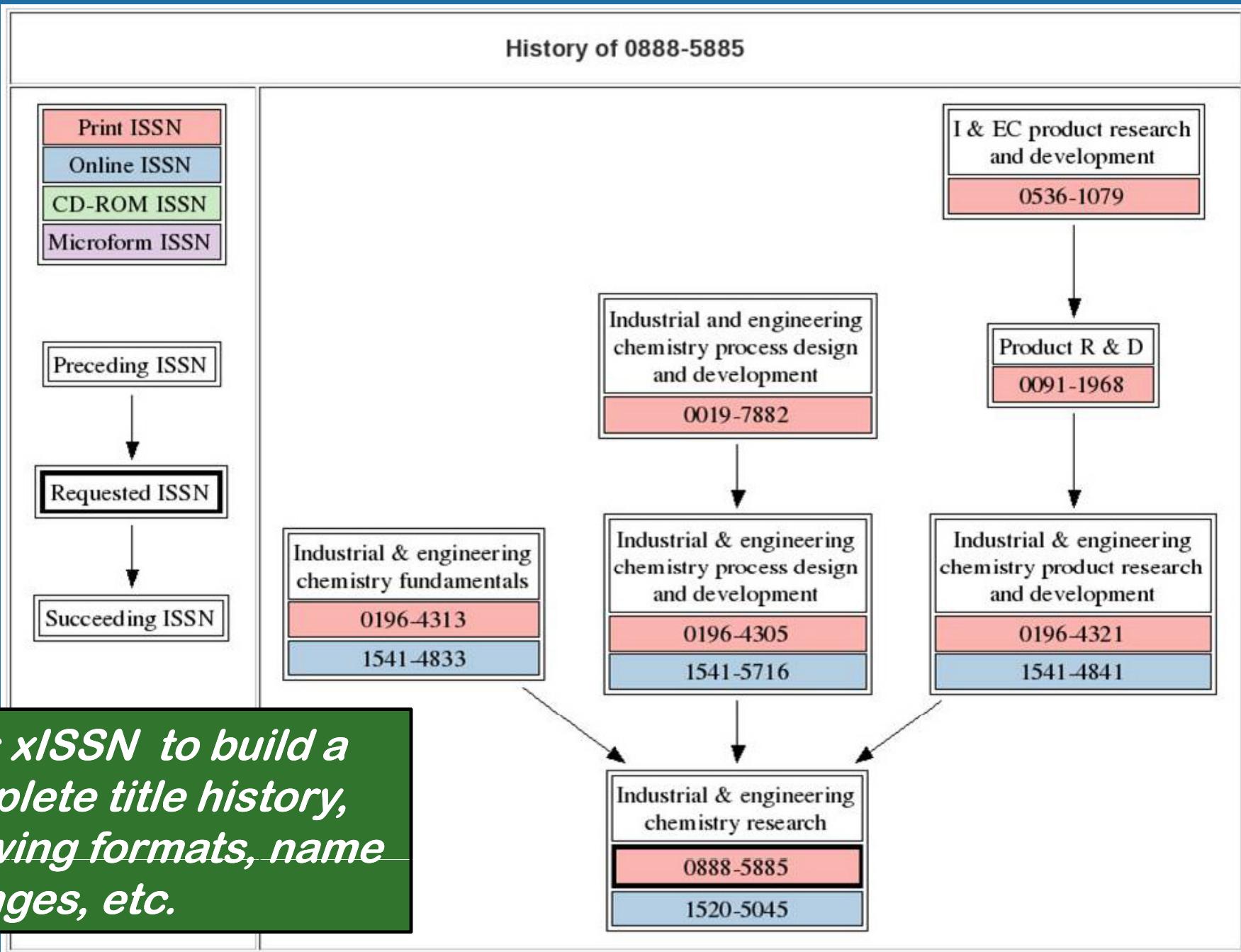


# xISSN - Title History tool





# xISSN - Title History tool





# notes on xID services in general

- REST-style Web services
  - response formats: XML, JSON, plain text, PHP
  - support JSON call back



# notes on xID services in general

- REST-style Web services
  - response formats: XML, JSON, plain text, PHP
  - support JSON call back
- Free to OCLC cataloguing members. 500 requests/day free to anyone. Also available to others for fee.



# notes on xID services in general

- REST-style Web services
  - response formats: XML, JSON, plain text, PHP
  - support JSON call back
- Free to OCLC cataloguing members. 500 requests/day free to anyone. Also available to others for fee.
- Based on data mining of WorldCat bibliographic data. Updated monthly.



# notes on xID services in general

- REST-style Web services
  - response formats: XML, JSON, plain text, PHP
  - support JSON call back
- Free to OCLC cataloguing members. 500 requests/day free to anyone. Also available to others for fee.
- Based on data mining of WorldCat bibliographic data. Updated monthly.
- Key goals:
  1. Provide machine interface to WorldCat FRBRization.
  2. Provide mapping between different identifiers.



# xISBN Bookmarklets

Expand ISBN searches of your OPAC to include all editions.

LibraryLookup - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://xisbn.worldcat.org/liblook/resolve.htm?res\_id=http%3A%2F%2Fcatalog.princeton.edu%2F&isbn=0385504209

xISBN - Links to editions

This catalog limits searches to 10 ISBNs at a time, so here is a complete list of search links for all ISBNs related to your work. The first link contains the specific ISBN you requested. The rest are ranked according to their frequency of holdings in libraries.

Princeton University Library

new search titles list your account recall borrow direct

ILL/document delivery

Search Request: Guided = (0385504209 OR 0375432302 OR 038551375) [in ISBN]

Search results: Displaying 1 of 1 entries

group 1

group 2

group 3

group 4

group 5

group 6

group 7

group 8

group 9

Author/Artist: Brown, Dan, 1964-

Title: The Da Vinci code : a novel /

Edition: 1st ed.

previous

brief view long view



# xISBN Bookmarklets

Expand ISBN  
searches of your  
OPAC to include  
all editions.

- Downloadable browser bookmarklet tailored for your library catalog.
  - Synchronized with Worldcat Registry. Thousands of libraries covered.

**Setup tool automatically  
guesses and verifies your  
OPAC linking.**

- OPAC link guessing API

**xISBN - Links to editions**

This catalog limits searches to 10 ISBNs at a time, so here is a complete list of search links for all ISBNs related to your work. The first link contains the specific ISBN you requested. The rest are ranked according to their frequency of holdings in libraries.

[group 1](#)  
[group 2](#)  
[group 3](#)  
[group 4](#)  
[group 5](#)  
[group 6](#)  
[group 7](#)  
[group 8](#)  
[group 9](#)

**Princeton University Library**

[new search](#) [titles list](#) [your account](#) [recall](#) [borrow direct](#)

[ILL/document delivery](#) [search history](#)

Search Request: Guided =  
(0385504209 OR 0375432302 OR 038551375)  
[in ISBN]

Search results. Displaying 1 of 1 entries

[previous](#) [brief view](#) [long view](#) [next](#)

<b>Author/Artist:</b> <u>Brown, Dan, 1964-</u>
<b>Title:</b> The Da Vinci code : a novel /
<b>Edition:</b> 1st ed.



# xISBN Bookmarklets

Expand ISBN searches of your OPAC to include all editions.

- Downloadable browser bookmarklet tailored for your library catalog.

- Synchronized with Worldcat Registry. Thousands of libraries covered.

Setup tool automatically guesses and verifies your OPAC linking.

- OPAC link guessing API

*easy way to set up xISBN-enhanced search of your OPAC*

The screenshot shows a Microsoft Internet Explorer window with the title "LibraryLookup - Microsoft Internet Explorer". The address bar contains the URL [http://xisbn.worldcat.org/liblook/resolve.htm?res\\_id=http%3A%2F%2Fcatalog.princeton.edu&rft.isbn=0385504209&url\\_ver=1](http://xisbn.worldcat.org/liblook/resolve.htm?res_id=http%3A%2F%2Fcatalog.princeton.edu&rft.isbn=0385504209&url_ver=1). The main content area displays the "Princeton University Library Main Catalog". On the left, there is a sidebar titled "xISBN - Links to editions" with a message about searching for multiple ISBNs and a list of 12 groups (group 1 through group 12). The main catalog page shows a search request for ISBNs: (0385504209 OR 0375432302 OR 0385513755 OR 0736689702 OR 1400079179 OR 07393073 [in ISBN]). The search results for "The Da Vinci code" by Dan Brown are shown, including the author (Brown, Dan, 1964-), title (The Da Vinci code : a novel / Dan Brown.), edition (1st ed.), published/created (New York : Doubleday, 2003.), physical description (454 p. ; 25 cm.), and ISBN (0385504209).



# xISBN Bookmarklets

Expand ISBN searches of your OPAC to include all editions.

- Downloadable browser bookmarklet tailored for your library catalog.

- Synchronized with Worldcat Registry. Thousands of libraries covered.

Setup tool automatically guesses and verifies your OPAC linking.

- OPAC link guessing API

*easy way to set up xISBN-enhanced search of your OPAC*

*do the full API integration next year, perhaps.*

Princeton University Library Main Catalog

new search titles list your account recall borrow direct annex request recap request in process request trace a book not on shelf

ILL/document delivery search history help start over

Search Request: Guided = (0385504209 OR 0375432302 OR 0385513755 OR 0736689702 OR 1400079179 OR 07393073 [in ISBN])

Search Results: Displaying 1 of 1 entries

Author/Artist: [Brown, Dan, 1964-](#)

Title: The Da Vinci code : a novel / Dan Brown.

Edition: 1st ed.

Published/Created: New York : Doubleday, 2003.

Physical description: 454 p. ; 25 cm.

ISBN: 0385504209 :



# xID projects out there

xID has been built into many sites and products and projects, including:

- LibX
- Python WorldCat API module
- xISBN bookmarklet
- Aquabrowser, Koha, SFX integration
- xISSN titlehistory tool
- Bookchaser.com
- Bookmooch.com
- this is just some of the big ones





# Recent & Future Work

## Recent:

- Search in a library feature, supports Hathitrust, OCA eBooks, Internet Archive, Wikipedia, etc.
- Guess/Lookup of publisher information based on ISBN

## Future:

- xISSN:
  - ISSN-L integration
  - More complete information such as journal URL and RSS feeds.
- xISBN / XOCLCNUM:
  - Unifying book-related identifiers into one service



# Recent & Future Work

## Recent:

- Search in a library feature, supports Hathitrust, OCA eBooks, Internet Archive, Wikipedia, etc.
- Guess/Lookup of publisher information based on ISBN

## Future:

- xISSN:
  - ISSN-L integration
  - More complete information such as journal URL and RSS feeds.
- xISBN / XOCLCNUM:
  - Unifying book-related identifiers into one service

*what would  
YOU  
like to see?*