

**82<sup>nd</sup> IFLA General Conference and Assembly  
13-19 August 2016, Columbus, Ohio, USA**

# **Metadata for Accessibility Information**

**Current Possibilities and Future Potentials**

**Rehab Ouf**

Why are we here today?

A close-up photograph of a computer keyboard. The central focus is a large, rectangular key colored in a vibrant red. On this red key, the word "Problem" is printed in a clean, white, sans-serif font, slanted slightly upwards from left to right. Surrounding this key are several other keys from the keyboard, which are white with black characters. Visible characters include "L" on a key to the upper right and "A" on a key to the lower left. The lighting is soft, creating subtle shadows and highlights on the keys' surfaces, giving the image a three-dimensional feel.



# Accessible Formats



# Accessible Formats

Lack of common cataloging guidelines



Isolated practices



Non functional and  
informative metadata

# Within the Same Institution

## Dual access policies



Catalog

Webpage

## Dual cataloging practices / Separate Catalog



A catalog accessible formats

General catalog

## Library functions



Burden

No interlibrary sharing

“While catalogs restricted to accessible materials are valuable, the importance of catalogs of general collections should not be underestimated; visually impaired people increasingly use them for certain materials.”

Ann Chapman

Separate Catalog Vs. General Catalog



# A Unified Approach to Cataloging & Bibliographic Control of Accessible Formats

- ▶ Achieves a more inclusive information environment.
- ▶ Helps libraries in planning their operations and achieve better management of their resources.
- ▶ Enables interlibrary sharing, shared cataloging, copy cataloging and exchange of bibliographic data on the national and global levels.



diagnose

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diagnose



## Accessible Formats As Complex Bibliographic Items

Come in a variety of formats, which are by nature complex and require complex cataloguing.

- ▶ Each type has unique characteristics and may need different equipment or software to use the material

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Come in a variety of formats, which are by nature complex and require complex cataloguing.

- ▶ Each type has unique characteristics and may need different equipment or software to use the material
- ▶ General types are further categorized into sub-categories
  - ▶ Braille books in print format
  - ▶ Braille in electronic format
  - ▶ Digital braille

## Accessible Formats As Complex Bibliographic Items

Come in a variety of formats, which are by nature complex and require complex cataloguing.

- ▶ Each type has unique characteristics and may need different equipment or software to use the material
- ▶ General types are further categorized into sub-categories
  - ▶ Audiobooks in analog format
  - ▶ Audiobooks in digital format
  - ▶ Alone or mixed with text

## Accessible Formats As Complex Bibliographic Items

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- ▶ General types are further categorized into sub-categories
- ▶ A single accessible formats can combine different characteristics and mix several types of media
  - ▶ DAISY Digital Talking Books:
    - ▶ Sound recording
    - ▶ Electronic file
    - ▶ Audio only
    - ▶ Audio + Text
    - ▶ One Carrier

## Accessible Formats As Complex Bibliographic Items

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- ▶ General types are further categorized into sub-categories
- ▶ A single accessible formats can combine different characteristics and mix several types of media
- ▶ Assistive technology is wide ranging and appeal to different senses
  - ▶ Screen Magnifiers (vision)
  - ▶ Screen readers (hearing)
  - ▶ Braille display (touching)

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- ▶ Assistive technology is wide ranging and appeal to different senses
- ▶ Relationship with the original item from which they are derived
  - ▶ “most accessible materials have a source in the form of a printed book”



# What Information Users With Special Needs Want

- ▶ Characteristics of the materials
- ▶ Target audience
- ▶ System requirements for the assistive technology
- ▶ Access details for the traditional materials

# MARC As a Cataloging Platform For Accessible Formats

The background of the slide features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, layered effect. The text is positioned on the left side of the slide, set against a plain white background.

007	Physical- Description- Fixed-Field	
245	Title-Statement	\$Mmedium
300	Physical-Description	\$aExtent
506	Restriction-on-Access- Note	
511	Participant- or- Performer-Note	\$a-(Narrator,...)
516	Type- of- Computer- File-or-Data-Note	\$a-(Digital-talking-book)
520	Summary,-Etc.-Note	
521	Target- Audience- Note	Also,- systematically- used- by- Used- by- NLS- to record-(Narrator-gender)
530	Additional- Physical- Form-Available-Note	(may-also-be-available...)
534	Original-Version-Note	(Recorded-from...,originally-published...)
538	System-Details-Note	(i.e. Type-of-DAISY:-full-audio-and-structure) + detailed-system-requirement-including-assistive technology-to-be-used
546	Language-Note	(English-braille,-American-Edition-(Contracted))
588	Source-of-Description- Note	(description-based-on-the-print-edition-used-for-the braille-transcription)
655	Index- Term- Genre/Form	(i.e. Downloadable-books,-Braille-books)
700	Added-Entry-Personal- Name	Used-to-create-an-added-entry-by-the-Narrator, Transcriber...)
852	Location	
856	Electronic- Location- and-Access	

336	Content-Type	\$aTerm\$bCode\$2Source
337	Media-Type	\$aTerm\$bCode\$2Source
338	Carrier-Type	\$aTerm\$bCode\$2Source
344	Sound-Characteristics	\$aType-of-Recording\$gConfiguration-of-playback channels-\$2Source
347	Digital-File-Characteristics	\$aFile-Type\$bEncoding-Format\$2Source

710	Added-Entry-Corporate-Name	Can be used to create an added entry by the recording institution
-----	----------------------------	---

## 007 - Tactile Material (R)

### MARC 21 Bibliographic - Full

#### Indicators and Subfield Codes

Field has no indicators or subfield codes; the data elements are positionally defined.

#### Character Positions

##### 00 - Category of material

f - Tactile material

##### 01 - Specific material designation

a - Moon  
b - Braille  
c - Combination  
d - Tactile, with no writing system  
u - Unspecified  
z - Other  
| - No attempt to code

##### 02 - Undefined

# - Undefined

##### 3-04 - Class of braille writing

- No specified class of braille writing  
- Literary braille  
- Format code braille  
- Mathematics and scientific braille  
- Computer braille  
- Music braille  
n - Multiple braille types  
- Not applicable  
- Unknown  
- Other  
- No attempt to code

##### 5 - Level of contraction

- Uncontracted  
- Contracted  
n - Combination  
- Not applicable  
- Unknown  
- Other

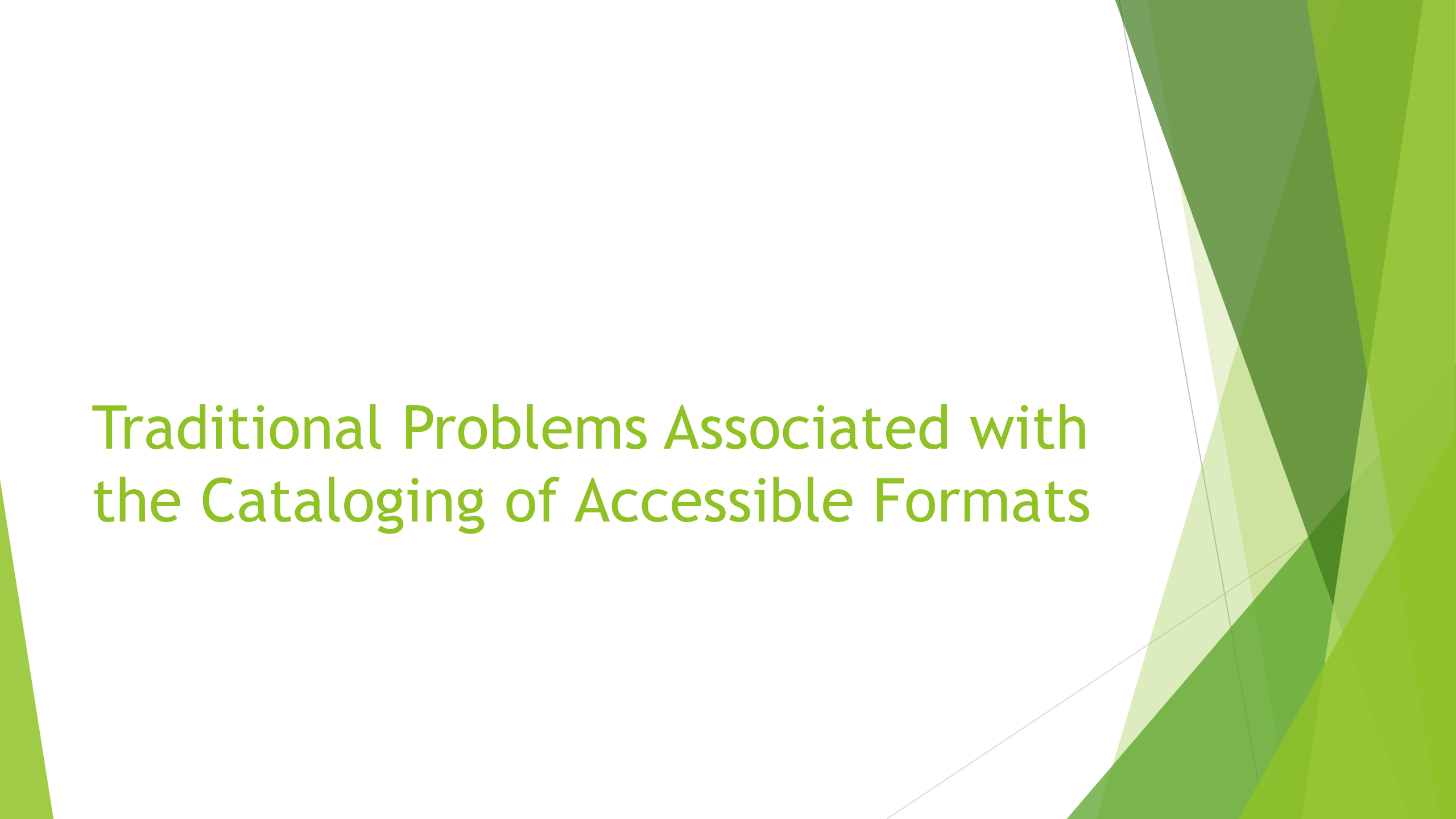
##### 06-08 - Braille music format

# - No specified braille music format  
a - Bar over bar  
b - Bar by bar  
c - Line over line  
d - Paragraph  
e - Single line  
f - Section by section  
g - Line by line  
h - Open score  
i - Spanner short form scoring  
j - Short form scoring  
k - Outline  
l - Vertical score  
n - Not applicable  
u - Unknown  
z - Other  
||| - No attempt to code

##### 09 - Special physical characteristics

a - Print/braille  
b - Jumbo or enlarged braille  
n - Not applicable  
u - Unknown  
z - Other  
| - No attempt to code

# Traditional Problems Associated with the Cataloging of Accessible Formats

The background of the slide features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, layered effect. The text is positioned on the left side of the slide, set against a plain white background.

# AACR2 Shortcomings

Single GMD approach to the cataloguing record

Records constructed from the viewpoint of the original item

Inconsistent approach to the categorization of GMDs

Concatenation of mixed information in note fields

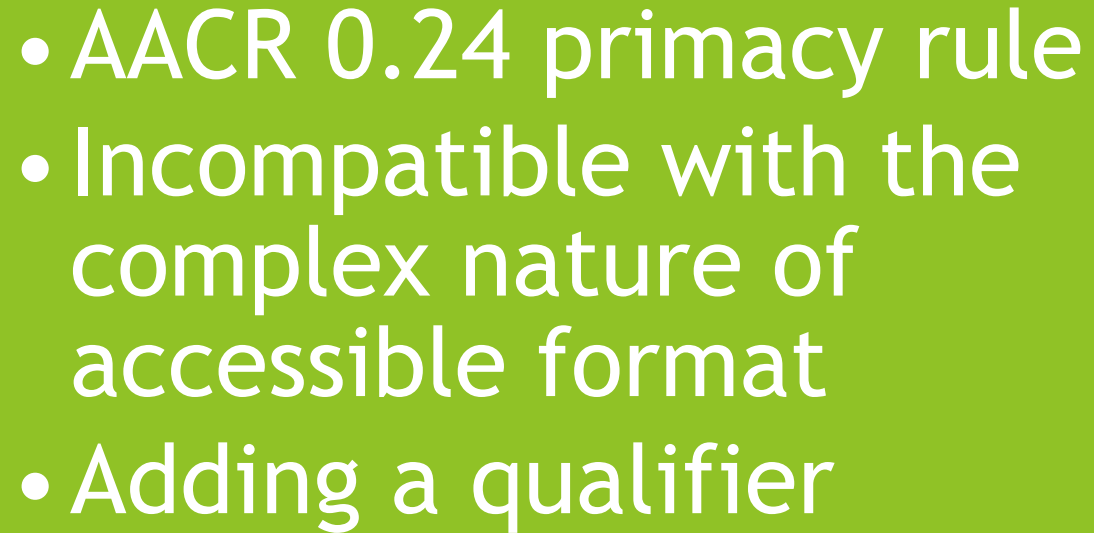
Restriction on the number of access points



# AACR2 Shortcomings



Single GMD approach to  
the cataloguing record

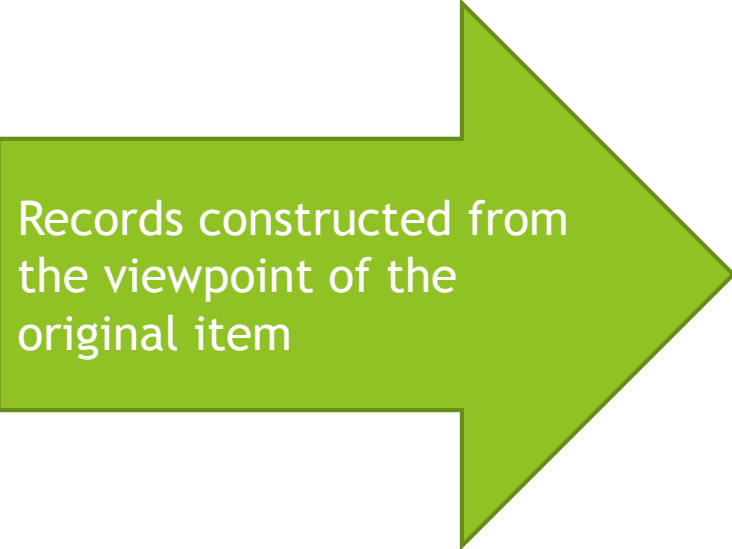
- 
- AACR 0.24 primacy rule
  - Incompatible with the complex nature of accessible format
  - Adding a qualifier

# AACR2 Shortcomings

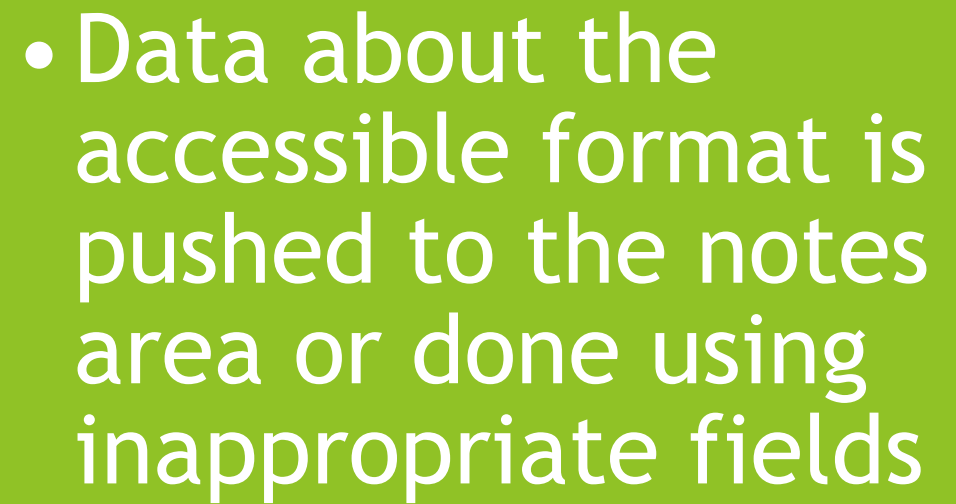
Inconsistent approach to  
the categorization of  
GMDs

- GMDs map to  
different FRBR  
entities

# AACR2 Shortcomings



Records constructed from  
the viewpoint of the  
original item

- 
- Data about the accessible format is pushed to the notes area or done using inappropriate fields

# AACR2 Shortcomings

- Recording “data” in “textual” fields
- Surcharging 5XX fields; burring important data
- Hard to search and process by ILS

Concatenation of mixed information in note fields

# AACR2 Shortcomings

- Absence, by cataloging rules, of access points for some crucial entities, i.e. individuals and/or institutions which created the accessible format

Restriction on the number of access points

# AACR2 Shortcomings

Single GMD approach to the cataloguing record

Records constructed from the viewpoint of the original item

Inconsistent approach to the categorization of GMDs

Concatenation of mixed information in note fields

Restriction on the number of access points

# A Catalog for Users With Special Needs

What Metadata for Accessibility Information?



# How Users With Special Needs Approach a Library Catalog?

- They need to quickly identify the resources that they can use in a vast collection of resources
- Sometimes, it is the starting point of a search done in a catalog

# How Users With Special Needs Approach a Library Catalog?

- A user searching by title, author, subject, need to know if/(which of) the works presented to him in the list of results are in a format that he can use
- They need to quickly identify the resources that they can use in a vast collection of resources
- Sometimes, it is the starting point of a search done in a catalog

# Search Phase

- ▶ Information that supports searching & filtering



**Association Valentin Haüy**  
Au service des aveugles et des malvoyants

Plan du site  
Contact

Rechercher dans le site :

L'association Valentin Haüy | Implantations locales | Établissements | Publications | Braille | Médiathèque | Matériel Spécialisé | Agir avec NOUS

Espace Presse | Espace Entreprises | Emploi, Formation | Accessibilité | Nos services | Loisirs, sports, vacances | Audiovision

Vous êtes ici : Accueil > Médiathèque > Catalogue > Rechercher dans le catalogue

**Rechercher dans le catalogue** \_\_\_\_\_

**Mode d'emploi :** Le catalogue en ligne vous permet de rechercher des livres, films et partitions selon plusieurs critères :

- par type de support (Albums pour enfants, braille abrégé, braille intégral, braille abrégé ou intégral, films, gros caractères, livres audio Daisy, partitions musicale **Tous**)
- par catégorie ou thématique (Albums pour Enfants, policier...)
- par nom d'auteur (Braille Abrégé, Braille Intégral)
- par titre. (Braille Abrégé et Intégral)

Vous devez renseigner au moins un critère de recherche (3 caractères minimum pour les champs de saisie).

**Options diverses**

Type de support : **Tous**

Médiathèque  
Je m'inscris  
Catalogue  
Nouveautés  
Rechercher dans le catalogue  
École  
Coin des lecteurs  
Espace des professionnels  
Nous contacter

# Record's Display Phase

- ▶ Mode of access of the resource
- ▶ System requirements, i.e. the assistive technology
- ▶ Content of the material they can use vis-à-vis the content of the original format
- ▶ Entities involved in the creation of the accessible format (could be a search/filtering option)

---

Title: Birthplace of western civilization [cartographic material (tactile)] : [Nile River Valley and Near East]  
Published: Watertown, Mass. : Howe Memorial Press, Perkins School for the Blind, [n.d.].  
Description: 1 map (braille) ; 56 x 71 cm.  
Book Number: TM 00243 (LOST)  
Dewey No.: 912.32  
Notes: Scale 1:10,137,600. 1 in. to 160 miles.  
Shows coastline and rivers, and capital city.  
Historic note in lower right corner.  
Key to symbols and abbreviations.  
Availability restricted to those meeting the eligibility criteria of the holding agency.  
reproduced from: Watertown, Mass. : Howe Press of Perkins School for the Blind, 1938.  
Subjects: Nile River Valley -- Maps.  
Location: DLC-B TM 00243 NLS/BPH  
Control No.: 84560

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the page, creating a modern, layered effect. The text is positioned on the left side of the page, set against a plain white background.

# **ENHANCING THE INFORMATION ENVIRONMENT FOR USERS WITH SPECIAL NEEDS**

# How RDA Solves Accessible Formats Cataloging Problems?

Three level approach to categorization of resources

- ▶ Content Type
- ▶ Media Type
- ▶ Carrier Type

## MARC Provisions

- ▶ Replacing 245\$h [Medium]
- ▶ 3 New Fields: 336, 337, 338
- ▶ Repeatable
- ▶ Describe as many Content, Media, Carriers as the resource encloses!

# How RDA Solves Accessible Formats Cataloging Problems?

- ▶ Categorization based on human senses

cartographic dataset  
cartographic image  
cartographic moving image  
**cartographic tactile image**  
**cartographic tactile three-dimensional form**  
cartographic three-dimensional form  
computer dataset  
computer program  
notated movement  
notated music  
performed music  
sounds  
**spoken word**  
still image  
**tactile image**  
**tactile music**  
**tactile notated movement**  
**tactile text**  
**tactile three-dimensional form**  
**text**  
three-dimensional form



# How RDA Solves Accessible Formats Cataloging Problems?

- ▶ Information stored as **data elements** NOT text strings
- ▶ Solving the problem of 5XX note fields
- ▶ Great manipulation
- ▶ Data unambiguously defined
- ▶ Enhanced catalog functions
  - ▶ Accurate searching
  - ▶ Sound display

# How RDA Solves Accessible Formats Cataloging Problems?

- ▶ Bibliographic and intellectual **relationships**
- ▶ Compare resource versions
- ▶ Clear definition of roles (braille embosser, transcriber,...)
- ▶ Enhanced catalog navigation

# How RDA Solves Accessible Formats Cataloging Problems?

- ▶ Preferred Access Points!
  - ▶ Permit the construction of access points for the **Expressions** not only the Works
  - ▶ Solve the problem of accessible format vs. original format
  - ▶ Permit construction of access points by the Creators of the accessible format
    - ▶ Recording institution of DAISY items
    - ▶ Narrator of a talking book

LDR 02600cam 2200589 a 4500

001 349071

005 20151103184132.0

007 cr|nn |||a|caa

007 fb|a|bnnnn

008 04012752004 dcu ef 00 0|eng

010 \$a 2004990288

040 \$aDLC-B\$beng\$cDLC-B

072 7\$aBESTAN\$2NBDL

072 7\$aLANGAN\$2NBDL

072 7\$aYOUNAN\$2NBDL

082 00\$a428.1\$aYNF\$221

084 \$aBR 15198\$2z

245 00\$a100 words every high school graduate should know /\$cfrom the editors of the American heritage dictionaries \$h[braille]

246 3 \$aOne hundred words every high school graduate should know

260 \$aWashington, D.C. :\$bNational Library Service for the Blind and Physically Handicapped, Library of Congress,\$c2004.\$f(National Braille Press, transcribing agency. National Braille Press, distributor.)

300 \$a1 volume of press braille ;\$c28 x 28 cm.

336 \$atactile text\$btct\$2ndacontent

337 \$aunmediated\$bn\$2rdamedia

338 \$avolume\$bnc\$2rdacarrier

385 \$nage\$aAdults\$2lcdgt

385 \$nage\$aTeenagers\$2lcdgt

500 \$aBased on the 4th ed. of the American Heritage college dictionary

506 \$aAvailability restricted to persons meeting the eligibility requirements of the National Library Service for the Blind and Physically Handicapped, Library of Congress.

520 \$aThe American Heritage College Dictionary web site list of vocabulary words evolved into a published book by popular demand. For senior high and older readers. Bestseller. 2003.

521 \$aBestseller.\$bNLS/BPH

521 \$aFor senior high and adult.\$bNLS/BPH

530 \$aAlso available for download from BARD/Web-Braille as digital braille.  
\$cUsers must register with their cooperating library.

534 \$pTranscription of:\$cBoston : Houghton Mifflin, c2003.

546 \$bEnglish Braille, American Edition (contracted braille).

588 \$aDescription based on the print edition used for the braille transcription.

650 0\$aVocabulary.

655 4\$aDownloadable books.

655 4\$aNonfiction.

655 7\$aBraille books.\$2lcfgft

730 0 \$aAmerican Heritage college dictionary.

830 0\$a100 words series

852 81\$aDLC-B\$cBR 15198\$zNLS/BPH

856 40\$uhttp://hdl.loc.gov/loc.nls/br.15198v01\$3Volume 1.

906 \$a/\$bcbc\$cblndbks

952 \$aCopyAllotment April 2004

953 \$ajaya 03/05/2004

953 \$bjaya 08/04/2004

955 \$aDistributed August 2004

955 \$aretrondapartial

955 \$aya082code

985 \$aNLS BR GRP1

991 \$bNLS NAT

001 726138  
005 20160405192948.0  
007 cr|nna|||||da  
007 sz||mnnnn|ned  
008 110503s2012 dcunnnnes | n eng  
010 \$a 2011992325  
040 \$aDLC-B\$beng\$cDLC-B  
043 \$an-us---  
072 7\$aTRAVAN\$2NBDL  
082 00\$a917.3\$aANF\$222  
084 \$aDB 73663\$2z  
245 04\$aThe 10 best of everything national parks h[sound recording] :\$b800 top  
picks from coast to coast /\$cintroduction by Fran P. Mainella.  
246 3 \$aTen best of everything national parks  
260 \$aWashington, D.C. :\$bNational Library Service for the Blind and  
Physically Handicapped, Library of Congress,\$c2012.\$f(American Printing  
House for the Blind, recording studio)  
300 \$a1 online resource (audio (26 hours, 31 minutes))  
306 \$a263100  
336 \$aspoken word\$bspw\$2rdacontent  
337 \$aaudio\$bs\$2rdamedia  
337 \$acomputer\$bc\$2rdamedia  
338 \$aonline resource\$bcr\$2rdacarrier  
344 \$adigital\$gmono\$2rda  
347 \$aaudio file\$bDaisy\$2rda  
385 \$nage\$aAdults\$2lcdgt  
506 \$aAvailability restricted to persons meeting the eligibility requirements  
of the National Library Service for the Blind and Physically Handicapped,  
Library of Congress.

511 0 \$aNarrated by: Kerry Dukin.  
516 \$aDigital talking book. 3 levels. Digitally mastered.  
520 \$aFor this guide to exploring America's National Parks, National  
Geographic Society editors consulted nature writers and outdoor enthusiasts  
to identify eighty areas of interest--such as natural wonders, wildlife,  
history, day hikes, and campgrounds, cuisine--and recommend the ten best  
parks in each category. 2011  
521 \$aFemale narrator.\$bNLS/BPH  
530 \$aMay also be available for loan on cartridge. Contact your cooperating  
library for more information.  
534 \$pRecorded from:\$cWashington, D.C. : National Geographic Society, 2011.  
\$z9781426207341  
538 \$aFull audio with structure.  
538 \$aSystem requirements: NLS authorized ANSI/NISO Z39.86-2002 digital  
talking book (dtb) player compatible with NLS flash cartridges. Web version  
requires computer with Internet access, BARD password and NLS authorized  
digital talking book player. Contact your cooperating library or the  
National Library Service for the Blind and Physically Handicapped, Library  
of Congress, for more information.  
588 \$aDescription based on cassette record.  
593 \$a3\$cDM  
596 \$adbcurrent  
650 0\$aNational parks and reserves\$zUnited States.  
655 4\$aDownloadable books.  
655 4\$aNonfiction.  
655 7\$aTalking books.\$2lcft  
700 1 \$aDukin, Kerry,\$enarrator.  
710 2 \$aNational Geographic Society (U.S.)  
852 81\$aDLC-B\$cDB 73663\$zNLS/BPH



## Format

- All Formats (17,585)
- Article (7741)
- Chapter (1197)
- Downloadable article (1055)
- Book (5718)
- Print book (4340)
- eBook (1189)
- Thesis/dissertation (548)
- Braille Book (60)
- Microform (45)
- Large print (18)
- Music (832)
- CD (441)
- eMusic (68)
- Cassette (27)
- LP (17)

[Show more ...](#)








## Refine Your Search

## Author







- [J K Rowling](#) (990)
- [Joanne K Rowling](#) (311)
- [J K Rowling](#) (253)

Results 1-10 of about 17,585 (.27 seconds)

[« First](#) [< Prev](#) 1 [2](#) [3](#) [Next >](#)
[Select All](#) [Clear All](#)Save to:  Sort by:  

1.  [Harry Potter and the Half-Blood Prince](#)  
by J K Rowling; Mary GrandPré  
 Print book : Fiction : Juvenile audience [View all formats and languages »](#)  
Language: English  
Publisher: New York, NY : Arthur A. Levine Books, an imprint of Scholastic Inc., 2005.  
Database: WorldCat  
[View all editions »](#)
2.  [Harry Potter and the chamber of secrets](#)  
by David Heyman; Steven Kloves; Chris Columbus; Daniel Radcliffe; Emma Watson; Rupert Grint; Kenneth Branagh; John Cleese; Robbie Coltrane; Warwick Davis; Richard Griffiths; Richard Harris; Jason Isaacs; Alan Rickman; Fiona Shaw; Maggie Smith; Julie Walters; John Williams; J K Rowling; Warner Bros. Pictures (1969- ); Heyday Films.; 1492 Pictures.;  
 DVD video  Computer File [View all formats and languages »](#)  
Language: English  
Publisher: Burbank, CA : Warner Home Video, [2003], ©2002.  
Database: WorldCat  
[View all editions »](#)
3.  [Harry Potter and the goblet of fire](#)  
by Mike Newell; David Heyman; Steven Kloves; Daniel Radcliffe; Emma Watson; Rupert Grint; Maggie Smith; Gary Oldman; Roger Pratt; Patrick Doyle; J K Rowling; Heyday Films.; Warner Bros. Pictures (1969- ); Warner Home Video (Firm).;  
 DVD video : NTSC color broadcast system. [View all formats and languages »](#)

[Select All](#) [Clear All](#)Save to:  Sort by:  

1.  [Harry Potter and the prisoner of Azkaban](#)  
by J K Rowling  
 Braille book : Braille : Fiction : Juvenile audience  
Language: English  
Publisher: Brisbane : Queensland Braille Writing Association, 2000.  
Database: WorldCat
- 
2.  [Harry Potter and the goblet of fire](#)  
by J K Rowling  
 Braille book : Braille : Fiction : Juvenile audience [View all formats and languages »](#)  
Language: English  
Publisher: [Boston, Mass.] : National Braille Press, [2000]  
Database: WorldCat  
  
[View all editions »](#)
- 
3.  [Harry Potter and the sorcerer's stone](#)  
by J K Rowling  
 Braille book : Braille : Fiction : Juvenile audience  
Language: English  
Publisher: [Boston] : National Braille Press, 1999?

## Format

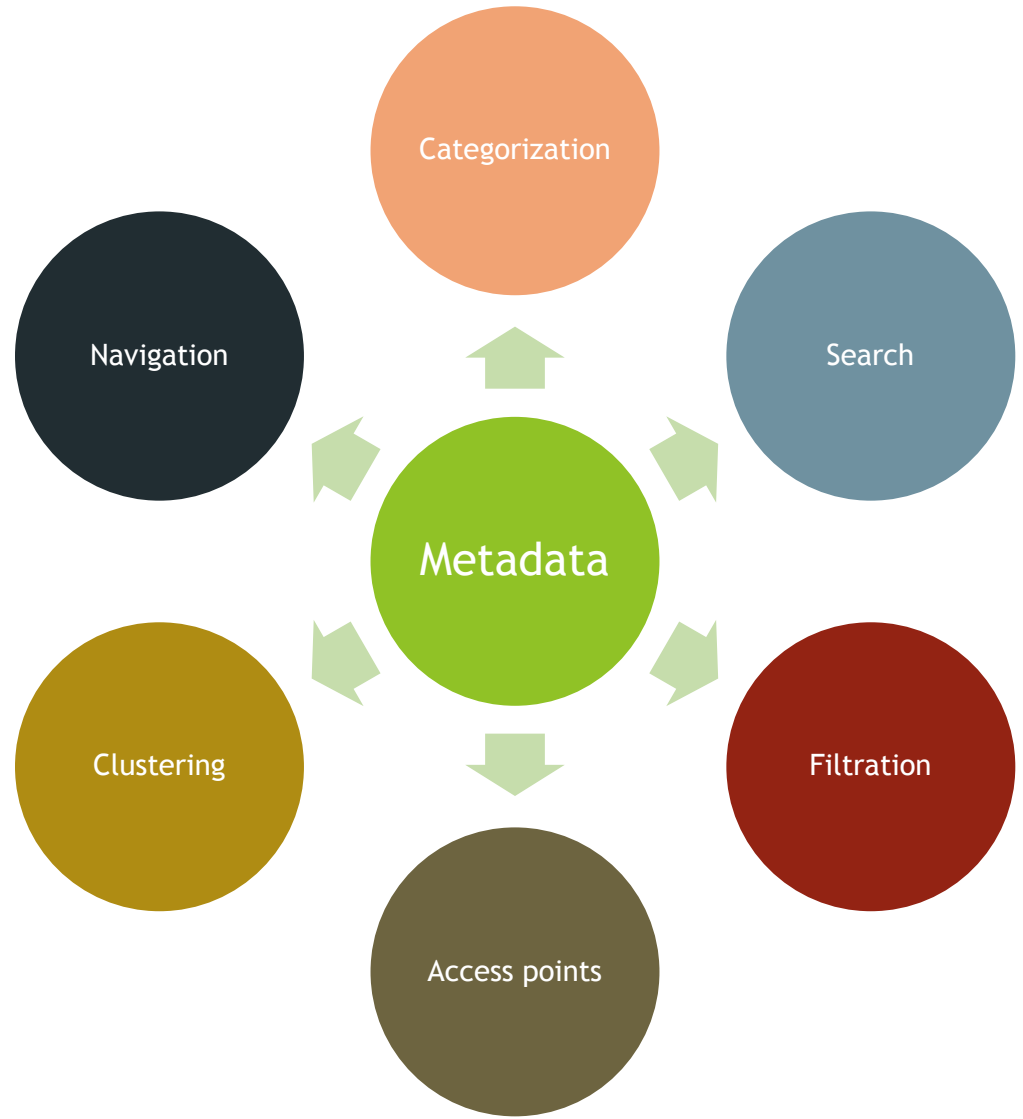
- All Formats
- Article (7741)
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  - eMusic (68)
  - Cassette (27)
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## Refine Your Search

## Author

- [J K Rowling \(26\)](#)
- [Joanne K Rowling \(18\)](#)
- [J K Rowling \(3\)](#)
- [Melissa Anelli \(1\)](#)





The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the frame, creating a modern, layered effect. The central area is a plain white space.

Thank You