Metadata Standards and Applications

1. Introduction to Digital Libraries and Metadata

Intro to Digital Libraries

- Traditional library characteristics
- Digital library characteristics
- How does the environment affect the creation of metadata?
  - Differences
  - Similarities

Traditional Libraries

- Firm commitment to standards
  - AACR2+--specifications for metadata content
  - MARC 21--specifications for metadata structure, encoding and "packaging"
  - A variety of syntactical bindings available
- Agreements on quality expectations
- Tradition of sharing, facilitated by bibliographic utilities
- Available documentation and training

Digital Libraries

- No dominant content standard
- A variety of "formats" (or "schemas" or "element sets")
- Some emerging "federated" agreements, mostly in the world of digital libraries attached to traditional libraries (ex.: DLF)
- Very low (if any) quality expectations!
- Emerging (but still spotty) basis for sharing (OAI-PMH)
- Very little documentation and training available (mostly local and difficult to re-use)

Environmental Factors

- Differences:
  - *Players*: New world of metadata not necessarily lead by librarians
  - *Goals*: Competition for users critical for sustainability
  - *Resources*: No real basis for understanding non-technical needs (including metadata creation and maintenance)
  - Many levels of content responsibility (or none)

Environmental Factors

- Similarities
  - It's about discovery (and access, and use, and meeting user needs)
  - Pressure for fast, cheap and "good enough" (also rich, scalable, and re-usable--is that a contradiction?)
  - Wide variety of materials and services
  - Maintenance needs often overlooked

What *IS* Metadata?

- Some possibilities:
  - "Data about data" (or data about resources)
  - "Structured information that describes, explains, locates, and otherwise makes it easier to retrieve and use an information resource."
  - A management tool
  - "People, stuff, and agreements" (indecs)

Functions of Metadata

Discover resources

Manage documents

Control IP Rights

Identify versions

Certify authenticity

Indicate status

Mark content structure

Situate geospatially

Describe processes

Types of Metadata

- Administrative
- Descriptive
- Access/Use
- Preservation
- Structural
- Other?

Administrative Metadata

- Sometimes called: “Meta-metadata”
  - Who created this information?
  - When was it created?
  - When were links last checked?
  - Other update transactions?
- Review or approval (by cataloger, or other responsible party)

Descriptive Metadata

- Title, author, human-readable description of a resource
- Subject or topical information
- Genre and format of the resource
- Relationships with other resources (version, parent/child, etc.)

Access/Use Metadata

- Where is the resource? Is it in a place open to me?
- Are there restrictions on the use of the resource?
- Do I have the hardware/software to use the resource?
- What can I do with this resource?

Preservation Metadata

- Designed to ensure that the information the resource contains remains accessible to users over a long period of time
- Records details about format migration and data refreshment
- Tracks versions used for different kinds of access and display
- Allows a variety of approaches to the problem of maintaining resources over time

Structural Metadata

- No single standard or best practice governs structural metadata creation
- Ties the components of a complex or compound resource together and makes the whole usable
- Enables flexible and local approaches to presentation and navigation
- Various approaches to sharing structural metadata exist (METS perhaps the best known)

Cataloging and Metadata

- How are they related?
  - Underlying models for cataloging based on AACR2 and MARC 21
  - Underlying models for metadata not well integrated with schemas
    - DC Abstract model an exception
    - FRBR the model for RDA
- Most metadata models roughly based on attribute/value pairs:
  - <property> = <value>

One BIG Difference ...

- Catalogers most often are attempting to fit new items into an already existing world of materials--
  - The structure already exists, as do the rules for describing
- Metadata practitioners are generally working with aggregated "stuff," attempting to find a way to make it accessible
  - Involves broad understanding, ability to work with others to make decisions that work for whole projects or domains

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Exercise

- Examine the three digital library sites below, and be prepared to discuss differences in user approach and experience. How is metadata used in these sites?
  - Alsos: Digital Library for Nuclear Issues (http://alsos.wlu.edu/default.aspx)
  - CSUN Oviatt Library: Digital Collections (http://library.csun.edu/Collections/SCA/digicoll.html)
  - Birdsource (http://www.birdsource.org/)