CIMI Interoperability Testbed Meeting

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Z39.50 Profile for Access to Digital Library Objects

Ray Denenberg
Library of Congress
ray@rden.loc.gov

LC Collections

Detroit Publishing Company Collection

About 25.000 photos. U.S. scenes (mostly), including buildings, towns, cities, universities, battleships yachts, resorts, natural landmarks, industry.

Nation's Forum Collection

Recordings from 1918-20 to preserve voices of prominent Americans; WW I topics, postwar issues, 1920 election.

WPA Life Histories Collection

Life History Manuscripts from Folklore Project, WPA Federal Writers' Project, 1936-40. 2900 documents from 300 writers from 24 states. 2,000-15,000 words each. 23,000 page images total. Histories describe informant's family education, income, occupation, politics, religion, medical needs, diet, etc.

Finding Aids for Shirley Jackson Papers

American short-story writer/novelist of mid-20th century. Papers given to LC in 1967: diaries, journals, literary manuscripts, etc. Known for modern Gothic horror, in particular for her classic story, The Lottery, 1948. Also wrote stories about contemporary domestic life.

Coolidge-Consumerism Collection

17,000 pages (images) of 1920s primary-source materials: manuscript, monograph, serials Also photos, motion pictures. Documents various aspects of economic life in the U.S. during the '20s. Includes Calvin Coolidge Papers, focusing on life of Calvin Coolidge during the six years he was president (1923-1929).

Legislative Information System

LC Congressional Research Service

Object
Descriptive
Record

Brief Description

Associated Description

Related Collections

Digital Object

Search Within:

Brief description.
Associated Description.
Associated Description of a specific category.
Digital Object.
Digital Object of a specific category.

Search for records of a specific:

Physical format (book, map, etc.).
Language.
Chronological *subset* (e.g. > 103rd Congress).

Associated Description Categories:

Cataloging Record
Archival Register
Header
Web Page

Digital Object Categories

Text
Sound
Still Image
Moving Image

Model of a Digital Object

A digital object may consist of constituent parts, any of which may in turn consist of constituent parts, and so on.

Constituent parts **are represented as** ***Z39.50 elements*****.**

Example

Single digital object consisting of several images (photos, text images, etc.) The set of images comprises a ***single*** **digital object, but each must be distinctly representable and the object must convey:**

(continued) ...

The object must convey:

- **that there are distinct images,**
- **how many,**
- **individual characteristics.**

More Complex Example

digital object not only includes a number of images, but also additional constituent parts, further structured.

e.g. each constituent part may consist of several images.

This introduces an intermediate level of aggregation.

model

- **Arbitrary levels of aggregation.**
- **Object represented as tree.**
  - **Non-leaf nodes have arbitrary number of subtrees/leaves.**
  - **Leaf nodes represent data.**
- **Every node has string tag.**
  - **Conveys to the user what that node represents.**
  - **Description may accompany node, when string tag not sufficiently descriptive.**

Model could represent, for example:

- Digital object consisting of 10 boxes, each with 20 folders, each with 30 photos. String tags such as ’box’, ’folder’, and ’photo’ used to convey the type of element (type conveyed to the user, not the client).

- A folder might include a variety of photos, maps, correspondences, etc. and the correspondences consist of several sequential digitized pages.

- Digital object may consist of multiple volumes, each with a table of contents, several chapters, each chapter with sections, etc. String tags such as ’volume’, tableOfContents’, ’chapter’, ’section’, etc. could be used.

Repeating elements and ordinal occurrence

Example: an object has multiple volumes:
"volume 1", "volume 2" etc.

> **"Volume 2" would be represented by second occurrence of element with tag volume'.**

Similarly:

- **"Third chapter",**
- **"fifth image" or**
- **"first five pages"**

Supported by GRS-1 and eSpec.

Metadata and Inherritance

A variant spec or metadata element may apply at any node (leaf or non-leaf) of the digital object tree.

Rules of inheritance

For any leaf node:

- **If metadata is attached, it applies to that leaf only.**

- **If not, the most immediately superior occurrence, if any, of a metadata component of the same type applies.**

"Representations" of a Digital Object

E.g.

- "thumbnail",
- "highly compressed",
- "high resolution",
- "original",
- "reference image".

May apply to object as a whole or to arbitrary component.

Represented as Z39.50 variants; rules of inheritance above apply.

Element	Tag	type	Occur.	Rep.
object	1/13	Object	mand.	no

tagSet-M element 13 ('record') description includes

"…. tagSet-M elements that occur subordinate to this element apply only to that nested record."

Used here to encapsulate schema identifier (tagSet-M element 1) that will pertain to, and only to, the subordinate structure.

Object

Element	Tag	type	Occur./ value	Rep.
schema Identifier	1/1	Object Ident-ifier	mandatory; oid of this schema	no
root	4/1	Tree	mandatory	no

Object

Element	Tag	type	Occur./ value	Rep.
schema Identifier				
root	4/1	**Tree**	mandatory	no

Tree

Element	Tag	type	Occur	Rep.
metadata	4/2	Metadata	opt.	no
child	3/ string	Tree or OCTET STRING	mand.	yes

Metadata

Element	Tag	Datatype
globalIdentifier	4/5	International String
briefDescription	2/17	International String
elementOrdering	4/6	International String
creationDate	1/15	Generalized Time
dateLastModified	1/16	Generalized Time
dateLastReviewed	1/17	Generalized Time

global Identifier	**An element may physically belong to more than one object; though this is otherwise transparent to the client, client may use this identifier to determine that it has already retrieved this element.**
brief Description	**Addit'l description if string tag not sufficiently descriptive.**
element Ordering	**Applicable only to non-leaf elements. How child elements are ordered.**