



METADATA

BUILDING BLOCKS FOR KNOWLEDGE

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DISA
DIGITAL INNOVATION
SOUTH AFRICA

Overview

- ▶ To describe and explore the similarities and differences of traditional libraries and digital libraries focusing on metadata
- ▶ To understand and identify metadata, types and functions
- ▶ To introduce the Dublin Core

Reading on the laptop...



TRADITIONAL vs DIGITAL LIBRARIES

Traditional libraries

- Emphasis on storage and preservation of physical items such as books and periodicals , videos etc.
- Cataloguing at a high level rather than one of detail, eg. Author and subject indexes as opposed to full text.
- Browsing based on physical location of materials, eg. Books on politics will be close together on the shelves
- Users need to visit the library at a physical location to make use of the material.

Digital libraries

- Emphasis on access of digitized materials wherever they may be located
- Cataloguing down to individual words.
- Browsing based on hyperlinks, keywords, or any other defined relation; materials on the same subject need not be in the same location in any physical sense
- Users need to make use of the world wide web to access the digital library.

Finding physical resources and information

- ▶ In everyday life
 - clothing tags
 - television guides to programmes
 - information on packaging
- ▶ catalogues are useful for finding resources
 - Concise information representing the resource
- ▶ Indexes, directories are useful for finding resources
 - Lists guiding you to the resource

Digital resources

- ▶ Using computers to create, manage and store information in digital format

and

- ▶ Using computers to access these materials in digital format
 - Collections of digital files or datastreams
 - Digital files managed in a different way
 - End-users are accessing digital resources without going to a physical location

World Wide Web

- ▶ looking for information on the Web
 - Large returns of irrelevant information
 - Browsing is time consuming
 - Clicking through numerous links and pages
 - Abandoned searches
- ▶ you can't always find what you are looking for ...

What is missing?

- ▶ pathways to the resources
- ▶ lack of information about the resources on the web
 - concise descriptions
 - consistent descriptions
 - structured descriptions
- ▶ “data about data” - metadata

What is Metadata?

- ▶ Data about Data
- ▶ Information about Data
- ▶ Of any sort and in any format
- ▶ Readable by computers
- ▶ Understandable by humans

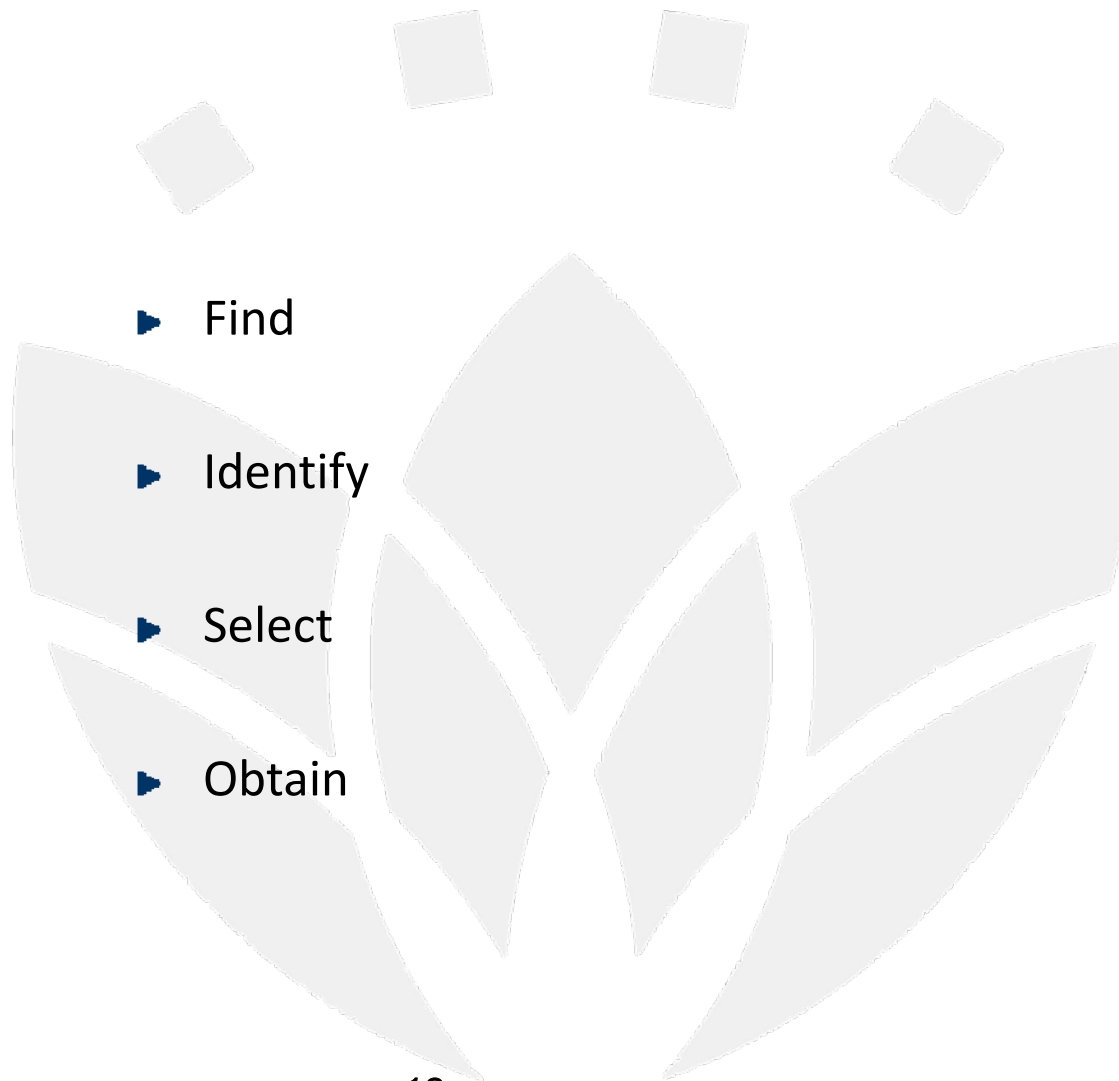
Definition of Metadata

- ▶ Metadata describes other data and provides information about a certain item's content.
- ▶ For example, an image may include metadata that describes how large the picture is, the colour depth, the image resolution, when the image was created, and other data. A text document's metadata may contain information about how long the document is, who the author is, when the document was written, and a short summary of the document.

Why use metadata?

- ▶ Allows for **standardised**, precise description of resources
- ▶ Allows for **sharing** of information
- ▶ Enables resource **discovery**
- ▶ Enables **interoperability** between institutions
- ▶ **Authentication** and **reliability** of data

IFLA's functional requirements for bibliographic/metadata records (FRBR)



Types of Metadata

- ▶ Descriptive
- ▶ Administrative (including Rights)
- ▶ Preservation
- ▶ Technical
- ▶ Structural

Descriptive Metadata

- ▶ Title,
- ▶ Author
- ▶ Description of resource
- ▶ Subjects and Keywords
- ▶ Publisher
- ▶ Date

- ▶ Information describing the intellectual content of the object
- ▶ Descriptive metadata = cataloguing

Structural Metadata

- ▶ Information that ties each object to make up logical units.
- ▶ Information that relates individual images of pages from a book to the others that make up the book.

Administrative and Rights Metadata

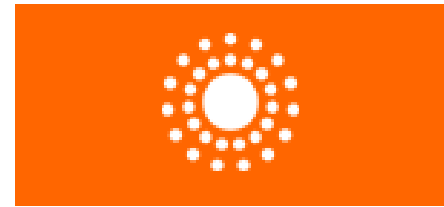
- ▶ Information used to manage the object or control access to it.
- ▶ Included here is information on how it was scanned, its storage format, copyright, and the necessary information required for the long-term preservation of digital objects.

International Standards and Schemes

- ▶ Metadata should be created according to appropriate international standards or schemes.
- ▶ This will depend on the type and format of the physical object which is being described
- ▶ Types include: Dublin Core (DC); Text encoding Initiative (TEI) and Encoded Archival Description (EAD)

Dublin Core

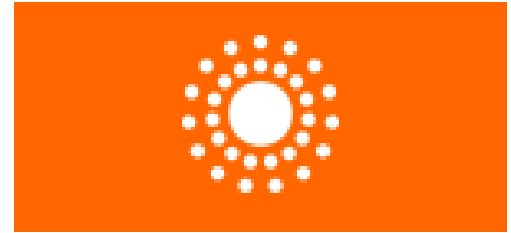
- ▶ “Dublin” in the name Dublin Core refers to Dublin, Ohio, U.S., where the work originated from an original workshop hosted by OCLC IN 1995
- ▶ “Core” refers to the fact that the metadata element set is a basic yet expandable core list of elements
- ▶ All fields on Dublin Core are optional and all are repeatable
- ▶ 1 Metadata record = 1 Item



Dublin Core Metadata Elements

Title	Creator
Subject	Publisher
Description	Contributor
Language	Rights
Source	Date
Relation	Format
Coverage	Identifier
	Type

Dublin Core



- international standard for metadata creation
- simple element set – 15 elements
- describing simple resources (eg photos)
- “simple” and “qualified”
- expressed in XML – “Interoperability Standard”

What is XML?

- ▶ eXtensible Mark-up Language
- ▶ XML is for structuring data
- ▶ XML looks a bit like HTML
- ▶ XML is text but isn't meant to be read
- ▶ XML is a family of technologies – X-link, XSL
- ▶ XML is license-free and platform-independent
- ▶ *De facto* standard for metadata on the Web

Use of keywords/thesaurus/subject headings

- ▶ Use of controlled vocabularies
- ▶ Consistency
- ▶ Efficient retrieval of resources

DISA - Dublin Core Metadata Generator

Please fill in the relevant fields, making use of the drop down lists where applicable. Once you have completed the form, press the Preview the Dublin Core Record button once.

Title(required)

Identifier(required)

Repository Collection Folder

Creator *Enter one per field*

 [Add another value](#)

Contributor *Enter one per field*

 [Add another value](#)

Publisher

Description(required) (You may enter up to 900 characters.)

900 characters still available.

Language *Choose one from the drop down list*

English [Add another value](#)

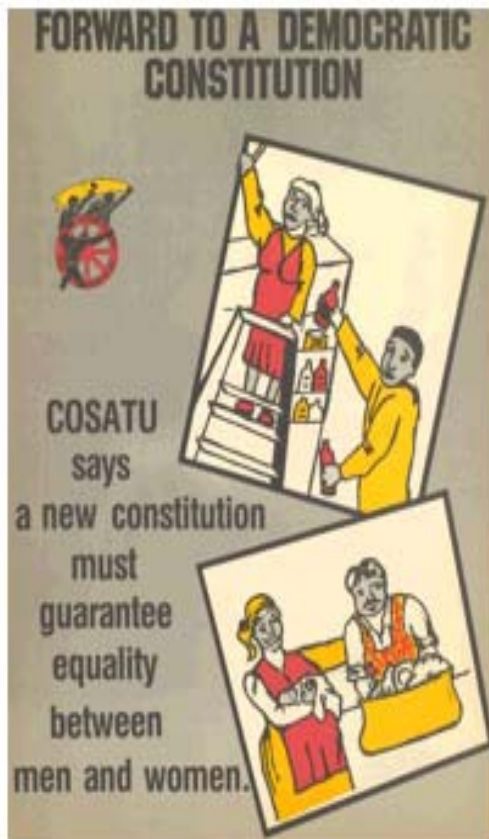
XML metadata record

The screenshot displays the Altova XMLSpy interface with an XML metadata record. The record is structured as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<record xmlns:dc="http://purl.org/dc/elements/1.1/">
  <dc:title>
    Forward to a democratic constitution
  </dc:title>
  <dc:identifier>
    pos00000000.043.053.1061
  </dc:identifier>
  <dc:description>
    Equality in constitution between men and women. Two blocks with images of men doing women's work. COSATU logo. Grey background with black lettering.
  </dc:description>
  <dc:language>
    eng
  </dc:language>
  <dc:subject>
    POSTERS
  </dc:subject>
  <dc:subject>
    CONSTITUTIONS
  </dc:subject>
  <dc:subject>
    DEMOCRACY
  </dc:subject>
  <dc:subject>
    EQUALITY
  </dc:subject>
  <dc:subject>
    GENDER
  </dc:subject>
  <dc:subject>
    CONGRESS OF SOUTH AFRICAN TRADE UNIONS
  </dc:subject>
  <dc:coverage>
    SOUTH AFRICA
  </dc:coverage>
</record>
```

The interface includes a menu bar (File, Edit, Project, XML, DTD/Schema, Schema design, XSL, Authentic, Convert, View, Browser, Tools, Window, Help), a toolbar with various icons, and a status bar at the bottom showing the file path 'pos00000000.043.053.1061' and the text 'Ln 1, Col 1'. The system tray at the bottom indicates the time as 08:53 AM.

Web display of metadata



Title	Forward to a democratic constitution
Creator	
Contributor	
Publisher	
Date	0000-00-00
Resource type	Posters
Language	English
Keywords	POSTERS CONSTITUTIONS DEMOCRACY EQUALITY GENDER CONGRESS OF SOUTH AFRICAN TRADE UNIONS
Coverage	SOUTH AFRICA
Source	SAHA
Extent	1 poster
Description	Equality in constitution between men and women. Two blocks with images of men doing women's work. COSATU logo. Grey background with black lettering.
Relation	
Digital rights	Digital Innovation South Africa

In conclusion...

When creating descriptive metadata ask yourself ...

- ▶ Is this record useful for resource discovery?
 - Think like a researcher

- ▶ Is the content correct?
 - Use reliable reference resources
 - Spelling errors?
 - Controlled vocabularies?
 - Consistency

- ▶ Have I adequately described the physical object?

References

- ▶ *Digital vs. Traditional Libraries* http://www.wtec.org/loyola/digilibs/02_03.htm: 08/07/2009
- ▶ *DISA Guidelines for best practice: indexing and metadata* http://www.disa.ukzn.ac.za/index.php?option=com_docman&task=cat_view&gid=62&Itemid=88 08/07/2009
- ▶ *Metadata* <http://www.techterms.com/definition/metadata> 15/07/2009
- ▶ Rowley, Jennifer and Hartley, Richard J. 2008. *Organising knowledge*
- ▶ *Playing with building blocks* <http://www.edupics.com/en-coloring-pictures-pages-photo-playing-with-building-blocks-i7336.html> 08/07/2009