

Title: OSU Knowledge Bank Metadata Application Profile

Creator: The Ohio State University Knowledge Bank Policy Committee
libkbhelp@list.acs.ohio-state.edu
(614) 292-6151

Date Issued: 2004-6-18

Date Modified: 2006-06-28

Identifier:

Replaces: Not applicable

Is Replaced By: Not applicable

Latest Version: 1.0

Status of Document: This is an OSU Knowledge Bank recommendation.

Description of Document: This application profile recommends the implementation of a core set of metadata elements and Dublin Core Metadata Element Set mappings (<http://www.dublincore.org>) for use in projects in the [OSU Knowledge Bank](#) .

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Introduction

The Ohio State University Knowledge Bank (Knowledge Bank) includes the digital assets and information services available to or being created by OSU faculty, staff, and students. Contributors to the system, in addition to adding digital objects, will be required to contribute additional information about the digital objects called metadata. This document describes the necessary elements that comprise the set of metadata elements used in the Knowledge Bank.

Purpose

The primary purpose of this document is to provide guidance to contributors in the metadata creation process and to improve both local and remote resource discovery. These guidelines are adopted from the OhioLINK Metadata Application Profile (MAP) and ensure the consistency required for effective access while also maintaining enough flexibility to accommodate a variety of collections.

The following pages contain the basic guidelines for creating Knowledge Bank metadata records for digital objects and the original resources from which they may be derived. Digital objects may include reformatted (digitized) photographs, text, audio, video, and three-dimensional artifacts as well as resources that are born digital such as honors theses or learning objects. Application of these best practices will result in standards-based records that:

1. improve retrieval accuracy and resource discovery;
2. facilitate multi-institutional interoperability and quality control;
3. comply with the Open Archives Initiative Protocol for Metadata Harvesting; and
4. enable collection migration, import & export between the Knowledge Bank and other systems as necessary.

These guidelines will also provide a foundation for OSU Knowledge Bank training and consultation, and will serve as a reference for Knowledge Bank software enhancements and development. This document will need to evolve over time and it is suggested that a feedback mechanism and scheduled reviews be established.

Background

The OhioLINK Data Management Standards Committee (DMSC) Metadata Task Force, a task force created by the DMSC in April 2003, prepared metadata guidelines for the consortium which were then adopted by DMSC. The Knowledge Bank Advisory Committee adopted the guidelines as the standard for the OSU Knowledge Bank in June 2004.

Knowledge Bank Structure

The Knowledge Bank captures, distributes and preserves OSU's digital resources. Here you can find articles, working papers, preprints, technical reports, conference papers and data sets in various digital formats. Content grows daily as new communities and collections are added to the Knowledge Bank. The Knowledge Bank content is mainly organized around Communities which correspond to OSU administrative entities such as schools, departments, labs and research centers. Within each community there can be an unlimited number of collections. Within each collection there can be an unlimited number of items. Each Community acts as a “sponsor” of the digital resources in its collections, or a digital publisher. For more information about the Knowledge Bank, please review the [Frequently Asked Questions](http://library.osu.edu/sites/kbinfo/faqs.html) (<http://library.osu.edu/sites/kbinfo/faqs.html>) page.

Selection of Standards

Because of statewide developments in digital repositories, the Knowledge Bank would like to follow any statewide standards in use. Because Dublin Core (DC) is the basis for the statewide standard and supported by the Knowledge Bank software, the Knowledge Bank core element set is based the DC metadata scheme. It is the logical choice for the following reasons:

1. It is the de-facto standard in the digital library community with a number of best practice documents written to guide implementation efforts.
2. It is the metadata foundation on which the Open Archives Initiative is based, therefore it supports harvesting by external organizations.
3. It enables widespread access across distributed collections of heterogeneous resources within the Knowledge Bank community.
4. It supports the creation of resource descriptions that are easy to create and understand.
5. It is extensible and flexible.

The resulting Knowledge Bank element set consists primarily of elements from Dublin Core and supplementary elements deemed necessary in this environment. Mapping to the Dublin Core is indicated for each individual element. Dublin Core definitions have been retained for those elements drawn directly from the DC element set. Any refinements have been made according to Dublin Core Metadata Initiative (DCMI) principles. Use of qualifiers, if at all, for each element is described. Additional information and URLs are provided in the References section.

Extensibility of Metadata in the OSU Knowledge Bank

This metadata element set applies to all contributions to the OSU Knowledge Bank. The intent is not to provide an exhaustive set of elements covering every attribute of all possible entity types but to establish a common set of elements that support first and foremost resource discovery and only secondarily resource description.

However, some contributions to the Knowledge Bank may require metadata elements not included in this set. From the Knowledge Bank 's inception and throughout its evolution we recognize the need to accommodate metadata that may be project or domain-specific (i.e. appropriate to a particular subject, discipline, or object type) and therefore NOT suitable across all collections. In support of this, all collections will use the CORE elements listed but will have additional elements specific to the project or domain that can be added as needed. OSU Knowledge Bank staff will work with contributors to determine the metadata requirements of the digital asset(s).

Software

Contributors to the OSU Knowledge Bank will use DSpace© software for uploading media data (images, audio, video, etc.) and for describing that data. This interface may evolve and include different features as appropriate (e.g. templates for commonly used pre-defined values). Instructions for accessing and using the Knowledge Bank system will be supplied to contributors.

Snapshot of Knowledge Bank Element Set

The following list provides an at-a-glance view of the OSU Knowledge Bank Core Element set in the same order as presented later in the document in detail. **Mandatory elements** appear in **bold**.

- **Title**
 - Alternative
- **Creator**
- Contributor
 - Advisor
 - Author
 - Editor
 - Illustrator
 - Other
- **Date**
 - Accessioned
 - Available
 - Copyright
 - Created
 - **Issued**
 - Submitted
- Description
 - Abstract
 - Embargo
 - Provenance
 - Sponsors
 - Table of Contents
- Subject
 - Classification
 - DDC
 - LCSH
 - MESH
 - Other
- Coverage
 - Spatial
 - Temporal
- Language
 - ISO
- Type
- Publisher
- Source
 - URI
- Rights
 - URI
- Relation
 - Haspart
 - Hasversion
 - Isbasedon
 - Isformatof
 - Ispartof
 - Ispartofseries
 - Isreferencedby
 - Isreplacedby
 - Isversionof
 - Replaces
 - Requires
 - URI
- **Format**
- **Identifier**
 - Citation
 - Govdoc
 - ISBN
 - ISMN
 - ISSN
 - Other
 - Sici
 - URI

General Input Guidelines

Input guidelines are provided for all non-system supplied elements, including guidelines for commonly encountered anomalies or otherwise ambiguous situations. While it is impossible to anticipate all situations, every effort has been made to assist contributors in metadata creation. Recommended best practice is to select or establish content standards prior to project implementation and to apply them consistently across elements as appropriate. Examples of established content standards include: Anglo-American Cataloguing Rules (AACR2) and Describing Archives: A Content Standard (DACS). Select terms from controlled vocabularies, thesauri and heading lists; establish new terms and headings using the same standards. Employing terminology from these types of sources ensures consistency, reduces spelling errors and can improve the quality of search results. In some cases, this document refers to specific external content standards such as the date/time standard ISO 8601. Full citations for text-based standards or URLs for those that are Internet accessible are provided in the references.

1. **Qualifiers.** Some elements in the core set have refinements (or qualifiers) which more accurately describe the information contained in the field. For example, an identifier for an item could be a citation or URL (noted as identifier.citation and identifier.url, respectively). For elements with qualifiers, each available qualifier will be listed and defined on the element's page.
2. **Repeatable Values.** Some elements such as "subject" will have more than one value. Those elements are called repeatable elements and allow multiple values. For these elements, the Knowledge Bank software will supply an "Add More" button on the submission screen. Clicking the button will create new blank entry fields for use.
3. **Names.** Apply the same rules or guidelines to format names of creators, digital publishers, contributors, and names entered as subjects. If not following established rules such as Anglo-American Cataloguing Rules (AACR2), then use these guidelines:
 - a. Determine correct form of the name when possible. The Library of Congress Authority File (<http://authorities.loc.gov>) or other locally specified bibliographic utility (OCLC, RLIN, etc.) should be consulted. If the name is not in a national or local list, use the name the person is most commonly known by.
 - b. Enter personal names in the appropriately labeled input box in the Knowledge Bank: last name, first name and middle name, initial, or suffix. If it is not obvious how to invert or structure the name, use the form of the name given in an authority list or enter it as it would be in the country of origin. Birth and/or death dates, if known, can be added, in accordance with the authorized form of name.
 - c. Enter group or organization names in full, direct form. In the case of a hierarchy, list the parts from the largest to smallest.
 - d. If there is doubt as to how to enter a name and the form of name cannot be verified in an authority list, enter it as it appears and do not invert (Example: Sitting Bull).
4. **Dates.** Enter dates in the appropriately labeled input box in the Knowledge Bank: choose a month, then enter a date and year (format: YYYY).
 - a. In some cases, the required date for the Knowledge Bank will be generated by the system.
 - b. When using a date field, only the year (format: YYYY) is required. More specific date information (i.e. month and day or month) may be required by a particular collection's metadata content standard.
 - c. For a range of dates in other fields, enter the dates on the same line, separating them with a space hyphen space (1910 – 1920)
 - d. To show date is approximate, follow the date with a question mark (1890?)

- e. Input B.C.E. dates (200 B.C.E.) and time periods (Jurassic) as needed.
- 5. **Diacritics.** Enter diacritics and other non-standard characters as needed. In general, Unicode is offered that will support any character on any platform.
- 6. **Other.** Custom metadata services are available. Please contact the OSU Knowledge Bank at libkbhelp@lists.acs.ohio-state.edu.

Elements

The following section describes each element in detail, including how it is applied and specific guidelines for entering values. Each element occupies a single page. The “Element Documentation Format” is not an element itself, but rather a guide to the structure of each element page that includes instructive descriptions of the following items:

- Element Name
- Definition
- Obligation
- Occurrence
- Qualifier(s)
- Recommended Schemes
- Input Guidelines
- Examples
- Maps to DC Element

Element Documentation Format

Element Name:

The name given to the data element as it appears in the database. An element represents a single characteristic or property of a resource.

Definition: Specifies the type of information required for the named element. In most cases definitions are taken directly from the Dublin Core Element Set definitions [<http://www.niso.org/international/SC4/n515.pdf>].
Comments: appear in italics and may be included to provide additional information or clarification.

Obligation: Indicates whether or not a value must be entered. An obligation will be designated as one of the following:

1. *Mandatory* means that a value must be entered even if it requires the creation of an arbitrary value.
2. *Required (if available)* means that a value must be included if it is available.
3. *Optional* means that it is not required to include a value for this element.

Occurrence: Indicates whether only a single value or multiple values can be used.

1. *Repeatable:* If the occurrence is Repeatable, more than one value can be entered.
2. *Non-Repeatable:* If the occurrence is Non-Repeatable then only a single value can be used.

Qualifier(s): If applicable, indicates whether an element has refinements or not. If so, the qualifiers will be listed and defined below.

1. [element name].[1st refinement]: Definition of its use within the Knowledge Bank
2. [element name].[2nd refinement]: Definition of its use within the Knowledge Bank
3. etc.

Recommended Schemes: Established lists of terms or classification codes from which a user can select when assigning values to an element in a database. There are two types of schemes: Vocabulary Encoding Schemes and Syntax Encoding Schemes. Vocabulary schemes are controlled vocabularies such as LCSH and other formal thesauri. Syntax schemes indicate that the value is a string formatted in accordance with a formal notation, such as "2000-01-01" as the standard expression of a date. See the list of recommended schemes included in the References.

Input Guidelines:

Input Guidelines list common conventions and syntax rules used to guide the data entry process. In the case of system supplied values a brief explanation of the process will be provided.

Examples:

Examples are provided to illustrate the types of values, conventions and syntax used for the element.

Maps to DC Element: Gives the Dublin Core element equivalent, if applicable.

Title

Definition: A name given to a resource. Typically a title will be a name by which the resource is known. It may also be an identifying phrase or object name supplied by the holding institution.

Obligation: Mandatory

Occurrence: Non-Repeatable

Qualifier(s):

title.alternative: substitute or alternative names given to the resource

Recommended Schemes: None.

Input Guidelines:

1. Identify and enter one Title element per resource according to the guidelines that follow.
2. Transcribe title from the resource itself, such as book title, photograph caption, artist's title, object name, etc., using same punctuation that appears on the source.
3. When no title is found on the resource itself, use a title assigned by the holding institution or found in reference sources. If title must be created, make the title as descriptive as possible, avoiding generic terms such as Papers or Annual report. Use punctuation appropriate for English writing.
4. When possible, exclude initial articles from title. Exceptions might include when the article is an essential part of the title or when local practice requires use of initial articles.
5. Capitalize only the first letter of the first word of the title and of any proper names contained within the title.
6. Consult established cataloging rules such as Anglo-American Cataloguing Rules (AACR2) or Describing Archives: A Content Standard (DACS) for more information.

Examples:

1. Dance from the Quill:
Reimagining Alexander Pope's The Rape of the Lock
2. Using metadata standards to support interoperability
3. Is the academy ready for learning objects?
4. Algal and Lemna populations continue to fluctuate seasonally and basin-to-basin in the Olentangy River Wetlands

Maps to DC Element: Title

Creator

Definition: Entity or entities primarily responsible for making the content of the resource. Examples of creator(s) include authors of written documents, artists, illustrators, photographers, collectors of natural specimens or artifacts, organizations that generate archival collections, etc. *Comments: Entities with a secondary role in the creation process should be entered under 'Contributor'.*

Obligation: Mandatory

Occurrence: Repeatable

Recommended Schemes: Library of Congress Authority File.

Input Guidelines:

1. Enter the name(s) of the creator(s) of the object. Construct names according to General Input Guidelines. Secondary authors, editors, etc. should be entered using the Contributor element.
2. Leave the field blank if a creator cannot be determined.
3. Repeat the names of creators in the subject element only if the object is also about the creator in some way. (Example: A record for a self portrait of Picasso would list Picasso, Pablo, 1881-1973 as both creator and subject; a record for a work by Picasso would list Picasso, Pablo, 1881-1973 only in the creator element).

Examples:

1. Pearl, Dennis K.
2. Couch, Nena
3. Kantz, John A.
4. Bennett, Jennifer
5. Girves, Jean Elizabeth, 1948-

Maps to DC Element: Creator

Contributor

Definition: Entity or entities responsible for making contributions to the content of the resource. Those listed should be person(s) or organization(s) who made significant intellectual contributions to the resource but whose contribution is secondary to any person(s) or organization(s) already specified in a Creator element. *Comments:* An entity with a primary role in the creation process should be entered under 'Creator'.

Obligation: Optional

Occurrence: Repeatable

Qualifier(s):

contributor.advisor: person(s) or organization(s) who advised the creator on the content of the work

contributor.author: person(s) or organization(s) who contributed authorship to the work

contributor.editor: person(s) or organization(s) who edited content of the work

contributor.illustrator: person(s) or organization(s) who illustrated the work

contributor.other: person(s) or organization(s) who contributed to the content of the work in any other manner

Recommended Schemes: Library of Congress Authority File

Input Guidelines:

1. Construct names according to General Input Guidelines.

Examples:

1. Martin, Lee
2. Greenbaum, Robert
3. Shoemaker, Brian
4. Gilliom, M. Eugene

Maps to DC Element: Contributor

Date

Definition: Creation or modification date(s) for the digital resource or for the original object from which the digital object was derived.

Obligation: Required (if available)

Occurrence: Repeatable

Qualifier(s):

date.accessioned: date that the resource accessioned into the system (auto assigned)

date.available: date that resource was made publicly available in the Knowledge Bank (auto assigned)

date.copyright: date that the resource was copyrighted

date.created: date the digital resource or original work was created

date.issued: date the digital resource was issued by publishing entity

date.submitted: date the resource was submitted to the Knowledge Bank

Recommended Schemes: ISO 8601

Input Guidelines:

1. A resource may have several associated dates, including creation date, copyright date, etc. Enter dates according to General Input Guidelines.

Examples:

1. 1965-05-04
2. 1988
3. 1969-07
4. 1969-1988

Maps to DC Element: Date

Description

Definition: An account of the content of the resource. *Comments:* Use other, more specific elements where applicable.

Obligation: Required (if available)

Occurrence: Repeatable

Qualifier(s):

description.abstract: abstract or summary of the resource

description.embargo: statement detailing the length of time an item was delayed from dissemination in the Knowledge Bank

description.provenance: account of the technical, revision, and/or custodial history of the resource

description.sponsorship: declaration of an entity or entities that sponsored the creation of the resource

description.statementofresponsibility: identification of entity or entities who created or contributed to resource

description.tableofcontents: listing of contents of the resource

description.uri: internet address of an alternate, supplemental, or only description of the resource

Recommended Schemes: None.

Input Guidelines:

1. Enter descriptive text, remarks, and comments about the object. This information can be taken from the object, repository records, or other sources.
2. Enter here specialized information not included in other elements such as provenance, distinguishing features, inscriptions, the nature of the language of the resource, and/or history of the work.
3. Use punctuation necessary to make entry clear and easy to read.

Examples:

1. Looking north with the Ballcourt in the foreground and Temple I in the background
2. Contents: Dear Friends; \$3.85 Million Cohen Foundation Gift Supports Library Renovation, Diversity Lecture; Thomas Nast: A Celebration of His Contribution to American Culture; OSU Authors Present; Renovation Update for the Thompson (Main) Library; Libraries welcome new Library Campaign Director; Ohio State Pioneers Oral History DVD; Thurber Collection Benefits from Save America's Treasures Grant; Friends Award 2002 Rudolph Student Book Collector Contest Scholarships; Calendar of Events.
3. Sanduskians eagerly watched George Bing as he made adjustments to his engine during a test flight on the Sandusky Bay ice. Bing's design resembled that of the Hudson flier Glenn Curtiss had flown successfully from Euclid Beach to Cedar Point, Ohio, in 1910. However, Bing believed he had incorporated new and important safety features in his biplane. Safety was an important component if a regular air mail route between Sandusky, Ohio, and Kelley's Island were to be established.
4. In German and English, in parallel columns.

Maps to DC Element: Description

Subject

Definition: A topic of the content of the resource. Typically, Subject will be expressed as keywords. Thesaurus terms, classification codes, or controlled vocabulary terms or names that describe a topic of the resource are used with the appropriate qualifiers. *Comments: Use coverage.spatial (geographic subject) and coverage.temporal (time period) to note specific geographic subjects or time periods.*

Obligation: Required (if available)

Occurrence: Repeatable

Qualifier(s):

subject.classification: used for terms from a classification scheme

subject.ddc: used for Dewey Decimal Classification terms

subject.lcsh: used for Library of Congress Subject Heading terms giving item level subject access

subject.mesh: used for Medical Subject Headings terms

subject.other: used for terms from local controlled lists giving collection level subject access

Recommended Schemes: It is strongly recommended that subject words and phrases come from established thesauri or discipline-related word lists, e.g. LCSH, Mesh, TGM, or from locally developed term lists.

Input Guidelines:

1. Determine subject terms using the resource itself, including title and description. Use words or phrases from established thesauri or construct new subject terms following the rules of an established thesaurus if available terms do not adequately describe content of resource. Construct names according to General Input Guidelines.
2. Subjects may be personal or organization names as well as topics, places, genres, forms, and events. Subject elements may describe not only what the object is, but also what the object is about.
3. Repeat the names of creators in the subject element only if the object is also about the creator in some way. (Example: A record for a self portrait of Picasso would list Picasso, Pablo, 1881-1973 as both creator and subject; a record for a work by Picasso would list Picasso, Pablo, 1881-1973 only in the creator element).

Examples:

1. information literacy
2. Promotion and tenure
3. Marie Byrd Land
4. Nicotine dependence
5. Virtual Reality

Maps to DC Element: Subject

Coverage

Definition: Describes the characteristics of the intellectual content of the resource, in relation to time and space.

Obligation: Optional

Occurrence: Repeatable

Qualifier(s):

coverage.spatial: refers to the location(s) covered by the intellectual content of the resource.

coverage.temporal: refers to the time period(s) covered by the intellectual content of the resource.

Recommended Schemes: TGN (Getty Thesaurus of Geographic Names), Library of Congress Authority File, Library of Congress Subject Headings, Local Terms

Input Guidelines:

1. Multiple places and physical regions may be associated with the intellectual content of a resource.
2. If using place names, select terms from a controlled vocabulary or thesaurus.
3. temporal.coverage is not necessarily the publication date or creation date.

Examples:

1. Alaska
2. Columbus (Ohio)
3. 18th Century
4. Middle Ages

Maps to DC Element: Coverage

Language

Definition: A language of the intellectual content of the resource. *Comments: Images do not usually have a language unless there is significant text in a caption or in the image itself, and would therefore not be coded for language.*

Obligation: Required (if available)

Occurrence: Repeatable

Qualifier(s):

language.iso: ISO639-2 code for languages

Recommended Schemes: None

Input Guidelines:

1. Select term(s) from list provided in submission form.
2. If language is not in the list, select "Other."
4. If the resource does not have a language (i.e. a photograph), select "N/A."
5. A textual description of the nature of the language may also be included in the Description element. (Example: In German and English, in parallel columns).

Examples:

1. English (United States)
2. German
3. Japanese

Maps to DC Element: Language

Type

Definition: The manifestation of the content of the digital resource.

Obligation: Required (if available)

Occurrence: Repeatable

Recommended Schemes: None

Input Guidelines:

1. Select term(s) from list provided in submission form.
2. If the “Type” of material you have is not listed, select “Other.”
3. Please send suggestions for new type values to libkbhelp@lists.acs.ohio-state.edu.

Examples:

1. Transcript
2. Application
3. Software
4. Thesis

Maps to DC Element: Type

Publisher

Definition: An entity responsible for making the resource available. Examples of a publisher include a university, college department, corporate body, publishing house, museum, historical society, project, repository, etc. who provide the digital object to OSU Knowledge Bank, as well as the entity that digitized the object. *Comments: The Knowledge Bank Community need not be repeated in the Publisher field.*

Obligation: Mandatory

Occurrence: Repeatable

Recommended Schemes: Library of Congress Authority File

Input Guidelines:

1. Construct names according to General Input Guidelines.
2. If the publisher is the same as the creator or contributor, enter the name or entity in both elements.

Examples:

1. The Ohio State University. Byrd Polar Research Center
2. The Ohio Academy of Sciences
3. The Ohio State University. Arts (College of the)

Maps to DC Element: Publisher

Source

Definition: The immediate parent (manifestation) of the digital resource. This value may be the same as Type.

Obligation: Optional

Occurrence: Repeatable

Qualifier(s):

source.uri: location of the source or record for the source of the digital resource being described.

Recommended Schemes: None

Input Guidelines:

1. Use values consistently.
2. Where applicable, use a discipline specific authority file or controlled vocabulary.

Examples:

1. 35 MM Negative
2. 4" x 5" Transparency
3. VHS

Maps to DC Element: Source

Rights

Definition: Information about rights held in and over the resource. Typically, Rights will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), and Copyright. The Knowledge Bank has been granted non-exclusive rights to reproduce, translate, and/or distribute each digital resource for preservation purposes and inclusion in the Knowledge Bank. *Comments: A Creative Commons license may also be assigned to a digital resource to govern use of a work stored in the Knowledge Bank.*

Obligation: Optional

Occurrence: Repeatable

Qualifier(s):

rights.uri: uri that contains information regarding the rights over the resource

Recommended Schemes: None

Input Guidelines:

1. Enter a textual statement and/or URL pointing to a use and access rights statement for digital resources on the Internet.
2. This statement may be a general rights statement for the institution, for the whole collection, or a specific statement for each resource.
3. The statement may be general, providing contact information, or specific, including the name of the rights holder.

Examples:

1. Copyright 1999 Ohio State University
2. U.S. and international copyright laws protect this digital image. Commercial use or distribution of the image is not permitted without prior permission of the copyright holder.
3. Please contact libkbhelp@lists.acs.ohio-state.edu for permission to use the digital image.

Maps to DC Element: Rights

Relation

Definition: Name or other information for other objects or group of objects to which the resource is related.

Obligation: Optional

Occurrence: Repeatable

Qualifier:

relation.haspart: identification of physically or logically related portions of the digital resource

relation.hasversion: identification of a version, edition, or adaptation of the resource

relation.isbasedon: identification of a version of a work from which the digital resource is derived

relation.isformatof: identification of another format in which the digital resource is available

relation.ispartof: identification of referenced work for which the digital resource is a physical or logical part

relation.ispartofseries: identification of series to which the digital resource belongs

relation.isreferencedby: identification of a work that references the digital resource

relation.isreplacedby: identification of a work that replaces the digital resource

relation.isversionof: identification of a work that is a version of the digital resource

relation.replaces: identification of a work that is replaced by the digital resource

relation.requires: identification of a work that is required by the digital resource

relation.uri: location that supplies relational information about the digital resource

Recommended Schemes: None

Input Guidelines:

1. Enter name of collection to which the resource belongs. Include sufficient information to enable users to identify, cite, and locate or link to the related resources.

Examples:

1. Annual reports (Olentangy River Wetland Research Park)
2. OSUL Faculty and Research Publications
3. Learning Objects Research Collection

Maps to DC Element: Relation

Format

Definition: The manifestation of the digital resource. This element is automatically captured and assigned by the Knowledge Bank software. Properties such as file format (e.g. jpeg, tiff, ram, mov, mpeg, etc.) and file size are automatically captured. While many file types are recognized, some but not all are supported. Please contact the [Knowledge Bank staff \(libkbhelp@lists.acs.ohio-state.edu\)](mailto:libkbhelp@lists.acs.ohio-state.edu) if you have any questions or concerns about a file type you are using.

Obligation: Mandatory

Occurrence: Non-Repeatable

Recommended Schemes: Internally Defined.

Input Guidelines:

1. This element is automatically captured by the Knowledge Bank software

Examples:

1. IMAGE, JPEG, 250Kb
2. AUDIO, .WAV, 2.4 Mb
3. VIDEO, .MPEG 319Mb

Maps to DC Element: Format

Identifier

Definition: A ID given to the digital object various entities.

Obligation: Mandatory

Occurrence: Non-Repeatable

Qualifier(s):

identifier.citation: formal citation for the resource

identifier.govdoc: government documents number for the resource

identifier.isbn: ISBN of the resource

identifier.ismn: ISMN of the resource

identifier.issn: ISSN of the resource

identifier.other: another identifier of the resource

identifier.sici: SICI of the resource

identifier.uri: URI where the resource is located

Recommended Schemes: None

Input Guidelines:

1. A persistent identifier (or a handle) is automatically assigned by the Knowledge Bank software

Examples:

1. <http://hdl.handle.net/1811/116>
2. RG.1323.212
3. 3395-2092
4. The Ohio Journal of Science, v. 56 no. 2

Maps to DC Element: Identifier

Knowledge Bank Input-Output Metadata Map

KB Element Name (users display)	Available Fields	Default Input Display (submission display)	Administrator Name (edit display -- All labels preceded by "DC".)	Indexed
Title		Title	Title	Y
Other titles	Alternative	Alternative title		Y
Creator		Author	Creator	Y
	Contributor		Contributor	Y
	Advisor	None	Contributor. Advisor	Y
	Author	None	Contributor. Author	Y
	Editor	None	Contributor. Editor	Y
	Illustrator	None	Contributor. Illustrator	Y
	Other	None	Contributor. Other	Y
Issue date	Issued	Date of Issue	Date. Issue	
	Date		Date	
	Accessioned		Date. Accessioned	
	Available		Date. Available	
	Copyright		Date. Copyright	
	Created		Date. Created	
	Submitted		Date. Submitted	
Description	Description	Description	Description	
Abstract	Abstract	Abstract	Description. Abstract	Y
	Provenance		Description. Provenance	
	Sponsors	Sponsors	Description. Sponsors	
	Table of Contents		Description. Table of Contents	
Keywords	Subject	Subjects	Subject	Y
	Classification		Subject. Classification	Y
	DDC		Subject. DDC	Y
	LCSH		Subject. LCSH	Y
	MESH		Subject. MeSH	Y
	Other		Subject. Other	Y
	Coverage		Coverage	
	Spatial		Coverage. Spatial	
	Temporal		Coverage. Temporal	
	Language	Language	Language	
	ISO		Language. ISO	

KB Element Name (users display)	Available Fields	Default Input Display (submission display)	Administrator Name (edit display -- All labels preceded by "DC".)	
Publisher	Type Publisher Source URI Rights URI Relation HasPart HasVersion IsBasedOn IsFormatOf	Type Publisher	Type Publisher Source Source. URI Rights Rights. URI Relation Relation.HasPart Relation.HasVersion Relation.IsBasedOn Relation.IsFormatOf	Y
Series/Report No.	IsPartOfSeries IsReferencedBy IsReplacedBy IsVersionOf Replaces Requires URI Format Extent Mime Type	Series/Report No.	Relation. IsPartOfSeries Relation.IsReferencedBy Relation.IsReplacedBy Relation.IsVersionOf Relation.Replaces Relation.Requires Relation.URI Format Format.Extent Format.MimeType	Y
Other identifiers	Identifier	Identifier	Identifier	
Citation	Citation	Citation	Identifier.Citation	Y
Other identifiers	Govdoc	Govdoc	Identifier.Govdoc	
Other identifiers	ISBN	ISBN	Identifier.ISBN	
Other identifiers	ISMN	ISMN	Identifier.ISMN	
Other identifiers	ISSN	ISSN	Identifier.ISSN	
Other identifiers	Other	Other	Identifier.Other	
Other identifiers	Sici	Sici	Identifier.Sici	

Knowledge Bank Core Element Set: Condensed View

ELEMENT NAME	OBLIGATION	OCCURRENCE of VALUES	MAPPING
Title	Mandatory	Non-Repeatable	DC.title
Creator	Mandatory	Repeatable	DC.creator
Contributor	Optional	Repeatable	DC.contributor
Date	Required (if available)	Repeatable	DC.date
Description	Required (if available)	Repeatable	DC.description
Subject	Required (if available)	Repeatable	DC.subject
Coverage	Optional	Repeatable	DC.coverage
Language	Required (if available)	Repeatable	DC.language
Type	Required (if available)	Repeatable	DC.type
Publisher	Mandatory	Repeatable	DC.publisher
Source	Optional	Repeatable	DC.relation.HasFormat
Rights	Optional	Repeatable	DC.rights
Relation	Optional	Repeatable	DC.relation
Format	Mandatory (system supplied)	Non-repeatable	DC.format
Identifier	Mandatory (system supplied)	Non-repeatable	DC.identifier

Knowledge Bank Core Element Set: Grouped by Function

Elements related to the original (regardless of format)	Elements related to the digital manifestation	Elements related to OSU Knowledge Bank asset management
Title	Publisher	Format
Creator	Source	Identifier
Contributor	Rights	
Date		
Description		
Subject		
Coverage		
Language		
Type		
Relation		

Glossary

This list includes specialized terms and their definitions. Some of these terms may not appear in the document but may carry significance within digital library community. Sources for definitions are listed in “Information Sources for Glossary” that immediately follows this section.

ADMINISTRATIVE METADATA: Metadata used to manage and administer information resources, e.g., intellectual property rights or technical information.

APPLICATION PROFILE: A set of metadata elements, policies, and guidelines and documentation that have been defined for a specific application.

ATTRIBUTE: A category of information about an element or entity. This category can be used to identify, qualify, classify or quantify the element or entity.

CROSSWALK: A map from the metadata elements of one scheme to the metadata elements of another. Crosswalks help promote interoperability.

DESCRIPTIVE METADATA: Metadata used for resource discovery.

DUBLIN CORE: A basic set of 15 metadata elements designed to represent core fields for the description of any electronic resource.

ELEMENT: A discrete unit of data about a resource. The Dublin Core standard uses 15 metadata elements, or categories of information, to describe a digital object. Elements may be further *qualified*.

ENCODING SCHEME: A scheme that helps interpret element values. Data entered following the rules of a specific encoding scheme may therefore be specifically interpreted according to that scheme. Examples can include parsing rules or controlled vocabularies.

ENTITY: An object or thing about which information needs to be known or held. An entity may be tangible, may be an activity or operation, or may be conceptual.

EXTENSIBLE: Able to be extended.

HARVESTING: Harvesting (or metadata harvesting) is a means of collecting metadata from repositories.

HYPertext MARKUP LANGUAGE (HTML): A text-formatting language for documents on the World Wide Web. HTML files can also contain embedded metadata tags to aid description and discovery. HTML is a subset of SGML.

INTEROPERABILITY: The ability of software and hardware on multiple machines from multiple vendors to communicate.

METADATA: In general, "data about data;" functionally, "structured data about data." Metadata includes data associated with either an information system or an information object for purposes of description, administration, legal requirements, technical functionality, use and usage, and preservation. In the case of Dublin Core, information that expresses the intellectual content, intellectual property and/or instantiation characteristics of an information resource.

METADATA REGISTRY: A publicly accessible system for recording and managing information about metadata schema.

NISO: National Information Standards Organization

OPEN ARCHIVES INITIATIVE (OAI): The OAI provides an application-independent interoperable framework based on metadata harvesting.

PRESERVATION METADATA: Metadata that facilitates long-term preservation of and access to electronic resources.

QUALIFIER: Qualifiers refine or restrict the meaning of an element.

RIGHTS METADATA: A type of administrative metadata, rights metadata enables the management of rights related to information resources.

SCHEMA: A set of metadata elements and their rules defined to describe a specified group of digital objects.

STRUCTURAL METADATA: Metadata that describes the internal organization of a resource. Structural metadata also aids navigation and display.

SYNTAX: The form and structure with which metadata elements are combined. How a metadata scheme is structured for exchange in machine-readable form. Common syntaxes include MARC, SGML, and XML.

TECHNICAL METADATA: A type of administrative metadata that identifies and describes the electronic formats comprising digital objects; used to document the creation and physical characteristics of electronic resources.

UNICODE: A means of representing any character from any language on any computer software or hardware platform. It is a 16-bit character set standard, designed and maintained by the non-profit consortium Unicode Inc.

URI: Short for Uniform Resource Identifier, the generic term for all types of names and addresses that refer to objects on the World Wide Web. A URL is one kind of URI.

Information Sources for Glossary

Caplan, Priscilla. Metadata Fundamentals for all Librarians. Chicago: ALA, 2003.

Clement, Gail and Winn, Pete. 24 Feb. 2001. Dublin Core Metadata Glossary. Final draft. 24 Feb. 2001. Dublin Core Users Guide Committee. <<http://library.csun.edu/mwoodley/dublincoreglossary.html>>

Creative Commons. Licenses Explained. 21 July 2005.
<<http://creativecommons.org/about/licenses/>>

Day, Michael and Powell, Andy. UKOLN Metadata Glossary. 9 August 2001.
<<http://www.ukoln.ac.uk/metadata/glossary/>>

Dekkers, M. "Application Profiles, or how to Mix and Match Metadata Schemas." Cultivate Interactive. Issue 3 (29 January 2001) <<http://www.cultivate-Int.org/issue3/schemas/>>

Dublin Core Metadata Initiative. Glossary. 12 April 2001.
<<http://dublincore.org/Documents/2001/04/12/usageguide/glossary.shtml>>

Gartner, Richard. METS: Metadata Encoding and Transmission Standard. May 2002. <http://www.jisc.ac.uk/uploaded_documents/tsw_02-05.pdf>

Heery, Rachel. "What is... RDF?" Ariadne. Issue 14 (March 1998). <<http://www.ariadne.ac.uk/issue14/whatis>>

Hillmann, Diane. "Using Dublin Core." Dublin Core Metadata Initiative Web Page. 6 August 2003.
<<http://dublincore.org/documents/usageguide/>>

Gilliland-Swetland, Anne J. Setting the stage. 5 July 2000. From Introduction to Metadata, Pathways to Digital Information. <http://www.getty.edu/research/institute/standards/intrometa/2_articles/index.html>

Howarth, Lynne C. Modelling a Metalevel Ontology: Overview of Selected Metadata Standards. 2002.
<<http://www.fis.utoronto.ca/special/metadata/overview.htm>>

Lombardi, Victor. Metadata Glossary. May 2003.
<http://www.noisebetweenstations.com/personal/essays/metadata_glossary/metadata_glossary.html>

McLellan, Tim. Data Modeling: Finding the Perfect Fit, An Introduction to Data Modeling. 1995.
<<http://www.islandnet.com/~tmc/html/articles/datamodl.htm#Introduction>>

Walsh, Norman. "What is XML?" A Technical Introduction to XML. 3 October 1998.
<<http://www.xml.com/pub/a/98/10/guide1.html>>

References

The following references include schemes and content standards recommended for defining the values of elements. They are grouped with the elements to which they apply.

Introduction

- Dublin Core Metadata Initiative
<http://dublincore.org/>
- Open Archives Initiative
<http://www.openarchives.org/>

General Input Guidelines

- AACR2 Anglo-American cataloguing rules. (2nd ed., 2002 revision) Chicago : American Library Association, 2002.
- APPM Hensen, Steven L. Archives, personal papers, and manuscripts : a cataloging manual for archival repositories, historical societies, and manuscript libraries. (2nd ed.) Chicago : Society of American Archivists, 1989.
- Library of Congress Authority File
<http://authorities.loc.gov/>

Creator

- LC Authority File
<http://authorities.loc.gov/>

Contributor

- LC Authority File
<http://authorities.loc.gov/>

Date

- ISO 8601
<http://www.w3.org/TR/NOTE-datetime>

Subject

- Library of Congress Authority File
<http://authorities.loc.gov/>
- LCSH (Library of Congress Subject Headings)
<http://lcweb.loc.gov/cds/lcsh.html>
- MeSH (Medical Subject Headings)
<http://www.nlm.nih.gov/mesh/meshhome.html>
- TGM (Thesaurus for Graphic Materials – I: Subject Terms)
<http://lcweb.loc.gov/rr/print/tgm1>

Spatial Coverage

- LCSH (Library of Congress Subject Headings)
<http://lcweb.loc.gov/cds/lcsh.html>
- DCMI Box (uses geographic limits to identify a region of space)
<http://dublincore.org/documents/dcmi-box>
- TGN (Getty Thesaurus of Geographic Names)
http://www.getty.edu/research/conducting_research/vocabularies/tgn/
- DCMI Point (uses geographic coordinates to locate a point in space)
<http://dublincore.org/documents/dcmi-point>
- ISO 3166 (uses 3-letter codes to represent names of countries)
<http://www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/index.html>

Temporal Coverage

- ISO 8601
<http://www.w3.org/TR/NOTE-datetime>
- LCSH (Library of Congress Subject Headings)
<http://lcweb.loc.gov/cds/lcsh.html>

Language

- ISO 639-2
<http://www.loc.gov/standards/iso639-2/englangn.html>

Work Type

- AAT (Art & Architecture Thesaurus Online)
http://www.getty.edu/research/conducting_research/vocabularies/aat/
- TGM (Thesaurus for Graphic Materials II: Genre and Physical Characteristics)
<http://lcweb.loc.gov/rr/print/tgm2>

Digital Publisher

- LC Authority File
<http://authorities.loc.gov/>

Digital Creation Date

- ISO 8601
<http://www.w3.org/TR/NOTE-datetime>
- Z39.87-2002
http://www.niso.org/standards/resources/Z39_87_trial_use.pdf

Digitizing Equipment

- Data Dictionary -- Technical Metadata for Digital Still Images (NISO Z39.87-2002 AIIM 20-2002)
http://www.niso.org/standards/resources/Z39_87_trial_use.pdf