#### Metadata element set for the NTL

This metadata schema is a work in progress. It evolved out of the idea that the NTL metadata schema should conform to national standards for the sake of interoperability with other systems/collections.

The NTL metadata schema is based on the DC-Library Application Profile. [http://dublincore.org/documents/library-application-profile/] This proposed application profile clarifies the use of the Dublin Core Metadata Element Set in libraries and library-related applications and projects.

The DC-Library Application Profile uses terms from two namespaces:

- DCMI Metadata Terms [http://dublincore.org/documents/dcmi-terms/]
- MODS elements used in DC-Lib application profile [http://www.loc.gov/mods]
- The Usage Board has decided that any encoding scheme that has a URI defined in a non-DCMI namespace may be used. DCMI will not define these. Those so far considered for this application profile are indicated.

Two types of refinements (personal and corporate) included in this scheme are not specified in any of the predefined namespaces used. They are to be used with the Creator, Publisher, and Contributor elements. We have created several new encoding schemes. Some of them are specific for the NTL like the subject encoding scheme - TRT and the identifier encoding scheme - TRIS. Some of them are standard (like OCLC and Standard report numbers) but have not been incorporated into the DC-Library application profile.

Definitions of our Administrative Metadata elements are added at the end, and resources for further study of these metadata elements are included in the bibliography.

#### Entries:

Label: The human-readable label assigned to the data element.

Namespaces utilized:

http://purl.org/dc/elements/1.1

http://purl.org/dc/terms

http://purl.org/dc/dcmitype

http://dublincore.org/usage/terms/dc/current-schemes

http://www.loc.gov/mods.

Dublin Core (DC) Definition: The way Dublin Core defines the term.

**Description:** Any additional information to clarify the scope or use of the element.

Mandatory: If "yes", a value for this element must be included in the metadata record.

Repeatable: If "yes", the element field is repeatable in the NTL metadata record. (All Dublin Core

elements are optional and repeatable)

**Refinements:** Refinements share the meaning of the unqualified element, but with a more restricted scope. Any refinements listed here may be used, but do not necessarily have to be used.

Encoding schemes: What scheme(s) may be used with the element. An encoding scheme aids in the interpretation of an element value. Includes controlled vocabularies and formal notations or parsing rules (e.g., a term from a set of subject headings or "2000-01-01" as the standard expression of date).

# Descriptive Metadata Elements:

Title

Label: Title

**DC** Definition: A name given to the resource by the creator or publisher.

Mandatory: Yes

Repeatable: No. Use alternative refinement for all other titles.

Refinements:

*Title.alternative* - Any form of the title used as a substitute or alternative to the formal title of the resource.

Encoding schemes: None

## Input Guidelines:

- Transcribe title from the resource itself. AACR2 states, "The source of information for the Title proper is the title screen or other eye-readable information. Only when there is no eye-readable information can a title be transcribed from other internal evidence such as metadata in the file header."
- From chapter 9 of revised AACR2, dealing with electronic resources: "no clear order of precedence for selection of titles" [MK: Don't need to note source of title for our purposes].
- If no title is available, construct one, making the title as descriptive as possible.
- A parellel/transliterated title is considered a main title, and the title element is repeated.
- Use "Alternative" refinement for titles other than the main title. This can include title abbreviations, translations, or uniform titles.
- Enter one Title per element. Use separate elements to enter more than one title if necessary for access (i.e., series title).
- For reports, select title from technical report documentation page if available. If not available, select title from title page or other source that presents the most information. For websites with dynamic content, consult all obvious sources for most descriptive title (see AACR2)
- Retain initial articles.
- Capitalize only the first letter of the first word of the title or of any proper names contained within the title. Separate title proper from subtitle(s) with space colon space (e.g., Title: Subtitle: Another subtitle).

#### Creator

Label: Creator

**DC** Definition: An entity primarily responsible for making the content of the resource.

Mandatory: Yes, if available

Repeatable: Yes, to separate individual author names

#### Refinements:

Creator.creatorPersonal

*Creator.creatorGroup* - enter organizations here if organization was primarily responsible for making the content.

**Encoding scheme**: LCNAF (<a href="http://authorities.loc.gov">http://authorities.loc.gov</a>) with TRIS use as a secondary alternative. **Input Guidelines**:

- Enter multiple creators in the order in which they appear on the resource or in order of importance.
- Secondary authors, editors, etc. may be entered using the Contributor element. If in doubt about which author/corporation had primary responsibility, put name in Contributor field.
- For personal names, enter in inverted form in most cases: Last, First I. (middle initial). If only initial(s) known, enter with space between initials as in: Name, I. I.
- For corporate authors, best to use a standardized form of entry. No "the" to proceed a corporate name. No la, le, das, der, etc. either in foreign corporate names.
- Optional: The function of the creator may be included in parentheses after the name. Example: Lastname, First name (Compiler).
- Remove "Dr.", "Mrs.", "Ph.D.", etc. from personal names. Jr., III, and the like is allowed.
- TRIS allows up to 15 names—our practice has been to allow the same number as TRIS.
- Have a clear understanding of how the database handles non-standard characters such as diacritics and input them so that they display and retrieve effectively.
- If the creator is unknown, leave the element blank.

## Subject

Label: Subject

**DC Definition**: The topic of the content of the resource.

**Description**: Subject elements may describe not only what an object is about, but also what it is. Expressed by headings, keywords, phrases, or names; or terms for significantly associated people, places, and events, etc. May also list acronyms as well as the spelled-out form of acronyms.

Best Practice: Select from a controlled vocabulary or formal classification scheme (e.g., LCSH).

Mandatory: Yes, if applicable

Repeatable: Yes Refinements: Encoding scheme:

NTL: Select NTL classification terms from list TRT: Use Transportation Research Thesaurus terms

#### Input Guidelines:

- For general subject keywords, include significant terms, including words from the title or abstract, that provide subject access to the document that is not provided by TRT terms.
   In general, do not put non-preferred terms here as this defeats the use of a controlled vocabulary.
- Enter as in form from TRT, i.e., capitalize first letter of first word (one exception: pH). Number of terms may range from 2 to ten. Separate entries with the semicolon, space.
- Generally, Do not index redundantly (i.e., Do not index the same concept at more than one level of specificity). However, do index the same concept both broadly and narrowly if it is so treated in the article.

- The first descriptor should represent the major thrust of the material being indexed.
- Subject elements may describe not only what an object is about, but also what it is.

## Description

Label: Description

**DC Definition**: An account of the content of the resource. May include, but is not limited to: abstract, table of contents, reference to a graphical representation of content or a free text account of the content.

Mandatory: Strongly Recommended

Repeatable: Yes, particularly if using a URI in addition to a text account for some harvested items

(i.e., for linking to a longer description, such as an exec. summary)

**Refinements**: (may be used for clarification)

Description.abstract

Description. table of Contents

**Encoding Schemes**: URI Def.: Uniform Resource Identifier. See <a href="http://ietf.org/rfc/rfc2396.txt">http://ietf.org/rfc/rfc2396.txt</a> **Input guidelines**:

- Include description except where title is very descriptive of contents. Consider shortening long abstracts to a single paragraph. Include physical details when easily available (except page numbers or kilobytes which go in Format.Extent element). For example, 4 appendices, figures and tables
- If the item being cataloged has an abstract, copy it and paste it into this field. If there is no abstract, but some other portion of the document contains an informative summary, copy and paste that text. Otherwise, if a title is not descriptive of the contents of the item being cataloged, prepare a brief informative annotation of (approximately one to three lines??).
- Try not to exceed one half page of text.
- For abstracts, follow NISO guidelines for indicative abstracts (http://www.niso.org/standards/standard\_detail.cfm?std\_id=514)
- Enter here specialized information not included in other elements.

### **Publisher**

Label: Publisher

**DC** Definition: An entity responsible for making the resource available. This would include the organization responsible for publishing work in its present form. Typically, the name of a publisher should be used to indicate the entity.

**Description:** For digital objects, publisher is the entity that created the digital resource. Publishers can be a corporate body, publishing house, museum, historical society, university, a project, a repository, etc. AACR2 gives precedence to eye readable information over HTML source code.

Mandatory: No

**Repeatable:** Yes, a resource may have a publisher and distributor or more than one entity responsible for making the resource available.

Refinements:

Publisher.publisherPersonal

# Publisher.publisherCorporate

**Encoding scheme**: use controlled vocabulary (LCNAF or own list of corporate publishers)

Input Guidelines:

- Use separate Publisher elements to enter multiple publishers or clearly separate each entry by a semicolon, space within an element.
- Use of LCAF is encouraged. This file is available via LC Web Authorities website (http://authorities.loc.gov)
- Initial articles in publisher names?
- Old way: Enter corporate names under the lowest part of the name that can stand alone and
  qualify it by the parent body. Examples: Federal Transit Administration (U.S. Department
  of Transportation); or, New way: Enter group or organization names in full, direct form. In
  the case of a hierarchy, list the parts from the largest to smallest, separated by periods. In
  the case of a long organization name that includes subordinate units, may be able to shorten
  name by eliminating some of the hierarchical parts not considered necessary for uniquely
  identifying the body in question (e.g., United States. Central Intelligence Agency). See form
  of name given in LCAF.

#### Note:

The publisher element contains information about the digital publisher. The publisher of another form of the object, before digitization, may be given in the Source element; or, if a publisher of an earlier form is considered important to users and therefore for resource discovery, publisher can be included in the Contributor element.

#### Contributor

Label: Contributor

**DC Definition**: An entity responsible for making contributions to the content of the resource. **Description**: Contribution to intellectual content should be secondary to any person(s) or organization(s) already specified in a Creator element. Examples: editor, transcriber, illustrator, etc.

Mandatory: No Repeatable: Yes Refinements:

> Contributor.contributorPersonal Contributor.contributorCorporate

Encoding Scheme: LCNAF or TRIS list of sources

## Input Guidelines:

- Enter multiple contributors in the order in which they appear on the resource or in order of their importance. Use separate Contributor elements to enter multiple contributors or clearly separate each entry by a semi-colon, space within an element (will depend on how database handles separate names).
- Determine the correct form of the name when possible. Consult either the Library of Congress Authority File or a controlled list (e.g., from TRIS).
- Optional: The function of a contributor may be included in parentheses after the name.

Date

Label: Date

**DC Definition**: A date associated with an event in the life cycle of the resource.

Mandatory: Yes, if applicable

Repeatable: Yes Refinements:

Date.created (Date of creation of the resource-use for creation of intellectual content)

**Date.copyrighted** (Date of a statement of copyright.)

Encoding Scheme: ISO 8601 [W3C-DTF] Use with hyphens (i.e., YYYY-MM-DD).

# Input guidelines:

For technical reports, and other completed documents, use the date of the report.

- To show an approximate date, follow it with a question mark as in 1970?
- If a website has multiple dates that the resource was modified, use the most recent date.

## Type

Label: Resource Type

**Definition**: The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content.

**Description**: A broad term drawn from a controlled vocabulary that describes the genre or nature of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary.

Mandatory: No

**Repeatable**: Yes, or clearly separate each entry by a semicolon, space within an element (will depend on how database handles...).

Refinements: None

Encoding Scheme: DCMI Type Vocabulary. Definition: a list of types used to categorize the nature or genre of the content of the resource. Types include: Collection, Dataset, Event, Image, Interactive Resource (virtual exhibit), MovingImage, PhysicalObject, Service, Software, Sound (sound recording), StillImage, Text (home pages could fall under this category), Physical Object. See <a href="http://www.dublincore.org/documents/dcmi-type-vocabulary/">http://www.dublincore.org/documents/dcmi-type-vocabulary/</a>

### Input Guidelines:

- Some digital objects may involve more than one TYPE, i.e., a website may have images and text
- Select from dropdown list

#### **Format**

Label: Format

**DC Definition**: The physical or digital manifestation of the resource. The data representation of the resource, such as text/html, ASCII, Postscript file, executable application, JPEG image, etc. **Description**: Typically, format may include the media-type or dimensions...Format may be used to determine the software, hardware or other equipment needed to display or operate the resource. Examples of dimension include size and duration. Best practice is to select electronic format terms from the Internet Media Types standardized list at

http://www.iana.org/assignments/media-types

Mandatory: DC-Lib: Strongly recommended

Repeatable: Yes Refinement:

**Format.extent** Definition: The size or duration of the resource. Comment: May want to repeat the extent refinement to show both kb/mb and number of pages in a pdf document.

Encoding Scheme: Use a dropdown list of Internet Media Types. See

http://www.iana.org/assignments/media-types

#### **Identifier**

Label: Resource identifier

**DC Definition**: An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Example: URI, URL, DOI, ISBN, ISSN.

Description: A character string or record number that clearly and uniquely identifies a digital

resource. For example, a report number uniquely identifying the report.

Mandatory: Yes Repeatable: Yes Refinements: None Encoding schemes:

URL Definition: The url of the resource. REPORT Definition: The report number.

TRIS Definition: The accession number for item in TRISOnline OCLC Definition: The accession number for item in TLCat-OCLC

ISBN Definition: The ISBN number.
ISSN Definition: The ISSN number.

DOI Definition: The Digital Object Identifer

#### Input Guidelines:

- Provide applicable identifiers such as accession numbers or report numbers. If the
  identifier is potentially ambiguous (e.g., all numerals), include the associated agencies' name
  as part of the identifier element.
- When entering multiple identifiers from different schemes, best practice is to use separate identifier elements.
- Input ISBN or other international standard numbers without hyphens or spaces.

# Source

Label: Source

**DC Definition**: A reference to a source from which the present resource is derived. The present resource may be derived from the source in whole or in part. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Example: URI, URL, DOI, ISBN, ISSN

**Description**: A string or number used to identify the work from which this resource was derived, e.g. the paper version of an HTML-encoded document; an ISBN no. for a physical version of a PDF document.

Mandatory: No Repeatable: Yes Refinements: None

Encoding Schemes: URI, etc.

Input Guidelines:

- Use only when the described resource is the result of digitization of non-digital originals. Otherwise, use Relation. (Source elements generally have a corresponding Relation element, but not vice versa)
- Whenever possible, include a unique standard identifier such as an ISBN, ISSN, or NTIS
  report number. If no standard identifier exists, use a local accession number, etc., and
  identify the institution associated with such locally derived numbers.
- May want to clarify the original relationship between the two resources by using an intial phrase such as Originally published as, Original format: ..., etc.

## Language

Label: Language

**DC Definition**: A language of the intellectual content of the resource.

Mandatory: Yes, if applicable

Repeatable: Yes Refinements: None

Encoding scheme: Use ISO 639-2/B. See http://www.loc.gov/standards/iso639-2/

Best practice: use three-letter primary language tags.

#### Relation

Label: Relation

**DC Definition**: A reference to a related resource. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system.

**Description**: Element contains information necessary to find or link to a related resource. Best to use (with qualifiers) when documents in hand are parts of "host documents" (e.g. journal, monographic series) and when there is no citation information in DC identifier (if used by Citation WG); and, when documents in hand are revisions or reformatted issues of earlier publications and information on these are readily available.

Mandatory: No

**Repeatable:** Yes. A resource may relate to other resources in a variety of relationships that requires more than one Relation element to describe.

#### Refinements:

The following refinements are strongly recommended by Lib Appl profile:

 $\it Relation.isVersionOf$  - described resource is a version, edition, or adaptation of the referenced resource.

**Relation. isPartOf** - the described resource is a physical or logical part of the referenced resource—recommended use when documents in hand are parts of "host documents" (e.g., journal, monographic series) and when there is no citation information in DC identifier.

**Relation.** hasPart: the described resource includes the referenced resource either physically or logically.

**Relation. isFormatOf**: the described resource is the same intellectual content of the referenced resource, but presented in another format. Use when there are alternative formats and it is not clear which preceded the other

**Relation.** hasFormat: the described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.

**Relation.** requires - the described resource requires the referenced resource to support its function, delivery, or coherence of content.

**relation**. **isRequiredBy** - the described resource requires the related resource to support its function, delivery, or coherence of content.

**Relation.** references - the described resource references, cites, or otherwise points to the referenced resource.

**Relation.** isReplacedBy - the described resource is supplanted, displaces or supercedes the related resource.

**Relation.** replaces - the described resource is supplanted, displaces or supercedes the related resource.

**Encoding scheme**: same as for identifier, source.

# Input guidelines:

- Use separate Relation elements to enter multiple relations (or use semicolon???).
- Select the appropriate refinement from the above list of qualifiers recommended by Dublin Core (see <a href="http://dublincore.org/documents/dcmes-qualifiers">http://dublincore.org/documents/dcmes-qualifiers</a>)
- Include sufficient information in the Relation element to enable users to identify, cite, or link to a related resource (e.g., Relation.IsPartOf: Journal of Transportation and Statistics v. 33, no. 8 (March 2, 2000) p. 5-8)

## Coverage

Label: Coverage

**DC Definition**: The extent or scope of the content of the resource. Coverage will typically include spatial location (a place name or geographic coordinates), temporal period, or jurisdiction (named administrative entity). Select from a controlled vocabulary (e.g., the Thesaurus of Geographic Names [TGN]) and that, where appropriate, named places or time periods be used in preference to numeric identifiers such as sets of coordinates or date ranges.

Mandatory: Yes, if applicable

Repeatable: Yes Refinements:

*Coverage.spatial* - refers to geographic location(s) covered by the intellectual content of the resource (i.e., place names, etc.).

*Coverage.temporal* - Def.: Temporal characteristics or time period covered by the intellectual content of the resource (e.g., 1950-1970).

Encoding schemes: TGN: The Getty Thesaurus of Geographic names (see

http://www.getty.edu/research/tools/vocabulary/tgn/index.html); or, ISO3166: ISO 3166 codes for the representation of names of countries. See

http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/index.html. See also: MARC Geog. Codes and MARC country codes, DCMI Period, W3C-DTF.

Best Practice: DC-Lib.: Use coverage with qualifier Spatial or Temporal; use of unqualified Coverage is discouraged in qualified DC

# Input guidelines:

- Best to use separate Coverage elements to enter multiple spatial and temporal values or clearly separate each entry by a semi-colon, space.
- For a range of dates, enter the dates on the same line, separating them with a space, hyphen, and space as in 1900 1950.
- To show a date is approximate, follow it with a question mark as in 1977?

# **Rights**

Label: Rights

**DC Definition**: Information about rights held in and over the resource. Typically, a rights element will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights, copyright, and various property rights. If the Rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.

Mandatory: DC-Lib Strongly recommends

Repeatable: No Refinements: None

Encoding scheme: URI if applicable

# Input quidelines (copied from Western States Dublin Core Best Practices, Jan. 2003):

- Enter either a textual statement or a URL pointing to a use and access rights statement for digital resources on the Internet (If website has a separate copyright page, use URL).
- This statement can be a general copyright statement for the institution, for the whole collection, or a specific statement for each resource.
- The statement may be general, providing contact information, or specific, including the name of the copyright holder.
- Make sure that the rights statement corresponds to the digital resource; for example, link to a copyright statement for the digital resource instead of the original resource.

#### **Edition**

Label: Edition

DC Definition: Not a DC element.

**DC-Lib Definition**: Information designating the version or edition of a work. Not to be used for versions in the sense of different physical formats. This element is included in the Library Application Profile.

Mandatory: Yes, if applicable

Repeatable: No Refinements: None

**Encoding scheme**: None, but we should all be consistent, so input as, for example, 4<sup>th</sup> ed. **Best Practice**: DC-Lib. – element should be included if necessary for identification.

# **Encoding Schemes:**

**DCMIType** 

Label: DCMI Type Vocabulary

**Defined By:** http://purl.org/dc/terms/

**Definition:** A list of types used to categorize the nature or genre of the content of the resourse.

See Also: <a href="http://dublincore.org/documents/dcmi-type-vocabulary/">http://dublincore.org/documents/dcmi-type-vocabulary/</a>

Encoding Scheme For: Type

DOI

Label: DOI

**Definition:** Digital Object Identifier

See Also: http://www.doi.org/

Encoding Scheme For: Identifier, Source, IsVersionOf, IsFormatOf, HasFormat, IsReplacedBy,

Replaces, IsPartOf, HasPart, Requires, IsReferencedBy, References

IMT

Label: IMT

Defined By: http://purl.org/dc/terms/

**Definitions:** The Internet media type of the resource. **See Also:** http://www.iana.org/assignments/media-types

Encoding Scheme For: Format, Medium

**ISBN** 

Label: ISBN Defined By:

**Definitions:** International Standard Book Number

See Also: http://www.isbn.org/standards/home/isbn/international/index.asp

Encoding Scheme For: Identifier, Source, IsVersionOf, IsFormatOf, HasFormat, IsReplacedBy,

Replaces, IsPartOf, HasPart, Requires, IsReferencedBy, References

ISO639-2

Label: ISO 639-2

**Defined By:** http://purl.org/dc/terms/

Definitions: ISO 639-2: Codes for the representation of names of languages

See Also: <a href="http://www.loc.gov/standards/iso639-2/">http://www.loc.gov/standards/iso639-2/</a>

Encoding Scheme For: Language

**ISO8601** 

Label: ISO 8601

**Defined By**: http://purl.org/dc/terms/

Definitions: Date that follows the YYYY-MM-DD format

See Also:

Encoding Scheme For: Date, Created, Valid, Available, Issued, Modified, DateCopyrighted,

DateSubmitted, DateAccepted, DateCaptured

**ISSN** 

Label: ISSN

**Definitions:** International Standard Serial Number

See Also: <a href="http://www.issn.org:8080/pub/">http://www.issn.org:8080/pub/</a>

Encoding Scheme For: Identifier, Source, IsVersionOf, IsFormatOf, HasFormat, IsReplacedBy,

Replaces, IsPartOf, HasPart, Requires, IsReferencedBy, References

NTL

Label: NTL

**Definitions:** NTL Classification Scheme

See Also:

Encoding Scheme For: Subject

OCLC

Label: OCLC

**Definitions:** OCLC Accession Number

See Also:

Encoding Scheme For: Identifier

REPORT Label: Report

**Definitions:** Report Number

See Also:

Encoding Scheme For: Identifier

TRIS

Label: TRIS

**Definitions:** TRIS Accession Number

See Also:

Encoding Scheme For: Identifier

**TRT** 

Label: TRT

**Definitions:** Transportation Research Thesaurus **See Also:** http://ntl.bts.gov/trt/trt\_topterms.jsp

Encoding Scheme For: Subject

**URL** 

**Label:**URL Defined By:

**Definitions:** Universal Resource Location

See Also:

Encoding Scheme For: Identifier

# Administrative Metadata Elements: "housekeeping" information about the record itself.

id

Label: Record Number

DC Definition: Not a DC element.

NTL Definition: Autonumber for new entries

Mandatory: Yes Repeatable: No Refinements: None

#### createdDate

Label: Record creation date

DC Definition: Not a DC element.

NTL Definition: Add Time-stamp of record creation

Mandatory: Yes Repeatable: No Refinements: None

Encoding scheme: ISO 8601

## Date item captured

Label: Date item captured

DC Definition: Not a DC element.

DC-Lib Definition: Add date item captured for portal records, Ingested sites, etc. This element-

refinement is included in the Library Application Profile.

Mandatory: No Repeatable: No Refinements: None

Encoding scheme: ISO 8601

# modified

Label: Date of last modification

**DC Definition:** Date on which the resource was changed. **NTL Definition:** Add Time-stamp of record creation

Mandatory: Yes Repeatable: No Refinements: None Refines: Date

Encoding scheme: ISO 8601

Supplier

Label: Supplier

DC Definition: Not a DC element.

NTL Definition: Record source of digital doc

Mandatory: No Repeatable: No Refinements: None

Notes

Label: Notes

DC Definition: Not a DC element.

NTL Definition: Notes by/for indexers, tech services staff

Mandatory: No Repeatable: No Refinements: None

## Selected Bibliography:

DCMI Usage Board. (2003, March 4). *DCMI Metadata Terms*. Available at URL: http://www.dublincore.org/documents/dcmi-terms/

Guenther, R. (2002, Sept. 24). Library Application Profile. Available at URL: http://dublincore.org/documents/library-application-profile

IFLA Cataloguing Section Working Group on the Use of Metadata Schemas. (2003, Oct.27). Guidance on the Structure, Content, and Application of Metadata Records for Digital Resources and Collections [draft]. Available at URL: <a href="http://www.ifla.org/VII/s13/quide/metaquide03.htm">http://www.ifla.org/VII/s13/quide/metaquide03.htm</a>

OCLC/RLG Working Group on Preservation Metadata. (2002, June). *Preservation Metadata and the OAIS Information Model: A Metadata Framework to Support the Preservation of Digital Objects*. Available at URL: <a href="http://www.oclc.org/research/pmwq">http://www.oclc.org/research/pmwq</a>

Powell, Andy and Pete Johnston (2003, April 2). *Guidelines for implementing Dublin Core in XML*. Available at URL: <a href="http://dublincore.org/documents/dc-xml-guidelines/">http://dublincore.org/documents/dc-xml-guidelines/</a>

Western States Digital Standards Group, Metadata Working Group. (2003, Jan.). Western States Dublin Core Best Practices Version 1.2. Available at URL: http://www.cdpheritage.org/resource/metadata/documents/WSDCMBP\_v1-2\_2003-01-20.pdf

Western States Digital Standards Group, Metadata Working Group. (2005, Jan.). Western States Dublin Core Best Practices Version 2.0. Available at URL: <a href="http://www.cdpheritage.org/resource/metadata/documents/WSDCMBP.pdf">http://www.cdpheritage.org/resource/metadata/documents/WSDCMBP.pdf</a>