Metadata element set for the NTL

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. One other refinement (contributorCotr) is used in this schema to describe a unique data need. 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.

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

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 (http://authorities.loc.gov).

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

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.tableofContents*
>>> *Description.notes*

Encoding Schemes: URI Def.: Uniform Resource Identifier. See <http://ietf.org/rfc/rfc2396.txt>

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: LCNAF (http://authorities.loc.gov).

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, Contracting Officer's Technical Representatives, etc.
Mandatory: No
Repeatable: Yes
Refinements:

>>> *Contributor.contributorPersonal*
>>> *Contributor.contributorCorporate*
>>> *Contributor.contributorCotr*

Encoding Scheme: LCNAF (http://authorities.loc.gov).

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).

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: Uses controlled 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.
> *SYSTEM* Definition: The system assigned number.
> *NTIS* Definition: The accession number for item in NTIS

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.
CONTRACT Definition: The contract number.
DOI Definition: The Digital Object Identifer

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; journal and conference information.
Mandatory: No
Repeatable: Yes
Refinements: None
Encoding Schemes: URI, 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/

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:

   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.

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

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

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, 4th ed.
Best Practice: DC-Lib. – element should be included if necessary for identification.

Encoding Schemes:

CONTRACT
Label: Contract
Definitions: Contract Number
See Also:
Encoding Scheme For: Identifier

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: http://www.loc.gov/standards/iso639-2/
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: http://www.issn.org:8080/pub/
Encoding Scheme For: Identifier, Source, IsVersionOf, IsFormatOf, HasFormat, IsReplacedBy, Replaces, IsPartOf, HasPart, Requires, IsReferencedBy, References

NTIS
Label: NTIS
Definitions: NTISAccession Number
See Also:
Encoding Scheme For: Identifier

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

SYSTEM
Label: SYSTEM
Definitions: System Assigned Number / Local Accession Number

See Also:
Encoding Scheme For: Identifier

URL
Label:URL
Defined By:
Definitions: Universal Resource Location
See Also:
Encoding Scheme For: Identifier

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

record.createdBy
Label: Record created by
DC Definition: Not a DC element.
NTL Definition: Staff who created metadata record
Mandatory: Yes
Repeatable: No
Refinements: None
Encoding scheme: controlled list

record.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

Record.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

record.modifiedBy
Label: Record modified by
DC Definition: Not a DC element.
NTL Definition: Staff who last editied metadata record
Mandatory: Yes
Repeatable: No
Refinements: None
Encoding scheme: controlled list

record.modified
Label: Date of last modification
DC Definition: Date on which the record was late changed.
NTL Definition: Add Time-stamp of record creation
Mandatory: Yes
Repeatable: No
Refinements: None

Refines: Date
Encoding scheme: ISO 8601

record.collection
Label: Collection
DC Definition: Not a DC element.
NTL Definition: collection code
Mandatory: No
Repeatable: No
Refinements: None

record.supplier
Label: Supplier
DC Definition: Not a DC element.
NTL Definition: Record source of digital doc
Mandatory: No
Repeatable: No
Refinements: None

record.staffnotes
Label: Staff Notes
DC Definition: Not a DC element.
NTL Definition: Notes by/for indexers, tech services staff
Mandatory: No
Repeatable: No
Refinements: None