



Texas Center for Digital Knowledge
University of North Texas
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A Proof-of-Concept Repository for Learning Objects: Supporting the Reuse and Repurposing of Redesigned Courses and Their Content

THECB Learning Object Repository Application Profile

Prepared by the THECB LOR Team

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THECB Learning Object Repository Application Profile

1. Introduction

The purpose of this document is to describe THECB Learning Object Repository (LOR) Application Profile. The THECB LOR Application Profile is primarily based on Dublin Core (DC) Metadata Element Set. Additional elements were drawn from DC Education Application Profile, IEEE Learning Object Metadata, GEM Metadata set, and D-Space.

This document is adapted from the DC Education Application Profile Working Draft. The DC Education Application Profile is available at:

http://dublincore.org/educationwiki/DC_2dEducation_20Application_20Profile

2. Namespaces and Format of Entries

2.1 Namespaces

THECB LOR Application Profile has several namespaces:

- DCMI Metadata Terms <http://dublincore.org/documents/dcmi-terms/>
- IEEE Learning Object Metadata (LOM)
http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
- DSpace Federation Metadata <http://dspace.org/technology/metadata.html>
- DC-Educational Application Profile
http://dublincore.org/educationwiki/DC_2dEducation_20Application_20Profile
- GEM 2.0: Application Profiles
<http://www.thegateway.org/about/documentation/ApplicationProfiles-9-8-04/>
- THECB LOR Locally Defined Elements

2.2 Format of Entries

This Application Profile is presented following the "[CEN CWA 14855: Dublin Core Application Profiles Guidelines](#)" produced by the [CEN MMI-DC Workshop](#). Some fields and definitions have been modified to fit needs of THECB LOR Application Profile.

Name of Term	A unique token assigned to the term.
Term URI	A Uniform Resource Identifier used to identify the term.
Label	A human-readable label assigned to the term.
Defined By	An identifier of a namespace, pointer to a schema, or bibliographic reference for a document within which the term is defined.
Source Definition	The definition of the term in the namespace in which the term was originated.
THECB LOR Application Profile Definition	THECB LOR Application Profile definition of the term, with appropriate changes in semantics.
Source Comments	Comments on the term from the namespace in which the term originated.
THECB LOR	THECB LOR Application Profile comments about the term.

Application Profile Comments	
Type of term	The grammatical category of the term (e.g. "Element", "Element Refinement", or "Encoding Scheme").
Refines	The described term semantically refines the referenced term. A refinement makes the meaning of the element narrower or more specific. It will share the meaning of the unrefined element but with a more restricted scope.
Refined By	The described term is semantically refined by the referenced term.
Has Encoding Scheme	The described term, an encoding scheme, qualifies the referenced term. Using an encoding scheme will aid in the interpretation of an element value. These schemes include controlled vocabularies and formal notations or parsing rules. A value expressed using an encoding scheme will thus be a token selected from a controlled vocabulary (e.g., a term from a classification system or set of subject headings) or a string formatted in accordance with a formal notation (e.g., "2000-01-01" as the standard expression of a date). If an encoding scheme is not understood by a client or agent, the value may still be useful to a human reader.
Obligation	<p>Indicates whether the element is required to always or sometimes be present.</p> <p>In this application profile the obligation can be:</p> <ul style="list-style-type: none"> • mandatory (M), • mandatory if applicable (MA), • strongly recommended (R) • optional (O) • system-supplied (SS) • not applicable (N/A) <p>Mandatory ensures that some of the elements are always supported and mandatory if applicable means that this element must be supported if the information is available. An element with a mandatory obligation must have a value. The strongly recommended and the optional elements should be filled with a value if the information is appropriate to the given resource but if not, they may be omitted.</p>
Occurrence	<p>Indicates any limit to the repeatability of the element. For THECB LOR Application Profile categories bellow are used:</p> <ul style="list-style-type: none"> • repeatable (R) • not repeatable (NR) • not applicable (N/A)
Example	A section of an operating record for the element may be included here

3. THECB Learning Object Repository Application Profile

3.1 Elements and Refinements

Name of Term	title
Term URI	http://purl.org/dc/elements/1.1/title
Label	Title
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A name given to the resource
THECB LOR Application Profile Definition	
Source Comments	Typically, a Title will be a name by which the resource is formally known.
THECB LOR Application Profile Comments	
Type of term	Element
Refines	
Refined By	alternative
Has Encoding Scheme	
Obligation	M
Occurrence	NR
Example	Central and South American Indians

Name of Term	alternative
Term URI	http://purl.org/dc/terms/alternative
Label	Other Title
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	Any form of the title used as a substitute or alternative to the formal title of the resource.
THECB LOR Application Profile Definition	
Source Comments	This qualifier can include Title abbreviations as well as translations.
THECB LOR Application Profile	

Comments	
Type of term	element-refinement
Refines	title
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	R
Example	Creating Web Pages with HTML

Name of Term	isPartOf
Term URI	http://purl.org/dc/terms/isPartOf
Label	Course Structure
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	The described resource is a physical or logical part of the referenced resource.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	This element will contain a link to a map of the course that learning object is part of
Type of term	element-refinement
Refines	relation
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	NR
Example	http://hdl.handle.net/123456789/62

Name of Term	taxon
Term URI	
Label	Discipline and Sub-Discipline
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	A particular term within a taxonomy. A taxon is a node that has a defined label or term. A taxon may also have an alphanumeric designation or identifier for

	standardized reference. Either or both the label and the entry may be used to designate a particular taxon.
THECB LOR Application Profile Definition	
Source Comments	An ordered list of taxons creates a taxonomic path, i.e., "taxonomic stairway": this is a path from a more general to more specific entry in a classification.
THECB LOR Application Profile Comments	
Type of term	Element-refinement
Refines	classification
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	R
Example	History

Name of Term	subject
Term URI	http://purl.org/dc/elements/1.1/subject
Label	Subjects
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	The topic of the resource. Controlled subject term(s) chosen from the THECB LOR Subject Terms.
THECB LOR Application Profile Definition	
Source Comments	Typically, the topic will be represented using keywords, key phrases, or classification codes. Recommended best practice is to use a controlled vocabulary. To describe the spatial or temporal topic of the resource, use the Coverage element.
THECB LOR Application Profile Comments	
Type of term	Element
Refines	
Refined By	
Has Encoding Scheme	THECB LOR History Subject Terms
Obligation	M

Occurrence	R
Example	Hopewell

Name of Term	abstract
Term URI	http://purl.org/dc/terms/abstract
Label	Summary
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	An account of the content of the resource
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	Summary of the resources content, including geographic and temporal coverage of the resources (if applicable)
Type of term	element-refinement
Refines	description
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	NR
Example	

Name of Term	tableOfContents
Term URI	http://purl.org/dc/terms/tableOfContents
Label	Learning Object's Contents
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A list of subunits of the content of the resource.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element-refinement

Refines	description
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	NR
Example	<p>Lessons' Topic:</p> <ol style="list-style-type: none"> 1. The Americas Before Columbus 2. How did the First People Come to the Americas? 3. Central and South American Natives

Name of Term	language
Term URI	http://purl.org/dc/elements/1.1/language
Label	Language
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A language of the resource.
THECB LOR Application Profile Definition	
Source Comments	Recommended best practice is to use a controlled vocabulary such as RFC 3066 [RFC3066].
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	
Has Encoding Scheme	THECB LOR Language Terms
Obligation	M
Occurrence	R
Example	English

Name of Term	educationLevel
Term URI	http://purl.org/dc/terms/educationLevel
Label	Intended Educational Audience
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A general statement describing the education or training context. Alternatively, a

	more specific statement of the location of the audience in terms of its progression through an education or training context.
THECB LOR Application Profile Definition	
Source Comments	Recommended best practice is to use a controlled vocabulary
THECB LOR Application Profile Comments	
Type of term	Element-refinement
Refines	audience
Refined By	
Has Encoding Scheme	NSDLEdLvl
Obligation	O
Occurrence	NR
Example	Graduate

Name of Term	type
Term URI	http://purl.org/dc/elements/1.1/type
Label	Learning Object Type
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	The nature or genre of the content of the resource
THECB LOR Application Profile Definition	
Source Comments	Recommended best practice is to use a controlled vocabulary such as the DCMI Type Vocabulary [DCMITYPE]. To describe the file format, physical medium, or dimensions of the resource, use the Format element.
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	
Has Encoding Scheme	NSDLResType
Obligation	M
Occurrence	R
Example	Lesson

Name of Term	instructionalMethod
Term URI	http://purl.org/dc/terms/instructionalMethod
Label	Instructional Method
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A process, used to engender knowledge, attitudes and skills, that the resource is designed to support.
THECB LOR Application Profile Definition	
Source Comments	Instructional Method will typically include ways of presenting instructional materials or conducting instructional activities, patterns of learner-to-learner and learner-to-instructor interactions, and mechanisms by which group and individual levels of learning are measured. Instructional methods include all aspects of the instruction and learning processes from planning and implementation through evaluation and feedback.
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	
Has Encoding Scheme	THECB LOR Instructional Method Terms
Obligation	O
Occurrence	R
Example	Case Study

Name of Term	interactivityType
Term URI	
Label	Interactivity Type
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	Predominant mode of learning supported by this learning object.
THECB LOR Application Profile Definition	
Source Comments	"Active" learning (e.g., learning by doing) is supported by content that directly induces productive action by the learner. An active learning object prompts the learner for semantically meaningful input or for some other kind of productive action or decision, not necessarily performed within the learning object's

	framework. Active documents include simulations, questionnaires, and exercises. "Expositive" learning (e.g., passive learning) occurs when the learner's job mainly consists of absorbing the content exposed to him (generally through text, images or sound). An expositive learning object displays information but does not prompt the learner for any semantically meaningful input. Expositive documents include essays, video clips, all kinds of graphical material, and hypertext documents. When a learning object blends the active and expositive interactivity types, then its interactivity type is "mixed".
THECB LOR Application Profile Comments	In "Active" mode, learners learn by doing, and it is supported by content that directly induces productive action by the learner. An active learning object prompts the learner for semantically meaningful input or for some other kind of productive action or decision, not necessarily performed within the learning object's framework. Active documents include simulations, questionnaires, and exercises. In "Expositive" mode, learning (e.g., passive learning) occurs when the learner's job mainly consists of absorbing the content exposed to him (generally through text, images or sound). An expositive learning object displays information but does not prompt the learner for any semantically meaningful input. Expositive documents include essays, video clips, all kinds of graphical material, and hypertext documents. When a learning object blends the active and expositive interactivity types, then its interactivity type is "mixed".
Type of term	Element-refinement
Refines	educational
Refined By	
Has Encoding Scheme	IEEE LOM Interactivity Type Vocabulary
Obligation	O
Occurrence	NR
Example	mixed

Name of Term	interactivityLevel
Term URI	
Label	Interactivity Level
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	The degree of interactivity characterizing this learning object. Interactivity in this context refers to the degree to which the learner can influence the aspect or behavior of the learning object.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	Element-refinement

Refines	educational
Refined By	
Has Encoding Scheme	IEEE LOM Interactivity Level Vocabulary
Obligation	O
Occurrence	NR
Example	Low

Name of Term	typicalLearningTime
Term URI	
Label	Typical Learning Time
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	Approximate or typical time it takes to work with or through this learning object for the typical intended target audience.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	educational
Refined By	
Has Encoding Scheme	THECB LOR Typical Learning Time Terms
Obligation	O
Occurrence	NR
Example	10 hours

Name of Term	difficulty
Term URI	
Label	Difficulty Level
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	How hard it is to work with or through this learning object for the typical intended target audience.
THECB LOR Application Profile	

Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	
Refines	educational
Refined By	
Has Encoding Scheme	IEEE LOM Difficulty Level Vocabulary
Obligation	O
Occurrence	NR
Example	easy

Name of Term	requirement
Term URI	
Label	Technical Requirements
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Source Definition	The technical capabilities necessary for using this learning object.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	technical
Refined By	
Has Encoding Scheme	THECB LOR Requirement Terms
Obligation	O
Occurrence	R
Example	flash

Name of Term	format
Term URI	http://purl.org/dc/elements/1.1/format



Label	Media Format
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	The physical or digital manifestation of the resource.
THECB LOR Application Profile Definition	The media-type of the resource.
Source Comments	Typically, Format may include the media-type or dimensions of the resource. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	Extent
Has Encoding Scheme	THECB LOR Media Format Terms
Obligation	O
Occurrence	NR
Example	Audio

Name of Term	author
Term URI	http://purl.org/dc/elements/1.1/contributor
Label	Authors
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	
THECB LOR Application Profile Definition	An entity primarily responsible for making the content of the resource.
Source Comments	
THECB LOR Application Profile Comments	Typically, the name of an author is used to indicate the entity.
Type of term	Element-refinement
Refines	contributor
Refined By	
Has Encoding Scheme	
Obligation	MA

Occurrence	R
Example	Smith, Jane

Name of Term	affiliation
Term URI	
Label	Author's Affiliation
Defined By	Locally defined for this application
Source Definition	
THECB LOR Application Profile Definition	Author's affiliation
Source Comments	
THECB LOR Application Profile Comments	An organization that author has affiliations with
Type of term	Element-refinement
Refines	contributor
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	NR
Example	University of North Texas

Name of Term	other
Term URI	
Label	Other Contributors
Defined By	Locally defined for this application
Source Definition	
THECB LOR Application Profile Definition	An entity responsible for making significant contribution to the content of the resource
Source Comments	
THECB LOR Application Profile Comments	An entity could be organization or service. The name of contributing party should be used to indicate the entity.
Type of term	Element-refinement

Refines	contributor
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	R
Example	Smith, Amy

Name of Term	dateAccepted
Term URI	http://purl.org/dc/terms/dateAccepted
Label	Date Published
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	Date when the resource was put into the repository, when it was “published” or made available.
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	Element-refinement
Refines	date
Refined By	
Has Encoding Scheme	W3C-DTF
Obligation	MA
Occurrence	NR
Example	Mar. 2007

Name of Term	publisher
Term URI	http://purl.org/dc/elements/1.1/publisher
Label	Publisher
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	An entity responsible for making the resource available
THECB LOR Application Profile	

Definition	
Source Comments	Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.
THECB LOR Application Profile Comments	Use the default value: Texas Higher Education Coordinating Board
Type of term	Element
Refines	
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	R
Example	NISO Press

Name of Term	identifier
Term URI	http://purl.org/dc/elements/1.1/identifier
Label	Identifier
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	An unambiguous reference to the resource within a given context.
THECB LOR Application Profile Definition	
Source Comments	Recommended best practice is to identify the resource by means of a string conforming to a formal identification system.
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	
Has Encoding Scheme	
Obligation	SS
Occurrence	N/A
Example	http://hdl.handle.net/123456789/23

Name of Term	provenance
--------------	------------

Term URI	http://purl.org/dc/terms/provenance
Label	Creation and Ownership Information
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation.
THECB LOR Application Profile Definition	
Source Comments	The statement may include a description of any changes successive custodians made to the resource.
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	NR
Example	

Name of Term	rights
Term URI	http://purl.org/dc/elements/1.1/rights
Label	Intellectual Property Rights
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	Information about rights held in and over the resource.
THECB LOR Application Profile Definition	
Source Comments	Typically, rights information includes a statement about various property rights associated with the resource, including intellectual property rights.
THECB LOR Application Profile Comments	
Type of term	element
Refines	
Refined By	accessRights license

	rightHolder
Has Encoding Scheme	
Obligation	MA
Occurrence	NR
Example	

Name of Term	accessRights
Term URI	http://purl.org/dc/terms/accessRights
Label	Access and Use Rights
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	Information about who can access the resource or an indication of its security status.
THECB LOR Application Profile Definition	
Source Comments	Access Rights may include information regarding access or restrictions based on privacy, security or other regulations.
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	rights
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	NR
Example	

Name of Term	license
Term URI	http://purl.org/dc/terms/license
Label	Access and Use License
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A legal document giving official permission to do something with the resource.
THECB LOR Application Profile Definition	



Source Comments	Recommended best practice is to identify the license using a URI. Examples of such licenses can be found at http://creativecommons.org/licenses/ .
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	rights
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	NR
Example	

Name of Term	rightsHolder
Term URI	http://purl.org/dc/terms/rightsHolder
Label	Rights Holder
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A person or organization owning or managing rights over the resource.
THECB LOR Application Profile Definition	
Source Comments	Recommended best practice is to use the URI or name of the Rights Holder to indicate the entity.
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	rights
Refined By	
Has Encoding Scheme	
Obligation	MA
Occurrence	R
Example	

Name of Term	individualCataloger
Term URI	http://purl.org/gem/qualifiers/IndividualCataloger

Label	Metadata Cataloger
Defined By	http://purl.org/gem/qualifiers/
Source Definition	The name of an individual responsible for creation of the description (metadata record) of a resource.
THECB LOR Application Profile Definition	
Source Comments	The «individualCataloger» element is intended to contain information identifying the individual who did the cataloging. The «individualCataloger» element should not be used to record information about the cataloging agency.
THECB LOR Application Profile Comments	Personal names should be listed given name first, followed by surname or family name.
Type of term	Element-refinement
Refines	Cataloging
Refined By	
Has Encoding Scheme	
Obligation	M
Occurrence	R
Example	Kelly McMichael

Name of Term	domainCataloger
Term URI	
Label	Domain Cataloger
Defined By	Locally defined for this application
Source Definition	
THECB LOR Application Profile Definition	The name of an individual responsible for creation of the metadata record.
Source Comments	
THECB LOR Application Profile Comments	Locally Defined GEM Element Refinement. The element is intended to contain information identifying the individual who did the cataloging of some domain metadata, for example the subjects, summary, your name is the source.
Type of term	Element-refinement
Refines	Individual Cataloger
Refined By	

Has Encoding Scheme	
Obligation	M
Occurrence	R
Example	Kelly McMichael

Name of Term	dateIssued
Term URI	http://dspace.org/technology/metadata.html
Label	Date Issued
Defined By	http://dspace.org/technology/metadata.html
Source Definition	Date of formal issuance (e.g., publication) of the resource.
THECB LOR Application Profile Definition	
Source Comments	Date of publication or distribution.
THECB LOR Application Profile Comments	This occurs when the user clicks on the checkbox for item previously published
Type of term	Element-refinement
Refines	date
Refined By	
Has Encoding Scheme	
Obligation	SS
Occurrence	N/A
Example	

Name of Term	dateAccessioned
Term URI	http://dspace.org/technology/metadata.html
Label	Date Accessioned
Defined By	http://dspace.org/technology/metadata.html
Source Definition	Date that the resource accessioned into the system
THECB LOR Application Profile Definition	
Source Comments	
THECB LOR Application Profile	

Comments	
Type of term	Element-refinement
Refines	date
Refined By	
Has Encoding Scheme	
Obligation	SS
Occurrence	N/A
Example	

Name of Term	dateAvailable
Term URI	http://dspace.org/technology/metadata.html
Label	Date Available
Defined By	http://dspace.org/technology/metadata.html
Source Definition	Date or date range item became available to the public
THECB LOR Application Profile Definition	Date that resource was made publicly available in the THECB LOR
Source Comments	
THECB LOR Application Profile Comments	
Type of term	Element-refinement
Refines	date
Refined By	
Has Encoding Scheme	
Obligation	SS
Occurrence	N/A
Example	

Name of Term	extent
Term URI	http://purl.org/dc/terms/extent
Label	Extent
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	The size or duration of the resource.
THECB LOR Application Profile	

Definition	
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element-refinement
Refines	format
Refined By	
Has Encoding Scheme	
Obligation	SS
Occurrence	N/A
Example	325Kb

Name of Term	mimeType
Term URI	http://dspace.org/technology/metadata.html
Label	Medium
Defined By	http://dspace.org/technology/metadata.html
Source Definition	The physical or digital manifestation of the resource.
THECB LOR Application Profile Definition	The material or physical carrier of the resource.
Source Comments	Registered MIME type identifiers
THECB LOR Application Profile Comments	Registered MIME type identifiers are used for this element
Type of term	Element refinement
Refines	format
Refined By	
Has Encoding Scheme	IMT
Obligation	SS
Occurrence	N/A
Example	

Name of Term	identifierURI
Term URI	http://dspace.org/technology/metadata.html
Label	Identifier URI
Defined By	http://dspace.org/technology/metadata.html

Source Definition	Uniform Resource Identifier.
THECB LOR Application Profile Definition	This identifier should be in the form of a URI that points to the location of the resource described by the metadata record and is applicable for resources residing in the THECB LOR repository.
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element refinement
Refines	Identifier
Refined By	
Has Encoding Scheme	URI
Obligation	SS
Occurrence	N/A
Example	

Name of Term	uri
Term URI	
Label	IMS Content Package
Defined By	
Source Definition	
THECB LOR Application Profile Definition	A reference to a related resource.
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element refinement
Refines	IdentifierURI
Refined By	
Has Encoding Scheme	URI
Obligation	MA
Occurrence	NR
Example	

Name of Term	title
Term URI	http://purl.org/dc/elements/1.1/title
Label	Title
Defined By	http://dublincore.org/documents/dcmi-terms/
Source Definition	A name given to the resource
THECB LOR Application Profile Definition	The title of the IMS content packages name.
Source Comments	
THECB LOR Application Profile Comments	
Type of term	Element refinement
Refines	title
Refined By	

Has Encoding Scheme	
Obligation	M
Occurrence	NR
Example	Unit 1

Name of Term	uri
Term URI	
Label	Learning Object Description
Defined By	
Source Definition	
THECB LOR Application Profile Definition	A reference to a related LOs
Source Comments	
THECB LOR Application Profile Comments	
Type of term	element refinement
Refines	description
Refined By	
Has Encoding Scheme	URI
Obligation	M
Occurrence	NR
Example	

3.2 Encoding Schemes

3.2.1 Registered Encoding Schemes

Name of Term	IMT
Term URI	http://purl.org/dc/terms/IMT
Label	IMT
Defined By	http://purl.org/dc/terms/
Definition	The Internet media type of the resource.
Comments	
See Also	http://www.isi.edu/innotes/iana/assignments/media-types/media-types/
Type of term	encoding scheme
Encoding Scheme For	format

Name of Term	NSDLResType
Term URI	http://metadataregistry.org/NSDLResType
Label	NSDL Learning Resource Type
Defined By	http://metadataregistry.org/vocabulary/show/id/11
Definition	A list of types used to categorize the nature or genre of the content of the resource.
Comments	
See Also	http://projects.ischool.washington.edu/sasutton/dcmi/DC-EdAP-7-18-06.html#NSDLResType
Type of term	Encoding Scheme
Encoding Scheme For	type

Name of Term	IEEE LOM Interactivity Type Vocabulary
Term URI	
Label	IEEE LOM Interactivity Type Vocabulary
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Definition	A list of terms to indicate the interactivity type of the resource
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	interactivityType

Name of Term	IEEE LOM Interactivity Level Vocabulary
Term URI	
Label	IEEE LOM Interactivity Level Vocabulary
Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Definition	A list of terms to indicate the interactivity level of the resource
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	interactivityLevel

Name of Term	IEEE LOM Difficulty Level Vocabulary
Term URI	
Label	IEEE LOM Difficulty Level Vocabulary

Defined By	http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
Definition	A list of terms to indicate the difficulty level of the resource
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	difficulty

Name of Term	NSDLEdLvl
Term URI	http://metadataregistry.org/uri/NSDLEdLvl
Label	NSDL Education Level Vocabulary
Defined By	http://metadataregistry.org/uri
Definition	Terms representing levels of formal education relevant in most of the United States.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	educationLevel

Name of Term	W3CDTF
Term URI	http://purl.org/dc/terms/W3CDTF
Label	W3C-DTF
Defined By	http://purl.org/dc/terms/
Definition	W3C encoding rules for dates and times – a profile based on ISO 8601.
Comments	
See Also	http://www.w3.org/TR/NOTE-datetime
Type of term	Encoding Scheme
Encoding Scheme For	dateAccepted

Name of Term	URI
Term URI	http://purl.org/dc/terms/URI
Label	URI
Defined By	http://purl.org/dc/terms/
Definition	A URI Uniform Resource Identifier
Comments	
See Also	http://www.ietf.org/rfc/rfc2396.txt
Type of term	Encoding Scheme
Encoding Scheme For	identifierURI

3.2.2 Unregistered Encoding Schemas

Name of Term	THECB LOR History Subject Terms
Term URI	
Label	THECB LOR Subject Terms
Defined By	
Definition	A list of subject terms to be used in the THECB LOR.
Comments	
See Also	

Type of term	Encoding Scheme
Encoding Scheme For	subject

Name of Term	THECB LOR Instructional Method Terms
Term URI	
Label	THECB LOR Instructional Method Terms
Defined By	
Definition	A list of instructional methods terms to be used in the THECB LOR.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	instructionalMethod

Name of Term	THECB LOR Requirement Terms
Term URI	
Label	THECB LOR Requirement Terms
Defined By	
Definition	A list of requirement terms to be used in the THECB LOR.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	requirement

Name of Term	THECB LOR Language Terms
Term URI	
Label	THECB LOR Language Terms
Defined By	
Definition	A list of language terms to be used in the THECB LOR.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	Language

Name of Term	THECB LOR Media Format Terms
Term URI	
Label	THECB LOR Media Format Terms
Defined By	
Definition	A list of media format terms to be used in the THECB LOR.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	Format

Name of Term	THECB LOR Typical Learning Time Terms
---------------------	---------------------------------------



Term URI	
Label	THECB LOR Typical Learning Time Terms
Defined By	
Definition	A list of terms to be used in the THECB LOR for Typical Learning Time Element.
Comments	
See Also	
Type of term	Encoding Scheme
Encoding Scheme For	Typical Learning Time

4. Appendix of Encoding Scheme Values

4.1 THECB LOR History Subject Terms

Abolitionism	Continental Congress	Hartford Convention
Act for the Impartial	Cotton	Immigration
Administration of Justice	Cotton Gin	Impressment
Adams Administration	Cult of True Womanhood	Independence Day
Adams-Onis Treaty	Currency	Indian Removal
Albany Plan	Currency Act	Industrial Revolution
Alien and Sedition Acts	Dartmouth College v.	Industrialization
American Art	Woodward	Interchangeable Parts
American Colonization	Declaration of American	Intolerable Acts
Society	Rights	Iroquois Nation
American Culture	Declaration of Independence	Jackson Administration
American Government	Declaration of Sentiments	Jacksonian Democracy
American Indians	Declaration of the Causes	Jefferson Administration
American Literature	and Necessity of Taking Up	John Q. Adams
American Renaissance	Arms	Administration
American Revolution	Declaration of the Rights and	Join or Die
American System	Grievances of the Colonies	Joint-stock Companies
Anglican Church	Declaratory Act	Judiciary Act of 1801
Annexation	Democracy	Kentucky and Virginia
Anti-Slavery	Domestic Policy	Resolves
Army Nursing Corps	Dred Scott Decision	King George's War
Art	Early American Democracy	King Philip's War
Articles of Confederation	East India Company	King William's War
Bacon's Rebellion	Eaton Affair	Labor
Bank of the United States	Economic Change	Labor Parties
Bank War	Election of 1824	Labor Unions
Battle of Fallen Timbers	Election of 1836	Land Act of 1820
Battle of New Orleans	Embargo	Land Laws
Battle of Saratoga	English Civil War	Liberty Trees
Bering Strait	English Colonization	Louisiana Purchase
Bicameral Legislature	Enlightenment	Lowell System
Bill of Rights	Evangelicalism	Madison Administration
Biological Exchange	Exploration Routes	Madisonian Model
Boston Massacre	Factories	Manifest Destiny
Boston Port Act	Federalism	Massachusetts Government
Boston Tea Party	Federalist Papers	Act
British Colonies	First Encounters	Mayflower Compact
British Empire	Force Bill	McCulloch v. Maryland
Calvinism	Foreign Policy	Mental Institutions
Canals	Free Will	mercantile system
Cities	French America	Mercantilism
Coercive Acts	French and Indian War	Mexican-American War
Colonial Government	French Colonization	Middle Passage
Colonial Life	French Revolution	Mississippian
Common Sense	Gender Roles	Missouri Compromise
Commonwealth v. Hunt	Gibbons v. Ogden	Molasses Act
Conestoga Wagon	Glorious Revolution	Monroe Administration
Connecticut Compromise	Gold Rush	Monroe Doctrine
Constitutional Convention	Government	Moral Reform

Moral Reform Societies	Stamp Act	Renaissance
National American Woman Suffrage Association	Stamp Act Congress	The Age of the Common Man
National Bank	Star-Spangled Banner	Breed's and Bunker Hills
Navigation Acts	Steamboats	California
News	Strict Constructionism	Colonial Cities
Non-consumption Agreements	Suffolk Resolves	Delaware
Non-Intercourse Act	Suffrage	Florida
Northwest Ordinance	Sugar Act	Jamestown
Nullification	Tariff of 1824	Lexington and Concord
Olive Branch Petition	Tariff of 1828	Massachusetts Bay Colony
Pan-Indian Movement	Tariff of 1832	Middle Colonies
Panic of 1819	Tariff of 1833	New Jersey
Panic of 1837	Tariffs	New York
Philadelphia Female Anti-Slavery Society	Tarring and Feathering	Northern Colonies
Philosophy	Technology	Old Northwest
Pinckney's Treaty	Temperance	Old Southwest
Plantation System	Texas Revolution	Oregon Territory
Political Activism	Textiles	Pennsylvania
Political Parties	The American Society for the Promotion of Temperance	Plymouth
Politics of Personality	The Crusades	Roanoke
Polk Administration	The Enlightenment	South Carolina
Pontiac's Rebellion	The Liberator	Southern Colonies
Portuguese Exploration	The Mayflower	St. Augustine
Predestination	Three-Fifths Compromise	Texas
Prisons	Tobacco	The South
Proclamation Line of 1763	Townshend Acts	Tippecanoe
Prohibitory Act	Trail of Tears	Yorktown
Protestant Reformation	Transcendentalism	Adam Smith
Protestantism	Transportation	African Americans
Puritanism	Treaty of Ghent	Africans
Quartering Act	Treaty of Guadalupe Hidalgo	Alexander Hamilton
Queen Anne's War	Treaty of New Echota	American Indians
Railroads	Treaty of Paris	Amerigo Vespucci
Religion	Two Treatises on Government	Anasazi
Religious Tolerance	Tyler Administration	Andrew Jackson
Restraining Acts	U.S. Constitution	Anne Hutchinson
Revolution of 1800	U.S. Navy	Anti-Federalists
Revolutionary War	Utopian Movement	Anti-Masonic Party
Salem Witch Trials	Virginia Company	Antoinette Brown Blackwell
Scalping	Virtual Representation	Antonio Lopez de Santa Anna
Second Bank of the United States	Voting and Representation	Aztecs
Second Great Awakening	War of 1812	Benjamin Franklin
Second Treatise of Civil Government	War of Jenkins' Ear	Charles Grandison Finney
Seneca Falls Convention	Washington Administration	Charles Townshend
Slave Trade	Webster-Ashburton Treaty	Cherokee
Slavery	Westward Expansion	Chief Osceola
Slavery Debate	Whiskey Rebellion	Christopher Columbus
Social Reform	Women's Rights	Daniel Shays
Spanish Colonization	Women, Satire	Daughters of Liberty
Specie Circular	XYZ Affair	Democratic Party
Spoils System	Early Nationhood	Democratic-Republicans
	Era of Good Feeling	Dorothea Dix
	Pre-Columbian	Dr. Elizabeth Blackwell
	Pre-Columbian America	Dred Scott
		Easter n Woodlands People

Eastern Woodlands People	John Dickinson	Pocahontas
Eli Whitney	John Jay	Pontiac
Elizabeth Cady Stanton	John L. O'Sullivan	Quakers
Explorers	John Locke	Rene-Robert Cavalier
Federalists	John Marshall	Republicans
Five Civilized Tribes	John Quincy Adams	Robert J. Walker
Francisco Pizarro	John Ross	Roger Williams
Frederick Jackson Turner	John Slidell	Samuel Adams
Frederick Lord North	John Tyler	Samuel de Champlain
General Winfield Scott	John White	Seminole
George Grenville	Jonathan Edwards	Shays' Rebellion
George Washington	King George III	Sieur de La Salle
George Whitefield	La Malinche	Sir Walter Raleigh
Grimke Sisters	Loyalists	Sojourner Truth
Henry CLay	Lucretia Mott	Sons of Liberty
Henry the Navigator	Martin Luther	Squanto
Henry VIII	Martin Van Buren	Stephen F. Austin
Hernan Cortes	Mayas	Susan B. Anthony
Hernando De Soto	Minute Men	Tecumseh
Hohokams	Mississippian	Thomas Jefferson
Hopewell	Mogollons	Thomas Paine
Incas	Mormons	Timothy Dwight
Indentured Servants	Mound Builders	Treaty Party
Jacque Cartier	Nathaniel Bacon	Vikings
James II	Native Americans	War Hawks
James K. Polk	Nicholas Biddle	Whigs
James Madison	Odwandiyag	William Henry Harrison
James Monroe	Oliver Cromwell	William Lloyd Garrison
John Adams	Patrick Henry	William of Orange
John C. Calhoun	Paul Revere	William Pitt
John Calvin	Pilgrims	Women

4.2 IEEE LOM Interactivity Type Vocabulary

Active
 Expositive
 Mixed

4.3 IEEE LOM Interactivity Level Vocabulary

Very low
 1=Low
 2=Medium
 3=High
 4=Very high

4.4 IEEE LOM Difficulty Level Vocabulary

Very easy
 Easy
 Medium
 Difficult
 Very difficult

4.5 NSDL Learning Resource Type

Abstract	Fiction	Problem Set
Annotation	Form	Project
Article	Forum	Reference
Artifact	Game	Remotely Sensed Imagery
Ask-an-Expert	Glossary	Report
Assessment	Illustration	Simulation
Bibliography	Instructor Guide	Study Guide
Broadcast	Lesson	Syllabus
Case Study	Map	Textbook
Clearinghouse	Music	Thesis
Course	Oral History	Tutorial
Curriculum	Periodical	Field Trip
Data Set	Photograph	Weblog
Demonstration	Portal	
Experiment	Presentation	

4.6 THECB LOR Instructional Method Terms

Assessment Item	Learning Module
Activity Exercise	Lecture Presentation
Case Study	Multiple activities
Computer-Based Tutorial Instruction	Multimedia instruction
Computer simulations	Project-based learning
Course Lecture Presentation Notes	Role playing
Cooperative learning	Games
Demonstrations	Simulations
Curriculum Syllabus	Student Success guide
Discussions	Teaching guide
Examination Test	Podcast
Experiential learning	Vodcast
Glossary	Visual instruction
Interdisciplinary	

4.7 NSDL Education Level Vocabulary

- Undergraduate (Lower Division)
- Undergraduate (Upper Division)
- Graduate

4.8 Language Terms

- English (United States)
- English
- Spanish
- German

French
 Italian
 Japanese
 Chinese
 Other

4.9 THECB LOR Requirement Terms

Flash
 Real Player
 Quick Time
 Shockwave
 Acrobat Reader
 Windows Media Play

4.10 List of Internet Media Types (MIME Types)

This short list of values from the encoding scheme. The full list of values available at http://www.w3schools.com/media/media_mimeref.asp

MIME Type/Subtype	Associated File Extensions
application/msword	doc, dot
application/pdf	pdf
application/vnd.ms-excel	xla, xlc, xlm, xls, xlt, xlw
application/vnd.ms-powerpoint	pot, pps, ppt
application/vnd.ms-works	wcm, wdb, wks, wps
application/x-msmediaview	m13, m14, mvb
application/x-shockwave-flash	swf
application/x-javascript	js
application/zip	zip
audio/mpeg	mp3
audio/x-pn-realaudio	ra, ram
image/gif	gif
image/jpeg	jpe, jpeg, jpg
image/tiff	tif, tiff
text/html	htm, html, stm
text/plain	bas, h, c, txt
text/richtext	rtx
text/x-vcard	vcf
video/mpeg	mp2, mpa, mpe, mpeg, mpg, mpv2
video/quicktime	mov, qt
video/x-msvideo	avi
video/x-sgi-movie	movie

4.11 THECB LOR Media Format Terms

Audio
 Video
 Text
 Multimedia

4.12 THECB LOR Typical Learning Time Terms

10 hours

2.5 hours

20 minutes

10 minutes

5 minutes

varies—see summary