

digital library south dakota metadata guidelines

version 1.1

November, 2009

Updated 12/17/2009

- Digitization Specifications

Updated 02/25/2009

- NISO link p. 4 and p. 45

Updated 04/ 23/2010

- Clarifications and additions to Metadata Entry Guidelines, Title, Creator, Subject, Publisher, Contributor, Format, Identifier, Source and Digitization Specifications

Updated 07/10/2012

- Addition of audio digitization specifications: sample rate and number of channels p. 46-48

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Introduction

Digital Library South Dakota Metadata Guidelines provides a best practice outline for the creation of metadata records for digital resources for inclusion in Digital Library South Dakota (DLSA). Resources may be either born digital or digitized from an existing physical resource, and include photographs, text, audio, video, three-dimensional artifacts, and other materials. This document's foundation is supplied by the *Dublin Core Metadata Initiative (DCMI) Metadata Terms*. Application of these guidelines will result in standardized Dublin Core records that:

- Enhance online search and retrieval accuracy in local and shared databases.
- Improve resource discovery capabilities.
- Improve quality control of metadata records.
- Facilitate inter-institutional interoperability.

Good-quality, standardized descriptive metadata is critical to the usability of any digital collection. Descriptive metadata provides users with intellectual access to a collection's content. Metadata is necessary for users' ability to discover and identify the digital resources that match their interests and needs. Metadata provides the essential building blocks and framework for collection searching, browsing, and navigation, allowing users to limit searches and locate results from large, diverse online collections. High quality metadata conforming to established standards is equally critical for the harvesting, sharing, repurposing, and general interoperability of the metadata itself, both within the DLSA collaborative and within the larger global context of aggregated digital collections.

DLSA content creators have agreed to use this manual when creating all DLSA entries. Quality control, ease of use, search and discovery for users, both local and global, relies on the standardization of records created by the use of this manual.

The following Dublin Core properties or sub-properties may not be defined, in whole or in part, in this document as they are not currently available for mapping in CONTENTdm, the software supported by DLSA: Access Rights, Accrual Method, Accrual Periodicity, Accrual Policy, Bibliographic Citation, Date Accepted, Date Copyrighted, Date Submitted, Education Level, License, Provenance, and Rights Holder. If these properties or sub-properties are utilized in the creation of metadata records, it is advised that these fields not be mapped to any other currently available Dublin Core property in CONTENTdm, but map to "None."

Acknowledgements

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Digital Library South Dakota Metadata Guidelines is substantially based on and includes formatting, excerpts, and entire sections (either verbatim or with adaptations) from the following sources, used with permission:

- *AES standard for audio metadata - Audio object structures for preservation and restoration*, Audio Engineering Society, INC. AES57-2011
- *Claremont Colleges Digital Library (CCDL) Metadata Best Practices Version 1.1*, December 2005
<http://ccdlibraries.claremont.edu/inside/CCDLmetadata.pdf>
- *Collaborative Digitization Program Dublin Core Metadata Best Practices (CDPDCMBP) Version 2.1.1*, September 2006
<http://www.bcr.org/cdp/best/dublin-core-bp.pdf>
- *Dublin Core Metadata Initiative (DCMI) Metadata Terms*, January 14, 2008
<http://dublincore.org/documents/dcmi-terms/#H1>
- *Wisconsin Heritage Online (WHO) Metadata Guidelines Version 2.0*, August 2008
<http://wiheritage.pbwiki.com/Metadata>

Special thanks to Thomas Baker (DCMI), Liz Bishoff (BCR), Debbie Cardinal (WHO), and Pat Vince (CCDL) for their support and generosity.

Digitization Specifications references the recommendations of NISO Z39.87-2006 *Data Dictionary – Technical Metadata for Digital Still Images*:

http://www.niso.org/kst/reports/standards?step=2&gid=None&project_key=b897b0cf3e2ee526252d9f830207b3c9f3b6c2c.

DLSD Metadata Properties Table

Property	Sub-property	Requirements	Repeatability
Title		Required	Repeatable
	Alternative Title	Optional	Repeatable
Creator		Required if available	Repeatable
Subject		Required	Repeatable
Description		Optional	Repeatable
	Abstract	Optional	Repeatable
	Table of Contents	Optional	Repeatable
Publisher		Required	Repeatable
Contributor		Required if available	Repeatable
Date		Required if available	Repeatable
	Date Available	Optional	Repeatable
	Date Created	Optional	Repeatable
	Date Accepted	Optional	Repeatable
	Date Copyrighted	Optional	Repeatable
	Date Submitted	Optional	Repeatable
	Date Issued	Optional	Repeatable
	Date Modified	Optional	Repeatable
Date Valid	Optional	Repeatable	
Type		Required	Repeatable
Format		Required	Repeatable
	Extent	Optional	Repeatable
	Medium	Optional	Repeatable
Identifier		Required	Repeatable
	Bibliographic Citation	Optional	Repeatable
Source		Required if applicable	Repeatable
Language		Required if applicable	Repeatable
Relation		Required (see Is Part Of)	Repeatable
	Conforms To	Optional	Repeatable
	Has Format	Optional	Repeatable
	Has Part	Optional	Repeatable
	Has Version	Optional	Repeatable
	Is Format Of	Optional	Repeatable
	Is Part Of	Required	Repeatable
	Is Referenced By	Optional	Repeatable
	Is Replaced By	Optional	Repeatable
	Is Required By	Optional	Repeatable
	Is Version Of	Optional	Repeatable
	References	Optional	Repeatable
	Replaces	Optional	Repeatable
Requires	Optional	Repeatable	
Coverage		Optional	Repeatable
	Spatial Coverage	Optional	Repeatable
	Temporal Coverage	Optional	Repeatable
Rights		Required	Repeatable
	Access Rights	Optional	Repeatable
	License	Optional	Repeatable

Property	Sub-property	Requirements	Repeatability
Provenance		Optional	Repeatable
Rights Holder		Optional	Repeatable
Audience		Optional	Repeatable
Date Digital		Required	Repeatable
Digitization Specifications		Required	Repeatable
	Bit Depth	Required	Repeatable
	Checksum	Required	Repeatable
	Color Mode	Required	Repeatable
	Compression	Required	Repeatable
	Extent	Required	Repeatable
	File Format	Required	Repeatable
	File Size	Required	Repeatable
	Hardware	Required	Repeatable
	Number of Channels	Required	Repeatable
	Operating System	Required	Repeatable
	Resolution	Required	Repeatable
Sample Rate	Required	Repeatable	
Software	Required	Repeatable	

DLSD Required and Optional Properties

Required:

Title.....	10
Subject.....	15
Publisher.....	20
Type.....	26
Format.....	28
Identifier.....	30
Relation [Is Part Of].....	34
Rights.....	40
Date Digital.....	45
Digitization Specifications.....	46

Required if available/applicable:

Creator.....	13
Contributor.....	22
Date.....	23
Source.....	31
Language.....	33

Optional:

Description.....	18
Coverage.....	37
Provenance.....	42
Rights Holder.....	43
Audience.....	44

Metadata Entry Guide

Careful data entry:

Consistent data entry may mean the difference between locating related resources and “losing” those resources in the online database because they cannot be effectively retrieved by users. Typographical errors, extraneous punctuation, inconsistency in what data is assigned to which fields, or whether fields are properly filled, can all affect retrieval success.

Follow grammatical rules:

We suggest that content creators follow the general grammatical rules of the main language in which the resource exists when entering descriptive information. **In addition, the *Anglo-American Cataloging Rules (AACR2)* and the *Descriptive Cataloging of Rare Materials (Books)* are to be used for general rules and guidelines for data entry.** Below are seven key format or grammar-related concerns.

Punctuation: Avoid extraneous punctuation or ending punctuation unless it is part of the content of the resource, (i.e., “Lawrence County tornado, July 23, 1969, 5:35 p.m.”). However, some punctuation is necessary to make data display more cleanly, (i.e., “...yesterday (Thursday, October 19, 1919)”). For the use of punctuation with acronyms, please see “Capitalization” below.

Abbreviations: In general, avoid abbreviations, except for common usage (i.e., “St.” for “Saint”), designations of function (i.e., “trans.” For “translator”), date terms (i.e., “b.” for “born”), terms added to names to distinguish persons (“Jr.”, “Mrs.”, etc.), and acronyms. If a caption or corresponding data includes abbreviations or punctuated acronyms, an Alternative Title property should be used to provide uniformity in the database (i.e., a Title property from the caption, “Law Co Ad Bld ‘09” would result in an Alternative Title property, “Lawrence County Administrative Building 1909”). Abbreviations should not be used if they make the record unclear, and when in doubt, spell out the abbreviation (i.e., “Association of Legal Administrators”, not “ALA”). If an acronym occurs only in the Description field, consider spelling out the first instance of the entity followed by the acronym. Each subsequent use is acronym only, without qualification. This is especially true when the entity in question is not a Subject Heading, use of which would guarantee a controlled vocabulary in that property. Outside of the Title property, render most acronyms without periods (i.e., “ALA”, not “A.L.A.”), but adhere to common usage where punctuation is always used (i.e., “Ph.D.”). As with abbreviations, acronyms in the Title property may require use of Alternative Title (i.e., “Library Faculty at A.L.A.” on a caption would result in a Title property of the same, but an Alternative Title would then be created: “Library Faculty at ALA”, etc.), preserving search success on acronyms without internal punctuation. When possible, avoid plural acronyms, but when used, do not incorporate apostrophes (i.e., “DVDs”, not “DVD’s”), and Description field creations for entities should avoid use of possessive acronyms (i.e. “ALA’s charter...”); write or rewrite the account preserving search success on the acronym.

Capitalization: In general, capitalize the first word (of a title, for example) and proper names (place, personal and corporate names) and subject terms only. Capitalize content in the description field according to normal rules of writing. Do not enter content in all capital letters except in the case of acronyms.

Initial Articles: Omit initial articles at the beginning of titles: the, a, an, le, la, los, el, der, die, das, etc. For non-English language items, a complete list, by article, can be found in Appendix E of, *MARC 21 Format for Authority Data* (<http://www.loc.gov/marc/authority/ecadhome.html>); Cataloguer’s Toolbox provides broader scope comparative cataloging information for 12 key languages, *A Glossary of Bibliographic Information by Language* (<http://staff.library.mun.ca/staff/toolbox/lang/biblang.htm>).

Spelling: When a misspelling is encountered, you may choose to put [sic] after the affected word (preferred), or insert the proper letters with brackets, i.e., Shak[e]speare. This, however, will affect searching and indexing.

Alternately, consider leaving spelling errors as found and elsewhere in the record include a brief statement that provides the proper spelling, or correct it in use within the Description property, making both the error and the correction searchable. If the spelling error is encountered in the Title property, enter the uncorrected version as the Title, without brackets, and provide the corrected version as the entry in the Alternate Title property.

Characters to avoid:

Symbols: Do not use less-than or greater-than symbols (< >).

Ampersands: Do not use ampersands (&); spell out the word “and.” If the ampersand appears in the original title use of the ampersand is advisable, but spell out the word “and” in an Alternate Title property.

Line breaks: Do not use line breaks via “hard” or “carriage” returns (result of the use of the “Enter” key) or the use of HTML coding.

Hyphens: In general, avoid hyphenated words in the Description property especially if the words are likely keyword search terms. When needed, use hyphens for word combinations not yet accepted as single words (i.e., e-books). If unusual or grammatically incorrect hyphenated words appear in the Title property, when appropriate, create an Alternative Title preserving search success on the proper or un-hyphenated term (i.e., “La-Kota Club 1949”, done also as “Lakota Club 1949”).

Diacritics: Many diacritics and foreign characters are supported. Enter them as you would normally in a word processor (Basic Latin character set). For a chart of diacritics, please see <http://www.ramsch.org/martin/uni/fmi-hp/iso8859-1.html>.

Controlled vocabularies:

Adding a controlled vocabulary (for such properties as Creator, Contributor, Subject, Type, Format, Language, etc.) provides for greatly increased search specificity. Controlling an entry makes the entire text string searchable as a string, not simply as the individual terms making up the string or entry. Additionally, controlled entries offer a cleaner presentation as each string will appear on its own display line in the web view. From the collection administration screen, click “field properties.” From there, click “edit” on the field for which a controlled vocabulary will be created. Select “yes” on the radio button for controlled vocabulary. Select the first option to “create a new controlled vocabulary for this field.” Either select an installed controlled vocabulary or select “use the existing contents of the field.” If you are using the existing contents of the field, you will have to approve any additions to the controlled vocabulary in CONTENTdm Administration. Please see <http://www.contentdm.org/USC/tutorials/controlled-vocab.pdf> for more information.

Digital Library South Dakota Metadata Guidelines

Dublin Core Metadata Properties

DLSD Metadata Guidelines is substantially based on and includes formatting, excerpts, and entire sections (either verbatim or with adaptations) from the following sources, used with permission:

- *Claremont Colleges Digital Library (CCDL) Metadata Best Practices Version 1.1*, December 2005
<http://ccdlibraries.claremont.edu/inside/CCDLmetadata.pdf>
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<http://www.bcr.org/cdp/best/dublin-core-bp.pdf>
- *Dublin Core Metadata Initiative (DCMI) Metadata Terms*, January 14, 2008
<http://dublincore.org/documents/dcmi-terms/#H1>
- *Wisconsin Heritage Online (WHO) Metadata Guidelines Version 2.0*, August 2008
<http://wiheritage.pbwiki.com/Metadata>

Title

REQUIRED; REPEATABLE

DLSD Requirements:

Required: One **Title** property, either from the resource or devised by the metadata creator.

Optional: Alternative Title properties for other titles born by the resource or derived titles. A **Title** property must be provided if choosing to add **Alternative Title(s)**.

DC Definition:

A name given to the resource.

DLSD Comment:

Normally **Title** is the name given to the resource by the creator or publisher. If the name is unknown, or the resource does not have a formal name assigned, an identifying name or phrase must be provided by the submitting institution. If a title is assigned by the submitting institution, use a title that best describes the resource by using established cataloging rules such as *Anglo-American Cataloging Rules (AACR2)*, *Describing Archives: A Content Standard (DACS)*, or *Cataloging Cultural Objects (CCO)*. The title should describe the resource in basic terms, but should not attempt to provide an exhaustive description.

Use "Untitled" (without quotation marks) only when the item is specifically named "Untitled" by the creator or publisher.

Input Guidelines:

- Enter multiple titles in the order in which they appear on the resource or in the order of their importance. Use separate **Title** or **Alternate Title** properties to enter multiple titles or clearly separate each entry by a semicolon and a space within a property. Use separate properties to enter more than one title if necessary for access, i.e., "caption title, former title, spine title, collection title, series title, artist's title, object name, etc." or if in doubt about what constitutes the title.
- Capitalize the first word and proper names (place, personal, and corporate names). Do not enter content in all capital letters except in the case of acronyms.
- Do not use quotation marks around titles.
- Make the title as descriptive as possible, avoiding simple generic titles such as "Papers" or "Annual Reports."
- When possible, exclude initial articles from titles. Exceptions might include when the article is an essential

part of the title or when local practice requires use of initial articles.

f. In general, transcribe titles and subtitles from the source using the same punctuation that appears on the source. If the holding institution has created the title, then use punctuation that would be appropriate for the English language. Some institutions may wish to apply consistent guidelines proscribed by the Modern Language Association (MLA), *Chicago Manual of Style*, etc.

g. File names, accession numbers, call numbers, or other identification schemes should be entered in the **Identifier** or **Source** properties. A non-numeric description of the resource is preferred for the title.

h. If multiple items are being described as a collection by one record and no collection title already exists, create a collective title that is as descriptive as possible of the contents. If each item in such a collection is itself worthy of being described by its own record (i.e., item-level record), refer back to the collection-level title in the **Relation** property.

i. Translations of titles into another language from that of the original source item should be added to the **Description** property and not placed in **Title** or **Alternative Title**.

Sub-properties:

Property	DC Definition
Alternative Title [optional, repeatable]	An alternative name for the resource. [DC Comment: The distinction between titles and alternative titles is application-specific.]

Syntax Encoding Scheme(s) or Vocabulary Encoding Scheme(s): none

Examples:

Property	Sub-property	Content	Comment
Title		Untitled	From a work the creator titled: "Untitled." (Can only be used when the creator has titled the work: "Untitled"; metadata creators cannot assign "Untitled" to any work lacking a title).
Title		Hiking trail guide to Bear Butte	Title of the pamphlet, now digitized.
Title		Fort Randall country, summer 1910	Title from handwritten caption on reverse of photographic print.
Title		Running brave	Title as given on the poster promoting the motion picture of the same name.
Title		The 1954 Black Hills Passion Play	Title from caption on the reverse of postcard promoting the Play.
Title		Bozeman Farm, 1888-1898	Title of manuscript (diary), as found.
Title		Thoen Stone	Title of the object seen in, and the caption from, the photographic slide.
Title		Mammoth Site, Hot Springs	Title caption, with misspelling.
Title	Alternative Title	Mammoth Site, Hot Springs	Title caption, with corrected spelling.
Title		Matopaha	Title of original photographic work as found on the reverse of the print.
Title	Alternative Title	Mato Paha	Alternative two word title version, as found in LCNAF SH.
Title		RC-flood-72	Title from handwritten caption on the face of photographic print.
Title	Alternative Title	Rapid City flood, 1972	Alternative version of the title, spelled out, with year and abbreviation.
Title		Library Building	Title from caption.
Title	Alternative Title	Grace Balloch Memorial Library	Derived title.

Property	Sub-property	Content	Comment
Title		Drive the Oyate Trail, South Dakota	Title as given on billboard, in the untitled photographic image; title supplied by metadata creator.
Title		Christmas parade, downtown Hot Springs, ca. 1975	Image of annual parade; precise year unknown; most likely mid 1970s; title supplied by metadata creator.
Title		Billy Mills, 10,000 meter preliminary race, 1964 Olympic Games	Image of Billy Mills taken at the Games of the XVIII Olympiad (Tokyo, Japan); title supplied by metadata creator.

Creator**REQUIRED IF AVAILABLE;
REPEATABLE****DC Definition:**

An entity primarily responsible for making the resource.

DC Comment:

Examples of a creator include a person, an organization, or a service. Typically, the name of a creator should be used to indicate the entity.

DLSD Comment:

There can be more than one creator. For example, you could have a composer and a lyricist equally responsible for the intellectual content of a musical piece. You could also have two authors of a book or article.

Input Guidelines:

- a. Enter multiple creators in the order in which they appear on the resource or in order of their importance. Use separate **Creator** properties to enter multiple creators or clearly separate each entry by a semicolon and a space within a property. Creation of a locally administered controlled vocabulary (see "Controlled vocabularies" p. 9) is recommended. Secondary authors, editors, etc., may be entered using the **Contributor** property.
- b. Use of Library of Congress Name Authority File (LCNAF) is required.
- c. If the **Creator** does not appear in LCNAF, please use the following format:
 - Last name, first name, middle initial, date-date
 - If you have only a birth or death date, or an approximate (circa) date, use the following patterns: "b. date," "d. date," and "ca. date." Question marks are allowed in this field.
 - Examples: Smith, Joe M., 1931-2002
 Smith, Joe M., b. 1931?
 Smith, Joe M., d. 2002
 Smith, Joe M., ca. 1900-1990
- d. For corporate body names (i.e., names of organizations, societies, government agencies, etc.) enter the name as it appears. If the name includes a subordinate body, which is part of a larger parent body, give the parent body first, ending with a period, followed by the subordinate body.
 - Examples: South Dakota School of Mines and Technology. Institute of Atmospheric Sciences
 South Dakota State University. Alumni Association
- e. Do not include any extraneous explanatory data in addition to the name and dates, such as a person's role (i.e., Smith, Joe, M. 1931-2002: Composer) unless it is included in the LCNAF entry. Including data other than the controlled form of the name will not allow all instances of the name to be hyperlinked and indexed for database users. If the creator's role in an item is otherwise unclear, include mention of this in a **Description** property.
- f. If there is doubt as to how to enter a name and the form of name cannot be verified in a controlled vocabulary, enter it as it appears and do not invert.
 - Example: Medicine Garner
- g. If the creator is unknown, leave the property blank.
- h. Alternate spellings of a creator (spelling on the resource is different than the controlled form in LCNAF) should be noted in a **Description** property.

Sub-properties: none

Vocabulary Encoding Scheme(s):

Name	Description
LCNAF [required]	Library of Congress Name Authority File: http://authorities.loc.gov

Examples:

Property	Scheme	Content	Comment
Creator	LCNAF	Howe, Oscar, 1915-1983	Artist of the painting (watercolor) seen in the slide, now digitized.
Creator	LCNAF	Hare, William Hobart, 1838-1909	Author of the text (sermon) now contained in digitized text file.
Creator	LCNAF	Clark, Badger, 1883-1957	Author of text (poem) now contained in digitized text file.
Creator	LCNAF	Wilder, Laura Ingalls, 1867-1957	Author of text (story) now contained in digitized text file.
Creator	LCNAF	Communication Service for the Deaf (Sioux Falls, S.D.)	Author (Corp.) of the manual contained in the digitized text file.
Creator	LCNAF	Wall Drug Store (Wall, S.D.)	Author (Corp.) of the text (brochures) now contained in the digitized file.
Creator	LCNAF	Indigenous (Musical group)	Artist (Corp.) responsible for the sound recording now digitized.
Creator	LCNAF	Borglum, Gutzon, 1867-1941	Artist of the sculpture in the original photographic print now digitized.
Creator	LCNAF	Borglum, Lincoln	Photographer of the original image now digitized.
Creator	LCNAF	Lewis, Emma Elizabeth, b. 1886	Author (autobiography) of the original manuscript, now digitized.
Creator		Bigelow, Cecil Allen, 1858-1908	Author not in LCNAF (dates known).
Creator		Red Horse Owner, b. 1850?	Author not in LCNAF (dates approximate).
Creator		Yuill, Camille	Author not in LCNAF (dates unknown).

Subject**REQUIRED; REPEATABLE****DLSD Requirements:**

Required: At least one (preferably more) **Subject** property; strongly recommended: use terms from one of the established controlled vocabularies listed under Vocabulary Encoding Schemes below; acceptable: use terms from a local or other established vocabulary; minimum acceptable: use uncontrolled keyword terms. When applicable, use of South Dakota Place Names (SDPN) is required.

Optional: Additional **Subject** properties with uncontrolled terms in addition to controlled vocabulary terms.

DC Definition:

The topic of the resource.

DC Comment:

Typically, the subject 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** property.

DLSD Comment:

What the content of the resource is about or what it is, expressed by headings, phrases, names and sometimes keywords. Subject terms usually originate from an established thesaurus or discipline-related word lists.

Enter the genre term of the object in the **Subject** field. A digital image that is a photograph could be given the subject genre term "Photograph" but its type listed in the **Type** property will be "Still Image." An artist's book may be given the subject genre term "Artists' books" while the type listed in the **Type** property will be "Text."

Input Guidelines:

- a. For multi-word subject terms, capitalize just the first word, unless other words are proper nouns.
- b. Delimit fields with a semi-colon and space ("; "), i.e., Subject term 1; Subject term 2; Subject term 3.
- c. Creation of a locally administered controlled vocabulary (see "Controlled vocabularies" p. 9) is recommended.
- d. If LCSH terms are being used, follow the standard formatting, using space dash dash space to separate headings and subdivisions (on standard keyboards, two hyphens are used to equal a dash), i.e., Heading -- Subdivision.
- e. When including terms from multiple vocabularies, use separate **Subject** properties.
- f. Identify applicable schemes or thesauri in the **Subject** property or label using standardized abbreviations such as those from the *MARC Code List: Part IV: Term, Name, Title Sources* (<http://www.loc.gov/marc/relators/relasour.html#rela600b>).
- g. If the subject is a person or organization, use the same form of name as if the person or organization was a **Creator**.

Sub-properties: none

Vocabulary Encoding Scheme(s):

Name	Description
DDC [optional]	Dewey Decimal Classification: http://www.oclc.org/dewey
LCC [optional]	Library of Congress Classification: http://lcweb.loc.gov/catdir/cpsolcco/lcco.html
LCNAF [optional]	Library of Congress Name Authorities File: http://authorities.loc.gov
LCSH [optional]	Library of Congress Subject Headings: http://authorities.loc.gov
MESH [optional]	Medical Subject Headings: http://www.nlm.nih.gov/mesh/meshhome.html
NLM [optional]	National Library of Medicine Classification: http://wwwcf.nlm.nih.gov/class
UDC [optional]	Universal Decimal Classification: http://www.udcc.org

Name	Description
AAT [optional]	Art and Architecture Thesaurus: http://www.getty.edu/research/conducting_research/vocabularies/aat
AMG [optional]	Audiovisual Materials Glossary
ATLA [optional]	Religion Indexes Thesaurus
CHT [optional]	Chicano Thesaurus for Indexing Chicano Materials
ERICD [optional]	Thesaurus of ERIC Descriptors: http://www.ericfacility.net/extra/pub/theseearch.cfm
FAST [optional]	Faceted Application of Subject Terminology: http://fast.oclc.org
GEOREFT [optional]	GEORef Thesaurus
GMGPC [optional]	Thesaurus for Graphic Materials: TGM II, Genre and Physical Characteristic Terms: http://www.loc.gov/rr/print/tgm2
GFASD [optional]	Guidelines on Subject Access to Individual Works of Fiction, Drama, etc.
LCSHAC [optional]	Library of Congress Subject Headings: Annotated Card Program
LCTGM [optional]	Library of Congress Thesaurus for Geographic Names I: Subject Terms: http://www.loc.gov/rr/print/tgm1
Local [optional]	Locally controlled list of terms
MIM [optional]	Moving Image Materials: Genre Terms
NALAT [optional]	NAL Agricultural Thesaurus: http://agclass.nal.usda.gov/agt/agt.shtml
NASAT [optional]	NASA Thesaurus: http://www.sti.nasa.gov/thesfrm1.htm
NICEM [optional]	NICEM (National Information Center for Educational Media) Thesaurus For order info, see: http://www.nicem.com
NIMACSC [optional]	NIMA Cartographic Subject Categories
NLMC [optional]	NLM Classification: http://wwwcf.nlm.nih.gov/class
NMC [optional]	Revised Nomenclature for Museum Cataloging: a revised and expanded version of Robert C. Chenhall's system for classifying man-made objects.
NTISSC [optional]	NTIS Subject Categories
RBGENR [optional]	Genre Terms: A Thesaurus for Use in Rare Books and Special Collections
Sears [optional]	Sears Subject Headings
SDPN [mandatory if applicable]	South Dakota Place Names
TEST [optional]	Thesaurus of Engineering and Scientific Terms
TGN [optional]	Getty Thesaurus of Geographic Names: http://www.getty.edu/research/tools/vocabulary/tgn/index.html
WATREST [optional]	Thesaurus of Water Resources Terms

Examples:

Property	Scheme	Content	Comment
Subject	LCSH	Buffalo Gap National Grassland (S.D.)	Resource is a guide to the Grassland.
Subject	LCSH	Means, Russell, 1939-	Resource is a digital image of Means.
Subject	LCSH	Cemeteries -- South Dakota -- Sioux Falls	Resource is a city cemetery directory.
Subject	LCSH	Crazy Horse Mountain (S.D.)	Resource is a vintage postcard.
Subject	LCSH	Railroad accidents -- South Dakota	Resource is SD RR accident index.
Subject	LCSH	South Dakota Hall of Fame	Resource is Hall architectural plans.
Subject	LCSH	Bob Burns Dakota Bowl (Football game)	Resource is a game audio recording.
Subject	LCSH	Old Post Cemetery (Fort Meade, S.D.)	Resource is an old cemetery map.
Subject	LCSH	Floods -- South Dakota -- Rapid City	Resource is USGS flood publication.
Subject	LCSH	Fort Randall Historic Site -- History	Resource is Historical Site pamphlet.

Property	Scheme	Content	Comment
Subject	LCSH	United States. Army. Cavalry, 7 th .	Resource is 1891 Cavalry photograph.
Subject	LCSH	Bridges -- South Dakota -- Chamberlain	Resource is an image depicting the Chamberlain Bridge.
Subject	LCSH	Ellsworth Air Force Base (S.D.)	Item is a photo of vintage bumper stickers promoting the AFB.
Subject	LCSH	Fraternal Order of Police (U.S.). State Lodge of South Dakota.	Resource is an image of the Order; SH supplied by metadata creator based on similar existing entries in LCNAF.
Subject	AAT	Earth lodges	Resource is a sketch of a Native American dwelling.
Subject	AAT	Parfleches	Resource is an image of a small container of Plains Indian origin.
Subject	AAT	Ledger drawings	Resource is an image of a collage of recent Plains Indian origin.
Subject	SDPN	Homestake Mine (Lawrence County)	Resource is an annual report.
Subject	SDPN	Fort Meade (Meade County)	Resource is a collection of letters regarding the Fort.
Subject	SDPN	Bear Foot Lake (Bennett County)	Resource is a water quality report.
Subject	SDPN	Custer State Park (Custer and Pennington Counties)	Resource is a Park brochure.
Subject	SDPN	Pine Ridge Reservation (Washington, Shannon, and Washabaugh Counties)	Resource is a government report on the Reservation.

Description**OPTIONAL; REPEATABLE****DC Definition:**

An account of the resource.

DC Comment:

Description may include but is not limited to: an abstract, a table of contents, a graphical representation, or a free-text account of the resource.

DLSD Comment:

Description may also include edition information, transcriptions, information about the physical description or condition of the resource, and any free-text notes about the resource.

Regarding photographic materials; transcribe anything handwritten, stamped, or printed on the image, mat, or case. Include any information not represented in other fields. The **Description** property may include contextual information about the object.

The **Description** property may be used for transcripts or “full-text,” but fields are limited to 128,000 single-byte characters and 64,000 characters when double-byte character sets are used (Chinese, Japanese and Korean). CONTENTdm allows for only one “full-text searching” field per collection.

Input Guidelines:

- a. This is a free text field.
- b. Best practices recommend standard sentence form. Capitalize content in the description field according to normal rules of writing. Do not enter content in all capitals except in the case of acronyms.
- c. Enter multiple descriptions in the order of their importance. Use separate **Description** properties to enter multiple descriptions or clearly separate each entry by a semicolon and a space within a property.

Sub-properties:

Property	DC Definition
Abstract [optional]	A summary of the resource.
Table of Contents [optional]	A list of subunits of the resource.

Syntax Encoding Scheme(s) or Vocabulary Encoding Scheme(s): none

Examples:

Property	Sub-property	Content	Comment
Description		From back of photograph: “CCC workers from Este F-3 Camp constructing Dalton Dam”. Dated July 6, 1935.	Description is the notation from the reverse of the original photograph.
Description		Leah Authier, shown left, and Janice Hildebrand, shown in the middle, prepare for the USD Theatre production of A Midsummer Night’s Dream, which was presented January 14-16, 1954. Authier played the part of Mustard-seed, and Hildebrand played the part of Puck.	Description of persons depicted in a digitized photograph.
Description		Grand View Hotel was located on the Lake Madison Chautauqua grounds. It provided elegant living accommodations for Chautauqua visitors. It was destroyed by a fire in December 1946.	Description is a metadata-creator supplied free-text account of a place in a digitized photograph.

Property	Sub-property	Content	Comment
Description		History of Minnehaha County – containing an account of its settlements, growth, development and resources: an extensive and minute sketch of its cities, towns and villages, their improvements, industries, manufactories, churches, colleges, schools and societies: synopsis of public records, biographical sketches, portraits of early settlers and other prominent residents: illustrations of public buildings, residences, farms and scenery.	Description is the added subtitle of the digitized booklet.
Description	Abstract	A biographical account of Chief Red Cloud, (1822-1909), focusing on his later years at Pine Ridge, his work to establish a Jesuit-run educational institution there, and his subsequent death and burial on the hill overlooking Red Cloud Indian School, which was named in his honor.	Abstract of a digital journal article.

Publisher**REQUIRED; REPEATABLE****DC Definition:**

An entity responsible for making the resource available.

DC Comment:

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.

DLSO Comment:

Publisher is the name of the person, institution, or administrative unit (library, museum, archive, etc.) responsible for publishing the digital resource.

The **Publisher** property contains information about the digital publisher. Use of a field title "Digital Publisher" for this property is recommended. Publisher information from the original resource (not born-digital), now digitized, should be listed in properties such as **Source** or **Contributor**.

Use of the DLSO controlled vocabulary "DLSO Publishers" is required. To add the controlled vocabulary to a collection, click "field properties" on the collection administration screen. From there, click "edit" for the Publisher (Digital Publisher) property. Select "yes" on the radio button for "use a controlled vocabulary from another field or collection." Select the controlled vocabulary "DLSO Publishers" from the drop down menu. Digital publisher entries may be added as needed to the controlled vocabulary through CONTENTdm Administration. See <http://www.contentdm.org/USC/tutorials/controlled-vocab.pdf> for more information about controlled vocabularies.

Input Guidelines:

- Enter multiple publishers in the order of their importance. Use separate **Publisher** properties to enter multiple publishers or clearly separate each entry by a semicolon and a space within a property.
- In the case of an object that existed in another form before being digitized (not born-digital), the publisher of this earlier form may be entered in the **Source** property. If a publisher of an earlier form is considered important to users and therefore for resource discovery, include it in the **Contributor** property. (The Source property is currently not available for use with WorldCat Digital Collection Gateway.)
- Use of authority files, such as Library of Congress Name Authority File (LCNAF) (<http://authorities.loc.gov>) is strongly recommended.
- Omit initial articles in publisher names.

Sub-properties: none

Vocabulary Encoding Scheme(s):

Name	Description
LCNAF [required]	Library of Congress Name Authority File: http://authorities.loc.gov

Examples:

Property	Content	Comment
Publisher	Black Hills State University. Leland D. Case Library	Publisher of digital object.
Publisher	Dakota State University. Karl Mundt Library. University Archives	Publisher of digital object.
Publisher	Northern State University. Archives and Special Collections	Publisher of digital object.
Publisher	South Dakota School of Mines and Technology. Devereaux Library	Publisher of digital object.
Publisher	South Dakota State University	Publisher of digital object.
Publisher	University of South Dakota. University Libraries. Archives and Special Collections	Publisher of digital object.

Property	Content	Comment
Publisher	University of South Dakota. National Music Museum	Publisher of digital object.
Source	Originally published as: Violin-making as it was and is: a historical, theoretical, and practical treatise on the science and art of violin-making, for the use of violin makers and players, amateur and professional. (Boston: E. Howe, 1899), ML802 .H47 1899 (University of South Dakota Libraries)	Publisher of the original printed text, now digitized, including place of publication.
Contributor	Boston: E. Howe	This is the publisher of a print book that was later digitized by another entity.

Contributor**REQUIRED IF AVAILABLE;
REPEATABLE****DC Definition:**

An entity responsible for making contributions to the resource.

DC Comment:

Examples of a contributor include a person, an organization, or a service. Typically, the name of a contributor should be used to indicate the entity.

DLSD Comment:

Person(s) or organization(s), in addition to the **Creator**, who have made significant intellectual contributions to the content of the resource but whose contribution is secondary to that of the **Creator**. Examples of a **Contributor** include editor, transcriber, illustrator, etc.

Input Guidelines:

- a. Enter multiple contributors in the order in which they appear on the resource or in order of their importance. Use separate **Contributor** properties to enter multiple contributors or clearly separate each entry by a semicolon and a space within a property. Creation of a locally administered controlled vocabulary (see "Controlled vocabularies" p. 9) is recommended.
- b. Use of Library of Congress Name Authority File (LCNAF) is required.
- c. If the **Creator** does not appear in LCNAF, please use the following format:
 - Last name, first name, middle initial, date-date
 - If you have only a birth or death date, or an approximate (circa) date, use the following patterns: "b. date," "d. date," and "ca. date." Question marks are allowed in this field.
 - Examples: Smith, Joe M., 1931-2002
Smith, Joe M., b. 1931?
Smith, Joe M., d. 2002
Smith, Joe M., ca. 1900-1990
- d. For corporate body names (i.e., names of organizations, societies, government agencies, etc.) enter the name as it appears. If the name includes a subordinate body which is part of a larger parent body, give the parent body first, ending with a period, followed by the subordinate body.
 - Examples: South Dakota School of Mines and Technology. Institute of Atmospheric Sciences
South Dakota State University. Alumni Association
- e. Do not include any extraneous explanatory data in addition to the name and dates, such as a person's role (i.e., Smith, Joe, M. 1931-2002: Composer). Including data other than the controlled form of the name will not allow all instances of the name to be hyperlinked and indexed for database users. If the contributor's role in an item is otherwise unclear, include mention of this in the description field.
- f. If there is doubt as to how to enter a name and the form of name cannot be verified in a controlled vocabulary, enter it as it appears and do not invert.
 - Example: Medicine Garner

Sub-properties: none

Vocabulary Encoding Scheme(s):

Scheme Name	Description
LCNAF [required]	Library of Congress Name Authority File: http://authorities.loc.gov

Examples:

Property	Scheme	Content	Comment
Contributor	LCNAF	Robinson, Doane, 1856-1946	Editor
Contributor	LCNAF	Manhart, Paul	Translator
Contributor	LCNAF	South Dakota Writers' Project	Transcriber(s)
Contributor	LCNAF	Dunn, Harvey, 1884-1952	Illustrator

Date**REQUIRED IF AVAILALBE;
REPEATABLE****DC Description:**

A point or period of time associated with an event in the lifecycle of the resource.

DC Comment:

Date may be used to express temporal information at any level of granularity. Recommended best practice is to use an encoding scheme, such as the W3C-DTF profile of ISO 8601 [W3CDTF].

DLSD Comment:

A resource may have many dates associated with it, including: creation date, copyright date, revision date, edition date, modification date, issued date, valid date, available, etc. DLSD mandates including the date of the creation of the original resource from which the digital object is derived, or the date of creation of a born-digital object. For dates other than creation date, use separate **Date** properties with the sub-property for each additional date associated with the resource.

Enter dates pertaining to the digitized version of the resource when not “born digital” in the local DLSD **Date Digital** property.

Best practice when working with CONTENTdm is to create two properties for each **Date** property or sub-property. The first iteration (as described in the property descriptions) is for display (visible), is non-searchable, has a text data type, i.e., 1890-1900 or ca. 1890, and is not mapped to a Dublin Core property. The second **Date** property is hidden, searchable, has a date data type, i.e., 1890, 1891, 1892, etc., and is mapped to the **Date** property.

Input Guidelines:

- a. Specific dates should follow ISO 8601 [W3CDTF] format.
- b. Questionable or approximate dates should be expressed using “ca.” in the visible, non-searchable property and not a question mark. Use “ca.” for a single date or date range when you can estimate that this is the probable date or date range, but it is not certain. If you can determine with certainty that a resource was created during a given date range, give that date range without the “ca.” Enter W3C-DTF formats without “ca.” in the hidden, searchable property.
- c. **Date Original** may be used as the title to identify this property in the public record.
- d. Enter dates in the form YYYY-MM-DD in accordance with the W3C-DTF syntax encoding scheme. Use a single hyphen to separate the year, month, and date components.
 - Examples: Year: YYYY (1897)
Year and month: YYYY-MM (1897-07 for July 1897)
Complete date: YYYY-MM-DD (1897-07-16 for July 16, 1897)
- e. For a range of dates, enter the dates in accordance with the DCMI Period encoding scheme, separating them with a hyphen, as in 1910-1920.
- f. Enter dates for different purposes in separate **Date** properties, i.e., date resource created and date modified.

Note: Date Accepted, Date Copyrighted, and Date Submitted are not available in CONTENTdm for mapping; recommended best practice is to map these properties to “None” if including these properties in metadata records.

Sub-properties:

Property	DC Definition
Date Available [optional]	Date (often a range) that the resource became or will become available.

Property	DC Definition
Date Created [optional]	Date of creation of the resource.
Date Accepted [optional] [not available for mapping in CONTENTdm]	Date of acceptance of the resource. [DC Comment: Examples of resources to which a Date Accepted may be relevant are a thesis (accepted by a university department) or an article (accepted by a journal).]
Date Copyrighted [optional] [not available for mapping in CONTENTdm]	Date of copyright.
Date Submitted [optional] [not available for mapping in CONTENTdm]	Date of submission of the resource. [DC Comment: Examples of resources to which a Date Submitted may be relevant are a thesis (submitted to a university department) or an article (submitted to a journal).]
Date Issued [optional]	Date of formal issuance (i.e., publication) of the resource.
Date Modified [optional]	Date on which the resource was changed.
Date Valid [optional]	Date (often a range) of validity of a resource.

Syntax Encoding Scheme(s):

Name	Description
W3C-DTF [mandatory if applicable]	W3C Encoding rules for dates and times – a profile based on ISO 8601: http://www.w3.org/TR/NOTE-datetime .
DCMI Period [optional]	A specification of the limits of a time interval: http://dublincore.org/documents/dcmi-period .

Examples:

Property	Sub-property	Scheme	Content	Comment
Date [hidden and visible]	Issued	W3C-DTF	1927	Date of original text, published in 1927.
Date [hidden and visible]	Created	W3C-DTF	1927-07	Date of original art work, created in July of 1927.
Date [hidden and visible]	Created	W3C-DTF	1927-07-03	Date of original photograph taken on July 3, 1927.
Date [hidden and visible]	Created	DCMI Period	1910-1920	Date range: original art work known to have been created between these dates. For a serial, these are the beginning and ending dates of publication.
Date [visible]	Issued		ca. 1927	Approximate single date: original text probably published in this year or close to it.
Date [hidden]	Issued	DCMI Period	1925-1929	Approximate date range: original text probably published in this range of years.
Date [visible]	Created		ca. 1910-1919	Approximate date range: original work probably created sometime between these dates.

Property	Sub-property	Scheme	Content	Comment
Date [hidden]	Created	DCMI Period	1910-1919	Approximate date range: original work probably created sometimes between these dates.
Date [visible]	Created		ca. 1600s	Approximate date range of original text known to have been created in this century.
Date [hidden]	Created	DCMI Period	1600-1699	Approximate date range of original text known to have been created in this century.

Type**REQUIRED; REPEATABLE****DLSD Requirements:**

Required: A value selected from the DCMI Type scheme for the predominant content of the resource.

Optional: Additional **Type** properties if applicable; i.e., a digital resource in which text, image, and sound are integrated and are all of equal importance.

DC Definition:

The nature or genre of the resource.

DC Comment:

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** property.

DLSD Comment:

A term selected from the DCMI Type list that best characterizes the content of the resource, regardless of its original or digital manifestation. For example, a book digitized as a set of image files would still be **Type** "Text," whereas its digital **Format** would be "Still Image."

Note that digital representations of three-dimensional objects should use the designations "Still Image," "Text," or one of the other types from the DCMI Type Vocabulary. Use of the term "Physical Object" is limited to databases of only physical objects, not their digital surrogates.

In 2003, DCMI recommended the use of narrower terms "Still Image" or "Moving Image" in addition to the broader term "Image."

Input Guidelines:

- Follow capitalization and spacing from the DCMI Type scheme exactly.
- Some digital objects may involve more than one type, i.e., "Image" and "Still Image." Use separate **Type** properties to enter multiple types or clearly separate each entry by a semicolon and a space within a property.

Sub-properties: none

Vocabulary Encoding Scheme(s):

Name	Description
DCMI Type [mandatory]	DCMI Type Vocabulary: A list of types used to categorize the nature or genre of the content of the resource: http://dublincore.org/documents/dcmi-type-vocabulary .

Examples:

Property	Scheme	Term	Definition
Type	DCMI Type	Collection	An aggregation of resources. A collection is described as a group; its parts may also be separately described.
Type	DCMI Type	Dataset	Data encoded in a defined structure. Examples include lists, tables, and databases. A dataset may be useful for direct machine processing.
Type	DCMI Type	Event	A non-persistent, time-based occurrence. Metadata for an event provides descriptive information that is the basis for discovery of the purpose, location, duration, and responsible agents associated with an event. Examples include an exhibition, webcast, conference, workshop, open day, performance, battle, trial, wedding, tea party, and conflagration.

Property	Scheme	Term	Definition
Type	DCMI Type	Image	A visual representation other than text. Examples include images and photographs of physical objects, paintings, prints, drawings, other images and graphics, animations and moving pictures, film, diagrams, maps, musical notation. Note that Image may include both electronic and physical representations.
Type	DCMI Type	Interactive Resource	A resource requiring interaction from the user to be understood, executed, or experienced. Examples include forms on Web pages, applets, multimedia learning objects, chat services, or virtual reality environments.
Type	DCMI Type	Moving Image	A series of visual representations imparting an impression of motion when shown in succession. Examples include animations, movies, television programs, videos, zoetropes, or visual output from a simulation. Instances of the type Moving Image must also be describable as instances of the broader type Image.
Type	DCMI Type	Physical Object	An inanimate, three-dimensional object or substance. Note that digital representations of, or surrogates for, these objects should use Image, Text or one of the other types.
Type	DCMI Type	Service	A system that provides one or more functions. Examples include a photocopying service, a banking service, an authentication service, interlibrary loans, a Z39.50 or Web server.
Type	DCMI Type	Software	A computer program in source or compiled form. Examples include a C source file, MS-Windows .exe executable, or Perl script.
Type	DCMI Type	Sound	A resource primarily intended to be heard. Examples include a music playback file format, an audio compact disc, and recorded speech or sounds.
Type	DCMI Type	Still Image	A static visual representation. Examples include paintings, drawings, graphic designs, plans and maps. Recommended best practice is to assign the type Text to images of textual materials. Instances of the type Still Image must also be describable as instances of the broader type Image.
Type	DCMI Type	Text	A resource consisting primarily of words for reading. Examples include books, letters, dissertations, poems, newspapers, articles, archives of mailing lists. Note that facsimiles or images of texts are still of the genre Text.

Format**REQUIRED; REPEATABLE****DLSO Requirements:**

Required: One **Format** property containing the Internet Media Type (IMT) [MIME] designation for the digital file, using the IMT encoding scheme qualifier that describes the access file not the archival or preservation file.

Optional: Additional **Format** properties or sub-properties. Sub-properties may contain the extent (file size or duration) of the digital file and/or a physical description of the original resource.

DC Definition:

The file format, physical medium, or dimensions of the resource.

DC Comment:

Examples of dimensions include size and duration. Recommended best practice is to use a controlled vocabulary such as the list of Internet Media Types [MIME].

DLSO Comment:

There will always be one **Format** property containing the IMT of the digital resource. Optionally, the size or duration of the digital file may be given in a separate **Format** property using the **Extent** sub-property.

In addition, physical description information about the original analog resource, such as size, number of pages, duration, physical materials, and so on, can be included in a separate **Format** property by utilizing the **Medium** sub-property.

Do not use the **Format** property for subject genre or musical medium, such as musical or artistic work (this would go into **Description** or **Subject** properties), because they speak more to the intellectual content of the resource.

Input Guidelines:

- a. Mandatory: Enter the IMT for the type of digital access file following the IMT scheme exactly.
- b. Optional: Enter digital file size or duration information for the access file in **Extent**.
- c. Optional: Enter format of original analog object in **Medium**.
- d. Some digital objects may involve more than one format, for example, an oral history interview may have audio formats and text format transcriptions. Use separate **Format** properties to enter multiple formats or clearly separate each entry by a semicolon and a space within a property.
- e. Enter formats for different purposes as separate **Format** properties, i.e., separate file size and duration entries.
- f. Record the file size as bytes (i.e., 3,670,016 bytes) and not as kilobytes (35,840 KB), megabytes (35 MB), etc.
- g. For audio and moving image file formats, include the duration (i.e., play time) of the resource.
- h. The **Format** property may influence a user's decision to access the described resource. When the resource being described requires the use of software, hardware, or other infrastructures that are external to the resource itself, record that information in the **Relation Requires** property. For example, if a Dublin Core record for the digitized version of a hand-written letter is delivered to the user as a PDF file, Adobe Acrobat Reader (which is external to the resource being described) is required to view that PDF file. In this scenario, the metadata would be entered as follows:

- **Format:** application/pdf
Format Extent: 7,500,000 bytes
Relation Requires: Adobe Acrobat Reader

An MP3 audio file requiring Real Audio for listening would have the following metadata:

- **Format:** audio/mp3
Format Extent: 3,200,000 bytes
Format Extent: 5 minutes
Relation Requires: Real Audio Player

Sub-properties:

Property	DC Definition
Extent [optional]	The size or duration of the resource.
Medium [optional]	The material or physical carrier of the resource.

Vocabulary Encoding Scheme(s):

Name	Description
IMT [mandatory]	The Internet Media Type of the resource: http://www.iana.org/assignments/media-types .

Examples:

Property	Sub-property	Scheme	Content	Comment
Format		IMT	image/jpeg	Internet Media Type designation for a jpeg image file.
Format		IMT	image/jp2	Internet Media Type designation for a jpeg 2000 image file.
Format		IMT	application/pdf	Internet Media Type designation for a PDF text file.
Format	Extent		3,670,016 bytes	File size for a 35 megabyte file.
Format	Extent		1 minute	Play time for a digital audio file.
Format	Medium		DVD	Describes the physical characteristic of the original resource.
Format	Medium		oil on canvas	The physical characteristics/material of the original resource depicted in a digital image.
Format	Medium		linen with beads	Describes the physical characteristics/material of the original resource depicted in a digital image.

Identifier**REQUIRED; REPEATABLE****DLSD Requirements:**

Required: One **Identifier** property containing a unique file name for the digital object being represented by the metadata record or a span of unique file names, which includes the first and last file name, representing multiple files for a digital object.

Optional: Additional **Identifier** properties, if appropriate.

DC Definition:

An unambiguous reference to the resource within a given context.

DC Comment:

Recommended best practice is to identify the resource by means of a string conforming to a formal identification system.

DLSD Comment:

A unique file name that ties the metadata record to the digital file it describes is required for DLSD.

Use separate **Identifier** property fields for each unique type of identifier.

The **Identifier** property ensures that individual digital objects can be accessed, managed, stored, recalled, and used reliably.

Input Guidelines:

- a. Record the **Identifier** according to common formatting conventions for the type of identifier being used.
- b. Recommended best practice is to include identifiers from different Syntax Encoding Schemes in separate properties.
- c. For multi-piece, multipart digital objects such as each individual page image of a scanned text, best practice is to identify each page with a predictable naming scheme locally, but to share one metadata record for the text as a single, whole resource.

Sub-properties:

Name	DC Definition
Bibliographic Citation [optional] [not available for mapping in CONTENTdm]	A bibliographic reference for the resource. [DC Comment: Recommended practice is to include sufficient bibliographic detail to identify the resource as unambiguously as possible.]

Syntax Encoding Scheme(s):

Name	Description
URI [optional]	Uniform Resource Identifier

Examples:

Property	Scheme	Content	Comment
Identifier		abc0049501	Local file name for the digital object represented in this metadata record.
Identifier	DOI	10.1000/182	DOI for digital article.
Identifier		MMA0001-MMA0133	First and last local file name from a span representing the individually scanned pages from a book.

Source**REQUIRED IF APPLICABLE;
REPEATABLE****DC Definition:**

A related resource from which the described resource is derived.

DC Comment:

The described resource may be derived from the related resource in whole or in part. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system.

DLSD Comment:

The **Source** property should only be used for information identifying the original object from which a digital reproduction was created in whole or in part. Do not use **Source** for the name of a collection, whether original or digital, from which the current resource was taken or of which it is a part; use **Relation Is Part Of** instead. (See **Relation** property for more information and examples.)

Do not use the **Source** property for resources that are “born digital” and are not derived from a pre-existing resource.

The **Source** property is currently not available for harvesting to WorldCat Digital Collection Gateway. If information that appears in the **Source** property is essential for searching and retrieval in WorldCat, make sure this information is included in properties that are available for harvesting.

Input Guidelines:

- a. Enter multiple source information in order of their importance. Use separate **Source** properties to enter multiple sources or clearly separate each entry by a semicolon and a space within a property. Usually there will be only one source from which the present digital resource has been derived.
- b. If, as in most cases, the **Source** property describes an originating resource upon which the digital resource is somehow based, then also include a **Relation** property such as **Relation Is Version Of**. (See **Relation** property for more information.) Such **Relation** properties often duplicate information given in the **Source** property, but in shorter form.
- c. The **Source** property may consist of a combination of elements such as free text combined with a formal identification system (such as an ISBN) to describe a book.
- d. Whenever possible, include a unique standard identifier such as an ISBN, ISSN, LC call number, etc. If no standard identifier exists, use a local call number, control number, accession number, or barcode. Identify the institution associated with such locally derived numbers.
- e. Clarify the nature of the relationship between the two resources by using an initial phrase such as “Originally published as:”, “Excerpted from:”, “Original book:”, “Original format:”, or “Reproduction of:”, etc.
- f. The **Source** property usually is used in conjunction with a corresponding **Relation** property. Because **Source** properties show a derivative relationship with another resource, they generally have a corresponding **Relation** property to show that relationship. Not all **Relation** properties, however, conversely require a corresponding **Source** property because not all related resources are derivative. For example, a resource might require another resource to support it or it might be referenced by another resource. In both these cases, a **Relation** property might be required (i.e., **Relation Requires** and **Relation Is Referenced By**), but a **Source** property would not. See **Relation** for more information.
- g. In general, include information about a previous version which does not fit easily into **Relation**.

Sub-properties: none

Syntax Encoding Scheme(s):

Name	Description
URI	Uniform Resource Identifier: http://www.ietf.org/rfc/rfc2396.txt
URN [optional]	Uniform Resource Number
DOI [optional]	Digital Object Identifier

Name	Description
ISBN [optional]	International Standard Book Number
ISSN [optional]	International Standard Serial Number

Examples:

Property	Content	Comment
Source	Excerpted from: Audio recording Edwin H. Shaw, Jr. being interviewed by Cedric Cummins (1972-02-17); SDOHP 148 (Vermillion: South Dakota Oral History Center)	Digitized audio clip taken from an audio tape recording.
Source	Original letter: Letter from Elbert W. Harrington to Lewis E. Akeley, December 6, 1955, Lewis Ellsworth Akeley Papers, University of South Dakota, University Libraries, Archives and Special Collections. Accession No. RC83-0001	Digitized reproduction of a letter.
Source	Original version: 35 mm slide of the exterior of Old Main, slide no. 5962, USD Photograph Collection, University of South Dakota, University Libraries, Archives and Special Collections	Digitized image from an original slide.
Source	Original format: The Adventure of the Arts (Vermillion, SD: University of South Dakota, 1976) 1 film reel (14 minutes): color, 9.5 inches, H-135. (University of South Dakota, University Libraries, Archives and Special Collections)	Textual description.
Source	Originally published as: Violin-making as it was and is: a historical, theoretical, and practical treatise on the science and art of violin-making, for the use of violin makers and players, amateur and professional. (Boston: E. Howe, 1899), ML802 .H47 1899 (University of South Dakota, University Libraries, Archives and Special Collections)	Publisher of the original printed text, now digitized, including place of publication.
Source	http://apollo.sdln.net/F/IH2M2JBKGUFN4RQH7BF8TTPAGV1T3FUVG5H674CULJYJKG7C-90425?func=full-set-set&set_number=046665&set_entry=000097&format=999	URL for MARC record that describes the original resource.
Source	Reproduction of: Cradelites Poster, 1912. (University of South Dakota, University Libraries, Archives and Special Collections)	Textual description.
Source	DG975.C8 C2 1645	LC call number for original book.
Source	1575793490	ISBN for original book.

Language**REQUIRED IF APPLICABLE;
REPEATABLE****DC Definition:**

A language of the resource.

DC Comment:

Recommended best practice is to use a controlled vocabulary such as RFC 4646 [RFC4646].

DLSD Comment:

The language(s) in which a text is written or the spoken language(s) of an audio or video resource. Visual images do not usually have a language unless there is a significant text in a caption or in the image itself. Sound recordings without sung or spoken words also lack linguistic content. Include language codes for each language that makes up a significant portion of the resource.

Input Guidelines:

- a. Must use the appropriate 3-letter code from the ISO639-2 scheme.
- b. For resources with no linguistic content, either omit the language property or use the code “zxx” for “no linguistic content.”
- c. A resource may include multiple languages. Use separate **Language** properties to enter multiple languages or clearly separate each entry by a semicolon and a space within a property.
- d. In addition to using language codes, if needed, a textual description of the nature of the language may be included in the **Description** property, i.e., “In German and English, in parallel columns.”

Sub-properties: none

Syntax Encoding Scheme(s):

Name	Description
ISO 639-2 [mandatory]	ISO 639-2: Codes for the Representation of Names of Languages Part 2: Alpha-3 Code: http://lcweb.loc.gov/standards/iso639-2/langhome.html .

Examples:

Property	Scheme	Content	Comment
Language	ISO 639-2	eng	ISO 639-2 code for English.
Language	ISO 639-2	zxx	ISO 639-2 for “No linguistic content.”
Language	ISO 639-2	sio	ISO 639-2 for Siouan languages.
Language	ISO 639-2	spa	ISO 639-2 code for Spanish.
Language	ISO 639-2	ger	ISO 639-2 code for German.
Language	ISO 639-2	fre	ISO 639-2 code for French.
Language	ISO 639-2	ita	ISO 639-2 code for Italian.
Language	ISO 639-2	chi	ISO 639-2 code for Chinese.
Language	ISO 639-2	rus	ISO 639-2 code for Russian.
Language	ISO 639-2	jpn	ISO 639-2 code for Japanese.

Relation**REQUIRED; REPEATABLE****DLSD Requirements:**

Required: One **Relation Is Part Of** property (if using Qualified Dublin Core) or one **Relation** property (if using Simple Dublin Core) containing the name of the parent collection, physical or digital, of which the resource is a part.

Optional: Additional **Relation** properties or sub-properties.

DC Definition:

A related resource.

DC Comment:

Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system.

DLSD Comment:

This property contains information necessary to show a relationship with another resource separate from the resource being described/represented by the current metadata record. In some cases, the collection name may be the collection title used on the institution website.

Relationships can be from the resource being described to another resource in the same online collection, in a different online collection, or to an external resource. Each sub-property can be used to indicate more than one type of item in a collection (i.e., "Is Part Of" can refer to both a movement within a work and a work within a series).

Recommended best practice is to always use one of the sub-properties listed below to explain the nature of the relationship between the described resource (i.e., the resource being described by the metadata record) and the related resource being referred to in the **Relation** property.

Input Guidelines:

- a. Free text form: Name of the collection
- b. Use of **Is Part Of** is preferred to describe relation to a parent collection.
- c. Use separate **Relation** properties to enter multiple relations or clearly separate each entry by a semicolon and a space within a property.
- d. A resource may relate to another resource in a variety of ways that can be described by using more than one **Relation** property. For example, the same resource can be a part of a larger resource while simultaneously containing a smaller resource within itself; it can be a more recent version of one resource and be superseded by another. A resource can be a different version of another resource, or contain the same intellectual content as another resource, but be in a different format.
- e. Include sufficient information in the **Relation** property to enable users to identify, cite, and either locate or link to the related resource.

Sub-properties:

Property	DC Definition
Conforms To [optional]	An established standard to which the described resource conforms.
Has Format [optional]	A related resource that is substantially the same as the pre-existing described resource, but in another format.
Has Part [optional]	A related resource that is included either physically or logically in the described resource.
Has Version [optional]	A related resource that is a version, edition, or adaptation of the described resource.
Is Format Of [optional]	A related resource that is substantially the same as the described resource, but in another format.

Property	DC Definition
Is Part Of [required]	A related resource in which the described resource is physically or logically included.
Is Referenced By [optional]	A related resource that references, cites, or otherwise points to the described resource.
Is Replaced By [optional]	A related resource that supplants, displaces, or supersedes the described resource.
Is Required By [optional]	A related resource that requires the described resource to support its function, delivery, or coherence.
Is Version Of [optional]	A related resource of which the described resource is a version, edition, or adaptation. [DC Comment: Changes in version imply substantive changes in content rather than differences in format.]
References [optional]	A related resource that is referenced, cited, or otherwise pointed to by the described resource.
Replaces [optional]	A related resource that is supplanted, displaced, or superseded by the described resource.
Requires [optional]	A related resource that is required by the described resource to support its function, delivery, or coherence.

Syntax Encoding Scheme(s):

Name	Description
URI [optional]	A URI Uniform Resource Identifier

Examples:

Property	Sub-property	Content	Comment
Relation	Is Part Of	Lake Madison Chautauqua	The digital image described in the metadata is a part of the "Lake Madison Chautauqua" online collection.
Relation	Is Part Of	W. R. Cross Photograph Collection	The digital image described in the metadata is a part of the "W. R. Cross Photograph Collection" online collection.
Relation	Is Part Of	USD Photograph Collection	The digital image described in the metadata is part of the "USD Photograph Collection" physical collection.
Relation	Is Part Of	Mahoney Music Collection	The digitized book described in the metadata record is part of the "Mahoney Music Collection" of rare books related to the violin and the violin family of instruments.
Relation	Is Part Of	Wet Hen v. 1, no. 1 (April 30, 1926) p. 11	The digitized article described in the metadata is part of this particular issue of Wet Hen.
Relation	Is Part Of	Canterbury Tales	A digitized text of The Knight's Tale is part of the larger work The Canterbury Tales.
Relation	Has Part	Knight's Tale	A digitized text of the complete Canterbury Tales includes The Knight's Tale as a part within it.
Relation	Is Version Of	Adaptation of the play Death of a Salesman by Arthur Miller	The digital text described in the metadata is an adaptation of the Arthur Miller play.
Relation	Is Version Of	1 st ed.	Second edition of the same work.

Property	Sub-property	Content	Comment
Relation	Is Format Of	Digital reproduction of the poster Cradelites, 1912, University of South Dakota.	The digital image described in the metadata is a format of the Cradelites poster.
Relations	Is Format Of	UPH000012.tif	The digital resource described in the metadata is of the photographic print of the negative listed.
Relation	Is Format Of	Digital reproduction from the Papers of Andrew E. Lee, Governor of South Dakota, 1897-1900, microfilm, reel 78.	The digital resource described in the metadata is a format of the letter as it was captured on microfilm.
Relations	Has Format	UPH001234; USDPH0005982	The digital resource described in the metadata is of a photographic print and the two identifiers listed point to a slide of the photograph as well as the original negative.
Relation	References	American Culture Series II	The described resource is an index to the series.
Relation	Is Referenced By	The New Sabin, v. 1, no. 333. ISBN 0878750495	The described resource is referenced in this volume of The New Sabin.
Relation	Replaces	DLSO Metadata Guidelines, version 1.0, January, 2009	The document described in the metadata replaces the DLSO document referenced in the Relation property.
Relation	Is Replaced By	CDP Dublin Core Metadata Best Practices, version 2.1, September 2005	The document described in the metadata is replaced by the CDP document referenced in the Relation property.
Relation	Requires	Adobe Acrobat Reader, version 6.0	The resource described in the metadata requires Adobe Acrobat Reader, version 6.0.

Coverage**OPTIONAL; REPEATABLE****DC Definition:**

The spatial or temporal topic of the resource, the spatial applicability of the resource, or the jurisdiction under which the resource is relevant.

DC Comment:

Spatial topic and spatial applicability may be a named place or a location specified by its geographic coordinates. Temporal topic may be a named period, date, or date range. A jurisdiction may be a named administrative entity or a geographic place to which the resource applies. Recommended best practice is to use a controlled vocabulary such as the Thesaurus of Geographic Names [TGN]. Where appropriate, named places or time periods can be used in preference to numeric identifiers such as sets of coordinates or date ranges.

DLSD Comment:

Spatial Coverage refers to the location(s) covered by the intellectual content of the resource (i.e., place names, longitude and latitude, celestial sector, etc.) not the place of publication. This is essentially a subject content property used when the resource depicts or is about a particular place. The spatial characteristics can refer to the place where an artifact/object originated. Keep in mind that not every geographic name or date related to a resource should go in the **Coverage** property. For example, the location of a publisher should go into the **Publisher** property.

Temporal Coverage refers to the time period covered by the intellectual content of the resource (i.e., Jurassic, 1900-1920), not the publication date. For artifacts or art objects, the temporal characteristics refer to the date or time period during which the artifact/object was made.

If the date refers to the date a resource was created it should go into the **Date** property. **Coverage** refers only to the subject content of the resource. The name of an institution is not considered a place; however, the city in which it is located is. If the name of the institution must be included in the resource record, it should be placed in the **Description** or **Subject** properties.

Currently recommended only for use in describing maps, globes, and cartographic resources or when place or time period cannot be adequately expressed using the **Subject** property.

Input Guidelines:

- a. Multiple places, physical regions, dates, and time periods may be associated with the intellectual content of the resource. No hierarchy is implied. Use separate **Coverage** properties to enter multiple spatial and temporal values or clearly separate each entry by a semicolon and a space within a property.
- b. If using place names, select terms from a controlled vocabulary to identify place names (i.e., *Geographic Names Information System (GNIS)*, *Getty Thesaurus of Geographical Names*, *Library of Congress Subject Headings*, etc.).
- c. If using latitude/longitude, enter according to GNIS standards:
 - “A variable-length alphanumeric field that contains geographic coordinate pairs locating the feature. Each coordinate pair is compressed into and fixed at 15 characters. Latitude and longitude values are in degrees, minutes, and seconds followed by a one-character directional indicator. If the degrees of longitude are less than 100, a leading zero is present. The first coordinate pair listed in this property is termed the primary coordinates. In the case of areal features [i.e., covering a broad area, such as a mountain range], they represent the location of the approximate geographic center of the feature, whereas the primary coordinates of linear features [i.e., long & narrow as in a river] represent the location of the mouth of the feature.” — (*GNIS User Guide 6*, Reston, VA. 1996. http://geonames.usgs.gov/gnis_users_guide_descripds.html).
 - Enter coordinates as “DDMMSSXDDMMSSX” with D=degrees, M=minutes; S=seconds, X=Directional indicator (N, S, E, or W); citing the latitude first, following by the longitude. Note that

two spaces are provided for latitude and three spaces for longitude degrees. Use leading zeros if needed to fill up allotted spaces.

- Example: To represent coordinates for Washington Monument in Washington, D.C., cite as “385322N0770208W,” which translates as latitude 38 degrees, 53 minutes, 22 seconds north and longitude of 77 degrees, 2 minutes, 8 seconds west.

d. Use free text to input B.C.E. dates.

- Example: 200 B.C.E.

e. Specific dates should follow ISO 8601 [W3CDTF] format.

f. Questionable or approximate dates should be expressed using “ca.” and not a question mark. Use “ca.” for a single date or date range when you can estimate that this is the probable date or date range, but it is not certain.

g. Spell out state names and country names.

h. Make sure correct schemes are being used in the correct manner.

Sub-properties:

Property	DC Definition
Spatial Coverage [mandatory if applicable]	Spatial characteristics of the resource.
Temporal Coverage [mandatory if applicable]	Temporal characteristics of the resource.

Syntax Encoding Scheme(s) or Vocabulary Encoding Scheme(s):

Name (Spatial)	Description
TGN [strongly recommend]	The Getty Thesaurus of Geographic Names: http://www.getty.edu/research/tools/vocabulary/tgn/index.html
ISO3166 [optional]	ISO 3166 Codes for the representation of names of countries: http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html
Box [optional]	The DCMI Box identifies a region of space using its geographic limits: http://dublincore.org/documents/dcmi-box/
Point [optional]	The DCMI Point identifies a point in space using its geographic coordinates: http://dublincore.org/documents/dcmi-point/
Declat [optional]	Decimal Degree Latitude: http://www.fcc.gov/mb/audio/bickel/DDMMSS-decimal.html
Declong [optional]	Decimal Degree Longitude: http://www.fcc.gov/mb/audio/bickel/DDMMSS-decimal.html
PLSS [optional]	The Public Land Survey System: http://nationalatlas.gov/articles/boundaries/a_plss.html
GNIS [optional]	Geographic Name Information System http://geonames.usgs.gov/index.html

Name (Temporal)	Description
W3C-DTF [mandatory if applicable]	W3C Encoding rules for dates and times – a profile based on ISO 8601: http://www.w3.org/TR/NOTE-datetime
DCMI Period	A specification of the limits of a time interval: http://dublincore.org/documents/dcmi-period/

Examples:

Property	Sub-property	Scheme	Content	Comment
Coverage	Spatial	TGN	South Dakota	Place name from the Thesaurus of Geographic Names.
Coverage	Spatial	TGN	Andes, Lake	Place name from the Thesaurus of Geographic Names.
Coverage	Spatial	TGN	Buffalo Gap	Place name from the Thesaurus of Geographic Names.

Coverage	Spatial	TGN	Big Sioux River	Place name from the Thesaurus of Geographic Names.
Coverage	Spatial	GNIS	442146N1002247W	Latitude/Longitude for Fort Pierre, South Dakota.
Coverage	Spatial	GNIS	425300N0972348W	Latitude/Longitude for Yankton, South Dakota.
Coverage	Temporal	W3C-DTF	1889-11-02	Date for November 2, 1889.
Coverage	Temporal	W3C-DTF	1889-11	Date for November, 1889.
Coverage	Temporal	W3C-DTF	1889	Date for year 1889.
Coverage [visible]	Temporal		ca. 1889	Approximate single date of source content.
Coverage [hidden]	Temporal	DCMI	1889	Approximate single date of source content.
Coverage [visible]	Temporal		ca. 1880-1900	Approximate date range of source content.
Coverage [hidden]	Temporal	DCMI	1880-1900	Approximate date range of source content.
Coverage	Temporal	Free text	Colonial America	Free text time period name.
Coverage	Temporal	Free text	Ming	Free text time period name.
Coverage	Temporal	Free text	15 th century	Free text time period name.
Coverage	Temporal	Free text	96 B.C.E.	Free text B.C.E. date.

Rights**REQUIRED; REPEATABLE****DLSD Requirements:**

Required: One **Rights** property containing a free text institutional copyright statement applicable to the institution holding the rights to the digital resource (image, text, etc.).

Optional: Additional **Rights** statements, properties or sub-properties.

DC Definition:

Information about rights held in and over the resource.

DC Comment:

Typically, rights information includes a statement about various property rights associated with the resource, including intellectual property rights.

DLSD Comment:

This property has two aspects: (1) ownership and rights information pertaining to the original object and (2) rights and terms of access for the digital object. **Access Rights** and **License** are not available for mapping in CONTENTdm.

Input Guidelines:

a. One **Rights** statement selected from the examples listed below. Additional **Rights** statements may be added in additional properties or added to the selected **Rights** statement.

Sub-properties:

Property	DC Definition
Access Rights [optional] [not available for mapping in CONTENTdm]	Information about who can access the resource or an indication of its security status. [DC Comment: Access Rights may include information regarding access or restrictions based on privacy, security, or other policies.]
License [optional] [not available for mapping in CONTENTdm]	A legal document giving official permission to do something with the resource.

Syntax Encoding Scheme(s) or Vocabulary Encoding Scheme(s): none

Examples:

Property	Content	Comment
Rights	This work is in the public domain and is free of copyright restrictions. This work may be reproduced, published, distributed, displayed, transmitted, and used to produce derivative works without permission.	Material in the public domain.
Rights	The [photograph/text/etc.] from which this copy was made included the following copyright notice: [transcribe the original notice.]	Copyrighted works.
Rights	[Copyright] [© Symbol] [Year of 1 st publication of the work], [Name of copyright owner]: Copyright © 2008, The University of South Dakota	Copyrighted works.

Property	Content	Comment
Rights	The work from which this copy was made did not include a formal copyright notice. This work may be protected by U.S. copyright law (Title 17, United State Code), which governs reproduction, distribution, public display, and other uses of protected works. Some uses may be legal with permission from the copyright holder, if the copyright on the work has expired, or if the use is fair use or within another legal exemption. The user of this work is responsible for compliance with the law.	Works of unknown copyright status.

Provenance**OPTIONAL; REPEATABLE****DC 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.

DC Comment:

The statement may include a description of any changes successive custodians made to the resource.

Rights Holder

OPTIONAL; REPEATABLE

DC Definition:

A person or organization owning or managing rights over the resource.

Audience

OPTIONAL; REPEATABLE

DC Definition:

A class of entity for whom the resource is intended or useful.

Local DLSD Properties

Date Digital

REQUIRED; REPEATABLE

DLSD Definition:

The date on which the digital file was created whether the resource was born digital or is a digitization of a resource originally in a non-digital format.

DLSD Comment:

Best practice is to not map **Date Digital** to the **Date** property.

Input Guidelines:

- a. Specific dates should follow ISO 8601 [W3CDTF] YYYY-MM-DD format.

Sub-properties: none

Syntax Encoding Scheme(s):

Name	Description
W3C-DTF	W3C Encoding rules for dates and times – a profile based on ISO 8601: http://www.w3.org/TR/NOTE-datetime .

Examples:

Date Digitized	Comment
2009-10-16	Date photograph was scanned.
2008-11-14	Date book was scanned.
1996-06-06	Date of digitally born photograph.
2009-07	The resource was scanned in July of 2009.
2008	The year the book was scanned.

Digitization Specifications**REQUIRED; REPEATABLE****DLSD Definition:**

Technical information recorded for the long-term preservation of digital resources.

DLSD Comment:

Effective preservation of digital resources requires attention early in the life cycle, at the moment of creation, and ongoing management to ensure continued usability. The preservation process is made more efficient when attention is paid to issues of consistency, format, standardization and metadata description. The digitization specifications should be recorded for the archival source file and not the access file. Use the **Format** property to record information about the access file.

* Although the **Digitization Specifications** are required and visible, it may not be feasible to list the Checksum Value, Extent, File Size, and Resolution for each image in a compound object when that compound object (or PDF) is comprised of many source files, i.e., a book containing several hundred pages. In this instance, record the Checksum Value, Extent, File Size, and Resolution information in a **Digitization Specifications** field that is not visible.

Input Guidelines:

- a. Most digital objects will include multiple digitization specifications. Use separate **Digitization Specification** properties to enter multiple specifications or clearly separate each entry by a semicolon and a space within a property.
- b. Refer to NISO Z39.87-2006 *Data Dictionary – Technical Metadata for Digital Still Images*:
http://www.niso.org/kst/reports/standards?step=2&gid=None&project_key=b897b0cf3e2ee526252d9f830207b3cc9f3b6c2c.

Sub-properties:

Property	Definition
Bit Depth [required] [visible]	Number of different colors or shades of gray that can be stored in each pixel of an image.
Checksum Value * [required] [visible]	A numeric value used to detect errors in file recording or file transfer; checksum helps ensure the integrity of the digital files against loss of data. The Digital Library of South Dakota (DLSD) uses the MD5 algorithm for computing checksums.
Color Mode [required] [visible]	Color, grayscale, or black and white.
Compression [required] [visible]	Electronic format or compression scheme used for optimized storage and delivery of digital object.
Extent * [required] [visible]	Indicates the range over which a digital object reaches as expressed in space or time. Digital object extent types include pixel dimensions for scanned images (WWW:HHHH) and duration for playing time of an audio recording or motion picture (HHHH:MM:SS:SSS).
File Format [required]	The data element that describes the format name or a description of the file format. Label should be derived from a controlled vocabulary such as Internet Media Type (IMT) [MIME] designation for the archival digital file or describe its proper format name.
File Size * [required] [visible]	The number of bytes as provided by the computer system. Best practice is to record the file size as bytes, i.e., 3,670,016 bytes, and not as kilobytes (35840 KB), megabytes (35 MB), etc.
Hardware [required] [visible]	General type, manufacturer, model name, and model number of hardware used in creating the digital image.
Number of Channels [required] [visible]	Number of channels is used to declare the number of audio streams present. The number of channels is represented as a non-negative integer.

Property	Definition
Operating System [required] [visible]	Computer operating system and version used on the computer with which the digital object was created.
Resolution * [required] [visible]	Pixels per inch.
Sample Rate [required] [visible]	Sample rate is the number of samples that occur in a one second period for a single channel of audio. If the audio object does not contain digital audio data, then the sample rate element shall be omitted.
Software [required] [visible]	Brand and version of software used in creating the digital resource.

Syntax Encoding Scheme(s) or Vocabulary Encoding Scheme(s): none

Examples:

Property	Sub-property	Content
Digitization Specifications		Master file format: 3,670,016 bytes, 24 bit, RGB, image/tif; 600 ppi, CCITT Group 4; Checksum: b0bb7474110910e49be371cdd97af50d; 4550 x 3612; Epson Expression 10000XL Photo flatbed scanner; Adobe Photoshop CS3
Digitization Specifications		Master file format: 43,533,656 bytes, 8 bit, Adobe RGB, 4672 x 3104, 500ppi, uncompressed, TIFF, checksum 236799e3463fbca9c727df8a7381e9da, Pentax K20D SLR digital camera with Zeiss Macro 50mm f/2 ZK Makro-Planar T lens, Microsoft Windows XP Professional Version 2002, Adobe Photoshop CS3
Digitization Specifications	Bit Depth	8 bit
Digitization Specifications	Bit Depth	24 bit
Digitization Specifications	Checksum Value	b0bb7474110910e49be371cdd97af50d
Digitization Specifications	Color Mode	RGB
Digitization Specifications	Color Mode	Grayscale
Digitization Specifications	Compression	Uncompressed
Digitization Specifications	Compression	CCITT Group 4
Digitization Specifications	Compression	LZW
Digitization Specifications	Compression	Lossy
Digitization Specifications	Compression	Lossless
Digitization Specifications	Extent	1:1
Digitization Specifications	Extent	3600 x 6000
Digitization Specifications	File Format	DNG
Digitization Specifications	File Format	TIFF

Property	Sub-property	Content
Digitization Specifications	File Format	WAV
Digitization Specifications	File Format	Microsoft Windows RIFF WAV
Digitization Specifications	File Format	audio/wav
Digitization Specifications	File Format	image/tif
Digitization Specifications	File Format	video/mps
Digitization Specifications	File Format	MPEG-4
Digitization Specifications	File Size	3,670,016 bytes
Digitization Specifications	Hardware	Microtek ScanMaker 1000XL Pro flatbed scanner
Digitization Specifications	Hardware	Pentax K20D digital SLR with Zeiss Macro 50mm f/2 ZK Makro-Planar T lens
Digitization Specifications	Hardware	Nikon Super Coolscan 9000ED slide and film scanner
Digitization Specifications	Hardware	BetterLight Super 6K-2HS scanning back with Linhof 4x5 camera
Digitization Specifications	Number of Channels	1 [Mono] 2 [Stereo]
Digitization Specifications	Operating System	Microsoft Windows Vista 32 bit
Digitization Specifications	Operating System	Microsoft Windows 2000
Digitization Specifications	Operating System	Linux
Digitization Specifications	Resolution	400 ppi
Digitization Specifications	Sample Rate	44,100 Hz
Digitization Specifications	Software	Adobe Photoshop CS3
Digitization Specifications	Software	SilverFast Ai IT8 Studio