



Metadata Entry Guidelines for Mansfield Library Digital Collections

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Please forward questions about these guidelines or on how to properly enter metadata information to the Metadata & Digital Production Librarian.

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INTRODUCTION

Purpose and Scope

The intent of the *Mansfield Library Metadata Entry Guidelines* is to provide guidelines for creating metadata records for digitized resources that are either born digital or have been reformatted from an existing physical resource, such as photographs, text, audio, video, etc. This document uses the Dublin Core element set as defined by the *Dublin Core Metadata Initiative (DCMI)*.¹

Application of these best practices 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

These guidelines have been created to address the needs of the Mansfield Library (ML) and affiliates. This document seeks to accommodate different backgrounds and metadata skill levels of those charged with creating metadata records, including catalogers, archivists, librarians, paraprofessionals, student employees, volunteers, or anyone interested in creating digital collections that will be hosted by the Mansfield Library. We have attempted to provide clear and concise explanation of terms and concepts, as well as examples describing the varied resources found in library digital collections. Some terms may be used interchangeably, such as catalog, online catalog and database; digital resource and digital object; or controlled vocabulary, thesaurus and subject heading list.

Background

Digital collections at Mansfield Library support the mission of the library by providing a quality-based learning, teaching, and research environment through expertise in the digitization, preservation, and cataloging of online materials.

The Mansfield library maintains consortial memberships with:

- Northwest Digital Archives (<http://nwda.wsulibs.wsu.edu/>)
- Montana Memory Project (<http://cdm15018.contentdm.oclc.org/>)

¹ Dublin Core Metadata Initiative (DCMI) is responsible for the maintenance of the Dublin Core standard. Information on the Dublin Core can be found at <http://www.dublincore.org>.

What is Metadata?

The term metadata is a modern term for the bibliographic information that libraries traditionally entered into their catalogs or databases. It is most commonly used to refer to descriptive information about digital resources.

The creation of metadata for digital resources is an important part of a digitization project, and must be incorporated into a project's workflow. Metadata supports the discovery, use, management, reusability, and sustainability of digital resources.

Metadata is most often divided into three conceptual types:

- Descriptive metadata: information used for the indexing, discovery, and identification of a digital resource.
- Structural metadata: information used to display and navigate digital resources, such as chapters in a book or articles in a journal.
- Administrative metadata: information related to the management digital objects. This may include information needed to access and display the resource, as well as rights management information. Administrative metadata might also include technical information, such as the resolution at which the images were scanned, the hardware and software used to produce the image, compression information, pixel dimensions, etc.

Because today's users access digital resources from different locations (home, work, school, etc.), at any time of the day, and often without the assistance of a librarian, archivist, or other professional, metadata needs to provide information that²:

- certifies the authenticity and degree of completeness of the content
- establishes and documents the context of the content
- identifies and exploits the structural relationships that exist between and within information objects
- provides a range of intellectual access points for an increasingly diverse range of users
- provides some of the information that an information professional might have provided in a physical reference or research setting

² Bulleted list quoted from CDP Metadata Working Group. (2006, September). *Dublin Core Metadata Best Practices*. Retrieved March 30, 2009, from BCR's Collaborative Digitization Program (CDP): <http://www.bcr.org/cdp/best/dublin-core-bp.pdf>

Why Dublin Core?

The Dublin Core metadata schema is an internationally recognized metadata standard composed of fifteen basic elements, or descriptive categories, used to describe a variety of digital resources. The semantics of these elements have been established through consensus by an international, cross-disciplinary group of professionals from the library, museum, publishing, computer science, and text encoding communities, as well as from other related fields of scholarship. The Dublin Core Metadata Initiative Element Set has been approved by the American National Standards Institute (ANSI) and assigned the number Z39.85.

The Dublin Core metadata standard embodies the following characteristics:

- Simplicity of creation and maintenance.
- Commonly understood terminology.
- International in scope.
- Extensibility.
- Used in the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH).³
- While the Dublin Core is relatively simple to learn and easy to use, its elements include the most essential information about a resource.
- It works well with the CONTENTdm[®] software currently used at the Mansfield Library.

Updating this document

The Dublin Core Metadata Initiative and the CDP Metadata Working Group maintain the Dublin Core metadata formats upon which this document is based. The Metadata & Digital Production Librarian at the Mansfield Library assumes responsibility for maintaining this document, and will update its metadata element set and best practices document as needed in response to DCMI modifications and the needs of the Mansfield Library and its affiliates.

³ Information on the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) can be found online <http://www.openarchives.org>.

Additional elements needed for digital resources

The Mansfield Library has developed four additional elements considered necessary to use the Dublin Core standard effectively for digital resources. A basic ML record will include fifteen elements from the Dublin Core standard, three additional elements as stated in the CDP standard, and four additional ML elements.

Additional Keywords

Because ML has elected to use controlled vocabularies for subject descriptions and many users may not be familiar with specific vocabularies, additional keywords can be a critical component for providing access to digital resources. Keywords are individual terms that describe the resource, but do not belong to an established controlled vocabulary or thesaurus. Examples of keywords may include slang or modern terms and common spelling variations. Best practice is to use this element to add [or incorporate any] non-controlled terms that will assist users with search and discovery. Additional descriptive terms or keywords can also be included in the description element, along with other descriptive information about the digital resource.

Scale

A special digitization project involving historical maps prompted the addition of this element. The scale may be a critical component for determining the usefulness of a cartographic resource. It is best practice to include this element when describing any cartographic resource. Scale can also be included in the description element, along with other descriptive information about the digital resource.

Reproduction

The Archives & Special Collections department provides reproductions of certain materials from their collections. This element is intended to notify users of this service.

Contact Us

Contact information can be a critical component for providing additional access and information about the library's collections and resources. This element is intended to provide users with an avenue for requesting help with further research.

Mandatory and Optional Elements

The Dublin Core record as developed by the Mansfield Library includes twenty elements, each of which is repeatable. To assure success in a collaborative environment where consistent description of digital resources is critical for interoperability, the Mansfield Library has designated the following ten mandatory elements:

- Title
- Creator (if available)
- Subject
- Description
- Date Digital
- Date Original (if applicable)
- Format
- Digitization Specifications
- Resource Identifier
- Rights Management

The remaining ten elements are optional, but recommended. Richer, more complete records increase the likelihood that database users will locate the desired digital resource.

- Publisher
- Contributor
- Type
- Source
- Language
- Relation
- Coverage
- Scale (if applicable)
- Contributing Institution
- Additional Keywords
- Reproduction
- Contact Us

Record for digital object vs. original objects

The Mansfield Library recommends that a new record be created when resources are converted into digital formats. Adding information about the digital resource to an existing record for the original resource is inadequate for supporting the preservation and management of the digital object over time.

Creating additional MARC records for digital objects which are not currently represented in the library's online public access catalog (OPAC) is not mandatory. While exposure of descriptive metadata in both the OPAC and the digital collections database may enhance discovery and use of digital resources, duplicative efforts are not considered to be an efficient use of time and resources. It is best practice to create MARC records for digital collections materials only when the subject or liaison librarian feels the topic is high use, or the benefits of added exposure outweigh the costs of duplicating efforts.

Augmenting existing MARC records to include the resource identifier information and a link to the digital object is highly recommended. Enhancing pre-existing bibliographic records with a link to the digital object can be a critical component for providing public access to the resource. Addition of the resource identifier for the digital object may be a critical component for providing access and implementing future updates or enhancements to resource descriptions.

Linking to the digital object will be done using an 856 linking field in the MARC record.

Formatting for the 856 tag will be as follows:

856 4 1 #u [insert the http address for the digital object] #z CONNECT TO THIS TITLE ONLINE

Adding resource identifier information will be done using a 787 Nonspecific Relationship Entry field in the MARC record. Formatting for the 787 tag will be as follows:

787 0_ #o [insert resource identifier for digital object] #n Resource Identifier.

Controlled Vocabularies

When entering information about digital resources, employing terminology from controlled vocabularies can improve the quality of search results through consistency and error reduction. The best practice is to select terms from controlled vocabularies, thesauri, and subject heading lists for completion of the subject elements.

Keywords vs. Subject Terms

Best practice recommends that subject terms be taken from a controlled vocabulary whenever possible for more accurate retrieval of resources. However, other non-controlled terms or keywords that identify the resource with some precision can be added to a record to enhance resource retrieval and discovery, especially in cases where such terms are too new to be included in controlled vocabularies.

Element Descriptions

The ML Element descriptions include the following attributes that provide information about elements.

Description Label	Comment
Label	The human-readable name used for public display of data.
ML Definition	Additional information about the use of the element in the ML context
Mandatory	Specifies if the element is required by Mansfield Library
Repeatable	Specifies whether the element may be used more than once.

Qualifiers Refinements Schemes	Lists valid qualifiers from DCMI Metadata Element Set, version 1.1 and additional qualifiers used in the ML context.
Input Guidelines	Provides additional guidance about entering and encoding values for the elements and qualifiers.
Notes	Additional information about the element.
Examples	Instances of how the element is used.
Maps to:	Defines relationship of the ML element to the DCMI Metadata Element Set, version 1.1.
ML Term Modified	Indicates when revisions were last made to the ML element.

General Input Guidelines

Metadata creators should follow the general grammatical rules of the language involved when entering descriptive information about resources. In addition, it may be useful to consult the latest version of the Anglo-American Cataloging Rules (AACR2), Describing Archives: A Content Standard (DAC), or Cataloging Cultural Objects (CCO) for more information and details on general rules and guidelines for data entry. The following are a few brief comments:

Punctuation

In general avoid ending punctuation unless it is part of the content of the resource. Best practice is to use Standard English punctuation if it is necessary to make the information in the description clearer and easier to understand. In addition local standards have been devised for separating information that would otherwise be input in a repeatable field.

Abbreviations

In general, the following abbreviations are allowed: common or accepted abbreviations (such as “St.” for “Saint”); designations of function (such as “ed.” for “Editor”); terms used with dates (b. or fl.); and distinguishing terms added to names of persons, if they are abbreviated on the item (such as “Mrs.”); established and approved abbreviations as stated in AACR2. Best practice is to avoid abbreviations if they would make the record unclear. In case of doubt, spell out the abbreviation.

Capitalization

In general, capitalize the first word (of a title, for example) and proper names (place, personal, and organization names). Capitalize content in the description element according to normal rules of writing. Acronyms should be entered in capital letters.

Initial Articles

Omit initial articles at the beginning of the title such as: the, a, an, le, la, los, el, der, die, das, etc.

Line breaks

CONTENTdm software, used to build many of the digital collections at ML, does not support repeating fields. When a field needs to be repeated, use a semicolon, and a space to separate the information that would be in the repeated field.

Character Encoding

Have a clear understanding of how the database handles nonstandard characters and diacritics (such as ü, é, ñ, etc.) and input them so that they display and retrieve effectively.⁴

Qualifiers

The elements described are intended to cover most of the information needed to give an adequate description of the digital resource. However, there is often a need to further refine information about a resource than can be expressed using the basic elements. To help remedy this, the Mansfield Library has adopted “Qualified” Dublin Core that consists of an element and additional qualifiers known as refinements and schemes. Recommendations for using qualifiers appear along with each element description.

ML Element Descriptions

Title

Label: Title

⁴ For additional information on Character Encoding see: “Character Encoding,” Wikipedia.
<http://en.wikipedia.org/wiki/Character_encoding>.

ML Definition: The name given to the resource by the creator or publisher; may also be an identifying phrase or name of the object supplied by the contributing institution.

Mandatory: Yes

Repeatable: Yes

Qualifiers:

Refinements:

Refinement Name	Refinement Label	Definition
alternative	AlternativeTitle	Any form of the title used as a substitute or alternative to the formal title of the resource
	CaptionTitle	A title given at the beginning of the first page of the text.
	PanelTitle	A title given in a panel of a map
	SpineTitle	A title given on the spine of a book
	CollectionTitle	A title given to a group of individual objects

Schemes: None

Input Guidelines: Enter the title into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. If the object has been formally published, transcribe the title as it appears.

Otherwise, assign a title using a brief description of the object that will assist the user in determining its content.⁵ A more detailed description of the object may be recorded in the *Description* element. Enter multiple titles in the order in which they appear on the resource or in order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

If qualifying alternate titles is considered beneficial to the user, insert the refinement label inside brackets immediately before the text of the title.

Notes: None

Input Examples:

- History of Montana 1739-1885
- Salmon Lake, Montana; [PanelTitle] Salmon Lake bathymetric map
- Frontier brethren; [AlternativeTitle] Hutterite experience in the American West
- Fishermen displaying their trophies
- Street scene in Milltown Montana

Maps to: Dublin Core Title

ML Term Modified: 2009-04-02

Creator

Label: Creator

⁵ For more guidance in constructing titles, consult established cataloging rules such as Anglo-American Cataloging Rules (AACR2), Describing Archives: A Content Standard (DAC), or Cataloging Cultural Objects (CCO).

ML Definition: The name of an individual or an organization that is responsible for the intellectual content of the resource.

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the name of the creator into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter personal names in inverted form in most cases: “Last name, First name, Middle name or initial.” Enter group or organization names in full, direct form. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: Best practice is to determine the correct form of the name when possible. Use the Library of Congress Authorities (<http://authorities.loc.gov>) or locally specified bibliographic utilities. Input entities responsible for digitizing an existing resource in the Contributing Institution element.

Input Examples:

- Cram, George Franklin, 1841-1928.
- Sanders, Helen Fitzgerald, 1883-
- United States. Forest Service. Northern Region.
- Byrne, John C.; Stage, Albert R.

Maps to: Dublin Core Creator

ML Term Modified: 2009-04-02

Subject

Label: Subject

ML Definition: A topical term that best characterizes the subject the resource. Includes terms describing the people, organizations, events or themes depicted in the object.

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: It is strongly recommended that subject words and phrases come from established controlled vocabularies, thesauri or discipline-related word lists. The following chart shows examples of established vocabularies.

Schema Name	Schema	Definition
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	Label	
LCNAF	LCNAF	LC Name Authorities File http://authorities.loc.gov
LCSH	LCSH	Library of Congress Subject Headings
MESH	MESH	Medical Subject Headings http://www.nlm.nih.gov/mesh/meshhome.html
AAT	AAT	Art and Architecture Thesaurus http://www.getty.edu/research/conducting_research/vocabularies/aat/
AMG	AMG	Audiovisual Materials Glossary (AMG)
FAST	FAST	Faceted Application of Subject Terminology http://fast.oclc.org/
GMGPC	GMGPC	Thesaurus for Graphic Materials: TGM II, Genre and Physical Characteristic Terms http://www.loc.gov/rr/print/tgm2/
LCTGM	LCGTM	Thesaurus for Graphic Materials: TGM I, Subject Terms http://www.loc.gov/rr/print/tgm1/
NASAT	NASAT	NASA Thesaurus http://www.sti.nasa.gov/thesfrm1.htm
NIMACSC	NIMACSC	NIMA Cartographic Subject Categories
TGN	TGN	Getty Thesaurus of Geographic Names http://www.getty.edu/research/conducting_research/vocabularies/tgn/

Input Guidelines: Enter the subject terms into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. If possible use an established word or phrase from an established controlled vocabulary such as those included, but not limited to the list in the above schema chart.

Use specific or unique words rather than more general words (Example: If the object is a picture of lilies, use the term “Lilies” instead of “Flowers”; if the object is a field of wild flowers, use the term “Wild flowers” instead of “Flowers.”) Subjects may be personal or organization names as well as topics, places, genres, forms, and events. Subject elements may describe not only what an object is about, but also what it is. Enter multiple subject terms and/or phrases in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

If entering a term or phrase from LCSH which includes subfields retain the pre-coordinated structure of the subject field and separate the subheadings with two dashes to simulate the way these heading appear in the library OPAC. In general do not include subfield z headings (geographical subject headings) in the *subject* element, enter them instead in the *coverage* element.

Notes: Subjects are different from the very the broad categories found in the Type element. A digital image that is a photograph could be given the subject genre term “photograph,” but its genre type listed in the *Type* element would be “image.” An artist’s book might be given the subject genre term “artist’s book,” while the genre type listed in *Type* element would be “text.” Enter the names of creators of the

object in the *Creator* element. Repeat these names in the *Subject* element only if the object is also about the creator in some way.

Input Examples:

Indians of North America -- Religion (a single LCSH subject phrase heading)

Flathead County (Mont.) -- Map (a single LCSH subject phrase => Note the county information in this example should be entered in the *coverage* element unless the institution feels inclusion in the subject area would be of benefit to the user.)

Horses; Cavalry horses; World War, 1939-1945 -- Cavalry operations (a list of multiple words and phrases from TGM and LCSH)

Maps to: Dublin Core Subject

ML Term Modified: 2009-04-02

Description

Label: Description

ML Definition: A narrative textual description of the content of the resource. *Description* may include but is not limited to: an abstract, a table of contents, reference to a graphical representation of content, or a summary note.

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the description into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Record information about the persons, places, events, or themes depicted in the object. For un-published objects and photos this is typically a more extended version of the information recorded in the *Title* element. Avoid the use of abbreviations and especially the ampersand character. Generally the text should only be in sentences; don't use paragraph or any electronic coding that would create structural changes to the text—the description should be only a block of text. The only exception to this is that a hard return may be inserted to separate multiple descriptive elements. Enter multiple descriptive elements in the order of their importance. Clearly separate each entry by a semicolon, and a space, and a hard return if necessary within an element.

Notes: Descriptive comments about the original object that cannot be observed in the digital resource should be entered in the Source element.

Input Examples:

- Hunting party posed in front of Railway car next to Bonner Mill; killed birds and ducks decorate the car and are piled on the ground.

- Map containing a bird's-eye view of Butte and views of Main Street.
- A collection of 225 posters from the 9th Colorado International Invitational Poster Exhibition, held 1995 in Fort Collins, Colorado.

Maps to: Dublin Core Description

ML Term Modified: 2009-04-02

Date Digital

Label: Date Digital

ML Definition: A date of an event in the life cycle of the resource

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements:

Refinement Name	Refinement Label	Definition
Created	Created	Date of creation of the resource
valid	Valid	Date (often a range) of the validity of the resource
available	Available	Date (often a range) that the resource will become or did become available
modified	Modified	Date on which the resource was changed

Schemes:

Scheme Name	Scheme Label	Definition
W3CDTF	W3C-DTF	World Wide Web Consortium encoding rules for dates and times http://www.w3.org/TR/NOTE-datetime.html
Period	DCMI Period	A specification of the limits of a time interval http://dublincore.org/documents/dcmi-period/

Input Guidelines: Record the date the digital object was created into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. If only the year is known, record that. If a more specific date is known, record it in the form yyyy-mm or yyyy-mm-dd (if the exact day of the document is known). If the date is uncertain, place a question mark after the date (use question mark in place of “circa”). If the date is uncertain but likely falls within a range of dates, record the earliest and latest dates separated by a space-hyphen-space. Enter multiple date elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element. If qualifiers are used for the *date digital*, insert the refinement label inside brackets immediately before the text of the date.

Notes: Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3C-DTF] and follows the YYYY-MM-DD format. Enter dates pertaining to the original version of the resource under the Date Original element.

Input Examples:

- 1872 (use for year only)

- 1890-03 (use for March 1890)
- 1905-05-22 (use for May 22, 1905)
- 1875? (means possibly 1875; use ? instead of “circa”)
- 1850 - 1895 (between 1850 and 1895 [Note the use of the required spaces before and after the hyphen])
- [Modified] 2009-05-24 (using a qualifier for the date)

Maps to: Dublin Core Date

ML Term Modified: 2009-04-02

Date Original

Label: Date Original

ML Definition: Creation or modification dates for the original resource from which the digital object was derived or created.

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements:

Refinement Name	Refinement Label	Definition
Created	Created	Date of creation of the resource
valid	Valid	Date (often a range) of the validity of the resource
available	Available	Date (often a range) that the resource will become or did become available
issued	Issued	Date of formal issuance (e.g., publication) of the resource
modified	Modified	Date on which the resource was changed

Schemes:

Scheme Name	Scheme Label	Definition
W3CDTF	W3C-DTF	World Wide Web Consortium encoding rules for dates and times http://www.w3.org/TR/NOTE-datetime.html
Period	DCMI Period	A specification of the limits of a time interval http://dublincore.org/documents/dcmi-period/

Input Guidelines: Record the date the digital object was created into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. If only the year is known, record that. If a more specific date is known, record it in the form yyyy-mm or yyyy-mm-dd (if the exact day of the document is known). If the date is uncertain, place a question mark after the date (use question mark in place of “circa”). If the date is uncertain but likely falls within a range of dates, record the earliest and

latest dates separated by a space-hyphen-space. Enter multiple date elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element. If qualifiers are used for the *date original*, insert the refinement label inside brackets immediately before the text of the date.

Notes: Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3C-DTF] and follows the YYYY-MM-DD format. Enter dates pertaining to the original version of the resource under the Date Original element.

Input Examples:

- 1872 (use for year only)
- 1890-03 (use for March 1890)
- 1905-05-22 (use for May 22, 1905)
- 1875? (means possibly 1875; use ? instead of “circa”)
- 1850 - 1895 (between 1850 and 1895 [Note the use of the required spaces before and after the hyphen])

Maps to: Dublin Core Date

ML Term Modified: 2009-04-02

Format

Label: Format

ML Definition: Information that describes the physical format or material composition of the resource

Mandatory: Yes (if available)

Repeatable: Yes

Qualifiers:

Refinements:

Refinement Name	Refinement Label	Definition
extent	Extent	The size or duration of the resource
medium	Medium	The material or physical carrier of the resource

Schemes:

Scheme Name	Scheme Label	Definition
IMT	IMT	Internet Media Type http://www.iana.org/assignments/media-types/

Input Guidelines: Record the format information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple *format* elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element. If qualifiers are used, insert the refinement label inside brackets immediately before the text of the date.

Notes: Typically, Format may include the media type or the dimensions of the resource. Format may be used to describe the software, hardware, or other equipment needed to display or operate the resource. Examples of dimensions include size and duration. 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).

Use the *Extent* refinement to record a resource's file size and/or duration. Use the *Medium* refinement to describe an item's physical (as opposed to its digital) nature. The *Format* element is reserved for describing the access file only (be it image, audio, or video). Technical metadata relating to the digitization process (i.e., scanner model, scanner resolution, color schemes, file size of the master file, etc.) should be recorded in the *Digitization Specifications* element.

Input Examples:

- Image/jpeg (a visual file in JPEG format)
- Audio/mp3; [Extent] 5 minutes (an audio file that is 5 minutes long)

Maps to: Dublin Core Format

ML Term Modified: 2009-04-02

Digitization Specifications

Label: Digitization Specifications

ML Definition: Use the Digitization Specifications element to record technical information about the hardware, software, and processes used to create the digitized resource.

Mandatory: Yes

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Include information such as scanner model, scan resolution, color profiles, compression schemes, size of master file (sometimes referred to as archival file), etc. This element is primarily intended for use at the local level. Use the Format element to record information about the access file. Enter multiple descriptive elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: The following are some important technical details of digital file creation that are worth recording. These details are not included in any of the other elements in this document:

Strongly Recommended:

- a. File size for master file - The number of bytes as provided by the computer system. Best practice is to record the file size as bytes (e.g., 3,000,000 bytes) and not as kilobytes (Kb), megabytes (Mb), etc.

- c. Quality - For visual resources, characteristics such as bit depth, resolution (not spatial resolution); for multimedia resources, other indicators of quality, such as 16-bit audio file.
- d. Compression - Electronic format or compression scheme used for optimized storage and delivery of digital object. This information often supplements the Format element.
- e. Extent of master file - Pixel dimensions, pagination, spatial resolution, play time, or other measurements of the physical or temporal extent of the digital object.

Recommended:

- a. Creation hardware - If a hardware device was used to create, derive, or generate the digital object, indicate from a controlled list of terms the particular hardware device. (Examples: flatbed reflective scanner, digital camera, etc.) Include manufacturer, model name, and model number.
- b. Operating system - Computer operating system used on the computer with which the digital object was created. (Examples: Windows, Mac, UNIX, Linux). Also include version of operating system.
- c. Creation software - Name and version number of the software used to create the digital object.
- d. Preferred presentation - Designation of the device, application, medium, or environment recommended for optimal presentation of the digital object.
- e. Checksum value - A numeric value used to detect errors in file recording or file transfer, checksum helps ensure the integrity of digital files against loss of data.
- f. Statement about methods of deriving checksum.
- g. Creation methodology - If creation process used a standard series of steps, derivations or techniques either state or refer to a URL describing the creation process.
- h. Object producer - Name of scanning technician, digitization vendor, or other entity responsible for the digital object's creation. Distinguishable from the descriptive Creator element, this element is especially useful when different persons generated multiple versions of the object's content.

Input Examples:

- Digitized using a Bookeye 3 scanner at 300 PPI, 8 bit grayscale. Web-viewable images created from master TIFF using Photoshop CS and CONTENTdm 4.3. Optical Character Recognition performed using Abbyy FineReader 8 Corporate Edition.

Maps to: Dublin Core Description

ML Term Modified: 2009-04-02

Resource Identifier

Label: Resource Identifier

ML Definition: A unique alpha-numeric string that identifies the resource being described.

Mandatory: Yes

Repeatable: No

Qualifiers:**Refinements:** None**Schemes:** None

Input Guidelines: Enter the resource identifier information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. If an identifier (or a range of identifiers for a project) has not already been assigned to you, please contact the Metadata & Digital Production Librarian for more information.

Notes: A character string or record number that clearly and uniquely identifies a digital object or resource. The Identifier element ensures that individual digital objects can be accessed, managed, stored, recalled, and used reliably. Input the ISSN, ISBN, other international standard numbers, and local naming conventions that describe the original in *Source*.

Input Examples:

- mtg001801

Maps to: Dublin Core Identifier**ML Term Modified:** 2009-04-02

Rights Management

Label: Rights Management

ML Definition: Information about rights held in and over the resource. It may either be a narrative text statement or a URL that links to a more formal rights page.

Mandatory: Yes (if available)**Repeatable:** Yes**Qualifiers:****Refinements:** None**Schemes:** None

Input Guidelines: Enter the rights information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple rights elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: A rights management statement may contain information concerning accessibility, reproduction of images, copyright holder, restrictions, securing permissions for use of text or images, etc. If the *Rights Management* element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.

Input Examples:

- Copyright 2008 The University of Montana. All rights reserved.
- This audio file may be freely used for educational uses, as long as it is not altered in any way. No commercial reproduction or distribution of this audio file is permitted without written

permission of XXX. A high-quality version of this file may be obtained for a fee for personal use by contacting XXX.

Maps to: Dublin Core Rights Management

ML Term Modified: 2009-04-02

Publisher

Label: Publisher

ML Definition: An entity responsible for making the resource available. 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.

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the publisher information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: For digital objects, Publisher is the entity that created the digital resource. Publishers can be a corporate body, publishing house, museum, historical society, university, project, repository, etc. In the case of an object that existed in another form before being digitized, the publisher of this earlier form may be entered in the *Source* element.

Input Examples:

- University of Virginia Press.
- United States. Government Printing Office
- Caxton Printers

Maps to: Dublin Core Publisher

ML Term Modified: 2009-04-02

Contributor

Label: Contributor

ML Definition: The name of an individual or an organization that played a secondary role in the creation of the resource. Examples: editor, transcriber, illustrator, etc.

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the name of the contributor into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter personal names in inverted form in most cases: “Last name, First name, Middle name or initial.” Enter group or organization names in full, direct form. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon and a space within an element.

Notes: Best practice is to determine the correct form of the name when possible. Use the Library of Congress Authorities (<http://authorities.loc.gov>) or locally specified bibliographic utilities. Input entities responsible for digitizing an existing resource in the Contributing Institution element.

Input Examples:

- Cram, George Franklin, 1841-1928.
- Sanders, Helen Fitzgerald, 1883-
- United States. Forest Service. Northern Region.
- Byrne, John C.; Stage, Albert R.

Maps to: Dublin Core Contributor

ML Term Modified: 2009-04-02

Type

Label: Type

ML Definition: The nature or genre of the content of the resource

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes:

Scheme Name	Scheme Label	Definition
DCMIType	DCMI Type Vocabulary	DCMI Type Vocabulary http://dublincore.org/documents/dcmi-type-vocabulary/

Input Guidelines: Enter the information for *type* into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Best practice for ML metadata is to use only the DCMI Type Vocabulary <http://dublincore.org/documents/dcmi-type-vocabulary/> Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: To describe the physical or digital manifestation of the resource, use the Format element.

Input Examples:

- Still Image (the *type* for a photograph, painting, drawing, graphic design, plan and map, etc.)
- Moving image (the *type* used for an animation, movie, television program, video, etc.)
- Text (the *type* used for a scrapbook, diary, manuscript, music score, or any other object for which page images are textual.)
- Sound ; Text (multiple *types* listed for a digital object like an oral history which contains both an audio file and a textual transcript)

Maps to: Dublin Core Type

ML Term Modified: 2009-04-03

Source

Label: Source

ML Definition: A reference to a resource from which the present resource is derived.

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Enter the source information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. The present resource may be derived from the source resource in whole or in part. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: When applicable, use the Source element to cite any other resource from which the digital resource was derived, either in whole or in part. Some digital resources are “born digital” and derive from no pre-existing resource; in these cases, the Source element is not used.

Because *Source* elements show a derivative relationship with another resource, they generally have a corresponding *Relation* element to show that relationship. Not all *Relation* elements, however, conversely require a corresponding *Source* element 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* element might be required (i.e., Relation [Requires] and Relation [IsReferencedBy]), but a Source element would not. See *Relation* for more information.

Input Examples:

- A 13.78:INT-289 (The SuDoc call number of the item scanned to created the digital object)
- 978.6 B988n (The DDC call number of the item scanned to created the digital object)
- <http://tinyurl.com/cew7rl> (URL for a MARC record that describes the original resource)
- Original artifact: 3 x 5 postcard, Photo Number 94.0028, Archives and Special Collections, Mansfield Library (Textual description of the original resource scanned to create the digital object)

Maps to: Dublin Core Source

ML Term Modified: 2009-04-03

Language

Label: Language

ML Definition: A language of the intellectual content of the resource

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes:

Scheme Name	Scheme Label	Definition
ISO639-1	ISO 639-1	Codes for the Representation of Names of Languages, Part 2 http://www.loc.gov/standards/iso639-2/php/English_list.php

Input Guidelines:

Enter the code for language into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Best practice for is to use either the ISO 639-1 alpha-2 code, the ISO 639-2 alpha-3 code, or some other established standards for language code. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: This represents 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 significant text in a caption or in the image itself.

Input Examples:

- en (English)
- fr (French)

Maps to: Dublin Core Language

ML Term Modified: 2009-04-03

Relation

Label: Relation

ML Definition: A reference to a related resource

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: Use one of the following refinements 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* element

Refinement Name	Refinement Label	Definition
isVersionOf	isVersionOf	The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
hasVersion	hasVersion	The described resource has a version, edition, or adaptation, namely the referenced resource.
IsReplacedBy	isReplacedBy	The described resource is supplanted, displaced, or superseded by the referenced resource.
Replaces	Replaces	The described resource supplants, displaces, or supersedes the referenced resource.
isRequiredBy	isRequiredBy	The described resource is required by the referenced resource, either physically or logically.
Requires	Requires	The described resource requires the referenced resource to support its functionality, delivery, or coherence of content.
isPartOf	isPartOf	The described resource is a physical or logical part of the referenced resource
hasPart	hasPart	The described resource includes the referenced resource either physically or logically.
isReferencedBy	isReferencedBy	The described resource is referenced, cited, or otherwise pointed to by the referenced resource.
References	References	The described resource references, cites, or points to the referenced resource
isFormatOf	isFormatOf	The described resource is the same intellectual content of the referenced resource, but presented in another format.
hasFormat	hasFormat	The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.
conformsTo	conformsTo	A reference to an established standard to which the resource conforms.

Schemes: None

Input Guidelines: Record the *Relation* information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple *Relation* elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element. If qualifiers are used, insert the refinement label inside brackets immediately before the text of the date.

Notes: The element may consist of textual information about the related resource relevant to the specific refinement; it may also consist of an identifier, such as a URI, for linking directly to the other resource. Include sufficient information in the Relation element to enable users to identify, cite, and either locate or link to the related resource.

Input Examples:

- [isPartOf] John R. Toole family papers, K. Ross Toole Archives, The University of Montana, Mansfield Library (The described resource is a part of the larger collection housed in the Archives)
- [Requires] Windows Media Player, RealPlayer or Apple QuickTime
- [conformsTo] Encoded Archival Description, Version 2002
- [References] American Culture Series II (The described resource in an index to the series)

Maps to: Dublin Core Relation

ML Term Modified: 2009-04-03

Coverage

Label: Coverage

ML Definition: The extent or scope of the content of the resource

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Record the *coverage* information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple *coverage* elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: Coverage will typically include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) that, where appropriate, uses named places or time periods in preference to numeric identifiers such as sets of coordinates or date ranges.

If including latitude/longitude enter a text string that will mimic the way this information is represented in the library's OPAC (W 114°07'30"--W 114°00'00"/N 46°52'30"--N 46°45'00")

For a range of dates, enter the dates on the same line, separating them with a space, hyphen, and space as in "1900 - 1950."

Input Examples:

- Rocky Mountains
- 1900 – 1901
- W 114°07'30"--W 114°00'00"/N 46°52'30"--N 46°45'00"
- Montana
- 15th Century

Maps to: Dublin Core Coverage

ML Term Modified: 2009-04-03

Scale

Label: Scale

ML Definition: The ratio of distances on a map, globe, relief model, (vertical) section, or other cartographic item to the actual distances they represent.

Mandatory: No (recommended for cartographic materials)

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Record the *scale* information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank either as a representative fraction expressed as a ratio or as a text statement. Enter multiple *scale* elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: None

Input Examples:

- 1:50 000
- 1 inch to 4 miles
- 20 cm. = 50 km.
- Scale [ca. 1:920 000]. Vertical scale [ca. 1:720 000]. "Approx. vertical scale 1" = 11.4 miles. Approx. horizontal scale 1" = 14.5 miles"
- Not drawn to scale

Maps to: Dublin Core Coverage

ML Term Modified: 2009-04-03

Contributing Institution

Label: Contributing Institution

ML Definition: Name of the institution contributing the digital resource to the library.

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Record the *Contributing Institution* name or code into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Enter multiple elements in the order of their importance. Clearly separate each entry by a semicolon, and a space within an element.

Notes: Generally enter names in direct order (as the name generally appears)

Input Examples:

- The University of Montana

Maps to: None**ML Term Modified:** 2009-04-03

Additional Keywords

Label: Additional Keywords**ML Definition:** A term or terms that describes the resource, but do not belong to an established controlled vocabulary or thesaurus. Examples of keywords may include slang or modern terms and common spelling variations.**Mandatory:** No**Repeatable:** Yes**Qualifiers:****Refinements:** None**Schemes:** None**Input Guidelines:** Record the *keywords* into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank. Clearly separate each entry by a semicolon and a space.**Notes:** None**Input Examples:**

- Montana; Mont; MT
- War Eagle
- children; child; brother; barbecue; barbeque; BBQ

Maps to: None**ML Term Modified:** 2009-04-03

Reproduction

Label: Reproduction**ML Definition:** Information about reproduction services available for the digital resource.**Mandatory:** No**Repeatable:** Yes**Qualifiers:****Refinements:** None**Schemes:** None**Input Guidelines:** Record the reproduction information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank.**Notes:** None**Input Examples:**

- To order a reproduction, download our order form at <http://www.lib.umt.edu/research/digitalcollections/reproduction.pdf> or contact Archives and Special Collections, Mansfield Library: (406) 243-2053 / library.archives@umontana.edu.

Maps to: Dublin Core Rights Management

ML Term Modified: 2009-04-03

Contact Us

Label: Contact Us

ML Definition: Contact information for the department or librarian responsible for the digital resource. Information may include, name, title, address, e-mail, phone numbers etc.

Mandatory: No

Repeatable: Yes

Qualifiers:

Refinements: None

Schemes: None

Input Guidelines: Record the contact information into the appropriate spreadsheet column, text box of the Media Editor, or database entry blank.

Notes: None

Input Examples:

- For additional information about our collections visit the Archives and Special Collections website: <http://www.lib.umt.edu/asc> . To suggest a keyword or share what you know about this item e-mail library.archives@umontana.edu. Please include the resource identifier in your note to us.

Maps to: None

ML Term Modified: 2009-04-03

Bibliography

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