**MODS Application Profile for LibraryCloud**

*Draft, rev. 2019-06-28*

***Overview***

Harvard’s LibraryCloud service provides API access to descriptive metadata for Harvard Library resources. LibraryCloud metadata is openly available to the public. Anyone can use the API to find, gather, and repurpose the metadata. It also is used within Harvard Library applications-- for example, by serving metadata to Harvard Digital Collections[[1]](#footnote-1) and CURIOSity Digital Collections[[2]](#footnote-2)-- and it underlies sites and services developed throughout the Harvard community. It also supports Harvard’s partnerships with initiatives such as DPLA. As such, the metadata aims to balance internal and external requirements and expectations.

LibraryCloud aggregates descriptive metadata from a variety of sources, mainly:

* Alma, the integrated library system where the bulk of library cataloging is created
* JSTOR Forum, where most Harvard Library visual resources are described
* ArchivesSpace, for archival materials

Each source uses different metadata standards and vocabularies appropriate to its scope and function. To facilitate searching across and reusing the disparate metadata aggregated in LibraryCloud, the source metadata is converted into a common format, MODS[[3]](#footnote-3).

The records undergo other transformations, normalizations, and enrichments to improve their interoperability and usefulness in the aggregated environment:

* Incoming records are split into separate records when they represent multiple resources.
* The names of Harvard libraries and archives are normalized into a standard full form, and a short form for faceting.
* Text equivalents are added when the original metadata contains coded values for language and country/state of publication.
* Records that describe digital resources in Harvard’s Digital Repository Service (DRS) are augmented with a subset of administrative metadata about those resources.
* Records included in CURIOSity collections or other curatorial or administrative sets will include brief information about those sets.

Note that LibraryCloud is not the database of record for this metadata. The metadata in LibraryCloud is neither definitive nor exhaustive. Additional metadata and more specifically-defined metadata can be found in the source systems that provide metadata to LibraryCloud.

**MODS (Metadata Object Description Schema)**

MODS version 3.6 is the base format of all metadata returned by the LibraryCloud Item API. The documentation[[4]](#footnote-4) of the MODS standard is comprehensive; therefore, Harvard’s profile will focus on implementation-specific and source-specific aspects of the metadata in LibraryCloud.

There are six sources of descriptive metadata records in LibraryCloud:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source Name** | **Source Code** | **Number of Records** | **Source Format** | **Transformation to MODS** |
| Alma | MH:ALMA | >15,000,000 | MARCXML | A lightly customized version[[5]](#footnote-5) of the Library of Congress MARC-to-MODS stylesheet MARC21slim2MODS3-6.xsl. |
| ArchivesSpace | MH:OASIS | >2,300,000 | Encoded Archival Description (EAD) | EAD files are converted to individual MODS records for each archival component.[[6]](#footnote-6) |
| JSTOR Forum | MH:VIA | >7,000,000 | VIA XML | JSTOR Forum’s SSIO XML is first converted to Harvard’s legacy VIA format[[7]](#footnote-7), and then from VIA to MODS[[8]](#footnote-8). Individual MODS records are created for each JSTOR Forum image record, whether or not the image has been digitized. |
| Iranian Oral History Project | MH:IOHP | ~900 | Custom | Custom[[9]](#footnote-9) |
| Jacques Burkhardt Scientific Drawings | MH:MCZArtwork | ~1,000 | Custom | Custom[[10]](#footnote-10) |
| Milman Parry Collection of Oral Literature | MH:MHPL | ~1,800 | Custom | Custom[[11]](#footnote-11) |

**Record Splitting**

Each incoming record will be transformed into one **or more** MODS records. A record will be split during this process if it represents more than resource according to specific criteria per contributing source:

**Alma:**

If the incoming record contains more than one DRS URL for deliverable digital content (i.e., not counting a preview URL, such as a thumbnail image), one record will be created with all URLs plus all physical locations AND a separate record will be created for each digital manifestation.

The MODS *recordIdentifier* for each of the split records will concatenate the original Alma record identifier, an underscore, and the URN portion of the DRS URL to the deliverable content.

Example: <https://api.lib.harvard.edu/v2/items/990088020470203941_HBS.Baker:10771779>

**JSTOR Forum:**

If the incoming record contains more than one item (<display:DR>), a separate MODS record will be created for each item, each record containing information about the work plus information about one of the items. There is no record in LibraryCloud for the Work alone or the work with all items.

The MODS *recordIdentifier* for the split records will concatenate the Work record identifier, an underscore, and either 1) the URN portion of the DRS URL to the deliverable content, or 2) the item record identifier, if the item does not reference digital content.

Example, Case 1: <https://api.lib.harvard.edu/v2/items/S19482_urn-3:FHCL:3116579>

Example, Case 2: <https://api.lib.harvard.edu/v2/items/S19482_olvsurrogate186373>

**ArchivesSpace:**

For each finding aid (Encoded Archival Description (EAD) file), a separate MODS record will be created for every described component. No record will be created for the archival resource (aka collection) itself, because that would redundant with the corresponding collection-level cataloging record from Alma. Each component record will inherit key fields from the hierarchy of the finding aid to ensure that the archival object is placed in context.

The MODS *recordIdentifier* for each of the split records will be the component id (Ref ID) of the archival object record.

Example: <https://api.lib.harvard.edu/v2/items/hou01365c02879>

**MODS Structure**

MODS consists of 20 top-level elements or element wrappers, all of which are optional and repeatable. Top-level elements may have subelements that, taken together within an instance of a top element, represent a single concept.

**Special Topics: Hierarchical Description**

One of the MODS elements, *relatedItem*, allows for great flexibility in the way the description of a resource is structured that has implications for applications that consume the metadata.

All MODS top-level elements are valid within *relatedItem*. *relatedItem* has many uses, but one is crucial to the aggregation of metadata in LibraryCloud: it enables nested, hierarchical whole/part description.

Records from JSTOR Forum and from ArchivesSpace both take advantage of this hierarchical structure, but in different ways. In both cases, the record overall represents one resource (which may be a compound resource, such as a folder of letters that are not individually described) and a larger context for it. However, in ArchivesSpace records, the description moves from narrower to broader, while in JSTOR Forum, the description moves from the broader context to the specific item. ***For ArchivesSpace and JSTOR Forum records, relatedItem information is necessary to provide context or specificity about the described resource*.**

The type and displayLabel attributes in the relatedItem element indicate the kind of relationship:

*<relatedItem type=”host”>*

A larger context of which the described resource is a part.

*<relatedItem type=”host” displayLabel=”collection”>*

The largest unit –the collection—of which the resource is a part.

*<relatedItem type=”constituent”>*

An item which is part of or representative of the primary object of description.

Records for archival components from ArchivesSpace start with the description of one component of a collection, followed by **any number** of levels of description that provide the context of that component within the collection.

For example: <https://api.lib.harvard.edu/v2/items?recordIdentifier=hou01365c02879>

Record

--Sub-Series <relatedItem type=”host”>

----Series <relatedItem type=”host”>

------Collection <relatedItem type=”host” displayLabel=”collection”>

Records from JSTOR Forum, in contrast, start with the broader description of a painting, building, event, etc., and may have 0-2 additional levels of description for a specific view, such as a perspective, a detail, or a verso.

For example, <https://api.lib.harvard.edu/v2/items?recordIdentifier=W209586_urn-3:VIT.BB:25445424>:

Painting

--X-Ray (detail) <relatedItem type=”constituent”>

Or <https://api.lib.harvard.edu/v2/items?recordIdentifier=G80_olvsurrogate307431>:

Quilt series

--One Quilt <relatedItem type=”constituent”>

----Total view of the quilt <relatedItem type=”constituent”>

**Special Topics: Non-Latin Script Metadata**

Non-Latin script may appear in LibraryCloud records from any source. However, theMODS *altRepGroup* attribute is only used in Alma records to designate paired elements containing corresponding information in transliteration and in vernacular script*.*

If an *altRepGroup* attribute is present with a value other than “00”, there will be another element with an identical *altRepGroup* value containing a representation of some or all of the element information in a different script (e.g., Arabic).

Example from <https://api.lib.harvard.edu/v2/items?recordIdentifier=990000773410203941>

<mods:titleInfo **altRepGroup="02"**>

<mods:nonSort>al- </mods:nonSort>

<mods:title>Nahḍah al-Isrāʼīlīyah wa-tārīkhuhā al-khālid</mods:title>

<mods:subTitle>

muzayyinan bi-rusūm ʻuẓmāʼ al-Isrāʼīlīyīn fī al-ʻālam

</mods:subTitle>

</mods:titleInfo>

<mods:titleInfo **altRepGroup="02"**>

<mods:title>نهضة الاسرائيلية وتاريخها الخالد</mods:title>

<mods:subTitle>مزينا برسوم عظماء الاسرائيلية في العالم</mods:subTitle>

</mods:titleInfo>

Non-Latin script metadata may occur in records from other sources, but it will not be marked for association with its transliteration.

**Profile by MODS Top-Level Element**

***titleInfo***

Most, but not all, records will include at least one top-level *titleInfo* element. The exception is a subset of archival component records from ArchivesSpace. Lacking a *titleInfo*, these are required to have a top-level *originInfo/dateCreated*. See <https://api.lib.harvard.edu/v2/items?q=hou02652c00990> as an example.

*Attribute Usage:*

*type* or *otherType:*

* *type* values: abbreviated, translated, alternative, uniform
* *otherType* values are not controlled.
* *titleInfo* elements that contain neither *type* nor *otherType* attributes can be considered primary titles.

*Subelements*:

*titleInfo* is a wrapper element

|  |  |
| --- | --- |
| **Subelement** | **May occur in records from** |
| title | Alma, JSTOR Forum, ArchivesSpace |
| subTitle | Alma |
| partNumber | Alma |
| partName | Alma |
| nonSort | Alma |

When multiple subelements are used, their order is important and should be retained in displays to insure intelligibility.

***name [TBD]***

***typeOfResource***

*typeOfResource* appears in Alma and JSTOR Forum records; it is not present in ArchivesSpace records. While repeatable, it is not, in fact, repeated.

Alma records can contain any of the values enumerated in the MODS 3.6 schema. All JSTOR Forum records will have the value “still image”.

*Attribute Usage*:

*collection=”yes”*: Records from Alma representing collection-level description will contain the *typeOfResource* attribute *collection=”yes”*

*manuscript="yes"*: Records from Alma representing manuscript material will contain the *typeOfResource* attribute *manuscript="yes"*

***genre***

The *genre* element is present in many Alma records, nearly all JSTOR Forum records, and all Jacques Burkhardt records.

It is not present in ArchivesSpace records, Iranian Oral History, or Milman Parry records.

***originInfo***is a wrapper element for information about the creation or issuance of the resource.

|  |  |
| --- | --- |
| **Subelement** | **May occur in records from** |
| place/placeTerm | Alma, JSTOR Forum, ArchivesSpace |
| publisher | Alma |
| copyrightDate | Alma |
| dateCreated | Alma, JSTOR Forum, ArchivesSpace |
| dateIssued | Alma |
| dateOther | JSTOR Forum |

***place***

The *place* wrapper element will contain one or more *placeTerm* elements. If more than one *placeTerm* is present within a single *place* element, all *placeTerms* contain different representations of the same place.

Example: <https://api.lib.harvard.edu/v2/items/990026310040203941>

<mods:place>

<mods:placeTerm authority="marccountry" type="code">miu</mods:placeTerm>

<mods:placeTerm authority="marccountry" type="text">Michigan</mods:placeTerm>

</mods:place>

<mods:place>

<mods:placeTerm type="text">Detroit</mods:placeTerm>

</mods:place>

Note the use of the attribute *type=”code”* in Alma records.

**Date Elements**

MODS supports seven different elements to express dates associated with the creation of a resource. Any of these may appear in LibraryCloud, but generally ArchivesSpace and JSTOR Forum dates will be in the *dateCreated* element, while Alma dates will use *dateIssued.*

***Date Elements Attribute Usage***

Date elements with no attributes or with the keyDate attribute are free-text date expressions suitable for display.

Some attributes are important for applications that use LibraryCloud metadata:

*encoding*

The encoding attribute will only occur in records from Alma, and the only value is “marc”. These date elements are designed to support date and date-range searching and are best omitted from displays.

*point*

These date elements designate the start and end of a date range. They support date-range searching and can be omitted from displays. There will typically be another date element better suited for display in the same *originInfo* element or in a sibling *originInfo* element.

*keyDate*

The keyDate attribute only appears in JSTOR Forum records. It duplicates dateCreated [lacking attributes] in dateOther with keyDate="yes", e.g.,

<mods:originInfo>

<mods:dateOther keyDate="yes">early/mid 20th century</mods:dateOther>

<mods:dateCreated point="start">1910</mods:dateCreated>

<mods:dateCreated point="end">1960</mods:dateCreated>

<mods:dateCreated>early/mid 20th century</mods:dateCreated>

</mods:originInfo>

***language***

All Alma records contain one or more coded language designation in a *languageTerm* element. The primary language code will also be available as text in a second *languageTerm* element in the same *language* parent element. *languageTerms* for different languages, as opposed to different ways of expressing the same language, will be in separate *language* elements.

Use the *type* attribute to select between code and text values.

<mods:language>

<mods:languageTerm authority="iso639-2b" type="code">**per** </mods:languageTerm>

<mods:languageTerm authority="iso639-2b" type="text">**Persian** </mods:languageTerm>

JSTOR Forum records do not contain language information, so for the purposes of LibraryCloud, the following has been added to all records derived from JSTOR Forum:

<mods:languageTerm type="code">**zxx**</mods:languageTerm>

<mods:languageTerm type="text">**No linguistic content**</mods:languageTerm>

In ArchivesSpace records, language is set at the collection-level and may not be accurate for all items in the collection. For that reason, item level records derived from ArchivesSpace contain

<mods:languageTerm authority="iso639-2b" type="code">**und**</mods:languageTerm>

<mods:languageTerm authority="iso639-2b" type="text">**Undefined**</mods:languageTerm>

***location***

The two most important uses of location in LibraryCloud records are for 1) information about the Harvard repository holding the material, and 2) links to digital content.

***physicalLocation***.

There can be none, one, or several *location* elements each containing one *physicalLocation. physicalLocations* that represent Harvard holdings will contain the attribute *displayLabel="Harvard repository".* Most of these will alsocontain a valueURI attribute with an URI from International Standard Name Identifier (ISNI) or the Library of Congress Name Authority File (LCNAF)

***url***

* + *mods:url access="raw object"* designates deliverable digital content in the DRS.
  + *mods:url access="preview"* designates thumbnail images for content in the DRS.
  + *mods:url access="object in context"* links to the bibliographic record for the digital content from the DRS within a curated collection site. The specific collection will be indicated with a *displayLabel* attribute, e.g., displayLabel="Harvard Digital Collections".

***physicalDescription [TBD]***

***extent***

***form***

***note***

***abstract***

Records from Alma, JSTOR Forum, and ArchivesSpace may contain the *abstract* element.

***tableOfContents***

Only Alma records can contain the *tableOfContents* element.

***targetAudience*** and ***part*** are almost non-existent in LibraryCloud.

***note***

***subject***

*subject* is a wrapper element.

***classification***

In LibraryCloud, only Alma …

***relatedItem***

ALMA

The MODS *relatedItem* *type* attribute contains enumerated values: preceding, succeeding, original, host, constituent, series, otherVersion, otherFormat, isReferencedBy, references, reviewOf. Examples in Appendix TBD.

Alternatively, the otherType attribute …

See Special Topics: Hierarchical Description for other uses of *relatedItem*.

***accessCondition***

displayLabel="copyright"

type="useAndReproduction"

***extension***

LibraryCloud records will contain one or more MODS <extension> elements to augment the basic descriptive metadata record.

Some extensions carry descriptive metadata that cannot otherwise be expressed in MODS: style, culture, and materials, techniques, and support.

* cdwalite:cultureWrap
* cdwalite:indexingMaterialsTechSet
* cdwalite:styleWrap

The other category of extensions supplements the original metadata with related metadata from other systems, with administrative information, or with metadata values normalized to support particular functions. These extensions are

* DRSMetadata
* librarycloud
* sets

For details, see Appendix 1: MODS Extensions, below.

***recordInfo***

A LibraryCloud record will contain one or more *recordInfo* wrapper elements, with at most one occurrence per level of hierarchy. That is, each *relatedItem* may also include a *recordInfo* element that applies specifically to the content of that related item. The primary *recordInfo*—the one that applies to the record as a whole--occurs at the top level of the record. Only the primary *recordInfo* will include the *source* attribute.

The subelements within the primary *recordInfo* element vary by source, but all will include *recordIdentifier* and *recordChangeDate.*

JSTOR Forum Example:

<mods:recordInfo>

<mods:recordContentSource authority="marcorg">MH</mods:recordContentSource>

<mods:recordContentSource authority="marcorg">MH-VIA </mods:recordContentSource>

<mods:recordChangeDate encoding="iso8601">20181109</mods:recordChangeDate>

<mods:recordIdentifier source="MH:VIA">8000464237\_urn-3:FHCL.JUD:9806298</mods:recordIdentifier>

<mods:languageOfCataloging>

<mods:languageTerm>eng</mods:languageTerm>

</mods:languageOfCataloging>

</mods:recordInfo>

Alma Example:

<mods:recordInfo>

<mods:recordCreationDate encoding="marc">821202</mods:recordCreationDate>

<mods:recordChangeDate encoding="iso8601">20180528</mods:recordChangeDate>

<mods:recordIdentifier source="MH:ALMA">990000000020203941</mods:recordIdentifier>

<mods:recordOrigin>

Converted from MARCXML to MODS version 3.6 using MARC21slim2MODS3-6.xsl (Revision 1.117 2017/02/14)

</mods:recordOrigin>

</mods:recordInfo>

ArchivesSpace Example:

<mods:recordInfo>

<mods:recordChangeDate encoding="iso8601">20190523</mods:recordChangeDate>

<mods:recordIdentifier source="MH:OASIS">hua03010c00264</mods:recordIdentifier>

</mods:recordInfo>

**Appendix 1: MODS Extensions**

**cdwalite:cultureWrap**

*cultureWrap* is a wrapper element containing a single *cdwalite:culture* element. Multiple cultures will appear in separate extensions. This extension only occurs in JSTOR Forum records.

<mods:extension>

<cdwalite:cultureWrap xmlns:cdwalite="http://www.getty.edu/research/conducting\_research/standards/cdwa/cdwalite">

<cdwalite:culture>Egyptian</cdwalite:culture>

</cdwalite:cultureWrap>

</mods:extension>

**cdwalite:indexingMaterialsTechSet**

*indexingMaterialsTechSet* is a wrapper element containing a single *cdwalite:termMaterialsTech* element. Multiple materials or techniques will appear in separate extensions. This extension only occurs in JSTOR Forum records.

<mods:extension>

<cdwalite:indexingMaterialsTechSet xmlns:cdwalite="http://www.getty.edu/research/conducting\_research/standards/cdwa/cdwalite">

<cdwalite:termMaterialsTech>granite</cdwalite:termMaterialsTech>

</cdwalite:indexingMaterialsTechSet>

</mods:extension>

**cdwalite:styleWrap**

*styleWrap* is a wrapper element containing a single *cdwalite:style* element. Multiple styles will appear in separate extensions. This extension only occurs in JSTOR Forum records.

Example:

<mods:extension>

<cdwalite:styleWrap xmlns:cdwalite="http://www.getty.edu/research/conducting\_research/standards/cdwa/cdwalite">

<cdwalite:style>New Kingdom</cdwalite:style>

</cdwalite:styleWrap>

</mods:extension>

**DRSMetadata**

The DRSMetadata extension includes a subset of administrative and technical metadata copied from the Harvard Digital Repository Service (DRS) to facilitate discovery and use of digital content available from the DRS.

Add table block for DRSMetadata wrapper

|  |  |  |
| --- | --- | --- |
| Element | **inDRS** | |
| Description | A flag indicating that there is digital content in the DRS associated with this record. | |
| Attributes | None |  |
| Content | True | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | The element exists to facilitate searching and faceting.  Only *inDRS=”true”* is explicit in the metadata. Any record lacking a DRSMetadata extension will be recorded as *inDRS=“false”* in the LibraryCloud Item API, and there will be no DRSMetadata extension in the record. | |
| Example | <HarvardDRS:inDRS>true</HarvardDRS:inDRS> | |

|  |  |  |
| --- | --- | --- |
| Element | **accessFlag** | |
| Description | A code indicating whether the DRS digital content is accessible to the public or is restricted to Harvard affiliates. | |
| Attributes | None |  |
| Content | Controlled values:   * P (public) * R (restricted) | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | The value applies to a file in the DRS if the URN in the LibraryCloud record resolves to a specific file. If the URN resolves to a multifile object, the accessFlag will be the least restrictive accessFlag value associated with any deliverable file in the object. | |
| Example | <HarvardDRS:accessFlag>P</HarvardDRS:accessFlag> | |

|  |  |  |
| --- | --- | --- |
| Element | **contentModel** | |
| Description | An indication of type and structure of the digital object in the DRS. | |
| Attributes | None |  |
| Content | Controlled values:   * STILL IMAGE * PDS DOCUMENT * DOCUMENT * AUDIO * TEXT * PDS DOCUMENT LIST * VIDEO | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note |  | |
| Example | <HarvardDRS:accessFlag>P</HarvardDRS:accessFlag> | |

|  |  |  |
| --- | --- | --- |
| Element | **uriType** | |
| Description | A code for the type of service that will be used to deliver the content to the user. | |
| Attributes | None |  |
| Content | Controlled values:   * FDS * IDS * PDS * PDS\_LIST * SDS * SDS\_VIDEO | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | Delivery service types: FDS (text documents), IDS (images), PDS (page-turned objects), PDS\_LIST (list of page-turned objects), SDS (streaming audio), (SDS\_VIDEO (streaming video) | |
| Example | <HarvardDRS:uriType>SDS</HarvardDRS:uriType> | |

|  |  |  |
| --- | --- | --- |
| Element | **fileDeliveryUrl** | |
| Description | The persistent identifier for delivery of the DRS content. | |
| Attributes | None |  |
| Content |  | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | This URL serves to associate a URL in descriptive record with its corresponding DRS metadata.  Despite its name, it does not necessarily correspond to a delivered file. Most often it delivers content in a dedicated viewer or rendering application. | |
| Example | <HarvardDRS:fileDeliveryURL>https://nrs.harvard.edu/urn-3:FHCL:2789166</HarvardDRS:fileDeliveryURL> | |

|  |  |  |
| --- | --- | --- |
| Element | **ownerCode** | |
| Description | A DRS code identifying the Harvard library, archive, or other repository responsible for the digital content. | |
| Attributes | None |  |
| Content | [is there a public code list?] | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | This value is expanded into the human-readable text form of the unit name in the ownerCodeDisplayName element. | |
| Example | <HarvardDRS:ownerCode>FHCL.HOUGH</HarvardDRS:ownerCode> | |

|  |  |  |
| --- | --- | --- |
| Element | **ownerCodeDisplayName** | |
| Description | The DRS name for the Harvard library, archive, or other repository responsible for the digital content. | |
| Attributes | None |  |
| Content | A text string [is there a public code list?] | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note | This value corresponds to the code for the unit name in the ownerCode element. | |
| Example | <HarvardDRS:ownerCodeDisplayName>Houghton Library</HarvardDRS:ownerCodeDisplayName> | |

|  |  |  |
| --- | --- | --- |
| Element | **metsLabel** | |
| Description | A descriptive string from the METS object descriptor file in the DRS for identifying an object to a user. | |
| Attributes | None |  |
| Content | A text string | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note |  | |
| Example | <HarvardDRS:metsLabel>  LN 93. Derviš, Zilić. Ide Tito preko Romanije. Stolac, June 9, 1950. Albert B. Lord Collection. Milman Parry Collection of Oral Literature.  </HarvardDRS:metsLabel> | |

|  |  |  |
| --- | --- | --- |
| Element | **lastModificationDate** | |
| Description | The date and time of the most recent update to the object in the DRS. | |
| Attributes | None |  |
| Content | ISO8601 timestamp in the form YYYY-MM-DDThh:mm:ss.SSSZ | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //HarvardDRS:DRSMetadata | |
| Note |  | |
| Example | <HarvardDRS:lastModifiedDate>2015-11-02T15:06:39.404Z</HarvardDRS:lastModifiedDate> | |

**librarycloud Extension**

The librarycloud extension provides alternative, normalized, or user-friendly values to improve searching, faceting, or display, as well as auxiliary and administrative information.

The elements may occur together in one librarycloud wrapper element in a single mods:extension or split across more than one mods:extension, and they may occur at any level of the hierarchy.

Add table block for librarycloud wrapper

|  |  |  |
| --- | --- | --- |
| Element | **availableTo** | |
| Description | A single value that represents the broadest access for any DRS content referenced by the LibraryCloud record. If any part of the DRS content is public, the value will be “Everyone”. | |
| Attributes | None |  |
| Content | Values:   * Everyone * Harvard only | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note | availableTo values are derived from HarvardDRS:accessFlag values.   * accessFlag P🡪 Everyone * accessFlag R🡪Harvard only   Two types of content may have inaccurate values:   1. Restricted images that have separate thumbnail images deposited in the DRS will appear as “Everyone” 2. Restricted Audio content that is accessed through a DRS playlist appears as “Everyone” because the playlist is public, even if the underlying audio files are not. | |
| Example | <librarycloud:availableTo>Everyone</librarycloud:availableTo> | |

|  |  |  |
| --- | --- | --- |
| Element | **DigitalFormats** | |
| Description | DigitalFormats is a wrapper element containing one DigitalFormat element for each type of DRS content described in the LibraryCloud record. | |
| Attributes | None |  |
| Content | Subelement:   * DigitalFormat | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note | Most LibraryCloud records will contain no more than one | |
| Example | See under DigitalFormat below. | |

|  |  |  |
| --- | --- | --- |
| Element | **DigitalFormat** | |
| Description | * DigitalFormat contains a descriptive word or phrase for the type of DRS content described in the LibraryCloud record. The values are derived from a combination of the DRSMetadata contentModel and uriType elements. | |
| Attributes | None |  |
| Content | Controlled values:   * Audio -- when ContentModel=AUDIO or (ContentModel=TEXT and uriType=SDS) * Books and documents -- when ContentModel=DOCUMENT, PDS\_DOCUMENT, or PDS\_LIST\_OBJECT * Images -- when ContentModel=STILL\_IMAGE * Videos -- when ContentModel=VIDEO | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud/librarycloud:DigitalFormats | |
| Note | Most LibraryCloud records will contain no more than one DigitalFormat element. | |
| Example | <librarycloud:digitalFormats>  <librarycloud:digitalFormat>Audio</librarycloud:digitalFormat>  <librarycloud:digitalFormat>Books and documents</librarycloud:digitalFormat>  </librarycloud:digitalFormats> | |

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| Element | **HarvardRepositories** | |
| Description | HarvardRepositories is a wrapper element containing one HarvardRepository element for each unique repository name occurring in the LibraryCloud record. | |
| Attributes | None |  |
| Content | Subelement:   * HarvardRepository | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note | The form of the value in //physicalLocation[@displayLabel=”Harvard repository”] | |
| Example | See under HarvardRepository below. | |

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| --- | --- | --- |
| Element | **HarvardRepository** | |
| Description | HarvardRepository contains the short form of the name of a Harvard repository appearing in the LibraryCloud record. Each HarvardRepository value will occur only once per record. | |
| Attributes | None |  |
| Content | Text | |
| Obligation | Required | |
| Repeatable | Yes | |
| Contained In | //librarycloud:HarvardRepositories | |
| Note | Each unique value in //physicalLocation[@displayLabel=”Harvard repository”] will be mapped to a corresponding short form of repository name. The forms are added from the normalization file RepositoryNameMapping.xml. | |
| Example | <librarycloud:HarvardRepositories>  <librarycloud:HarvardRepository>Houghton</librarycloud:HarvardRepository>  <librarycloud:HarvardRepository>Widener</librarycloud:HarvardRepository>  </librarycloud:HarvardRepositories> | |

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| --- | --- | --- |
| Element | **originalDocument** | |
| Description | This element contains a URL link to a downloadable copy of the source record from which the LibraryCloud record was derived. | |
| Attributes | None |  |
| Content | URL | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note | The source record referred to by the originalDocument link may already have transformed from the internal format of the source system before it reaches the LibraryCloud ingest process.  More than one LibraryCloud may be derived from the same source record. See Record Splitting in the MODS Application Profile for LibraryCloud | |
| Example | <librarycloud:originalDocument>  https://s3.amazonaws.com/harvard.librarycloud.marc/990014252210203941  </librarycloud:originalDocument> | |

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| --- | --- | --- |
| Element | **priorrecordids** | |
| Description | Contains one or more subelements containing superseded identifiers for the record, such as those from previous generations of cataloging systems. | |
| Attributes | None |  |
| Content | Subelement:   * recordIdentifier | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note |  | |

|  |  |  |
| --- | --- | --- |
| Element | **recordIdentifier** | |
| Description | Contains a single superseded identifier for the record, such as the identifier from a previous generation of cataloging system. | |
| Attributes | source | MH:ALEPH |
| Obligation | Required when parent is present | |
| Repeatable | Yes | |
| Contained In | //librarycloud:priorrecordids | |
| Note |  | |
| Example | <librarycloud:recordIdentifier source="MH:ALEPH">001425221</librarycloud:recordIdentifier> | |

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| --- | --- | --- |
| Element | **processingDate** | |
| Description | The processingDate element includes a timestamp for the date *this version* of the record was ingested by LibraryCloud. The date is replaced each time an updated version of the record is processed. | |
| Attributes | None |  |
| Content | Timestamp in the form YYYY-MM-DDTHH:mmZ | |
| Obligation | Required | |
| Repeatable | No | |
| Contained In | //librarycloud:librarycloud | |
| Note | There is no date in LibraryCloud to represent the first date that a record was loaded. | |
| Example | <librarycloud:processingDate>2019-04-16T05:49Z</librarycloud:processingDate> | |

**set Extension**

The set extension identifies curated collections in which the item is included, specifically collections created and maintained through Harvard’s Collection Builder service.

These sets may be available for OAI-PMH harvesting (see <https://wiki.harvard.edu/confluence/display/LibraryStaffDoc/LibraryCloud+OAI-PMH+Data+Provider>).

They may have dedicated exhibit sites, e.g., <http://curiosity.lib.harvard.edu/women-working-1800-1930>.

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| Element | **sets** | |
| Description | sets is the wrapper element containing information about each of the curated collections or sets in which the record is included. | |
| Attributes | None |  |
| Content | Subelements:   * set | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //mods:extension | |
| Note |  | |
| Example | <sets:sets>  <sets:set>  <sets:systemId>57217</sets:systemId>  <sets:setName>Women Working, 1800-1930</sets:setName>  <sets:setSpec>ww</sets:setSpec>  <sets:baseUrl>  https://id.lib.harvard.edu/curiosity/women-working-1800-1930/45-  </sets:baseUrl>  </sets:set>  </sets:sets> | |

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| --- | --- | --- |
| Element | **set** | |
| Description | set is a wrapper element containing information about a single curated collection. | |
| Attributes | None |  |
| Content | Subelements:   * systemId * setName * setSpec * baseUrl | |
| Obligation | Required when parent is present | |
| Repeatable | Yes | |
| Contained In | //sets:sets | |
| Note |  | |
| Example | See **sets**, above. | |

|  |  |  |
| --- | --- | --- |
| Element | **systemId** | |
| Description | The identifier of the collection record in the collection database. | |
| Attributes | None |  |
| Content | One numeric identifier | |
| Obligation | Required when parent is present | |
| Repeatable | No | |
| Contained In | //sets:set | |
| Note |  | |
| Example | <sets:systemId>57218</sets:systemId> | |

|  |  |  |
| --- | --- | --- |
| Element | **setName** | |
| Description | A human-readable string naming the set or collection. | |
| Attributes | None |  |
| Content | Text string | |
| Obligation | Required when parent is present | |
| Repeatable | No | |
| Contained In | //sets:set | |
| Note | This is the same as the setName in OAI-PMH[[12]](#footnote-12) | |
| Example | <sets:setName>Women Working, 1800-1930</sets:setName> | |

|  |  |  |
| --- | --- | --- |
| Element | **setSpec** | |
| Description | A unique identifier for the set in the context of the LibraryCloud OAI-PMH Data Provider. | |
| Attributes | None |  |
| Content | Text string | |
| Obligation | Required when parent is present | |
| Repeatable | No | |
| Contained In | //sets:set | |
| Note | This is the same as the setSpec in OAI-PMH[[13]](#footnote-13) | |
| Example | <sets:setSpec>ww</sets:setSpec> | |

|  |  |  |
| --- | --- | --- |
| Element | **baseUrl** | |
| Description | URL used to construct item level object-in-context links for records in the set or collection | |
| Attributes | None |  |
| Content | URL | |
| Obligation | Optional | |
| Repeatable | No | |
| Contained In | //sets:set | |
| Note | baseUrl will only be present if there is a public exhibit or site for the collection. | |
| Example | <sets:baseUrl>  https://id.lib.harvard.edu/curiosity/women-working-1800-1930/45-  </sets:baseUrl> | |

**Appendix 2**: ***relatedItem*** **examples**

MH:ALMA:

1. Permalink to the record in HOLLIS:

<mods:relatedItem otherType="HOLLIS record">

<mods:location>

<mods:url>

<https://id.lib.harvard.edu/alma/990000000230203941/catalog>

</mods:url>

</mods:location>

1. Unspecified
   1. Link to a finding aid:

<mods:relatedItem>

<mods:titleInfo>

<mods:title>Electronic finding aid</mods:title>

</mods:titleInfo>

<mods:location>

<mods:url><https://nrs.harvard.edu/urn-3:RAD.SCHL:sch01321> </mods:url>

</mods:location>

1. Series titles:

<mods:relatedItem type="series">

<mods:titleInfo>

<mods:title>Tübinger Beiträge zur Linguistik ; 465</mods:title>

</mods:titleInfo>

1. Other format:

<mods:relatedItem type="otherFormat" displayLabel="Online version:" otherType="Online version:">

<mods:titleInfo>

<mods:title>Reversing the tide</mods:title>

</mods:titleInfo>

<mods:originInfo>

<mods:publisher>Washington, DC : World Bank, 2005</mods:publisher>

</mods:originInfo>

<mods:identifier type="local">(OCoLC)654737656</mods:identifier>

1. Constituent part:

<mods:relatedItem type="constituent">

<mods:titleInfo>

<mods:title>Société civile et efficacité de l'aide</mods:title>

</mods:titleInfo>

1. Larger context / Is Part OF

<mods:relatedItem displayLabel="part of">

<mods:titleInfo>

<mods:title>

Julia Child Additional papers. Folder: Paul Child log book transcription: 6\_KC64, HOLLIS collection-level record: 12694681

</mods:title>

</mods:titleInfo>

1. Is Referenced By:

<mods:relatedItem type="isReferencedBy">

<mods:titleInfo>

<mods:title>Pottle, F.A. Boswell,</mods:title>

</mods:titleInfo>

<mods:part>

<mods:detail type="part">

<mods:number>91</mods:number>

</mods:detail>

</mods:part>

1. <https://library.harvard.edu/digital-collections> [↑](#footnote-ref-1)
2. <https://curiosity.lib.harvard.edu/> [↑](#footnote-ref-2)
3. <https://www.loc.gov/standards/mods/> [↑](#footnote-ref-3)
4. <https://www.loc.gov/standards/mods/mods-outline-3-6.html> [↑](#footnote-ref-4)
5. <https://github.com/harvard-library/librarycloud_ingest/blob/release/1.5.0/src/main/resources/MARC21slim2MODS3-6.xsl> [↑](#footnote-ref-5)
6. <https://github.com/harvard-library/librarycloud_ingest/blob/release/1.5.0/src/main/resources/eadcomponent2mods.xsl> [↑](#footnote-ref-6)
7. <http://hul.harvard.edu/ois/xml/xsd/via/newvia.xsd> [↑](#footnote-ref-7)
8. <https://github.com/harvard-library/librarycloud_ingest/blob/release/1.5.0/src/main/resources/viacomponent2mods.xsl> [↑](#footnote-ref-8)
9. <https://github.com/harvard-library/librarycloud_ingest/blob/master/src/main/resources/mpcol2mods.xsl> [↑](#footnote-ref-9)
10. <https://github.com/harvard-library/librarycloud_ingest/blob/master/src/main/resources/mcz2mods.xsl> [↑](#footnote-ref-10)
11. <https://github.com/harvard-library/librarycloud_ingest/blob/master/src/main/resources/iohp2mods.xsl> [↑](#footnote-ref-11)
12. <http://www.openarchives.org/OAI/openarchivesprotocol.html> [↑](#footnote-ref-12)
13. <http://www.openarchives.org/OAI/openarchivesprotocol.html> [↑](#footnote-ref-13)