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Building a Sustainable Metadata Workflow for Audio-visual Resources: University of Illinois Library's Medusa Digital Preservation Repository

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Abstract:

When the University of Illinois Library began development of its digital preservation repository system, Medusa, the library found that there were many audio-visual resources that had yet to be cataloged, i.e. inaccessible to users. In order to make resources available to end-users and comply with Open Archival Information System (OAIS) reference model, the library developed an ingestion package that includes descriptive metadata. The Preservation program's OAIS Modeling for Media Files Working Group carefully examined the currently available best practice documents and recommendations for the cataloging of audio-visual resources to draft levels of compliance for audio Submission Information Packages (SIPs) and descriptive metadata. The paper introduces the detailed decision process for the Library's descriptive metadata standard and element set included within audio SIPs along with their designated file formats, file specifications, and directory structures. The paper also discusses the element-by-element comparison between PBCore and MODS, and the XML-based descriptive metadata creation workflow as it was applied in a recent pilot project.

Keywords: Metadata, Audio-visual, Preservation, Digital Preservation Repository, MODS

Introduction

The Medusa digital preservation repository[1] at the University of Illinois at Urbana-Champaign (UIUC) University Library provides a storage environment to ensure long-term access and use for digital content selected by content managers and producers. As Medusa has shifted from planning to implementation, library departments have begun to review workflows and profiles for digital projects. Up to this point, much of the project directory structure and metadata creation has been conducted ad hoc, with little declared consistency or documentation. For in-house audio-visual digitization projects and large-scale vendor reformatting alike, this need necessitated urgent action.

This paper documents the planning and implementation of these guidelines, including challenges and solutions that arose in the process of harvesting and transforming disorganized collection information into discrete descriptive metadata records. Also included is analysis of the conceived audio object packaging, file specifications, naming conventions, and directory structures. The paper will also discuss the pilot project that benefited from implementation of an XML-based descriptive metadata creation workflow informed by these guidelines.

Background

As the University Library moves forward implementing digital project workflows and metadata guidelines for repository content development, digitization projects of the recent past must be taken into consideration within this framework. As a primary stakeholder in the development of the Medusa digital preservation repository and a significant digital content reformatting and production department, the Preservation Unit has begun to explore its own unique needs and challenges in defining ingest packaging practices and functional project directory structures in the Medusa environment.

In fall of 2012, Preservation assembled the *OAIS Modeling for Media Files Working Group*[2] to investigate defined methods of organization and description in audio-visual reformatting project workflows, primarily for use by the Media Preservation Program[3] and its third-party vendors. This ultimately led to the outline basic descriptive metadata requirements, file specifications, and Submission Information Package (SIP) profiles for reformatted audio. The working group also compared PBCore[4] and Metadata Object Description Schema (MODS)[5] with the information required in the profile levels, ultimately deciding to require MODS as its descriptive metadata standard.

In the preservation community there is a familiarity and widespread use of the WAV audio format. "Preservation Master" quality is a 24-bit and 96 kHz sample rate WAV profile, which is regarded as the standard for lossless analog-to-digital conversion (International Association of Sound and Audiovisual Archives Technical Committee, 2009). Audio is a relatively linear and simple bitstream, its associated metadata and preservation issues less onerous than those for video. As it can contain multiple audio and caption streams in addition to moving images, with myriad variations of wrapper and codec formatting, video can be exponentially complex. For this reason, the working group has focused first on digital audio in its preliminary research and pilot project, addressed in this paper.

Pilot Project: The WILL Transcription Disc Collection

As the working group considered file specifications and descriptive metadata schema for audio objects, matters of scalability and sustainability were lead concerns. It became clear that a direct, investigative application would be immensely beneficial in shaping and informing policy. Therefore

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[1] https://wiki.duraspace.org/display/hydra/Medusa

[2] Working Group*:* Josh Harris (Media Preservation Coordinator), Annette Morris (Preservation Reformatting Coordinator), Tracy Popp (Digital Preservationist), Kyle Rimkus (Preservation Librarian), Ryan Edge (Graduate Assistant), Gary Maixner (Graduate Assistant), and Thomas Padilla (Research Assistant).

[3] http://www.library.illinois.edu/prescons/services/media_preservation/media_preservation.html

[4] http://pbcore.org/

[5] http://www.loc.gov/standards/mods/

a pilot project was conceived to measure the success and full applicability of the framework for past and future reformatted digital audio collections. Fortunately, this target collection was one of considerable and urgent need. Since 2011, Media Preservation has overseen its first high volume reformatting effort: the digitization of nearly 6,000 local public radio recordings housed on over 3,000 electric transcription discs[6] in the University of Illinois Archives. Given that the WILL Transcription Disc collection is a steadily growing digital surrogate cache in the Medusa repository–and a highly valued one at that–it was decided that it would receive full and immediate care.

The WILL recordings are a varied and inconsistently documented, yet information-rich collection, laden with many of the potential challenges and intellectual conundrums that retrospective processing and description can present. The program information itself was extracted from multiple sources over many years, and was inherently messy and largely inconsistent, with numerous omissions and redundancies. But it is demonstrative of the myriad of the practical obstacles libraries face in mining complex and high volume time-based media collections, particularly those indexed by questionable relationships, and compiled by any number of student assistants over the years. The sound recordings were produced between 1938 and 1970, with a number of different caretakers over time. Only within the last decade has there been an authoritative record of their contents. That authoritative record existed solely as a Microsoft Excel spreadsheet, with a great deal of data units sharing cells, utterly lacking in syntactical uniformity: a sea of character, string and number values in a cell, with semicolons, periods, and spaces used interchangeably. The discs themselves were inventoried by disc/item number, though often A- and B-side distinctions were unlabeled or obscured. For lack of any stronger record, the University Archives spreadsheet had to serve as the de facto metadata source and basis for audio object packaging and MODS records. Eventual complications arose from this precarious dependency, discussed later in the *Limitations to Metadata Excavation* section.

Digital Preservation Repository

Design Principles:

Using the OAIS Information Package as model, the working group outlined additional package design principles. These core objectives largely exist to stress modularity and some degree of metadata at each level of the directory structure. Taking a common sense, pragmatic approach, it was decided that naming conventions of audio filenames should convey a reasonable amount of technical and descriptive information while also essentially being a unique identifier within the repository, adopting identifier conventions of the source repositories if and when these exist or are still deemed relevant.

Directory Structures:

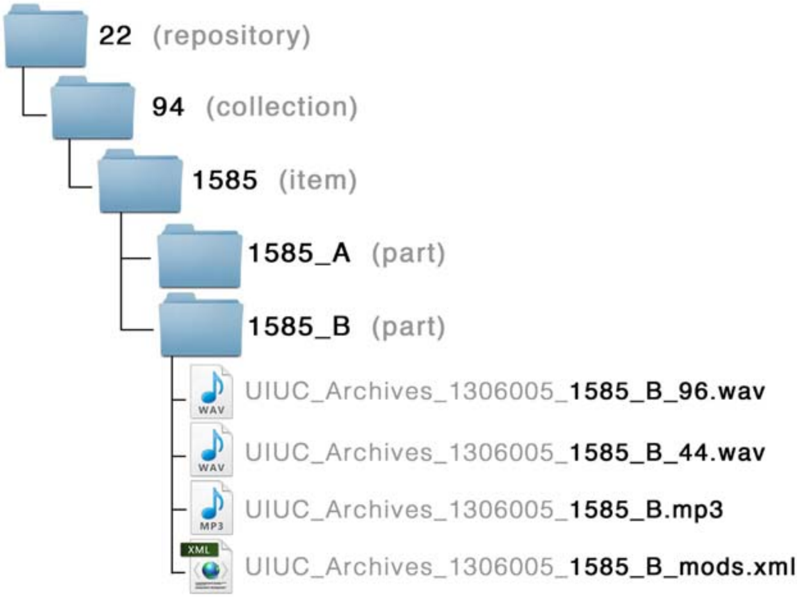
In the case of the University Archives' audio collections, there is a file naming convention that Preservation strives to respect while also unobtrusively amending for preservation functionality. For example, "UIUC_Archives_[series]_[item]_[part]" is the general template being implemented by the Archives. "UIUC_Archives" indicates originating repository, followed by a drill-down from archival series (or collection) to item to discrete item part, if applicable. Media Preservation–and vendors–will append a tag to this base filename to indicate further audio quality, "_96.wav" or "_44.wav" for "Preservation" and "Mezzanine" WAV files, respectively. Further information regarding Media Preservation's file naming practice in relation to quality and packaging structure follow in the *Audio SIP Classifications* section.

Media Preservation project directory structures in service of the Archives attempt to follow this hierarchical syntax, though Medusa repository's internal directory semantics are divergent and less intuitive. A digital audio surrogate bearing the filename

[6] A transcription disc is a special phonograph record intended for, or recorded from, a radio broadcast. Usually found at the top of an institution's reformatting queue, they are extremely fragile and often one of a kind. For more information concerning care, handling, and preservation of transcription discs, see: http://www.theaudioarchive.com/TAA_Resources_Disc_Transcription.htm

"UIUC_Archives_1306005_1060_A_96.wav"[7] is located as follows: *Repository* 22 holds all University Archives collections, which contains *Collection* 94, a directory of digital audio surrogates derived from grooved discs. Within 94, there are packages for each item, or audio disc, in this particular recorded sound collection. *Item* 1060, for instance, possesses two subfolders "1060_A" and "1060_B" (read: A/B sides), one for each digital audio object. See *Figure 1* below for an illustration of this organization.

Figure 1. Audio Project Directory Structure (WILL Transcription Disc Collection).



Audio SIP Classifications:
Explicit requirements for *Minimal*, *Medium*, and *Full* audio object packaging classifications were devised for use not only by Preservation, but for current and future vendors, with potential to extend as a template for media projects throughout the University Libraries. The fundamental specifications require a folder for each object and a singular identifier as its filename. This identifier then extends as the base filename for all other items contained within the directory, including the corresponding descriptive metadata file and derivative audio files.

At the *Minimal* baseline, one or more audio file in the WAV format will be required. For true "Preservation Master" WAV files (96kHz/24-bit), the filename suffix and extension combination must read "_96.wav" to denote a 96 kHz sampling rate. For "Mezzanine" production quality WAV files (44.1kHz/16-bit), the suffix and extension combination will read "_44.wav" to denote a 44.1 kHz sampling rate. Additionally, within each object package there must be at least one derivative MP3 audio file accompanying the aforementioned WAV files. This Access Copy MP3 will simply be indicated by the telltale ".mp3" file extension.

The *Medium* level SIP profile for audio includes a descriptive MODS XML-based metadata in addition to the above minimum specifications. Metadata files also wear the base identifier of the accompanying audio files (masters and derivatives), though with "_mods.xml" suffix and file extension appended to the core filename.

[7] The 7-digit ID 1306005 relates to an Archon classification, often with leading zeros added according to the pattern ##/##/###. 1306005, for example, was derived from Record Group 13/6/5. See the University Archives (via Archon): http://archives.library.illinois.edu/archon/index.php?p=collections/controlcard&id=1994

Full SIP compliance with the requirements sees the adoption of and appropriate use of the required MODS metadata fields (discussed in the following section), absolute inclusion of a Preservation Master WAV audio file, and a photographic documentation file (e.g. JPEG image), with a "_pd.jpeg" suffix and file extension appended to the core filename.

Table 1. Audio Object SIP Profiles.

Attributes	Minimal	Medium	Full
File(s)	1 or more audio file(s)	1 or more audio file(s), XML metadata file(s)	1 or more audio file(s), XML metadata file(s), optional photographic documentation file(s)
File Format(s)	WAV, MP3	WAV, XML, MP3	WAV, XML, MP3, JPEG
File Specifications	44.1 kHz sampling rate, 16-bit	44.1 kHz sampling rate, 16-bit	96 kHz sampling rate, 24-bit
Descriptive Metadata Format	(*minimal SIP does not require metadata*)	MODS (version 3.4)	MODS (version 3.4)
Required Metadata Fields	(*not applicable*)	Repository, Creator, Title, Format, Date, ID, Runtime	Repository, Creator, Title, Format, Date, ID, Runtime

Choosing a Metadata Standard

Demands on the descriptive metadata schema and encoding were fairly modest. Scalability over specificity was the operative maxim in the planning phase. A universal metadata foundation that would translate across digital reformatting projects of variable media and content was the intent. All audio SIPs that must include descriptive metadata are required to carry seven essential fields: Repository, Creator, Title, Format, Date, ID, and Runtime. As these elements are vital to user discovery and access, nearly every descriptive metadata schema supports them in one way or another, from Dublin Core on up. Considering the nature of audio-visual reformatting and derivation, however, it was clear that PBCore and MODS were the primary contenders among available metadata standards used in describing audio-visual resources (De Sutter, Notebaert, & Van de Walle, 2006).

By using PBCore, an ability to express all analog and digital instantiations for a given entity would be gained. Another step further with PBCore would enable connections to the overarching programs and series as well as to the University Archives collection and to possible sub-collections it belonged to, all communicated through a single metadata record. However, the schema and vocabularies are conceived specifically for media producers, to be "utilized as a data model for media cataloging and asset management systems. As a schema, it enables data exchange between media collections, systems and organizations" (Corporation for Public Broadcasting, n.d.). While PBCore complements media reformatting workflows, much of its language and features are oriented toward public broadcasting communities and resources, not academic libraries, cultural heritage institutions, and media preservation services. PBCore, while incredibly robust in content description and technical metadata, was determined to be more high caliber than necessary.

MODS, on the other hand, is a more streamlined descriptive metadata schema for audio objects at the Library. There is no additional need for technical or administrative metadata within the Medusa repository, due to its built-in Preservation Metadata: Implementation Strategies (PREMIS) functionality. MODS, as a descriptive metadata, is a good fit, capable of supporting provenance information and offering multiple access points. Appropriate for the purposes of audio-visual projects in Medusa, intuitive for any library professional with basic cataloging competencies, the MODS schema provides an amenable language for collaborating in-house and with vendors. In addition, the element-by-element comparison between MODS and PBCore proved that MODS possesses the rich set of semantics that can be repurposed with any other metadata standards in the future (see *Appendix 1*).

Table 2. Minimum Required Metadata Fields.

Field Name	Note	MODS Element
Repository	Department holding the resource.	`<originInfo>` `<publisher>`
Creator	Primary person/organization associated with the resource.	`<name> (role)`
Title	Title of the resource.	`<titleInfo>` `<title>`
Format	Physical/ file format of the resource.	`<physicalDescription>` `<internetMediaType>`
Date	Publication date – date when the program originally aired.	`<originInfo>` `<dateIssued>`
ID	Unique identifier of the resource.	`<relatedItem>` `<identifier>`
Runtime	Length of the resource or length of the whole series.	`<relatedItem>` `<physicalDescription>` `<extent>`

On Closer Inspection: Additional Metadata Concerns

Metadata works as a roadmap to facilitate the use of information resources; information-rich, well-structured, and properly granular metadata allows library professionals to organize and manage collections efficiently (Cole & Han, 2013). The practice of creating and managing metadata for audio-visual resources has been a challenge for many libraries since resources in audio-visual formats require capturing types of information far different than those required for text objects, notably technical information, and usually consist of many items (parts) which demand an appropriate metadata standard to support the hierarchical structure (O'Brien, 2012). Following the decision to use MODS as a descriptive metadata standard for all audio-visual resources, the question of what information should be captured in MODS metadata emerged. The answer came rather easily: the Medusa digital preservation repository relies on PREMIS, which has the ability to handle many different types of information, either using PREMIS semantics or linking to metadata created in different standards. Technical information outlined in the Library's best practices[8] will be extracted automatically by software, such as JHOVE,[9] during the submission process. Thusly MODS metadata strictly contains descriptive aspects, including the resource identifier that works as a matching point between the resource and the metadata. However, the granularity of metadata and the level of description remained an issue to be discussed further.

Because the Medusa digital preservation repository will work on bit-level preservation,[10] the initial plan for metadata creation was also based on the same principle, i.e. creating a MODS record for each physical disc. However, over the course of the pilot project, the group realized that there was one

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[8] http://www.library.illinois.edu/dcc/bestpractices/chapter_10_technicalmetadata.html#10.2.3DigitalAudioFiles

[9] http://jhove.sourceforge.net/

[10] Basic level of digital preservation services and methods, bit-level preservation generally will address the secure and monitored storage of digital files. For more information on the levels of digital preservation, see: http://www.digitalpreservation.gov/ndsa/working_groups/documents/NDSA_Levels_Archiving_2013.pdf

issue in achieving this goal. When creating metadata for each object, identifying and capturing relationships between disc sides, titles, and a program names was the most critical component of the metadata. But the hierarchies of the relationships vary program by program and title by title. In most cases, a program is comprised of many broadcasts, and a title can be spread across multiple audio discs (and sides). In rare cases, one disc side may contain more than one broadcast title, or part. In the end, another approach was taken: MODS metadata should be created at the title level, as part of the SIP. Since MODS works well for describing compound objects, information associated with any related resources can be added in the title level metadata (Dulock & Cronin, 2009). The metadata has multiple <relatedItem> elements for all associated discs and parent program information; the item (disc side) information is added with a "constituent" attribute, and the program information is added with a "host" attribute. The detailed information associated with each disc is also captured in sub-elements allowed in <relatedItem> element, such as <titleInfo>, <name>, <part>, and <extension> as shown in *Figure 2* below.

Figure 2. Disc specific information captured in <relatedItem> element of title level MODS metadata.

```
<relatedItem type="constituent" ID="disc2ID">
       <titleInfo>
         <title>title2</title>
       </titleInfo>
       <name type="personal">
         <namePart>name1</namePart>
         <role>
          <roleTerm type="text" authority="marcrelator">role</roleTerm>
         </role>
       </name>
       <physicalDescription>
         <extent>13 min.</extent>
       </physicalDescription>
      <identifier>disc2ID</identifier>
   </relatedItem>
```

Project Workflow

From Data to Metadata:

Accepting that a spreadsheet was the sole window into the collection, using Extensible Stylesheet Language Transformations (XSLT) to create MODS metadata was another benchmark to be achieved concurrent to the first round of filename normalization and packaging efforts. In order to accomplish this, the spreadsheet data had to be distilled only to values of absolute necessity. Supplementary elements beyond the fundamental seven–those of potential value to researchers–were also included; no useful data were left behind in the migration process. This level of care demanded a balance between a human editor's time (interpreting, formatting, partitioning) and scripting enhanced normalization processes. For example, after manual manipulation of inconsistent name formats into strict *Last, First* personal name syntax, subsequent Ruby scripting enabled string value parsing of the Name fields and assignment of roles, e.g. "Trimble, Timothy (speaker)." This made the eventual XSLT transformation all the more seamless when splitting string values and assigning name part types, e.g. <namePart type="given"> Timothy </namePart> <namePart type="family"> Trimble </namePart>.

Due to the fractured sequence of broadcast and series parts, as well as multiple entities housed on a given disc side, it was decided that MODS metadata would be trained on a title level. Identifiers were assigned to unique titles rather than each disc side/part. These systematic assignments were also accomplished by way of Ruby scripting. This script parses the Title, Speaker, and Program cells to establish exact matches within fifteen row intervals. In the case of exact matches in each cell, it is presumed that these entries represent parts of a segmented broadcast, thus linking them by a common identifier. When XSLT transformation occurs, each sequential part of the whole is included one

<relatedItem> constituent, distinguished by the Archives' disc identifier, as well as all retrievable primary descriptive metadata which it possesses and shares with the complete MODS entity.

Transformation:
Successful XSLT transformations demand rigid information modeling conformance. Essentially, data transformation began as the spreadsheet was reformatted into one comprehensive XML record. This file then functions as an intermediary. In the XML format, this data can then be opened in an editor (e.g. oXygen), where it is associated with the homemade Excel-to-MODS XSLT file that repurposes column numbers as identifiers in the creation of MODS elements, each row translating as a separate MODS metadata output into one directory. There is a considerable degree of syntactic customization and tokenization specific to the WILL broadcast recordings at work within the XSLT. For instance the <name type="personal"> values are divided into first and last name parts. In addition to the seven required elements, a few attributes have been added to better facilitate unique properties of this local collection. By example, default "Urbana-Champaign, Illinois" location values for local productions were placed in the <originInfo> <place> field. Per aforementioned demands on MODS to carry hierarchical relationships, matching entity titles and identifiers are passed in as related constituents while the series information is routed in as the host, or parent collection.

Limitations to Metadata Excavation:
The objective of the pilot project was to demonstrate the ability of the audio object packaging guidelines in the excavation of digital audio and past cataloging data from raw and sometimes undercooked sources. A significant lesson was learned here. How can one verify that a given record (in this case a spreadsheet) is in fact the most authentic representation of a vast time-based media collection? In the retrospective cataloging of such collections, often one cannot be certain that all digital surrogates contain the content they purport to contain. Therefore, one must improvise.

Past Media Preservation quality control reviews of the collection were informal, randomly sampling digital transfers upon arrival from the vendor, in batches. Perhaps because this was not a proper sample survey, it wrongly suggested agreement between University Archives data and that which was provided by the vendor. Nevertheless, prior to joining metadata records to their respective SIPs, a significant discrepancy was discovered in the earliest vendor batches, misidentification of Archive identifiers in filenames delivered by the vendor. It seems that in a number of early discs, there were inconsistent distinctions between A- and B-side labels. Therefore, in a few dozen cases, the Archives' record and the vendor technician's assignment of an identifier (e.g. 1082_A) and surrogate filename/identifier conflicted. Pinpointing and reversing all A/B disagreements in a collection of over 6,000 audio files was out of the question. The workflow oversight instigating these errors has long since been resolved, so in a collection of this volume, a few dozen errors might even seem negligible, if correctly mitigated.

On the other hand, to base the packaging of thousands of metadata records on one uncorroborated document is always a risk. Yet the metadata creation had to proceed, without setting existing errors in stone. In order to make this collection available to users, difficult decisions were made, some falling outside of best practices, with asterisks along the way. Subscribing to Greene and Meissner's "More Product, Less Process" (2005) efficiency approach to archival backlog processing, it was decided to loosen the object directory for all potential disparities in the problematic range (discs #1–200). Rather than a rigid bind for each audio object contained on the disc, all MODS XML files are parked at the disc/item level, allowing for end user discoverability and interpretation in such cases of disagreement. For example, disc directory "12" would contain MODS metadata for both A/B titles in addition to "12_A" and "12_B" object packages. It was also agreed that the final collection summary notes should acknowledge this error and information regarding the flexible packaging solution. Again, this softening of best practices is not a broad recommendation, but worth acknowledging as a means to an end. There are exceptions in every collection; distinct problems in each library collection will require unique and sometimes untidy solutions.

Lessons Learned

Metadata becomes an integral component of a library collection's life cycle management because it enables access and preservation of library resources. In executing the digital repository project, a number of lessons were learned about creating a scalable and sustainable metadata workflow, which the authors believe can be applied to similar library projects:

Assessing and identifying metadata needs:

In order to create metadata that can be reused and repurposed in the future, metadata should be created with a standard with broad community support. Assessing and identifying metadata needs will help to choose the metadata standard that works best for the project. For the University of Illinois Library's digital repository project, the metadata was to support access and should include the provenance information of the resource. Based on those needs, the seven metadata elements were required for descriptive metadata. Though a necessity for audio-visual preservation, technical and administrative metadata was provided for within the repository infrastructure by PREMIS. After comparing the two widely used metadata standards of MODS and PBCore, the group decided to use MODS. For the specific needs, this preference was largely based on its rich semantics and flexibility in describing relationships between resources.

Building a sustainable and scalable metadata workflow:

Libraries must today address metadata created by and for many different stakeholders and in many different formats. In many cases, metadata is created in local database systems in a format that does not conform to any standards. To work with metadata in different types and qualities, a sustainable and scalable metadata workflow should be in place. The University of Illinois Library is an early adopter of information technologies in its metadata workflows, notably XML and related technologies. Since most locally created or vendor provided metadata can be easily exported to or are already in a Microsoft Excel, XML was utilized to transform and enhance the metadata. However, in order for the XML technologies to work best, human intervention was crucial, i.e. metadata quality is best served by one who knows the collection and can make informed decisions in cleaning and normalizing the data in Excel.

Sharing metadata creation and implementation decisions with stakeholders:

As the resources that the library curates and collects come from many different sources, including campus units, scholars, vendors, and publishers, metadata creation and implementation decisions should be shared with those stakeholders. Depending on the sources that produce the resources, the metadata needs, main user group, and ways in which the resources are stored and accessed can vary. The library's cataloging unit is not the only unit responsible for creating metadata and providing access services. Instead, consulting with other groups that need metadata decisions and guides, and providing available metadata technologies have become a responsibility of the cataloging unit.

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Appendix 1. PBCore v. MODS, side-by-side.

Field name	MODS	PB Core 2.0	Note
Title	<titleInfo> <title> <subTitle>	Intellectual Content: <pbcoreTitle>	Title of the resource–this can be used for object level or work level
Alternative title	<titleInfo> <title type="alternative"> <subTitle>	Intellectual Content: <pbcoreTitle>	Alternative title of the resource
Creator	<name> <namePart> <displayForm> <affiliation> *<role> <description>	Intellectual Property: <pbcoreCreator> <creator> <creatorRole>	Name of the creator(s)
Contributor	<name> <namePart> <displayForm> <affiliation> *<role> <description>	Intellectual Property: <pbcoreContributor> <contributor <contributorRole>	Name of the contributor(s)
Publisher or Studio	<originInfo> <place> <publisher>	Intellectual Property: <pbcorePublisher> <publisher> <publisherRole>	Name of the studio from where the content was recorded; geopgraphic location (place of publication)
Date of publication	<originInfo> <dateIssued> <dateIssued> <dateCreated> <dateCaptured>	Intellectual Content: <pbcoreAssetDate>	Date
Genre or Media Type	<genre>	Intellectual Content: <pbcoreGenre>	Genre (type) of the resource
Physical descriptions	<extension>	Instantiation: <instantiationFileSize>	File size of the object
Duration	<extension>	Instantiation: <instantiationDuration>	Length of the object
Description	<note>	Intellectual Content: <pbcoreDescription>	Any information that is not fit for other fields
Subject	<subject> <topic> <geographic> <temporal>	Intellectual Content: <pbcoreSubject>	Subject aspect of the resource
Rights	<accessCondition>	Intellectual Property: <pbcoreRightsSummary> <rightsSummary> <rightsLink> <rightsEmbedded>	Rights information including access condition, right statements, etc.
Related resource(s)	<relatedItem> <otherVersion> <otherFormat>	Intellectual Content: <pbcoreRelation> <pbcoreRelationType> <pbcoreRelationIdentifier>	Information regarding constituents or hosts: collections to which object belongs
Identifier	<identifier>	Intellectual Content: <pbcoreIdentifier>	Identifier of the object–need to have a good schema
Collection title	<relatedItem> <host>		Name of the collection