University of Texas Libraries
Human Rights Documentation Initiative
Metadata Guidelines for Video
Version 1.2

September 2012

Changes made in version 1.2:

Changed geographic authority from *Geonames* to *Getty Thesaurus of Geographic Names* for Geographic Base and Geographic Focus elements.

Changes made in version 1.1:

Changed language code from ISO 639-2b to ISO 639-3.

Added input guidelines for pseudonyms, noms de guerre, nicknames, and aliases in the <creator> and <contributor> elements.

Expanded definition of <identifier> and <note>.

Changed the <topic> element part Named Persons to Named Entities (to include significant organizations).

Small copy edit changes (fixed typos).

Small format changes (fixed font type inconsistencies).

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Introduction

Purpose and Scope

The University of Texas Libraries' Human Rights Documentation Initiative (HRDI)[1] is committed to the long-term preservation of fragile and vulnerable records of human rights struggles worldwide, the promotion and secure usage of human rights archival materials, and the advancement of human rights research and advocacy around the world.

The *UT Libraries Human Rights Documentation Initiative Metadata Guidelines for Video* provides guidelines for creating comprehensive metadata that will facilitate the discovery and preservation of fragile, born-digital video documentation of human rights violations acquired through partnerships with human rights organizations worldwide.

This document aims to support the internal needs of the UT Libraries and also to guide and shape local descriptive metadata practices of our contributing partners. UT Libraries staff will work with contributing partners to transform any existing descriptive and source metadata; technical metadata and preservation metadata will be automatically generated by UT Libraries staff once copies of videos have been received by contributing partners. All of this metadata will be packaged at the digital object level and ingested into the Libraries' archive. See the *UTVideo and METS* section on page 6 for more information on our digital object model.

This document is expected to be modified and refined over time to accommodate new requirements for describing and preserving born-digital video.

Background

In 2007, the University of Texas Libraries (UTL) co-sponsored with Columbia University Libraries and the Center for Research Libraries the conference "Human Rights Archives and Documentation: Meeting the Needs of Research, Teaching, Advocacy, and Social Justice[2]." The program brought together librarians and archivists from research universities with representatives from advocacy organizations around the world to grapple with the preservation and access issues related to the documentation of human rights violations. In the wake of the conference, the University of Texas Libraries established the Human Rights Documentation Initiative at the University of Texas at Austin with a generous grant from the Bridgeway Foundation[3] in 2008.

Working with activists, scholars, and organizations to identify electronic and analog resources that are particularly vulnerable to loss, the HRDI aims to preserve the most fragile records of human rights struggles worldwide, promote the security and use of human rights archival materials, and further human rights research and advocacy around the world.

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[1] http://lib.utexas.edu/hrdi/

[2] http://www.columbia.edu/cu/lweb/indiv/humanrights/news_events/2007/conference/index.html

[3] http://www.bridgewayfoundation.org/

Acknowledgments

Using the Guidelines

In following these guidelines, metadata contributors will be describing the original moving image entity ("source object"), the digital surrogate of the original entity ("video object") and the files that comprise the entity ("video files") in various parts of the record.

Terminology

These guidelines use a consistent descriptive terminology for the different aspects of video metadata; they are defined as follows:

Source Object: The original physical or digital moving image entity from which a video object is created.

Video Object: The digital surrogate of a source object. A video object may be a single digital video file or comprised of multiple digital video files.

Video File(s): A distinct video file (*e.g.* .mov, .wmv, .mp4) that makes up a video object.

Sequence: The ordered parts of a distinct moving image narrative, divided into sections as separate video files.

Conventions

Throughout the guidelines we indicate the following level of requirement for each element:
M=Mandatory: an element that is an absolute requirement. *Please see the "At-A-Glance Mandatory Requirements" on page10 for a simple view of every mandatory element in this document.*
R=Recommended: an element that implementers may ignore, but only if they have fully weighed the implications of doing so.
RA=Recommended if Applicable: an element that is recommended if it is applicable to the object being described.
O=Optional: an element that implementers may use at their own discretion.

We have attempted to follow the same conventions for each metadata section; there are slight variations, specifically between the descriptive metadata section and the remaining metadata sections. The conventions are as follows:

Name of Element: Name of metadata element.
Element Parts: Lists the parts of element, if any.
Definition: Definition of element and element parts.
Input Guidelines: May include references to appropriate content standard, authority file, thesaurus, controlled vocabulary, etc. to guide data value entry. The **Note!** alert is used throughout the guidelines to draw attention to mandatory elements that may require special treatment.
Repeatable: Indicates whether an element and its parts may be repeated.
Examples of Use and Mappings: Provides examples of preferred data values within MODS and Dublin Core elements or other designated schema.
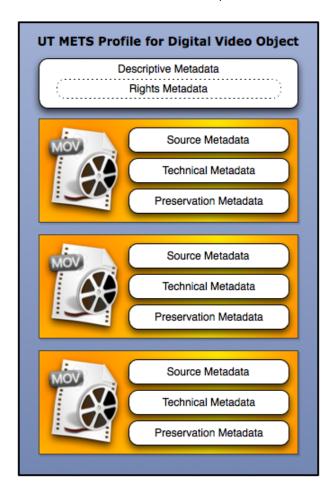
UTVideo and METS

These guidelines are based on a data architecture which can be used in a METS-based or METS-compliant environment. METS[4], the *Metadata Encoding and Transmission Standard*, is a metadata standard for encoding descriptive, administrative, and structural metadata regarding digital objects.

This document addresses the descriptive and administrative (source, technical, and preservation) metadata that will be used to build a METS package. METS packages used in the Human Rights Documentation Initiative conform to a METS application profile for video developed by the UT Libraries, which is described in detail in the *UTVideo METS Profile[5]*.

The descriptive and administrative metadata outlined within this document uses a set of descriptive fields that can be mapped to MODS or Dublin Core, local schemas developed by the UT Libraries for technical and source metadata, and PREMIS:event for preservation metadata. We define the descriptive and administrative metadata component in METS as follows:

Descriptive metadata – descriptive information about the video object, such as names of people directly involved with creation of the object and the subject headings that could describe its contents, as well as the **rights** and any restrictions on access *pertaining* to the video object.

Source metadata describes the physical characteristics of the source object from which the video file(s) were created.

Technical metadata describes the digital characteristics of each video file(s) created from the source object.

Preservation metadata records any actions taken where the video object is modified.

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[4] http://www.loc.gov/standards/mets/

[5] http://www.loc.gov/standards/mets/profiles/00000035.xml

Structural Metadata

While these guidelines do not address the structural metadata component of METS, below is a brief explanation of the <fileSec> and <structMap> sections in the *UTVideo METS Profile*. This explanation does not attempt to cover everything needed to build a METS package. For more information about the specific rules and requirements, please refer to the *UTVideo METS Profile*.

`<fileSec>`

In a METS document, the `<fileSec>` lists all the files which comprise a video object. The `<fileSec>` section contains one or more `<fileGrp>` elements, which are used to group the individual video files into sets based on the use of the video file. The designation of a file's use or type is achieved by the USE attribute of the `<fileGrp>` element. In the *UTVideo METS Profile*, values of the USE attribute can be "raw, "master," and "derivative." The USE attribute of "raw" is for grouping the initial captured video files. The USE attribute of "master" is for grouping the production master files and any supplemental files such as transcripts. The USE attribute "derivative" is for grouping compressed video files and any thumbnail or jpeg screen captures. The basic structure of the file section looks like this:

```
<mets:fileSec>
    <mets:fileGrp USE="raw"></mets:fileGrp>
    <mets:fileGrp USE="master"></mets:fileGrp>
    <mets:fileGrp USE="derivative"></mets:fileGrp>
</mets:fileSec>
```

Within each `<fileGrp>` individual files must be listed within a `<file>` element and assigned a unique identifier with the FILEID attribute. Each `<file>` element must contain an `<FLocat>` element which specifies the external location of the video file in an xlink:href attribute. A pointer to any metadata unique to the individual file should also be included at this level.

`<structMap>`
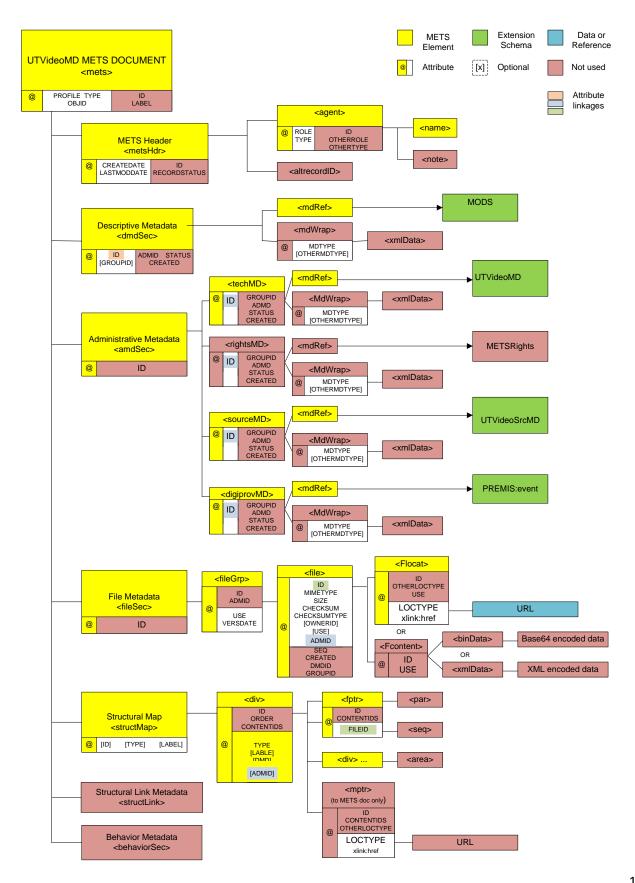
In the structural map section, using the `<structMap>` TYPE attribute, we indicate that the structure of the video files is "logical." The structural divisions of the hierarchical organization in a `<structMap>` are represented by `<div>` elements, which can be nested to any depth. In *UTVideo METS* the structure is organized around the type of file and is designated through the TYPE attribute. These TYPES may be "video," "transcript," "thumbnail," or "preview." Within each TYPE div, another nested <div> specifies the order or sequence of the video files. Every <div> node in the structural map hierarchy is connected to the video files listed in the `<fileSec>` via `<fptr>` elements. The basic structure of a <structMap> section looks like this:

```
<mets:structMap TYPE="logical">
      <div>
          <div TYPE="video">
                <div ORDER="1"><fptr/></div>
                <div ORDER="2"><fptr/></div>
                <div ORDER="3"><fptr/></div>
          </div>
          <div>
             <div TYPE="transcript"><fptr/></div>
          </div
          <div>
             <div TYPE="thumbnail">
                <div ORDER="1"><fptr/></div>
                <div ORDER="2"><fptr/></div>
                <div ORDER="3"><fptr/></div>
          </div
      </div>
</mets:structMap>
```

The diagram on the following page represents[6] how the various METS components work in the *UTVideo METS Profile*:

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[6] Adopted from the Australian Partnership for Sustainable Repositories' APSR-NLA METS Profile diagram. Original diagram drawn by Gerard Clifton. http://www.apsr.edu.au/nla-mets/mets_profile_report.pdf

UTVideoMD METS DOCUMENT
<mets>

@ PROFILE TYPE OBJID   ID LABEL

METS Element (yellow)
Extension Schema (green)
Data or Reference (blue)
@ Attribute
[x] Optional
Not used (red)
Attribute linkages

METS Header
<metsHdr>
@ CREATEDATE LASTMODDATE   ID RECORDSTATUS

<agent>
@ ROLE TYPE   ID OTHERROLE OTHERTYPE

<name>
<note>

<altrecordID>

Descriptive Metadata
<dmdSec>
@ ID [GROUPID]   ADMID STATUS CREATED

<mdRef> → MODS
<mdWrap>
@ MDTYPE [OTHERMDTYPE]   <xmlData>

Administrative Metadata
<amdSec>
@ ID

<techMD>
@ ID   GROUPID ADMD STATUS CREATED
<mdRef> → UTVideoMD
<MdWrap>
@ MDTYPE [OTHERMDTYPE]   <xmlData>

<rightsMD>
@ ID   GROUPID ADMD STATUS CREATED
<mdRef> → METSRights
<MdWrap>
@ MDTYPE [OTHERMDTYPE]   <xmlData>

<sourceMD>
@ ID   GROUPID ADMD STATUS CREATED
<mdRef> → UTVideoSrcMD
<MdWrap>
@ MDTYPE [OTHERMDTYPE]   <xmlData>

<digiprovMD>
@ ID   GROUPID ADMD STATUS CREATED
<mdRef> → PREMIS:event
<MdWrap>
@ MDTYPE [OTHERMDTYPE]   <xmlData>

File Metadata
<fileSec>
@ ID

<fileGrp>
@ ID ADMID   USE VERSDATE

<file>
@ ID MIMETYPE SIZE CHECKSUM CHECKSUMTYPE [OWNERID] [USE] ADMID SEQ CREATED DMDID GROUPID

<Flocat>
@ ID OTHERLOCTYPE USE LOCTYPE xlink:href → URL

OR

<Fcontent>
@ ID USE
<binData> → Base64 encoded data
OR
<xmlData> → XML encoded data

Structural Map
<structMap>
@ [ID] [TYPE] [LABEL]

<div>
@ ID ORDER CONTENTIDS TYPE [LABLE] [DMD] [ADMID]

<fptr>
@ ID CONTENTIDS FILEID
<par>
<seq>

<div> ...
<area>

<mptr>
(to METS doc only)
@ ID CONTENTIDS OTHERLOCTYPE LOCTYPE xlink:href → URL

Structural Link Metadata
<structLink>

Behavior Metadata
<behaviorSec>

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At-A-Glance Mandatory Elements

Descriptive Metadata:
Title
Creator
Date Created
Topic
Geographic Focus
Type of Resource
Identifier
Rights

Source Metadata
ID
Analog Digital Flag
Generation
Carrier Number
Signal Format
Identifier Type
Identifier Value
Duration

Technical Metadata
File Name
Format
Codec
File Size
Duration
Overall Bit Rate
Encoded Date

Preservation Metadata
Event Identifier
Event Type
Event Date/Time

Descriptive Metadata

This section provides specifications for describing a digital video object. The guidelines are structured according to a set of high-level descriptive elements. Although we intend for MODS[7] to be our primary descriptive metadata schema, the element names used here vary slightly from the MODS top-level elements for ease of use. We have mapped each element to MODS; mappings to Dublin Core have also been provided to accommodate systems that require Dublin Core. We recommend that metadata authors be familiar with the MODS schema in addition to the guidelines here. Please see *Appendix A* for a summary chart of the requirements and recommendations for descriptive metadata.

<u>**High-Level Descriptive Elements**</u>
Title (M)
Alternative Title (O)
Creator (M)
Contributor (O)
Publisher (R)
Date Created (M)
Language (R)
Abstract/Summary (O)
Physical Description/ Sequence (R)
Geographic Base (R)
Subjects (Topics, Named Entities, Geographic Focus, Geographic Region) (M)
Type of Resource (M)
Genre (O)
Table of Contents (O)
Note (O)
Identifier (M)
Location (RA)
Rights (M)

Title (M)

Element Parts: None
Definition: The title for the video assigned by the creator or owner, or a descriptive title assigned by Libraries staff.
Input Guidelines: The title of the video can be transcribed from the original source object. It should be assigned when a title does not appear. Make the title as descriptive as possible, avoiding simple generic titles such as "Video" or "Interview."

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

Repeatable: No. In cases where video has multiple titles (such as the same title in multiple languages) use the Alternative Title element.

Mapping to MODS:
```
<mods:titleInfo>
    <mods:title>
        Oral History Testimony of Ntamfurayishyari Silas
    </mods:title>
</mods:titleInfo>
```

Mapping to DC:
```
<dc.title>Oral History Testimony of Ntamfurayishyari Silas</dc.title>
```

Alternative Title (O)

Element parts: None
Definition: Any form of the title used as a substitute or alternative to the Title of the video, such as translation of title from another language, or a title with alternate spellings, omissions, abbreviations, or acronyms. If alternative title is title in another language, note the use of the *lang* attribute in the title element.
Input Guidelines: Enter varying form of the Title if it contributes to the further identification of the item.
Repeatable: Yes

Mapping to MODS:
```
<mods:titleInfo type="alternative" lang="fre">
    <mods:title>
        L'histoire orale témoignage de Ntamfurayishyari Silas
    </mods:title>
<mods:titleInfo>
```

Mapping to DC:
```
<dc.title.alternative>
    L'histoire orale témoignage de Ntamfurayishyari Silas
</dc.title.alternative>
```

Creator (M)

Element parts: *Creator Name, Display Form, Creator Type, Creator Affiliation, Creator Role*
Definition: *Creator Name* designates the name of person(s), institution, agent, or organization responsible for the creation of the video. *Creator Name* is mandatory. *Display Form* is used to indicate how a personal name should be displayed. *Creator Type* designates whether the creator is a person or

organization. *Creator Role* designates the role of the creator. The *Role* "creator" is mandatory. *Creator Affiliation* designates the name of an organization the creator is associated with.

Repeatable: Yes. In cases where video has multiple creators, use a separate creator field for each creator name.

Creator Name (M)
Input Guidelines: Enter the authorized form of the person or organization's name if possible. For personal names, enter the family and given name separately. Use *Display Form* to indicate when a personal name should be displayed in some other way than the default: GivenName FamilyName. **Note!** The creator's name is mandatory. If creator is unknown, do not leave element empty. Enter the value "unknown."

Display Form (O)
Input Guidelines: Use this field to indicate how a personal name should be displayed (e.g. in reversed order rather than direct). The default display is GivenName FamilyName.

Creator Type (R)
Input Guidelines: Enter "personal" or "corporate" to indicate whether the creator is a person or a company, institution, or other organization. The term "corporate" is used to encompass all types of companies and organizations (including non-profits and nongovernmental agencies), not just those belonging to a corporation.

Creator Affiliation (O)
Input Guidelines: Enter the organization, institution or group the creator was affiliated with at the time the resource was created. Use the official or authorized form of the organization's name.

Creator Role (M)
Input Guidelines: Note! The role "creator" is mandatory. Entering additional roles of the creator is optional. Use *MARC Relators and Roles*[8] controlled vocabulary to enter additional roles. Terms from the controlled list that may be appropriate for video are terms like "interviewer," "funder" or "producer."

Note about pseudonyms, noms de guerre, nicknames, and aliases—
In cases where a person's real name and pseudonym are known, please follow these guidelines: Nested within the `<mods:name>` element of the creator, enter the pseudonym in a separate `<mods:namePart>` element; indicate which name (real name, pseudonym, or both) should be displayed in the `<mods:displayForm>` element; and add the <mods:description> element to define the relationship between real name and pseudonym. **Note!** All pseudonyms should be entered with

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[8] http://www.loc.gov/marc/relators/relaterm.html

double quotation marks. *Please see Real Name/Pseudonym example below. In cases where only a pseudonym is known, enter the pseudonym as you would any other name, with no <mods:description> element. *See Pseudonym Only example below.

Mapping to MODS:
```
<mods:name type="personal">
    <mods:namePart type="family">Niwenshuti</mods:namePart>
    <mods:namePart type="given">Martin</mods:namePart>
    <mods:displayForm>Niwenshuti Martin</mods:displayForm>
    <mods:role>
            <mods:roleTerm>creator</mods:roleTerm>
            <mods:roleTerm>interviewer</mods:roleTerm>
    </mods:role>
</mods:name>
<mods:name type="personal">
    <mods:namePart type="family">Ntamfurayishyari</mods:namePart>
    <mods:namePart type="given">Silas</mods:namePart>
    <mods:displayForm>Ntamfurayishyari Silas</mods:displayForm>
    <mods:role>
            <mods:roleTerm>creator</mods:roleTerm>
            <mods:roleTerm>interviewee</mods:roleTerm>
    </mods:role>
</mods:name>
<mods:name type="corporate">
    <mods:namePart>Kigali Genocide Memorial</mods:namePart>
    <mods:role>
            <mods:roleTerm>creator</mods:roleTerm>
            <mods:roleTerm>producer</mods:roleTerm>
    </mods:role>
</mods:name>
```

Mapping to DC:
```
<dc.creator>Ntamfurayishyari Silas</dc.creator>
<dc.creator>Niwenshuti Martin</dc.creator>
<dc.creator>Kigali Genocide Memorial</dc.creator>
```

*Real Name/Pseudonym example and Mapping to MODS:
```
<mods:name type="personal">
    <mods:namePart type="family">Jones</mods:namePart>
    <mods:namePart type="given">John</mods:namePart>
    <mods:namePart>"Ranger"</mods:namePart>
    <mods:displayForm>John Jones "Ranger"</mods:displayForm>
    <mods:role>
            <mods:roleTerm>creator</mods:roleTerm>
            <mods:roleTerm>interviewee</mods:roleTerm>
    </mods:role>
    <mods:description>"Ranger" is nickname of John Jones.</mods:description>
```

```
</mods:name>
```

*Real Name/Pseudonym example and Mapping to DC:
```
<dc.creator>John Jones</dc.creator>
<dc.creator>"Ranger"</dc.creator>
<dc.description>"Ranger" is nickname of John Jones.</dc.description>
```

*Pseudonym Only example and Mapping to MODS:
```
<mods:name type="personal">
    <mods:namePart>"Ranger"</mods:namePart>
    <mods:displayForm>"Ranger"</mods:displayForm>
    <mods:role>
            <mods:roleTerm>creator</mods:roleTerm>
            <mods:roleTerm>interviewee</mods:roleTerm>
    </mods:role>
</mods:name>
```

*Pseudonym Only example and Mapping to DC:
```
<dc.creator>"Ranger"</dc.creator>
```

Contributor (O)

Element parts: *Contributor Name, Display Form, Contributor Type, Contributor Affiliation, Contributor Role*

Definition: *Contributor Name* designates the name of a person or organization that has played an important but secondary role in creating the content of the resource and is not specified in the Creator element. *Display Form* is used to indicate how a personal name should be displayed. *Contributor Type* designates whether the contributor is a person or organization. *Contributor Role* designates the role of the contributor. *Contributor Affiliation* designates the name of an organization the contributor is associated with.

Repeatable: Yes. In cases where video has multiple contributors, use a separate contributor field for each contributor name.

Contributor Name (O)
Input Guidelines: Enter the authorized form of the person or organization's name if possible. For personal names, enter the family and given name separately. Use *Display Form* to indicate when a personal name should be displayed in some other way than the default: GivenName FamilyName.

Display Form (O)
Input Guidelines: Use this field to indicate how a personal name should be displayed (e.g. in reversed order rather than direct). The default display is GivenName FamilyName.

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Contributor Type (O)

Input Guidelines: Enter "personal" or "corporate" to indicate whether the contributor is a person or a company, institution, or other organization. The term "corporate" is used to encompass all types of companies and organizations (including non-profits and nongovernmental agencies), not just those belonging to a corporation.

Contributor Affiliation (O)

Input Guidelines: Enter the organization, institution or group the contributor was affiliated with at the time the video was created. Use the official or authorized form of the organization's name.

Contributor Role (MA)

Input Guidelines: Note! If a contributor is listed, use the *Role* of "contributor." Entering additional roles of the contributor is optional. Use *MARC Relators and Roles*[9] controlled vocabulary to enter additional roles. Terms from the controlled list that may be appropriate for video are terms like "interviewer," "funder" or "producer."

Note about pseudonyms, noms de guerre, nicknames, and aliases—

In cases where a person's real name and pseudonym are known, please follow these guidelines: Nested within the `<mods:name>` element of the contributor, enter the pseudonym in a separate `<mods:namePart>` element; indicate which name (real name, pseudonym, or both) should be displayed in the `<mods:displayForm>` element; and add the <mods:description> element to define the relationship between real name and pseudonym. **Note!** All pseudonyms should be entered with double quotation marks. *Please see Real Name/Pseudonym example below. In cases where only a pseudonym is known, enter the seudonym as you would any other name, with no <mods:description> element. *See Pseudonym Only example below.

Mapping to MODS:

```
<mods:name type="personal">
    <mods:namePart type="family">Mudede</mods:namePart>
    <mods:namePart type="given">Perpetue</mods:namePart>
    <mods:displayForm>Mudede Perpetue</mods:displayForm>
    <mods:role>
            <mods:roleTerm>contributor</mods:roleTerm>
            <mods:roleTerm>interviewee</mods:roleTerm>
    </mods:role>
</mods:name>

<mods:name type="corporate">
    <mods:namePart>Aegis Trust</mods:namePart>
```

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[9] http://www.loc.gov/marc/relators/relaterm.html

```
    <mods:role>
            <mods:roleTerm>contributor</mods:roleTerm>
            <mods:roleTerm>consultant</mods:roleTerm>
    </mods:role>
</mods:name>
```

Mapping to DC:
```
<dc.contributor>Mudede Perpetue</dc.contributor>
<dc.contributor>Aegis Trust</dc.contributor>
```

*Real Name/Pseudonym example and Mapping to MODS:
```
<mods:name type="personal">
    <mods:namePart type="family">Jones</mods:namePart>
    <mods:namePart type="given">John</mods:namePart>
    <mods:namePart>"Ranger"</mods:namePart>
    <mods:displayForm>"Ranger"</mods:displayForm>
    <mods:role>
            <mods:roleTerm>contributor</mods:roleTerm>
    </mods:role>
    <mods:description>"Ranger" is nickname of John Jones</mods:description>
</mods:name>
```

*Real Name/Pseudonym example and Mapping to DC:
```
<dc.contributor>John Jones</dc.contributor>
<dc.contributor>"Ranger"</dc.contributor>
<dc.description>"Ranger" is nickname of John Jones</dc.description>
```

*Pseudonym Only example and Mapping to MODS:
```
<mods:name type="personal">
    <mods:namePart>"Ranger"</mods:namePart>
    <mods:displayForm>"Ranger"</mods:displayForm>
    <mods:role>
            <mods:roleTerm>contributor</mods:roleTerm>
    </mods:role>
</mods:name>
```

*Pseudonym Only example and Mapping to DC:
```
<dc.contributor>"Ranger"</dc.contributor>
```

Publisher (R)

Element parts: None
Definition: The entity responsible for making the video available.
Input Guidelines: Expressed in the authorized form of the publisher's name if possible.

Repeatable: Yes. In the case of multiple publishers, use a separate publisher field for each publisher.

Mapping to MODS:
```
<mods:originInfo>
      <mods:publisher>Kigali Genocide Memorial</mods:publisher>
      <mods:publisher>University of Texas Libraries</mods:publisher>
</mods:originInfo>
```

Mapping to DC:
```
<dc.publisher>Kigali Genocide Memorial</dc.publisher>
<dc.publisher>University of Texas Libraries</dc.publisher>
```

Date Created (M)

Element parts: None
Definition: The date or date range of creation of the video.
Input Guidelines: As specified by *ISO 8601*[10], enter date as Year-Month-Day, separating the sections with a single hyphen (e.g. YYYY-MM-DD). Include partial dates only if the year or only the month and year are known (e.g. YYYY or YYYY-MM). For date ranges, follow the same basic format but separate the dates with a slash mark (e.g. YYYY-MM-DD/YYYY-MM-DD or YYYY/YYYY). For circa dates, follow the ISO format but add the word "circa" in front (e.g. circa YYYY or circa YYYY-MM or circa YYYY/YYYY) **Note!** The date element is mandatory. If date is unknown do not leave field blank; use the term "undated."
Repeatable: No

Mapping to MODS:
```
<mods:originInfo>
      <mods:dateCreated encoding="iso8601">
           2007-02-27
      </mods:dateCreated>
</mods:originInfo>
```

Mapping to DC:
```
<dc.date.created>2007-02-27</dc.date.created>
```

Language (R)

Element Parts: None
Definition: The spoken language(s) on the video.

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[10] http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40874

Input Guidelines: Use the three- letter *ISO 639-3*[11] code for the representation of the name of the language(s).
Repeatable: Yes. In cases where more than one language is spoken in video, use a separate language field for each language.

Mapping to MODS:
```
<mods:language>
      <mods:languageTerm type="code" authority="iso639-3">
            kin
      </mods:languageTerm>
</mods:language>
```

Mapping to DC:
```
<dc.language.iso>kin</dc.language.iso>
```

Abstract/Summary (O)

Element Parts: None
Definition: A summary of the contents of the video.
Input Guidelines: Describe the subject matter of the video. Use complete sentences with proper grammar and punctuation. Avoid any commentary on or interpretation of the video being described.
Repeatable: No

Mapping to MODS:
```
<mods:abstract>
    The oral history testimony of Rwandan Genocide survivor and rescuer
    Ntamfurayishyari Silas recorded by the Kigali Genocide Memorial in Kigali,
    Rwanda. Mudede Perpetue also appears on the video and gives  an account of
    her rescue by Ntamfurayishyari Silas. The  testimony is given in
    Kinyarwanda language.  An English language transcript is available.
</mods:abstract>
```

Mapping to DC:
```
<dc.description.abstract>
    The oral history testimony of Rwandan Genocide survivor and rescuer
    Ntamfurayishyari Silas recorded by the Kigali Genocide Memorial in Kigali,
    Rwanda. Mudede Perpetue also appears on the video and gives  an account of
    her rescue by Ntamfurayishyari Silas. The  testimony is given in
    Kinyarwanda language.  An English language transcript is available.
</dc.description.abstract>
```

---

[11] http://www.sil.org/iso639-3/codes.asp

Physical Description/ Sequence (R)

Element parts: *Extent, Note*
Definition: *Extent* is the total number of sequences associated with the video object. *Note* is a textual statement about the video sequence.
Repeatable: No

Extent
Input Guidelines: Enter the total number of sequences associated with the video object.

Note
Input Guidelines: Enter a textual statement about the number of sequences comprising the video object.

Mapping to MODS:
```
<mods:physicalDescription>
      <mods:extent>2</mods:extent>
       <mods:note>
           This interview is divided into 2 parts (sequence 1 and
           sequence 2)
       </mods:note>
</mods:physicalDescription>
```

Mapping to DC:
```
<dc.format.extent>2</dc.format.extent>
<dc.format.note>
    This interview is divided into 2 parts (sequence 1 and sequence 2)
</dc.format.note>
```

Geographic Base (R)

Element parts: None
Definition: The geographic location of entity responsible for making video.
Input Guidelines: Begin with the largest (e.g. "continent" level) and proceed to the smallest relevant geographical unit, separating each term with two dashes (e.g. "--"). Use *Getty Thesaurus of Geographic Names*[12] as authority.

---

[12] http://www.getty.edu/research/tools/vocabularies/tgn

Repeatable: Yes. In cases where organization is based in more than one location, enter each location string in a separate field.

Mapping to MODS:
```
<mods:originInfo>
      <mods:place authority="tgn">
            Africa--Rwanda--Eastern Province--Kigali
      </mods:place>
</mods:originInfo>
```

Mapping to DC:
```
<dc.coverage.geographicBase>
    Africa--Rwanda--Eastern Province--Kigali
</dc.coverage.geographicBase>
```

Subjects (Topics, Named Entities, Geographic Focus, Geographic Region) (M)

Element Parts: *Topic, Named Entities, Geographic Focus, Geographic Region*
Definition: *Topic* is a term or phrase representing the primary topic(s) of the video. *Named Entities* refers to people or organizations that are significant in some way to the content of the video. *Geographic Focus* refers to the geographic place(s) covered in the video. *Geographic Region* refers to the broad geographic area on which the content of the video object focuses. **Note!** At least one *Topic* and at least one *Geographic Focus* must be assigned.
Repeatable: Yes. All element parts are repeatable.

> **Topics (M)**
> **Input Guidelines:** Choose appropriate topic(s) from the *Human Rights Documentation Initiative Thesaurus*[13]. Must choose at least one topic, but more than one can be assigned. Enter the full hierarchy of the topic, separating each term with two dashes (e.g. "--").
>
> **Named Entities (O)**
> **Input Guidelines:** Enter names of people or organizations that are significant in some way to the video.
>
> **Geographic Focus (M)**
> **Input Guidelines**: Begin with the largest (e.g. "continent" level) and proceed to the smallest relevant geographical unit, separating each term with two dashes (e.g. "--"). Use *Getty Thesaurus of Geographic Names* as authority.

---

[13] placeholder

Geographic Region (R)

Input Guidelines: Enter the continent name or general region name as listed in the *Getty Thesaurus of Geographic Names.*

Mapping to MODS:
```
<mods:subject>
      <mods:topic authority="hrdi">
            armed conflict and persecution--genocide
      </mods:topic>
      <mods:topic authority="hrdi">
            armed conflict and persecution--refugees
      </mods:topic>
      <mods:topic authority="hrdi">
            armed conflict and persecution--desertion
      </mods:topic>
      <mods:name>
            <mods:namepart>Mudede Perpetue</mods:namepart>
      </mods:name>
      <mods:geographic authority="tgn">
            Africa--Rwanda--Eastern Province--Kigali
      </mods:geographic>
      <mods:geographic authority="tgn">
            Africa
      </mods:geographic>
</mods:subject>
```

Mapping to DC:
```
<dc.subject.hrdi>
    armed conflict and persecution--genocide
</dc.subject.hrdi>
<dc.subject.hrdi>
    armed conflict and persecution--refugees
</dc.subject.hrdi>
<dc.subject.hrdi>
    armed conflict and persecution--desertion
</dc.subject.hrdi>
<dc.subject>Mudede Perpetue</dc.subject>
<dc.subject.tgn>
    Africa--Rwanda--Eastern Province--Kigali
</dc.subject.geonames>
<dc.subject.tgn>Africa</dc.subject.tgn>
```

Type of Resource (M)

Element Parts: None

Definition: The broad, high-level term that categorizes the type of material being described (such as text, still image, moving image, etc).
Input Guidelines: Use the *UT Libraries' Type Vocabulary*[14] term "moving image."
Repeatable: No

Mapping to MODS:
```
<mods:typeOfResource authority="uttype">
    moving image
</mods:typeOfResource>
```

Mapping to DC:
```
<dc.type>moving image</dc.type>
```

Genre (O)

Element parts: None
Definition: Characterizes the content of the video.
Input Guidelines: Use term(s) from the *Library of Congress Moving Image Genre Form List*[15] or the *MARC Genre Term List*[16]
Repeatable: Yes. Repeat element if video falls into more than one genre term.

Mapping to MODS:
```
<mods:genre authority="migfg">interview</mods:genre>
<mods:genre authority="marcgt">memoir</mods:genre>
```

Mapping to DC:
```
<dc.type.genre>interview</dc.type.genre>
<dc.type.genre>memoir</dc.type.genre>
```

Table of contents (O)

Element Parts: None
Definition: A detailed and structured description of the contents of the video.

---

[14] See *Appendix B*

[15] http://www.loc.gov/rr/mopic/miggen.html

[16] http://www.loc.gov/standards/valuelist/marcgt.html

Input Guidelines: Describe the contents or sequence of the video.
Repeatable: No

Mapping to MODS:
```
<mods:tableOfContents>
    Sequence 1 covers life before the Genocide. Sequence 2 covers life
    during and after the Genocide.
</mods:tableOfContents>
```

Mapping to DC:
```
<dc.description.tableOfContents>
    Sequence 1 covers life before the Genocide. Sequence 2 covers life
    during and after the Genocide.
</dc.description.tableOfContents>
```

Note (O)

Element Parts: None
Definition: Any information relating to the video that cannot be entered in other elements, such as collection name, project name, administrative information, or information to assist with the management of the object.
Input Guidelines: Use proper grammar and punctuation.
Repeatable: Yes

Mapping to MODS:
```
<mods:note>
    Additional copy of video held at University of Nottingham.
</mods:note>
<mods:note>Collection name: Oral History Testimonies</mods:note>
```

Mapping to DC:
```
<dc.description.note>
    Additional copy of video held at University of Nottingham.
<dc.description.note>
<dc.description.note>
    Collection name: Oral History Testimonies
</dc.description.note>
```

Identifier (M)

Element Parts: None

Definition: Any unique standard number(s) or code(s) that distinctively identifies the video object.
Input Guidelines: Enter the root file name of the video object and/or other unique number(s).
Repeatable: Yes

Mapping to MODS:
```
<mods:identifier>kmc00022</mods:identifier>
<mods:identifier>ROR1212</mods:identifier>
```

Mapping to DC:
```
<dc.identifier>kmc00022</dc.identifier>
<dc.identifier>ROR1212</dc.identifier>
```

Location (RA)

Element Parts: None
Definition: Identifies location of video object in archival repository.
Input Guidelines: System supplied handle or URL.
Repeatable: Yes

Mapping to MODS:
```
<mods:location>
        <mods:url>https://archive.lib.utexas.edu/kmc00022</mods:url>
</mods:location>
```

Mapping to DC:
```
<dc.identifier.url>
    https://archive.lib.utexas.edu/kmc00022
</dc.identifier.url>
```

Rights (M)

Element Parts: *Rights Type, Rights Information*
Definition: Information about rights relating to access and use of video object. *Rights Type* designates the "restriction on access" and the terms of "use and reproduction." *Rights Information* designates whether video object can be made public, or whether it must remain private, or whether there are restrictions on parts of the content.
Repeatable: Yes

Rights Type (M)

Input Guidelines: There are two types of information that must be documented in the *Rights Information* section: "restriction on access" and "use and reproduction."

Rights Information (M)

Input Guidelines: When entering "restriction on access" information, enter one of three values: "public," "private," or "restricted."

> public=access is open or there are no restrictions.
>
> private=access is restricted to content holders and/or their designees, and digital archive administrators.
>
> restricted=content or parts of content is restricted and the conditions of the restriction is documented in the "use and reproduction" section.

"Use and reproduction" information should be entered to document the terms and conditions of the "restriction on access." If "restriction on access" is "public," enter this statement: **"This electronic resource is made available by the University of Texas Libraries solely for the purposes of research, teaching and private study. All intellectual property rights are retained by the legal copyright holders. The University of Texas does not hold the copyright to the content of this file. Formal permission to reuse or republish this content must be obtained from the copyright holder."**

If "restriction on access is "restricted," enter the conditions of the restriction. Use complete sentences with proper grammar and punctuation.

Mapping to MODS:

```
<mods:accessCondition type="restriction on access">
    public
</mods:accessCondition>
<mods:accessCondition type="use and reproduction">
    This electronic resource is made available by the University of  Texas
Libraries solely for the purposes of research, teaching and  private study.
All intellectual property rights are retained by the  legal copyright
holders. The University of Texas does not hold the copyright to the content
of this file. Formal permission to reuse or republish this content must be
obtained from the copyright holder.
</mods:accessCondition>
```

OR

```
<mods:accessCondition type="restriction on access">
    restricted
</mods:accessCondition>
<mods:accessCondition type="use and reproduction">
    The first 10 minutes of video are not for public access. Begin   public
access at timecode 00:10:00.
</mods:accessCondition>
```

Mapping to DC:

```
<dc.rights.restriction>public</dc.rights.restriction>
<dc.rights>This electronic resource is made available by the University of
Texas Libraries solely for the purposes of research, teaching and private
study. All intellectual property rights are retained by the  legal copyright
holders. The University of Texas does not hold the copyright to the content
of this file. Formal permission to reuse or republish this content must be
obtained from the copyright holder.
</dc.rights>
```

OR

```
<dc.rights.restriction>restricted</dc.rights.restriction>
<dc.rights>The first 10 minutes of video are not for public access. Begin
public access at timecode 00:10:00.</dc.rights>
```

Source Metadata

Source Metadata describes the original video (source object) from which the digital video file(s) were created. The source object is described mostly in terms of the video's physical characteristics. Outlined below is the UTVIDEOSrc[17] xml schema created by the UT Libraries for capturing source metadata. It is loosely based on the Library of Congress' VIDEOMD[18] schema. Please see *Appendix C* for a summary chart of the requirements and recommendations for source metadata.

High-Level Source Elements
ID (M)
Analog Digital Flag (M)
Condition (RA)
Disposition (RA)
HDTV (RA)
Generation (M)
Carrier Number (M)
Carrier Data (R)
Signal Format (M)
Timecode Record Method (O)
Timecode Type (O)
Identifier Type (M)
Identifier Value (M)
Aspect Ratio (R)
Closed Captioning Note (O)
Closed Captioning Type (O)
Duration (M)
Frame (RA)
Subtitle (RA)
Subtitle Language (RA)
Note (O)

---

[17] www.lib.utexas.edu/schema/UTVIDEOSrc.xsd

[18] http://memory.loc.gov/mets/Schemas/VMD.xsd

ID (M)

Element Name: id
Element Parts: None
Definition: Unique identifier for each source object. For example, if interview is on 2 mini DV tapes, each tape will be treated as a unique source object. Do not confuse with the video's own unique identifier, such as an accession, inventory, or call number; for those numbers, use the element "Identifier Value."
Encoding Guidelines: Encode information on video ID in `<UTVIDEOSrc:id>` element.
Input Guidelines: Positive integer
Repeatable: No

Example of use:
`<UTVIDEOSrc:id>1</UTVIDEOSrc:id>`

Analog Digital Flag (M)

Element Name: analog_digital_flag
Element Parts: None
Definition: Indicates whether the source object is Analog, Physical Digital, or File Digital.
Encoding Guidelines: Encode information about the type of source in the `<UTVIDEOSrc:analog_digital_flag>` element.
Input Guidelines: Value for this element must be one of the following: "analog," "physDigital," or "fileDigital."
Repeatable: No

Example of use:
```
<UTVIDEOSrc:analog_digital_flag>
    physDigital
</UTVIDEOSrc:analog_digital_flag>
```


Condition (RA)

Element Name: condition
Element Parts: None
Definition: Describes the physical condition of the source object.
Encoding Guidelines: Encode information about the physical condition of the source object in the `<UTVIDEOSrc:condition>` element.
Input Guidelines: The possible values for this element are: "good," "acceptable," "poor," or "un-usable."

"good"=image and sound are both good quality. "acceptable"=some issues but still usable. "poor"=integral issues, including but not limited to scratches, warping, etc. "un-usable"=source is unable to be transferred.
Repeatable: Yes

Example of use:
`<UTVIDEOSrc:condition>good</UTVIDEOSrc:condition>`

Disposition (RA)

Element Name: disposition
Element Parts: None
Definition: Describes what became of the source object.
Encoding Guidelines: Encode information regarding the disposition of the source object in the `<UTVIDEOSrc:disposition>` element.
Input Guidelines: The possible values for this element are: "retained," "destroyed," "missing," or "relocated." "retained"= source object has been retained by owning institution. "destroyed"= source object has been damaged beyond use. "missing"=source object is lost but not necessarily destroyed. "relocated"=source object has been relocated from the owning institution to another institution.
Repeatable: Yes

Example of use:
`<UTVIDEOSrc:disposition>retained</UTVIDEOSrc:disposition>`

HDTV (RA)

Element Name: hdtv
Element Parts: *HDTV Aspect Ratio, HDTV Note, HDTV Resolution, HDTV Scan*
Definition: Container element for describing attributes of a high definition TV source object.
Repeatable: Yes

HDTV Aspect Ratio (RA)
Element Name: hdtv_aspect_ratio
Definition: The aspect ratio (expressed as width divided by height) of the high definition source object.
Encoding Guidelines: Encode the aspect ratio of source in the `<UTVIDEOSrc:hdtv_aspect_ratio>` subelement within the `<UTVIDEOSrc:hdtv>` container element.

Input Guidelines: Value will always be expressed as integer:integer (e.g. 4:3). Most common values will be 4:3 and 16:9.

HDTV Note (RA)
Definition: Additional information about the high definition source object that is not reflected in the other hdtv elements.
Encoding Guidelines: Encode any additional textual information in the `<UTVIDEOSrc:hdtv_note>` subelement within the `<UTVIDEOSrc:hdtv>` container element.
Input Guidelines: Free text.

HDTV Resolution (RA)
Definition: The number of horizontal lines that make up the digital image.
Encoding Guidelines: Encode the resolution of the high definition source object as expressed in horizontal lines in the `<UTVIDEOSrc:hdtv_resolution>` subelement within the `<UTVIDEOSrc:hdtv>` container element. Use the *unit* attribute to designate the unit of measurement. The following value must be used in the *unit* attribute: "pixels"
Input Guidelines: Integer.

HDTV Scan (RA)
Definition: Indicates whether the high definition source object is scanned in a progressive or an interlaced mode.
Encoding Guidelines: Encode whether the source object is scanned in an interlaced or progressive manner in the `<UTVIDEOSrc:hdtv_scan>` subelement within the `<UTVIDEOSrc:hdtv>` container element.
Input Guidelines: Value must either be "interlaced" or "progressive."

Example of Use:

```
<UTVIDEOSrc:hdtv>
    <UTVIDEOSrc:hdtv_aspect_ratio>4:3</UTVIDEOSrc:hdtv_aspect_ratio>
    <UTVIDEOSrc:hdtv_note>Standard</UTVIDEOSrc:hdtv_note>
    <UTVIDEOSrc:hdtv_resolution unit="pixels">
       1080
    </UTVIDEOSrc:hdtv_resolution>
    <UTVIDEOSrc:hdtv_scan>interlaced</UTVIDEOSrc:hdtv_scan>
</UTVIDEOSrc:hdtv>
```

Generation (M)

Element Name: generation
Element Parts: None

Definition: The generation of the source object.
Encoding Guidelines: Encode the generation of the source object in the
`<UTVIDEOSrc:generation>` element.
Input Guidelines: Value must be either "original," "copy of original," or "unknown."
Repeatable: Yes

Example of use:
`<UTVIDEOSrc:generation>copy of original</UTVIDEOSrc:generation>`

Carrier Number (M)

Element Name: carrier_number
Element Parts: None
Definition: The order in which the source object comes in sequence.
Encoding Guidelines: Encode information regarding the sequence order of the source object in a
`<UTVIDEOSrc:carrier_number>` element.
Input Guidelines: Free text and integers in format like 1 of 1, 2 of 3, etc.
Repeatable: No

Example of Use:
`<UTVIDEOSrc:carrier_number>1 of 1</UTVIDEOSrc:carrier_number>`

Carrier Data (R)

Element Name: carrier_data
Element Parts: *Carrier Brand, Carrier Format*
Definition: Container element to hold information about the physical carrier of source object if it is
analog or physDigital.
Repeatable: Yes

> **Carrier Brand (O)**
> **Definition:** The name of the manufacturer of the recording medium.
> **Encoding Guidelines:** Encode the name of the manufacturer of the recording medium in a
> `<UTVIDEOSrc:carrier_brand>` subelement within the
> `<UTVIDEOSrc:carrier_data>` container element.
> **Input Guidelines:** Official form of the manufacturer's name if possible.
>
> **Carrier Format (R)**
> **Definition:** Identifies the format of the media as it exists in an actual physical form that occupies
> physical space (e.g., space on a shelf), rather than as a digital file residing on a server or hard
> drive.

>   **Encoding Guidelines:** Encode information about the physical format of the source object in a
>   `<UTVIDEOSrc:carrier_format>` subelement within the
>   `<UTVIDEOSrc:carrier_data>` container element.
>   **Input Guidelines:** Value must come from controlled list of carrier format terms found in
>   *Appendix D*.

Example of Use:
```
<UTVIDEOSrc:carrier_data>
     <UTVIDEOSrc:carrier_brand>Sony</UTVIDEOSrc:carrier_brand>
     <UTVIDEOSrc:carrier_format>DV Mini</UTVIDEOSrc:carrier_format>
</UTVIDEOSrc:carrier_data>
```

Signal Format (M)

Element Name: signal_format
Element Parts: None
Definition: The signal format of the source object.
Encoding Guidelines: Encode information about the signal format in the
`<UTVIDEOSrc:signal_format>` element.
Input Guidelines: Use values such as NTSC, PAL, and SECAM.
Repeatable: Yes

Example of use:
```
<UTVIDEOSrc:signal_format>PAL</UTVIDEOSrc:signal_format>
```

Timecode Recording Method (O)

Element Name: timecode_record_method
Element Parts: None
Definition: The method for recording the timecode of source object.
Encoding Guidelines: Encode the method used to record the timecode in a
`<UTVIDEOSrc:timecode_record_method>` element.
Input Guidelines: Must use one of the following values: "LTC," "VITC," or "other." LTC = longitudinal.
VITC=vertical interval. other=any other method.[19]
Repeatable: No

Example of use:
```
<UTVIDEOSrc:timecode_record_method>
    VITC
```

---

[19] Controlled values taken from RUCore Source Metadata Guidelines
http://rucore.libraries.rutgers.edu/open/projects/openwms/index.php?sec=guides&sub=metadata&pg=s_vt_time
-code

```
</UTVIDEOSrc:timecode_record_method>
```

Timecode Type (O)

Element Name: timecode_type
Element Parts: None
Definition: The specific kind of timecode.
Encoding Guidelines: Encode the type of timecode in a `<UTVIDEOSrc:timecode_type>` element.
Input Guidelines: Must use one of the following values: "simple timecode," "SMPTE nondrop frame," "SMPTE drop frame," "keykode," or "barcode[20]."
Repeatable: Yes

Example of Use:
```
<UTVIDEOSrc:timecode_type>SMPTE drop frame</ UTVIDEOSrc:timecode_type>
```

Identifier Type (M)

Element Name: identifier_type
Element Parts: None
Definition: The type of tracking identifier of the source object.
Encoding Guidelines: Encode the type of identifier in the `<UTVIDEOSrc:identifier_type>` element.
Input Guidelines: Free text with values like, barcode number, shelf number, call number, etc.
Repeatable: Yes

Example of Use:
```
<UTVIDEOSrc:identifier_type>
    kmc tape number
</UTVIDEOSrc:identifier_type>
```

Identifier Value (M)

Element Name: identifier_value
Element Parts: None
Definition: The actual tracking identifier of source object.
Encoding Guidelines: Encode the tracking identifier in the `<UTVIDEOSrc:identifier_value>` element.
Input Guidelines: Free text.
Repeatable: Yes

---

[20] Ibid.

Example of Use:
```
<UTVIDEOSrc:identifier_value>212</UTVIDEOSrc:identifier_value>
```

Aspect Ratio (R)

Element Name: aspect_ratio
Element Parts: None
Definition: The aspect ratio of the image on the screen.
Encoding Guidelines: Encode the aspect ratio in the `<UTVIDEOSrc:aspect_ratio>` element.
Input Guidelines: Value must come from controlled list of carrier format terms found in *Appendix E*.
Repeatable: No

Example of Use:
```
<UTVIDEOSrc:aspect_ratio>4:3</UTVIDEOSrc:aspect_ratio>
```

Closed Captioning Note (O)

Element Name: closed_captioning_note
Element Parts: None
Definition: Any free text information about the closed captioning of the source object.
Encoding Guidelines: Encode any information pertaining to the closed captioning of the source in the `<UTVIDEOSrc:closed_captioning_note>` element.
Input Guidelines: Free text.
Repeatable: Yes

Example of Use:
```
<UTVIDEOSrc:closed_captioning_note>
    in PAL using teletext
</UTVIDEOSrc:closed_captioning_note>
```

Closed Captioning Type (O)

Element Name: closed_captioning_type
Element Parts: None
Definition: The type of closed captioning in source object.
Optional Practice: Encode the type of closed captioning in the `<UTVIDEOSrc:closed_captioning_type>` element.
Input Guidelines: Value must be "pop-up," "scroll-up," "paint-on," or "other."
Repeatable: Yes

Example of Use:
```
<UTVIDEOSrc:closed_captioning_type>
    pop-up
</UTVIDEOSrc:closed_captioning_type>
```

Duration (M)

Element Name: duration
Element Parts: None
Definition: The length of the film or video.
Encoding Guidelines: Encode the duration of the source object in a `<UTVIDEOSrc:duration>` element.
Input Guidelines: Express duration as specified in *ISO 8601*[21].
Repeatable: No

Example of Use:
```
<UTVIDEOSrc:duration>00:57:22.003</UTVIDEOSrc:duration>
```

Frame (RA)

Element Name: frame
Element Parts: *horizontal, vertical, frame rate*
Definition: Container element for holding frame information, such as horizontal and vertical dimensions of frame in video and the frequency of the frames per second.
Repeatable: Yes

> **Horizontal (RA)**
> **Definition:** The horizontal dimensions of a frame in pixels or lines.
> **Encoding Guidelines:** Encode the horizontal dimensions in the `<UTVIDEOSrc:horizontal>` subelement within the `<UTVIDEOSrc:frame>` container element. Use *unit* attribute to designate unit of measurement of dimension. The following value must be used in the *unit* attribute: "pixels."
> **Input Guidelines:** Positive integer.
>
> **Vertical (RA)**
> **Definition:** The vertical dimensions of a frame in pixels or lines.
> **Encoding Guidelines:** Encode the vertical dimensions in the `<UTVIDEOSrc:vertical>` subelement within the `<UTVIDEOSrc:frame>` container element. Use *unit* attribute to designate unit of measurement of dimension. The following value must be used in the *unit* attribute: "pixels."

---

[21] http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40874

Input Guidelines: Positive integer.

Frame Rate (RA)
Definition: The frequency of frames per second.
Encoding Guidelines: Encode the frame rate in the `<UTVIDEOSrc:frame_rate>` subelement within the `<UTVIDEOSrc:frame>` container element. Use *unit* attribute to designate unit of measurement of frame rate. The following value must be used in the *unit* attribute: "frames per second."
Input Guidelines: Decimal.

Example of Use:
```
<UTVIDEOSrc:frame>
     <UTVIDEOSrc:horizontal unit="pixels">720</UTVIDEOSrc:horizontal>
     <UTVIDEOSrc:vertical unit="pixels">480</UTVIDEOSrc:vertical>
     <UTVIDEOSrc:frame_rate unit="frames per second">
          25.5
     </UTVIDEOSrc:frame_rate>
</UTVIDEOSrc:frame>
```

Subtitle (RA)

Element Name: subtitle
Element Parts: None
Definition: Describes whether the source object contains a subtitle or not.
Encoding Guidelines: Encode information about whether the video has a subtitle in the `<UTVIDEOSrc:subtitle>` element.
Input Guidelines: Must be a "yes" or "no" value.
Repeatable: No

Example of Use:
```
<UTVIDEOSrc:subtitle>no</UTVIDEOSrc:subtitle>
```

Subtitle Language (RA)

Element Name: subtitle_lang
Element Parts: None
Definition: The language of the subtitles.
Encoding Guidelines: Encode the language of the subtitles in a `<UTVIDEOSrc:subtitle_lang>` element.
Input Guidelines: Value must be the three- letter *ISO 639-3*[22] code.
Repeatable: Yes

---

[22] http://www.sil.org/iso639-3/codes.asp

Example of Use:
```
<UTVIDEOSrc:subtitle_lang>zul</UTVIDEOSrc:subtitle_lang>
```

Note (O)

Element Name: note
Element Parts: None
Definition: Miscellaneous information about the source object.
Encoding Guidelines: Enter any general information relating to the video that cannot be entered in other elements in the `<UTVIDEOSrc:note>` element.
Input Guidelines: Free text.
Repeatable: Yes

Example of Use:
```
<UTVIDEOSrc:note>
    Handwritten notes on cassette label illegible.
<UTVIDEOSrc:note>
```

Technical Metadata

This section provides specifications for capturing technical metadata on each raw and production master digital video file that comprises the video object.   We have chosen *MediaInfo*[23] as our tool for automatically generating technical metadata. Outlined below is the UTVIDEOTech[24] xml schema created by the UT Libraries to work with *MediaInfo*. It is loosely based on the Library of Congress' VIDEOMD[25] schema. Please see *Appendix F* for a summary chart of the requirements and recommendations for technical metadata.

High-Level Technical Elements
File (M)
General Data
Video
Audio

File (M)

Element Name: file
Element Parts: *General Data, Video, Audio*
Definition: A wrapper element for building technical metadata.

General Data

Element Name: general_data
Element Parts: *File Name, Format, Format Profile, Codec, File Size, Duration, Overall Bit Rate, Stream Size, Encoded Date, Tagged Date, Writing Library*
Definition: Container element relating to the overall technical data of the video file.
Example of Use: See the end of General Data section for full example of use.

> **File Name (M)**
> **Element Name:** file_name
> **Definition:** The name of the video file.
> **Encoding Guidelines:** Encode the name of the video file in the `<UTVIDEOTech:file_name>` subelement within the `<UTVIDEOTech:general_data>` container.

---

[23] http://mediainfo.sourceforge.net/en

[24] www.lib.utexas.edu/schema/UTVIDEOTech.xsd

[25] http://memory.loc.gov/mets/Schemas/VMD.xsd

Input Guidelines: Free text.

Format (M)
Element Name: format
Definition: Official name of the file format.
Encoding Guidelines: Encode information about the file format in a
`<UTVIDEOTech:format>` subelement within the `<UTVIDEOTech:general_data>`
container.
Input Guidelines: Free text. Use values like "avi," "mpeg4," etc.

Format Profile (R)
Element Name: format_profile
Definition: The multimedia container file that contains one or more tracks, each of which stores
a particular type of data: audio, video, etc.
Encoding Guidelines: Encode information about the format profile in a
`<UTVIDEOTech:format_profile>` subelement within the
`<UTVIDEOTech:general_data>` container.
Input Guidelines: Free text.

Codec (M)
Element Name: codec
Definition: The device used to encode/decode the data stream.
Encoding Guidelines: Encode the codec used in the video file in a `<UTVIDEOTech:codec>`
subelement within the `<UTVIDEOTech:general_data>` container.
Input Guidelines: Free text. Use values like "MPEG4," "H.264," "WMV."

File Size (M)
Element Name: file_size
Definition: The size of the file. The unit of measurement attribute will be the largest unit where
the value is greater than one.
Encoding Guidelines: Encode information about the size of the file in a
`<UTVIDEOTech:file_size>` subelement within the `<UTVIDEOTech:general_data>`
container. Use *unit* attribute to designate unit of measurement of file size. One of the following
values must be used in the *unit* attribute: bytes, kilobytes, Megabytes, Gigabytes, Terabytes,
Petabytes.
Input Guidelines: Express file size as decimal (e.g. 5.68).

Duration (M)
Element Name: duration
Definition: The length of the file.

Encoding Guidelines: Encode information about the duration of the file in a
`<UTVIDEOTech:duration>` subelement within the `<UTVIDEOTech:general_data>`
container.

Input Guidelines: Express duration as specified in ISO 8601[26].

Overall Bit Rate (M)

Element Name: overall_bit_rate

Definition: The data transfer rate of the digital video. The unit of measurement attribute will be
the largest unit where the value is greater than one.

Encoding Guidelines: Encode information about the bit rate of the file in a
`<UTVIDEOTech:overall_bit_rate>` subelement within the
`<UTVIDEOTech:general_data>` container. Use *unit* attribute to designate unit of
measurement of overall bit rate. One of the following values must be used in the *unit* attribute:
bits per second, kilobits per second, Megabits per second, Gigabits per second, Terabits per
second.

Input Guidelines: Express overall bit rate as decimal (e.g. 5.68).

Stream Size (R)

Element Name: stream_size

Definition: The size of the general data stream. The unit of measurement attribute will be the
largest unit where the value is greater than one.

Encoding Guidelines: Encode the stream size in a `<UTVIDEOTech:stream_size>`
subelement within the `<UTVIDEOTech:general_data>` container element. Use *unit*
attribute to designate unit of measurement of stream size. One of the following values must be
used in the *unit* attribute: bytes, kilobytes, Megabytes, Gigabytes, Terabytes, Petabytes.

Input Guidelines: Express stream size as decimal (e.g. 5.68).

Encoded Date (M)

Element Name: encoded_date

Definition: The date the digital file was encoded.

Encoding Guidelines: Encode the date in a `<UTVIDEOTech:encoded_date>` subelement
within the `<UTVIDEOTech:general_data>` container element.

Input Guidelines: Express encoded date as specified in ISO 8601[27] (e.g. 2009-01-26T23:30:12).

Tagged Date (R)

Element Name: tagged_date

Definition: The date and time the digital file finished encoding and a tag was placed.

---

[26] http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40874

[27] Ibid.

Encoding Guidelines: Encode the tagged date in a `<UTVIDEOTech:tagged_date>` subelement within the `<UTVIDEOTech:general_data>` container element.

Input Guidelines: Express tagged date as specified in ISO 8601 (e.g. 2009-01-26T23:30:12).

Writing Library (R)

Element Name: writing_library

Definition: Identifies the name of the software package used to create the file.

Encoding Guidelines: Encode the name of the writing library in a `<UTVIDEOTech:writing_library>` subelement within the `<UTVIDEOTech:general_data>` container.

Input Guidelines: Free text. Use values like "Microsoft WaveEdit" or "Apple QuickTime."

Example of Use:

```
<UTVIDEOTech:file>
   <UTVIDEOTech:general_data>
   <UTVIDEOTech:file_name>kmc0002-vid1.mov</ UTVIDEOTech:file_name>
   <UTVIDEOTech:format>MPEG4</UTVIDEOTech:format>
   <UTVIDEOTech:format_profile>Quicktime</UTVIDEOTech:format_profile>
   <UTVIDEOTech:codec >MPEG4</UTVIDEOTech:Codec>
   <UTVIDEOTech:file_size unit="Gigabytes">5.68</UTVIDEOTech:file_size>
   <UTVIDEOTech:duration encoding="iso8601">
       00:26:48.808
   </UTVIDEOTech:duration>
   <UTVIDEOTech:overall_bit_rate unit="Megabits">
       30.3
   </UTVIDEOTech:overall_bit_rate>
   <UTVIDEOTech:stream_size unit="Gigabytes">4.0</UTVIDEOTech:stream_size>
   <UTVIDEOTech:encoded_date encoding="iso8601">
       2009-02T23:14:44
   </UTVIDEOTech:encoded_date>
   <UTVIDEOTech:tagged_date encoding="iso8601">
       2009-01-26T23:30:12
   </UTVIDEOTech:tagged_date>
   <UTVIDEOTech:writing_library>Apple QuickTime</UTVIDEOTech:writing_library>
   </UTVIDEOTech:general_data>
```

Video

Element Name: video

Element Parts: *Format, Codec, Duration, Bit Rate Mode, Bit Rate, Width, Height, Pixel Aspect Ratio, Original Pixel Aspect Ratio, Display Aspect Ratio, Original Aspect Ratio, Frame Rate Mode, Frame Rate, Signal Format, Sampling, Interlacement, Bits Pixel Frame, Stream Size, Encoded Date, Tagged Date*

Definition: Container element describing the technical specifications of the video stream of the video file.

Example of Use: See the end of Video section for full example of use.

Format (R)
Element Name: format
Definition: The format of the video file.
Encoding Guidelines: Encode information about the format in a `<UTVIDEOTech:format>` subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Free text. Use values like "digital video."

Codec (R)
Element Name: codec
Definition: The device used to encode/decode the video data stream.
Encoding Guidelines: Encode information about the video codec in a `<UTVIDEOTech:codec>` subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Free text.

Duration (R)
Element Name: duration
Definition: The length of the video track.
Encoding Guidelines: Encode information about the video duration in a `<UTVIDEOTech:duration>` subelement within the `<UTVIDEOTech:Video>` container element.
Input Guidelines: Express duration as specified in ISO 8601[28].

Bit Rate Mode (R)
Element Name: bit_rate_mode
Definition: Describes the rate at which a codec's output data should be read.
Encoding Guidelines: Encode information about the bit rate mode of the video track in a `<UTVIDEOTech:bit_rate_mode>` subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Value must either be "constant" or "variable."

Bit Rate (R)
Element Name: bit_rate
Definition: The data transfer rate of the video track. The attribute unit of measurement will be the largest unit where the value is greater than one.

---

[28] Ibid.

Encoding Guidelines: Encode information about the bit rate of the video track in a `<UTVIDEOTech:bit_rate>` subelement within the `<UTVIDEOTech:video>` container element. Use *unit* attribute to designate unit of measurement of bit rate. One of the following values must be used in the *unit* attribute: "bits per second," "kilobits per second," "Megabits per second," "Gigabits per second," "Terabits per second."
Input Guidelines: Express bit rate as decimal (e.g. 5.68).

Width (R)
Element Name: width
Definition: The horizontal dimension of the frame in pixels.
Encoding Guidelines: Encode the width of the frame in a `<UTVIDEOTech:width>` subelement within the `<UTVIDEOTech:video>` container element. Use *unit* attribute to designate unit of measurement of width. The following value must be used in the *unit* attribute: "pixels."
Input Guidelines: Integer.

Height (R)
Element Name: height
Definition: The vertical dimension of the frame in pixels.
Encoding Guidelines: Encode the height of the frame in a `<UTVIDEOTech:height>` subelement within the `<UTVIDEOTech:video>` container element. Use *unit* attribute to designate unit of measurement of height. The following value must be used in the *unit* attribute: "pixels."
Input Guidelines: Integer.

Pixel Aspect Ratio (R)
Element Name: pixel_aspect_ratio
Definition: The ratio of the width of the pixel to its height.
Encoding Guidelines: Encode the ratio in a `<UTVIDEOTech:pixel_aspect_ratio>` subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Express pixel aspect ratio as decimal.

Original Pixel Aspect Ratio (R)
Element Name: original_pixel_aspect_ratio
Definition: The ratio of the width of the pixel to its height in which the video was produced.
Encoding Guidelines: Encode the original ratio in a `<UTVIDEOTech:original_pixel_aspect_ratio>` subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Express original pixel aspect ratio as decimal.

Display Aspect Ratio (R)

Element Name: display_aspect_ratio

Definition: The ratio of image width to height.

Encoding Guidelines: Encode the aspect ratio in a
`<UTVIDEOTech:display_aspect_ratio>` subelement within the
`<UTVIDEOTech:video>` container element.

Input Guidelines: Value will always be expressed as Integer:Integer (e.g. 4:3).

Original Display Aspect (R)

Element Name: original_aspect_ratio

Definition: The aspect ratio in which the video was produced.

Encoding Guidelines: Encode the original aspect ratio in a
`<UTVIDEOTech:original_aspect_ratio>` subelement within the
`<UTVIDEOTech:video>` container element.

Input Guidelines: Value will always be expressed as Integer:Integer.

Frame Rate Mode (R)

Element Name: frame_rate_mode

Definition: Indicates if the frame rate of the video is constant or variable.

Encoding Guidelines: Encode information about the frame rate mode in a
`<UTVIDEOTech:frame_rate_mode>` subelement within the `<UTVIDEOTech:video>`
container element.

Input Guidelines: Value must either be "constant" or "variable."

Frame Rate (R)

Element Name: frame_rate

Definition: The number of frames per second at which the video was digitized.

Encoding Guidelines: Encode the frame rate in a `<UTVIDEOTech:frame_rate>`
subelement within the `<UTVIDEOTech:video>` container element. Use *unit* attribute to
designate unit of measurement of frame rate. The following value must be used in the *unit*
attribute: "frames per second."

Input Guidelines: Express frame rate as decimal.

Signal Format (R)

Element Name: signal_format

Definition: The analog television signal format used in encoding the video.

Encoding Guidelines: Encode information about the television encoding standard in a
`<UTVIDEOTech:signal_format>` subelement within the `<UTVIDEOTech:video>`
container element.

Input Guidelines: Free text with values such as "NTSC," "PAL," or "SECAM."

Sampling (R)

Element Name: sampling

Definition: The video sampling format in terms of luminance and chrominance.

Encoding Guidelines: Encode information regarding the video sampling format in a `<UTVIDEOTech:sampling>` subelement within the `<UTVIDEOTech:video>` container element.

Input Guidelines: Value will always be expressed as Integer:Integer:Integer (e.g. 4:2:0).

Interlacement (R)

Element Name: interlacement

Definition: Indicates whether the digital video is scanned in an interlaced or progressive mode.

Encoding Guidelines: Encode the scan type of the video in a `<UTVIDEOTech:interlacement>` subelement within the `<UTVIDEOTech:video>` container element.

Input Guidelines: Value must either be "interlaced," "progressive," or "ppf."

Bits Pixel Frame (R)

Element Name: bits_pixel_frame

Definition: Bits pixel frame is derived by the equation [bits/pixel]=(bitrate [in kb/s] * 1000) / (width *height * frames/s). It is used as an indicator of resolution quality.

Encoding Guidelines: Encode the number of bits*pixel*frame in a `<UTVIDEOTech:bits_pixel_frame>` subelement within the `<UTVIDEOTech:video>` container element.

Input Guidelines: Express bits pixel frame as a decimal.

Stream Size (R)

Element Name: stream_size

Definition: The size of the video stream.

Encoding Guidelines: Encode the video stream size in a `<UTVIDEOTech:stream_size>` subelement within a `<UTVIDEOTech:video>` container element. Use *unit* attribute to designate unit of measurement of stream size. One of the following values must be used in the *unit* attribute: "bytes," "kilobytes," "Megabytes," "Gigabytes," "Terabytes," "Petabytes."

Input Guidelines: Express stream size as a decimal (e.g. 670.54).

Encoded Date (R)

Element Name: encoded_date

Definition: The date the video file was encoded.

Encoding Guidelines: Encode the encoded date in a `<UTVIDEOTech:encoded_date>` subelement within the `<UTVIDEOTech:video>` container element.

Input Guidelines: Express encoded date as specified in ISO 8601[29] (e.g. 2009-01-26T23:30:12).

---

[29] Ibid.

Tagged Date (R)
Element Name: tagged_date
Definition: The date and time the video file finished encoding and a tag was placed.
Encoding Guidelines: Encode the tagged date in a `<UTVIDEOTech:tagged_date>`
subelement within the `<UTVIDEOTech:video>` container element.
Input Guidelines: Express encoded date as specified in ISO 8601 (e.g. 2009-01-26T23:30:12).

Example of Use:
```
<UTVIDEOTech:video>
    <UTVIDEOTech:format>digital video</UTVIDEOTech:format>
    <UTVIDEOTech:codec>DV</UTVIDEOTech:codec>
    <UTVIDEOTech:duration encoding="iso8601">
        00:26:48.808
    </UTVIDEOTech:duration>
    <UTVIDEOTech:bit_rate_mode>constant</UTVIDEOTech:bit_rate_mode>
    <UTVIDEOTech:bit_rate unit="kilobits per second">
        7414
    </UTVIDEOTech:bit_rate>
    <UTVIDEOTech:width unit="pixels">720</UTVIDEOTech:width>
    <UTVIDEOTech:height unit="pixels">480</UTVIDEOTech:height>
    <UTVIDEOTech:display_aspect_ratio>4:3</UTVIDEOTech:display_aspect_ratio>
    <UTVIDEOTech:original_aspect_ratio>4:3</UTVIDEOTech:original_aspect_ratio>
    <UTVIDEOTech:frame_rate_mode>constant<UTVIDEOTech:frame_rate_mode>
    <UTVIDEOTech:frate_rate unit="frames per second">
        25.5
    </UTVIDEOTech:frame_rate>
    <UTVIDEOTech:signal_format>NTSC</UTVIDEOTech:signal_format>
    <UTVIDEOTech:sampling>4:1:1</UTVIDEOTech:sampling>
    <UTVIDEOTech:interlacement>interlaced</UTVIDEOTech:interlacement>
    <UTVIDEOTech:bits_pixel_frame>0.716</UTVIDEOTech:bits_pixel_frame>
    <UTVIDEOTech:stream_size unit="Gigabytes">1.39</UTVIDEOTech:stream_size>
    <UTVIDEOTech:encoded_date encoding="iso8601">
        2009-01-26Z23:14:44
    </UTVIDEOTech:encoded_date>
    <UTVIDEOTech:tagged_date encoding="iso8601">
        2009-01-26T23:30:12
    </UTVIDEOTech:tagged_date>
</UTVIDEOTech:video>
```

Audio

Element Name: audio

Element Parts: *Stream ID, Format, Format Settings Endianness, Format Settings Sign, Codec, Codec Settings Endianness, Duration, Bit Rate Mode, Bit Rate, Sampling Rate, Resolution, Stream Size, Encoded Date, Tagged Date*

Definition: Container element describing the technical specifications of the audio stream(s) of the video file.

Repeatable: Yes. This element and its element parts are repeatable for each individual audio stream.

Stream Id (R)
Element Name: stream_id
Definition: The number designating each individual audio stream.
Encoding Guidelines: Encode the stream id in a `<UTVIDEOTech:stream_id>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Value must be a positive integer.

Format (R)
Element Name: format
Definition: The type of container in which the audio data is stored.
Encoding Guidelines: Encode the format in a `<UTVIDEOTech:format>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Free text. Use values such as: "PCM," "DSD," "MPEG1," "MPEG2."

Format Settings Endianness (R)
Element Name: format_settings_endianness
Definition: The ordering of the bytes in the data stream.
Encoding Guidelines: Encode the byte order in a `<UTVIDEOTech:format_settings_endianness>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Value must either be "big" or "little."

Format Settings Sign (R)
Element Name: format_settings_sign
Definition: Defines whether the audio data is signed or unsigned.
Encoding Guidelines: Encode whether the data is signed or unsigned in a `<UTVIDEOTech:format_settings_sign>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Value must either be "signed" or "unsigned."

Codec (R)
Element Name: codec
Definition: The kind of file container format.

Encoding Guidelines: Encode the kind of codec in the `<UTVIDEOTech:codec>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Free text.

Codec Settings Endianess (R)
Element Name: codec_settings_endianness
Definition: The ordering of the bytes in the data stream.
Encoding Guidelines: Encode the byte order in a
`<UTVIDEOTech:codec_settings_endianness>` subelement within the
`<UTVIDEOTech:audio>` container element.
Input Guidelines: Value must either be "big" or "little."

Duration (R)
Element Name: duration
Definition: The length of the audio stream.
Encoding Guidelines: Encode information about the duration of the audio stream in a
`<UTVIDEOTech:duration>` subelement within the `<UTVIDEOTech:audio>` container.
Input Guidelines: Express duration as specified in ISO 8601[30].

Bit Rate Mode (R)
Element Name: bit_rate_mode
Definition: Describes the rate at which a codec's output data should be read.
Encoding Guidelines: Encode whether the bit rate is constant or variable in the
`<UTVIDEOTech:bit_rate_mode>` subelement within the `<UTVIDEOTech:audio>`
container element.
Input Guidelines: Value must either be "constant" or "variable."

Bit Rate (R)
Element Name: bit_rate
Definition: The data transfer rate and unit of measurement of the audio track.
Encoding Guidelines: Encode the bit rate of the audio stream in a
`<UTVIDEOTech:bit_rate>` subelement within a `<UTVIDEOTech:audio>` container
element. Use *unit* attribute to designate unit of measurement of bit rate. One of the following
values must be used in the *unit* attribute: "bits per second," "kilobits per second," "Megabits per
second," "Gigabits per second," "Terabits per second."
Input Guidelines: Express audio bit rate as a decimal (e.g. 512.00).

Sampling Rate (R)
Element Name: sampling_rate

---

[30] Ibid.

Definition: The number of samples per unit in the audio stream. The attribute unit of measurement will be the largest unit where the value is greater than one.

Encoding Guidelines: Encode the sampling rate in a `<UTVIDEOTech:sampling_rate>` subelement within the `<UTVIDEOTech:audio>` container element. Use *unit* attribute to designate unit of measurement of sampling rate. One of the following values must be used in the *unit* attribute:

"hertz," "kilohertz," "Megahertz," "Gigahertz."

Input Guidelines: Express sampling rate as a decimal (e.g. 32.00).

Resolution (R)
Element Name: resolution
Definition: The number of bits per sample of the audio stream.
Encoding Guidelines: Encode the resolution of the audio stream in a `<UTVIDEOTech:resolution>` subelement within a `<UTVIDEOTech:audio>` container element. Use *unit* attribute to designate unit of measurement of resolution. The following value must be used in the *unit* attribute: "bits."
Input Guidelines: Express resolution as decimal (e.g. 16.00).

Stream Size (R)
Element Name: stream_size
Definition: The size of the audio stream.
Encoding Guidelines: Encode the stream size in a `<UTVIDEOTech:stream_size>` subelement within a `<UTVIDEOTech:audio>` container element. Use *unit* attribute to designate unit of measurement of stream size. One of the following values must be used in the *unit* attribute: "bytes," "kilobytes," "Megabytes," "Gigabytes," "Terabytes," "Petabytes."
Input Guidelines: Express stream size as decimal (e.g. 240.99).

Encoded Date (R)
Element Name: encoded_date
Definition: The date the video file was encoded.
Encoding Guidelines: Encode the date in a `<UTVIDEOTech:encoded_date>` subelement within the `<UTVIDEOTech:audio>` container element.
Input Guidelines: Express encoded date as specified in ISO 8601[31] (e.g. 2009-01-26T23:30:12).

Tagged Date (R)
Element Name: tagged_date
Definition: The date and time the video file finished encoding and a tag was placed.
Encoding Guidelines: Encode the tagged date in a `<UTVIDEOTech:tagged_date>` subelement within the `<UTVIDEOTech:audio>` container element.

---

[31] Ibid.

Input Guidelines: Express encoded date as specified in ISO 8601 (e.g. 2009-01-26T23:30:12).

Example of Use:

```
<UTVIDEOTech:audio>
    <UTVIDEOTech:stream_id>1</UTVIDEOTech:stream_id>
    <UTVIDEOTech:format>PCM</UTVIDEOTech:format>
    <UTVIDEOTech:format_settings_endianness>little
    </UTVIDEOTech:format_settings_endianness>
    <UTVIDEOTech:format_settings_signed>
        signed
    </UTVIDEOTech:format_settings_signed>
    <UTVIDEOTech:codec>PCM</UTVIDEOTech:codec>
    <UTVIDEOTech:codec_settings_endianness>
        little
    </UTVIDEOTech:codec_settings_endianness>
    <UTVIDEOTech:duration>00:26:48.807</UTVIDEOTech:duration>
    <UTVIDEOTech:bit_rate_mode>constant</UTVIDEOTech:bit_rate_mode>
    <UTVIDEOTech:bit_rate unit="bits">768000</UTVIDEOTech:bit_rate>
    <UTVIDEOTech:sampling_rate unit="kilohertz>
        48.0
    </UTVIDEOTech:sampling_rate>
    <UTVIDEOTech:resolution unit="bits">16</UTVIDEOTech:resolution>
    <UTVIDEOTech:stream_size unit="Megabits">147</UTVIDEOTech:stream_size>
    <UTVIDEOTech:encoded_date>2009-01-26Z23:14:44</UTVIDEOTech:encoded_date>
    <UTVIDEOTech:tagged_date>2009-01-26Z23:30:12</UTVIDEOTech:tagged_date>
</UTVIDEOTech:audio>
```

Preservation Metadata

This section provides specifications for capturing event-based metadata. An event is any action which modifies the video object. We have selected several elements from the *Event* entity of the PREMIS[32] schema to record this metadata. Not all *Event* entity elements are listed; we recommend that metadata authors be familiar with the PREMIS schema in addition to the guidelines here. Please see *Appendix G* for a summary chart of requirements and recommendations for preservation metadata.

High Level Preservation Elements
Event Identifier (M)
Event Type (M)
Event Date/Time (M)
Event Detail (O)
Event Outcome Information (O)

Event Identifier (M)

Element Name: eventIdentifier
Element Parts: *Event Identifier Type, Event Identifier Value*
Definition: Container element for recording a unique identifier for the event being described.
Repeatable: No

> **Event Identifier Type (M)**
> **Definition**: A designation of the domain within which the event identifier is unique. (e.g. "UUID," "FDA," "UT Repository Event ID")
> **Encoding Guidelines**: Encode the type of identifier in a <PREMIS:eventIdentifierType> element within the <PREMIS:eventIdentifier> container element.
> **Input Guidelines:** For most preservation repositories, the *eventIdentifierType* will be its own internal numbering system. It can be implicit within the system and provided explicitly only if the data is exported.
> **Repeatable:** No
>
> **Event Identifier Value (M)**
> **Definition:** The value of the *eventIdentifier.*
> **Encoding Guidelines**: Encode the identifier in a <PREMIS:eventIdentifierValue> element within the <PREMIS:eventIdentifier> container element.
> **Input Guidelines:** Binary integer
> **Repeatable:** No

---

[32] http://www.loc.gov/standards/premis/premis.xsd

Example of Use:
```
<PREMIS:eventIdentifier>
    <PREMIS:eventIdentifierType>
        UT Repository Event ID
    </PREMIS:eventIdentifierType>
    <PREMIS:eventIdentifierValue>
        0012
    </PREMIS:eventIdentifierValue>
<PREMIS:eventIdentifier>
```

Event Type (M)

Element Name: eventType
Element Parts: none
Definition: A categorization of the nature of the event. Recommended practice is to record detailed information about the event itself in *eventDetail* rather than using a very granular value for *eventType.*
Encoding Guidelines: Encode the type of event in a <PREMIS:eventType> element.
Input Guidelines: Value must come from controlled list of event type terms found in *Appendix F*.
Repeatable: No

Example of Use:
```
<PREMIS:eventType>capture</PREMIS:eventType>
```

Event Date/Time (M)

Element Name: eventDateTime
Element Parts: none
Definition: The single date and time, or date and time range, at or during which the event occurred.
Encoding Guidelines: Encode the date and time of the event in the <PREMIS:eventDateTime> element.
Input Guidelines: Express date and time as specified in *ISO 8601[33]*.
Repeatable: No

Example of Use:
```
<PREMIS:eventDateTime>
    2006-07-16T19:20:30+01:00
</PREMIS:eventDateTime>
```

Event Detail (O)

Element Name: eventDetail

---

[33] Ibid.

Element Parts: none
Definition: Additional information about the event. *eventDetail* is not intended to be processed by machine. It may record any information about an event and/or point to information stored elsewhere.
Encoding Guidelines: Encode event information in a <PREMIS:eventDetail> element.
Input Guidelines: Free text. Use proper grammar and punctuation.
Repeatable: No

Example of Use:
```
<PREMIS:eventDetail>Audio timecode breaks occurred during capture
</PREMIS:eventDetail>
```

Event Outcome Information (O)

Element Name: eventOutcomeInformation
Element Parts: *Event Outcome, Event Outcome Detail, Event Outcome Detail Note*
Definition: Container element to record Information about the overall result of an event.
Repeatable: Yes. Since events may have more than one outcome, this container is repeatable.

Event Outcome (O)
Definition: Information about the overall result of the event.
Encoding Guidelines: Encode the success level of the event in a <PREMIS:eventOutcome> subelement within the <PREMIS:eventOutcomeInformation> container element.
Input Guidelines: Value must be "success," "partial success," or "failure."
Repeatable: No

Event Outcome Detail (O)
Definition: Container element for detailed description of event outcome. This may be used to record all error and warning messages issued by a program involved in the event or to record a pointer to an error log. If the event was a validity check (e.g., profile conformance) any anomalies or quirks discovered would be recorded here. Contains *Event Outcome Detail Note*
Repeatable: Yes

Event Outcome Detail Note (O)
Definition: A detailed description of the result or product of the event in textual form.
Optional Practice: Encode any textual notes about the event in the <PREMIS:eventOutcomeDetailNote> subelement within the <PREMIS:eventOutcomeDetail> container element.
Input Guidelines: Free text.

Example of Use:
```
<PREMIS:eventOutcomeInformation>
      <PREMIS:eventOutcome>success</PREMIS:eventOutcome>
   <PREMIS:eventOutcomeDetail>
      <PREMIS:eventOutcomeDetailNote>
```

```
            Non-standard tags found in header.
        </PREMIS:eventOutcomeDetailNote>
    </PREMIS:eventOutcomeDetail>
<PREMIS:eventOutcomeInformation>
```

Appendices

Appendix A: Descriptive Metadata Summary of Requirements
Appendix B: UT Libraries' Type Vocabulary
Appendix C: Controlled Vocabulary for <carrier_format> in Source Metadata
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Appendix H: Controlled Vocabulary for <eventType> in Preservation Metadata

Appendix A: Descriptive Metadata Summary of Requirements

Element Name	Element Level of Requirement	Element Parts	Element parts Level of Requirement	Repeatable	Content Controlled
Title	M	None	N/A	No	No
Alternative Title	O	None	N/A	Yes	No
Creator	M	Creator Name Creator Type Creator Affiliation Creator Role	M R O M	Yes Yes Yes Yes	No Yes No Yes
Contributor	O	Contributor Name Contributor Type Contributor Affiliation Contributor Role	O O O O	Yes Yes Yes Yes	No Yes No Yes
Publisher	R	None	N/A	Yes	No
Date Created	M	None	N/A	No	Yes
Language	R	None	N/A	Yes	Yes
Abstract/Summary	O	None	N/A	No	No
Physical Description	R	Extent Note	R R	No	Yes No
Geographic Base	R	None	N/A	Yes	Yes
Subjects	M	Topics Named Entities Geographic Focus	M O M	Yes Yes Yes	Yes No Yes
Type of Resource	M	None	N/A	No	Yes
Genre	O	None	N/A	Yes	Yes
Table of Contents	O	None	N/A	No	No
Note	O	None	N/A	Yes	No
Identifier	M	None	N/A	Yes	No
Location	R	None	N/A	No	No
Rights	M	Rights Type Rights Information	M M	Yes Yes	Yes No

Appendix B: UT Libraries' Type Vocabulary

collection

dataset

event

image

    musical score/notation

    postcard

    architectural drawing

    map

    photograph

    rendering

interactive resource

moving image

physical object

service

software

sound

text

    article

    book

    journal

    manuscript

    newsprint

    thesis

website

Appendix C: Source Metadata Summary of Requirements

Element Name	Element Level of Requirement	Element Parts	Element Parts Level of Requirement	Repeatable	Content Controlled
Id	M	None	N/A	No	No
Analog Digital Flag	M	None	N/A	No	Yes
Condition	RA	None	N/A	Yes	Yes
Disposition	RA	None	N/A	Yes	Yes
HDTV	RA	HDTV Aspect Ratio HDTV Note HDTV Resolution HDTV Scan	RA RA RA RA	Yes Yes Yes Yes	Yes No No No
Generation	M	None	N/A	Yes	Yes
Carrier Number	M	None	N/A	No	No
Carrier Data	R	Carrier Brand Carrier Format	O R	Yes	Yes
Signal Format	M	None	N/A	Yes	No
Timecode Recording Method	O	None	N/A	No	Yes
Timecode Type	O	None	N/A	Yes	Yes
Identifier Type	M	None	N/A	Yes	No
Identifier Value	M	None	N/A	Yes	No
Aspect Ratio	R	None	N/A	No	Yes
Closed Captioning Note	O	None	N/A	Yes	No
Closed Captioning Type	O	None	N/A	Yes	Yes
Duration	M	None	N/A	No	Yes

Frame	RA	Horizontal Vertical Frame Rate	RA RA RA	Yes	No
Subtitle	RA	None	N/A	No	Yes
Subtitle Language	RA	None	N/A	Yes	Yes
Note	O	None	N/A	Yes	No

Appendix D: Controlled Vocabulary for <carrier_format> in Source Metadata[34]

Film: 8mm
Film: 16mm
Film: 35mm
Film: 70mm
8mm video
8mm: Hi8 Video
8mm: Digital-8
1/4 inch videotape: Akai
1/2 inch videotape: CV
1/2 inch videotape: EIAJ Type 1
1/2 inch videotape: VCR
1/2 inch videotape: V2000
1/2 inch videotape:Hawkeye/Recam/M
3/4 inch videotape: U-matic
3/4 inch videotape: U-matic SP
1 inch videotape: PI-3V
1 inch videotape: EV-200
1 inch videotape: EL3400
1 inch videotape: SMPTE Type A
1 inch videotape: SMPTE Type B
1 inch videotape: SMPTE Type C
1 inch videotape: IVC-700/800/900
1 inch videotape: Helical BVH-1000
2 inch videotape: Quad
2 inch videotape: Helical Ampex VR-1500
2 inch videotape: Sony Helical SV-201
2 inch videotape: Helical IVC-9000
Betacam
Betacam SP
Betacam Digital (Digi Beta)
Betacam SX
Betamax/Super/HB
DV Mini
DVC-Pro 25
DVC-Pro 50
DVC-Pro 50/P

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[34] Taken from PBCore v.1.1 <formatPhysical> picklist: http://www.pbcore.org/PBCore/formatPhysical.html

DVCam: Sony
D1
D2
D3
D5
D6
D7
HD: D5
HD: D9
HD: DVC PRO HD
HDCAM
VHS
S-VHS
W-VHS
CD-Video
CD-ROM
DVD-Video
HD-Videodisc
BD-Videodisc
UMD-Videodisc: Sony
EVD-Videodisc: China
DVD-R
DVD+R
DVD-RW
DVD+RW
DVD+R DL
Laser Videodisc CAV: 12-inch
Laser Videodisc CLV: 12-inch
Hard Drive
Flash Memory
Cartivision
CVC
DCT
ED-Beta
EIAJ Cartridge
HDD1000
HDV1000
Macthronics MVC-10
M-II
MPEG IMX
UniHi

V-Cord
V-Cord II
VTR150
VTR600
VX

Appendix E: Controlled Vocabulary for <aspect_ratio> in Source Metadata[35]

4:3
4:3 (16:9 letterbox)
4:3 (16:9 anamorphic)
16:9
5.5:3
7:3 (Panavision or CinemaScope)
2.35:1
1.85:1
Other

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[35] Taken from PBCore v.1.1 <formatAspectRatio> picklist: http://www.pbcore.org/PBCore/formatAspectRatio.html

Appendix F: Technical Metadata Summary of Requirements

* wrapper element

\# repeatable

Element Name		Element Level of Requirement	Element Parts	Element Attribute	Content Controlled
file*		M			
General Data*	File Name	M	None	None	No
	Format	M	None	None	No
	Format Profile	R	None	None	No
	Codec	M	None	None	No
	File Size	M	None	*unit* attribute	*unit* attribute limits content
	Duration	M	None	*encoding* attribute	Yes
	Overall Bit Rate	M	None	*unit* attribute	*unit* attribute limits content
	Stream Size	R	None	*unit* attribute	*unit* attribute limits content
	Encoded Date	M	None	*encoding* attribute	*encoding* attribute limits content
	Tagged Date	R	None	*encoding* attribute	*encoding* attribute limits content
	Writing Library	R	None	None	No
Video*	Format	R	None	None	No
	Codec	R	None	None	No
	Duration	R	None	*encoding* attribute	*encoding* attribute limits content
	Bit Rate Mode	R	None	None	Yes
	Bit Rate	R	None	*unit* attribute	*unit* attribute limits content
	Width	R	None	*unit* attribute	*unit* attribute limits content
	Height	R	None	*unit* attribute	*unit* attribute limits content
	Pixel Aspect Ratio	R	None	None	No
	Original Pixel Aspect Ratio	R	None	None	No
	Display Aspect Ratio	R	None	None	No
	Original Display Aspect	R	None	None	No

Element Name	Element Level of Requirement	Element Parts	Element Attribute	Content Controlled
Frame Rate Mode	R	None	None	Yes
Frame Rate	R	None	*unit* attribute	*unit* attribute limits content
Signal Format	R	None	None	No
Sampling	R	None	None	Yes
Interlacement	R	None	None	Yes
Bits Pixel Frame	R	None	None	Yes
Stream Size	R	None	*unit* attribute	*unit* attribute limits content
Encoded Date	R	None	*encoding* attribute	*encoding* attribute limits content
Tagged Date	R	None	*encoding* attribute	*encoding* attribute limits content
Stream ID	R	None	None	No
Format	R	None	None	No
Format Settings Endianness	R	None	None	Yes
Format Settings Sign	R	None	None	Yes
Codec	R	None	None	No
Codec Settings Endianness	R	None	None	Yes
Duration	R	None	*encoding* attribute	*encoding* attribute limits content
Bit Rate Mode	R	None	None	Yes
Bit Rate	R	None	*unit* attribute	*unit* attribute limits content
Sampling Rate	R	None	*unit* attribute	*unit* attribute limits content
Resolution	R	None	*unit* attribute	*unit* attribute limits content
Stream Size	R	None	*unit* attribute	*unit* attribute limits content
Encoded Date	R	None	*encoding* attribute	*encoding* attribute limits content
Tagged Date	R	None	*encoding* attribute	*encoding* attribute limits content

(Rows from "Stream ID" onward are grouped under the row label **Audio*#**.)

Appendix G: Preservation Metadata Summary of Requirements

* wrapper element

\# repeatable

Element Name	Element Level of Requirement	Element Parts	Element Parts Level of Requirement	Content Controlled
Event Identifier*	M	Event Identifier Type Event Identifier Value	M M	No No
Event Type	M	None	N/A	Yes
Event Date/Time	M	None	N/A	*encoding* attribute limits content
Event Detail	O	None	N/A	No
Event Outcome Information*#	O	Event Outcome Event Outcome Detail#	O O	No No

Appendix H: Controlled Vocabulary for \<eventType> in Preservation Metadata[36]

Controlled Value	Definition
capture	the process whereby a repository actively obtains an object
compression	the process of coding data to save storage space or transmission time
creation	the act of creating a new object
deaccession	the process of removing an object from the inventory of a repository
decompression	the process of reversing the effects of compression
decryption	the process of converting encrypted data to plaintext
deletion	the process of removing an object from repository storage
digital signature validation	the process of determining that a decrypted digital signature matches an expected value
dissemination	the process of retrieving an object from repository storage and making it available to users
fixity check	the process of verifying that an object has not been changed in a given period
ingestion	the process of adding objects to a preservation repository
message digest calculation	the process by which a message digest ("hash") is created
migration	a transformation of an object creating a version in a more contemporary format
transformation	Process performed on a video object that results in one or more new video files that are not bit-wise identical to the source object.

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[36] Taken from the PREMIS Data Dictionary 2.0: http://www.loc.gov/standards/premis/v2/premis-dd-2-0.pdf