Metadata for Digital Audio Collections

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Overview

• Unique properties of audio materials
• Embedded metadata schemas
• External metadata schemas
• Customizing for content
• Tools
• Best Practice Examples
• Questions
Thinking About Metadata

• Creating a digital surrogate that can stand in for the original item
• Giving users access points into content
Unique Properties of Audio Materials

- What part of the (event, performance, container) is being described?
- Maintaining context for the audio

Unique properties
- duration
- number of channels
- recording information (who, when, where, how)
- original medium (format, condition)
- movement/song/album relationships
- wide variety of contributors: arranger/author/composer/performer/participant/speaker
- digitization specifics
Metadata: The Big Three

• **Descriptive**
  • intellectual content, basic provenance
  • title, creator, subject, genre, date
  • used for indexing and discovery

• **Administrative**
  • information related to management of the content
  • history, copyright, master/derivative relationships
  • digitization specifications

• **Technical**
  • information necessary to interpret the file
  • encoding, file format
Embedded and External Metadata

- **Embedded**
  - information recorded within the structure of the digital file
  - “catastrophic metadata”
  - RIFF INFO, BWF <bext> chunk, ID3

- **External**
  - information recorded in a separate file or database
  - Dublin Core, EBUCore, METS
Embedded Metadata: File Structure

Broadcast Wave File format.

From “BWF — a format for audio data files in broadcasting” <http://tech.ebu.ch/docs/tech/tech3285.pdf>
Embedded Metadata: RIFF INFO tags

- Embedded in WAV files (.wav)
- Used more for commercial purposes
- Not a recognized archival standard

Typical tags used for archival recordings:

- INAM (Title)
- ISBJ (Subject)
- IENG (Engineer)
- ICOP (Copyright)
- IGNR (Genre)
- IART (Artist)
- IKEY (Keywords)
- ISFT (Originator Software)
- ICRD (Creation Date)
- IMED (Original Medium)
- ICMT (Comment)
Embedded Metadata: BWF <bext> chunk

- Embedded in BWF WAV files (.wav)
- Developed by European Broadcasting Union
- Recognized archival standard
- Can be declared in XML

Fields:
- Description
- Originator
- OriginatorReference
- OriginationDate
- OriginationTime
- TimeReference
- Version
- UMID
- Reserved
- CodingHistory
Embedded Metadata: ID3 tags

- Embedded in MP3 files (.mp3)
- Not an official specification of MP3 format
- Useful for derivative files

Typical tags used:
- TOPE (Artist)
- TIT2 (Title)
- TALB (Album)
- TORY (Year)
- TRCK (Track Number)
- TCON (Genre)
- TCOP (Copyright)
Embedded Metadata: Drawbacks

- Limited number of fields and coverage
- Different players interpret fields differently
- Strict character limits
- Difficult to create, maintain, index
External Metadata

- Much deeper and broader level of description
- Easily indexed
- Can describe associations between multiple files, content types

Commonly used schemas for digital audio objects:
  - Dublin Core
  - EBUCore
  - METS

Choice based on institution, system, resource, audience, anticipated use
External Metadata: Dublin Core

• 15 metadata elements which can be used to create basic descriptions of digital resources
• “Rigorous simplicity”
• Primarily descriptive, not much support for administrative and technical metadata
• Native schema (qualified DC) used by many Digital Object Management Systems
• Can be extended using an application profile
External Metadata: EBUCore

• Created by European Broadcasting Union
• Specifically for audio and video resources (radio and television broadcasts)
• Designed to work well in DC-centric environments
• Technical metadata: formats, file types, segmentation of media
• Administrative metadata: publication history, rights
External Metadata: METS

- Metadata Encoding and Transmission Standard
- Provides a means to combine elements of different schema into a single record
  - MARC, EAD, DC, TEI, MODS, etc
- Well-suited for associating multiple files together
- Takes more resources to create and maintain records
External Metadata: METS

METS provides for:

• descriptive metadata
• administrative metadata
  – technical metadata
  – source metadata
  – digital provenance metadata
  – rights metadata
• file groups
• structural map
• behavior
Tailoring metadata for content

- Transcriptions
- Subject headings
- Oral histories: biographical details of participants
- GIS data on locations mentioned
- Music: instrumentation, genre, key
- Associate other content: images, text
Project-Specific Metadata

TEI

• Schema for encoding text and metadata developed by Text Encoding Initiative
• TEI Header provides for detailed metadata about participants in an event

Custom Fields

• Locally defined metadata fields can be created in most DOMSs
Tools for Audio Metadata Editing

- JHOVE
- BWF MetaEdit
- WAV Properties Extension
- RIFF File Viewer
- Audacity
- FastSum
Best Practices

Sound Directions
• Harvard and Indiana University
• custom METS profile
• software tools
• documentation

Archival Sound Recordings
• British Library
• custom METS profile
• metadata records available for all items
AES-X098

- Being developed by Audio Engineering Society
- Covers descriptive (part A), technical (part B) and administrative metadata (part C)
- Intended to cover wide array of formats
- Descriptive metadata uses EBUCore
- Draft of parts B & C used by Sound Directions
Thank You!

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