University Libraries: Faculty Publications and Other Works

Faculty Publications and Other Works by Department

10-2010

Metadata for Digital Audio Collections

Eben English

eenglish1@luc.edu

Follow this and additional works at: https://ecommons.luc.edu/lib_facpubs

Part of the Communication Technology and New Media Commons, and the Library and Information Science Commons

Recommended Citation

Metadata for Digital Audio Collections

Eben English, MLIS
Digital Services Librarian
Loyola University Chicago

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

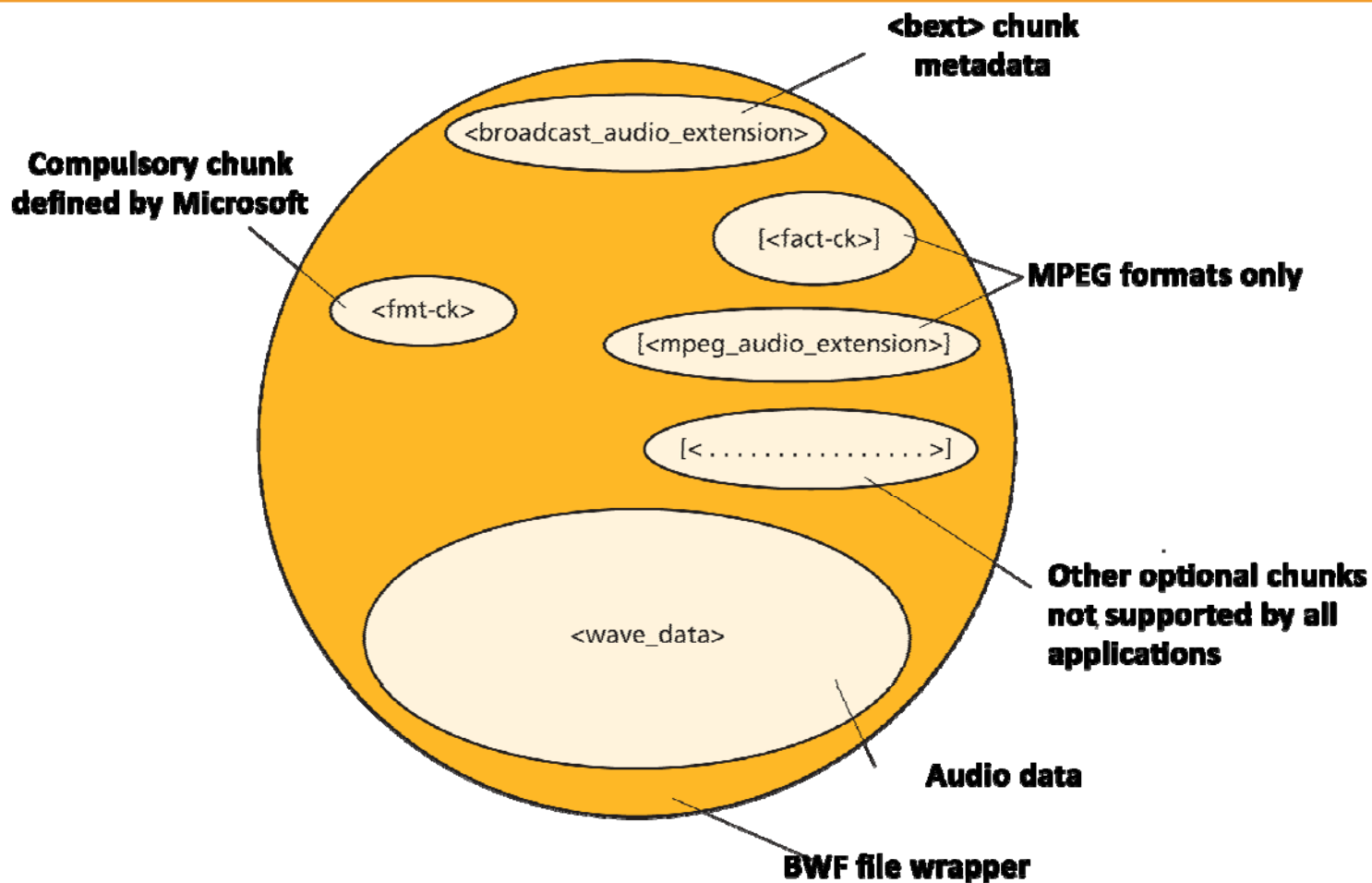# Metadata: The Big Three

- 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

<bext> chunk metadata

<broadcast_audio_extension>

Compulsory chunk defined by Microsoft

[<fact-ck>]

MPEG formats only

<fmt-ck>

[<mpeg_audio_extension>]

[< . . . . >]

Other optional chunks not supported by all applications

<wave_data>

Audio data

BWF file wrapper

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

On the Horizon

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!

Eben English

Loyola University Chicago

eenglish1@luc.edu

773.508.2686