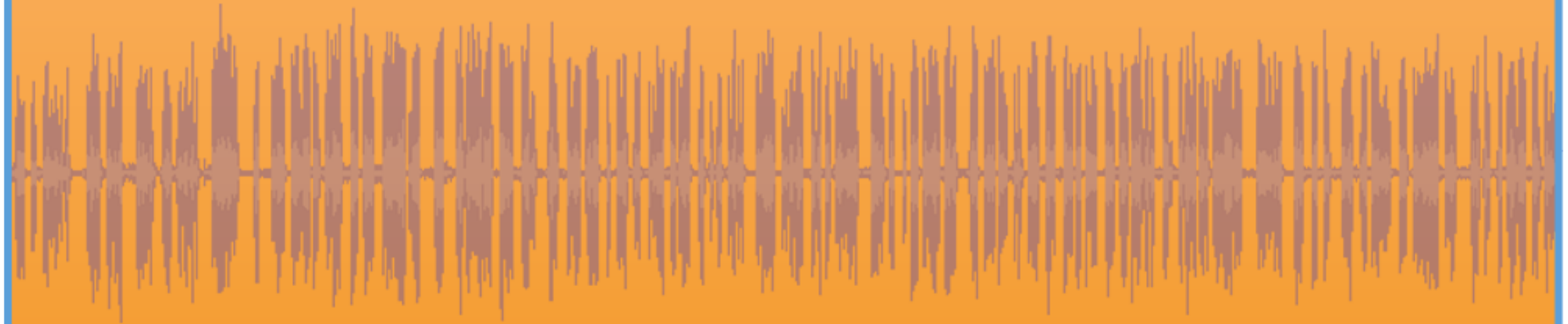


# Metadata for Digital Audio Collections



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

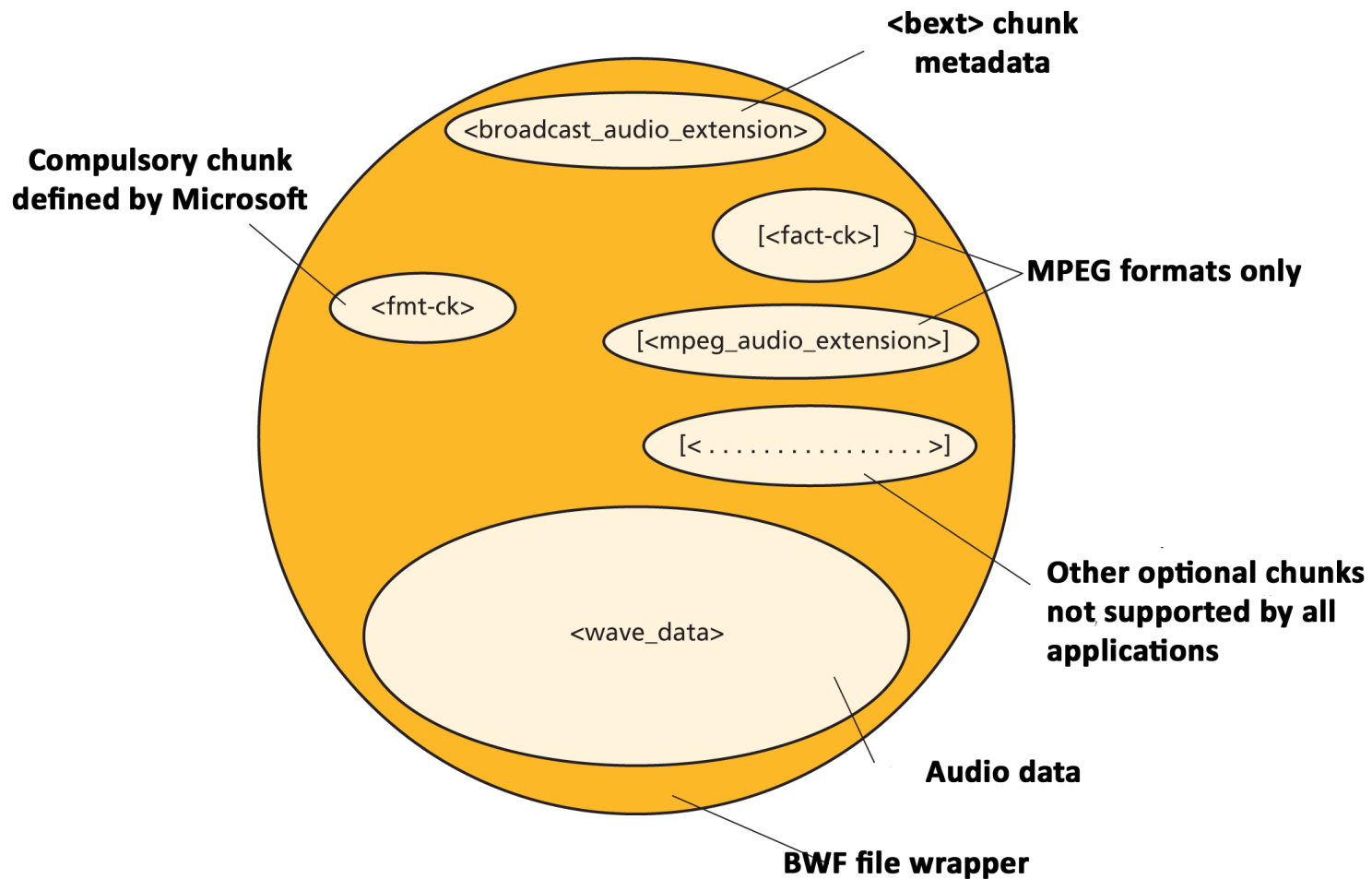
# Metadata: The Big Three

- 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



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

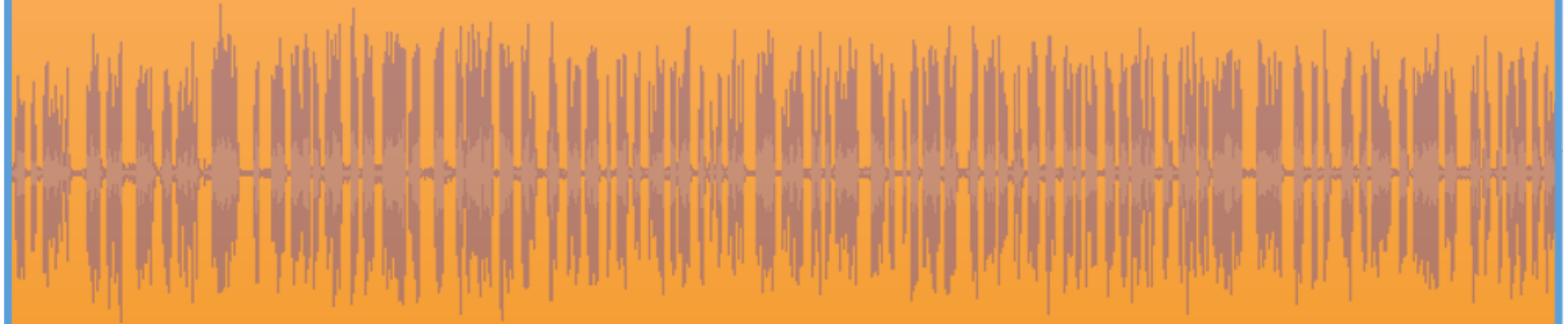
- British Library
- custom METS profile
- metadata records available for all items

## 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