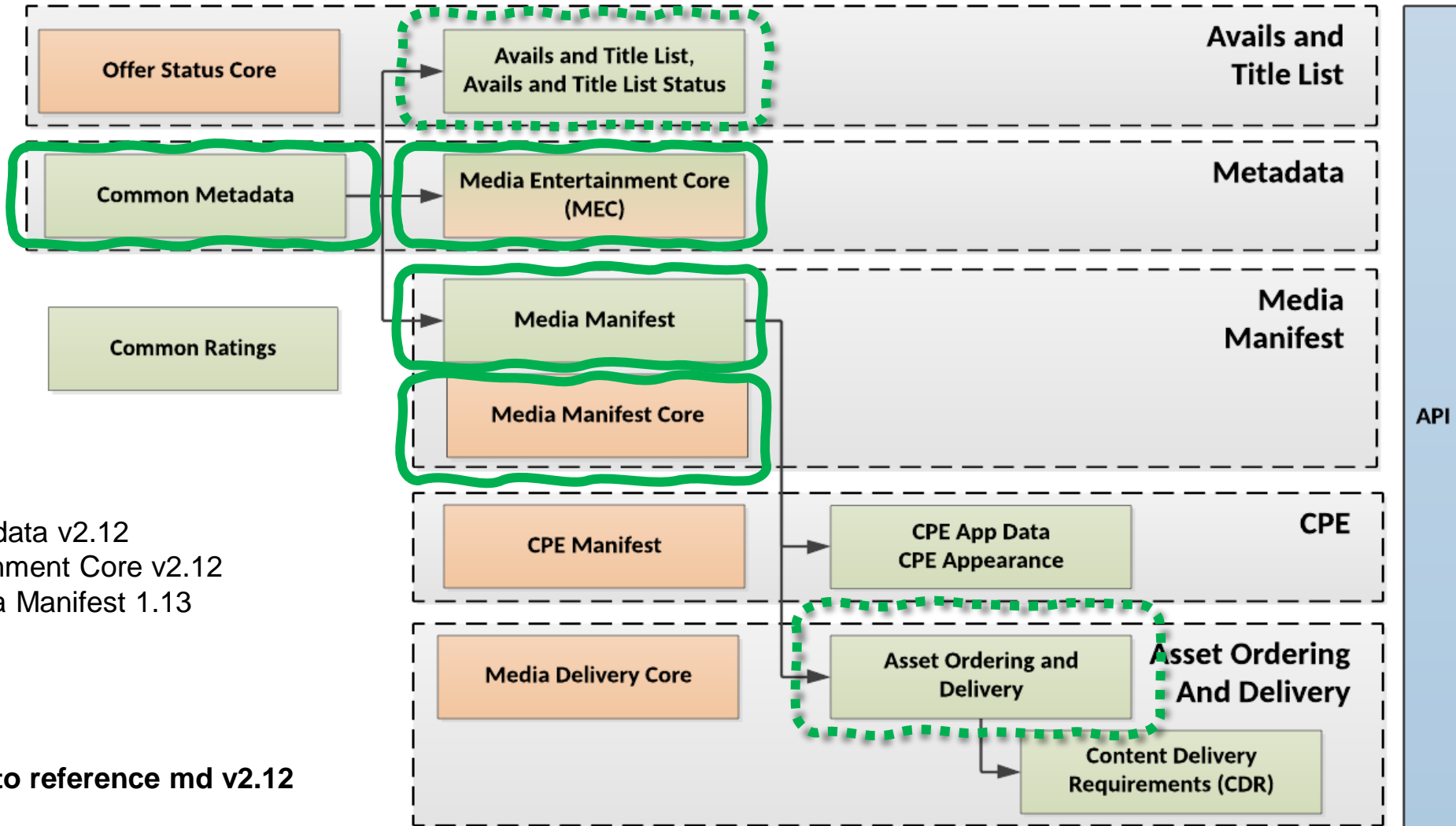# MDDF 2023/4 Spec Updates

March 2024

MDDF Updates

Spec updates
- Common Metadata v2.12
- Media Entertainment Core v2.12
- Common Media Manifest 1.13

Schema Updates
- MD 2.12
- MEC 2.12
- Manifest 1.13

Scheme updates to reference md v2.12
- Avails 2.6.2
- Delivery 1.4

Best Practices

- ## Guidance for Conforming Tracks and Referencing Them

  - This practice defines how to align tracks when timecodes are not necessarily aligned.

- ## Dolby-E Channel Mapping

  - This practice defines how to encode reference Dolby-E audio in Manifest Channel Mapping

- ## Playlists Encoding Best Practice

  - This practice defines the method for describing a Playlist in Media Manifest. Playlists are sequences of distinct works that play back-to-back, such as a promo followed by a recap followed by an episode.

- ## Live Events [DRAFT]

  - This practice defines the method for describing a Playlist in Media Manifest. Playlists are sequences of distinct works that play back-to-back, such as a promo followed by a recap followed by an episode.
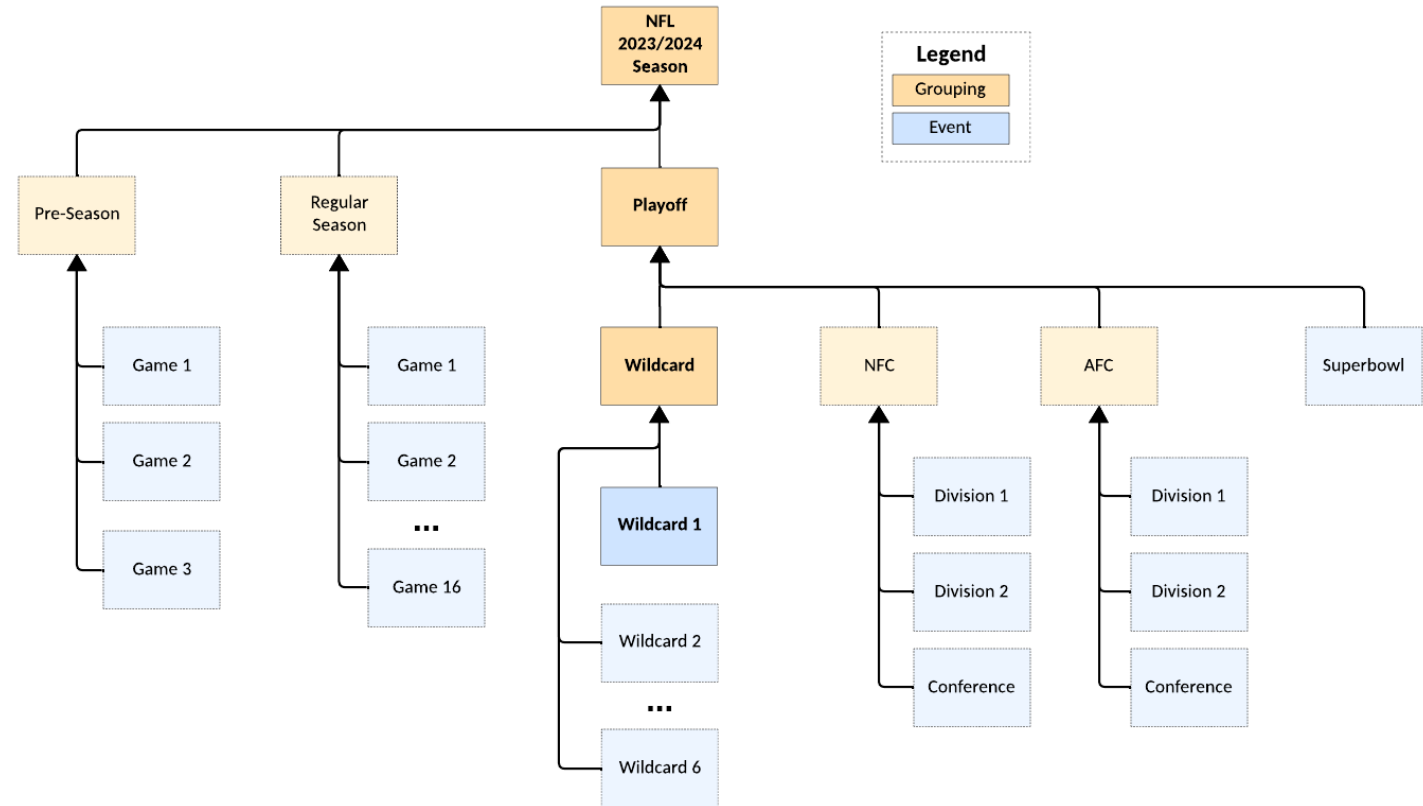
Live Events

- Problem
  - Live events needs information not in CM
    - People grouping (e.g., teams, bands)
    - Location/Venue
    - Timeframe
    - Activity (e.g., Sport, Concert, etc.)
- Solution
  - Add following element to Basic/
    - Group
    - Place
    - Activity
    - Timeframe
  - WorkType
    - Added: Tournament, Tournament Stage, Tournament Round, Concert
    - Clarified 'Music Video' to ambiguity
    - Clarified Non-episodic Show
  - Drafted Best Practice for Sports and Concerts (work in progress)
  - OrgName elements can be localized
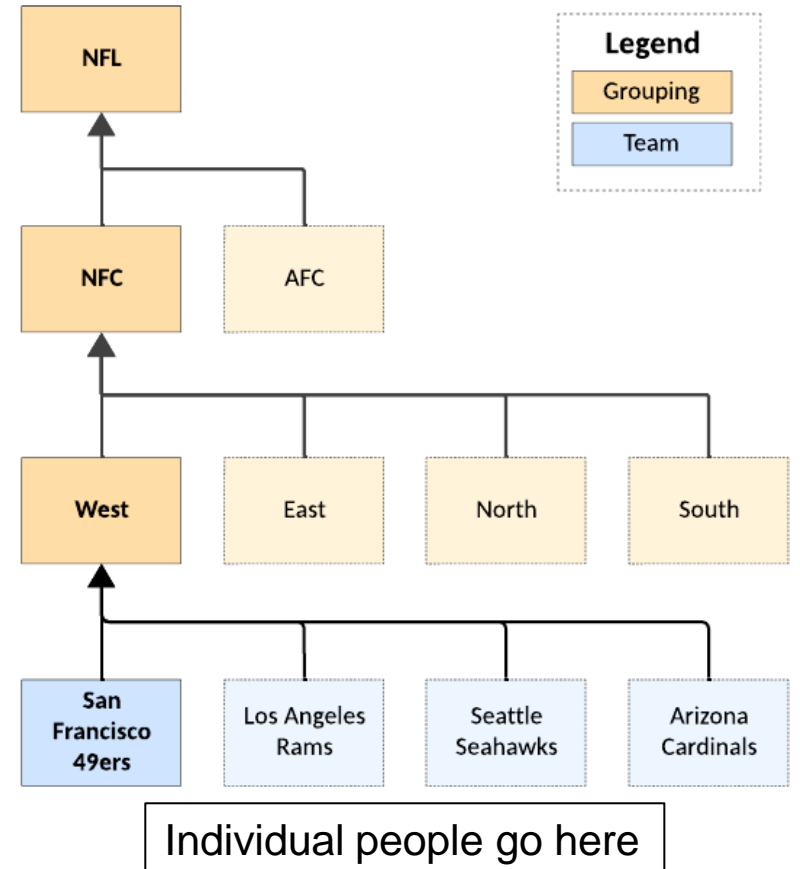
Live Events (continued)

- Problem

- Solution
  - Use existing Common Metadata grouping based on "Parent"
  - WorkType has grouping elements (e.g., Tournament)
  - Can also use existing grouping elements like "Season"
    - Sports Season
    - Season of "Sunday Night Football"

Group of People

- Problem
  - Need means to express sports teams, bands, and other groups
  - People element isn't sufficient
- Solution
  - Added Basic/Group (BasicMetadataGroup-type)
  - Localized metadata: Description, Image
  - Identifiers
  - People in group (same as People element)
  - Supports hierarchy (ParentGroup)

Activity

- Problem
  - No way to describe an activity such as a sport or concert
- Solution
  - Added Basic/Activity (Activity-type)
  - Type, SubType
    - To be defined in Best Practices
  - Localized: Name, SubName
  - Identifier
    - Standard identifiers can be defined in Best Practices

Listing Order

- Problem
  - Certain element <u>require</u> more than one instance, but some implementations don't handle multiple
  - Need ability to drive which are listed, typically when there is only one
- Solution
  - Added @listingOrder to indicate preferred order (when all else fails)
  - Added to
    - Basic/
      - CountryOfOrigin
      - PrimarySpokenLanguage
      - OriginalLanguage
    - Video/Language

MEC Signature

- Problem
  - In some workflows, provenance of a metadata record needs to be authenticated
- Solution
  - Add XMLDSIG signature
    - Replicates model for signing Avails

Common Metadata Misc. (1 of 2)

- Basic
  - Added FrameRate (formerly only in Manifest)
  - Added SecurityTitle with @expiration
    - Useful for pre-release and as a factoid
  - Added @spoken, @written, and @signed to OriginalLanguage
- Added md:Terms to Basic/ and LocalizedInfo/
  - Adds flexibility for arbitrary addition of name/value pairs
  - Downside is potential for ad hoc undocumented practices
- ContentRelatedTo
  - Added Venue and Activity to ContentRelatedTo
  - Restructured type definitions (e.g., Period based on Timeframe-type)
- Added @interpretation to CountryOfOrigin
  - With goal of deprecating @intepretation
  - This is backwards compatible, but might cause problem when some use one and some use the other
  - I'm not sure anyone is using this
  - Plan is to delete in next revision

- Basic

  - Fixed RegionUnion-type (not used in other types)

  - Added MadeForRegionExcluded to allow for "Domestic" and "International" EIDR definitions

  - Additional md:Term types added Binary and Label

  - VersionIntent/Description/@source added to align with EIDR

  - Editorial

  - Fixed spelling of 'isbasedon' enumeration in BasicMetadataParent-type/@relationshipType (not backward compatible, considered low risk since this is a relatively new feature)

  - Added Binary (with @MIME and description) and Label (string with @namespace and @level) to Terms-type

Dolby-E

- Problem
  - Dolby-E multiplexes multiple channels into two audio channels
  - Channel Mapping cannot be inferred without additional information
- Solution
  - Add Dolby-E Codec to list of valid codecs
  - Two channel mapping alternatives supplied in <u>Best Practice</u>
    - One option that covers most (if not all cases)
      - Uses Dolby nomenclature (from spec)
      - Does not provide for the Dolby E channels in a container with more than just the 2 Dolby E tracks
      - For example, "0L, 0C, 0Ls, 1L, 0R, 0LFE, 0Rs, 1R"
    - Another option is custom encoding
      - For example, "L,R,C,LFE,LS,RS,DE011,DE111"

Audio tracks in individual files

- Problem
  - There is no clear documentation on how to handle one channel per file
  - Typically, they are in directories with naming like this:
    - filename.L.wav
    - filename.R.wav
    - filename.C.wav
    - filename.LFE.wav
    - filename.Ls.wav
    - filename.Rs.wav
- Solution
  - Added ChannelMapping/@isMultipleFiles Boolean
  - Added ContainerReference/SequenceParsing/PatternSpec = "audio"
    - This is the default if not specified
    - Other patterns can be specified in SequenceParsing (also used for image sequences)
  - Added 'alphabetical' in case channel files are in alphabetical order

Image Metadata

- Problem
  - Image metadata was insufficient, especially for print
- Solution
  - Primaries
    - Added note that Rec.709 matches sRGB
    - Added "opRGB" (AKA Adobe RGB)
  - Added Image/ColorModel (CMYK, RGB, Monochrome)
  - Added PrintProfile
    - PPI (Pixels Per Inch) – like DPI only correct
    - SpotColor – used when specific inks are specified
    - PrintSpecification – Print-specific specs such as SWOP, GRACoL, and CGATS21

Digital Asset Metadata Misc. (CM and Manifest)

- Added CBR (constant bitrate as xs:boolean) to
  - Audio/Encoding
  - Video/Encoding
- To Audio/Picture/Progressive added @pulldown (e.g., "3:2", "2:2:2:4")
- Added Subtitle FormatType values for analog: CEA-708, CEA-608, ETSI Teletext
- Added Subtitle/Properties/TranslatorCreditPresent xs:boolean

Timed Events in Presentation

- Problem
  - Needed richer timed metadata (countless use cases)
    - Ability to annotate a portion of Presentation timeline with virtually any annotation
  - Markers and Chapters weren't enough
- Solution
  - Added TimedEvents to Presentation (references TimedEventList-type)
    - Formerly attached only to top-level Manifest
  - Added TimedEventList-type with list of TimedEvents
    - Mirrors pattern in other top-level Manifest objects
  - Added to TimedEvent
    - Confidence – Especially useful for automated processing
    - PictureArea
    - Error information (for QC)
    - etc.

Dub Card Ambiguity

- ## Problem
  - When there are multiple dubs in the same language, it is ambiguous which dub card goes with a given dub
- ## Solution
  - Added @clipID to each type in PlayableSequence/ (Clip, ImageClip)
    - This is necessary when dub card is a subset of a video (i.e., need in and out from Clip)
  - Added Audio/DubCardRef (InventoryAudioCardRef-type)
    - References @clipID (for Playable Sequences), PlayableSequenceID, VideoTrackID or ImageID

Media Manifest Misc.

- Clarified language around multiple video tracks (more common with HD and 4K/HDR)'
- Editorial