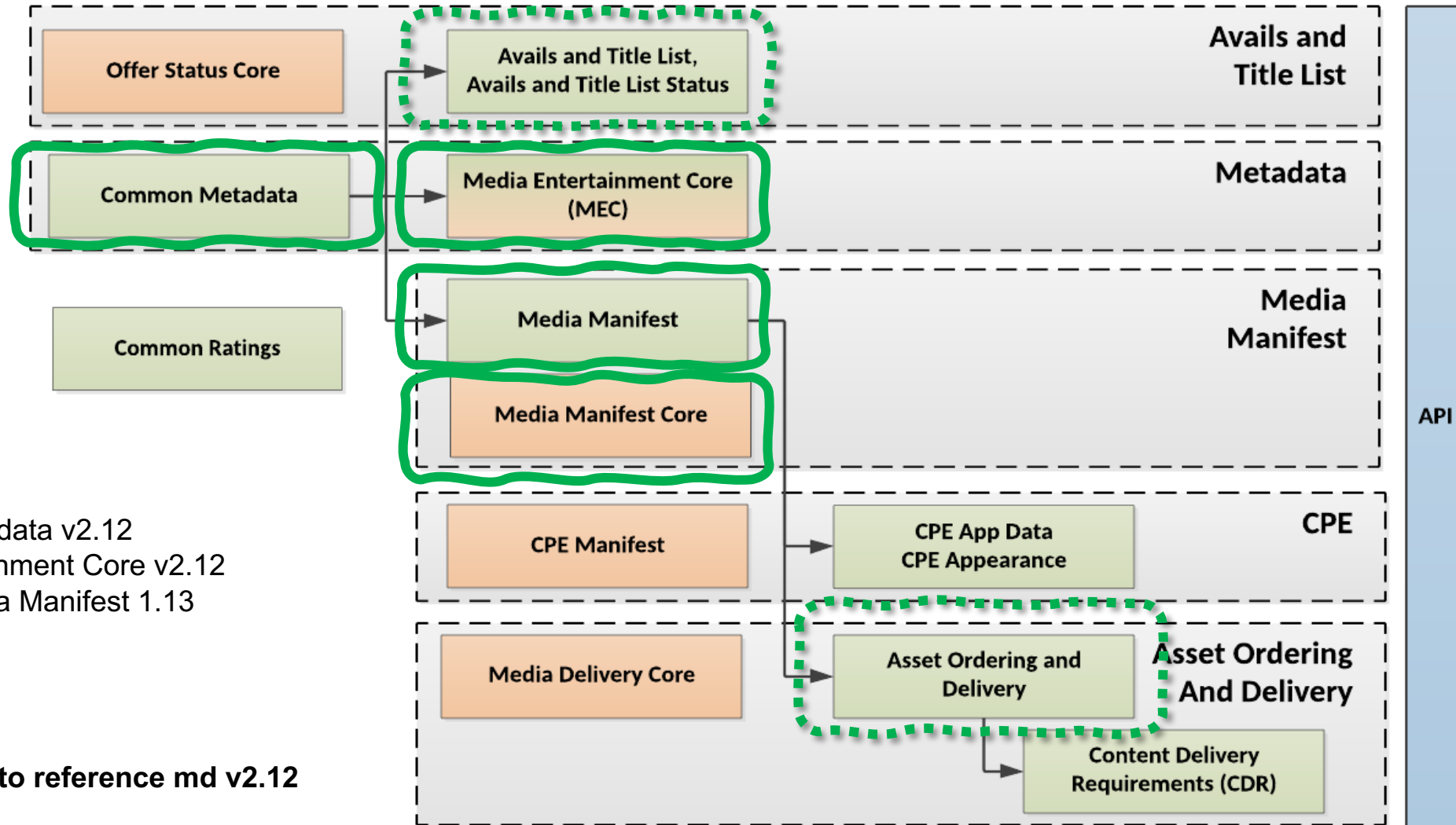


MDDF 2023 Spec Updates

February 2024

MDDF Updates

2



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

3

- **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

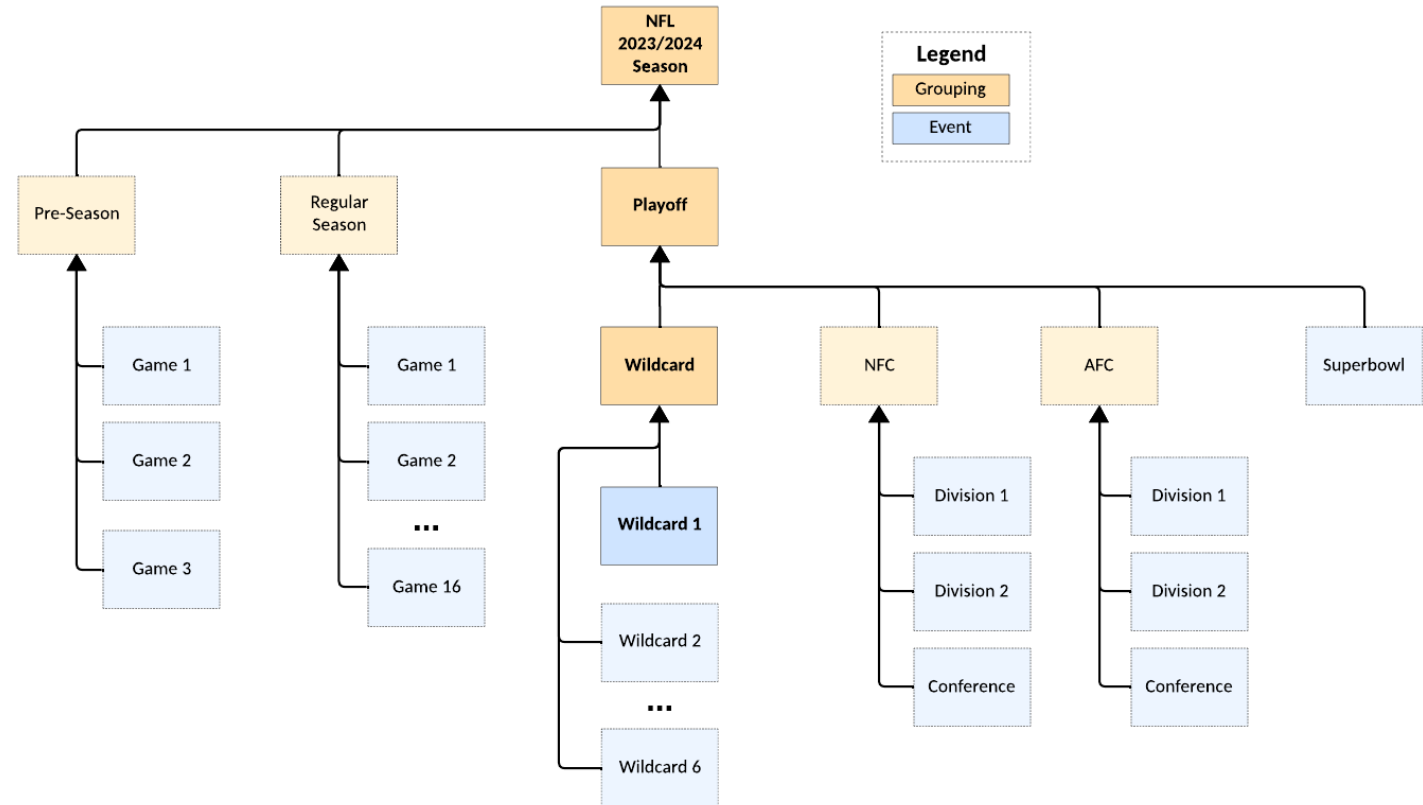
4

- 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)

5

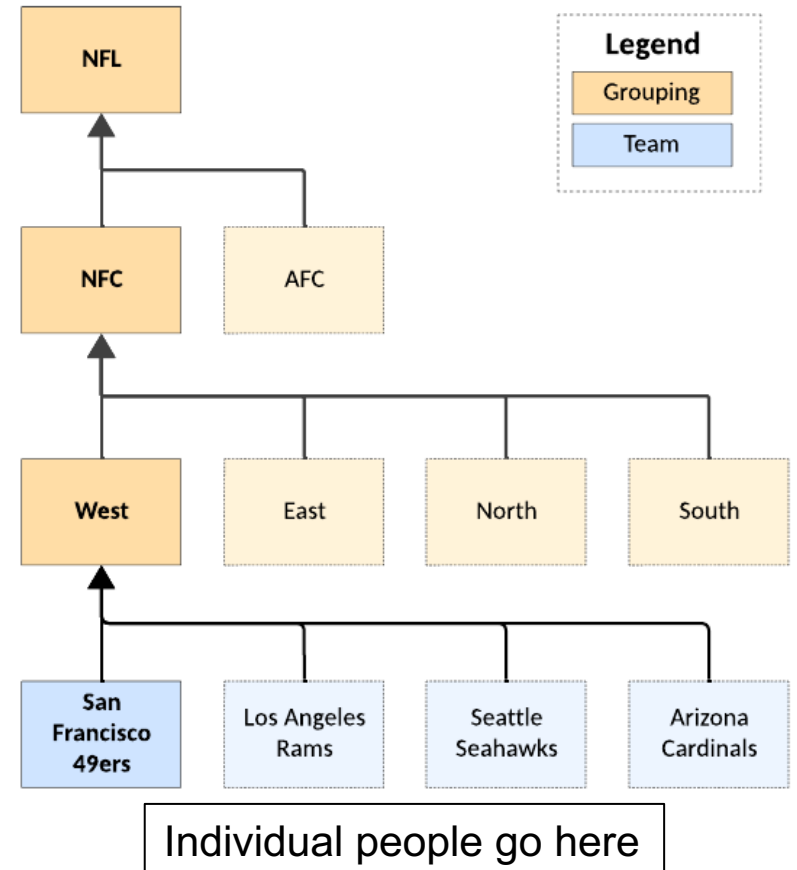
- Problem
- Solution
 - Use existing Common Metadata grouping based on “Parent”
 - WorkType has grouping elements (e.g., Tournament)
 - Can also use existing grouping elements like “Season”
 - Sports Season
 - Season of “Sunday Night Football”



Group of People

6

- 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

7

- 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

8

- Problem
 - Certain element require 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

9

- 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)

10

- 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

Common Metadata Misc. (2 of 2)

11

- 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

- 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 Best Practice
 - 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

13

- 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

14

- 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)

15

- 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

16

- 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

17

- 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.

18

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