Abstract Metadata in Public Broadcasting

Part 2: Core Models

Release 2.1
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1 Introduction

Public Broadcasting Service (PBS) acts as the caretaker of the Interconnection System (IXS) and the main distributor of content. For the next evolution of the IXS, PBS has implemented a metadata model based on the Entertainment Identifier Registry (EIDR). This metadata system will issue unique identifiers recognized across the entertainment industry to newly registered content based on basic metadata, like titles, genre, etc.

Using an industry-standardized ID will make new content more organized and easily discoverable by stations.

This is the second part of a series of documents concerning the metadata system. The other documents in this series are as follows:

- **Part 1: Introduction to Abstract Metadata in Public Broadcasting**
  This part introduces the Interconnection System and the need for an abstract hierarchical metadata system.
- **Part 3: Time-based Descriptive Metadata**
  This part explains the metadata that provides detailed information about media content.

This document describes the core abstract metadata models that compose the content library.

Document Organization

This document is organized as follows:

1. **Core Content Metadata**: This section lists the relational, library, and technical metadata that need to be inputted about core content — like a Series, Episode, etc. — at particular times in their lifecycles.
2. **Core Business Metadata**: This section covers what metadata should be documented about Associated Organizations and other specific people who deserve Credits.
3. **Metadata Field Reference**: This section defines each metadata field mentioned in the previous sections with examples, detailed formats, and external resources.

Status

The IXS metadata system is designed as a centralized database with near-real-time updates, with an exposed API that station traffic systems can use to consume data directly or create interfaces as is needed. The API allows any system to query metadata to find content.

Standards and Conventions

Standards referenced in this document include the following:

- **EIDR**, Technical Documentation. http://eidr.org/technology/.
  - Data Fields Reference, December 2015. http://eidr.org/documents/EIDR_2.0_Data_Fields.pdf
  - EIDR ID FORMAT, v1.3, July 2015. http://eidr.org/documents/EIDR_ID_Format_v1.3.pdf
- **TR-META**, MovieLabs Specifications and Standards. http://www.movielabs.com/md/md/.
  - **TR-META-CM**, Common Metadata, v2.4, Movie Labs, October 2015. http://www.movielabs.com/md/md/v2.4/Common_Metadata_v2.4.pdf
- **RFC5646**, Tags for Identifying Languages, IETF, September 2009. https://tools.ietf.org/html/rfc5646
- **RFC3339**, Date and Time on the Internet: Timestamps, IETF, July 2002. https://tools.ietf.org/html/rfc3339
- **ISO8601**, Date and Time Format, International Organization for Standardization. http://www.iso.org/iso/home/standards/iso8601.htm
  - ISO8601-2004, Data elements and interchange formats -- Information interchange -- Representation of dates and times. http://www.iso.org/iso/catalogue_detail?csnumber=40874
- **ISO3166-1**, Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes, 2007. http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63545
- **ISO3166-2**, Codes for the representation of names of countries and their subdivisions -- Part 2: Country subdivision code. http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63546

2 Core Content Metadata

This section defines the core metadata concepts of broadcasted content. The main metadata concepts include the following:

Abstract Concepts:

- Franchise (optional)
- Series
- Season
- Sub Series (optional)
- Sub Season (optional)
- Episode
- Story

Curated Compilations

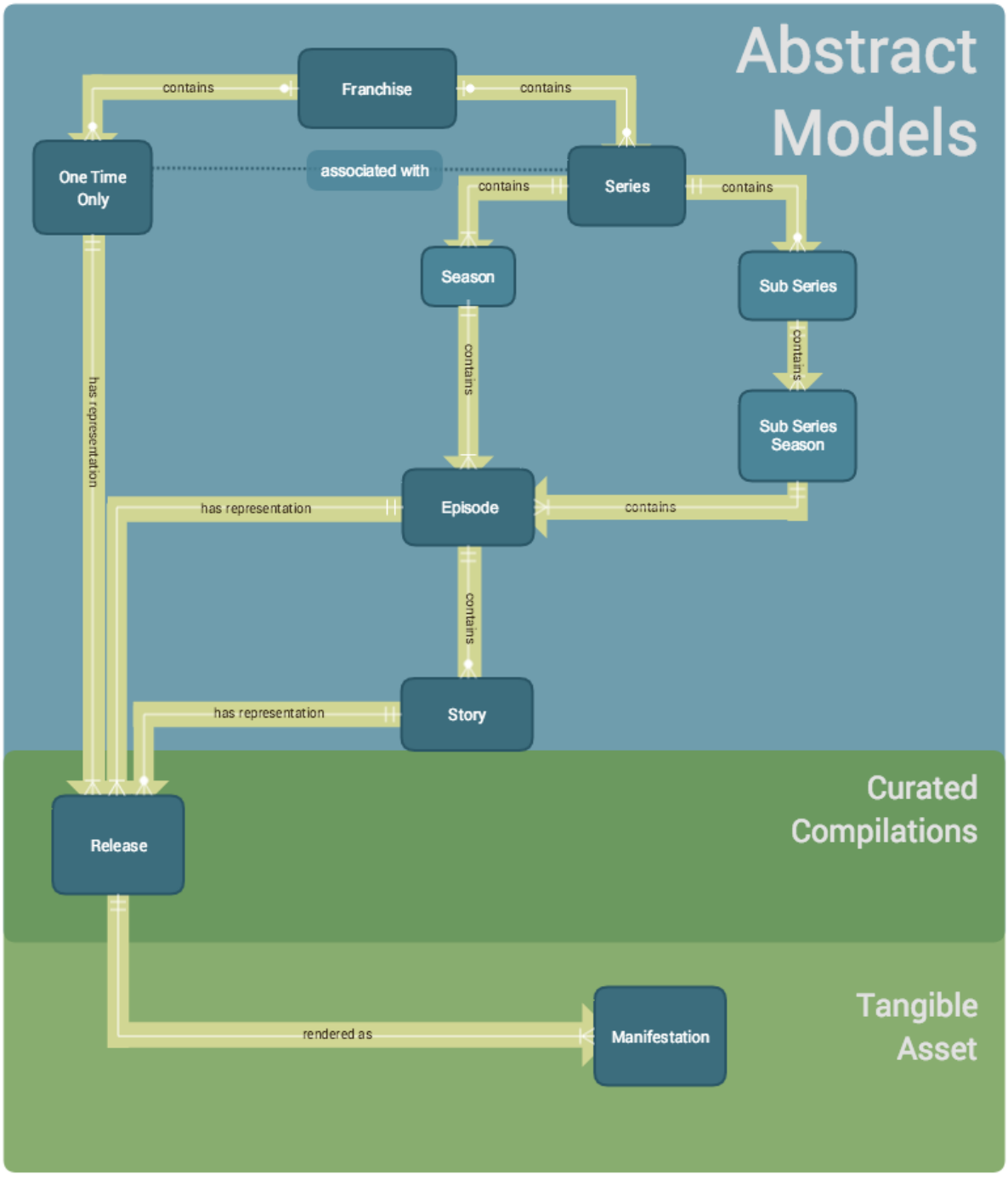
- Release

Tangible Assets

- Manifestation

Figure 1 shows an overview of the core abstract broadcasting concepts and their relationships to each other.

Figure 1: Overview of Abstract Content Models



This diagram shows the hierarchy of abstract content models. Child content models may inherit some metadata values from a parent content model. For example, a Series and an One Time Only from the same Franchise may share metadata with each other.

Franchise

This element is an optional super container for special circumstances, such as the following:

- Grouping a large body of work (e.g. Ken Burns Collection)

- Aggregating content for an anthology Series (e.g. Masterpiece)

How a Franchise Relates to Other Concepts

As represented in Figure 1, a Franchise has the following relationships with other concepts:

Relationship	Description
contains	A Franchise contains a Series and sometimes a One Time Only show. This means a Series and its descendants will inherit metadata from the Franchise. This also means that a Series and a One Time Only may share metadata values.

Franchise Metadata Fields

The metadata fields associated with a Franchise include the fields detailed in the following table:

Lifecycle Phase	Metadata Fields
During Acquisition	UID Title TitleSortable Title60 Title256 Slug Synopsis100 Synopsis400 Synopsis4000 Organizations
During Distribution	Aliases

Series

For most programs, the Series is the name of the program and contains multiple Seasons that run for several Episodes. Examples of a Series include NOVA, Nature, PBS Newshour.

Series Relational Metadata

As represented in Figure 1, a Series has the following relationships with other concepts:

Relationship	Description
partOf	A Series can be part of a Franchise, in association with another Series or an One Time Only show. This means a Series and its descendants may inherit metadata from the Franchise. A Series and its descendants may share metadata with another Series or an One Time Only of the same Franchise.
contains	A Series typically contains one or more Seasons. This means that Seasons and their descendants may inherit metadata from the Series container.

Series Metadata in the Content Lifecycle

This section lists the core library, technical, and business metadata associated with a Series and what part of the Lifecycle Phase by which their values should be documented.

Lifecycle Phase	**Metadata Fields**
During Acquisition	UID Title TitleSortable Title60 Title256 Alternate Titles Slug Synopsis100 Synopsis400 Synopsis4000 e/i Categories Parental Rating Primary Language Secondary Language(s) Country of Origin Primary Genre Secondary Genre(s)

	Program Format Typical HD Level Runtime Organization
During Production	EIDR ID Typical Audio Type Typical Screen Format Credits
During Distribution	Program Identifier Original Release Year Aliases

Season

A Season is a container for Episodes. Seasons are created by the Producer or Distributor.

Season Relational Metadata

As represented in Figure 1, a Season has the following relationships with other concepts:

Relationship	Description
isPart	A Season is part of a Series. This means that the Season may inherit metadata from the Series.
contains	A Season contains Episodes. This means that a Season may pass metadata onto Episodes.

Season Metadata in the Content Lifecycle

A Season is mainly a wrapper used to delineate a group of Episodes by production year or order.

Lifecycle Phase	Metadata Fields
During Acquisition	UID Season Name
During Production	EIDR ID

During Distribution	Aliases

Sub Series

A Sub Series is an optional metadata wrapper to group episodic content within a Series.

A Sub Series can be used to arrange Episodes in a particular order inside a regular Season, such as NOVA's "Making Stuff" sub series inside NOVA Season 2011.

A Sub Series can also contain Episodes inside a Series but outside of a regular Season. An example is the Antiques Roadshow Tucson Hours 1, 2, 3, which is a Series of Episodes that are part of the Antiques Roadshow Series but not within a typical Antiques Roadshow Season.

Lifecycle Phase	Metadata Fields
During Acquisition	UID Synopsis100 Synopsis400 Synopsis4000 Title TitleSortable Title60 Title256 Organizations
During Production	EIDR ID
During Distribution	Aliases

Sub Series Season

A Sub Series Season is an optional metadata wrapper to manage Sub Series Episodes that span Seasons. For Example, the Antique Roadshow: Austin, TX (2015) is a Sub Series Season separate from Antiques Roadshow: Austin, TX (2011).

Lifecycle Phase	Metadata Fields
During Acquisition	UID Season Name
During Production	EIDR ID
During Distribution	Aliases

Episode

An Episode represents `the essence of the program`.

Relational Metadata for an Episode

As represented in Figure 1, an Episode has the following relationships with other concepts:

Relationship	Description
partOf	An Episode is contained by a Season or Sub Series Season, which are in turn contained by a Sub Series or Series. This means that an Episode may inherit metadata from the Series, Sub Series, Season, or Sub Series Season.
contains	Episodes `optionally` contain Stories. This means that Stories may inherit Episode metadata.

Episode Lifecycle Metadata

Each Episode of a Season or Sub Series Season has its own unique metadata, as well as metadata inherited from the Series container. All inherited information can be overridden at this level.

Lifecycle Phase	Descriptive Metadata
Entering Acquisition	Primary Language Secondary Language(s) Country of Origin Primary Genre

	Secondary Genre(s) Program Format Categories Parental Rating Content Descriptors Sensitive Language Sensitive Material Runtime HD Level Organizations
During Acquisition	UID
Entering Production	Title TitleSortable Title60 Title256 AlternateTitles Slug Synopsis100 Synopsis400 Synopsis4000
During Production	EIDR ID Broadcast Premiere Date Open Subtitles Open Subtitles Language Closed Subtitles Closed Subtitles Language Credits
Distribution	Episode Identifier Aliases

One Time Only (OTO)

An One Time Only (OTO) is a collection of essence formatted into a standalone show that is not part of a Series.

Relational Metadata for an OTO

As represented in Figure 1, an OTO has the following relationships:

Relationship	Description
partOf	An OTO may be contained by a Franchise. This means that an OTO inherits metadata from a Franchise.
IsAssociatedWith	An OTO may be related to a Series as a special standalone "Episode" outside of a regular Season. This means an OTO may share metadata with a Series.
contains	An OTO contains Stories. This means that the Stories contained within an OTO may inherit some metadata.
	An OTO may also be completely independent from a Series or Franchise. This means that all of its metadata is unique.

OTO Lifecycle Metadata

This section describes the core data fields associated with an OTO.

An OTO contains metadata fields very similar to an Episode. However, because an OTO is not part of a Series, it will not have any inherited values.

Lifecycle Phase	Descriptive Metadata
During Acquisition	UID Title TitleSortable Title60 Title256 AlternateTitles Slug Synopsis100 Synopsis400 Synopsis4000 e/i

	Categories Parental Rating Content Descriptors Primary Language Secondary Language(s) Country of Origin Primary Genre Secondary Genre(s) Program Format Sensitive Language Sensitive Material Runtime HD Level Organizations
During Production	EIDR ID Broadcast Premiere Date Audio Type Screen Format Open Subtitles Language Closed Subtitles Language Credits
During Distribution	Program Identifier Episode Identifier Aliases

Story

A Story is a standalone piece of content within an Episode or OTO. It could be published by itself to represent a stand-alone piece of content but would not represent full long-form content.

For example, an Episode of Clifford typically includes two 12-minute Stories with an interstitial between the two Stories.

Relational Metadata for a Story

As represented in Figure 1, a story has the following relationships:

Relationship	Description
partOf	A Story may be contained by an Episode or OTO.

	This means that a Story may inherit metadata from its containing Episode or OTO.

Story Metadata

This section describes the core data fields associated with a Story.

Stories do not undergo the entire content lifecycle, like a Series or Episode. Rather, it is created during Production.

Lifecycle Phase	Descriptive Metadata
Entering Production	Primary Language Secondary Language(s) Country of Origin Primary Genre Secondary Genre(s) Categories Content Descriptors Runtime Sensitive Language Sensitive Material Duration HD Level
During Production	UID Title TitleSortable Title60 Title256 Slug Synopsis100 Synopsis400 Synopsis4000 EIDR ID Credits
Distribution	Aliases

Release

A Release is a version of an Episode or OTO created for a specific purpose or time. It is created during Production and does not undergo the entire Content Lifecycle.

Relational Metadata

Releases have the following relationship:

Relationship	Description
rendered as	Releases can be rendered as multiple Manifestations.

Release Metadata

The following metadata fields need to be defined when a Release is created at the end of Production:

- Aliases
- Duration
- EIDR ID
- Published
- Release Identifier
- Release Description
- Release Domain
- Release Type
- Revision Identifier
- Revision Description
- Synopsis100
- Synopsis400
- Synopsis4000
- UID

Manifestation

Manifestations are the actual video renderings of a Release. Each Manifestation derived from the same Release has identical content but different technical details.

The metadata for a Manifestation should be defined during the Production stage and before the beginning of the Distribution stage.

Core Manifestation Metadata

The following metadata fields help identify the Manifestation container as a whole:

- EIDR ID

- EIDR Manifestation Class
- HD Level
- Duration
- Size
- Container Type
- Container Subtype
- Repair Identifier
- Repair Description
- MD5
- Aliases

Video Track Metadata

The following technical metadata fields describe the video tracks contained in the manifestation.

- Screen Format (inherited from Series)
- Video Track Type
- Video Codec
- Video Codec Type
- MPEGProfile
- MPEGLevel
- Video Bitrate Max
- Video Bitrate Average
- Vertical Resolution
- Horizontal Resolution
- Scan Type
- Frame Rate
- Field Dominance
- Chroma Subsampling
- Color Space
- Closed Subtitles
- Closed Subtitles Language
- Start of Message
- End of Message

Audio Track Metadata

The following technical metadata fields describe the audio tracks contained in the Manifestation.

- Primary Language (inherited from Series)
- Track Reference
- Track Description
- Audio Track Type
- Audio Dubbed
- Audio Codec

- Audio Codec Type
- Audio Bitrate Max
- Audio Bitrate Average
- Audio Bit Depth
- Variable Bit Rate
- Sample Rate
- Channels
- Channel #
- Loudness
- Dial Norm
- Audio Track Duration

Subtitle Metadata

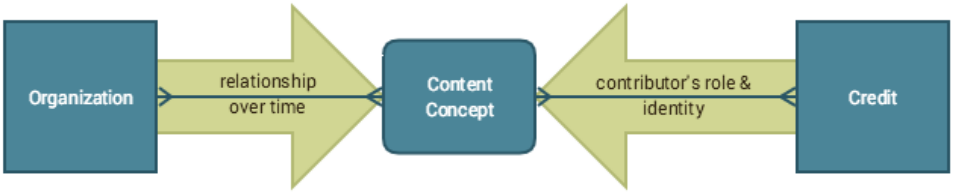
- Track Description
- Subtitle Type
- Subtitle Format Type
- Subtitle Language
- Track Reference

4 Core Business Metadata

Organizations and Credits are business concepts that can be associated with each of the content concepts described in Section 2: Core Content Metadata.

The basic relationships between Organizations, Credits, and the abstract content models are described in Figure 2.

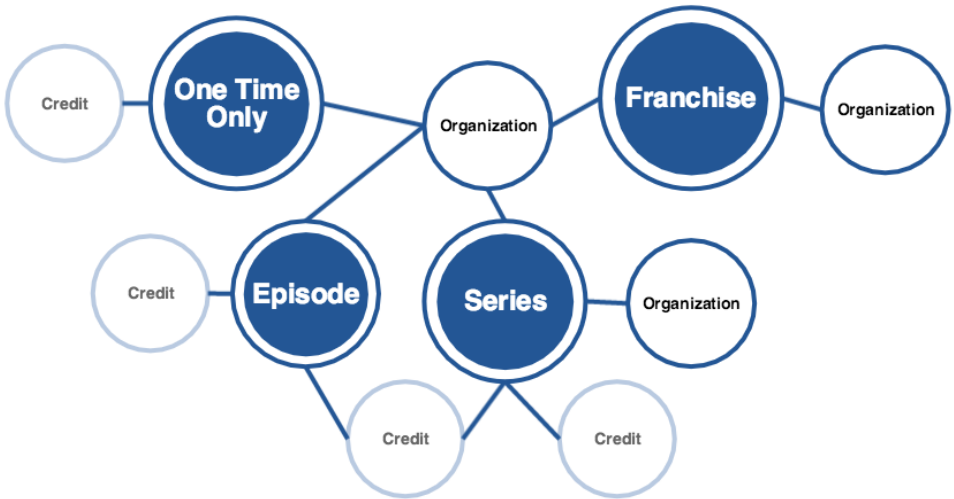
Figure 2: Metadata Relationships Between Organizations, Content, and Credits



Once registered, an Organization contains metadata describing its relationship to a content concept over time. Similarly, a Credit contains metadata that identifies a contributor and describes the contributor's specific role in relation to a content.

Many Organizations and Credits can be associated with one content concept, and Organizations can be associated with various pieces of content. Figure 3 illustrates these possibilities.

Figure 3: Example of Multiple Content Concepts, Organizations, and Credits



This web illustrates how Credits and Organizations can be associated with multiple content concepts.

Organizations

An Organization is some business entity with a role in content distribution, such as a Distributor, a Station, or a Producer. These Organizations may have some information like contact information and mailing addresses that would be useful to associate with content for legal reasons and planning.

Relationship	Description
isAssociatedWith	Organization metadata should be associated with a Franchise, Series, Sub Series, Episode, or OTO.

Setup for New Organization

During the Acquisition phase, a PBS system administrator should register new Organizations in the metadata system with the following information:

Field	Description	Format
Name	Name of the Organization. **Example:** PBS	String (100)
Description	A description of the business entity. **Example**: The Public Broadcasting Service is an American public broadcaster and television program distributor.	String (500)
Address	The physical address of the Organization's headquarters.	
Phone	The best phone number to reach the Organization.	
Prefix Codes	A list of short (up to 4 characters) codes that represent this entity. Used for compact display purposes and/or other string representations such as filenames, etc. Allowed characters are A-Z and case insensitive.	String (4)

After registration, the Organization will receive an EIDR ID, which should be added to their profile.

Adding Organization Metadata During Acquisition

Once an Organization has a profile with an EIDR ID, it can be associated to content with the following metadata fields:

Field	Description	Accepted Values
Role	This captures the Organization's role.	Distributor Primary Producer Secondary Producer Primary Presenter Secondary Presenter Copyright Holder Post-Production Other
Start Date	The beginning of the Organization's Role in the associated project.	Date and timestamp in the following format: `YYYY-MM-DD HH:MM:SS`
End Date	The end of the Organization's Role in the associated project. A null end timestamp represents a current relationship.	Date and timestamp in the following format: `YYYY-MM-DD HH:MM:SS`
Published	This field captures the status of a curated compilation or tangible asset that does not undergo the typical content lifecycle.	• Unpublished Default value. Content is only visible to the creator. • Published Content is visible to other entities on the network. • Invalid A blocking issue prevented the content from reaching publication.

Credits

Credits tell the identity and role of someone who contributed to a Series, Episode, OTO, or Story. For example: Directed by John Smith.

Some Credit metadata may be known at the Acquisition stage, such as Producer and Director. However, a lot of the Credit metadata cannot be filled in for sure until the end of Production.

Multiple Credits can be added to a piece of content.

Relational Metadata for Credits

As seen in the Overview of Core Business Metadata Concepts, Credits have the following relationships with other concepts:

Relationship	Description
ContributedTo	Series, Episode, OTO, or Story

Setup for New Credit

Field	Description	Accepted Values
UID	Unique ID for internal tracking purposes during the Acquisition phase.	See UID
DisplayName	The accredited person's name for display purposes.	String (500)
FirstGivenName	The person's first name.	String (500)
SecondGivenName	The person's second name.	String (500)
FamilyName	The person's family name.	String (500)
Suffix	e.g. Jr., J.D., etc.	String (500)
Prefix	Miss, Mrs. Mr.	String (500)

Adding Credit Metadata During Acquisition

Once the individual's profile is set up, it can be associated to content with the following metadata fields:

Field	Description	Accepted Values
Role	This field captures the type of contribution that the person made.	Producer Director Cast Crew Writer
Aliases	A Credit may have have different identifiers	See Aliases

	from external repositories, such as IMDB.	

5 Reference for Field Values

This section contains descriptions, examples, and accepted values or formats for the metadata fields in each model.

Aliases

This field captures a list or array of system identifiers used by external entities. These are identifiers for a Franchise, Series, OTO, Season, etc. that are not an EIDR ID or internal PBS identifiers like the UID or Package Number.

External companies that may use different identifiers include the following:

- iTunes
- Netflix
- Amazon
- Station Call Sign (e.g. WNET, WXXI, KOPB)
- PBS
- APT
- NETA

Applicable to: Series, Season, Episode, OTO, Story, Release, Manifestation, Franchise, Sub Series, Sub Series Season, Credits

Alternate Titles

If a content's Title changes, deprecated titles are captured in this field. Deprecated titles include working titles used during the Acquisition phase.

Applicable to: Series, Episode, OTO

Audio Codec

The field captures the name of the supported codec.

For a list of the supported types, see the most recent TR-META-CM.

Example: AAC, AC-3, ALAC, DOLBY-TRUEHD, DST, MPEG1, MPEG4-ALS, MP3, WAV, WMA

Applicable to: Manifestation

Audio Codec Type

This field captures the formal reference identification of the Audio Codec.

For a list of the supported types, see the most recent TR-META-CM.

Format: <namespace>:codectype

Example: mpegra:ac-3

Applicable to: Manifestation

Audio Bit Depth

This field captures the number of bits per audio sample.

Format: Positive integer

Example: If an audio sample has 16 bits, then Audio Bit Depth=16.

Applicable to: Manifestation

Audio Bitrate Average

Bitrate averaged over the entire audio track in kilobits/second.

Format: Positive integer

Example: If the bitrate average is 36 kilobits/second, the Audio Bitrate Average=36.

Applicable to: Manifestation

Audio Bitrate Max

Peak bitrate (kilobits/second) averaged over a short period.

Format: Positive integer

Example: If the bitrate max is 96 kilobits/second, the Audio Bitrate Max=96.

Applicable to: Manifestation

Audio Dubbed

This boolean field indicates if the spoken language in an audio track is dubbed.

Format: True/False

Applicable to: Manifestation

Audio Track Duration

Length of an audio track according to the ISO 8601:2004 standard format for time duration.

See IETF RFC 3339 for a full description of this format.

Format: HH:MM:SS

Applicable to: Manifestation

Audio Track Type

This field describes the purpose of the track in a controlled vocabulary.

Accepted values are as follows:

- Primary
- Narration
- Video Descriptive Service

Applicable to: Manifestation

Audio Type

The actual Audio Type for an Episode, OTO, or Manifestation. The default value is inherited from the Typical Audio Type at the Series level.

The accepted values are as follows:

- Stereo
- Surround 5.1
- Surround 7.1

- AC-3
- TrueHD
- Mono
- *none*

Applicable to: Episode, OTO

Broadcast Premiere Date

The date that an Episode is aired live. This may need to be adjusted from the expected value to the actual value upon distribution.

See the IETF RFC 3339 for information on the full-date format.

Format: *YYYY-MM-DDTHH:MM:SSZ*

Example: The Broadcast Premiere Date for an Episode aired at 4PM on December 24, 1999 is 1999-12-24T16:00:00Z.

Applicable to: Episode, OTO

Categories

A comma-delineated list of topics that can be associated with the content.

Format: 5000 characters

Example: Women, Youth, Social Services

Applicable to: Series, Episode, OTO, Story

Channels

This field captures the total number of channels in an audio track.

Format: Integer

Example: If an audio track has 16 channels, then Channels=16.

For each channel, there should be a sequentially numbered field to describe the audio channel's content. For two examples of these channel descriptions, see Channel #.

Applicable to: Manifestation

Channel

This field captures the content on a particular channel in the audio track, identified by a number (#).

Accepted values include the following:

- Left
- Right
- Center
- LFE
- Left Surround
- Right Surround
- Descriptive Video Service
- Alt Language: <language code>
- Unused
- DVI

This is a field that can be duplicated for however many Channels exist in an audio track. The # in the field label would change to identify a new Channel.

Example: Channel 1=Right, Channel 2=Left, Channel 3=Center

Applicable to: Manifestation

Chroma Subsampling

The luma and color channel sampling rate in an encoded video should be specified using the $Y'C_BC_R$ model.

Accepted values are as follows:

- 4:1:1
- 4:2:0
- 4:2:2
- 4:4:4

Applicable to: Manifestation

Closed Subtitles

Closed subtitles can be toggled on or off by the display device. This field indicates whether or not closed captions exist in the video.

Format: Yes/No

Applicable to: Episode, OTO, Manifestation

Closed Subtitles Language

This specifies the language of the closed subtitles. See Primary Language for accepted language subtags.

A Description flag can be added to the language code to indicate that the subtitle includes descriptions of sound effects for the deaf or hard of hearing. If the flag is not there, then the subtitles only transcribe dialogue lines.

Format: *Language Code, Language Code* - Description

Example: *Downton Abbey* includes Open Subtitles for English, English with Descriptions, Spanish, and French. The accepted values for this include en, sp, fr, and en - description.

Applicable to: Episode, OTO, Manifestation

Color Space

This field indicates the Colorimetry Encoding for a video track. Accepted values include the following standards:

- 601
  ITU Recommendation BT.601, Studio encoding parameters of digital television for standard 4:3 and widescreen 16:9 aspect ratios
- 709
  ITU Recommendation BT.709, Parameter values for the HDTV standards for production and international programme exchange.
- 2020
  ITU Recommendation BT.2020, Parameter values for ultra-high definition television systems for production and international programme exchange.

Format: 601, 709, 2020

Applicable to: Manifestation

Container Subtype

This field captures subtypes of a specified Container Type. See the most recent version of TR-META-CM for values.

Example: Operational Pattern 1a (OP1a) is a subtype of MXF.

Applicable to: Manifestation

Container Type

The container is a file comprised of a metadata wrapper and a subcontainer holding audio, video, subtitle, or image tracks.

Some acceptable values include the following:

- 3GP
- AC
- AV
- DIVX
- DTS
- FLV
- ISO
- JPEG
- M4V
- MP4
- MPEG
- OGG
- MOV
- other

For a complete list of values, see the most recent version of TR-META-CM for Container Type encoding.

Some Container Types may have a Subtype that can be specified further.

Applicable to: Manifestation

Content Descriptors

Content descriptors warn about specific thematic elements associated with the content. This field can be used to designate up to four content descriptors.

- D Suggestive Language
- L Coarse or crude language
- S Sexual situations
- V Violence
- FV Fantasy Violence (exclusive to TV-Y7)

Each piece of rated content may have up to four content descriptors along with their Parental Rating. By default, none are selected.

For more information, see the TV Parental Guidelines.

Applicable to: Episode, OTO, Story

Country of Origin

This field specifies the country from which the Title originates. The country code format should be from the ISO 3166-1 alpha 2 codes (Wikipedia has an easy-to-access list here).

Example: The country of origin for CRTC Recording productions is Canada, so the ISO 3166-1 alpha 2 code is CA.

Applicable to: Series, Episode, OTO, Release, Story

Dialnorm

Dialnorm stands for dialog normalization. It is an integer from 1-31 corresponding with a playback gain of -30 to 0 dB, where higher values allow for audio levels to have high peaks.

Format: dBFS

Example: -24dBFS

Applicable to: Manifestation

Distributor

The code of the Entity offering the content. Values are expressed as one to four alphabetic characters.

Examples: "PBS", "BBC", "APT", "WDSE"

Applicable to: Series, OTO

Duration

The frame-accurate time length of a piece of content expressed as a SMPTE timecode.

Format: Timecode

Example: 01:27:59;05

Applicable to: Release, Manifestation

e/i

This boolean field flags content as educational and informational (e/i) or not.

If True, then content is e/i.

If False, then content is not e/i.

Applicable to: Series**,** OTO

EIDR ID

Unique ID generated when the required metadata has been submitted into the MDM during the Acquisition phase. Every concept (Series, Season, Episode, etc.) has its own unique EIDR ID.

Format: 10.*EIDR*/*XXXX-XXXX-XXXX-XXXX-XXXX-C*

Where:

- 10 indicates that the ID string is a Digital Object Identifier (DOI)
- *EIDR* is a 4-integer string assigned by EIDR
- *XXXX-XXXX-XXXX-XXXX-XXXX-C* is the unique DOI suffix for the item

See the EIDR ID FORMAT documentation for more details on the format.

Example:

- The EIDR ID for *Downton Abbey* the Series is 10.5240/5BC6-2FA3-4F64-B17E-0B7D-H
- The EIDR ID for *Downton Abbey: Season 1* is 10.5240/FAEB-23C2-EB99-E52C-C356-T
- The EIDR ID for *Downton Abbey: Season 1: Episode 1* is 10.5240/12DC-C92E-76A3-8706-BC6D-I
- The EIDR ID of an Release of *Downton Abbey: Season 1: Episode 1* is 10.5240/B268-3C0B-107A-2E60-1271-R
- The EIDR ID for *Downton Abbey Rediscovered* (an OTO) is 10.5240/8AF4-86FD-E4D7-2A8B-7079-S

Applicable to: Series, Season, Episode, OTO, Story, Release, Manifestation, Franchise, Sub Series, Sub Series Season, Organizations

EIDR Manifestation Class

This field captures the purpose of a rendered Manifestation. The rendering may have been made for a specific platform (e.g. game machine, mobile, etc.), a file type (e.g. master, mezzanine), a definition setting (HD, SD), or a new dub (version language).

The acceptable values are as follows:

- Version Language
- Video on Demand (VOD)
- Electronic Sell-Through (EST)
- Mobile
- Web
- Master
- Mezzanine
- Proxy
- Screener
- DVD
- Blu-ray
- HD
- SD
- UHD
- Other

See the "Manifestation Class Details" section in the most recent EIDR Data Fields Reference for more information.

Applicable to: Manifestation

End of Message

The media timecode for the end of the media.

Format: Timecode

Applicable to: Manifestation: Video

Episode Identifier

The episode identifier string used to identify Episodes. For BroadView distributed content, this represents the NOLA Episode string.

Format: String (6) of integers

Example: 101

Applicable to: Episode, OTO

Field Dominance

This boolean field only needs to be filled if the Scan Type=Interlaced. This value specifies whether the first frame of picture is Field 1 or Field 2.

Format: 1 / 2

Applicable to: Manifestation

Frame Rate

This field only needs to be filled if the Scan Type=Interlaced. This value specifies the frame rate of the video scanning system.

Applicable to: Manifestation

HD Level

This is the actual HD Level for an Episode, Release, or Manifestation. The default value is inherited from the Typical HD Level at the Series Level.

Acceptable values include the following:

- 1080i

- 1080p
- 720i
- 720p
- 480i
- 480p
- Unknown
- None

Applicable to: Series, Episode, OTO, Manifestation, Story

Horizontal Resolution

This specifies the total number of pixel columns in the active portion of a frame in the video pixel matrix.

Accepted values include the following:

- 3840
- 1920
- 1280
- 720
- 640

Applicable to: Manifestation

Loudness

The loudness of an audio track in decibels.

Standard: LKFS

Applicable to: Manifestation

MD5

The MD5 message-digest algorithm is a cryptographic hash function used to verify the data integrity of a Manifestation. It is expressed as a 32-digit hexadecimal number.

Format: String (32)

Example: 94864ec28716b3be9c3bc1bc7d7edf90

Applicable to: Manifestation

MPEGLevel

The MPEG level if supported by the Video Codec.

See the "Video Encoding Details" section in the most recent EIDR Data Fields Reference for some common values.

Format: String (20) based on ISO/IEC 14496-10 or ISO/IEC 13818-2

Example: For MPEG-4: 4.1

Applicable to: Manifestation

MPEGProfile

The MPEG profile if supported by the Video Codec.

See the "Video Encoding Details" section in the most recent EIDR Data Fields Reference for some common values.

Format: String (20) based on ISO/IEC 14496-10 or ISO/IEC 13818-2

Example: For MPEG-2: Spatial

Applicable to: Manifestation

Open Subtitles

Open subtitles are burned into the video and cannot be removed. This field (Yes/No) indicates whether or not open captions exist in the video. If they do exist, the Open Subtitle Language needs to be specified.

Format: Yes/No

Applicable to: Episode, OTO, Manifestation

Open Subtitles Language

This indicates the language of the open subtitles. See Primary Language for accepted values.

A Description flag can be added to the language code to indicate that the subtitle includes descriptions of sound effects for the deaf or hard of hearing. If the flag is not there, then the subtitles only transcribe dialogue lines.

Format: *Language Code, Language Code* - Description

Example: *Downton Abbey* includes Open Subtitles for English, English with Descriptions, Spanish, and French. The accepted values for this include en, sp, fr, and en - description.

Applicable to: Episode, OTO, Manifestation

OrganizationAddress

The physical address of the Organization's headquarters.

Format: U.S. Mailing system standards

Example: 1111 Mouse Way, Turducken MD 21087

Applicable to: Series, OTO

OrganizationEndDate

The end date of the Organization's role. See ISO 8601 for the standard formatting.

Format: YYYY-MM-DD

OrganizationName

The name of an associated Organization. There may be as many duplicates of this field as is necessary to add all associated Organizations.

Format: String (100)

Applicable to: Series, OTO

OrganizationPhone

The best phone number to reach the Organization.

Format: (country code) area code - etc.

Example: (1) 932-854-1442

Applicable to: Series, Episode, OTO

OrganizationRole

This field describes the role of an associated Organization.

Accepted values include the following:

- Producer
- Broadcaster
- Distributor
- Editor
- Encoding
- Post-production
- Licensor
- Other

Applicable to: Series, OTO

OrganizationStartDate

The beginning of the Organization's role in a project. See ISO 8601 for the standard formatting.

Format: YYYY-MM-DD

Applicable to: Series, OTO

Original Release Year

The original release year for a Series.

Format: Year timestamp (YYYY)

Applicable to: Series

Parental Rating

Parental Rating codes indicate the recommended age group for this content. The following values

are acceptable:

- TV-Y
- TV-Y7
- TV-G
- TV-PG
- TV-14
- TV-M

For more information, see the TV Parental Guidelines.

Applicable to: Series, Episode, OTO, Release

Primary Genre

The primary genre of a piece of content. Genre refers to the kind of content a show will have. Only one option should be chosen from the following acceptable values:

- Arts
- Children's
- Cultural
- Drama
- Educational
- How-To
- History
- Outreach
- Public Affairs
- Science/Nature
- Self-Help
- Sports

Applicable to: Series, Episode, OTO, Story

Primary Language

A subtag indicating the primary language spoken in the original production.

An acceptable value for this field includes the following language code standards:

- a two-letter code from ISO 639-1 (2002)
- a three-letter code from ISO 639-2 (1998), ISO 639-3 (2007) or ISO 639-5 (2008)

Some common values are as follows:

- en (English)
- sp (Spanish)
- de (German)
- fr (French)
- ja (Japanese)

See the IETF RF 5646 for more information on using language subtags.

Applicable to: Series, Episode, OTO, Release, Story, Manifestation: Audio, Manifestation: Subtitle

Program Format

This field describes what formatting conventions will be used to present the show's content. The following values are acceptable:

- Children's Live/Animation
- Demonstration/ Instructional
- Documentary
- Event Coverage
- Feature Film/ Video Drama
- Interview/ Discussion/Review
- Magazine
- News
- Other
- Performance

Applicable to: Series, Episode, OTO

Program Identifier

The root code for the program identifier. For BroadView distributed content, this represents the NOLA Root

Format: Four character string of capital characters.

Example: MAST for Masterpiece, ANRO for Antiques Roadshow, NOVA for NOVA

Applicable to: Series, OTO

Published

This field captures the status of a curated compilation or tangible asset that does not undergo the typical content lifecycle.

The accepted values are as follows:

- Unpublished
  Default value. Content is only visible to the creator.
- Published
  Content is visible to other entities on the network.
- Invalid
  A blocking issue prevented the content from reaching publication.

Applicable to: Release, Manifestation, Organizations

Applicable to: Release

Release Description

Detailed description of a Release's content.

Applicable to: Release

Release Domain

The Entity Code of the agency assigning the Release Identifier. Value is limited to the four character alphanumeric code assigned by the sIX office to eligible metadata submission entities.

Examples: "P", "KFME", "NETA"

Applicable to: Release

Release Identifier

An identifier that represents the unique number for a release. In the general sense, this should be a string that is unique to a given Entity's Release Domain code. For purposes of content exchange, it is recommended this is represented as a six digit integer.

Example: "465967"

Release Type

This field identifies the type of Release from a set list.

The accepted values are as follows:

- Base
- Unedited
- Stacked
- Embedded Promo
- Reinvented Breaks
- Pledge
- Pledge Event
- Promo
- Short
- Spot
- Evergreen

Applicable to: Release

Repair Description

Detailed description of the repair of any technical impairment that was corrected.

Applicable to: Manifestation

Repair Identifier

An identifier that represents number of repair transcoding. In the case where the original transcode has a technical impairment, then subsequent transcodes can be created to fix the technical impairment. These subsequent transcodes can then be labeled using this field using monotonically increasing integers. The default value of this field shall be zero. The maximum value shall be 9.

Example: "1"

Applicable to: Manifestation

Revision Description

This field allows for detailed documentation as to why a particular revision exists.

Format: String (5000)

Example: [*Revision Identifier*] contains a new promo different from previous Releases.

Applicable to: Release

Revision Identifier

This field is a simple numerical identifier for a Release to keep track of versions. The default value of this field shall be "1". The maximum value shall be 999.

Format: Integer

Example: "3"

Applicable to: Release

Runtime

The time length of a piece of content in minutes.

If this value is set at the Series level, it determines the default Runtime for newly produced Episodes. This value only represents the Runtime for current and future Episodes and does not need to capture the HD Level for past Episodes.

If the value of the Episode differs from this expected value, the actual value may be set at the Episode level. Otherwise, the default value is inherited from the Runtime field at the Series level.

Example: An episode of *Downton Abbey* runs 60 minutes, so Runtime=60.

Applicable to: Series, Episode, OTO, Story

Sample Rate

Samples per second in kilobits/second.

Format: Positive integer

Example: Sample Rate=44

Applicable to: Manifestation

Scan Type

This field specifies whether the Scan Type for a Video Track is Progressive or Interlaced.

Format: Progressive/Interlaced

If Interlaced, the Frame Rate and Field Dominance must be specified.

Applicable to: Manifestation

Screen Format

The actual screen format for a rendered video. The default value is inherited from Typical Screen Format at the Series level but should be adjusted accordingly.

Format: IAR,CAR PF

Where:

- IAR is the Image Aspect Ratio. It defines the pixel ratio of the width vs the height.
- CAR is the Content Aspect Ratio. This can be omitted if identical to IAR. It describes the video content (i.e. non-black padding) in a numerical ratio of the width and height.
- PF is picture format which describes any additional manipulation or padding applied to the content to ensure content fits within the image. It is a term: Full Frame, Pillarbox, Letterbox, Other.

Acceptable Screen Formats are as follows:

- 16:9 Full Frame
- 16:9, 4:3 Pillarbox
- 16:9, 14:9 Pillarbox
- 16:9 Other
- 4:3 Full Frame
- 4:3, 16:9 Letterbox
- 4:3, 14:9 Letterbox
- 4:3 Other

Applicable to: Series, Episode, OTO, Manifestation

Season Name

A Season's name is formatted as a string followed by an ordering integer.

- The string can be the unique name or it can be the word Season.
- The ordering integer is a numerical identifier for a Season. They can be ordered by cardinal numbers, typically formatted as 100 for Season 1, then 200 for Season 2, etc. A Season with daily Episodes may be formatted as 1000, 2000, etc. Seasons also can also be ordered by year (1999, 2000, 2001...).

The first Season should be numbered 1, and if it is the only one in the sequence, it is numbered 1.

Format: String+Ordering Integer

Example: *Downton Abbey: Season 2*

Applicable to: Season, Sub Series Season

Secondary Closed Subtitle Language(s)

This field captures any secondary languages for Closed Subtitles. See Primary Language for accepted values.

Applicable to: Episode, OTO, Manifestation

Secondary Genre(s)

Any secondary genres that could apply. Multiple secondary genres can be selected for a Series. See Primary Genre for accepted values.

Applicable to: Series, Episode, OTO, Story

Secondary Language(s)

This field lists the secondary languages, if any, used in the original production. See Primary Language for accepted values.

Applicable to: Series, Episode, OTO, Story, Release

Secondary Open Subtitle Language(s)

This field captures any secondary languages for Open Subtitles. See Primary Language for accepted values.

Applicable to: Episode, OTO, Manifestation

Sensitive Language

This boolean field indicates whether or not the video contains language considered sensitive by the FCC. The default value is No.

Format: Yes/No

Applicable to: Episode, OTO, Story

Sensitive Material

This boolean field indicates whether or not the video contains images considered sensitive by the FCC. The default value is No.

Format: Yes/No

Applicable to: Episode, OTO, Story

Size

This field captures the size of a Manifestation container in bytes.

Format: Integer

Applicable to: Manifestation

Slug

A short, unique term used to identify the show quickly.

Format: String (100)

Example: american-experience, antiques-roadshow

Applicable to: Series, Episode, OTO, Story, Franchise

Start of Message

The media timecode for the start of the content. Note that the timecode of the media is not required to be 00:00:00;00 -- more commonly the Source Media content will begin at 01:00:00;00 to accommodate the preamble. The preamble usually includes a slate, bars, or a countdown.

Format: Timecode

Applicable to: Manifestation: Video

Subtitle Format Type

Acceptable format types include the following values:

- 3GPP
- Blu-Ray
- DCI
- DVB
- DVD
- SMPTE 2052-1 Timed Text
- SCC
- SRT
- TTML
- WEBVTT

For a full description of this subtitle format types, see the values for FormatType Encoding in the most recent version of the TR-META-CM.

Applicable to: Manifestation: Audio, Manifestation: Subtitle

Subtitle Type

This field indicates if the subtitle track is one of the following types:

- Caption
  Transcription of the dialogue.
- SDH
  Descriptive subtitles for the deaf and hard of hearing.
- Other
  Translations or other subtitle text

Applicable to: Manifestation: Subtitle

Synopsis100

Summary of the plot limited to 100 characters for Electronic Program Guides.

Applicable to: Series, Season, Episode, OTO, Story, Release, Franchise, Sub Series

Synopsis400

Summary of the plot limited to 400 characters. If this field is not user-specified, it will inherit the value for Synopsis100.

Applicable to: Series, Episode, OTO, Story, Franchise, Release, Sub Series

Synopsis4000

Summary of the plot limited to 4000 characters. If this field is not user-specified, it will inherit the value for Synopsis400.

Applicable to: Series, Episode, OTO, Story, Franchise, Release, Sub Series

Timecode

Timecode notation is specified using the following form: HHpMMpSSqFF

Where:

- **HH** is the two digit hour representation
- **MM** is the two digit minute representation
- **SS** is the two digit second representation
- **FF** is the two digit frame representation
- **p** is the punctuation delimiter. Generally, this is the colon (:) character but sometimes is represented as a semi-colon (;) to indicate drop-frame timecodes
- **q** is the punctuation delimiter for Frames. For drop-frame timecodes, this shall be the semi-colon character (;). At present, virtually all media at 29.97 FPS and thus uses the drop-frame timecode. In the extremely rare case for non drop-frame timecodes, the colon (:) character should be used.

Examples::

"01:00:00;00" - Represents one hour
"12:38:59;28" - Represents twelve hours, 38 minutes, 59 seconds and 28 frames

Title

The full title for a piece of content.

Format: String limited to 100 characters.

Example: *A Chef's Life*

Applicable to: Series, Season, Episode, OTO, Story, Release, Franchise, Sub Series

TitleSortable

A sortable version of the Title with leading articles moved to the back.

Format: String limited to 100 characters.

Example: *Chef's Life, A*

Applicable to: Series, Season, Episode, OTO, Story, Release, Franchise, Sub Series

Title60

A version of the Title limited to 60 characters for Electronic Program Guides.

Applicable to: Series, Episode, OTO, Story, Release, Franchise, Sub Series

Title256

A version of the Title limited to 256 characters.

Applicable to: Series, Episode, OTO, Release, Franchise, Sub Series, Story

Track Description

This field captures a brief, human-friendly description that helps identify what the track contains.

Format: String (500)

Applicable to: Manifestation: Audio, Manifestation: Subtitle

Track Reference

This field captures an identifying number for an audio or subtitle track container within a Manifestation.

Format: Integer

Applicable to: Manifestation: Audio, Manifestation: Subtitle

Typical Audio Type

This value is set at the Series level and determines the default Audio Type for newly produced Episodes. This value only represents the Audio Type for current and future Episodes and does not

need to capture deprecated values for past Episodes.

The actual value may be set at the Episode level as Audio Type.

Applicable to: Series

Typical HD Level

This value is set at the Series level and determines the default HD Level for newly produced Episodes. This value only represents the HD Level for current and future Episodes and does not need to capture deprecated values for past Episodes.

The actual value may vary at the Episode level and should be adjusted appropriately. See HD Level for acceptable values.

Applicable to: Series

Typical Screen Format

This value is set at the Series level and determines the default Screen Format for newly produced Episodes. This value only represents the Screen Format for current and future Episodes and does not need to capture deprecated values for past Episodes.

The actual value may vary at the Episode, OTO, or Manifestation level as Screen Format. See Screen Format for acceptable values.

Applicable to: Series

Variable Bit Rate

This boolean field indicates if the audio bit rate is variable or constant. If set to Yes, then the audio track contains a variable bit rate.

Format: Yes / No

Applicable to: Manifestation

Vertical Resolution

This specifies the total number of pixels rows in the active portion of a frame in the video pixel matrix.

Accepted values include the following:

- 2160
- 1080
- 720
- 480
- Other

Applicable to: Manifestation

Video Bitrate Average

Expressed in megabits/second and averaged over the entire video track.

Format: Integer

Example: If the bitrate average is 100 megabits/second, the Video Bitrate Average=100.

Applicable to: Manifestation

Video Bitrate Max

Expressed in megabits/second.

Format: Integer

Example: If the bitrate max is 500 megabits/second, the Video Bitrate Max=500.

Applicable to: Manifestation

Video Codec

The name of the video codec used to encode video data.

Some common codecs include the following:

- AVI Uncompressed
- Cineform HD
- DIVX
- DV
- H.264
- JPEG2000
- MOBICLIP
- PHOTOJPEG
- PRORES
- PRORESHQ
- PRORES422
- QT Uncompressed
- REAL
- Spark
- WMV8
- WMV9
- VC1
- VP6
- VP7
- VP8
- XVID

- MPEG1
- MPEG2
- On2
- SVQ
- WMV
- WMV7
- OTHER

For a full list of codecs, see the values for DigitalAssetVideoEncoding-type in the most recent version of the TR-META-CM.

If the Video Codec supports an MPEG profile or level, the MPEGProfile and MPEGLevel need to be specified.

Applicable to: Manifestation

Video Codec Type

The formal reference identification of the codec used in the track.

For a full description of this format, see the values for DigitalAssetVideoEncoding-type in the most recent version of the TR-META-CM.

Example: IANA:video/h264

Applicable to: Manifestation

Video Track Type

This field describes the purpose of the track with controlled vocabulary.

Accepted values include the following:

- Primary This is the default value.
- Overlay This refers to Picture-in-Picture (PiP) or other overlay track, intended for use with a primary track.
- Angle This is an alternate angle track.
- Other For none of the above.

For a full list of codecs, see the values for Video Track Type encoding in the most recent version of the TR-META-CM.

Applicable to: Manifestation

UID

Unique ID for internal tracking purposes during the Acquisition phase.

Format: urn:pbs:content:<uuid>

Example: urn:pbs:content:899310eb-b7cd-4364-acf0-8da105f46966

Applicable to: Franchise, Series, Season, Episode, OTO, Sub Series, Sub Series Season, Story, Release, Credits