

# Media Entertainment Core Metadata

## 'mdmec' namespace

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## REVISION HISTORY

Version	Date	Description
1.0	January 5, 2010	EMA Metadata
1.2	November 1, 2011	EMA Metadata with EMA Core definition
2.0	January 3, 2013	DEG-EMA Media Entertainment Core Metadata.
2.1	January 2, 2014	Updated to correspond with Common Metadata 2.1. Added top-level element.
2.2	October 2, 2014	Updated to correspond with Common Metadata 2.2.
2.3	June 3, 2015	Updated to correspond with Common Metadata 2.3.
2.3a	July 1, 2015	Added missing attribute in Publisher-type (schema unchanged)
2.4	October 13, 2015	Publisher Contact made optional to support Avails use case. Corresponds with Common Metadata 2.4.
2.5	December 16, 2016	Updated to correspond with Common Metadata 2.5
2.6	December 11, 2017	Updated to correspond with Common Metadata 2.6 Added delivery objects Replaced requirement for Summary190 with Summary400 Removed requirement for TitleSort
2.9	December 14, 2019	Added Compatibility for conveying version (same structure as Media Manifest) Changed Title length from 60 to unlimited Strengthened recommendation to use TitleSort Corrected element names
2.10, 2.11		Schema-only, aligning with Common Metadata 2.10, 2.11
2.12	March 20, 2024	Added signing

## 1 INTRODUCTION

The Entertainment Merchant’s Association (EMA) and the Digital Entertainment Group (DEG) have defined metadata for the description of information delivered from Publishers to Retailers. This document was developed by the EMA Digital Council and the DEG Media and Content Operations Committee with the objective of standardizing the metadata communication from content providers to digital retailers.

This document defines Media Entertainment Core Metadata v2.1. This is also referred to as MEC Metadata, or MEC.

MEC Metadata builds upon EMA Metadata and Common Metadata developed by Motion Picture Laboratories (MovieLabs), EMA, DEG and others. Common Metadata includes elements that cover typical definitions of media, particularly movies and television. Common Metadata has two parts: Basic Metadata and Digital Asset Metadata. Basic Metadata includes descriptions such as title and artists. It describes information about the work independent of encoding. Digital Asset metadata describes information about individual encoded audio, video and subtitle streams, and other media included. Package and File Metadata describes a single possible packaging scenario and ties in other metadata types. Ratings and Parental Control information is described.

Common Metadata is designed to provide definitions to be inserted into other metadata systems, such as was done here, EIDR metadata and UltraViolet metadata. Selected elements of the Common Metadata are used in derived specifications. Adopters then define additional metadata to cover areas not included in Common Metadata.

### 1.1 Document Organization

This document is organized as follows:

1. Introduction—Background, scope and conventions
2. Core Metadata –Definition of MEC Metadata.

### 1.2 Document Notation and Conventions

The document uses the conventions of Common Metadata [CM].

### 1.3 Normative References

[CM] TR-META-CM MovieLabs Common Metadata, v2.5, <http://www.movie labs.com/md/md>

All Common Metadata references are included by reference.

[XMLDSIG] *XML Signature Syntax and Processing (Second Edition)*,  
<http://www.w3.org/TR/xml-c14n11/>, June 2008,  
<http://www.w3.org/TR/2008/REC-xmlsig-core-20080610/>

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## 1.4 Informative References

[EIDR-TO] *EIDR Technical Documentation*. <http://eidr.org/technology>

[DECEMD] DECE Content Metadata. <http://www.uvu.com/techspec-archive.php>

## 1.5 XML Namespaces

This document defines:

- mdmec: includes Media Entertainment Core Metadata-specific data
- ‘mdmec’ builds on
- md: Common Metadata corresponding with Common Metadata [CM]

## 1.6 Identifiers

Identifiers must be universally unique. Recommended identifier schemes may be found in Common Metadata [CM] and in DECE Content Metadata [DECEMD].

The use of Entertainment Identifier Registry identifiers ([www.eidr.org](http://www.eidr.org)) is strongly encouraged. Please see [EIDR-TO].

## 1.7 Status

This specification is completed and ready for implementation. Although tested, we anticipate that additional implementation experience will yield recommendation for changes. Implementers should anticipate one or more revisions. Reasonable measures will be taken to ensure changes are backwards compatible. See Backwards Compatibility Best Practices in [CM]

## 2 MEC CORE METADATA

The section defines the MEC Metadata. The rules for what must be included and how it is encoded is in this section and its references.

Note that the structure accommodates additional data which may be included optionally.

The `CoreMetadata` element is defined to include MEC data.

### 2.1 CoreMetadata-type

This defines the MEC metadata, including both the descriptive information (Basic Metadata) and the encoding information (Physical metadata). It is as follows:

Element	Attribute	Definition	Value	Card.
<b>CoreMetadata-type</b>				
Basic		Basic Metadata	md:BasicMetadata-type	
DigitalAsset		Digital Asset Metadata: encoding information for the assets	md:DigitalAssetMetadata-type	0..n
TitleInternalAlias		Title used by involved parties to refer to this content	xs:string	0..1
Source		Organization that created the metadata	mdmec:Publisher-type	0..1
CompanyDisplayCredit		Organizations associated with the asset, for display purposes.	md:CompanyCredits-type	0..n
GroupingEntity		The "Network" or "Studio" that the product should be merchandised under within a retailer's website. For example, "Warner Bros".	md:GroupingEntity-type	0..n

#### 2.1.1 Publisher-type

Element	Attribute	Definition	Value	Card.
<b>Publisher-type</b>			md:OrgName-type (by extension)	
	organizationID	Organization Identifier for the publisher. This is an ID use by the Publisher to refer to itself.		0..1

	idType	Type of organization ID used.	xs:string	0..1
	retailerSpecificID	Identifier by which the Retailer knows the Publisher	xs:string	0..1
DisplayName		Name of Publisher in a displayable form. This is the name intended to be presented to a consumer.	xs:string	
SortName		Name of Publisher intended for sorting purposes. It is not necessary to include SortName if it is identical to DisplayName.		0..1
ContactInfo		Contact information for the publisher	md:ContactInfo-type	0..1

SortName is typically used when a Publisher has variations on its name that may not sort properly (e.g., some instances have a prefix).

## 2.2 Common Metadata derived types

Common Metadata [CM09] includes elements that cover typical definitions of media, particularly movies and television. Basic Metadata includes descriptions such as title and artists. It describes information about the work independent of encoding. Digital Asset metadata describes information about individual encoded audio, video and subtitle streams, and other media included. Package and File Metadata describes one possible packaging scenario and ties in other metadata types. Ratings and Parental Control information is described.

Common Metadata is designed to provide definitions to be inserted into other metadata systems, such as EMA's. Although EMA uses some element from Common Metadata, it also defines additional metadata to cover areas specific to EMA's requirements.

The following MEC types are derived directly from Common Metadata:

MEC Type	Common Metadata Type
mdmec:BasicMetadata-type	md:BasicMetadata-type
mdmec:DigitalAssetMetadata-type	md:DigitalAssetMetadata-type

All mandatory elements and attributes must be included. Any optional elements may be included. The following elements and attributes are required for MEC usage, regardless of whether they are optional, except as noted.

The following table uses the following conventions:

- Structure is given by table indentation. Parent level elements to the left.
- Attributes begin with '@'. For example, @ContentID refers to the ContentID attribute

## 2.2.1 Basic Metadata Usage

Element or Attribute		Usage Rules
BasicMetadata-type		Required
	@ContentID	Required
	UpdateNum	Shall be included if the record is an update (i.e., not the first record distributed)
	LocalizedInfo	At least one instance required
	@language	Required
	default	must be included for one instance of LocalizedInfo for the language of original production
	TitleDisplayUnlimited	Required. Note that TitleDisplay19 and TitleDisplay60 are no longer required.
	TitleSort	Not Required, but strongly recommended (was required through v2.5)
	OriginalTitle	Required
	Summary190	Deprecated, but recommended for backwards compatibility. Description that is unique to that content
	Summary400	Recommended
	PeopleLocal	if applicable
	Genre	Exactly one primary genre shall be included. It will be from <a href="http://www.movelabs.com/md/mec/mec_primary_genre.html">http://www.movelabs.com/md/mec/mec_primary_genre.html</a> @source='http://www.movelabs.com/md/mec/mec_primary_genre.html'. @level='0'. Any additional genres may be included.
	ArtReference	At least one instance is mandatory, additional instances are optional
	CopyrightLine	Required
	TitleAlternate	Recommended when alternate titles exist
	RunLength	Specify to at least seconds. Zero is recommended for season and series.
	ReleaseYear	Required



	ReleaseDate	should include the highest date/time resolution available
	ReleaseHistory ReleaseType	Original Release date must be included with ReleaseType='original'. When applicable Local Release date must be included with ReleaseType='local'. When applicable DVD Release date must be included with ReleaseType='DVD'
	WorkType	Required
	PictureColorType	optional, but it should be included
	PictureFormat	optional, but it should be included
	AltIdentifier	optional, but it should be included for all commonly used identifiers. For example, if ISAN is available, it should be included.
	RatingSet	SHALL be included for all available ratings in the regions where Retailers are authorized to sell this content. All elements and attributes should be included if applicable to the rating. The condition attribute should be used if the primary purpose of the edit is a derivation from a parent for the purposes of ratings change (e.g., airline edit or 'unrated edition').
	People	Include Actor(s), Director(s) and Producer(s) as applicable.
	CountryOfOrigin	defined as the "generally accepted country of reference".
	PrimarySpokenLanguage	Language should be included for the language(s) in which the video was shot (i.e., the language the "lips move to.") Movies such as Babel may have multiple PrimarySpokenLanguage elements. This should not be used for languages spoken incidentally and subtitled; for example, "RU" (Russian) in <i>The Hunt for Red October</i> .
	SequenceInfo Parent	SHALL be included for the following work types: Season, Episode, Promotion, Excerpt, Supplemental
	Number	Required
	HouseID	Shall be used for production ID in episodic content
	Parent	Shall be included for work type of Non-episodic Show if that show is part of a season or series. Should be included for derived works such as Director's Cut and promotional activity.

## 2.2.2 Digital Asset Metadata Usage

Element or Attribute		Usage Rules
DigitalAssetMetadata-type		Shall be included for each track included
	Audio	Required
	Type	Required
	Encoding	Required
	Codec	Required
	CodecType	The IANA namespace shall be used
	BitrateMax	Required
	SampleRate	Required
	SampleBitDepth	Required
	Language	Required
	Channels	Required
	Video	Required
	Type	Required
	Encoding	Required
	Codec	Required
	CodecType	The IANA namespace SHALL be used
	BitrateMax	Required
	Picture	Required
	AspectRatio	Required
	ColorType	Required
	SubtitleLanguage	Shall be included if the video contains visible subtitles.
	Subtitle	If applicable

		Format	Required
		Type	Required
		FormatType	Required
		Language	Required

### 2.2.3 Additional Usage Rules

- Original Release/Air Date (Year for features; Date for episodic television) – should be defined as the original release date in the target region of distribution.
- StartsWith search titles are included in TitleAlternate with type 'StartsWith'.
- ReleaseHistory should apply to distribution target.

## 3 WORKFLOW SUPPORT

While Section 2 defines the `CoreMetadata` element, workflows require additional types to support single delivery, bulk delivery and updates. The section defines types designed to support workflows.

These types use the `Workflow-attr` attribute group defined in Common Metadata [CM] for common workflow attributes.

### 3.1 CoreMetadataList

The `CoreMetadataList` element defined by the `CoreMetadataList-type` defines a set of `CoreMetadata` objects, intended for bulk transfer of multiple metadata objects.

Element	Attribute	Definition	Value	Card.
<code>CoreMetadataList-type</code>				
	<i>(workflow attributes)</i>	Workflow attributes as defined in [CM]	md:Workflow-attr	
Compatibility		Version information for determining compatibility.	md:Compatibility-type	0..1
CoreMetadata		Core Metadata	mdmec:CoreMetadata-type	1..n

### 3.2 LocalizedInfo Delivery

`LocalizedInfo` contains the elements and attributes that are affected by language and region. Consequently, when metadata is added for a specific language or region, only the `LocalizedInfo` object is required.

#### 3.2.1 LocalizedInfoDeliveryList

The `LocalizedInfoDeliveryList` element defined by `LocalizedInfoDeliveryList-type` allows multiple `LocalizedInfo` objects to be delivered.

Element	Attribute	Definition	Value	Card.
<code>LocalizedInfoDeliveryList-type</code>				

	<i>(workflow attributes)</i>	Workflow attributes as defined in [CM]	md:Workflow-attr	
	ContentID	ContentID associated with this LocalizedInfo delivery.	md:ContentID-type	
Compatibility		Version information for determining compatibility.	md:Compatibility-type	0..1
LocalizedInfoDelivery		LocalizedInfo metadata object plus workflow attributes	mdmec:LocalizedInfoDelivery-type	1..n

### 3.2.2 LocalizedInfoDelivery

The `LocalizedInfoDelivery` element defined by `LocalizedInfoDelivery-type` allows a single object to be delivered.

Element	Attribute	Definition	Value	Card.
<b>LocalizedInfoDelivery-type</b>			md:BasicMetadataInfo-type (extension)	
	<i>(workflow attributes)</i>	Workflow attributes as defined in [CM]	md:Workflow-attr	

### 3.3 CoreMetadataListSigned

The `CoreMetadataListSigned` element defined by the `CoreMetadataListSigned-type` defines a set of `CoreMetadata` objects and Signatures defined as a `XMLDSIG Signature` element.

Element	Attribute	Definition	Value	Card.
<b>CoreMetadataListSigned-type</b>				
	<i>(workflow attributes)</i>	Workflow attributes as defined in [CM]	md:Workflow-attr	
CoreMetadata		Core Metadata	mdmec:CoreMetadata-type	1..n
Signature		XMLDSIG signature	ds:Signature	0..n

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For message-level authentication, the general process is that the sender generates unsigned messages (based on the appropriate specification for the message), generates a digital signature for that message, and then packages the message with the signature. This package is then sent to the recipient. The signed message contains enough information to validate the sender of the message, and includes both the unsigned message as well as the digital signature of the unsigned message XMLDSIG Signature.

XML Digital Signatures can be used to sign and validate messages across any delivery structure. These shall be in conformance with [XMLDSIG]. Note that later versions may be adopted as defined here: <http://www.w3.org/TR/xmlsig-core/>.

The following constraints should apply when generating digital signatures:

- For CanonicalizationMethod
  - Algorithm=<http://www.w3.org/2006/12/xml-c14n11#WithComments>
- For SignatureMethod,
  - Algorithm=<http://www.w3.org/2000/09/xmlsig#rsa-sha1>
- For DigestMethod,
  - Algorithm=<http://www.w3.org/2000/09/xmlsig#sha1>