

EMA Metadata

Changes from 1.0 to 1.2

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NOTE: No effort is being made by EMA, the EMA Digital Council or Motion Picture Laboratories to in any way obligate any market participant to adhere to the Common Metadata or EMA Metadata. Whether to adopt the Common Metadata and/or EMA Metadata in whole or in part is left entirely to the individual discretion of individual market participants, using their own independent business judgment. Moreover, EMA, the EMA and Motion Picture Laboratories each disclaim any warranty or representation as to the suitability of the Common Metadata and/or EMA Metadata for any purpose, and any liability for any damages or other harm you may incur as a result of subscribing to this Metadata.

REVISION HISTORY

| <u>Version</u> | <u>Date</u> | <u>Description</u> |
|----------------|-------------------------|-------------------------------------|
| <u>1.0</u> | <u>January 5, 2010</u> | <u>Original Version</u> |
| <u>1.2</u> | <u>November 1, 2011</u> | <u>EMA Core Metadata Definition</u> |

1 INTRODUCTION

The Entertainment Merchant's Association has defined metadata for the description of information delivered from Publishers to Retailers. This document was developed by the EMA Digital Council with the objective of standardizing the metadata communication from content providers to digital retailers.

[This document incorporates EMA Core 1.0.](#)

Additional objectives of EMA's Digital Council outside the scope of this project include the following:

- Metadata Standardization – B2B communication from content providers to digital retailers
- Transaction Data Standardization – B2B communication from digital retailers to content providers
- Metadata Repository / Exchange
- Standardized (or translatable) Item Identification

EMA Metadata builds upon Common Metadata developed by Motion Picture Laboratories, EMA 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. A given metadata scheme, for example, the Entertainment Merchant's Association (EMA) may select elements of the Common Metadata to be used within its definitions. EMA would then define additional metadata to cover areas not included in Common Metadata.

1.1 Document Organization

This document is organized as follows:

1. Introduction—Provides background, scope and conventions
2. Identifiers—Specification of identifiers used to reference metadata.
3. General Types Encoding—Specific of encoding methods (e.g., language, region).
4. EMA Top-level Definitions—Definitions of the elements that tie all EMA data together.
5. Common Metadata Derived Types—EMA elements that refer directly to Common Metadata elements

6. Package and File Metadata—Metadata associated with packages and files
7. Transaction Information—Metadata associated with transactions.
8. Basic Metadata—Content descriptive metadata definition
9. Digital Asset Metadata—Encoded media metadata definition
10. Content Rating—Methods for encoding content ratings
11. Content Rating Encoding—Encoding for content rating information for various rating systems

Sections 2-3 and 8-11 are drawn directly from Common Metadata specifications and correspond with Common Metadata Version 1.0. They are repeated in this document. This document is the normative reference for these definitions when used as part of EMA metadata.

1.2 Document Notation and Conventions

1.2.1 XML Conventions

XML is used extensively in this document to describe data. It does not necessarily imply that actual data exchanged will be in XML. For example, JSON may be used equivalently.

This document uses tables to define XML structure. These tables may combine multiple elements and attributes in a single table. Although this does not align with schema structure, it is much more readable and hence easier to review and to implement.

Although the tables are less exact than XSD, the tables should not conflict with the schema. Such contradictions should be noted as errors and corrected.

1.2.1.1 Naming Conventions

This section describes naming conventions for Common Metadata XML attributes, element and other named entities. The conventions are as follows:

- Names use initial caps, as in InitialCaps.
- Elements begin with a capital letter, as in InitialCapitalElement.
- Attributes begin with a lowercase letter, as in initialLowercaseAttribute.
- XML structures are formatted as Courier New, such as `md:rightstoken`
- Names of both simple and complex types are followed with “-type”

1.2.1.2 Structure of Element Table

Each section begins with an information introduction. For example, “The Bin Element describes the unique case information assigned to the notice.”

This is followed by a table with the following structure.

The headings are

- Element—the name of the element
- Attribute—the name of the attribute
- Definition—a descriptive definition. The definition may define conditions of usage or other constraints
- Value—the format of the attribute or element. Value may be an XML type (e.g., “string”) or a reference to another element description (e.g., “See Bar Element”). Annotations for limits or enumerations may be included (e.g.,” int [0..100]” to indicate an XML xs:int type with an accepted range from 1 to 100 inclusively).
- Card—cardinality of the element. If blank, then it is 1. Other typical values are 0..1 (optional), 1..n and 0..n.

The first row of the table after the header is the element being defined. This is immediately followed by attributes of this element, if any. Subsequent rows are child elements and their attributes. All child elements (i.e., those that are direct descendents) are included in the table. Simple child elements may be fully defined here (e.g., “Title”, “”, “Title of work”, “xs:string”), or described fully elsewhere (“POC”, “”, “Person to contact in case there is a problem”, “md:ContactInfo-type”). In this example, if POC was to be defined by a complex type defined as md:ContactInfo-type. Attributes immediately follow the containing element.

Accompanying the table is as much normative explanation as appropriate to fully define the element, and potentially examples for clarity. Examples and other informative descriptive text may follow. XML examples are included toward the end of the document and the referenced web sites.

1.2.2 General Notes

All required elements and attributes must be included.

When enumerations are provided in the form ‘enumeration’, the quotation marks (‘’) should not be included.

1.3 Normative References

[RFC2141] R. Moats, *RFC 2141, URN Syntax*, May 1997, <http://www.ietf.org/rfc/rfc2141.txt>

[RFC3629] Yergeau, F., et al, *RFC 3629, UTF-8, a transformation format of ISO 10646*, November, 2003. <http://www.ietf.org/rfc/rfc3629.txt>

[RFC3986] Berners-Lee, T., et al, *RFC 3986, Uniform Resource Identifier (URI): Generic Syntax*, January 2005, <http://www.ietf.org/rfc/rfc3986.txt> ~~RFC4646~~

[RFC5646] Philips, A, et al, *RFC 4646/5646, Tags for Identifying Languages*, IETF, September, 2006/2009. <http://www.ietf.org/rfc/rfc5646.txt>

~~[ISO639]~~ ISO-639-2 Registration Authority, Library of Congress. ~~[IANA-LANG]~~ IANA Language Subtag Registry. <http://www.iana.org/assignments/language-subtag-registry>

[ISO3166-1] Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes, 2007.

[ISO3166-2] ISO 3166-2:2007 Codes for the representation of names of countries and their subdivisions -- Part 2: Country subdivision code

[ISO4217] Currency shall be encoded using ISO 4217 Alphabetic Code.
http://www.iso.org/iso/currency_codes_list-1

[ISO8601] ISO 8601:2000 Second Edition, *Representation of dates and times, second edition*, 2000-12-15.

[\[CEA766\] ANSI/CEA-766-C, U.S. and Canadian Rating Region Tables \(RRT\) and Content Advisory Descriptors for Transport of Content Advisory Information Using ATSC Program and System Information Protocol \(PSIP\). April 2008.](#)

1.4 Informative References

[Common Metadata, 'md' Namespace, Motion Picture Laboratories, Technical Report, TR-META-CM, version 1.0. \[RFC4647\] Philips, A., et al, RFC 4647, Matching of Language Tags, September 2006. http://www.ietf.org/rfc/rfc4647.txt](#)

European Broadcast Union, Tech 3295 – P_META Metadata Library,
http://www.ebu.ch/en/technical/metadata/specifications/notes_on_tech3295.php

The following ~~includes a few organizations or metadata standards~~ activities have numerous associated specifications. Rather than listing each specification, sites where complementary metadata development exists specifications can be found are listed.

- AMPAS – Academy of Motion Picture Arts and Sciences
<http://www.oscars.org/science-technology/council/projects/index.html>
- SMPTE Metadata Dictionary: <http://www.smp-te-ra.org/mdd/>
- MPEG – Motion Pictures Experts Group
- MHP – DVB Multimedia Home Platform
- CableLabs VOD Metadata 2.0
<http://www.cablelabs.com/specifications/md20.html>
- Dublin Core Metadata Initiative: <http://dublincore.org/>.
- TV Anytime (ETSI) <http://www.etsi.eu/WebSite/Technologies/TVAnytime.aspx>
- PBCore: www.pbcore.org
- Vocabulary Mapping Framework: <http://cdlr.strath.ac.uk/VMF/index.htm>

2 SCOPE

This document specifies certain information that is delivered from a Publisher to a Retailer as part of offering digital media.

2.1 Information specified

There are four types of Files:

- **Manifest**—The top-level construct is a Package that is described with a Manifest. The Manifest is uniquely identified with a PackageID and contains a description of the Package itself (date, Publisher, etc.) and the Files within the Package.
- **Metadata**—Descriptive information about an asset in the package. Details may include a description of the work (e.g., a movie, television episode, music video, song, etc.) or description of its encoding.
- **Media**—Playable media; the asset to be offered. In addition to traditional audio and video files, this may also include games, ringtones or software that might be associated with a product.
- **Transaction**—Information about the transaction, in particular parameters relating to offering the asset. Transactions, by definition, have region and time scope.
- **Ancillary**—Any other file used to support the offering, such as cover art image files.

This specification defines the content of the Manifest, Metadata and Transaction Files. The delivery mechanism is outside the scope of this specification. Although specification speaks in terms of files, actually delivery could be through any data delivery mechanism.

2.2 XML Namespaces

This document includes two XML namespaces:

- **md**: Common Metadata corresponding with Common Metadata, Version 1.0.
- **ema**: includes EMA-specific data

2.3 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.

3 IDENTIFIERS

Identifiers and metadata are closely linked. In essence, all identifiers have corresponding metadata that describes the object being identified. Just as it is useful to distinguish between different kinds of objects with different kinds of identifiers, it is useful to distinguish the metadata in terms of those same objects.

The primary objects being identified and described in metadata ~~is the Content Identifier (ContentID)~~ are:

- Content – Content ID (ContentID)
- Encoded Stream – Physical Asset (Asset Physical ID; APID)

3.1 Identifier Structure

Common Metadata identifiers use the general structure of the “urn:” URI scheme as discussed in RFC 3986 (URN) and RFC 3305 with a “md” namespace identifier (NID). However, for Common Metadata, rather than the fully articulated “urn:md” we abbreviate to “md:”. The basic structure for a Common Metadata ID is

`<MDID> ::= “md:”<type> “:”<scheme>“:”<SSID>`

- `<type>` is the type of identifier. These are defined in sections throughout the document defining specific identifiers.
- `<scheme>` is either a Common Metadata recognized naming scheme (e.g., “ISAN”) or “org:” non-standard naming. These are specific to ID type and are therefore discussed in sections addressing IDs of each type.
- `<SSID>` (scheme specific ID) is a string that corresponds with IDs in scheme `<scheme>`. For example, if the scheme is “ISAN” then the `<SSID>` would be an ISAN number.

There is a special case where `<scheme>` is “org”. This means that the ID is assigned by a recognized organization within their own naming conventions. If `<scheme>` is “org” then

`<SSID> ::= <organization><UID>`

- `<organization>` is a unique name assigned to an organization, ~~in particular a~~ with the following rules:
 - Organization is defined as domain name ~~used by that organization~~. For example, movielabs.com becomes md:org:movielabs.com:... and bbc.co.uk becomes md:org:bbc.co.uk:...
 - Other naming schemes may be used in contexts where names can be assigned within the scope of ID usage.

- <UID> is a unique identifier assigned by the organization identified in <organization>. Organizations may use any naming convention as long as it complies with RFC 3986 syntax.

Some sample identifiers are

- **ContentID:** md:cid:EIDR:10.5240%2ffF592-58D1-A4D9-E968-5435-L
- Content ID: md:cid:ISAN: 0000-3BAB-9352-0000-G-0000-0000-Q
- Content ID: md:cid:org:MYSTUDIO:12345ABCDEF

3.1.1 id-type Simple Type

The simple type md:id-type is the basic type for all IDs. It is XML type xs:anyURI.

All identifiers are case sensitive. insensitive and should be registered in canonical format and case sensitive identifiers should not be used..

~~3.2 Content Identifier~~

3.2 Asset Identifiers

Content Identifiers are assigned by the content owner or its designee. The following scheme provides flexibility in naming while maintaining uniqueness. ~~Common Metadata defines a Content Identifier (ContentID) for an abstract representation of a content item.~~

Common Metadata defines two types of asset identifiers:

- A Content Identifier (ContentID) denotes an abstract representation of a content item.
- Asset Physical Identifier (APID) refers to a physical entity (i.e., a file) that is associated with content.

3.2.1 ContentID

Syntax: “md:cid:”<scheme>“:”<SSID>

A ContentID points to Basic metadata. ContentIDs may refer to abstract items such as shows or seasons, even if there is no separate asset for that entity. A ContentID must be globally unique.

The following restrictions apply to the <scheme> and <SSID> part of a ContentID:

- A ContentID scheme may not contain the colon character.
- Where display formats exists (i.e., human readable versus computer-readable) use display format.
- ContentID < scheme> and ContentID <SSID> shall be in accordance with Table **Error! Reference source not found.**—1. Additional schemes may be added in the future.

Table Error! Reference source not found.: 1: Content Identifier Scheme and Value

| Scheme | Expected value for <SSID> |
|-------------------|--|
| ISAN | An <ISAN> element, as specified in ISO15706-2 Annex D. |
| TVG | TV Guide |
| AMG | AMG |
| IMDB | IMDB |
| MUZE | Muze |
| TRIB | Tribune |
| <u>Baseline</u> | <u>Baseline Research ID, www.baselineresearch.com</u> |
| UUID | A UUID in the form 8-4-4-4-12 |
| URI | A URI; this allows compatibility with TVAnytime and MPEG-21 |
| <u>GridGRid</u> | A Global Release identifier for a music video; exactly 18 alphanumeric characters |
| <u>ISBNEIDR</u> | <u>An ISBN, ISO 2108, Entertainment ID Registry, http://www.eidr.org</u> |
| <u>ISSN</u> | <u>Serials, ISO 3297:1998.</u> |
| <u>ISTC</u> | <u>Textual works, ISO 21047</u> |
| <u>ISMN</u> | <u>Printed music, ISO 10957, http://ismn-international.org/</u> |
| ISRC | Master recordings, ISO 3901, http://www.ifpi.org/content/section_resources/isrc.html |
| ISWC | Musical Works, http://www.cisac.org |
| DOI | Digital Object Identifier http://www.doi.org |
| <u>SMPTE-UMID</u> | <u>SMPTE-UMID as per SMPTE ST 330-2004</u> |
| <u>Ad-ID</u> | <u>Ad-ID as per format defined at http://www.ad-id.org/help/structure.cfm</u> |
| <u>GTIN</u> | <u>Global Trade Item Number. http://www.gtin.info/</u> |
| <u>UPC</u> | <u>Universal Product Code (UPC). UPC-E should be converted to UPC-A form.</u> |

| | |
|----------------------|--|
| CRid | CRid (Content Reference Identifier) as per RFC 4078 <u>http://tools.ietf.org/html/rfc4078</u> |
| cIDf | Content ID Forum. <u>cIDf Specification 2.0, Rev 1.1., 4/1/2007.</u> |
| file | Indicates that the identifier that follows is a local file name. |
| org | <SSID> begins with the Organization ID of the assigning organization and follows with a string of characters that provides a unique identifier. The <ssid> must conform to RFC 3986 with respect to valid characters. In the absence of agreements between parties using IDs of this form, we recommend the use of an organization DNS domain (e.g., movielabs.com). |

[Identifiers that contain URI shall use Percent-Encoding as per \[RFC3986\] for characters not allowed in URNs as per \[RFC2141\]. For example, space \(SP\) is replaced by '%20' and slash \(/\) is replaced by '%2f'. For example,](#)

[EIDR: 10.5240/F592-58D1-A4D9-E968-5435-L](#)

[ContentID: md:cid:EIDR:10.5240%2fF592-58D1-A4D9-E968-5435-L](#)

3.2.2 APID

[Syntax: "md:apid:< scheme>":"<SSID>":"<extension>](#)

[An APID is constrained as follows:](#)

- [Each APID is globally unique](#)

[The following restrictions apply to the <scheme>, <SSID> and <extension> part of an APID:](#)

- [An APID scheme may not contain the colon character](#)
- [Where display formats exist \(i.e., human readable versus computer-readable\) use display format.](#)
- [APID < scheme> and APID <SSID> shall be structured the same as ContentID](#)
- [<extension> is additional characters appended to the APID and may not contain colons](#)

[For example](#)

- [ContentID: md:cid:file:greatmedia.mp4](#)

- [ContentID: md:cid:ISAN:0000-3BAB-9352-0000-G-0000-0000-Q:p1](#)

[Note that APIDs may be constructed from ContentIDs. For example:](#)

- [ContentID: md:cid:org:MyCompany:ABCDEFG](#)
[APID: md:apid:org:MyCompany:ABCDEFG:100](#)

-
- ContentID: [md:cid:ISAN:0000-3BAB-9352-0000-G-0000-0000-Q](#)
 - APID: [md:apid:ISAN:0000-3BAB-9352-0000-G-0000-0000-Q:A203](#)

3.3 Organization ID

Common Metadata assumes one additional type be provided. That is an Organization ID (OrgID). md:orgID-type is a simple type of type md:id-type.

Currently, there is not an adequate global identification scheme, so this element should be used only if both the sending and receiving parties have an a priori agreement regarding the contents of this ID.

4 GENERAL TYPES ENCODING

4.1 Language Encoding

Language shall be encoded in accordance with ~~RFC 4646, *Tags for Identifying Languages* [RFC4646]. Matching shall be in accordance with RFC 4647, *Matching Language Tags*, [RFC4647]. Language codes may be found at the ISO 639-2 registration authority at the US Library of Congress [ISO639].~~

~~The xs:language type shall be used for languages. Common Metadata Language Encoding.~~

4.2 Region encoding

Region coding shall use the ISO 3166-1 two-letter alpha-2 codes [ISO3166-1]. Informally described here: http://en.wikipedia.org/wiki/ISO_3166-1_alpha-2.

When subdivisions are required, ISO3166-2 shall be used [ISO3166-2]. Informally described here: http://en.wikipedia.org/wiki/ISO_3166-2.

Common Metadata shall use the following type for region:

| Element | Attribute | Definition | Value | Card. |
|--------------------|-----------|-------------------------|--|----------|
| Region-type | | | | |
| country | | ISO 3166-1 Alpha 2 code | xs:string Pattern: "[A-Z][A-Z]" | (choice) |
| countryRegion | | ISO 3166-2 Code | xs:string Pattern: "[A-Z][A-Z]-[0-9A-Z]+" | (choice) |

4.3 Date and Time encoding

Date and time encoding shall use the XML rules. That is, where ISO 8601 [ISO8601] deviates from XML encoding, XML encoding shall apply.

4.3.1 Duration

Durations are represented using xs:duration. xs:time should not be used for duration.

4.3.2 Time

xs:time is used for a recurring time.

4.3.3 Dates and times

XML is fairly rigid in its date and time encoding rules. Specifically, it is difficult to have a single element where resolution may range from ‘year’ to ‘date’ to ‘time’. In some instances such as air dates/time, resolution might be year (movie released in 1939), date (movie released on December 25, 2009), or date and time (episode aired November 6, 2001, or November 6, 2001 EST).

- Year encoding uses `xs:gYear` (Gregorian year)
- Date encoding (year, month and day) uses `xs:date`
- Date encoding that includes both date and time shall uses `xs:dateTime`

Time zone should be included with `xs:dateTime` elements to avoid ambiguity. If representing a single point in time with no relevant time zone, Coordinated Universal Time (UTC) should be used.

In some cases, there are options for including year, date and date-time. Optional elements should be included if known and relevant.

4.3.4 Date and time ranges

Date Ranges may be encoded using the `DateTimeRange`-type:

| Element | Attribute | Definition | Value | Card. |
|----------------------------|-----------|----------------------|--------------------------|-------|
| <code>DateTimeRange</code> | | | | |
| Start | | Start of time period | <code>xs:dateTime</code> | |
| End | | End of time period | <code>xs:dateTime</code> | |

4.4 String encoding

String lengths are specified in characters (rather than bytes) unless otherwise stated. A string using double-byte Unicode characters can result in string elements whose actual size in bytes is larger than the stated length.

4.5 Organization Naming

Organization names shall include both a user-friendly display name and a sortable name. If the display name and the sort name are the same, the `SortName` element may be excluded.

| Element | Attribute | Definition | Value | Card. |
|---------------------|----------------|--|---------------|-------|
| OrgName-type | | | | |
| | organizationID | Organization's unique ID | md:orgID-type | 0..1 |
| DisplayName | | General display format. Safest to use as it accommodates various permutation on the name | xs:string | |
| SortName | | Sortable version of name. This will often be last name first. This may be displayed. | xs:string | 0..1 |

4.6 People Naming and Identification

This section describes the internationalized naming approach used for encoding metadata. This section also defines person identification for the purposes of metadata.

4.6.1 PersonName-type

| Element | Attribute | Definition | Value | Card. |
|------------------------|-----------|--|-----------|-------|
| PersonName-type | | | | |
| DisplayName | | Person's name for display purposes | xs:string | |
| SortName | | Name used to sort. May be excluded if identical to DisplayName. | xs:string | 0..1 |
| FirstGivenName | | First name | xs:string | 0..1 |
| SecondGivenName | | Second name | xs:string | 0..1 |
| FamilyName | | Family name | xs:string | 0..1 |
| Suffix | | Suffix | xs:string | 0..1 |
| Moniker | | Alternative name, usually of the form <FirstGivenName> "<Monikor>" <FamilyName> (e.g., <i>Scatman</i> in <i>Benjamin Sherman</i> " <i>Scatman</i> " <i>Crothers</i>). | xs:string | 0..1 |

4.6.2 PersonIdentifier-type

Assuming there is an identifier associated with the person, this structure holds information about that identifier.

| Element | Attribute | Definition | Value | Card. |
|------------------------------|-----------|---|-----------|-------|
| PersonIdentifier-type | | | | |
| Identifier | | Identifier associated with this individual within the Namespace | xs:string | |
| Namespace | | Namespace for identifier | xs:string | |
| ReferenceLocation | | Location associated for the identifier within the namespace. This is expected to be an online reference to information about the individual. | xs:anyURI | |

4.7 Currency

Currency shall be encoded using ISO 4217 Alphabetic Code [ISO4217].

http://www.iso.org/iso/currency_codes_list-1

4.8 Role Encoding, Role-type

Roles shall be encoded in accordance with ‘Term’ column of EBU Role codes found here: http://www.ebu.ch/en/technical/metadata/specifications/role_codes.php, plus “Other Group” and “Other” (referring to an unclassified individual).

Roles are defined in the simple type md:Role-type.

The JobFunction element allows for alternate schemes, however the scheme attribute is not supported at this time. At a future release, alternate schemes may be defined.

4.9 Keywords Encoding

Keywords are often culturally specific, so different keywords may exist for different regions. At this time, no keywords are defined.

4.9.1 Name/Value Pairs, NVPair-type

Use of Name/Value pairs provides considerable flexibility for growth. The NVPair-type complex type allows for any additional business data to be included in tuple format.

| Element | Attribute | Definition | Value | Card. |
|--------------------|-----------|---|-----------|-------|
| NVPair-type | | | | |
| Name | | Identification of the parameter being specified | xs:string | |
| Value | | Value specified for Name | xs:string | |

4.10 Personal/Corporate Contact Information, ContactInfo-type

| Element | Attribute | Definition | Value | Card. |
|-------------------------|-----------|--|-----------|-------|
| ContactInfo-type | | | | |
| Name | | Person or point of contact | xs:string | |
| PrimaryEmail | | Primary email address for user | xs:string | |
| AlternateEmail | | Alternate email addresses, if any | xs:string | 0..n |
| Address | | Mail address | xs:string | 0..n |
| Phone | | Phone number. Use international (i.e., +1 ...) format. | xs:string | 0..n |

5 EMA TOP-LEVEL DEFINITIONS

The top-level element for EMA data is the EMAFile element. EMAFile's contents include elements for each EMA file. EMAFile is a collection of elements defined by EMA-File-type, where each instance is a 'choice' of Metadata, Transaction or Manifest. EMA also has ancillary files such as cover art images, but ancillary files do not have EMA-defined metadata.

The EMAFile element is defined as a sequence of EMAFile-type which is defined as follows:

| Element | Attribute | Definition | Value | Card. |
|---------------------|-----------|--|--|----------|
| EMAFile-type | | | | |
| Metadata | | Basic and Physical metadata associated with the Assets | ema: Metadata <u>EMAMetadata</u> File-type | (choice) |
| TransactionData | | Transaction data | ema: TransactionData <u>EMATr</u> <u>ansFile</u> -type | (choice) |
| ManifestData | | Manifest data | ema: ManifestFile <u>EMAManife</u> <u>stFile</u> -type | (choice) |

5.1 MetadataEMAMetadataFile-type

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

| Element | Attribute | Definition | Value | Card. |
|--|-----------|--|--------------------------------|-------------|
| <u>EMATransFile</u><u>EMAMetadata</u><u>File</u>-type | | | | |
| Basic | | Basic Metadata | md:BasicMetadata-type | |
| <u>PhysicalDigitalAsset</u> | | <u>PhysicalDigital Asset</u> Metadata: encoding information for the assets | md:DigitalAssetMetadata-type | <u>0..n</u> |
| <u>TitleInternalAlias</u> | | <u>Title used by involved parties to refer to this content</u> | <u>xs:string</u> | <u>0..1</u> |
| <u>Source</u> | | <u>Organization that created the metadata</u> | <u>ema:Publsiher-type?</u> | <u>0..1</u> |
| <u>CompanyDisplayCredit</u> | | <u>Organizations associated with the asset, for display purposes.</u> | <u>ema:CompanyCredits-type</u> | <u>0..n</u> |

| | | | | |
|--------------------------------|--|---|---------------------------|----------------------|
| GroupingEntity | | <u>The "Network" or "Studio" that the product should be merchandised under within a retailer's website. For example, "Warner Bros".</u> | xs:string | 0..n |
|--------------------------------|--|---|---------------------------|----------------------|

5.1.1 TransactionDataCompanyDisplayCredit-type

This type describes the an intended audience for metadata:

| <u>Element</u> | <u>Attribute</u> | <u>Definition</u> | <u>Value</u> | <u>Card.</u> |
|---|--------------------------|--|---------------------------------|----------------------|
| MetadataCompanyCredits-type | | | | |
| DisplayString | | <u>String to be displayed.</u> | md:OrgName-type | 0..n |
| | language | <u>Language of DisplayString. If blank, then all languages</u> | xs:language | 0..1 |
| Region | | <u>Region(s) for which credits apply.</u> | md:Region-type | 0..n |
| DisplaySequence | | <u>Order of display. Lower-numbered entries are displayed before higher-numbered entries. Entries without this element should be displayed after numbered entries.</u> | xs:integer | 0..1 |

5.1.2 GroupingEntity-type

Grouping Entity type allows logical grouping of assets. This is typically around studio or network, but it can be any logical content grouping.

| <u>Element</u> | <u>Attribute</u> | <u>Definition</u> | <u>Value</u> | <u>Card.</u> |
|-------------------------------------|--------------------------|--|-----------------------------|----------------------|
| GroupingEntity-type | | | | |
| Type | | <u>The type of the group.</u> | xs:string | |
| GroupingIdenity | | <u>A string that uniquely identifies the group.</u> | xs:string | |
| DisplayName | | <u>A string that will be displayed when referring to this group.</u> | xs:string | 1..n |
| | language | <u>The language associated with the DisplayName. If language is</u> | xs:language | 0..1 |

| | | | | |
|------------------------|--|---|--------------------------------|----------------------|
| | | absent, DisplayName applies to all languages. | | |
| Region | | Region where group applies. If Region is absent, the group applies internationally. | md:Region-type | 0..1 |

[Type defines the type of grouping. Currently, the only defined value is “publisher”, although other values are not prohibited.](#)

[“publisher” indicates the grouping is around the organization publishing the content. Note that the actual publisher may differ from the publisher visible to the consumer. In that case, the GroupIdentity would reflect the actual publisher and the DisplayName would reflect the publisher familiar to the consumer.](#)

5.2 [EMATransFile-type](#)

This defines the EMA Transaction. The definition is as follows:

| Element | Attribute | Definition | Value | Card. |
|--|-----------|---|--|-------|
| TransFileEMATransFile-type | | | | |
| Transaction | | Information about each transaction. There may be multiple transactions in a EMATransFile-type definition. | ema:EMATransInfoListTransInfoList-type | 1..n |

5.3 [ManifestDataEMAManifestFile-type](#)

This defines the EMA Manifest. The manifest includes the definition of a Package and defines the contents of the Package. This includes a listing of all files included together along with identifying information about each file.

| Element | Attribute | Definition | Value | Card. |
|--|-----------|----------------------|---|-------|
| ManifestDataEMAManifestFile-type | | Manifest description | ema:EMAManifestInfoManifestInfo-type (by extension) | |

6 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 EMA types are derived directly from Common Metadata:

| EMA Type | Common Metadata Type |
|-------------------------------|------------------------------|
| ema:BasicMetadata-type | md:BasicMetadata-type |
| ema:DigitalAssetMetadata-type | md:DigitalAssetMetadata-type |

~~There are no specific requirements to adapt md:BasicMetadata-type and md:DigitalAssetMetadata-type to EMA. All required mandatory elements and attributes must be included; and any. Any optional element or attributes elements may be included. The following elements and attributes are required for EMA usage, regardless of whether they are optional, except as noted.~~

- BasicMetadata-type
 - ContentID attribute
 - UpdateNum—SHALL be included if the record is an update (i.e., not the first record distributed)
 - LocalizedInfo
 - Language attribute
 - default must be included for one instance of LocalizedInfo for the language of original production
 - TitleDisplay19
 - TitleDisplay60
 - TitleSort
 - OriginalTitle
 - Summary190 – description that is unique to that content
 - Cast if applicable
 - Genre – Exactly one primary genre shall be included. It will be from the http://www.movielabs.com/md/ema/ema_primary_genre.html. Source and have a level of '0'. Any additional genres may be included.
 - ArtReference – At least one instance is mandatory, additional instances are optional
 - CopyrightLine

- AlternateTitle
 - RunLength – specify to at least seconds. Zero is recommended for season and series.
 - ReleaseYear, ReleaseDate and ReleaseDateTime SHOULD include the highest date/time resolution available
 - ReleaseHistory: 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
 - 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 *The Hunt for Red October*.
 - SequenceInfo and Parent—SHALL be included for the following work types: Season, Episode, Promotion, Excerpt, Supplemental
 - Number
 - 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.
- DigitalAssetMetadata-type—SHALL be included for each track included in the Container.
 - Audio
 - Type
 - Encoding
 - Codec
 - CodecType—The IANA namespace SHALL be used
 - BitrateMax
 - SampleRate
 - SampleBitDepth
 - Language
 - Channels
 - Video:
 - Type
 - Encoding
 - Codec
 - CodecType—The IANA namespace SHALL be used
 - BitrateMax
 - Picture:
 - AspectRatio

- SubtitleLanguage—SHALL be included if the video contains visible subtitles.
- Subtitle (if applicable)
 - Format
 - Type
 - FormatType
 - Language
- Notes:
 - 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.

7 PACKAGE AND FILE METADATA

Content is delivered as packages which may contain multiple files. These sections describe the metadata associated with pages and files.

This structure assumes the following files:

- Manifest
- Metadata
- Media
- Transaction
- Ancillary files

To group files, there is the concept of a Package. A Package is all the files contained within the manifest, including the manifest itself. A Package is identified with a unique PackageID.

File formats are not addressed here, but these types represent the expression of information in files.

7.1 ManifestInfo-type

| Element | Attribute | Definition | Value | Card. |
|--|-----------|---|-------------------|-------|
| ManifestInfo-type | | | | |
| PackageID | | Unique identifier for package | xs:string | |
| PackageDate | | Date and time package generated | xs:dateTime | |
| Publisher | | Studio to whom the package is associated. This is the entity to be contacted with any inquiries associated with the Manifest. | md:Publisher-type | |
| AudienceRegion | | Intended audience for package contents | md:Region-type | |
| TotalFilesInPackage TotalFilesInPackage | | Count of files | xs:int | |
| FileInfo | | Information about each file in manifest | md:FileInfo-type | 1..n |

7.1.1 Publisher-type

| Element | Attribute | Definition | Value | Card. |
|----------------|--------------------|---|-----------------------------------|-------|
| Publisher-type | | | 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 |
| | 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 | |

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

7.2 FileInfo-type

FileInfo-type is used to describe a file in the Manifest. The data in this element should correspond with physical attributes of the file. For example, a file's name corresponds with Location, its file extension or type embedded in the file ~~correspond~~ corresponds with Type, and Hash can be generated from its contents.

The FileInfo-type information ensures that a file is correctly identified. As the Manifest may be delivered separately from other files, the FileInfo-type ensures the correct files are identified.

It is envisioned that Location will be used to facilitate network downloading of assets. The metadata is delivered without the file, and the file is retrieved from Location.

| Element | Attribute | Definition | Value | Card. |
|-------------------|-----------|---|--|-------|
| FileInfo-type | | | | |
| Location | | File location information. As a URI, name can be either a local file name or a web address. | xs:anyURI | |
| Type | | Type of file | xs:string "manifest" "metadata" "media" "transaction" "ancillary" | |
| Hash | | File hash of the entire file | | 0..1 |
| | Method | Hash method | xs:string "MD5" "SHA1" | |
| WrapperFormat | | Description of how file is packaged. This is typically a file extension less the dot (.). For example, zip or tar | xs:string | 0..1 |
| ContainerMetadata | | If file is a media container, ContainerMetadata includes information about how to decode the file. | md:ContainerMetadata-type | 0..1 |
| Replaces | | Optional list of files replaced by this version. This should grow with each replacement of a given file. | md:FileInfo-type | 0..n |

8 TRANSACTION INFORMATION

8.1 Description

Transactional Data describe the information specific to a given transaction, typically business-related arrangements between the content publisher (or its agent) and a someone authorized to handle the content. As transactions may be complex, general extensible mechanisms are provided.

8.2 Rules

Transaction Data are subject to agreements between the parties in question.

8.3 Definitions

8.3.1 TransInfoList-type

This type covers an entire business rule. There may be multiple rules ('Rule' elements) per Asset.

| Element | Attribute | Definition | Value | Card. |
|---------------------------|-----------|---------------------------------|-------------------------|-------|
| TransInfoList-type | | | | |
| Assets | | Asset for which the rules apply | ema:TransAssetList-type | |
| TransInfo | | Transaction-related information | md:TransInfo-type | 1..n |

8.3.2 TransAssetList-type

| Element | Attribute | Definition | Value | Card. |
|----------------------------|-----------|--|-------------------|-------|
| TransAssetList-type | | | | |
| ContentID | | Asset for which the rules apply | md:ContentID-type | |
| AssetStructure | | Composite Object describing structure of content, including optional additional metadata. The Composite Object must contain the Content IDs included in CID. | md:CompObj-type | 0..1 |

8.3.3 TransInfo-type

| Element | Attribute | Definition | Value | Card. |
|------------------------------|-----------|--|---------------------------|-----------------|
| TransInfo-type | | | | |
| Type | | Type of transaction. Values are currently undefined. | | |
| Description | | Text description of the rule | xs:string | |
| <u>DistributionTerritory</u> | | <u>Region to which info applies, if applicable</u> | <u>md:Region-type</u> | <u>0..1</u> |
| <u>Parameters</u> | | <u>Generalized mechanism for carrying specifics of the rule such as pricing.</u> | <u>md:NVPair-type</u> | <u>0..1</u> |
| <u>OtherInstructions</u> | | <u>Free text field for inclusion of any other information</u> | <u>xs:string</u> | <u>0..1</u> |
| Start | | Start time of applicability of Info. If not present, then start time is undefined. | xs:dateTime | 0..1 |
| CondStart | | Conditional Start | | 0..1 |
| End | | End time of applicability. If not present, then end time is undefined. | xs:dateTime | 0..1 |
| CondEnd | | Condition End | | 0..1 |
| Locale | | Region to which info applies, if applicable | md:Region-type | 0..1 |
| Parameters | | Generalized mechanism for carrying specifics of the rule such as pricing. | md:NVPair-type | |
| OtherInstructions | | Free text field for inclusion of any other information | xs:string | 0..1 |

8.3.4 TransCondDate-type

| Element | Attribute | Definition | Value | Card. |
|----------------|-----------|---|-----------|-------|
| TransInfo-type | | | | |
| Event | | The event to which this condition is tied | xs:string | 0..1 |
| Condition | | Indication of before, after, etc. | xs:string | |

| | | | | |
|--------|--|--|----------------|------|
| Locale | | Locale of the condition | md:Region-type | 0..1 |
| Lag | | Indication of how much before or after the event. This shall always be positive and the direction is assumed from the Condition. | xs:duration | 0..1 |

Event may have any value as listed under Release Information Encoding as described in the Common Metadata Specification.

The following are accepted values for Condition

- ‘before’ – indicates Lag before Event
- ‘after’ – indicates Lag after Event
- ‘simultaneous’ – indicates it happens at the same time. Lag should not be included, but ignored if it is.

8.3.5 Parameters

TransInfo-type contains Parameters in Name/Value pairs. These are designed to be extensible. In the future, specific parameters may be defined. At this time, the parameters are to be defined by the parties exchanging information.

9 BASIC METADATA

Basic Metadata is a set of data that are essentially ubiquitous in content systems. They may be used throughout.

9.1 BasicMetadata-type

| Element | Attribute | Definition | Value | Card. |
|------------------------|-----------|---|---------------------------|--|
| BasicMetadata-type | | | | |
| | ContentID | Content ID in Section 2. | md:ContentID-type | |
| UpdateNum | | Version. Initial release should be 1. This is a value assigned by the metadata creator that should only be incremented if a new version of metadata is released. If absent, 1 is to be assumed. This is assigned by the metadata originator. | xs:int | 0..1 |
| LocalizedInfo | | Instances of localized metadata. | md:BasicMetadataInfo-type | 1..n |
| RunLength | | Runlength <u>Approximate Runlength of the referenced work. (not the original product).</u> Resolution SHALL be at least minutes. Resolution should be seconds or better. <u>For a season or series, this should either be zero or the typical length of an episode. For broadcast, this should be the content length (e.g., an hour show with commercials might have a 44 minute RunLength).</u> | xs:duration | |
| ReleaseYear | | The year of original release. This applies to the version that is being released. | xs:gYear | |
| ReleaseDate | | Date of release or original air date. Adds month and day information to ReleaseYear. May not be included if ReleaseDateTime is included. | xs:date | 0..1 (choice with below) |

| Element | Attribute | Definition | Value | Card. |
|--|-----------|--|--|---|
| ReleaseDateTime ReleaseDate | | Year, Date or Date and timeTime of release or original air date. Adds datemonth and timeday information to ReleaseYear. Time should indicate the time-zone of release locale. May not be included if ReleaseDate is included. | xs:dateTime md:YearDateOrTime | 0..1 (choice with above) |
| ReleaseHistory | | Information about other release | md:ReleaseHistory-type | 0..n |
| WorkType | | Type of the work. See Work Type EncodingEnumeration . | xs:string | |
| PictureColorType | | Color type of asset. This SHALL not be included for audio-only assets. | md:ColorType-type | 0..1 |
| PictureFormat | | A textual description of the aspect ratio format type, as defined below. This field does not contain the actual aspect ratio. | xs:string | 0..1 |
| ThreeD | | Indicates whether work is in 3D. 'true' means 3D, 'false' or absent means not 3D. | xs:boolean | 0..1 |
| AspectRatio | | Aspect ratio of active pixels, the form m:n (e.g., 4:3,16:9, 2:35:1) | xs:string | |
| FitToActivePixels | | The content has been edited to fit the active pixels in the image. This may be cropped, pan-and-scan or other modification. | xs:boolean | 0..1 |
| AltIdentifier | | Other identifiers for the same content. | md:ContentIdentifier-type | 0..n |
| RatingSet | | All ratings associated with this content | md:ContentRating-type | 0.. A 1 |
| People | | People involved in production, with the exception of alternate language-specific roles (e.g., voice talent for language dubbing) | md:BasicMetadataPeople-type | 0..n |

| Element | Attribute | Definition | Value | Card. |
|------------------------|-----------|--|-----------------------------|-------------|
| CountryOf Origin | | The country from where the title originates, ISO3166-1 e.g., "US" for United States. A derived would should refer to the country of the original work. | md:Region-type | |
| <u>PrimaryLanguage</u> | | <u>Primary spoken language of original production. As guidance this can be considered, "The language lips move to."</u> | <u>xs:language</u> | <u>0..n</u> |
| AssociatedOrg | | Organization associated with the asset in terms of production, distribution, broadcast or in another capacity (see below for roles). | md:OrgName-type | 0..n |
| | role | Role of the associated organization. | xs:string | 0..1 |
| SequenceInfo | | Indicates how asset fits into sequence | md:ContentSequenceInfo-type | 0..1 |
| Parent | | Metadata for parent items. Note that this is recursive. | Md:BasicMetadataParent-type | 0..n |

9.1.1.1 WorkType Enumerations

WorkType shall be enumerated to one of the following (categories are to support the definition, but are not included in the enumeration).

Music related:

- ‘Album’ – A collection of songs
- ‘Song’
- ‘Music Video’ – Music Video, not ‘Performance’
- ‘Ring Tone’
- ‘Other Music’

Film related:

- ‘Feature Film’ ~~‘Movie’~~ – A full length movie- regardless of distribution (e.g., theatrical, TV, direct to disc, etc.) and content (e.g., includes documentaries).
- ‘Short’ – a film of length shorter than would be considered a feature film.
- ~~‘Long Form Non Feature’ – other works, for example, a documentary.~~

TV, web and mobile related:

- ‘Series’ – a show that might span one or more seasons or might be a miniseries.
- ‘Season’ – a season of a Series. It will contain one more episodes.
- ‘Episode’ – an episodes of a season or miniseries. A pilot is also an episode. If episode is a ‘webisode’, ‘mobisode’ or other specialized sequence, it should be noted in Keywords.
- ‘Non-episodic Show’ – TV or other show that is non-episodic; for example, ~~TV Movies~~, sports and news.
- ‘Promotion’ – promotional material associated with media. This includes teasers, trailers, electronic press kits and other materials. Promotion is a special case of ‘Ad’.
- ‘Ad’ – any form of advertisement including TV commercials, infomercials, public service announcements and promotions not covered by ‘Promotion’. This does not include movie trailers and teasers even though they might be aired as a TV commercial. ~~Promotion is a special case of ‘Ad’.~~

Other:

- ‘Excerpt’ – An asset that consists primarily of portion or portions of another work or works; for example, something having the ‘isclipof’ or ‘iscompositeof’ relationship.
- ‘Supplemental’ – Material designed to supplement another work. For example, and extra associated with a Movie for a DVD.
- ‘Collection’ – A collection of assets not falling into another category. For example, a collection of movies.
- ‘Franchise’ – A collection or combination of other types, for example, a franchise might include multiple TV shows, or TV shows and movies.

Although there is some overlap with Genre, Work Type is not language or culturally specific. Although terms may overlap, the usage does not. For example, the Work Type of ‘Sport’ refers to the capture of a sporting event, where a documentary on sport would have the ‘Non-episodic Show’ work type.

9.1.1.2 ColorType-type

md:ColorType-type enumerates the picture color types. The enumerations are as follows:

- ‘color’ for color. If the work contains color, but is not clearly classified into one of the other categories, is should use the ‘color’ type.
- ‘bandw’ for black and white
- ‘colorized’ for colorized video (i.e., different from the original that is typically black and white)).

- ‘composite’ for color composite (e.g., “Sin City²”).
- ‘unknown’ for assets based on legacy metadata where color type is not specified.

9.1.1.3 Picture Format Encoding

PictureFormat may be one of the following:

- ‘Letterbox’ – horizontal bars or other background appear above and/or below the picture’s active pixels.
- ‘Pillarbox’ – vertical bars or other background appear to the left and/or right of the picture’s active pixels.
- ‘Full’ – The active pixels fit the full area of the picture (within a few pixels). The entire original image is substantially included. This should not be confused with *fullscreen*, a term that may also refer to Pan and Scan.
- ‘Stretch’ – The active pixels fit the full area of the picture (within a few pixels). The entire original image is substantially included. The image has been visibly stretched in one dimension to fit (e.g., a 4:3 image stretched to 16:9 frame).
- ‘Pan and Scan’ – The active pixels the fit full area of the picture (within a few pixels). Part of the original image is not included. This includes fixed cropping, pan-and-scan and other cropping methods.
- ‘Other’ – A picture format encoding other than the above applies. For example, ‘Smilebox’.

9.1.1.4 UpdateNum

UpdateNum is an integer rather than a string (e.g., “2.3.1”) to simplify ordering. The Content Provide SHALL issue updates with increasing numbers.

9.1.1.5 PrimaryLanguage

PrimaryLanguage is a Primary spoken language spoken in the original production. That is, the language spoken by the actors, or more specifically, the language in which their lips are moving. It should include usage for meaningful dialog, but not an occasional word. For example, the movie *Babel* has multiple PrimaryLanguage elements. The movie *Hunt for Red October*, would have two: English and Russian. The movie *Silent Movie*, even with one word spoken, would have no PrimaryLanguage elements.

9.1.1.5.1.1.6 AssociatedOrg

The AssociatedOrg element provides information about organizational entities involved in the production, distribution, broadcast or other function relating to the asset. Often organizations provide different functions, so multiple organizations can be listed. The role attribute to AssociatedOrg may have one of the following values:

- ‘production²producer’ – involved in the production of the asset

- ~~‘network’~~‘broadcaster’ – network associated with asset’s broadcast
- ~~‘distribution’~~‘distributor’ – entity involved with distribution
- ‘other’ – any organization that does not fall into the previous categories.

9.1.1.69.1.1.7 Release Information Encoding, ReleaseHistory-type

ReleaseType may include the following values:

- ‘original’ – ~~first~~First worldwide
- ~~‘local’~~ ~~local airing~~
- ‘Broadcast’
- ‘DVD’
- ‘Blu-ray’
- ‘Hospitality’
- ‘PayTV’ – Premium TV
- ~~‘Internet’~~ ~~can cover any combination of other Internet release types~~
- ‘InternetBuy’ – Offered for purchase on the Internet.
- ‘InternetRent’ – Offered for rent on the Internet.
- ~~‘InternetStream’~~
- ‘Theatrical’
- ‘VOD’ – Home VOD.

This list may be expanded.

| Element | Attribute | Definition | Value | Card. |
|----------------------------|-------------|---|--|-------------|
| ReleaseHistory-type | | | | |
| ReleaseType | | Release type as described above | xs:string | |
| | <u>wide</u> | <u>Whether this release is a wide release, particularly for theatrical</u> | <u>xs:boolean</u> | <u>0..1</u> |
| DistrTerritory | | Where it was released to | md:Region-type | 0..1 |
| Date | | When was released. <u>When title was released. This may be a year, a date or a date and time. Generally, date is preferred over year. Date-time is</u> | xs:date <u>md:YearDateOrTime-type</u> | |

| | | | | |
|---------------------|----------------------|--|------------------------|-----------------|
| | | <u>preferred for broadcast air dates.</u> | | |
| | scheduled | Date is assumed to be an actual date unless scheduled is included and holds the value 'true' | xs:boolean | 0..1 |
| DateTime | | When was released. Time is expressed in local time (i.e., encode time zone). | xs:dateTime | 0..1 |
| | scheduled | Date and time are assumed to be an actual date/time unless scheduled is included and holds the value 'true' | xs:boolean | 0..1 |
| Description | | Description of the release, | xs:string | 0..1 |
| ReleaseOrg | | Organization involved with this release. | md:OrgName-type | 0..4 |

BasicMetadataInfo

9.1.2 BasicMetadataInfo-type

This contains language-specific descriptive information.

In accordance of RFC5646, language may be inclusive of both language and character set. If submission uses more than one language or more than one character set, then multiple instances of this element may need to be supplied.

| Element | Attribute | Definition | Value | Card. |
|-------------------------------|-----------|--|-------------|-------|
| BasicMetadataInfo-type | | | | |
| | language | Language for this set of metadata as defined in Section 4.1. <u>language should be as specific as possible (e.g., 'ja-kata' instead of 'ja').</u> | xs:language | |
| | default | Indicates whether this is a language to use if no other available language is meaningful within the usage context (e.g., the native language for the user). 'true' indicates yes. 'false' or absence indicates no. | xs:boolean | 0..1 |
| TitleDisplay19 | | A brief version of the feature title (for display) that is up to a maximum length of 19 chars. All UIs SHOULD be able to support display of this field. | xs:string | |

| | | | | |
|---------------------------------------|------------------------|--|----------------------------|----------------------|
| TitleDisplay60 | | An alternate display version from TitleBrief for those UIs that can support longer fields than 19 Characters. This title may be up to 60 characters. | xs:string | 0..1 |
| TitleDisplayUnlimited | | A display title with no length limit. It is recommended this be limited to no more than 256 characters. | xs:string | 0..1 |
| TitleSort | | A sortable version of the feature title, e.g., "Incredibles, The" separated by commas. | xs:string | |
| ArtReference | | Reference to art image | xs:anyURI | 0..n |
| | resolution | String in the form <i>colxrow</i> (e.g., 800x600 would mean an image 800 pixels wide and 600 pixels tall). | xs:string | |
| Summary190 | | The title description – sentence. (max 190 char) | xs:string | |
| | cast | Flag to indicate if cast is or is not included in summary description. Missing assumes 'false'. | xs:boolean | 0..1 |
| Summary400 | | The title description -one paragraph, could be used as description in EPG. (max 400 char) | xs:string | 0..1 |
| | cast | Flag to indicate if cast is or is not included in summary description. Missing assumes 'false'. | xs:boolean | 0..1 |
| Summary4000 | | The title description – multi-paragraph. (max 4000 char) | xs:string | 0..1 |
| | cast | Flag to indicate if cast is or is not included in summary description. Missing assumes 'false'. | xs:boolean | 0..1 |
| Display Indicators | | Indicators that MAY affect UI display. See Display Indicator Encoding below. | xs:string | 0..n |
| Genre | | Subject-matter classification of the show. See Genre Encoding below. | xs:string | 0..n |
| | source | Naming system from which genre is derived. | xs:anyURI | 0..1 |
| | id | Identifier for genre used within source | xs:string | 0..1 |
| | level | Indicates precedence of genre, with a lower number being high precedence. | xs:integer | 0..1 |
| Keyword | | Keyword | xs:string | 0..n |

| | | | | |
|-----------------------|-----------------|--|-----------------------------|-------------|
| VersionNotes | | A descriptive statement about the reason why this cut was created or what its content represents with reference to other versions of this work. Do not include information about the language of the title in this field. If the cut is for a censor in a particular linguistic region, the region associated with the censor or censor name should be used, i.e., German censor version. <u>VersionNotes may include edits for content, such as "Airplane Version".</u> | xs:string | 0..1 |
| Region | | The ISO 3166-1 code used to represent the name of the region(s) where the work is intended to be broadcast or shown. The code should be <u>sent interpreted in lowercase letters-a case insensitive manner.</u> Note: Do not use the code "ww" to represent a worldwide region. | md:Region-type | |
| OriginalTitle | | Original title (no size limits). | xs:string | |
| CopyrightLine | | Displayable copyright line. | xs:string | 0..1 |
| PeopleLocal | | People involved in the localized production, typically local voice actors. | md:BasicMetadataPeople-type | 0..n |
| <u>TitleAlternate</u> | | <u>Alternate titles</u> | <u>xs:string</u> | <u>0..n</u> |
| | <u>type</u> | <u>Type of alternate title</u> | <u>xs:string</u> | <u>0..1</u> |
| | <u>language</u> | <u>The language of TitleAlternate if different from language attribute for BasicMetadataInfo-type.</u> | <u>xs:language</u> | <u>0..1</u> |

9.1.2.1 Display Indicator Encoding

The values used for Display Indicator are at the discretion of the Publisher and the Retailer. Examples of values conceived for this element include, "CC", "DVS", "P" (season premiere) and "F" (finale).

9.1.2.2 Genre Encoding

Genre is culturally and contextually specific, so different genre classifications may exist for different regions. This section presents a few alternatives for genre enumeration. Others will apply. Any genre list may be used.

The following is a suggested genre list for US and Canada, English:

- 'Action'
- 'Adult'
- 'Adventure'

- ~~‘Anime’~~
- ~~‘Animation’~~
- ~~‘Children’s’~~
- ~~‘Comedy’~~
- ~~‘Documentary’~~
- ~~‘Drama’~~
- ~~‘Family’~~
- ~~‘Horror’~~
- ~~‘Independent’~~
- ~~‘Instructional’~~
- ~~‘Music Performance’~~
- ~~‘Musical’~~
- ~~‘Mystery’~~
- ~~‘Romance’~~
- ~~‘Science Fiction’~~
- ~~‘Sports’~~
- ~~‘Television’~~
- ~~‘Western’~~
- ~~‘Miscellaneous’~~

The source attribute should be used for defined genre sets. It should be a URL that uniquely and unambiguously identifies a genre classification system. Ad hoc genre naming systems should use a URI whose namespace is under the control of the author.

The ‘id’ attribute may be used when a genre has an ID associated with the text string. In this case, the text string goes in the element, and the ID goes in the attribute. For example, using the EBU metadata, when the genre is “Surfing” the ID is “3.2.6.10”.

The level attribute indicates which genres are primary genre, main genre, subgenre, etc. A lower number indicates a higher precedence. Primary should be encoded as ‘0’. Only one instance of a primary should be included for a source.

Following are some genre encoding that may be used. Others may be used as well.

Alternatively, the following genres apply:

| Region (Language) | Source | <u>Link’source’ attribute value</u> |
|--|------------------------|---|
| <u>United States, Canada (English)</u> | <u>Common Metadata</u> | <u>http://www.movielabs.com/md/md/common_genre.html</u> |

| | | |
|---------------------------------|--|---|
| United States, Canada (English) | Library of Congress, Motion Picture and Television Reading Room | http://www.loc.gov/rr/mopic/miggen.html |
| Europe | European Broadcast Union (EBU) Tech 3295 – P_META Metadata Library, v 2.0, EBUContentGenre | http://www.ebu.ch/metadata/cs/web/ebu_ContentGenreCS_p.xml.htm |

~~Other Genre lists may be applied.~~

9.1.3 ContentID-type

| | | |
|--|---|--|
| <u>United States, Canada (English), TV</u> | <u>Cable Television Laboratories (CableLabs)</u> | <u>http://www.cablelabs.com/projects/metadata/downloads/genre_classification_list.pdf</u> |
| <u>Worldwide</u> | <u>Entertainment Merchant's Association (EMA)</u> | <u>http://www.movie labs.com/md/ema/ema_primary_genre.html</u> |

9.1.2.3 TitleAlternate/type Encoding

The following types should be used for the type attribute describing an AlternateTitle element:

- 'alternative' – legitimate alternative titles used to refer to the work. Shortened titles and common variations are included in this category. Most alternate titles are in the category.
- 'misspelling' – the title with a common misspelling. This should be included rarely, and a comprehensive list of possible misspellings should *not* be included.
- 'StartsWith' – search-centric title using convention typically used in Japan

For the movie "Terminator 2: Judgment Day", 'alternate' titles could include "T2", "Terminator 2", "Terminator Two", and "Judgment Day". A 'misspelling' title could include "Terminator 2: Judgement Day".

Alternate titles may include a language attribute to indicate a language different from the language attribute in the parent element. For example, if the LocalizedInfo is in Hiragana and there is a Katakana TitleAlternate with a type of "StartsWith", the language should be 'ja-kata'.ContentID-type

This is designed to provide a cross reference to all other identifiers associated with this content. ContentIdentifier-type is a simple type based on md:id-type.

Namespace will be any namespace as listed in Table **Error! Reference source not found.**–1.

| Element | Attribute | Definition | Value | Card. |
|-------------------------------|-----------|---|-----------|-------|
| ContentIdentifier-type | | | | |
| Namespace | | Namespace of identifier from Content ID table in the Identifiers section. | xs:string | |
| Identifier | | Value of identifier. | xs:string | |
| Location | | Reference location for item in the referenced namespace. | xs:anyURI | 0..1 |

9.1.49.1.3 BasicMetadataPeople-type

| Element | Attribute | Definition | Value | Card. |
|---------------------------------|-----------|--|---|-------|
| BasicMetadataPeople-type | | | | |
| Job | | Description of job function and, if applicable, character(s) | md:BasicMetadataJob-type | 1..n |
| Name | | Person or entity's name | md:PersonName-type | |
| Identifier | | Formal identifier for this individual. | md:PersonIdentifier-type | 0..n |
| Gender | | Female, Male, Neutral, plural (name for group) | xs:string: "male", "female", "neutral" "plural" | 0..1 |

9.1.4.19.1.3.1 BasicMetadataJob-type

| Element | Attribute | Definition | Value | Card. |
|------------------------------|-----------|---|--------------|-------|
| BasicMetadataJob-type | | | | |
| JobFunction | | Role in production of media. Role is encoded in accordance with "Role Encoding" above. This version is displayable, but JobDisplay is preferred if present. | md:Role-type | |
| | scheme | The Role Scheme if alternate role systems are used. | xs:string | 0..1 |

| | | | | |
|-------------------|-----------------|--|---------------------|-------------|
| JobDisplay | | Displayable version of Role. This allows metadata encoder to be more specific. For example, while JobFunction allows encoding of "Assistant Cameraman", JobDisplay could be "1 st Assistant Cameraman". | xs:string | 0..4n |
| | <u>language</u> | <u>Language of JobDisplay. There may be multiple instances of JobDisplay, but only with unique language attributes.</u> | <u>xs:language</u> | <u>0..1</u> |
| BillingBlockOrder | | Order of listing, starting with 1. If missing, implies infinity and may be listed in any order. This need not be contiguous. | xs:int, [1..maxint] | 0..1 |
| Character | | For actors, what role(s) they are playing. May be more than one. | xs:string | 0..n |
| Guest | | Whether this is a guest role (e.g., guest actor). If 'true', Job is as a guest. 'false' or absent is not guest. | xs:boolean | 0..1 |

9.1.4.29.1.3.2 BasicMetadataParent-type

This allows parent metadata to be included either by inclusion or reference. Usage rules will define if and when ParentContentID may be used in lieu of Parent. This is an optimization to avoid repeating full metadata sets when multiple objects have the same parent.

| Element | Attribute | Definition | Value | Card. |
|---------------------------------|------------------|--|-----------------------|----------|
| BasicMetadataParent-type | | | | |
| | relationshipType | The relationship between this asset and its parent as defined below. | xs:string | 0..1 |
| Parent | | The parent metadata object. | md:BasicMetadata-type | (choice) |
| ParentContentID | | Same as Parent, although included by reference instead of inclusion. | md:ContentID-type | (choice) |

The relationshipType attribute may have the following enumerations:

- ‘isclipof’ – The asset is a subset of the larger body that is a contiguous subset of the parent. It may include unique small amounts of pre- and post-material such as new titles and credits. A typical example is a clip extracted from a larger video.
- ‘isepisodeof’ – The asset is an instance of an ordered sequence (i.e., an episode)
- ‘isseasonof’ – The asset is a season and the parent is a show

- ‘ispartof’ – The asset is one complete segment of a larger body not covered by other definitions here. This may include a movie that is part of a series of movies. A song will be part of an album.
- ‘isderivedfrom’—The asset is a modification of the parent work. Some examples include a colorized version derived from a B&W version, and an edit such as a “Director’s Cut” or “Unrated Edition”.
- ‘iscompositeof’ – Asset includes a subset of the parent, such as may be found in a mashup. This contrasts a clip which is a proper subset otherwise unmodified.
- ‘issupplementto’ – is supplemental material. For example, outtakes and makings-of would be supplements.
- ‘ispromotionfor’ – is promotional material, such as a trailer. This is used when the child object has a work type of ‘Promotion’ and it is a promotion for the parent object.

Note that the parent object supplements information in the work—there is no structural or implied inheritance. When parents exist, they should be included either directly or by reference in each BasicMetadata-type element instance.

9.1.4.39.1.3.3 ContentSequenceInfo-type

Describes Sequence, if part of sequence (episode, season, etc.). The actual sequence type is defined by the WorkType element.

Either Number or HouseSequence must be included. An element with HouseSequence but no number indicates the asset is non-sequenced and the HouseSequence is included for reference. This might be the case for a documentary whose airing sequence is irrelevant but the HouseSequence is still usable for management of the asset.

If neither Number nor HouseSequence is included, the ContentSequenceInfo-type based element should not be included.

| Element | Attribute | Definition | Value | Card. |
|--------------------------|-----------|---|-----------|-------|
| ContentSequenceInfo-type | | | | |
| Number | | Where it fits in sequence (e.g., episode 1 is “1”). Start with 1. If it is the only one in the sequence, it is numbered 1. <u>Generally, sorting is done by Number.</u> | xs:int | 0..1 |
| HouseSequence | | Identifier used internally for the asset. This <u>may</u> not be ordered the same as Number. The original may use this value however seen fit. <u>This is sometimes called Production ID.</u> | xs:string | 0..1 |

9.2 Composite Object

A Composite Object is a grouping outside of the structure of Basic Metadata (i.e., Parent definitions). Composite Objects may include metadata, either by inclusion or reference. The `md:CompObj-type` is designed as a simple list of entries. It is intended for inclusion within other structures. The `md:CompObjData-type` is a more standalone structure that has an ID and a `DisplayName` field at the top level, and then the entries. Lists of entries are ordered. For example, if the entries are season premieres of a given show, they can be ordered in season order; and that ordering should be preserved.

9.2.1 CompObj-type

| Element | Attribute | Definition | Value | Card. |
|---------------------|-----------|--|-----------------------------------|-------|
| CompObj-type | | | | |
| Entry | | An individual entry in the compound object. The list is ordered. | <code>md:CompObjEntry-type</code> | 1..n |

9.2.2 CompObjID-type

This is a simple type of type `md:id-type` that can be used to assign a unique identifier.

9.2.3 CompObjData-type

| Element | Attribute | Definition | Value | Card. |
|--------------------------|------------------------|--|--------------------------------|-------------|
| CompObjData-type | | | <code>md:CompObj-type</code> | (extension) |
| | <code>CompObjID</code> | Identifier for this compound object | <code>md:CompObjID-type</code> | 0..1 |
| <code>DisplayName</code> | | A description of the Compound Object. There may be one entry per language. | | 0..n |
| | <code>language</code> | Language of the <code>DisplayName</code> in accordance with encoding described in Section 4.1. | <code>xs:language</code> | 0..1 |

9.2.4 Comp-ObjEntry-type

| Element | Attribute | Definition | Value | Card. |
|--------------------------|-----------|---|-----------------------|----------|
| CompObjEntry-type | | | | |
| DisplayName | | A description of the Composite Object. There may be one entry per language. | | 0..n |
| | language | Language of the DisplayName in accordance with encoding described in Section 4.1. | xs:language | 0..1 |
| Entry | | An individual entry in the compound object. The list is ordered. | md:CompObjEntry-type | 0..n |
| ContentID | | Content ID for item in the Composite Object. It is assumed the metadata associated with this ContentID is available, and this field is used as an optimization to avoid repeating metadata. | md:ContentID-type | (choice) |
| BasicMetadata | | Basic Metadata for the entry. | md:BasicMetadata-type | (choice) |

Metadata is included either by inclusion (use of **BasicMetadata** element) or by reference (use of **ContentID** element). Use of **ContentID** is an optimization for situations where the metadata for that **ContentID** is already provided.

10 DIGITAL ASSET METADATA

Digital Asset Metadata describes includes relating to the Physical Asset that is distinct from the Logical Asset.

10.1 Digital Asset Metadata Description

A Digital Asset has certain properties that are not general to the Logical Asset and are therefore distinct from Basic Metadata. Digital Asset Metadata describes these properties. These data are distinct from Basic Metadata. The set of Digital Asset Metadata does not attempt to include all possible data about the Asset, only a subset of those most useful.

Metadata includes:

- Audio/video Encoding information
- Resolution, codec, frame rate, max bitrate

10.2 Definitions

10.2.1 DigitalAssetMetadata-type

| Element | Attribute | Definition | Value | Card. |
|---------------------------|-----------|-----------------------------|----------------------------------|----------|
| DigitalAssetMetadata-type | | | | |
| Audio | | Metadata for an audio asset | md:DigitalAssetAudioData-type | (choice) |
| Video | | Metadata for a video asset | md:DigitalAssetVideoData-type | (choice) |
| Subtitle | | Metadata for subtitles | md:DigitalAssetSubtitleData-type | (choice) |
| Image | | Metadata for Images | md:DigitalAssetImageData-type | (choice) |

10.2.2 DigitalAssetAudioData-type

| Element | Attribute | Definition | Value | Card. |
|----------------------------|-----------|------------|-------|-------|
| DigitalAssetAudioData-type | | | | |

| | | | | |
|----------------|--------|--|------------------------------|-------------|
| Description | | Description of the track. Description should be in the language given by the "Language" element below. | xs:string | 0..1 |
| Type | | The type of track. See Audio Track Encoding. If not present, track is assumed to be 'primary'. | xs:string | 0..1 |
| Language | | Language for the audio track as defined in Section 4.1. | xs:language | |
| | dubbed | If present and true, indicates Language is dubbed audio. | xs:boolean | 0..1 |
| Encoding | | Audio encoding information. If CODEC is not known, this should not be included. | md:DigitalAssetEncoding-type | <u>0..1</u> |
| Channels | | Number of audio channels, either as an integer (e.g., 2) or of the form x.y where x is full channels, and y is limited channels (e.g. "5.1") | xs:string | |
| TrackReference | | Track cross-reference to be used in conjunction with container-specific metadata (md:ContainerSpecific-type). | xs:string | 0..1 |

10.2.2.1 Type Encoding

If Type is present, it should have one of the following values:

- 'primary' – primary audio track. There may be multiple primary tracks, with one for each language
- ~~'descriptive'~~ Descriptive 'narration' - The visually impairment associated service is a complete program mix containing music, effects, dialogue, and additionally a narrative description of the picture content. The narration service may be coded using multiple channels. A Descriptive Video Service® (DVS®) track is a narration track.
- 'dialogcentric' - The hearing impaired associated service is a complete program mix containing music, effects, and dialogue with dynamic range compression. The dialog-centric service may be coded using multiple channels.
- ~~Audio for the visually impaired (e.g., DVS).~~
- 'commentary' – Commentary on the video. May be paired with a PIP.
- 'other' – not one of the above

10.2.3 DigitalAssetAudioEncoding-type

| Element | Attribute | Definition | Value | Card. |
|----------------------------|-----------|--|------------------|-------------|
| DigitalAssetAudioData-type | | | | |
| Codec | | Name of supported codec. See Codec encoding below. | xs:string | |
| <u>CodecType</u> | | <u>Formal reference identification of CODEC.</u> <u>See below</u> | <u>xs:string</u> | <u>0..n</u> |
| BitrateMax | | Bitrate (bits/second) | xs:integer | 0..1 |
| SampleRate | | Sample Rate (samples/second) | xs:integer | 0..1 |
| SampleBitDepth | | Number of bits per audio sample | xs:integer | 0..1 |

10.2.3.1 Audio CODEC Encoding

The following values should be used for elementary stream CODECs listed. “Other” should be used if the CODEC is not on the list. This list may be expanded over time.

- ‘AAC’ – Advanced audio CODEC
- ‘AAC-LC’
- ‘AAC-LC+MPS’
- ‘AAC-SLS’
- ‘AC-3’ – Dolby Digital, AC-3
- ‘AIFF’ – Audio Interchange File Format (when specific CODEC is not known)
- ‘ALAC’ – Apple Lossless Audio Codec
- ‘AMR’ – Adaptive MultiRate
- ‘DOLBY-TRUEHD’
- ‘DSD’ – Direct Stream Digital
- ‘DST’ – Direct Stream Transfer
- ‘DTS’ – DTS CODEC
- ‘DTS-ES’ – DTS ES (Extended Surround)
- ‘DTS-HRA’ – DTS-HD High Resolution Audio
- ‘DTS-96/24’ – DTS 96/24
- ‘DTS-MA’ – DTS-HD Master Audio

- ‘E-AC-3’ – Enhanced AC3, Dolby Digital Plus (DD+)
- ‘FLAC’ – Free Lossless Audio Codec
- ‘HE-AACv2’ – High Efficiency AAC v2
- ‘LPAC’ – Lossless Predictive Audio Compression
- ‘LTAC’ – Lossless Transform Audio Compression
- ‘MP3’ – MPEG 1 Layer 3
- ‘MPEG1’ – MPEG1 Layer 2
- ‘MPEG-4-ALS’
- ‘MLP’ – Meridian Lossless Package
- ‘PCM’ – Pulse Code Modulation, or Linear PCM
- ‘QCELP’ - Qualcomm Code Excited Linear Prediction
- ‘RealAudio-Lossless’ – Real Networks’ lossless format
- ‘Vorbis’ – Ogg Vorbis
- ‘WAV’ – used when specific CODEC (e.g., PCM) is unknown or not listed
- ‘WMA’ – Windows Media Audio
- ‘WM9-lossless’

~~It has been noted that there are standard references for CODECs including MPEG-4 Registration Authority (IANA) (. These should be considered as alternatives, if not primary.~~

10.2.3.2 CodecType Encoding

CodecType allows a more formal encoding of CODEC type based on formal registries. CodecType takes the form

<namespace> + ‘:’ + <codec type>

<namespace> is accordance with the following table:

| <u>Namespace</u> | <u>Definition</u> | <u>Reference for <codec type></u> |
|------------------|---|--|
| <u>mpeg4ra</u> | <u>MPEG 4 Registration Authority</u> | <u>http://www.mp4ra.org/codecs.htm</u> |
| <u>IANA</u> | <u>Internet Assigned Numbers Authority (IANA) Audio Media Types</u> | <u>http://www.iana.org/assignments/media-types/audio/</u> |
| <u>rfc4281</u> | <u>CODEC encoded in according with RFC4281</u> | <u>http://www.ietf.org/rfc/rfc4281.txt</u> |

Only one entry per namespace is allowable.

10.2.4 DigitalAssetVideoData-type

| Element | Attribute | Definition | Value | Card. |
|-----------------------------------|-----------|--|-----------------------------------|-------|
| DigitalAssetVideoData-type | | | | |
| Description | | Description of this video track | xs:string | 0..1 |
| Type | | Type of video track. If Type is missing, 'primary' is assumed. See Video Track Type encoding below. | xs:string | 0..1 |
| Encoding | | Details on Video Encoding. If CODEC is unknown, this element should not be included. | md:DigitalAssetVideoEncoding-type | 0..1 |
| Picture | | Picture description | md:DigitalAssetVideoPicture-type | |
| ColorType | | Color type of video. Note that Color Type is also included in descriptive metadata, however, this provides information down to the individual stream. | md:ColorType-type | |
| SubtitleLanguage | | Indicates the presence of subtitles embedded in the video stream, either closed (e.g., EIA-608B) or rendered into the video. This is distinguished from subtitles handled via separate tracks. Subtitles in separate tracks should be included in DigitalAssetMetadata-type's Subtitle element. Language encoding is defined in Section 4.1. | xs:language | 0..1 |
| | closed | Indicates whether captions are closed. | xs:boolean | 0..1 |
| TrackReference | | Track cross-reference to be used in conjunction with container-specific metadata (md:ContainerSpecific-type). | xs:string | 0..1 |

10.2.4.1 Video Type Encoding

Type, if present, should have one of the following values:

- 'primary' – primary video track. Whether or not this has burned-in subtitled is determined by the presence of the SubtitleLanguage element
- 'overlay' – PIP or other overlay track, intended for use with a 'primary' track
- 'angle' – alternate angle track

- ‘other’ - not one of the above

10.2.5 DigitalAssetVideoEncoding-type

| Element | Attribute | Definition | Value | Card. |
|--------------------------------|-----------|--|------------------|-------------|
| DigitalAssetVideoEncoding-type | | | | |
| Codec | | CODEC used. See Video CODEC Encoding below. | xs:string | |
| <u>CodecType</u> | | <u>Formal reference identification of CODEC. See below</u> | <u>xs:string</u> | <u>0..n</u> |
| MPEGProfile | | MPEG Profile | xs:string | 0..1 |
| MPEGLLevel | | MPEG Level (e.g., “3”, “4”, “1.3”) | xs:string | 0..1 |
| BitrateMax | | Bitrate (bits/second) | xs:integer | 0..1 |

10.2.5.1 Video CODEC Encoding

The following values should be used for elementary stream CODECs listed. ‘Other’ should be used if the CODEC is not on the list. This list may be expanded over time.

- ‘AVI Uncompressed’
- ‘CineForm HD’
- ‘DIVX’
- ‘DV’ – DV, including variants such as DVCPRO, DVCAM, etc.
- ‘H.264’ – H.264, MPEG-4 Part 10
- ‘JPEG2000’ – JPEG 2000, ISO/IEC 15444
- ‘MOBICLIP’ – Actimagine’s Mobiclip CODEC
- ‘MPEG1’ – MPEG 1 Part 2
- ‘MPEG2’ – MPEG 2 Part 2
- ‘On2’ – On2 CODEC when not VP6, VP7 or VP8, or exact CODEC is unknown.
- ‘PHOTOJPEG’
- ‘PRORES’ – Apple ProRes
- ‘PRORESHQ’ – Apple ProRes HQ

- ‘PRORES422’ – Apple ProRes 422
- ‘QT Uncompressed’ – Apple QuickTime Uncompressed
- ‘REAL’ – RealNetworks’ RealVideo
- ‘Spark’ – Sorenson Spark
- ‘SVQ’ – Sorenson Video Quantizer
- ‘WMV’ – Windows Media Video when not WMV7, WVM8 or WMV9 or exact CODEC is unknown
- ‘WMV7’ – Windows Media Video 7
- ‘WMV8’ - Windows Media Video 8
- ‘WMV9’ – Windows Media Video 9
- ‘VC1’ – Microsoft VC-1
- ‘VP6’ – On2 VP6
- ‘VP7’ – On2 VP7
- ‘VP8’ – On2 VP8
- ‘XVID’ – Xvid
- ‘OTHER’ – not one of the above.

~~It has been noted that there are standard references for CODECs including MPEG 4 Registration Authority and IANA . These should be considered as alternatives, if not primary.~~

10.2.5.2 CodecType Encoding

CodecType allows a more formal encoding of CODEC type based on formal registries. CodecType takes the form

<namespace> + ':' + <codec type>

<namespace> is accordance with the following table:

| <u>Namespace</u> | <u>Definition</u> | <u>Reference for <codec type></u> |
|------------------|---|--|
| <u>mpeg4ra</u> | <u>MPEG 4 Registration Authority</u> | <u>http://www.mp4ra.org/codecs.htm</u> |
| <u>IANA</u> | <u>Internet Assigned Numbers Authority (IANA) Audio Media Types</u> | <u>http://www.iana.org/assignments/media-types/audio/</u> |

Only one entry per namespace is allowable.

10.2.6 DigitalAssetVideoPicture-type

| Element | Attribute | Definition | Value | Card. |
|-------------------------------|-------------------|---|--|-------------|
| DigitalAssetVideoPicture-type | | | | |
| AspectRatio | | Aspect ratio of picture. Note that this is not necessarily the original aspect ratio. These will be of the form n:m, for example, "16:9". The following should be used for the respective standard encoding: "16:9" "4:3", "1.85:1", "2.35:1", "1:1", etc.. | xs:string | |
| PixelAspect | | <u>PixelClass of pixel</u> aspect <u>ratios</u> | xs:string "square" "NTSC": "PAL" "other" | 0..1 |
| WidthPixels | | Number of columns of pixels encoded (e.g., 1920) | xs:int | 0..1 |
| HeightPixels | | Number of rows of pixels encoded (e.g., 1080) | xs:int | 0..1 |
| ActiveWidthPixels | | Number of active pixels. Must be less than or equal to <u>WidthPixelsColumnPixels</u> . | xs:int | 0..1 |
| ActiveHeightPixels | | Number of active pixels. Must be less than or equal to <u>HeightPixelsRowPixels</u> . | xs:int | 0..1 |
| FrameRate | | Frames/second. If interlaced, use the frame rate (e.g., NTSC is 30). | xs:int | 0..1 |
| | <u>multiplier</u> | <u>This attribute indicates whether the 1000/1001 multiple should be applied. There is only one legal value for this attribute which is "1000/1001". If present, then apply 1000/1001 multiplier to FrameRate. For example, a FrameRate of 30 with multiplier='1000/1001' defines an actual frame rate of 29.97. If the frame rate is integral, this attribute shall not be present</u> | xs:string <u>"1000/1001"</u> | <u>0..1</u> |
| Progressive | | Whether image is progressive. "true"=progressive, "false"=interlaced | xs:boolean | 0..1 |
| Type3D | | Type of 3D picture. Encoding currently undefined, <u>although it is intended for types such as "Anaglyph"</u> . | xs:string | 0..1 |

10.2.7 DigitalAssetSubtitleData-type

| Element | Attribute | Definition | Value | Card. |
|-------------------------------|-------------------------|--|----------------------------|----------------------|
| DigitalAssetSubtitleData-type | | | | |
| Format | | Format of subtitle. See Subtitle Format Encoding below. | xs:string | |
| | SDImage | Are subtitle images targeted towards SD included? 'true' means yes, 'false' or absent means no. This only applies if Format is 'Image' or 'Combined' | xs:boolean | 0..1 |
| | HDImage | Are subtitle images targeted towards HD included? 'true' means yes, 'false' or absent means no. This only applies if Format is 'Image' or 'Combined' | xs:boolean | 0..1 |
| Description | | Description of this subtitle track. Description is in the language of the Language element. | xs:string | 0..1 |
| Type | | Intended purpose or purposes of subtitle | xs:string | 1..n |
| FormatType | | Identification of subtitle format. See below | xs:string | 0..1 |
| Language | | Language. See Language Encoding in Section 4.1. | xs:language | |
| TrackReference | | Track cross-reference to be used in conjunction with container-specific metadata (md:ContainerSpecific-type). | xs:string | 0..1 |

10.2.7.1 Subtitle Type Encoding

[Type describes the intended use or uses of the subtitle. If the track has more than one intended use, then multiple instances of Type must be included. For example, a single track might be used for both 'normal' and 'SDH' uses.](#)

[The following values may be used:](#)

- [• 'normal' – subtitle used for languages](#)
- [• 'SDH' – Subtitles for deaf and hard-of-hearing.](#)
- [• 'large' – subtitles for visually impaired](#)
- [• 'forced' – used to indicate subtitles is required regardless of whether the user has enabled subtitles. The correct language subtitle track must be chosen. Often referred to as 'forced captions.' A Type of 'forced' must only be used in conjunction with other Type instances, when the track contains a mix of forced](#)

and non-forced subtitles. Generally, when ‘forced’ is used it is the only instance of Type.

- ‘commentary’ – commentary, such as associated with a commentary audio track.
- ‘other’ – subtitles for commentary, or other purposes.

10.2.7.1 10.2.7.2 Subtitle Format Encoding

It is anticipated that IANA or others will provide a registry for subtitle encoding schemes. At that time, this section will be revised to reflect a more standard means of describing the subtitle. In the meantime, the following values may be used for Subtitle /Format:

- ‘Text’ – text subtitle
- ‘Image’ – image/picture data
- ‘Combined’ – Subtitle encoding that includes both text and image

10.2.7.3 FormatType Encoding

FormatType may be one of the following:

- ‘3GPP’ – 3GPP Timed Text, MPEG 4 Part 17 Timed Text, ISO/IEC 14496-17.
- ‘Blu-Ray’
- ‘DCI’ – DCI Subtitle, SMPTE 428-7-2007 D-Cinema Distribution Master - Subtitle
- ‘DVB’ – DVB Subtitling, ETSI 300 743 ‘Digital Video Broadcasting (DVB); Subtitling systems (2006-11)
- ‘DVD’
- ‘SMPTE 21052-1 Timed Text’ – Timed Text Format (SMPTE-TT), SMPTE ST 2052-1:2010
- ‘SRT’ – SRT Subtitles
- ‘TTML’ – W3C Timed Text Markup Language (TTML) 1.0, W3C Recommendation 18 November 2010. <http://www.w3.org/TR/ttaf1-dfxp/>
- ‘WebVTT’ – WebVTT (Web Video Text Tracks)

10.2.8 DigitalAssetImageData-type

| Element | Attribute | Definition | Value | Card. |
|--|-----------|--|--------|-------|
| DigitalAssetImageData-type | | | | |
| <u>WidthPixels</u> <u>ColumnPixels</u> | | Number of columns of pixels (e.g., 1920) | xs:int | |

| | | | | |
|---------------------------------------|--|---|-----------|------|
| HeightPixelsRowPixels | | Number of rows of pixels (e.g., 1080) | xs:int | |
| Encoding | | MIME type indicating encoding method | xs:string | |
| TrackReference | | Track cross-reference to be used in conjunction with container-specific metadata (md:ContainerSpecific-type). | xs:string | 0..1 |

10.2.9 DigitalAssetInteractiveData-type

| Element | Attribute | Definition | Value | Card. |
|---|-----------|---|-------------|-------|
| DigitalAssetInteractiveData-type | | | | |
| Type | | Type of interactive track (TBD). | xs:string | |
| Language | | Language. See Language Encoding in Section 4.1. | xs:language | |
| TrackReference | | Track cross-reference to be used in conjunction with container-specific metadata (md:ContainerSpecific-type). | xs:string | 0..1 |

10.2.9.1 Interactive Data Type Encoding

There is currently no enumeration for Interactive Data.

11 CONTAINER METADATA

The Container Metadata describes the container that includes the various media pieces and the glue that holds them together.

11.1 Container Metadata Description

Logically speaking, the container holds a collection of tracks as described using `md:DigitalAssetMetadata-type`. The container packages these data in accordance with the rules for that container type, defined with the `md:ContainerType` element.

Often, the container type definition alone is not enough information to access the media in the container. `md:ContainerSpecificMetadata` may be included to provide any additional necessary information. Container-specific metadata definitions are not included in this version of the specification, so the `xs:any` type is used.

If `ContainerSpecificInformation` is provided, the `md:TrackRef` elements in the Digital Asset Metadata types may be used to cross reference. For example, container-specific metadata may map an MPEG-2 transport stream PID to a given Track.

11.2 Definitions

11.2.1 ContainerMetadata-type

This type describes a container that in turn contains one or more audio, video, subtitle or image tracks.

| Element | Attribute | Definition | Value | Card. |
|-------------------------------|-----------|--|--|-------|
| ContainerMetadata-type | | | | |
| ContainerType | | Identification of container type | <code>md:DigitalAssetContainerType-type</code> | 0..1 |
| Track | | Track metadata. | <code>md:DigitalAssetMetadata-type</code> | 1..n |
| ContainerSpecificMetadata | | Additional information about the content and structure of the container. In the future, container-specific information will be provided. | <code>xs:any</code> | 0..1 |

11.2.1.1 Container Type encoding, ContainerType-type

Container type is of simple type `ContainerType-type` that is `xs:string`.

It may contain one of the following values:

- ‘3GP’ – Third Generation Partnership Project (3GPP) file format
- ‘3GP2’ – 3GPP2 file format
- ‘AC3’ – Dolby Digital file
- ‘AIFF’ – Audio Interchange File Format
- ‘ASF’ – Microsoft Advanced Streaming Format
- ‘AVI’ – Microsoft Audio Video Interleave, also includes AVI 2.0
- ‘DIVX’ – DivX movie file
- ‘DTS’ – DTS encoded file
- ‘FLV’ – Flash Video File
- ‘HCT’/‘HCT’ – Hectavision file/File
- ‘ISO’ – ISO Container ISO/IEC 14496-12, when not specified in a more specific fashion (e.g, MP4)
- ‘JPEG’ – JPEG image file
- ‘M4V’ – Apple M4V
- ‘MJ2’ – JPEG 2000 file format; ‘ISO’ containing JPEG 2000
- ‘MP4’ – MPEG-4 Part 14, ISO/IEC 14496-14:2003
- ‘MKV’ – Matroska multimedia container
- ‘MPEG-2 (TS)’ – MPEG-2 Transport stream
- ‘MPEG-2 (PS)’ – MPEG-2 Program Stream
- ‘MXF’ – SMPTE MXF file
- ‘Ogg’ – Xiph.Org file format for Vorbis and Theora
- ‘Quicktime (MOV)’ – Apple QuickTime movie file
- ‘PNG’ – Portable Network Graphics (PNG) file
- ~~‘RM’ – RealNetwork’s RealMedida file format~~
- ‘RIFF’ – Resource Interchange File Format
- ‘RM’ – RealNetwork’s RealMedia file format
- ‘SWF’ – Adobe Shockwave Flash
- ‘TIFF’ – tagged image file format
- ‘WMV’ – Microsoft WMV file
- ‘VOB’ – DVD Video Object file
- ‘XMF’ – XMF music file (MIDI)
- ‘ZIP’ – ZIP file

-
- ‘other’

If the format is not in this list, it is acceptable to include the Windows file extension. When using this form, precede with ‘EXT:’. For example, ‘EXT:DXR’ for Macromedia Director Movie File (.dxr file extension).

Standard encoding is preferred and will be investigated.

11.2.2 ContainerProfile-type

ContainerProfile-type is defined as xs:string. It may be used to specify a profile for a given container. There are no enumerations currently defined.

12 CONTENT RATINGS

Common Metadata supports content advisory based on formal ratings systems along with an “Adult only” flag for non-rated adult material and to allow limited cross-system blocking of content.

12.1 Description

Ratings are of the form: Region/System/Rating/Reason. There is also type (e.g., Film, TV and Music) but this is generally subsumed by the System and implicit in the content (exceptions are handled).

12.2 Rules

There is no implied cross-mapping between advisory systems.

12.2.1 “Unrated”

‘Unrated’ literally means that this particular media instance has not been rated. This frequently means that a work has never been self-rated or submitted to a ratings body, either because of the nature of the work (e.g., a sporting event) or for budgetary reasons.

‘Unrated’ is also used as a marketing term to reflect a work that contains additional material, generally implied as material that would change the rating, often represented something like, “*The Unrated Edition*”.

The rating system does not distinguish between the two. However, as a best practice, if the unrated work is derived from a rated work, the parent work should be included in the Parent element of the BasicMetadata-type with a relationshipType attribute of ‘isderivedfrom’. Although the content is still unrated, the recipient will have additional information on how they may wish to classify the work.

12.3 Definition

This section specifies the structure that can include a complete content rating set for a title.

12.3.1 ContentRating-type

This element describes content-specific parental control information as provided by the content owner or rating agency.

NotRated and RatingsMatrix are an XSD ‘choice’. If NotRated is chosen, it must be ‘true’.
NotRated is used if there are no other ratings.

The absence of a rating in a particular system does not necessarily imply the content is unrated. However, in most cases it can assumed that it is unrated. Specifications based on Common Metadata should include a requirement that all relevant ratings be included if available.

| Element | Attribute | Definition | Value | Card. |
|--------------------|------------------|---|-----------------------------|------------------|
| ContentRating-type | | | | |
| NotRated | | Has the content never been rated? 'true'=not rated. Must be 'true' if included. | xs:boolean | (choice) |
| | <u>condition</u> | <u>An indication of the nature of the unrated status.</u> | <u>xs:string</u> | <u>0..1</u> |
| Rating | | Rating information | md:ContentRatingDetail-type | (choice) 1..n |
| AdultContent | | Should content be blocked for all non-adult viewers? 'true'= yes. 'false' or absent means no. There is no formal definition of 'adult' content, and this represents the judgment of the originator. | xs:boolean | 0..1 |

NotRated is distinguished from “unrated”. As mentioned above, the term “unrated” is often used as a marketing term. “unrated” may be used as a keyword to indicate this type of version.

12.3.1.1 Condition encoding

Condition is an indication of why the work is unrated. If condition is absent, no conclusions can be drawn regarding why work is unrated.

If the BasicMetadata-type element has a parent element and condition is included, the values shall be one of the following:

- ‘higher’ – The intent is for the work to have a rating higher than or equal to the parent’s rating. This is typically used for the “Unrated Edition” edits.
- ‘neutral’ –The work was not explicitly rated, but is intended to have the same rating as its parent object.
- ‘lower’ – The work is derived in such a way as to lower the rating. The intent is for the work to have a rating lower than or equal to the parent’s rating. This would be typical of TV or airplane edit. This would also apply to edits for particular cultural or religious sensitivities.

If the BasicMetadata-type element does not have a parent element and condition should not be included. This can be interpreted as “never rated.”

12.3.2 ContentRatingDetail-type

This element describes content-specific parental control information as provided by the content owner or rating agency.

Values come from Section 13, “Content Rating Encoding”. Values should be exactly as entered in the table in Section 8.

| Element | Attribute | Definition | Value | Card. |
|--------------------------|-----------|--|------------------|-------------|
| ContentRatingDetail-type | | | | |
| Region | | Country/Region. Uses region encoding | md:Region-type | |
| System | | Rating System | xs:string | |
| Value | | Rating Value | xs:string | |
| Reason | | Rating Reason. <u>Only one Reason per element (i.e., either “L” or “V”, but not “LV”).</u> | xs:string | 0..n |
| LinkToLogo | | If there is an image associated with this rating, the link may be provided | xs:anyURI | 0..1 |
| <u>Description</u> | | <u>A string associated with the rating, such as, “Rated PG For mild thematic elements and brief smoking”</u> | <u>xs:string</u> | <u>0..1</u> |

13 CONTENT RATING ENCODING

| Region | Type | System | Ratings | Reason | Reference |
|-----------|-----------------|----------|---|--|--|
| Argentina | Film | INCAA | ATP 13 16 18 X | A S | www.incaa.gov.ar |
| Australia | TV | ACMA | P C G PG M MA15+ AV15+ | A V L S H D N SN M W B | www.acma.gov.au |
| Australia | Film | OFLC | E G G8+ PG M MA15+ R18+ X18+ | | Classification Review Board www.classification.gov.au |
| Austria | Film | BMUKK | Altersstufen 6 10 12 14 16 E | | www.bmukk.gv.at |
| Belgium | Film DVD | CICF/lvF | KT KNT E | | www.terrmedia.co.uk/law/film_classification_schemes.htm |
| Brazil | Film & TV | DJCTQ | ER L 10 12 14 16 18 E | A L S V N D | www.mj.gov.br |

| Region | Type | System | Ratings | Reason | Reference |
|--|------|---------|---------------------------------------|-----------------------------------|---|
| Bulgaria | Film | NFRC | A B C D X E | Children, educational A | National Film Rating Committee www.absoluteastronomy.com/topics/Motion_picture_rating_system |
| Canada | TV | CBSC | C C8 G PG 14+ 18+ E | | www.cbsc.ca |
| Canada British Columbia Saskatchewan Yukon | Film | BCFCO | G PG 14A 18A R A | | British Columbia Film Classification Office www.bcfilmclass.com/ |
| Canada Alberta Northwest Territories Nunavut | Film | Alberta | G PG 14A 18A R A | | Alberta Film Ratings www.albertafilmratings.ca/ |
| Canada Manitoba | Film | MFCB | G PG 14A 18A R | | Manitoba Film Classification Board www.gov.mb.ca/chc/mfcb/ |
| Canada Ontario | Film | OFRB | G PG 14A 18A R | | Ontario Film Review Board www.ofrb.gov.on.ca/english/default.htm |
| Canada Quebec | Film | Quebec | G 13+ 16 + 18 + | | Regie du cinema du Quebec www.rcq.qc.ca/mult/home.asp?lng=en |

| Region | Type | System | Ratings | Reason | Reference |
|--|------|----------|---|-------------|--|
| Canada Nova Scotia New Brunswick Prince Edward Island | Film | Maritime | G PG 14 14A 18 18A R A E NA XXX | | Maritime Film Classification Board www.gov.ns.ca/lwd/agd/film/rating/guidelines.asp |
| Canada | Game | ESRB | C E E10 M A T RP | | Entertainment Software Ratings Board www.esrb.org |
| Chile | TV | ANATEL | I 17 I12 F R A | | www.anatel.cl |
| Chile | Film | CCC | TE 14 18 18S 18V | S S V | Council of Cinematographic Classification www.filmnacional.cl |
| <u>Columbia</u> <u>Colombia</u> | Film | MoC | T 7 12 16 18 X Banned E | P | www.mincultura.gov.co |
| Czech Republic | Film | Film | U 12 15 18 | | |
| Denmark | TV | TV | Green Yellow Red | | |
| Denmark | Film | MCCYP | A 7 11 15 | | Medieradet www.medieraadet.dk/html/gb/classification_gb.htm |

| Region | Type | System | Ratings | Reason | Reference |
|----------------|-------|--------|--|--------|---|
| Egypt | Film | Film | G A E | | |
| Estonia | Film | Film | Pere L MS-6 MS12 K12 K14 K16 K6 | | |
| European Union | Games | PEGI | 3 7 12 16 18 | | www.pegi.info/en/index/id/33/ |
| FinlanSd | Film | FBFC | K3 K7 K11 K13 K15 K18 KE | | Finnish Board of Film Classification www.vet.fi |
| Finland | | VET | 3 7 11 15 18 | | www.vet.fi |
| Finland | | PEGI | 3+ 7+ 11+ 15+ 18+ | | www.vet.fi |
| France | TV | CSA | 10 12 16 18 | | www.csa.fr |
| France | Film | MoC | U 10 12 16 18 | P V | Ministry of Culture www.culture.gouv.fr |

| Region | Type | System | Ratings | Reason | Reference |
|-----------|-------|--------|--|-------------|--|
| Germany | Film | FSK | FSK 0 FSK 6 FSK 12 FSK 16 FSK 18 Keine Jugendfreigabe SPIO/JK | | www.spio.de |
| Germany | Games | USK | ALL AGES 6+ 12+ 16+ 18+ | | www.usk.de |
| Greece | Film | Flim | K K13 K17 E | V D P | |
| Hong Kong | Film | TELA | I IIA IIB III | PG | Television and Entertainment Licensing Authority www.tela.gov.hk |
| Hungary | Film | Film | KN 12 16 18 | | National Film Office www.nemzetifilmiroda.hu/start_en.html |
| Iceland | Film | Smais | L 7 12 14 16 18 | | www.smais.is/template25024.asp?PageID=4636 |
| India | Film | CBFC | U U/A A S | | www.cbfcindia.tn.nic.in |
| Indonesia | Film | LSF | SU A BO R D | | Lembaga Sensor Film www.lsf.go.id |
| Ireland | TV | RTE | GA CH YA PS MA | | www.rte.ie |

| Region | Type | System | Ratings | Reason | Reference |
|----------|--------------|--------|---|-------------|--|
| Ireland | Film | IFCO | G PG 12A 15A 16 18 | V S A | www.ifco.ie |
| Ireland | DVD | IFCO | G PG 18 | | www.ifco.ie |
| Israel | Film | Film | 16 18 PG X | | |
| Italy | Film | Film | T VM14 VM18 X | | Commissione di Revisione Cinematografica |
| Italy | TV | TV | Green Yellow Red Red+VM14 | | |
| Japan | Film | EIRIN | G PG-12 R-15 R-18 | | www.eirin.jp |
| Japan | Games | CERO | A B C D Z | | www.cero.gr.jp |
| Latvia | Film | NFC | V VP-10 VP-12 N-12 N-14 N-16 N-18 | | www.nfc.lv |
| Malaysia | Film & TV | Film | U PG-13 18SG 18SX 18PA 18PL | | Film Censorship Board |

| Region | Type | System | Ratings | Reason | Reference |
|-------------|-----------|---------------|---|-----------------------------|--|
| Maldives | Film & TV | NBC | G PG 12+ 15+ 18+ 18+R PU | | www.nbc.gov.mv |
| Malta | Film | KRS | U PG 12 14 16 18 | | Board of Film & Stage Classification www.doi.gov.mt/EN/bodies/boards/film.asp |
| Mexico | Film & TV | RTC | AA A B B-15 C D | | www.rtc.gob.mx |
| Netherlands | Film & TV | Kijkwijzer | AL 6 9 12 16 | Vi S S D D L | www.kijkwijzer.nl |
| New Zealand | Film & TV | OFLC | G PG M R13 R15 R16 R18 RP13 RP16 R | | Office of Film & Literature Classification Māori: Te Tari Whakaropu Tukuata www.censorship.govt.nz |
| Nigeria | Film | NFVCB | G PG 12 12A 15 18 RE | | www.nfvcb.gov.ng |
| Norway | Film | Medietilsynet | A 7 11 15 18 | | film.medietilsynet.no/Film/Om_aldersgrenser |

| Region | Type | System | Ratings | Reason | Reference |
|-------------|------------|--------|---|----------|--|
| Peru | TV & Film | Film | PT PG 14 18 | | |
| Philippines | TV | MTRCB | General Patronage Parental Guidance | | http://www.op.gov.ph/ |
| Philippines | Film | MTRCB | G(P) PG-13 R R-13 R-18 X | | http://www.op.gov.ph/ |
| Poland | TV | KRRiT | Green Circle Yellow Circle Red Circle Yellow 7 Yellow 12 Yellow 16 | | http://www.krrit.gov.pl/bip/ National Council of Radio Broadcasting and Television |
| Poland | Film TV | KRRiT | BO Green Circle Yellow Triangle 6 7 8 9 10 12 15 18 Red Circle 21 Green Circle Yellow 7 Yellow 12 Yellow 16 Red Circle | | http://www.krrit.gov.pl/bip/ National Council of Radio Broadcasting and Television |
| Portugal | Film | CCE | 4 6 12 16 18 P Q | P1 P2 | Comissão de Classificação de Espectáculos of the Ministry of Culture. www.cce.org.pt/ |

| Region | Type | System | Ratings | Reason | Reference |
|--------------------|-------------------------------|--------|--|----------------------------|--|
| Romania | Film | CNA | AG AP12 N15 IM18 IM18XXX IC | | National Audiovisual Council of Romania www.cna.ro |
| Korea, Republic of | Film | KMRB | All 12+ 15+ 18+ Limited | | Korea Media Rating Board www.kmr.or.kr/ |
| Serbia | TV | RBA | 12 14 16 18 | | Serbian Republic Broadcasting Agency www.rba.org.yu |
| Singapore | Film | MDA | G PG NC16 M18 R18 R21 | | Media Development Authority www.mda.gov.sg |
| Spain | Film | Film | TP 7 13 15 16 18 X | | Instituto de la Cinematografía y de las Artes Audiovisuales |
| South Africa | TV | FPB_TV | Family PG 13 16 18 R18 | V N S L P D | Film and Publication Board www.fpb.gov.za |
| South Africa | Film Video DVD Games | FPB | A PG 10M 10 13 16 18 | V N S L P B | Film and Publication Board www.fpb.gov.za |
| Sweden | Film | SBB | Btl 7 11 15 Prohibited | | National Board of Film Censors www.statensbiografbyra.se |

| Region | Type | System | Ratings | Reason | Reference |
|--------------------------|-----------|--------|--|------------------------|--|
| Switzerland | Film | Film | 0 7 10 6 12 14 16 18 | | Vaud and Geneva <u>Convention sur une commission nationale du film et de la protection des mineur. Effective 1 July 2011.</u> http://www.kkjpd.ch/images/upload/091112%20Vereinbarung%20Kommission%20Jugenschutz-Film%20f.pdf |
| Taiwan | Film | GIO | General audiences Protected Parental guidance Restricted | | Government Information Office www.gio.gov.tw |
| Thailand | Film | MFA | P G Under 13 Under 15 Under 18 Under 13 Under 15 Under 18 | | National Film Board www.mfa.go.th/web/2632.php |
| Turks and Caicos Islands | Film | Film | U U – w/c 7 11 13 16 16 w/P 18 Banned | | British Overseas Territory Rating system |
| United Kingdom | Film & TV | BBFC | U PG 12A 12 15 18 R18 | | British Board of Film Classification www.bbfc.co.uk |
| United Kingdom | Games | ELSPA | 3-10 11-14 15-17 18+ | | www.elspa.com |
| United States | TV | TVPG | TV-G TV-Y TV-Y7 TV-Y7-FV TV-PG TV-14 TV-MA | V S L D FV | TV Guidelines Rating and Reason definitions are defined in [CEA-766]. Only Rating/Reason combinations specified in [CEA766], Table 3 under dimension 0-6 are allowed. |

| Region | Type | System | Ratings | Reason | Reference |
|---|-----------------|--------------|---|--|--|
| United States | Film | MPAA | G PG PG-13 R NC-17 NR M GP SMA X | | www.mpaa.org |
| <u>United States</u> | <u>Trailers</u> | <u>MPAAT</u> | <u>GB</u> <u>RB</u> | | www.mpaa.org <u>GB (Green Band) and RB (Red Band) apply only to trailers</u> |
| United States / Film Advisory Board | Film | FAB | C F PD PD-M EM AO | violence frightening sexual mildlang stronglang substance intense bnudity fnudity explicit erotica | www.filmadvisoryboard.org |
| United States | Music | RIAA | Explicit Lyrics | | www.riaa.com |
| United States | Games | ESRB | EC E E10+ T M AO RP | | www.esrb.org |
| Venezuela | TV | | A B C D E | | www.leyresorte.gob.ve |

14 SELECTED EXAMPLES

Following are selected examples. These and other examples will appear on the web site.

14.1 People Name Examples

The following example was based on this test schema

```
<xs:element name="Person-name" type="md:PersonName-type"/>
<xs:element name="People">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Person" type="md:BasicMetadataPeople-type"
maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following example covers the following people: Gorillaz, Kid n' Play, Cher, 50 Cent, MC Hammer, Dita von Teese, Marilyn Manson, Teenage Mutant Ninja Turtles, James van der Beek, Max von Sydow, Kat von D, Benjamin "Scatman" Crothers, and Peter Sellers. Note that Teenage Mutant Ninja Turtles is not a real entity and therefore will not be encoded, but it was included to test completeness.

```
<mdtest:People xsi:schemaLocation="http://www.movielabs.com/md/mdtest
mdtest.xsd" xmlns:md="http://www.movielabs.com/md"
xmlns:mdtest="http://www.movielabs.com/md/mdtest"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <mdtest:Person>
    <md:Job>
      <md:JobFunction>Music Group</md:JobFunction>
      <md:JobDisplay>Band</md:JobDisplay>
    </md:Job>
    <md:Name>
      <md:DisplayName>Gorillaz</md:DisplayName>
      <md:SortName>Gorillaz</md:SortName>
    </md:Name>
    <md:Gender>neutral</md:Gender>
  </mdtest:Person>
  <mdtest:Person>
    <md:Job>
      <md:JobFunction>Other Group</md:JobFunction>
      <md:JobDisplay>Comedy Duo</md:JobDisplay>
    </md:Job>
    <md:Name>
      <md:DisplayName>Kid 'n Play</md:DisplayName>
      <md:SortName>Kid 'n Play</md:SortName>
    </md:Name>
    <md:Gender>male</md:Gender>
  </mdtest:Person>
```

```

<mdtest:Person>
  <md:Job>
    <md:JobFunction>Singer</md:JobFunction>
    <md:JobDisplay>Singer</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>Cher</md:DisplayName>
    <md:SortName>Cher</md:SortName>
  </md:Name>
  <md:Gender>female</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Singer</md:JobFunction>
    <md:JobDisplay>Rapper</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>50 Cent</md:DisplayName>
    <md:SortName>50 Cent</md:SortName>
    <md:FirstGivenName>Curtis</md:FirstGivenName>
    <md:SecondGivenName>James</md:SecondGivenName>
    <md:FamilyName>Jackson</md:FamilyName>
    <md:Suffix>III</md:Suffix>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Singer</md:JobFunction>
    <md:JobDisplay>Rapper</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>MC Hammer</md:DisplayName>
    <md:SortName>MC Hammer</md:SortName>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Dancer</md:JobFunction>
    <md:JobDisplay>Burlesque Dancer</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>Dita von Teese</md:DisplayName>
    <md:SortName>Von Teese, Dita</md:SortName>
    <md:FirstGivenName>Dita</md:FirstGivenName>
    <md:FamilyName>Von Teese</md:FamilyName>
  </md:Name>
  <md:Gender>female</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Singer</md:JobFunction>
    <md:JobDisplay>Singer</md:JobDisplay>
  </md:Job>

```

```
</md:Job>
<md:Name>
  <md:DisplayName>Marilyn Manson</md:DisplayName>
  <md:SortName>Mason, Marilyn</md:SortName>
  <md:FirstGivenName>Marilyn</md:FirstGivenName>
  <md:FamilyName>Manson</md:FamilyName>
</md:Name>
<md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Other Group</md:JobFunction>
    <md:JobDisplay>Superhero Turtles</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>Teenage Mutant Ninja Turtles</md:Display>
    <md:SortName>Teenage Mutant Ninja Turtles</md:SortName>
  </md:Name>
  <md:Gender>neutral</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Actor</md:JobFunction>
    <md:JobDisplay>Actor</md:JobDisplay>
    <md:BillingBlockOrder>1</md:BillingBlockOrder>
    <md:Character>Dawson Leery</md:Character>
  </md:Job>
  <md:Name>
    <md:DisplayName>James Van Der Beek</md:Display>
    <md:SortName>Van Der Beek</md:SortName>
    <md:FirstGivenName>James</md:FirstGivenName>
    <md:SecondGivenName>William</md:SecondGivenName>
    <md:FamilyName>Van Der Beek</md:FamilyName>
    <md:Suffix>Jr.</md:Suffix>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Actor</md:JobFunction>
    <md:JobDisplay>Actor</md:JobDisplay>
    <md:Character>Otto Frank</md:Character>
  </md:Job>
  <md:Name>
    <md:DisplayName>Max von Sydow</md:Display>
    <md:SortName>von Sydow</md:SortName>
    <md:FirstGivenName>Max</md:FirstGivenName>
    <md:FamilyName>von Sydow</md:FamilyName>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Artist/Performer</md:JobFunction>
```

```

    <md:JobDisplay>Tattoo Artist</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>Kat von D</md:DisplayName>
    <md:SortName>String</md:SortName>
    <md:FirstGivenName>Kat</md:FirstGivenName>
    <md:FamilyName>von D</md:FamilyName>
  </md:Name>
  <md:Gender>female</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Singer</md:JobFunction>
    <md:JobDisplay>Scat Singer</md:JobDisplay>
  </md:Job>
  <md:Name>
    <md:DisplayName>Scatman Crothers</md:DisplayName>
    <md:SortName>Scatman Crothers</md:SortName>
    <md:FirstGivenName>Benjamin</md:FirstGivenName>
    <md:SecondGivenName>Sherman</md:SecondGivenName>
    <md:FamilyName>Crothers</md:FamilyName>
    <md:Moniker>Scatman</md:Moniker>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
<mdtest:Person>
  <md:Job>
    <md:JobFunction>Actor</md:JobFunction>
    <md:JobDisplay>Actor</md:JobDisplay>
    <md:BillingBlockOrder>1</md:BillingBlockOrder>
    <md:Character>Group Captain Lionel Mandrake</md:Character>
    <md:Character>President Merkin Muffley</md:Character>
    <md:Character>Dr. Strangelove</md:Character>
  </md:Job>
  <md:Name>
    <md:DisplayName>Peter Sellers</md:DisplayName>
    <md:SortName>Sellers</md:SortName>
    <md:FirstGivenName>Peter</md:FirstGivenName>
    <md:FamilyName>Sellers</md:FamilyName>
  </md:Name>
  <md:Gender>male</md:Gender>
</mdtest:Person>
</mdtest:People>

```

14.2 Release History Example

The following example is based on this test schema:

```

<xs:element name="ReleaseHistorySet">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="ReleaseHistory" type="md:ReleaseHistory-type"
maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```



```

    </xs:sequence>
  </xs:complexType>
</xs:element>

```

The following history is included:

- US Theatrical: 2008-02-08
- US Fullscreen DVD: 2008-06-17
- US Widescreen DVD: 2008-06-17
- UK Theatrical: 2008-05-30
- UK DVD: 2008-09-22

```

<mdtest:ReleaseHistorySet
xsi:schemaLocation="http://www.movielabs.com/md/mdtest mdtest.xsd"
xmlns:md="http://www.movielabs.com/md"
xmlns:mdtest="http://www.movielabs.com/md/mdtest"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <mdtest:ReleaseHistory>
    <md:ReleaseType>original</md:ReleaseType>
    <md:DistrTerritory>
      <md:country>US</md:country>
    </md:DistrTerritory>
    <md>Date>2008-02-08</md>Date>
    <md>Description>US Theatrical Release</md>Description>
  </mdtest:ReleaseHistory>
  <mdtest:ReleaseHistory>
    <md:ReleaseType>DVD</md:ReleaseType>
    <md:DistrTerritory>
      <md:country>US</md:country>
    </md:DistrTerritory>
    <md>Date>2008-06-17</md>Date>
    <md>Description>US Fullscreen Edition</md>Description>
  </mdtest:ReleaseHistory>
  <mdtest:ReleaseHistory>
    <md:ReleaseType>DVD</md:ReleaseType>
    <md:DistrTerritory>
      <md:country>US</md:country>
    </md:DistrTerritory>
    <md>Date>2008-06-17</md>Date>
    <md>Description>US Widescreen Edition</md>Description>
  </mdtest:ReleaseHistory>
  <mdtest:ReleaseHistory>
    <md:ReleaseType>original</md:ReleaseType>
    <md:DistrTerritory>
      <md:country>UKGB</md:country>
    </md:DistrTerritory>
    <md>Date>2008-05-30</md>Date>
    <md>Description>UK Theatrical Release</md>Description>
  </mdtest:ReleaseHistory>
</mdtest:ReleaseHistorySet>

```

```

<md:ReleaseType>DVD</md:ReleaseType>
<md:DistrTerritory>
  <md:country>UKGB</md:country>
</md:DistrTerritory>
<md>Date>2008-09-22</md>Date>
<md>Description>UK Release</md>Description>
</mdtest:ReleaseHistory>
</mdtest:ReleaseHistorySet>

```

14.3 Content Rating Examples

The following example was based on this test schema:

```
<xs:element name="RatingSet" type="md:ContentRating-type"/>
```

The following ratings are given:

- US, MPAA, PG-13
- UK, BBFC, 12
- US, TV Parental Guidelines, TV14, coarse or crude language, sexual situations and violence
- Canada/Ontario, OFRB, 14A

```

<mdtest:RatingSet
  xsi:schemaLocation="http://www.movielabs.com/md/mdtest mdtest.xsd"
  xmlns:md="http://www.movielabs.com/md"
  xmlns:mdtest="http://www.movielabs.com/md/mdtest"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <md:Rating>
    <md:Region>
      <md:country>US</md:country>
    </md:Region>
    <md:System>MPAA</md:System>
    <md:Value>PG-13</md:Value>
    <md:LinkToLogo>http://www.mpa.org/_images/parental-
strongly.gif</md:LinkToLogo>
  </md:Rating>
  <md:Rating>
    <md:Region>
      <md:country>UKGB</md:country>
    </md:Region>
    <md:System>BBFC</md:System>
    <md:Value>12</md:Value>
    <md:LinkToLogo>http://www.bbfc.co.uk/images/classification/c-
12.gif</md:LinkToLogo>
  </md:Rating>
  <md:Rating>
    <md:Region>
      <md:country>US</md:country>

```

```
</md:Region>
<md:System>TVPG</md:System>
<md:Value>TV14</md:Value>
<md:Reason>LSVL</md:Reason>
<md:Reason>S</md:Reason>
<md:Reason>V</md:Reason>

<md:LinkToLogo>http://www.tvguidelines.org/images/tv14.jpg</md:LinkToLo
go>
  </md:Rating>
  <md:Rating>
    <md:Region>
      <md:countryRegion>CA-ON</md:countryRegion>
    </md:Region>
    <md:System>OFRB</md:System>
    <md:Value>14A</md:Value>

<md:LinkToLogo>http://www.ofrb.gov.on.ca/english/images/14a_high.gif</m
d:LinkToLogo>
  </md:Rating>
</mdtest:RatingSet>
```