



Using EIDR with IMF

Technical Note

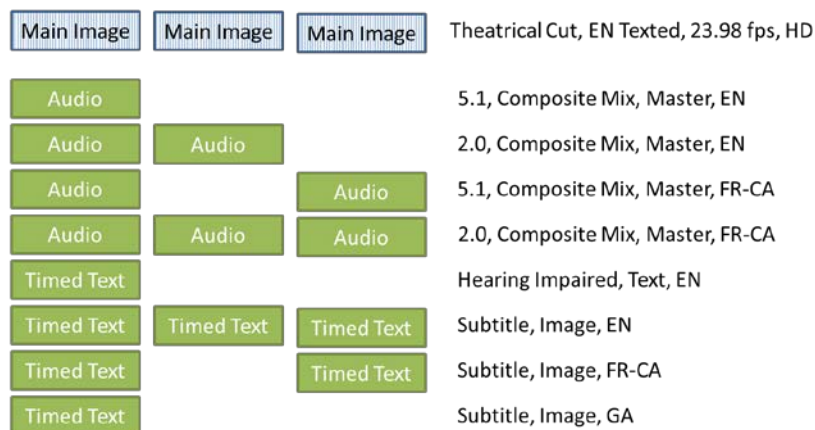
1 Scope

This Technical Note specifies best practices for using EIDR Content Identifiers to identify the audiovisual content of an Interoperable Master Format (IMF) Composition using EIDR Edit (Level 2) and Manifestation (Level 3) IDs. This practice accounts for the fact that there may be multiple versions of the same work or more than one unique IMF representation of a work active at the same time.

2 Overview

The audiovisual content of an IMF Composition is associated with a single Distribution Master, which consists of a Main Image track of a single complete work (movie, TV Episode, advertisement, etc.) plus some number of synchronized essence tracks.

Any change to the Main Image track (change to policy cards, aspect ratio, resolution, burn-ins, etc.) results in a new Distribution Master, but the addition (or removal) of synchronized essence tracks (subs and dubs) does not result in a new Distribution Master, simply a different inventory of items included in the Distribution Master. For example, all of the following represent the same Distribution Master because the Main Image is the same, while only the synchronized tracks differ.



Each vertical stack represents a single Distribution Master where the Main Image is unchanged. The Main Image track is identified with an EIDR Manifestation ID, registered as a descendent of the Main Image track's Edit ID.

3 Identifying a Distribution Master

3.1 Overview

The Distribution Master associated with a Composition is typically associated with up to four EIDR records, from high- to low-level:

- An EIDR Title (Level 1) record¹ that identifies the content in the abstract, e.g. the movie or TV episode;
- An EIDR Edit (Level 2) record that identifies a specific edit of the content;
- An EIDR Generic Manifestation (Level 3) record that identifies a specific sequence of images associated with the content; and
- An EIDR Digital Manifestation (Level 3) record that identifies a specific sequence of images (the Generic Manifestation) associated with a specific set of localized components, e.g. audio and subtitle tracks.

Best practices for the creation and selection of EIDR Title, Edit, and Manifestation records are documented in *Best Practices for Creating EIDR Title Records*, *Best Practices and Use Cases for EIDR Edits*, and *How to Use EIDR to Identify Versions for Distribution Purposes*. The sections that follow provide additional guidance on selecting Edit and Generic Manifestation records that match the audiovisual content of a Composition.

3.2 Selecting EIDR Identifiers

Distribution Masters are, by EIDR definition, Manifestations (EIDR Level 3) and SHOULD be identified by an EIDR Manifestation ID.

However, if there is only ever one Distribution Master per EIDR Edit ID, then the Edit ID is sufficiently differentiating and the Distribution Master MAY be identified by Title and Edit IDs² alone.

3.3 Storing EIDR Identifiers

The majority of Distribution Masters have a single Level 2 Edit ancestor in the EIDR registration tree. For these, the CPL `ContentVersionList` element:

- SHALL include exactly one `ContentVersion` element containing the EIDR Title ID (Level 1) of the Distribution Master;³
- SHALL include exactly one `ContentVersion` element containing the EIDR Edit ID (Level 2) of the Distribution Master; and
- SHOULD include exactly one `ContentVersion` element containing the EIDR Manifestation ID (Level 3) of the Distribution Master.

¹ A Title record is the first ancestor of an Edit record that is not an Edit record.

² This Edit record is the first non-Manifestation ancestor of the Distribution Master's specific Manifestation ID.

³ The Distribution Master can be unambiguously identified with just the Edit ID, but including the Title ID supports identification workflows without requiring Internet connectivity to resolve the Edit ID to retrieve the Title ID.

A `ContentVersion` element of the CPL that contains an EIDR Identifier SHOULD conform to the following:

- The `ContentVersion/Id` element SHALL be equal to the URN representation of the EIDR Identifier as specified in RFC 7972; and
- The `ContentVersion/Label` element SHOULD be set according to Table 1.

Table 1. `ContentVersion/Label` Format.

EIDR Record Type	<code>ContentVersion/Label</code>
Title	"EIDR Title (Level 1)"
Edit	"EIDR Edit (Level 2)"
Generic Manifestation	"EIDR Generic Manifestation (Level 3)"

EXAMPLE:

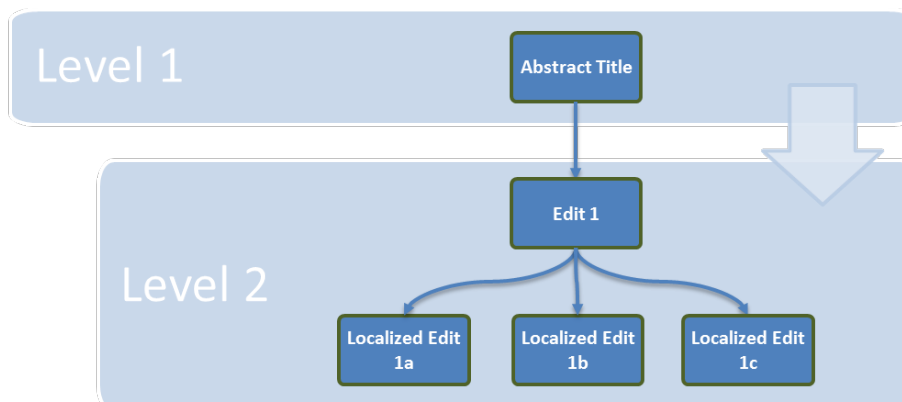
```
<ContentVersion>
  <Id>urn:eidr:10.5240:0CEC-3E15-7A54-6893-A8D9-6</Id>
  <Label>EIDR Title (Level 1)</Label>
</ContentVersion>
<ContentVersion>
  <Id>urn:eidr:10.5240:ECA3-005E-C21B-B02D-34C0-Z</Id>
  <Label>EIDR Edit (Level 2)</Label>
</ContentVersion>
```

EXAMPLE:

```
<ContentVersion>
  <Id>urn:eidr:10.5240:0CEC-3E15-7A54-6893-A8D9-6</Id>
  <Label>EIDR Title (Level 1)</Label>
</ContentVersion>
<ContentVersion>
  <Id>urn:eidr:10.5240:ECA3-005E-C21B-B02D-34C0-Z</Id>
  <Label>EIDR Edit (Level 2)</Label>
</ContentVersion>
<ContentVersion>
  <Id>urn:eidr:10.5240:4764-ED1B-685F-A54B-1445-X</Id>
  <Label>EIDR Generic Manifestation (Level 3)</Label>
</ContentVersion>
```

3.4 Storing EIDR Identifiers for Derived Versions

Occasionally, one version of a work is derived from another. For example, a local territory censorship cut may be derived from the original release version, while all of the local music versions (each with their own music cue sheet) may be derived from one common edit master. In EIDR, this relationship between source and derived versions may be represented using a hierarchical parent-child Edit (Level 2) relationship.



In these cases, the CPL `ContentVersionList` EIDR Title ID (Level 1) and element:

- SHALL contain EIDR Title (Level 1) and Manifestation (Level 3) IDs as described in the Section above; and
- SHALL include two ContentVersion elements containing the EIDR Edit IDs (Level 2) of the parent and child Edit, respectively.
 - The ContentVersion/Label element for the Edit IDs SHOULD be set according to Table 2.

Table 2. ContentVersion/Label Format for Derived Versions.

EIDR Record Type	ContentVersion/Label
Parent Edit	"EIDR Edit (Level 2)"
Localized Edit ⁴	"EIDR Localized Edit (Level 2)"
Music Cue Sheet Edit ⁵	"EIDR Music Edit (Level 2)"
Three-D Edit ⁶	"EIDR 3D Edit (Level 2)"
Unrated Edit ⁷	"EIDR Unrated Edit (Level 2)"
Other/Unspecified Edit ⁸	"EIDR Child Edit (Level 2)"

EXAMPLE: `<ContentVersion>`
`<Id>urn:eidr:10.5240:E2E7-2E41-A062-1808-7287-C</Id>`
`<Label>EIDR Edit (Level 2)</Label>`
`</ContentVersion>`
`<ContentVersion>`
`<Id>urn:eidr:10.5240:AEF3-1045-2890-3716-EF1C-P</Id>`
`<Label>EIDR Localized Edit (Level 2)</Label>`
`</ContentVersion>`

EXAMPLE: `<ContentVersion>`
`<Id>urn:eidr:10.5240:D57C-FA36-A578-FDE7-F1A7-A</Id>`
`<Label>EIDR Title (Level 1)</Label>`
`</ContentVersion>`
`<ContentVersion>`
`<Id>urn:eidr:10.5240:E2E7-2E41-A062-1808-7287-C</Id>`
`<Label>EIDR Edit (Level 2)</Label>`
`</ContentVersion>`
`<ContentVersion>`
`<Id>urn:eidr:10.5240:AEF3-1045-2890-3716-EF1C-P</Id>`
`<Label>EIDR Localized Edit (Level 2)</Label>`
`</ContentVersion>`

3.5 Storing EIDR Metadata

An EIDR ID can be resolved into its descriptive metadata by querying the EIDR Registry, which provides several different access methods and can return data in a variety of formats. Third-party services and in-

⁴ Includes EIDR Censored, Dialog, Regionalized, Sanitized, Sanitized Audio, Sanitized Picture, and Substitutions Edits.

⁵ Includes EIDR Music Edits.

⁶ Includes EIDR Three-D Edits.

⁷ Includes EIDR Unrated Edits.

⁸ Includes EIDR Alternate Ending, Anniversary, Colorized, Content Break, Creative, Credits, Director's Cut, Exit, Extended, Interactive Platform, Intermission, Logos, Overture, Product Placement, Promotional, Recap, Rereleased, Restored, Restored Audio, Restored Picture, Shortened, Sound Effects, Split, Syndication, Other, or otherwise undifferentiated Edits.

house systems can also be integrated with the EIDR Registry via the EIDR API or SDKs. This ensures access to the most current, accurate, and complete EIDR metadata available.

To address situations where the EIDR Registry cannot be queried, e.g. no Internet access is available, EIDR descriptive metadata in its XML form may be stored directly into `ContentVersion` elements using the extension mechanism specified in Section 6.9.1 of SMPTE ST 2067-3.

```
EXAMPLE 1: <ContentVersion>
  <Id>urn:eidr:10.5240:0CEC-3E15-7A54-6893-A8D9-6</Id>
  <Label>EIDR Title (Level 1)</Label>
  <ResourceName lang="en" titleClass="release"
    xmlns="http://www.eidr.org/schema">Monarch Douglas Bank</ResourceName>
</ContentVersion>
```

It is possible to include an entire EIDR metadata record, if desired.

```
EXAMPLE: <ContentVersion>
  <Id>urn:eidr:10.5240:0CEC-3E15-7A54-6893-A8D9-6</Id>
  <Label>EIDR Title (Level 1)</Label>
  <eidr:FullMetadata xmlns="http://www.eidr.org/schema"
    xmlns:md="http://www.movie labs.com/schema/md/v2.1/md"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <BaseObjectData>
      <ID>10.5240/0CEC-3E15-7A54-6893-A8D9-6</ID>
      <StructuralType>Abstraction</StructuralType>
      <Mode>AudioVisual</Mode>
      <ReferentType>TV</ReferentType>
      <ResourceName lang="en" titleClass="release">Monarch Douglas
        Bank</ResourceName>
      ...
    <Credits>
      <Director>
        <md:DisplayName>Paul Edwards</md:DisplayName>
      </Director>
      <Actor>
        <md:DisplayName>James Spader</md:DisplayName>
      </Actor>
      <Actor>
        <md:DisplayName>Megan Boone</md:DisplayName>
      </Actor>
      <Actor>
        <md:DisplayName>Diego Klattenhoff</md:DisplayName>
      </Actor>
      <Actor>
        <md:DisplayName>Ryan Eggold</md:DisplayName>
      </Actor>
    </Credits>
  </BaseObjectData>
  <ExtraObjectMetadata>
    <EpisodeInfo>
      <Parent>10.5240/D15D-6EA2-D2D9-DCAA-DD0F-Q</Parent>
      <SequenceInfo>
        <md:DistributionNumber
          domain="spe.sony.com">2</md:DistributionNumber>
        <md:HouseSequence domain="spe.sony.com">202</md:HouseSequence>
      </SequenceInfo>
    </EpisodeInfo>
  </ExtraObjectMetadata>
</eidr:FullMetadata>
</ContentVersion>
```

4 Selecting an EIDR Edit (Level 2) ID

4.1 General

An EIDR Edit represents any creative change made to the contents of an audiovisual object. Such creative changes include, for example, modifications to the timeline, such as with a Director's cut, sanitizing audio or blurring video to accommodate the mores of a region, or changing music to accommodate rights clearance.

The EIDR Edit associated with a Distribution Master SHOULD therefore:

- Identify the audiovisual content of the Distribution Master absent any translated audio or subtitle track; and
- Reflect any creative change, including changes made for censorship purposes, e.g. blurring of image, and changes to the timeline, e.g. Director's cut.

4.2 Mapping Edit record fields to CPL elements

4.3 ContentTitle

The CPL ContentTitle element should be equal to the Resource Name field of the Edit.

4.4 ContentKind

While there is no one-to-one mapping between EIDR Referent Types and values of the CPL ContentKind element, specific combinations of EIDR Record characteristics correspond to common ContentKind values, as detailed in Table 3.

To provide a one-to-one relationship between an Edit and an IMF ContentKind value, the ContentKind value should be stored in the EIDR record's Registrant Extra field using the pattern, "IMF:[ContentKind];".

Table 3. Characteristics of EIDR records associated with IMF CPLs with selected Content Kind value.

<i>IMF CPL ContentKind</i>	<i>Description</i>	<i>Characteristics of the nearest ancestor EIDR Abstract record</i>
feature	A theatrical feature.	ReferentType=Movie and has no parent
short	Non advertising/promotional content (3 to 15 minutes) typically before a theatrical feature.	ReferentType=Short and has no parent
teaser	Very short (typically less than 1 minute) content promoting an upcoming theatrical feature.	Has isPromotionOf LWR and Promotion Class=Teaser
trailer	Short (2 to 3 minutes) content promoting an upcoming theatrical feature.	Has isPromotionOf LWR and Promotion Class= Theatrical Trailer or DVD Trailer or Trailer
episode	Part of a dramatic work such as a serial television program.	Has isEpisodeOf relationship
supplemental	Content created as extra material for a feature or episode such as behind the	Has isSupplementOf LWR

scenes material or deleted scenes.

4.5 Locale

The CPL LocaleList element should contain a single Locale element that contains:

- An Annotation element equal to the ID of the EIDR record;
- Exactly one Language element for each distinct VersionLanguage value; and
- Exactly one Region element for each distinct MadeForRegion value.

5 Selecting an EIDR Generic Manifestation (Level 3) ID

An EIDR Generic Manifestation is used to capture the unique characteristics of the image track underlying the Distribution Master.

A Distribution Master SHOULD be associated with an EIDR Generic Manifestation, whose parent SHOULD be an EIDR Edit selected as noted above.

The EIDR Generic Manifestation SHOULD conform to those specified in EIDR *Data Fields Reference*, unless specified otherwise by Table 2.

Table 4. EIDR Manifestation Fields.

EIDR Field	Provisions
StructuralType	"performance"
ReleaseDate	The Generic Manifestation's creation year (or full date), if known. Inherited, if not.
ApproximateLength	Equal to the duration of the Composition as calculated per Section 7.1 of SMPTE ST 2067-3
Description	Human-readable description of the audiovisual content, e.g. "French (1.85 picture, 16.1 sound, dubbed)"
ManifestationClass	Include "Master"
MadeForRegion	List the country(ies) or territory(ies) for which the Generic Manifestation was originally produced. ⁹
ManifestationDetails	Include a value equal to "IMF Distribution Master" with the domain attribute set to "eidr.org". Other values <u>MAY</u> be present
Digital/Track/Video	When present, it indicates the differentiating characteristics of the Distribution Master

6 References

SMPTE ST 2067-3, Interoperable Master Format — Composition Playlist
<https://dx.doi.org/10.5594/S9781614827498>

⁹ If the Generic Manifestation is later used in different regions, the MadeForRegion field of the Generic Manifestation record is not modified. This field captures the original intent for which the Generic Manifestation was created. It is not an exhaustive inventory of all territories where it is eventually used.

EIDR Data Fields Reference (http://eidr.org/documents/EIDR_2.0_Data_Fields.pdf)

EIDR Best Practices Guide (http://eidr.org/documents/EIDR_2.0_Best_Practices.pdf)

EIDR Best Practice – Ratings Registrations (http://eidr.org/documents/EIDR_BP_Ratings.pdf)

IETF RFC 7972, Entertainment Identifier Registry (EIDR) URN Namespace Definition
(<https://tools.ietf.org/html/rfc7972>)

EIDR How to Use EIDR to Identify Versions for Distribution Purposes
(http://eidr.org/documents/FAQ_How_to_Use_EIDR_to_Identify_Versions_for_Distribution_Purposes_DRAFT_2014-06.pdf)