

EIDR

Obtaining an EIDR ID for a DECE CFF Container (DCC) APID

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1 Overview

This document describes how to get an EIDR ID to use as the APID of a DCC (DECE Common File Format Container). It assumes familiarity with the DECE *Identifiers, Content Structure, Metadata and Bundles Technical Note*,¹ especially Section 5; and with the DECE *Content Metadata Specification*.²

Some less-common use cases that are allowed or envisioned by the DECE specifications are not addressed in the body of this document. These are listed at the end of this document in the Special Cases section.

2 Process

Process Overview

Prior to creating EIDR IDs for APIDs:

- An EIDR Edit record must be created, typically used for both a DECE CID and ALID

Materials to create one or more EIDR IDs to be used in APIDs:

- Create one or more MetadataMovie XML documents. Ideally, these are exactly as they would be included in the Container, although an abbreviated version may be used (as described below).
- Create a manifest file listing each of the MetadataMovie documents according to the specification below.
- ZIP the MetadataMovie documents with the manifest file.

The EIDR IDs are typically created using an EIDR tool. For EIDR 1.2, this tool is run by EIDR staff. For EIDR 2.0, this tool will be made available to Content Providers.

EIDR Manifestations

EIDR Manifestations replaced Encodings in the EIDR 2.0 release. They are associated with the digital form of an asset, such as a DCC. As described in the DECE technical note mentioned above, EIDR records form a hierarchy of Titles, Edits, and Manifestations (Encodings). The Manifestation for the DCC is registered below the EIDR Edit used to create the CID and ALID with which the DCC is associated.

¹ Available at <http://uvvuwiki.com/index.php?title=IDs, Content Structure, Metadata and Bundles>. For those without access to uvvuwiki.com, the information in this section is also covered in the *EIDR/UV Technical Note*, which can be found with the EIDR technical documentation at <http://eidr.org/resources>.

² Available with the public DECE technical specifications at <http://uvvu.com/uv-for-business.php>.

The EIDR Edit records for the required CIDs and ALIDs must have been previously registered in accordance with EIDR best practices and the *Identifiers, Content Structure, Metadata and Bundles Technical Note*.

The metadata needed to register an EIDR Manifestation comes from the following:

- The Container metadata as defined in the DECE *Content Metadata Specification*. Specific field usage for EIDR registrations is defined below in the section on Container Metadata and Uniqueness in EIDR.
- The EIDR ID for the record to which the Manifestation should be parented. Typically, this is the EIDR Edit used to create the CID and ALID.

Registration Process

Registrants will provide EIDR with a set of XML files each containing valid Container Metadata and a single text-based manifest file. After the EIDR Manifestation registrations are completed, the manifest file will be returned with the APIDs for the registered Manifestations added. The formats of these files are described below.

The turnaround time on these registrations is two business days. This turnaround time does not include any correction of errors in the submission. If there are errors in the submission, including registrations that are not unique as specified in this document, APIDs will be returned only for the successful registrations. The remainder will need to be corrected and resubmitted. Registrants are strongly encouraged to submit test records representing all of their use cases and workflows well in advance of production registration requests so that any systematic problems can be resolved early.

The EIDR 1.2 APID registration tool is available only to EIDR staff. The EIDR 2.0 APID registration tool will be made available to service providers for use on behalf of their clients. In addition, EIDR members with direct SDK system integrations may generate their own Manifestations directly, using the issued EIDR IDs as APIDs.

DCC Metadata File (One per APID)

As the EIDR Manifestation record for an APID is constructed from DCC Container metadata, it is necessary to provide the Container metadata in a file. Each file contains a `MetadataMovie` element as defined in the DECE *Content Metadata Specification*, Section 4.

Each file must be valid Container XML, with all required fields present. Additionally, some optional fields may be required to differentiate the records in EIDR. EIDR requires that Manifestations belonging to the same Edit have differentiating metadata. Thus, it is essential for the successful registration of the DCC's Manifestations that one or more of the fields listed in the section below on Container Metadata and Uniqueness in EIDR be specified and different among Manifestation registrations under the same Edit.

The XML for each DCC must be in a file named <TitleEtc>_<ProfileEtc>_<ID>.xml, where:

- <TitleEtc> is an alphanumeric title string the contents and format of which are left to the provider. For episodic content it can contain series, season, and episode names and/or numbers.
- <ProfileEtc> is the profile “SD” or “HD”. Additional version or variant information can be encoded after the profile as needed, e.g., “SDv2” or “HD-1080”.
- <ID> is the short EIDR ID from the ALID. That is, the portion of the ID following “urn:dece:alid:eidr-s:”.

The Container filenames should only use alphanumeric characters plus hyphen (ASCII 45), underscore (ASCII 95) and period (ASCII 46).

For example, for a request to register two different DCC Manifestations of Top Gun with an ALID of urn:dece:alid:eidr-s:0EFB-02CD-126E-8092-1E49-W, the two files could be named:

TopGun_SD_0EFB-02CD-126E-8092-1E49-W.xml *and*

TopGun_HD_0EFB-02CD-126E-8092-1E49-W.xml

each containing a single `MetadataMovie` element.

The XML metadata files must be accompanied by a text-based manifest.³ Each line of the manifest contains the following tab-separated⁴ fields:

- **Filename:** The name of the DCC metadata file, as defined above.
- **EIDR Parent ID:** The full EIDR ID of the record to which this Manifestation should be parented. Typically, this is the ID of the Edit used in the CID / ALID and is the same as the EIDR in the filename, but it can be different as outlined in the mezzanine file use case below in Common Practices. If it is the same, the string “SAME” **may** be used here instead of the EIDR ID.

Blank lines and lines starting with “//” in the manifest file are skipped.

The manifest file is named using the following convention: manifest<-suffix>.txt. <-suffix> is optional, and can be used by registrants to relate the APID requests to their internal processes.

The manifest and all the XML files must be in the same directory inside a Zip file.

Care should be taken to ensure that:

- The manifest file is valid and in the format specified above.

³ The manifest file must be ANSI-formatted and text-only. UTF, Unicode, etc. are not allowed.

⁴ If the fields are separated by anything other than a *single* tab character, the registration request will generate an error.

- The filenames for the DCC metadata files conform to the practice outlined above.
- The Container metadata is well-formed XML and validates against the current Content Metadata (mddece) schema.
- The EIDR ID for each Manifestation's parent is an existing Edit record in EIDR as described in [Section 3](#) below.
- The Container metadata for the registration differs from that of any other registered Manifestation under that same parent as described in [Section 4](#) below.

Output from Registration Process

After registration, an updated manifest file will be returned with each line containing these tab-separated fields:

- Filename: As defined above.
- EIDR Parent ID: If supplied as input or "SAME".
- Result: Either the resulting APID (in urn:dece:alid:eidr-s format) or "ERROR".
- If an error, one of the following error codes:
 - Bad input file
 - Bad parent reference (the ALID does not exist, is the wrong type, etc.)
 - Duplicate (there is already an EIDR record that matches the requested APID)
 - Other error (with details supplied)
- If an error, optionally additional error details, such as the invalid XML element or the EIDR ID of the duplicate.

3 Common Practices

APIDs and ALIDs

In the most common case, an ALID is associated with two Containers (SD and HD), and would therefore require two APIDs.

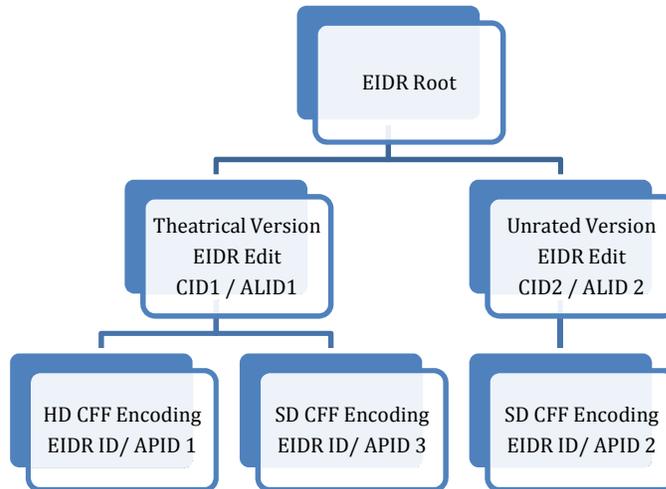
DECE is designed to support many-to-many mappings for certain outlying use cases, although this document does not yet describe those cases. (See Special Cases section below.) It is important to note that just because it is *possible* does not mean it is a good idea. Keep to the simple case if at all possible.

The ALID corresponds either to the EIDR Edit of an Episode record or to the Edit of a root Movie or TV record. In the latter case, that root record could also be a Composite of other EIDR records.

The following sections instruct how to structure ALIDs for different content structures.

Non-episodic

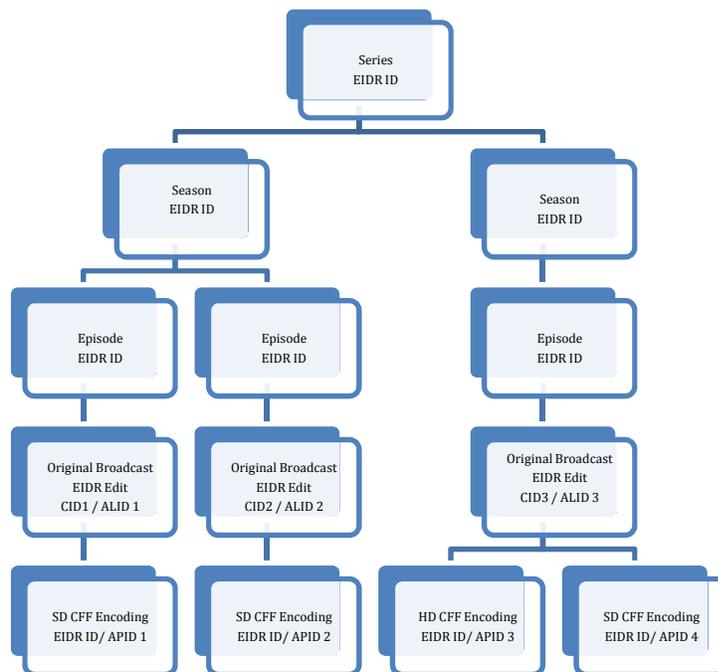
The following diagram illustrates how HD and SD Container APIDs map to Edit ALIDs:



The parent is an essential element of identification. Note that even if APID1 and APID2 are in the same format and are identical in all the required metadata fields, they will still be considered different EIDR objects because they have different parents.

Episodic

For episodic content, the model at the APID level is identical to the simple case— the presence of a more complex hierarchy above it does not affect the Manifestation.



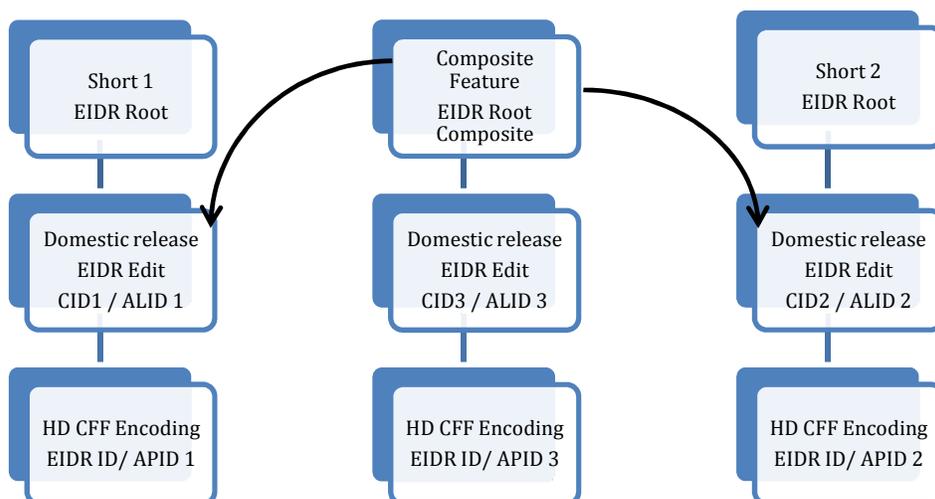
Composites

Composites are likely rare in DECE, but included here for completeness. One use case is the registration of a feature length version of a short mini-series.

Composites behave very much like other root records in EIDR, but have relationships to indicate the content from which they were derived. For purposes of ALIDs and APIDs these additional relationships are not important. The structure from the Composite root record through the Edit record down to the Manifestation record is identical to the other cases.

If all three items were being distributed in DECE, there would be three complete hierarchies, one for each of the Shorts and one for a feature-length composite of the two. The diagram below shows this. Each of the three viewed separately is just like the simple case given above.

Note: The Composite is built of the two short Edits, not from their abstract roots.



4 Container Metadata and Uniqueness in EIDR

This section defines what Container metadata is used in EIDR Manifestation metadata.⁵ As discussed above, EIDR Manifestation records must have metadata that distinguishes any two records related to the same Edit. Failure by a registrant to provide different metadata with a Manifestation registration under the same Edit as an existing one will cause the attempted registration to be rejected with an error of “Duplicate.”

⁵ Metadata elements and attributes not used in EIDR are ignored and may contain any value that passes schema validation. This allows the use of a preliminary Container file for APID-generation that is later edited to include values not known at the time, so long as none of the EIDR-referenced fields are modified.

For the current implementation, a Manifestation differs from any other Manifestation of the same Edit if any of the below fields differ. If a change is made in a field that is not in the below list, use a changed value of ContainerVersionReference or MetadataVersionReference to ensure uniqueness.

MetadataMovie

Element or Attribute	Required in DECE	Used in EIDR	Notes
MetadataMovie/@MetadataVersionReference		X	This MUST change if the only Container change is in the metadata.
MetadataMovie/ContentMetadata/DECEMediaProfile	X	X	Although other child elements of ContentMetadata are required only this element is used by EIDR.
MetadataMovie/ContentMetadata/RunLength	X	X	
MetadataMovie/RequiredImages	X		
MetadataMovie/TrackMetadata	See below		
MetadataMovie/Ratings			
MetadataMovie/Chapters			
MetadataMovie/OptionalImages			
MetadataMovie/TrackSelections			
MetadataMovie/InteractivityCapabilityLevel	If applicable		
MetadataMovie/ContainerVersionReference		X	This MUST change if other metadata used by EIDR do not adequately distinguish two Containers. May change at any time for any reason to distinguish Containers.

MetadataMovie/TrackMetadata/Track/Audio

Element or Attribute	Required in DECE	Used in EIDR	Notes
/Description			
/Type	X	X	
/Language	X	X	
/Language/@dubbed	If applicable	X	
/Encoding/Codec	X	X	
/Encoding/CodecType	X		Not used by EIDR because it is just a different representation of Codec
/Encoding/BitrateMax	X	X	Any valid bitrate for Codec
/Encoding/SampleRate	X	X	Any valid sample rate for Codec
/Encoding/SampleBitDepth	X	X	For placeholder, use any valid sample rate for Codec.
/Channels	X	X	For placeholder, use any valid channel configuration.
/TrackReference	X		

MetadataMovie/TrackMetadata/Track/Video

Element or Attribute	Required in DECE	Used in EIDR	Notes
/Description			
/Type	X		
/ColorType	X	X	MUST match ColorType of the parent EIDR Edit that corresponds to the DECE ALID.
/SubtitleLanguage	If applicable	If present	
/SubtitleLanguage/@closed	If applicable	If present	

Element or Attribute	Required in DECE	Used in EIDR	Notes
/TrackReference	X		
Encoding/Codec	X		Always "H.264, MPEG-4 Part 10"
Encoding/CodecType	X		Always "IANA:h264"
Encoding/MPEGProfile			
Encoding/MPEGLLevel			
Encoding/BitrateMax	X	X	For placeholder, use any valid sample rate for profile.
Picture/AspectRatio	X	X	Use aspect ratio of decoded frame, not active pixels.
Picture/PixelAspect			
Picture/WidthPixels			
Picture/HeightPixels			
Picture/ActiveWidthPixels			
Picture/ActiveHeightPixels			
Picture/FrameRate		If present	
Picture/FrameRate/@multiplier			
Picture/Progressive			
Picture/Type3D			

MetadataMovie/TrackMetadata/Track/Subtitle

Element or Attribute	Required in DECE	Used in EIDR	Notes
/Format	X	X	
/Format/@SDImage	If applicable	If present	

Element or Attribute	Required in DECE	Used in EIDR	Notes
/Format/@HDImage	If applicable	If present	
/Description			
/Type	X	X	May have multiple instances
/FormatType	X		Always "SMPTE 2052-1 Timed Text"
/Language	X	X	
/TrackReference	X		

Note: Elements and attributes marked with an "X" in the "Used in EIDR" columns above are required and must be present with valid entries in every submitted Container file. Those marked "If present" are optional, and will be used if they appear in the Container file.

5 Special Cases

This document covers the short-term needs of the DECE ecosystem and the currently stable use cases. The remainder of this document lists use cases of which we are aware but for which no practices have yet been defined. If you have others, or if you intend to implement any of the use cases below in the next six months, please let us know.

One APID Fulfilling Multiple ALIDs

DECE supports using multiple ALIDs to represent a single title to differentiate rights; for example assigning different ALIDs in different regions. One could fulfill all these ALIDs with a single Container, resulting in a mapping of multiple ALIDs to a single APID.

When a Container (referenced by APID) is used to fulfill multiple Rights (referenced by ALIDs), one ALID should be used to generate the APID.

ALIDs used in this manner do not represent items that match current studio practices for EIDR Edits. If you are interested in using this scenario, please contact us for additional instructions.

Future DECE Media Package Support

The DECE Media Package (DMP) does not currently require an identifier, although we expect this requirement to change. While a DCC only contains a single video program, the

DMP can contain multiple DCCs, each with its own APID, along with other material. These could be trailers, value added material, other titles, or interactive material all delivered in DCC form with their own ALIDs. Identification for DMPs using EIDR will be defined as necessary.

Alternate EIDR Practice - Mezzanine Files

Mezzanine files are not strictly within the scope of DECE, but some EIDR members have proposed practices to register them. This section is only relevant to those whose EIDR workflows involve registering encodings that derive from a mezzanine file as children of that mezzanine file.

In this case, the mezzanine Manifestation must be registered with EIDR before the DCC Manifestation since the EIDR ID of the parent mezzanine file must be provided in the DCC Manifestation's registration fields. For that reason, the EIDR ID of the mezzanine must be supplied in the manifest (see above).

