

EIDR and UltraViolet



This technical note describes how EIDR works within DECE (UltraViolet). DECE supports various identifier types allowing publishers to use standard or internal IDs suitable to each media type (movies, music, books etc.) in accordance with their individual needs.

Given the benefits of standard identifiers, MovieLabs recommends studios use EIDR IDs. EIDR was created to promote efficiencies and to support interoperability between systems. Using EIDR in DECE not only supports efficient publishing through metadata compatibility with internal studio systems using EIDR, it also allows DECE applications and services to make use of other services that use EIDR. We believe this offers advantages for studios, for partners and for customers.

Identifiers

Although the range of EIDR identifiers is much broader than needed for DECE, DECE's ID requirements can be met using EIDR IDs.

DECE uses the following identifiers to refer to content and groups of content. A Content Identifier (Content ID) refers to descriptive metadata. Rights Tokens use Asset Logical Identifiers (ALID) to identify obtainable (purchasable) assets. For streaming delivery, often these two identifiers are sufficient.

For download delivery using a DECE Container, an Asset Physical Identifier (APID) uniquely identifies each Container and is used for fulfillment and licensing. (ALIDs include mappings to both Content IDs and APIDs.)

A DECE Bundle identifier (Bundle ID) identifies a collection of content (a set of Content IDs).

Content ID, ALID, APID, and Bundle align directly with EIDR objects as follows:

- A Content ID corresponds to an EIDR Edit object. These Edit objects represent particular releases, edits, versions, or other instantiations of a title, but do not have a specific digital form.
- An ALID usually corresponds to an EIDR Edit object, the same one used for the Content ID. Looking forward, in the rare cases when an ALID needs to express granularity finer than the Edit or Version level, an EIDR Product object may be used.

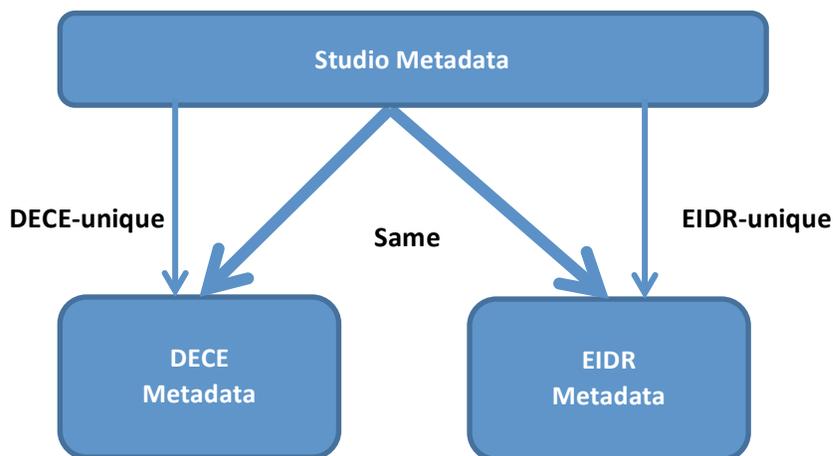
- An APID corresponds to an EIDR Encoding object. These both represent the playable digital form of an asset, including information about the encoding and the 'container' in which the encoding is carried (Common File Format, in the case of DECE).
- The DECE Bundle mechanism, which defines a group of assets (typically associated with a product offering), corresponds to EIDR's Composite object, which represents a collection of other EIDR objects.

Metadata

EIDR and DECE were designed around consistent data models and core data, and are therefore highly compatible. Operationally, EIDR and DECE work off of the same basic metadata, facilitating generation of consistent EIDR and DECE metadata.

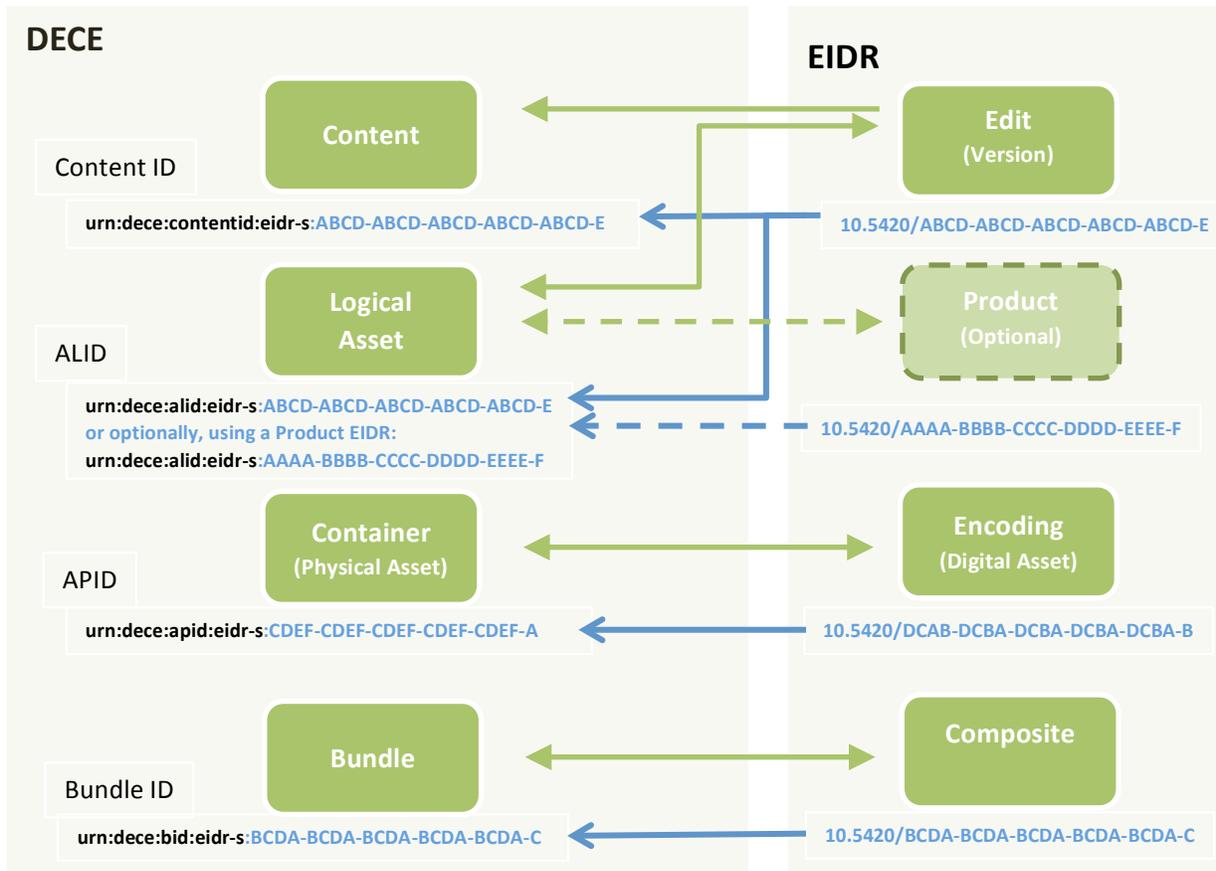
Entertainment Merchants Association (EMA) metadata, anticipated for distribution to DECE Retailers, uses the same data and model. We anticipate that metadata management in DECE will be much simplified with the use of compatible standards, including EIDR.

The diagram below shows how the metadata may be generated in parallel for EIDR and DECE.



Using EIDR in DECE

The following illustrates the correspondence between EIDR record types and DECE.



ID Format

In DECE, IDs are URNs with the following form

``urn:dece:'<type>':'<scheme>':'<ID>`.`

When using an EIDR ID <scheme> is ``eidr-s``, and the <ID> is the EIDR ID minus the prefix and slash. For example,

EIDR: 10.5420/ABCD-ABCD-ABCD-ABCD-ABCD-E
 ContentID: urn:dece:cid:eidr-s:ABCD-ABCD-ABCD-ABCD-ABCD-E

As shown, EIDR objects correspond directly to DECE's Content, Containers and Bundles. Consequently, there is a direct mapping of EIDR IDs to DECE's Content ID, APID and Bundle ID.

Content ID and ALID

In Content IDs and ALIDs, the EIDR ID for an Edit is used. This allows Rights to different versions, such as a Director's Cut, to be expressed. Most commonly there is only one Logical Asset (Right) associated with a Content item. (HD vs. SD entitlement is expressed in the Rights Token, and so does not require a separate ALID.) In this case, the EIDR used for the Content ID is also used in the ALID. When product offerings are structured with multiple Rights associated with a single Content item, Product EIDRs can be used to distinguish different Rights associated with the same Content. The diagram above shows examples of either an EIDR Edit or Product ID being used in an ALID.

This mapping of EIDR Edit records to DECE Content ID and ALID holds for both movie and episodic content. Generally, separate Rights Tokens are generated for each identifiable piece of content, e.g., each episode. So a Series or Season EIDR would never be used in an ALID to represent a collection of episodes.

APID

In the case of a DECE APID, for a DECE Container, an EIDR Encoding is used. Digital asset metadata generally distinguishes two Containers within EIDR. If more than one APID needs to be assigned for a given encoding, the `ContainerVersionReference` metadata element within the Container is used to differentiate.

Bundle

A DECE Bundle is represented by the EIDR of a Composite object. The EIDR 'Composite' type groups multiple EIDR assets together by reference, using the EIDR IDs of the contained assets.

The EIDR Composite should be created with a Composite Class of "On-line delivery" and the Registrant Extra field should include the string "DECE: Bundle" to facilitate searches. The elements of the composite should be the EIDR Edits corresponding to the ALIDs of the bundle.

Furthermore, EIDR provides an `IsPackagingOf` relationship that can be applied to any pair of objects. An `IsPackagingOf` relationship should be created if the set of objects in the bundle ('composite', in EIDR terms) is related to some other identified grouping. For example, a composite composed of TV episodes can point to a Season or Series, and a composite containing a movie and some extras can be labeled as a packaging of the movie itself. The EIDR for a Series or Season should not be directly used to identify a DECE Bundle.

Use of EIDR Short Forms

The EIDR-S short-form ID used above is derived from the complete EIDR ID, which also includes a prefix (usually 10.5240/) placing the ID within the context of the global

Handle System and the Digital Object Identifier (DOI) family of registries. The complete EIDR ID with the prefix makes the ID resolvable in the Handle System and the DOI infrastructure. The short-form EIDR-S uses a non-standard URN format recommended by EIDR for practical operational use in some contexts. However, when the ID is used in other contexts or passed outside the DECE infrastructure, it is important to re-append the full prefix in order to ensure successful DOI resolvability in a non-DECE context.

Further reading

For more information, please see DECE System Specification for a description of DECE Identifiers. EIDR information can be found in the EIDR Technical Overview and related documentation, especially the Data Fields Reference, available at <http://eidr.org/resources>.