

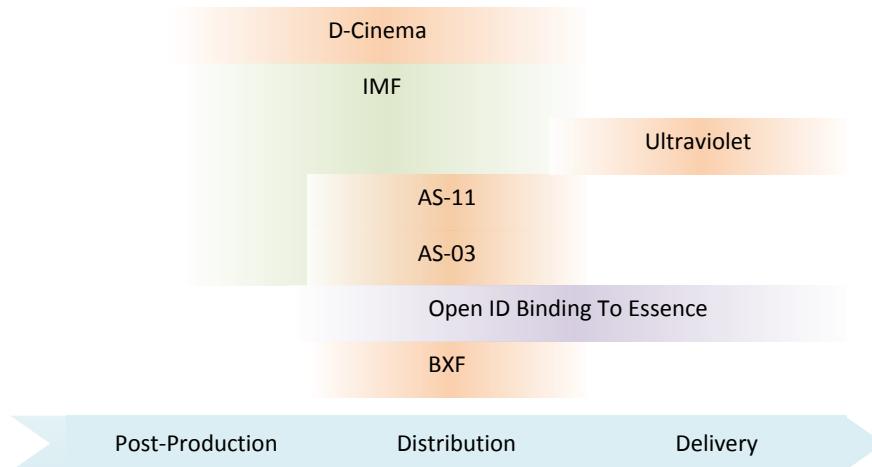


The Use of EIDR in Broadcast Workflows

Spring 2014 Status

EIDR is a global registry for unique identification of movie and TV content¹. It is based on the ISO/IEC 26324 Digital object identifier (DOI) system standard², and is, for instance, the primary content identifier used in the UltraViolet³ online media ecosystem.

The following highlights selected current and future applications of EIDR in professional media workflows.



MXF and XML

The MXF media container and the XML language are at the heart of professional media workflows.

To facilitate the use of EIDR in these workflows, SMPTE Recommended Practice RP 2079 standardizes⁴ text, KLV and URI representations of EIDR identifiers, supplementing ISO/IEC 26324.

SMPTE is now developing⁵ an EIDR Descriptive Metadata Scheme (DMS) that allows EIDR Identifiers to be added to an MXF file, at or after file creation.

AS-03 and AS-11

AMWA AS-03 and AS-11⁶ are vendor-neutral subsets of the MXF file format to use for delivery of finished programming from program producers and distributors to broadcast stations.

An EIDR Identifier can be designated as the primary program identifier by setting:



- the `AS_03_Identifier` and `AS_03_IdentifierKind` elements of the AS-03 DM Framework Set to the canonical string representation of the EIDR Identifier and the string "`EIDR`", respectively; or
- the `Other Identifier` and `Other Identifier type` elements of the DM_AS_11_UKDPP DM Framework Set to the canonical string representation of the EIDR Identifier and the string "`EIDR`", respectively.

Interoperable Master Format (IMF)

A single TV or movie title is typically made into multiple content versions (airline edits, director's cut...), with each of these edits localized for multiple territories and encoded into multiple formats to meet the needs of each distribution channel, e.g. packaged media, Internet, broadcast, etc...

To avoid an explosion in the number of assets to manage, the IMF framework⁷ allows these content versions, called Compositions, to be efficiently represented, managed, processed and exchanged. In particular it facilitates the on-demand generation of deliverables from a given Composition based on instructions contained in an Output Profile List.

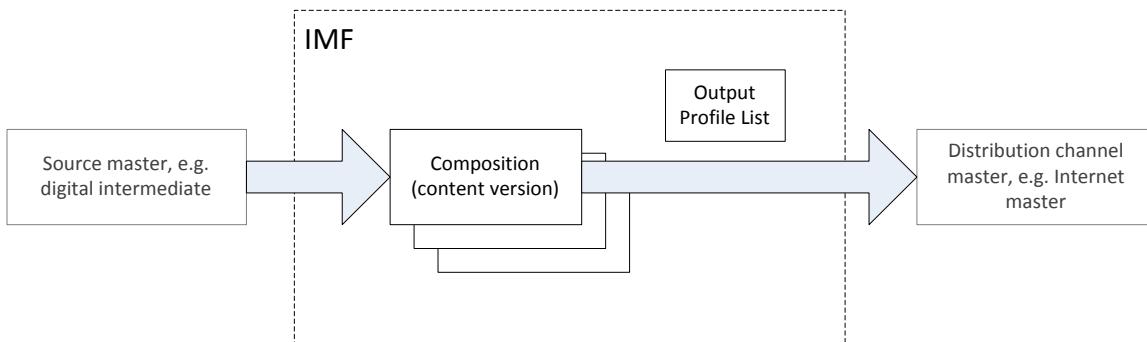


Figure 1. The IMF framework allows the management and processing of multiple high-quality content versions, called Compositions, of a finished content.

As such IMF is intended to be the first step in the long entertainment ecosystem. By associating an EIDR Identifier with a Composition, using the `//CompositionPlaylist/ContentVersion/Id` element of a Composition, the EIDR becomes available as the Composition is transformed, allowing the work to be identified from its origin to downstream distribution channels.

The IMF family of standards (ST 2067-2, ST 2067-3, ST 2067-5, etc...) is published by SMPTE⁸.

BXF

Broadcast Exchange Format (BXF)⁹ is a protocol for the exchange of data among broadcast systems such as Traffic, Program Management, Automation, and Content Distribution.



SMPTE has published¹⁰ Recommended Practice RP 2021-5, which allows an EIDR Identifier to be carried wherever `BxfAlternateId` is used.

Open ID Binding To Essence

EIDR is routinely carried as metadata in media containers and media streams, or bound to an identifier associated with a media container. These mechanisms do not always survive processing or delivery to the consumer.

Based on input from the Coalition for Innovative Media Measurement¹¹ (CIMM) industry group, the SMPTE 24TB Study Group on Open ID Binding to Essence¹² is studying the development of an open standard that would allow EIDR, as well as Ad-ID¹³, to be bound to the audio/visual essence itself, e.g. using a watermark, so that it can survive throughout the media chain, up to display to the consumer.

The Study Group expects to deliver a report in 2014.

D-Cinema

The D-Cinema Package¹⁴ is the worldwide standard for theatrical content distribution.

The SMPTE 21DC Technical Committee has undertaken work¹⁵⁻¹⁶ that will facilitate the use of EIDR as a content identifier for a D-Cinema work.

¹ <http://eidr.org/>

² http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=43506

³ <http://www.uvvu.com/>

⁴ <http://goo.gl/xjdt7j>

⁵ https://kws.smpte.org/kws/public/projects/project/details?project_id=224

⁶ www.amwa.tv/

⁷ <http://goo.gl/tz1sVW> and <http://www.youtube.com/watch?v=bmhv36hmSP4>

⁸ <http://library.smpte.org/>

⁹ <https://www.smpte.org/webcasts/BXF>

¹⁰ <http://goo.gl/pEVcFo>

¹¹ <http://cimm-us.org/>

¹² https://kws.smpte.org/kws/public/projects/project/details?project_id=179

¹³ <http://www.ad-id.org/>

¹⁴ <http://goo.gl/2Zy5Sh>

¹⁵ https://kws.smpte.org/kws/public/projects/project/details?project_id=185

¹⁶ https://kws.smpte.org/kws/public/projects/project/details?project_id=597