Introduction to the EIDR Data Model

Mysteries Revealed

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Introduction

The EIDR data model can be quite intimidating at first, but it need not be so. It is necessarily complex, since it must accommodate record types and practices across the global media & entertainment industry, but the elements that apply to any particular situation are limited and backed by published guidelines that normalize registration practice.

The EIDR Content ID Registry implements a simple three-level hierarchical tree:

- Level 1: Title Level (Abstraction) – a work in its most general form, including movies, episodes, and TV specials.
- Level 2: Edit and Clip Level (Performance) – creative changes to a work.
- Level 3: Manifestation Level (commonly Digital) – technical representations and encodings, including language versions ("subs and dubs").
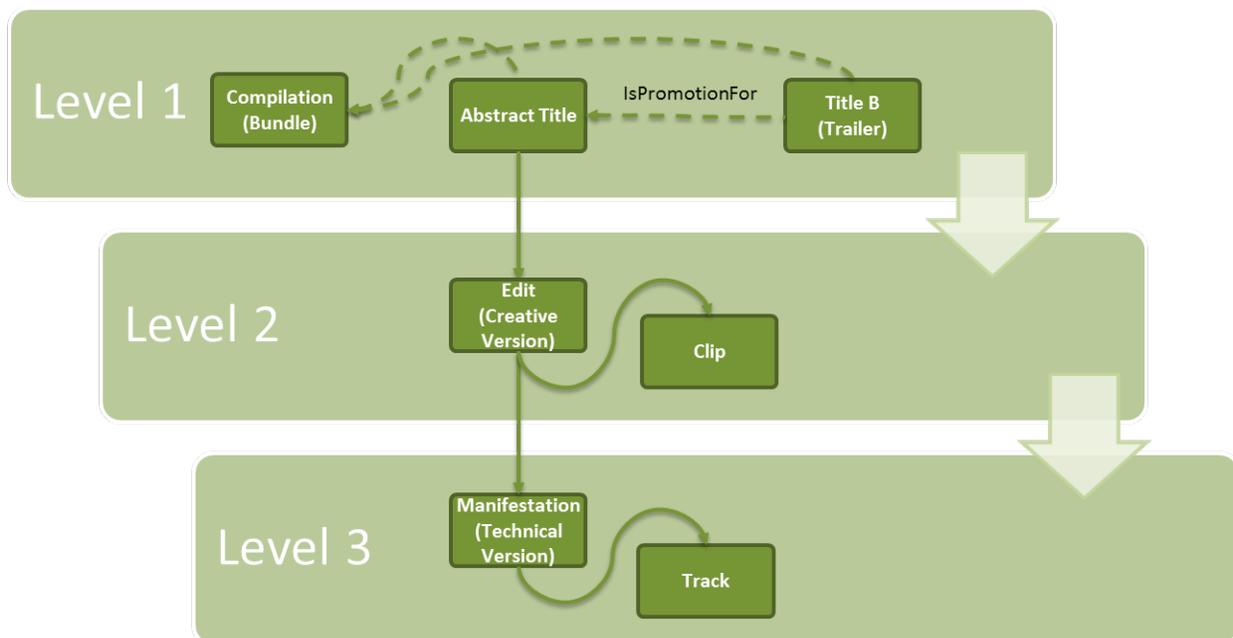
Figure 1: A Typical Feature Film Hierarchy

There are also grouping or container records such as Series, Seasons, and Compilations and record relationships such as isPackagingOf and isSupplementalTo. EIDR IDs at each level identify works and their derived versions, representations, and collections independent of distribution channel, ownership, or subsequent re-use for another purpose.

Regardless of the EIDR record type or its position in the registration tree, all EIDR IDs look the same and are assigned randomly from the pool of available identifiers.

Figure 2: EIDR Content ID Structure

Figure 3: A Typical Episodic Hierarchy
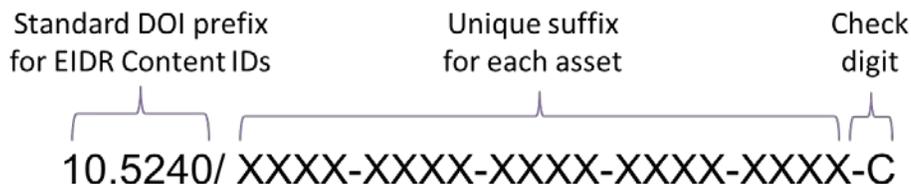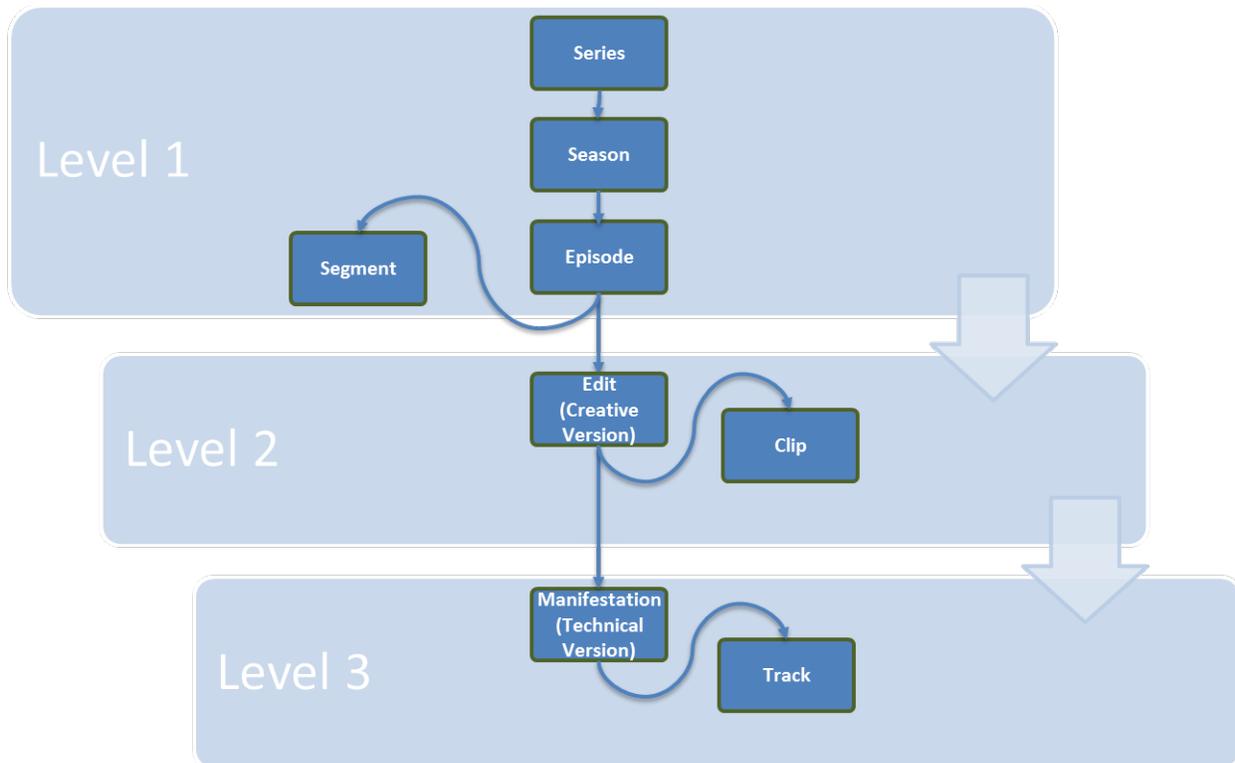
All EIDR Content records[1] share a common set of Base Object Data. Child records inherit many of their Base Object Data values from their parent and generally only supply self-defined values for those data elements that are unique to the child. For example, an Edit may inherit its parent's title (when it does not have a unique title of its own) while providing its own duration (since each cut may have a slightly different runtime). Certain record types extend the Base Object Data with Extra Object Metadata. This is where you will find data elements unique to an Episode or Edit along with relationship information that links one record to another, such as the included content ID list for a Composite record or the target ID of an isPromotionFor relationship.

All EIDR records are stored in the Registry as XML data according to the structure defined by the EIDR XML Schemas.[2] The EIDR Registry imposes further data validation rules that cannot be expressed in the schemas.[3] The Registry validation rules help tailor the generic data representations to specific situations and ensure a base level of data quality. Most EIDR users are shielded from the raw Registry XML by the systems they use to interact with the Registry, such as their own in-house title management systems or the EIDR Web UI.[4] Even if you never see the underlying XML, every EIDR user should be familiar with the EIDR data structures and allowed values as they apply to the user's particular area of interest.

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[1] EIDR also maintains separate Registries for Party, User, and Video Service records. This document focuses on the EIDR Content Record Registry.

[2] Available at http://eidr.org/schema/. See EIDR's **Data Fields Reference** document for further details.

[3] There are certain data validation rules that an XML schema cannot represent directly, such as conditional requirements: e.g., if a record is identified as a Short, then its duration must be ≤ 40 minutes.

[4] At https://ui.eidr.org/.

EIDR IDs themselves are always unique – the same ID is never issued twice. It is also important that the item the ID references is also unique, so every time an EIDR record is added to the Registry or an existing record is updated, it passes through de-duplication review. This helps ensure that the assigned EIDR ID references also remain unique.[5]

The two best pieces of advice when working with the EIDR Registry to obtain Content IDs are:
- "Start at the top and work down."
- "Go as far as you need to go, then stop."

Putting these together, when searching for existing registrations or registering new records, always start at the top with the abstract Title record (Level 1). For episodic works, start with the Series, then the Season (if applicable), and then the Episodes (all within Level 1). Only after that should you work through Edits, Clips, and Manifestations (Levels 2, 2, and 3, respectively). Go as deep into the EIDR hierarchy as you need to go for your current business needs, but do not add unnecessary complication by registering more granular record types than your process actually requires. They can always be added later. For example, if your current application requires abstract Title records but you do not have a current need for Edits, focus on the Title records for now and leave the Edits for another day. Similarly, if you need Edit IDs to support a current avails workflow, but do not yet need Manifestation IDs for the deliverables in the fulfillment chain, then register the Title and Edit records now and leave the Manifestations for later. Of course, if you need Manifestations or Clips, register them, but add them to your process after you have first mastered Title records and Edits.

Further Reading

A number of documents that provide additional information regarding the EIDR data model and recommended registration practices are available on the EIDR Web site, including:
- *EIDR Glossary*
- *EIDR Required Data Fields for Abstract Titles, Episodics, and Edits*
- *Data Fields Reference*
- *Best Practices for Creating EIDR Title Records*
- *EIDR Schemas*
- Specialized best practices documents:
  - *Best Practices and Use Cases for EIDR Edits*
  - *Best Practices for EIDR Supplemental Records*
  - *Distribution and Version Management for Episodic Content*
  - *EIDR: Best Practice – Digital Packages*
  - *EIDR: Best Practice – Documentaries and Actualities*
- Targeted technical notes:
  - *Using EIDR Language Codes*
  - *Using EIDR Region Codes*

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[5] A given abstract work has only one EIDR Title ID and an EIDR Title ID refers to only one abstract work – often referred to as a "one-to-one" relationship. The strict enforcement of this rule is relaxed in the lower levels of the EIDR hierarchy where a "one-to-many" relationship may be acceptable: e.g., since it is so difficult to uniquely and unambiguously describe every encoding of every edit of a work, it is often sufficient that an EIDR Manifestation ID refer to only one encoding while allowing for the possibility that a given encoding may have been assigned more than one EIDR Manifestation ID at different times and for different purposes.

Data Model Alignment

One of the first tasks in an EIDR integration is data model alignment: establishing how an organization's internal data representation relates to the EIDR representation so that organization data can be included in the EIDR registry and EIDR data can be included in the organization's internal systems and processes.

If the only EIDR data element of interest is the EIDR ID itself, then this process is simple:
- Allow space to carry a 34-character text field, including upper-case letters, numbers, and the punctuation symbols period (.), forward slash (/), and hyphen (-).

EIDR IDs can then be obtained from external sources, stored locally, and passed on to system users or downstream supply chain partners. Your EIDR integration is complete.

Most EIDR integrations will be more involved. Begin by identifying a proof-of-concept use case and focus on only those EIDR elements that are directly involved. Next, start at the root of the EIDR registration tree and master each level before moving on to the next. In some cases, it may be necessary to start at a higher level than the organization commonly deals with. For example, if the local system records only Edit records (as might be the case for an avails system), it will still be necessary to map to the EIDR Title structure (Level 1) before moving on to Edits (Level 2). Similarly, if the local system starts its episodic hierarchy with Seasons, it will be necessary to first master EIDR Series before moving on to Seasons and then to Episodes.

At the start of a data model alignment project, several key questions should be answered:
- Is this a one-off catalog project or the basis of an ongoing system integration?
- Can all necessary data for EIDR registration be derived from a single data source?
- If data must be combined from several sources, are they internal, or must external data be acquired to fill in any gaps? Will this require manual matching & data entry or are there pre-existing common identifiers that bridge the different data sources?
- Will the records only be matched to existing EIDR IDs or will gap records also be registered for new EIDR IDs?

The necessary data preparations are generally more rigorous when EIDR registration is the end goal, rather than matching alone, since registration requires a full EIDR metadata record while more sparse data may be acceptable for pre-registration matching.

Data that describe and identify audiovisual content are stored in a near-infinite variety of formats. As a result, the same organization may need to perform data model alignment separately for each of its systems or acquired catalogs. Even a single catalog project may have more than one data extraction set, since it is much more efficient to process records in similar batches according to the amount and type of preparation and review required. For example, feature films are generally processed separately from episodic works. It may also be helpful to process newer records separate from older ones due to differences in data quality over time. Significant effort can be saved by splitting a project into related sets that are processed iteratively, with each pass tailored to the data set and progressively more refined until all the records have been matched and registered.

A small-scale proof-of-concept using data representative of the records and source(s) that will be involved in the full-scale project can help refine the data selection, identify gaps in coverage, and define any transformations necessary to produce EIDR-conforming data. The EIDR Excel templates and BMR (Batch Match and Register) tool have been developed to facilitate this process prior to the development of an automated integration between the client's source system and the EIDR Registry.

Constructing a Basic Record

Introduction
A basic EIDR record consists of a single BaseObjectData block. This is the starting point for all Content record types – and the ending point for root Title records, since Movies and non-episodic TV, Web, and Shorts do not only require any ExtraObjectMetadata.[6]

Every record in the EIDR Content ID Registry begins with this same set of BaseObjectData. In some cases, ExtraObjectMetadata is added to provide data unique to that record type: i.e., Compilation, Episode, or Edit. ExtraObjectMetadata is also added when a record has Lightweight Relationships to other EIDR records.

Records that are not at the root of a registration tree (Seasons, Episodes, Edits, Clips, and Manifestations) can inherit much of their BaseObjectData from their immediate parent record, which may have inherited BaseObjectData from its immediate parent, and so on up to the root record (which has no parent to inherit data from). When a particular inheritable data value in a child record is the same as its parent, do not repeat the value in the child. Instead, allow it to inherit from the parent. This makes the records more compact, easier to construct, and allows data updates to flow down the registration tree. See *Data Fields Reference* for a list of those data elements and attributes that can be inherited for each EIDR record type.

Only move on to the more complex record types once you have mastered the basic types.

Basic Data Values
There are 43 different data points in BaseObjectData, but relatively few of them are required for every record. For a list of the required, conditionally required, and optional but recommended EIDR data elements and attributes for root Title records, please see *EIDR Required Data Fields – Abstract Titles, Episodic, and Edits*. For a full list of all possible data points and their individual requirements and restrictions, please see *Data Fields Reference*.

The following BaseObjectData elements have standard values for a root Title record:
- **ID:** The EIDR ID – assigned by the Registry at the time of creation
- **StructuralType:** "Abstraction"
- **Mode:** Usually "AudioVisual" (Silent films are "Visual" and Radio are "Audio")
- **ReferentType:** One of "Movie", "TV", "Short", "Web", "Supplemental"
- **Status:** "valid" (in most cases)

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[6] Optional ExtraObjectMetadata may still be added for Lightweight Relationships or Composite work types.

- **Registrant**: Your EIDR Party ID as the creator of the record.

The remaining BaseObjectData elements uniquely describe the audiovisual asset referenced by the assigned EIDR ID. In the case of a root Title record, that is a Movie or non-episodic TV, Short, Web, or Supplemental program in the abstract. Include as much descriptive metadata as is known or can be determined. This extra effort at the time of registration will help ensure proper de-duplication and will facilitate later discovery and subsequent de-duplication when someone else attempts to match or register the same underlying asset.

Data Model Alignment

When matching a third party data to the EIDR Registry, the proper data sources must be selected and certain elements will have to be transformed to comply with EIDR requirements. See the "Selected Data Best Practices" section of *Best Practices for Creating EIDR Title Records* for common data formatting rules and *Data Fields Reference* for other requirements and limitations.

There are a number of common issues that may be encountered during data model alignment or when preparing a catalog for EIDR matching or registration:

Title Selection

There are two fields for titles in an EIDR record:
- ResourceName
- AlternateResourceName

Each record has only one ResourceName and may optionally have up to 128 alternate resource names. The ResourceName should be the title by which the work was known during its original release in its home market. All other names by which the work is known should be included as AlternateResourceNames. Titles are key to the de-duplication process, so include as many as possible, following the rules outlined in *Best Practices for Creating EIDR Title Records*.

- Include foreign territory release titles; distribution channel-specific titles; abbreviations, nicknames, and fan-based titles; and internal or working titles that are commonly known within the industry or among the public.
- Do not include titles of specific versions of a work, such as a director's cut, a special anniversary release, etc. Those should be included as titles in the Edit record, not the abstract title record.
- At least one of the titles provided should be in the Latin-1 alphabet to facilitate use outside the home territory.
- The title language is the language in which that particular title is expressed, not the language of the work or release territory.
  - For fanciful titles or language-neutral proper nouns, use the language of the territory in which the title was first or primarily used.
  - If the language is not known or cannot be determined, use "und" for "undetermined."

Associated Orgs

For title records, the most useful Associated Orgs are producers. The producers of a work do not change after the work has been produced, they do not vary by territory, they can usually be

determined from the work's included credits, etc. The original commissioning broadcaster can also be helpful in abstract Title records. Other broadcasters, distributors, etc. are not useful for identification or deduplication of abstract Title records – and often cause more confusion than help.

Credits

Whenever possible, include the directors (up to two) and first billed actors (up to four). These are very helpful for both immediate de-duplication and later discovery. Use Latin-1 script to facilitate automated de-duplication and present the given name before the surname.[7] Pay particular attention for source data that include multiple names in one field (such as in a comma or semi-colon separated list) or that include character names or positions held in addition to or in place of the names of the people performing those tasks.

Provisional Data

Records for works that have not yet been produced (in development, in production, etc.) will likely have to be updated over time as new information becomes available or previous information becomes outdated. Prompt and complete data updates will help ensure the consistency of the EIDR Registry by facilitating ongoing identification and de-duplication while allowing workflows with incomplete or provisional data to proceed forward.

Controlled Vocabularies

A number of EIDR data points rely on controlled vocabularies (also known as enumeration types). Take care to select values from the correct controlled vocabulary list and to maintain proper capitalization. The vocabulary lists can be extracted from the EIDR schemas but are more conveniently available in *Data Fields Reference.*

Constructing an Episodic Record

When searching for or registering an episodic work, start by determining the Series, then the Season (if applicable), then the Episode.

Each record in the episodic tree begins with the standard BaseObjectData as found in an abstract Title record. Series records are at the root of the tree and cannot inherit any of their data. Seasons and Episodes are child records and can inherit some of their BaseObjectData values from their immediate parent. None of the additional descriptive information in the ExtraObjectMetadata section can be inherited.

For a list of the required, conditionally required, and optional but recommended EIDR data elements and attributes, please see *EIDR Required Data Fields – Abstract Titles, Episodic, and Edits*. For a full list of all possible data points and their individual requirements and restrictions, please see *Data Fields Reference.*

Series

See "Constructing a Basic Record," above, for general guidance on populating BaseObjectData. The following BaseObjectData elements have standard values for a Series record:

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[7] Certain Asian languages are inconsistent in the positioning of the surname. If the order cannot be established, use the name as is.

- **ID:**　　　　　　The EIDR ID – assigned by the Registry at the time of creation
- **StructuralType:** "Abstraction"
- **Mode:**　　　　　Usually "AudioVisual" (If all the Episodes of the Series are silent, use "Visual"; for a Radio series, use "Audio")
- **ReferentType:**　"Series"
- **Status:**　　　　 "valid" (in most cases)
- **Registrant**:　　Your EIDR Party ID as the creator of the record.

Since a Series is an abstract container that exists to hold Episodes, it technically not a Title record and does not have Associated Orgs, Directors, Actors, etc. of its own. Instead, these values are populated based on the most common values for the included Episodes.

- Associated Orgs are aggregated from those responsible for the Episodes.
- A Series Director is only provided when the same person directs the vast majority of the Series' Episodes.
- Series Actors are limited to those people who appear in the vast majority of episodes (a sitcom's series regulars, a talk show's host, a news program's anchor, etc.).
- Alternate IDs are those that apply to the series as a whole: e.g., IMDb has a unique Series ID but ISAN does not.[8]

Series ExtraObjectMetadata has five different data elements,[9] most of which provide data validation rules for the Series' child elements:

- EndDate: The release date of the last Episode in the Series. (Only populated for mini-series and series that have been cancelled.) This (along with the Series' own release date) limits the release dates of the child Seasons and Episodes. Only "Pilot" and "Special" Episodes can lie outside these dates.
- NumberRequired: If set "true," then all child record must have an identifying number – SequenceNumber for Seasons, DistributionNumber for Episodes.
- DateRequired: If set "true," then all child records must have full release dates, not just release years.
- OriginalTitleRequried: If set "true," then all child records must have user-supplied ResourceNames, rather than the system-generated names common to most Seasons and many Episodes.

Season
See "Constructing a Basic Record," above, for general guidance on populating BaseObjectData. The following BaseObjectData elements have standard values for a Season record:

- **ID:**　　　　　　The EIDR ID – assigned by the Registry at the time of creation
- **StructuralType:** "Abstraction"
- **Mode:**　　　　　Usually "AudioVisual" (If all the Episodes of the Season are silent, use "Visual"; for a Radio series, use "Audio")

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[8] ISAN uses the series prefix from an Episode ID in place of a Series ID, but this is not technically an ISAN ID. In EIDR, it is identified as a Proprietary type ID with the domain "isan.org/serial", while true ISAN and V-ISAN IDs are identified directly with an ISAN type.

[9] At least one of the elements in the Series' ExtraObjectMetadata must be populated to avoid returning an empty XML tag validation error.

- **ReferentType:** "Season"
- **Status:** "valid" (in most cases)
- **Registrant**: Your EIDR Party ID as the creator of the record.

Like Series, Seasons are abstract containers that exists to hold Episodes, so they are technically not Title records and do not have Associated Orgs, Directors, Actors, etc. of their own. Instead, these values are populated based on the most common values for the included Episodes. As such, these values could differ from Season to Season. If they are the same as the Series, then they should be inherited.

- Associated Orgs are aggregated from those responsible for the Episodes.
- A Season Director is only provided when the same person directs the vast majority of the Season's Episodes.
- Season Actors are limited to those people who appear in the vast majority of episodes (a sitcom's series regulars, a talk show's host, a news program's anchor, etc.).
- Alternate IDs are those that apply to the season as a whole: e.g., IMDb and ISAN do not have Season identifiers, but IVA does.

Season ExtraObjectMetadata has seven different data elements,[10] most of which provide data validation rules for the Series' child elements:

- EndDate: The release date of the last Episode in the Season. As with the Series EndDate, this limits the release dates of the child Episodes, excluding "Pilot" and "Special" Episodes.
- NumberRequired: If set "true," then all child Episodes must have a DistributionNumber.
- DateRequired: If set "true," then all child Episodes must have full release dates, not just release years.
- OriginalTitleRequried: If set "true," then all child Episodes must have user-supplied ResourceNames, rather than the system-generated names common to many Episodes.

NOTE: Before registering a new Season in an existing Series, check the number/naming conventions of any current Seasons and adjust to follow that pattern.

Episode
See "Constructing a Basic Record," above, for general guidance on populating BaseObjectData. The following BaseObjectData elements have standard values for an Episode record:

- **ID:** The EIDR ID – assigned by the Registry at the time of creation
- **StructuralType:** "Abstraction"
- **Mode:** Usually "AudioVisual" (For a silent episode, use "Visual"; for a Radio episode, use "Audio")
- **ReferentType:** Usually "TV", but could also be "Short", "Web", or "Supplemental". Rarely "Movie".
- **Status:** "valid" (in most cases)
- **Registrant**: Your EIDR Party ID as the creator of the record.

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[10] At least one of the elements in the Series' ExtraObjectMetadata must be populated to avoid returning an empty XML tag validation error.

Episodes are proper Title records, so they have their own direct Associated Orgs, Directors, Actors, etc. If these differ from their parent, then provide them in the Episode record. Otherwise, let them inherit from the parent Series or Season.

- Alternate IDs are those that apply specifically to the episode: e.g., both IMDb and ISAN have individual Episode Identifiers, but normally V-ISAN IDs are not used in an Episode record.

Episode ExtraObjectMetadata has nine different data elements and attributes, all of which are descriptive. This includes three different types of Episode numbers:

- DistributionNumber: The original broadcast order of the episodes. In most cases, this restarts from 1 with each new Season. For "Series Sequential" Series, the numbering is continuous from Season to Season without repeating. The domain attribute is optional.
- HouseSequence: The producer's or commissioning broadcaster's numbering sequence, if different from the DistributionNumber. The domain attribute is optional, but strongly recommended to identify the source of the HouseSequence number.
- AlternateNumber: Some other number or number format not captured in DistributionNumber or HouseSequence. The domain attribute is required to identify the source of the AlternateNumber.

NOTE: Before registering a new Episode in an existing Series or Season, check the number/naming conventions of any current Episodes and adjust to follow that pattern. If your numbering sequence is different, include it as an AlternateNumber.

Constructing an Edit Record

When searching for or registering an Edit (creative version), start by determining the parent Title record (either an abstract root Title record or an Episode of a Series).

Each Edit record begins with the standard BaseObjectData also found in Title records. Since Edits are always child records, they can inherit most of their data values. New BaseObjectData values should only be provided when they differ from the parent. None of the additional descriptive information in the ExtraObjectMetadata section can be inherited.

- ApproximateLength: This should be the duration of the content portion of the Edit, excluding any leader or padding that may be included in a particular encoding or packaging of the Edit.
- Associated Org: Unlike Title records, the Distributor of an Edit may well be a distinguishing characteristic. The organization that commissioned or created the Edit may also be included with an Editor role.
- The Credits (Director and Actor) of an Edit rarely differs from the parent and are usually inherited.

For a list of the required, conditionally required, and optional but recommended EIDR data elements and attributes for an Edit record, please see *EIDR Required Data Fields – Abstract Titles, Episodic, and Edits*. For all others, please see *Data Fields Reference*.

Edit ExtraObjectMetadata has eight different data elements and attributes, all of which are descriptive.

- MadeForRegion: The values "Domestic" and "International" are interpreted in relation to the Title record's Country of Origin.
- EditDetails: Unlike the Description field in BaseObjectData, which is informative (not referenced during automated de-duplication), EditDetails is referenced by automated de-duplication and should be used to distinguish different Edits that would otherwise appear the same based on their other data values.

Record Bundles and Relationships

For a list of the required, conditionally required, and optional but recommended EIDR data elements and attributes for EIDR Compilations, Composites, and Lightweight Relationships, please see *Data Fields Reference*.

Common Data Model Issues

Edits vs. Abstractions

The EIDR Registry makes a very clear distinction between Title IDs (abstract Level 1 records) and Edit IDs (creative version Level 2 records). A particular work will only ever have one Title ID, but it may have any number of Edit IDs, each for a different derived version of the abstract work. Some master title management systems contain only records of a particular type: i.e., IMDb contains only Title records. Others contain mixed, but clearly identified types: i.e., the EIDR Registry. Opportunities for mischief arise when a single system contains a mixture of loosely defined record types or when it is not immediately obvious what kind of records are actually at hand. When considering how to map the records in a particular data set to the EIDR registry, begin with this question:

> Is it ever possible for one abstract work to have more than one record or a different internal ID, now or at any point in the future?

If the answer is, "Yes," then the data set contains at least some product/version level records that will likely map to EIDR Edit records.

Before obtaining EIDR IDs for a data set, take particular care to identify the type of records contained within. In many cases, what first appears to be a set of abstract title records is in reality a set of Edit, product, or version records. If this is the case, then a preliminary step to identify the appropriate EIDR Title IDs must be introduced before the necessary EIDR Edit IDs can be matched or registered.

Seasons vs. Series

The EIDR system uses North American English-language naming conventions for its episodic programs: Series – Season – Episode. Other territories may use different names for these same concepts. In particular, what EIDR calls a Series may be known as a Programme or Brand in the UK, while an EIDR Season may be known as a UK Series. Within a broadcast organization,

certain EIDR concepts may also be known by other names, such as Flight instead of Season or Event instead of Episode.
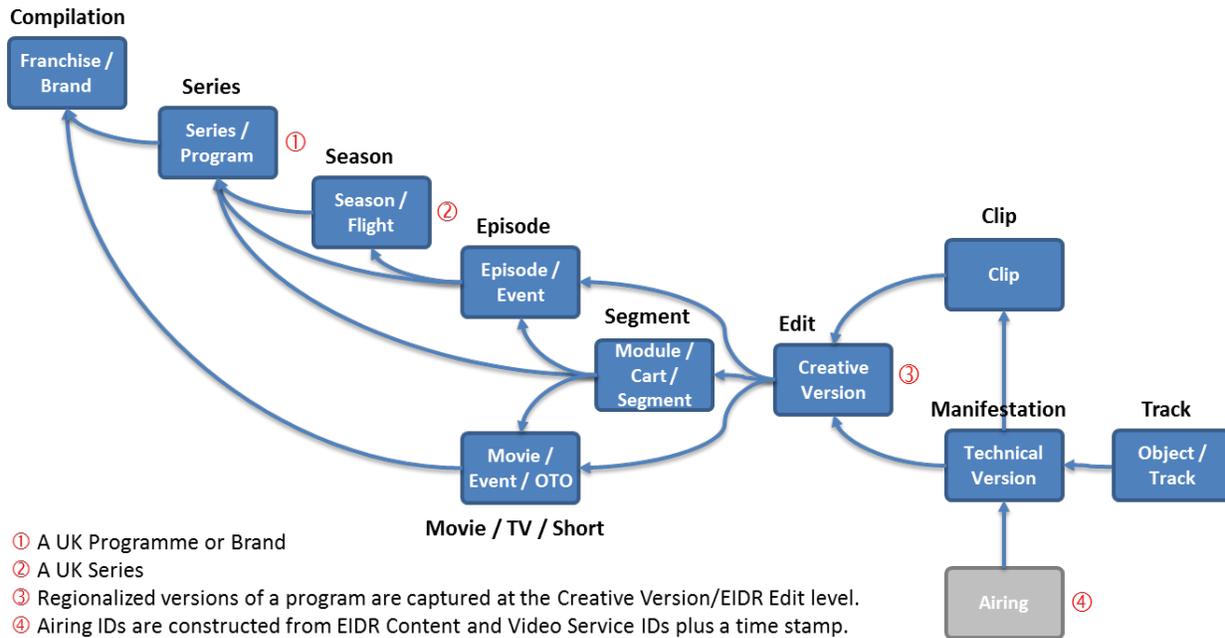

① A UK Programme or Brand
② A UK Series
③ Regionalized versions of a program are captured at the Creative Version/EIDR Edit level.
④ Airing IDs are constructed from EIDR Content and Video Service IDs plus a time stamp.

Figure 4: Typical Broadcast Assets

Standard EIDR Term	Common UK Term	Alternate Broadcast Term
Compilation		Franchise, Brand
Series	Programme, Brand	Program
Season	Series	Flight
Episode		Event
Segment		Module, Cart
Edit		Version
Track		Object

Episodic Numbering

Episodes are commonly identified by some combination of three factors:
- A title (not just "Episode 1," but an uniquely identifying name such as "The Man Who Said Hello")
- A number (usually related to the presentation sequence)
- A date (in EIDR, the date of original broadcast)

Titles and dates are reasonably straightforward, but episode numbers can be challenging.
- Is the episode number a simple sequential integer (1, 2, 3) or does it contain the season number (201, 202, etc. for the episodes of season 2)?
- Does the number sequence re-start with each Season (the most common case) or is it sequential throughout the life of the Series (typical with strip shows, such as soap operas that air at the same time five days a week)?
- If there is a pilot episode, is it identified as Episode 1 or Episode 0 (this affects the numbering of all episodes to follow)?

- Were the episodes produced and originally aired in the same order?
- Has the episode sequence been changed in syndication or foreign territory distribution?
- Have episodes been split (1a and 1b) or combined (1/2, 5/6) in some way?
- Do different sources list different numbers for the same episode?

EIDR's practice is to use a simple integer sequence representing the original presentation order whenever possible. This is season-sequential (restarting with each new season), unless specifically identified as series-sequential (counting forward without ever resetting).

Before registering new Episodes in an existing Series or Season that already has Episodes, consult the EIDR Registry to identify the current numbering pattern. If the episodic number pattern does not match the one used in the source material, then one or the other must be adjusted. The easiest adjustment is to move the source material's episode number from the Distribution Number field to an Alternate Sequence field and adopt the existing numbering pattern for the Distribution Number. (Each Episode can have multiple Alternate Sequence numbers, each identified by its source Domain.) If you believe that the existing EIDR numbering pattern is in error, then you must contact EIDR Operations to present your case and have the existing Episodes re-numbered.

NOTE: If there is an apparent disagreement between an Episode's Name and its Number, match based on the Name and adjust the Number. While it is relatively easy for the Number to be off (as discussed above), it is more difficult for the Name to differ. Full dates for the original broadcast presentation can also be used to re-sequence the Episodes when the Numbers are off.

For more information on Episode numbers and distribution alternatives, please see *EIDR Required Data Fields for Abstract Titles, Episodics, and Edits* and *Distribution and Version Management for Episodic Content*.

Retail-Specific Issues

Most retail avails (such as the EMA Avails spec) pivot off EIDR Edit IDs. When a more complex bundle is required (such as a season pass that contains multiple episodes, a feature bundled with additional value-added materials, etc.), the bundle would be identified as an EIDR Compilation of some number of EIDR Edit IDs.

Understanding EIDR Queries

To search the EIDR Registry,[11] you must identify the salient EIDR data elements based on their name and position within the schema hierarchy and reference those in an XPath-formatted query,[12] such as:

```
(/FullMetadata/BaseObjectData/ResourceName "Kung Fu")
```

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[11] ID-based resolution is an exception. You can retrieve records based on their Assigned EIDR ID or their included Alternate IDs directly without having to construct a query. See *EIDR REST API Reference*.
[12] EIDR uses a simplified form of XPath syntax (http://www.w3schools.com/xsl/xpath_syntax.asp).

EIDR query syntax is introduced in the ***Registry User's Guide*** under "Text Processing and Queries" with further examples provided in ***Command-Line Tools Overview***. Here, we focus on transcribing the elements and attributes of the EIDR data model into the EIDR query syntax.

To identify a data element in a query string, start with a root node, either FullMetadata (for Content records) or ProvenanceMetadata[13] (for record creation/modification data) and traverse through the nested XML structure, separating each element name with a slash (/) until you arrive at your destination.

The data tables in ***Data Fields Reference*** are indented to show this hierarchical relationship. See, for example, the Credits block within BaseObjectData:

Credits		
	/Director	
		/md:DisplayName
	/Actor	
		/md:DisplayName

The data tables in ***EIDR Required Data Fields – Abstract Titles, Episodic, and Edits*** show this same relationship in a more compact form:

Credits/Director/DisplayName
Credits/Actor/DisplayName

Either can be used to help trace the path to a particular data element. Starting with FullMetadata, the actor's name field in an EIDR query would be described as:

> `/FullMetadata/BaseObjectData/Credits/Actor/DisplayName`[14]

Attributes of an XML element are separated from the element name with an at-symbol (@) rather than the forward slash (/) that separates element names. So, to specify an Alternate ID's domain attribute, refer to the BaseObjectData table in ***Data Fields Reference***, which defines AlternateID as:

AlternateID	
	@xsi:type
	@domain
	@relation

Starting with FullMetadata, the Alt ID domain attribute would be described as:

> `/FullMetadata/BaseObjectData/AlteranteID@domain`

These same relationships can also be seen in a record's XML representation, so you can use an existing record to help structure query terms:

```
<FullMetadata xmlns="http://www.eidr.org/schema"
      xmlns:md="http://www.movielabs.com/schema/md/v2.1/md">
  <BaseObjectData>
      …
    <ApproximateLength>PT2H00M</ApproximateLength>
    <AlternateID xsi:type = "Proprietary" domain="movielabs.org/1"
      relation="IsSameAs">02134</AlternateID>
```

---

[13] See ***Command-Line Tools Overview*** for query examples using ProvenanceMetadata.
[14] In EIDR queries, the various XML namespaces are optional, so you could use "md:DisplayName," but we recommend the much simpler form of "DisplayName."

```
        …
    <Credits>
      <Director>
        <md:DisplayName>Ignatius Donnelly</md:DisplayName>
      </Director>
      <Actor>
        <md:DisplayName>Delia Bacon</md:DisplayName>
      </Actor>
    </Credits>
        …
  </BaseObjectData>
</FullMetadata>
```

This same basic process is followed to describe the elements and attributes of all of the EIDR data blocks, including:

```
/FullMetadata/BaseObjectData/…
/FullMetadata/ExtraObjectMetadata/SeriesInfo/…
/FullMetadata/ExtraObjectMetadata/SeasonInfo/…
/FullMetadata/ExtraObjectMetadata/EpisodeInfo/…
/FullMetadata/ExtraObjectMetadata/CompilationInfo/…
/FullMetadata/ExtraObjectMetadata/CompositeInfo/…
/FullMetadata/ExtraObjectMetadata/EditInfo/…
/FullMetadata/ExtraObjectMetadata/ClipInfo/…
/FullMetadata/ExtraObjectMetadata/PackagingInfo/…
/FullMetadata/ExtraObjectMetadata/PromotionInfo/…
/FullMetadata/ExtraObjectMetadata/SupplementalContentInfo/…
/FullMetadata/ExtraObjectMetadata/AlternateContentInfo/…
/FullMetadata/ExtraObjectMetadata/ManifestationInfo/…
/ProvenanceMetadata/…
/Service/…
/Party/…
```

For example, the domain attribute of an Episode's House Sequence number is described in the Data Fields Reference section on the EpisodeInfo block as:

SequenceInfo		
/md:DistributionNumber		
	@domain	
/md:HouseSequence		
	@domain	
/md:AlternateNumber		
	@domain	

This would translate to:

```
/FullMetadata/ExtraObjectMetadata/EpisodeInfo/SequenceInfo/HouseSequence@domain
```

BaseObjectData Elements and Attributes

The full list of BaseObjectData elements and attributes that may be used in an EIDR query includes:

```
/FullMetadata/BaseObjectData/ID
/FullMetadata/BaseObjectData/StructuralType
/FullMetadata/BaseObjectData/Mode
/FullMetadata/BaseObjectData/ReferentType
/FullMetadata/BaseObjectData/ResourceName
/FullMetadata/BaseObjectData/ResourceName@titleClass
/FullMetadata/BaseObjectData/ResourceName@lang
/FullMetadata/BaseObjectData/ResourceName@systemGenerated
/FullMetadata/BaseObjectData/AlternateResourceName
/FullMetadata/BaseObjectData/AlternateResourceName@titleClass
```

```
/FullMetadata/BaseObjectData/AlternateResourceName@lang
/FullMetadata/BaseObjectData/AlternateResourceName@romanized
/FullMetadata/BaseObjectData/OriginalLanguage
/FullMetadata/BaseObjectData/OriginalLanguage@mode
/FullMetadata/BaseObjectData/OriginalLanguage@type
/FullMetadata/BaseObjectData/VersionLanguage
/FullMetadata/BaseObjectData/VersionLanguage@mode
/FullMetadata/BaseObjectData/VersionLanguage@type
/FullMetadata/BaseObjectData/AssociatedOrg
/FullMetadata/BaseObjectData/AssociatedOrg@idType
/FullMetadata/BaseObjectData/AssociatedOrg@organizationID
/FullMetadata/BaseObjectData/AssociatedOrg@role
/FullMetadata/BaseObjectData/AssociatedOrg/DisplayName
/FullMetadata/BaseObjectData/AssociatedOrg/AlternateName
/FullMetadata/BaseObjectData/ReleaseDate
/FullMetadata/BaseObjectData/CountryOfOrigin
/FullMetadata/BaseObjectData/Status
/FullMetadata/BaseObjectData/ApproximateLength
/FullMetadata/BaseObjectData/AlternateID
/FullMetadata/BaseObjectData/AlternateID@relation
/FullMetadata/BaseObjectData/AlternateID@xsi:type
/FullMetadata/BaseObjectData/AlternateID@domain
/FullMetadata/BaseObjectData/Administrators
/FullMetadata/BaseObjectData/Administrators/Registrant
/FullMetadata/BaseObjectData/Administrators/MetadataAuthority
/FullMetadata/BaseObjectData/Credits
/FullMetadata/BaseObjectData/Credits/Director
/FullMetadata/BaseObjectData/Credits/Director/DisplayName
/FullMetadata/BaseObjectData/Credits/Actor
/FullMetadata/BaseObjectData/Credits/Actor/DisplayName
/FullMetadata/BaseObjectData/RegistrantExtra
/FullMetadata/BaseObjectData/Description
/FullMetadata/BaseObjectData/Description@lang
```

ProvenanceMetadata Elements

The full list of ProvenanceMetadata elements that may be used in an EIDR query includes:

```
/ProvenanceMetadata/ID
/ProvenanceMetadata/IssueNumber
/ProvenanceMetadata/Status
/ProvenanceMetadata/Administrators
/ProvenanceMetadata/Administrators/Registrant
/ProvenanceMetadata/CreatedBy
/ProvenanceMetadata/CreationDate
/ProvenanceMetadata/LastModifiedBy
/ProvenanceMetadata/LastModificationDate
/ProvenanceMetadata/PublicationDate
```