

Introduction to the
Companion EIDR Video
Services Registry



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1 Introduction

1.1 Background

The Entertainment Identifier Registry Association (EIDR) Content ID Registry was created in 2010 to enable unique identifiers of audiovisual content. While the EIDR Content ID has proven an effective way to identify **what** piece of content is being referenced, the media and entertainment industry also has a need to unambiguously identify **where** a piece of content might be delivered or presented to consumers.

In 2012, at the request of its Member companies, the EIDR developed the Video Service ID Registry¹ to provide unique identification video delivery services and channels, whether over-the-air or across-the-wire; real-time or non-real-time; linear or non-linear. The EIDR Video Service ID is a standard Digital Object Identifier (DOI)² issued by EIDR on behalf of the global media and entertainment industry as an open, unique, universal, and persistent identifier. Video Service IDs provide unique identification for TV networks and channels (e.g., ABC, HBO, ESPN2); their related SD, HD, UHD, and 3D variants; and their related regional or local feeds (e.g. East vs. West Coast and potentially local regions that may receive different feeds due to sports blackouts). EIDR is now specified within the [Real-time Event Signaling and Management API \(ESNI\)](#) specification for how MVPDs handle blackouts and other alternate content scenarios.

Additionally, Video Service IDs are applicable to online and VOD services as well as audio services delivered as video channels by a cable or satellite television provider.

1.2 Overview

A Video Service ID consists of a DOI prefix (“10.5239”), which identifies the DOI as an EIDR Video Service ID, a separating slash (“/”), and a suffix of eight hexadecimal digits (presented in two groups, separated by a hyphen: e.g., 6D0E-4A27). Combined together, they form a Video Service ID: e.g., 10.5239/6D0E-4A27 (the ID for the US East Coast feed of the premium cable TV service, ActionMAX). These differ from EIDR Content IDs (e.g., 10.5240/6A3C-2610-5C2E-D9EA-DADF-0 for the UK Broadcast Edit of the movie *Big Business*), which identify audiovisual works along with their creative and technical versions, clips, series, seasons, and distribution bundles.

Accompanying each Video Service ID is a selection of descriptive metadata designed to aid search, discovery, and de-duplication. Values include Service Name, Alternate Service Names, Format, Delivery Model, and Affiliated Services. In addition, each Video Service record can include an unlimited number of Alternate Identifiers, including third-party house IDs, channel lineup IDs, etc. The XML schema for the descriptive metadata that accompany each Video Service ID is available at eidr.org/schema/service.xsd, while the various metadata elements are described later in this document.

¹ Each EIDR-administered ID Registry covers one specific domain: Content IDs are for audiovisual works in all their forms; Party IDs are for companies engaged in the creation, distribution, and presentation of audiovisual works; and User IDs are for EIDR Registry users. Since Video Services are a distinct entity class, their IDs are administered in their own Registry.

² ISO standard 26324:2012. See www.doi.org.

EIDR provides a public Video Service ID search service at ui.eidr.org and a similarly configured Sandbox system for training and integration testing at sandboxui.eidr.org. The EIDR Registry is always read-for-free, and the EIDR IDs can be embedded in any system and included in any workflow without restriction, so long as you follow these recommended best practices for their registration and use.

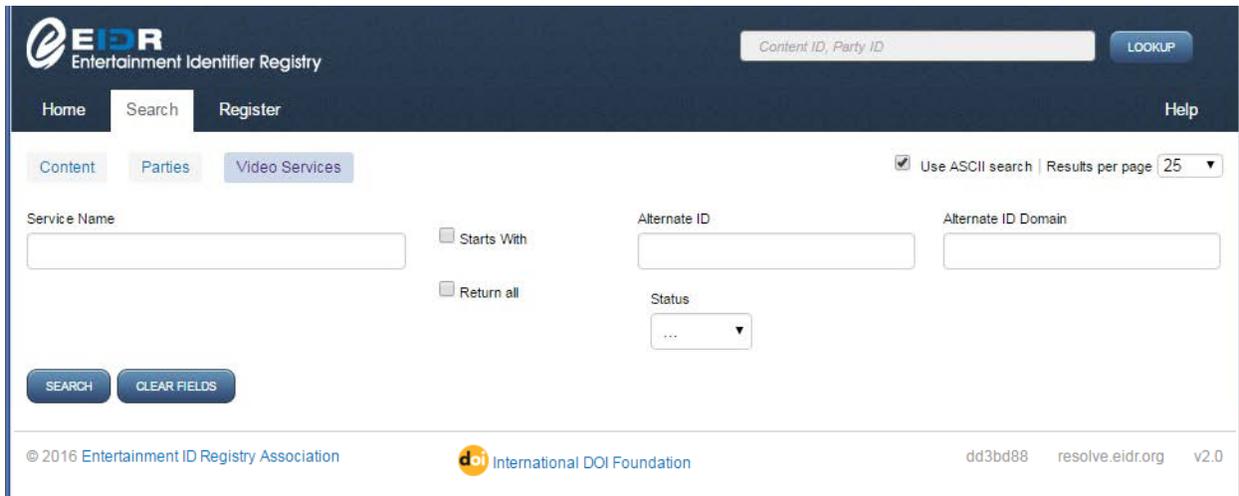


Figure 1: EIDR Public Web UI for Video Services Search

EIDR Members can register and maintain Video Service ID records through the public Web UI or via one of the various systems integration methods EIDR supplies.³

³ EIDR provides a Video Service REST API, Java SDK, .NET SDK, read/write public Web UI, and command line tools for direct use and shell script-based automation. See **Best Practices for Creating EIDR Title Records** for a more information on registering records in the EIDR Registry.

Figure 2: EIDR Web UI for Video Services Registration

1.3 Using Video Service IDs

There are three principal factors that identify a broadcast event:

1. Time and date of the broadcast (in local or UTC time)
2. The content presented during the broadcast (identified by an EIDR Content ID)
3. The service used for consumer content delivery (identified by a Video Service ID)

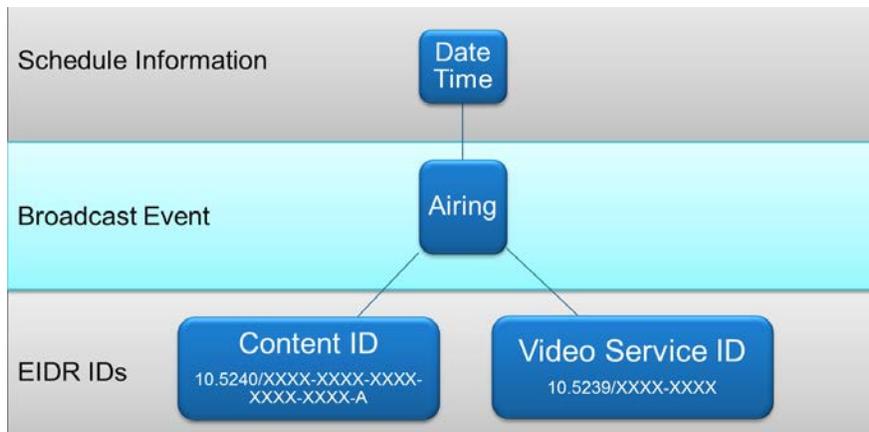


Figure 3: The factors that, taken together, create a unique broadcast Airing ID.

EIDR does not provide a Broadcast Event or Airing ID directly, but one can be constructed by combining EIDR IDs to identify the program (Content ID) and delivery channel (Video Service ID) at a particular time and date.

Video Service IDs support a basic hierarchical structure that can be used to identify a master service and its regional feeds (same programming with variations in time, format, or language) or a network and its affiliates (both independent and owned-and-operated).

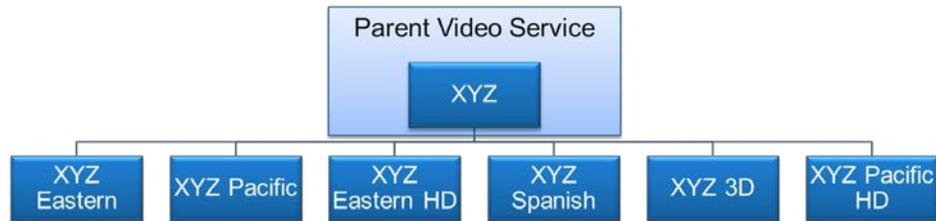


Figure 4: A master channel with differentiated feeds.

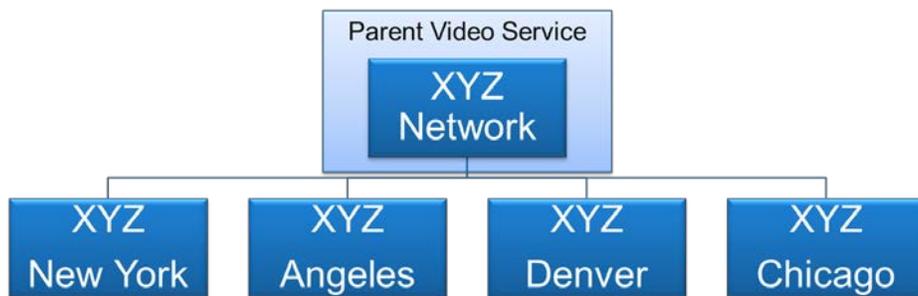
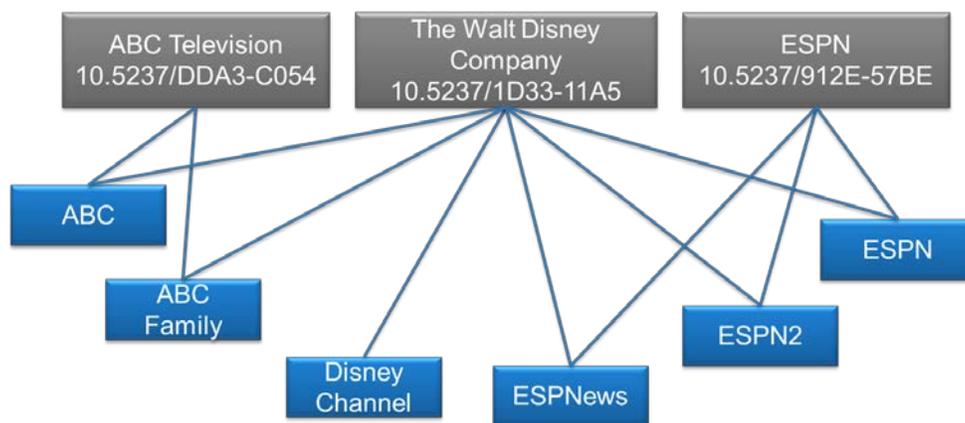


Figure 5: A broadcast network and its affiliates.

More complex relationships between video services can be identified using the Other Affiliation feature to identify the companies that own different delivery services and media outlets (via EIDR Party IDs⁴) and other peer-to-peer or parent-child relationships between Video Services.



⁴ EIDR Party IDs identify companies, such as producers and distributors. They are structured like a Video Service ID, but have a different DOI prefix: e.g., 10.5237/DDA3-C054 for ABC Television. Party IDs also identify broadcasters, but in this case, it is the company that owns a content delivery service rather than the delivery service itself (identified with a Video Service ID), though both may have the same name.

Figure 6: Associating multiple parent companies (via EIDR Party IDs) with Video Services.

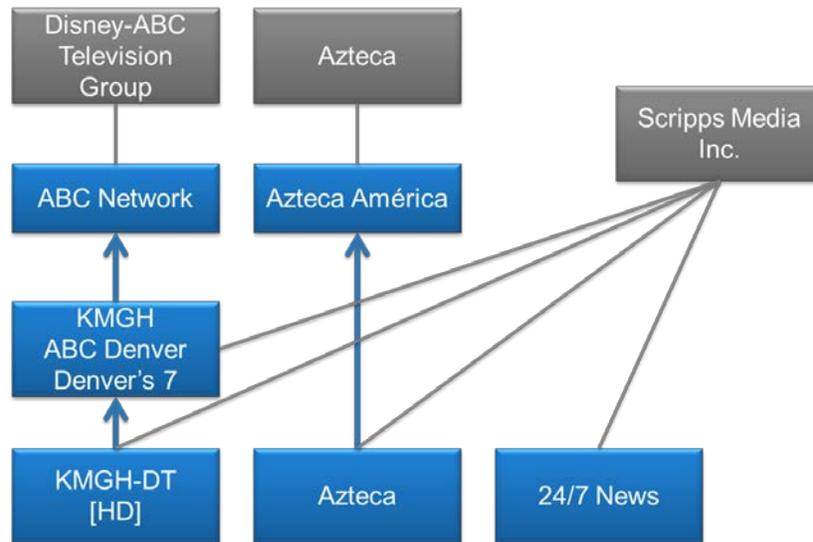
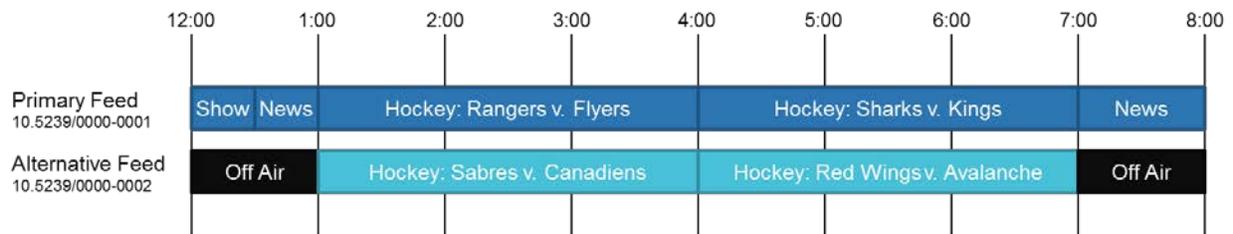


Figure 7: Many-to-many relationships between affiliated stations, networks, and companies.

NOTE: Affiliation is many-to-many, so that one Video Service may be associated with multiple companies (EIDR Parties) and one company may be associated with multiple Video Services. Similarly, one station may have multiple affiliated stations.

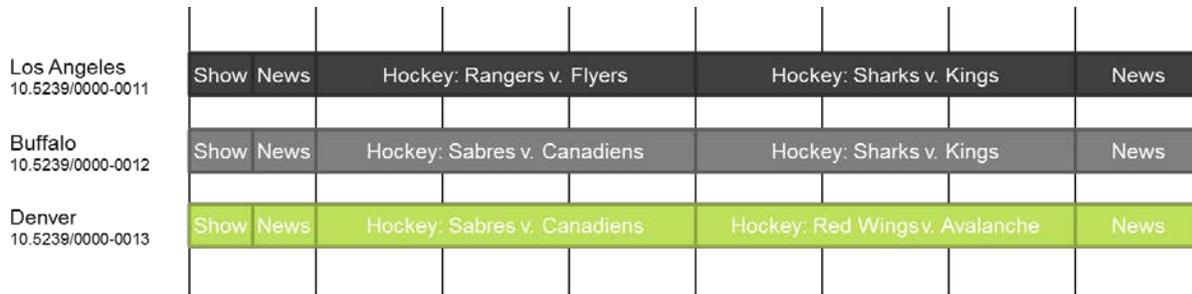
1.4 Linear Broadcast Example

In linear broadcast scenarios, Video Services are traditionally assigned to programmer feeds, as in the first example below where primary and secondary feeds each have their own Video Service ID.



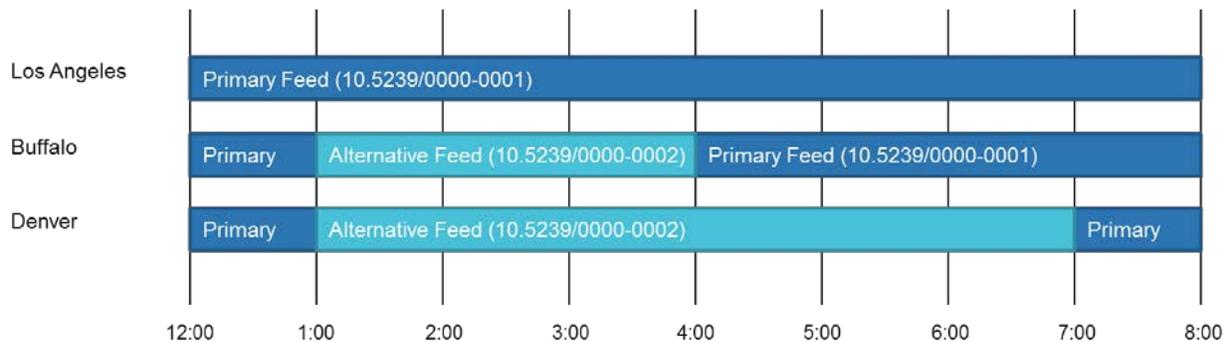
In the next example, different Video Service IDs are assigned to each regional variant of the program feed. The regional variants represent each unique combination of actual content that may be delivered to a client. This is similar to how EPG data are identified.

NOTE: It is not recommended that this approach be taken down to the local blackout level for live sports programming, since these tend to be ephemeral and Video Service IDs are perpetual.



In the third example, the programmers are not identified with Video Service IDs. Instead, the regional feeds themselves are assigned Video Service IDs, so as the content source switches, so does the Video Service ID, which is then identified using in-band or out-of-band metadata.

NOTE: This is much easier to maintain in the Video Service registry and can be used with local sports blackouts, since the Video Service-identified feed switches without requiring a unique Video Service ID assigned to the blackout coverage area. However, this does not align with how EPG data are identified.



The allowed Referent Type of the parent of a child is restricted as is discussed below in Derived Types. For example, the parent of a Season cannot be a Movie.

2 Video Service Data Best Practices

2.1 Service Name and Alternate Service Names

Video Services may be known by many names over their lifetime. Every name commonly used in reference to the Video Service should be included in the EIDR record.

- Service Name:** The primary, official, or most common name for the Video Service. This may not be in English and may not be in the Latin-1 alphabet. EIDR supports full Unicode characters in its text fields, so you can enter the name in its original form. **NOTE:** Each Service Name can only be used once in the Registry. It cannot appear in another Video Service record as either a Service Name or Alternate Service Name.
- Alternate Resource Name:** The additional names by which a Video Service is also known, including nicknames, abbreviation, obsolete names, and transliterations (for Service Names that are not presented in the Latin-1 alphabet). Include as many as are known, up to 10. **NOTE:** The same Alternate Resource Name may appear in more than

one record, but it cannot appear more than once in the same record or ever be used as a Service Name.

- **Abbreviation:** All names have an optional abbreviation attribute. Set this to “true” if the name is an abbreviation of a longer name and then record the longer name as an Alternate Resource Name. **NOTE:** If no value is provided, it is treated the same as if it were set to “false.”

When entering a name, follow these rules:

- Every name must be unique within the Video Service record. Do not repeat the Service Name in the list of Alternate Service Names.
- Video Service de-duplication keys off of the Service Name, so take particular care in its selection and presentation.
- The order of the Alternate Service Names does not affect discovery, but as a convenience to other users, if the Service Name is not in English or is presented in a non-Latin-1 alphabet, include an English or Latin-1 name as the first Alternate Service Name.
- Used mixed case (often called, “title case”). Standards for title capitalization vary by country (e.g., initial capital for all words other than articles and conjunctions; capitalize only the first word and any proper nouns). Use the standard appropriate to the Video Service’s home territory.
- Do not present names in all caps unless the name is an initialism or call sign (such as KNBC).
- Do not use trailing articles (“...”, “The” or “...”, “Les”).
- Do not include parentheticals or additional metadata in the name string unless it is a natural part of the name. All such information should be encoded in the appropriate field or included in the Description.
- The Registry will perform whitespace normalization. All non-space whitespace characters (tab, carriage return, non-breaking space, etc.) will be replaced with a space, consecutive spaces will be replaced with a single space, and leading and trailing spaces will be removed).

2.2 Capitalization, Diacriticals, and Ligatures (Accent Characters and Double Letters)

When EIDR evaluates a text field, it is case insensitive and punctuation is ignored. Capital and lowercase letters are equivalent.⁵ EIDR considers accented and un-accented characters identical. Thus, à, Ä, and ä are all the same as “a” and ß is the same as “ss.” The primary implication of this is that a name with accented characters or orthographic ligatures⁶ will be

⁵ Even though such fields are case-insensitive, capitalization best practices still apply. Controlled vocabulary lists, such as Formats, are controlled by an XML schema. XML is a case-sensitive language, so capitalization does matter in such cases.

⁶ Do not use typographic ligatures – those that are purely stylistic rather than linguistic – such as “ffi,” a single character that replaces the three-letter sequence “ffi.”

treated as identical to that title or name without them (and will be rejected as a duplicate by the Registry).

- Do not include multiple names that differ only in capitalization, punctuation, diacriticals, or orthographic ligatures.
- When given the choice, include the accented/ligatured version of a name and rely on the Registry to evaluate it the same as the un-accented/ligatured version in search and de-duplication operations.

2.3 Alternate IDs

Record as many alternate identifiers with each EIDR record as are known, up to 10. Use the required Domain attribute to identify both the source and type of the ID.

2.4 Descriptions

The Description field is for additional information to assist human operators during discovery or manual de-duplication: it is not used in automated de-duplication. Include any useful information not specifically recorded elsewhere.

2.5 Parent and Other Affiliations

Use the Parent field to record the Video Service ID of the direct parent of the subject Video Service. This could be a Network/Affiliate relationship or a master channel/regional feed relationship. Use the Other Affiliations field to record all other associated Video Services or Companies (identified with EIDR Party IDs). These could be video feed providers or corporate owners.

2.6 Format and Delivery Model

These fields can repeat up to four times per Video Service. If the primary nature of a particular Video Service cannot be defined with a single value, generally because no one Format or Delivery Model dominates, then use them in combination.

3 Video Service Data Fields Guide

3.1 Video Service Data Fields Table

3.1.1 How to Read the Data Fields Table

The following table lists all of the Video Service record metadata elements with the following information presented as columns.

FIELD NAME: The name of the metadata field in the schema. Field attributes are separated from the field name by an at-symbol (@), while nested field names are separated with a forward slash (/).

TYPE: The data type of the field is usually a standard programming type such as Boolean, integer, or string (including enumerated lists), which are expressed in XML as a simpleType. In other cases, a field is a more complex structure, including attributes and nested data fields.

Each data type is introduced by a simple description with an example followed by the XML definition for that data type.

NOTE: Text strings are not case sensitive in the EIDR database. Case should be used to improve readability in a user-provided string (for example in a service name).

NOTE: Enumerated values are case sensitive in XML and so will result in an EIDR schema-validation error if not capitalized correctly.

CARDINALITY: The number of times a particular element can appear within a single record, including if the field is required or optional.

- **Required:** Fields required for registration. For child objects (such as series episodes), these fields may sometimes be inherited from the parent record and do not need to be provided directly unless the value is different in the child record. This is discussed in detail below in the Derived Types section.
- **Conditionally Required:** Fields that are required under certain circumstances, but are optional in others.
- **Optional:** Fields that are optional. Note that in case of child objects some optional fields can be inherited from the parent. Some optional fields are marked Recommended.

The cardinality for optional fields has a range that starts with 0 (such as 0 or 0-1). Required fields start with 1. Repeating items may have an upper limit (such as 1-8 or 0-32) or may repeat an unlimited number of times (1-∞).

NOTE: Required child elements and attributes are only required when their parent, or containing element, is present.

EXPLANATORY NOTES: Additional details regarding the nature of the field.

Field Name	Type	Cardinality	Explanatory Notes
ID	EIDR Video Service ID: e.g., 10.5239/B196-EC56 <xs:element name="ID" type="eidr:serviceDOIType" />	1 Conditionally Required	The EIDR Video Service ID. Included with a record's metadata when retrieved from the Registry (via a resolve or query), but not included by the user when submitting a record to the Registry.
ServiceName	<xs:element name="ServiceName" type="eidr:serviceNameType" />	1 Required	ServiceName is a complex type where all data are recorded in child elements and attributes.
@abbreviation	Boolean: e.g., true <xs:attribute name="abbreviation" type="xs:boolean" use="optional" />	0-1 Optional	Indicates if the Video Service Display Name contains an abbreviation.
/md:DisplayName	Unicode 128 character string: e.g., BBC Four HD <xs:element minOccurs="0" name="DisplayName">	1 Required	The primary name of the Video Service. NOTE: Each Video Service primary name must be unique within the EIDR Registry.
AlternateServiceName	Unicode 128 character string: e.g., BBC4 HD <xs:element name="AlternateServiceName" type="eidr:altServiceNameType" minOccurs="0" maxOccurs="10" />	0-10 Optional	An additional name by which the Video Service is known. NOTE: Alternate Service Names must be unique within a particular record and may not repeat the primary name, but may be repeated in other records.
@abbreviation	Boolean: e.g., true <xs:attribute name="abbreviation" type="xs:boolean" use="optional" />	0-1 Optional	Indicates if the Alternate Service Name contains an abbreviation.

Field Name	Type	Cardinality	Explanatory Notes
AlternateID	A free text string: e.g., 8989363725265724117 <xs:element name="AlternateID" type="eidr:serviceAlternateIdType" minOccurs="0" maxOccurs="10"/>	0-10 Optional	Non-EIDR identifiers associated with the video service.
@domain	A text string with no whitespace characters, following the general pattern of a dot-separated list of sub-domains ending in a top-level domain followed by an optional slash-separated list of ID types: e.g.: comcast.com/MerlinID <xs:attribute name="domain" type="eidr:constrainedURIType" use="required"/>	1 Required	Identifies the organization that issued the ID with the option to specify a type of ID if the organization maintains more than one.
Description	Unicode 128 character string: e.g., Free-to-air HD broadcast channel. <xs:element name="Description" type="eidr:string128Type" minOccurs="0"/>	0-1 Optional	A free text description of the Video Service.
Parent	EIDR Video Service ID: e.g., 10.5239/242B-381A <xs:element name="Parent" type="eidr:serviceDOIType" minOccurs="0"/>	0-1 Optional	The ID of the Parent video service, if any.
OtherAffiliation	EIDR Party or Video Service ID: e.g., 10.5237/68A3-01BF <xs:element name="OtherAffiliation" type="eidr:serviceOrPartyDOIType" minOccurs="0" maxOccurs="10"/>	0-10 Optional	The IDs of any affiliated company (EIDR Party ID) or video service (EIDR Video Service ID), excluding the Parent video service.
Active	Boolean: e.g., true <xs:element name="Active" type="xs:boolean"/>	1 Required	A flag that indicates if the described video service is currently active or not. The Video Service ID itself exists perpetually, but the service it identifies may not.

Field Name	Type	Cardinality	Explanatory Notes
Format	Enumeration: SD, HD, 3D, Other <pre><xs:element name="Format" type="eidr:serviceFormatType" minOccurs="0" maxOccurs="4"/></pre>	0-4 Optional	A basic description of the format of the content commonly carried by the video service. See “Format Details,” below.
PrimaryTimeZone	Enumeration: e.g., HST, AKST, PST, MST, CST, EST, AST, GMT, WAT, CET, EET, CCT, AWST, JST, AEST, NZST <pre><xs:element name="PrimaryTimeZone" type="eidr:timeZoneType" minOccurs="0"/></pre>	0-1 Optional	The earliest time zone in which the video service is commonly delivered. See “Primary Time Zone Details,” below.
Region	Unicode 128 character string: e.g., Free-to-air HD broadcast channel. <pre><xs:element name="Region" type="eidr:string128Type" minOccurs="0"/></pre>	0-1 Optional	A free text description of the video service’s delivery region.
PrimaryAudioLanguage	RFC 5646 spoken language code: e.g., en-GB <pre><xs:element name="PrimaryAudioLanguage" type="md:language-redefine" minOccurs="0"/></pre>	0-1 Optional	The primary spoken language of the video service’s programming. See “Language Code Details,” below, and <i>Using EIDR Language Codes</i> .
DeliveryModel	Enumeration: Linear, VOD, Internet, Other <pre><xs:element name="DeliveryModel" type="eidr:deliveryModelType" minOccurs="0" maxOccurs="4"/></pre>	0-4 Optional	A basic description of how the video service commonly delivers its programming. See “Delivery Model Details,” below.

3.1.2 Sample Video Service XML Record

Below is a sample XML record for Video Service as retrieved from the Registry via the API, SDKs, or command line tools.⁷ You can also view Registry records in XML form using the “View XML” option on the EIDR Web UI.⁸ For details on generating XML records see the *EIDR Registry User’s Guide* and the *EIDR REST API Reference*.

```
<Service xmlns="http://www.eidr.org/schema"
xmlns:md="http://www.movielabs.com/schema/md/v2.1/md">
  <ID>10.5239/B196-EC56</ID>
  <ServiceName>
    <md:DisplayName>BBC Four HD</md:DisplayName>
  </ServiceName>
  <AlternateServiceName abbreviation="true">BBC4
HD</AlternateServiceName>
  <Parent>10.5239/242B-381A</Parent>
  <OtherAffiliation>10.5237/68A3-01BF</OtherAffiliation>
  <Active>true</Active>
  <Format>HD</Format>
  <PrimaryTimeZone>GMT</PrimaryTimeZone>
  <PrimaryAudioLanguage>en-GB</PrimaryAudioLanguage>
  <DeliveryModel>Linear</DeliveryModel>
</Service>
```

When submitting this same record for registration or modification, the ID element is excluded and a serviceCreationType tag is wrapped around the core metadata:

```
<serviceCreationType xmlns="http://www.eidr.org/schema"
xmlns:md="http://www.movielabs.com/schema/md/v2.1/md">
  <ServiceName>
    <md:DisplayName>BBC Four HD</md:DisplayName>
  </ServiceName>
  <AlternateServiceName abbreviation="true">BBC4
HD</AlternateServiceName>
  <Parent>10.5239/242B-381A</Parent>
  <OtherAffiliation>10.5237/68A3-01BF</OtherAffiliation>
  <Active>true</Active>
  <Format>HD</Format>
  <PrimaryTimeZone>GMT</PrimaryTimeZone>
  <PrimaryAudioLanguage>en-GB</PrimaryAudioLanguage>
  <DeliveryModel>Linear</DeliveryModel>
</serviceCreationType>
```

NOTE: The Registry prohibits the use of empty XML tags. If a particular entry does not have any values (attributes, data payload, or nested elements), do not include the entry. For example, if a record does not have an identified Format, do not include:

```
<Format></Format>
OR
<Format />
```

⁷ When submitting a record to the Registry, do not include the ID field – that is assigned by the Registry, not the user.

⁸ Available at <https://ui.eidr.org/>.

Simply skip the entry entirely.

3.2 Format Details

The Video Service Format can record up to four of the following values, set based on the principal format of the programming delivered via the identified video service.

Value	Explanatory Notes
SD	Programming is presented with image resolutions less than 1080i/720p.
HD	Programming is presented with image resolutions of at least 1080i/720p.
3D	Programming is presented in stereoscopic 3D.
Other	Programming is presented in a format not otherwise described.

3.3 Primary Time Zone Details

The Video Service Primary Time Zone can record one of the following values, set based on the earliest time zone in the video service's area of original delivery.

NOTE: If a local broadcast channel is picked up and re-broadcast via cable or satellite television or streamed on the Internet, the time zone is still defined by its original broadcast footprint, not its expanded re-distribution coverage area.

Value	Explanatory Notes
HST	Hawaii Standard Time: UTC-10
AKST	Alaska Standard Time: UTC-9
PST	Pacific Standard Time: UTC-8
MST	Mountain Standard Time: UTC-7
CST	Central Standard Time: CST-6
EST	Eastern Standard Time: UTC-5
AST	Atlantic Standard Time: UTC-4
GMT	Coordinated Universal Time: UTC-0
WAT	West Africa Time: UTC-1
CET	Central European Time: UTC+1
EET	Eastern European Time: UTC+2
CCT	China Coast Time: UTC+8

Value	Explanatory Notes
AWST	Australian Western Standard Time: UTC+8
JST	Japan Standard Time: UTC+9
AEST	Australian Eastern Standard Time: UTC+10
NZST	New Zealand Standard Time: UTC+12

3.4 Language Code Details

In EIDR, language codes are type `xs:language`, which is specified according to IETF RFC 5646. See **EIDR Language Code Best Practice** for detailed instructions and EIDR-specific guidelines.

- The simplest case of a language code is a two-letter code (originating from ISO 639-1) such as `fr` for French. Three-letter codes are required for some languages such as `sgn` for sign language (subtype not known) and `mul` for multiple languages (used when no single language dominates).
- Additional detail may be necessary to identify spoken country-specific language dialects such as Canadian French (`fr-CA`) vs. Parisian French (`fr-FR`) or Portuguese as spoken in Brazil (`pt-BR`). It is also possible to identify regionally intelligible (or neutral) dialects such as `es-419` for Latin American Spanish.

3.5 Delivery Model Details

The Video Service Delivery Model can record up to four of the following values, set based on the principal method of content delivery for the identified video service.

Value	Explanatory Notes
Linear	Traditional scheduled, linear programming.
VOD	Video-on-Demand, irrespective of the commercial model (subscription-based, fee-per-transaction, etc.).
Internet	Content is delivered via the Internet.
Other	Content is delivered via a method not otherwise described.