

CMS Data Fields Specification

EPG Fields for VOD and BTV

Version 4.21.2

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Preface

Document purpose

Purpose of this document is to specify the details of the fields of the data objects of the CMS Video On Demand domain (VOD) as well as the broadcast TV scheduling domain (BTV) that are used in import and export interfaces.

This data fields document is intended to be used as an annex to the specifications of the import and export interfaces, and avoid duplicating information as these different interfaces reference the same CMS data.

Audience

This document is intended for the persons who use CMS interfaces that create or modify these fields, specifically via the VOD & BTV import and export interfaces.

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Related Documents

- [1] ISO-639-2 language codes definition (3 characters)
<http://www.loc.gov/standards/iso639-2>
- [2] ISO-3166-1 country codes definition (2 characters)
http://www.iso.org/iso/country_codes.htm
- [3] ISO-4217 currency definition
http://www.iso.org/iso/currency_codes_list-1

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1. Introduction

This document provides the descriptions of the EPG fields of the following CMS data objects:

- Content
- Series
- Promotion
- Image
- Catalogue
- Node
- VodItem
- Product
- Channel (broadcast schedule)
- Programme (event broadcasted on a channel)

For the data fields where the allowed values are picked from a list of possible choices (**enumerations**), the CMS uses a "mapping table" in its database to hold the list of allowed values. This allows for easy on-site customisation. As a consequence it becomes the responsibility of the person modifying this configuration on-site to ensure that the values set in the CMS database are synchronised with the systems targeted by the import and export interfaces. This document provides only the values that are pre-configured in the CMS database for a new customer project.

Unless otherwise specified the max length for string fields is in characters; the number of bytes needed to hold the text may be more, for example for multi-byte encoding of Chinese.

1.1 Value inheritance

The CMS objects concerned by this document are linked together as shown in Figure 1. Note that it is not the goal of the current document to fully describe the CMS data model, and so Figure 1 is provided for the sole purpose of explaining the EPG values inheritance mechanism.

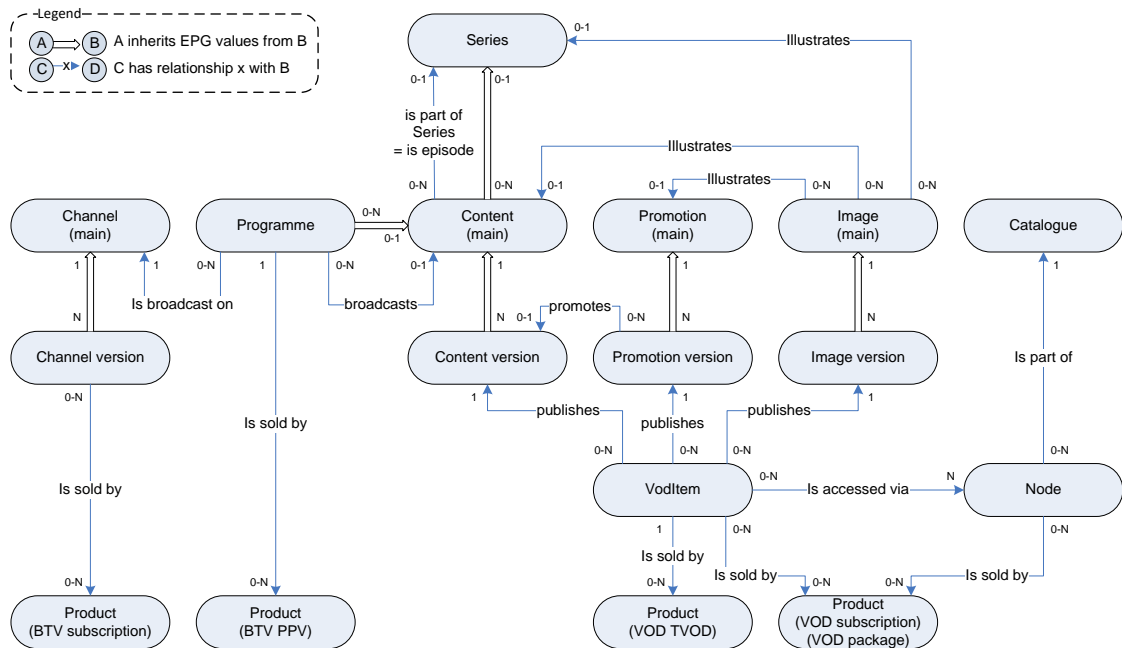


Figure 1 Relationships between CMS business data objects

When object A **inherits** EPG values from object B, (shown by the double lines in Figure 1) this means that if for the field A does not have a value explicitly set, it will automatically take the B's value for that field. On the other hand a value explicitly set for A **overrides** the value from B.

Using the inheritance Programme –Content – Series as an example, Table 1 illustrates how the inheritance mechanism is applied to determine the effective value of a field. The content values of rows 5 & 6 as well as the programme values of rows 3, 5 & 7 are inherited. The Content values of rows 7 & 8 and the programme values of rows 4, 6 & 8 are overrides.

Table 1 EPG value inheritance example						
	Value set explicitly in import and saved in CMS database			Effective value seen in CMS GUI and exported.		
	Series	Content	Programme	Series	Content	Programme
1						
2			Ppp			Ppp
3		Ccc			Ccc	Ccc
4		Ccc	Ppp		Ccc	Ppp
5	Sss			Sss	Sss	Sss
6	Sss		Ppp	Sss	Sss	Ppp
7	Sss	Ccc		Sss	Ccc	Ccc
8	Sss	Ccc	Ppp	Sss	Ccc	Ppp

The inherited values are persisted in the CMS database. If the source value is changed, the effective inherited value also changes. For example, if a Series value is changed, the contents linked to that series that do not override it take the new value. This value propagation occurs during the data save process.

Note that it is not possible to override with an empty value. For example, if a field value is supplied for a Series or Content, is it not possible to set an empty value for that field in the linked Programme.

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2. EPG data fields definitions

This chapter provides the definition of the EPG fields for each of the CMS data objects.

As a general rule, all EPG fields may be imported into the CMS or exported from the CMS, the exceptions are noted in the individual field descriptions.

2.1 Common editorial fields

This section lists the fields that are common to Series, Main Content, Content Version and Programme objects.

Common Editorial Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Actors	String	200	NO	NO	A semi-colon separated list of actor names.
Aspect	String	20	NO	NO	The picture ratio Allowed values are in mapping table TYPES.ScreenFormat, see § 4.13 E.g.: 16:9, Widescreen
Audio	String	2000	NO	NO	A list of semi-colon separated "locale-type" pattern. - locale: ISO 3 letters audio languages, see § 4.9 - type: VisualImpaired or Standard E.g.: Eng-Standard;Eng-VisualImpaired;Fra-Standard
AudioMode	String	20	NO	NO	The audio mode available. Allowed values are in mapping table TYPES.AudioMode, see § 4.1 E.g.: Mono, Nicam Stereo
BestSalesIndex	Integer		NO	NO	-1 or null, not available as Top n, 1..n available as Top 1..n

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Common Editorial Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Categories	String	200	NO	NO	List of semi-colon separated keywords classifying the content of this programme. Allowed values in mapping table: TYPES.Category See § 4.3 E.g.: Adventure, Sport
Colour	String	20	NO	NO	The video colour mode. Allowed values in mapping table: TYPES.Colours see § 4.4
ContentType	String	2000	NO	NO	Free text
ContentWarning	String	100	No	NO	A semi-colon separated list of keywords signaling content warnings. Allowed values in mapping table: TYPES.ContentWarnings, see § 4.5
CopyProtections	String	128	NO	NO	A list of semi-colon separated strings defining usage rules for controlling certain hardware outputs for preventing unauthorized content copying (CGMS-A, HDCP) The allowed values are defined externally to the CMS. If omitted, there is no limitation.
Copyright	String	1024	NO	YES	A text specifying the copyright owners/terms of the content. Free text.
Countries	String	2000	NO	NO	A semi-colon separated list of countries of the producer of the content of this programme. (ISO 2 letters code). Allowed values in mapping table TYPES. CountryCodeISO2, see § 4.6
Definition	String	10	NO	NO	The picture definition. Allowed values in Mapping table TYPES.VideoDefinition, see § 4.15 E.g.: HD, SD
Description	String	1000	NO	YES	The description of the content.
Directors	String	200	NO	NO	A semi-colon separated list of director names.

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Common Editorial Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
DvbCategories	String	100	NO	NO	List of DVB genres and sub-genres. Each genre / sub-genre is specified in the form A:B:0:0 where A and B are a single HEX digit and interpreted according to DVB content nibble specification. See § 4.17 for the list of preconfigured allowed values. Multiple entries are separated by semi-colon. E.g.: 1:6:0:0; B:1:0:0 A project specific genre/subgenre classification may also be used and will be entered via values of the form 0:0:C:D
Episode	String	1000	NO	YES	Used when the content is an episode of a series. In this case the Title EpgElement will generally contain the name of this series, and this field can be used to hold the specific title and / or number of the episode.
IsRecordable	Boolean		NO	NO	Specifies if the content is allowed to be recorded or not.
Language	String	3	NO	NO	The original language of the content. ISO 3 letters code, lower case. Allowed values in mapping table TYPES.LanguageCodeISO3, see § 4.9
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
Producers	String	200	NO	NO	A semi-colon separated list of producer names.

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Common Editorial Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ProgramId	String	2000	NO	NO	Allow to have a link between VOD content and schedule. This field is normally filled automatically by the CMS's CatchUp management feature (when activated); in general the value is not ingested into the CMS. It should not be used for series.
PromoImages	String	4000	NO	NO	A semi-colon separated list of URL of promoting pictures for this content. The value entered in the CMS is copied as-is; the CMS does not validate the format of this field's value. The CMS does NOT attempt to access the URL's to verify the existence of the image files. The max length is in bytes.
Rating	String	32	YES	NO	Parental rating of the content. The set of allowed values are customer specific. The pre-configured allowed values are integer values with the standard DVB interpretation: the minimum recommended age is the specified value + 3 years. They are defined in mapping table: TYPES.ParentalRating See chapter § 4.10
Scoring	Float		NO	NO	Score of the content/episode
ShortTitle	String	40	NO	YES	The short form of the title of this content. Intended for use on devices with limited space.
Studio	String	2000	NO	NO	The name of the content owner.
Subtitles	String	2000	NO	NO	A list of semi-colon separated "locale-type" pattern. - locale: ISO 3 letters subtitle languages, see § 4.9 - type: HearingImpaired or Standard E.g.: Eng-Standard;Eng- HearingImpaired;Fra-Standard

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Common Editorial Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Synopsis	String	2000	NO	YES	The synopsis of the content
Title	String	100	YES	YES	The name of the content as to be shown on the end-user device. In the CMS it is mandatory for the title field to be filled-in for at least one of the locales, it is not necessary for values to be provided for all the locales. In addition, for a given locale, if one of the other localized fields is filled, a title must also be provided in that locale.
TotalDownloads	Integer		NO	NO	Total number of downloads of the content/episode.
ViewingCounter	Integer		NO	NO	Number of times a content has been viewed.
ViewingNumber	Integer		NO	NO	Number of times a user can see the content sold once purchased. If it is set to 0 or omitted, there is no limitation.
Writers	String	200	NO	NO	The names of the screen writers / authors for this content.
SeasonNumber	String	4000	NO	NO	Used when the content is an episode of a series. In this case the Title EPG Element will generally contain the name of this series, and this field can be used to hold the specific title and / or number of the season. The max length is in bytes.
TmsId	String	4000	NO	NO	Unique identifier obtained from Gracenote. The max length is in bytes.
Year	Integer		NO	NO	The year of production of the content

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2.2 <Series> EPG fields

Series have all the common editorial fields described in § 2.1. There are no fields specific to series.

2.3 Main <Content> EPG fields

Main contents have all the editorial fields described in § 2.1.

When the content is an episode of a series, all fields will be inherited from the series except for PrivateMetadata.

Main contents have the additional fields listed in the table below.

Main <Content> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ProgrammeEndDate	GMT date&time		NO	NO	If the Content is a CatchUp Content then it contains the end date of the corresponding recorded broadcast event. Otherwise it's empty. This field is normally filled automatically by the CMS's CatchUp management feature (when activated); in general the value is not ingested into the CMS. E.g.: 2013-02-25T04:30:00Z (this format is mandatory).
ProgrammeStartDate	GMT date&time		NO	NO	If the Content is a CatchUp Content then it contains the start date of the corresponding recorded broadcast event. Otherwise it's empty. This field is normally filled automatically by the CMS's CatchUp management feature (when activated); in general the value is not ingested into the CMS. E.g.: 2013-02-25T03:30:00Z (this format is mandatory).
ServiceId	String	4000	NO	NO	If the Content is a CatchUp Content then it contains the id of the related channel. When the CMS's CatchUp management feature is activated this field will be filled with the id attribute of <Service> in the BTV interface.

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Main <Content> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ServiceLongName	String	100	NO	NO	If the Content is a CatchUp Content then it contains a reference to the broadcast channel from which the corresponding event was recorded. Otherwise it's empty. When the CMS's CatchUp management feature is activated this field will be filled with the longName attribute of <Service> in the BTV interface.
UserAverageRating	BigDecimal	999.99	NO	NO	The average ratings for content provided by users of the system
IsDownload2GoAuth	Boolean		NO	NO	Specified if the content is available for the feature D2G

2.4 <Content> version EPG fields

Contents versions have all the editorial fields described in § 2.1, and also the same additional fields as listed in § 2.3 for a main content.

All fields will be inherited from the main content except for PrivateMetadata.

Content versions have the additional fields listed in the table below.

<Content> Version Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
CUEndDate	GMT date&time		NO	NO	End date of the period during which the recorded content can be seen in nPVR context; otherwise empty. E.g.: 2013-02-28T04:45:00Z (this format is mandatory).

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<Content> Version Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
CUStartDate	GMT date&time		NO	NO	Start date of the period during which the recorded content can be seen in nPVR context; otherwise empty. E.g.: 2013-02-25T04:45:00Z (this format is mandatory).

2.5 <Programme> EPG fields

Programmes have all the editorial fields described in § 2.1, and also the same additional fields as listed in § 2.3 for a main content.

When a programme is linked to a content, all fields will be inherited from the main content except for PrivateMetadata, LiveEvent and Showing. Note that programmes cannot be linked to content versions.

Programmes have the additional fields listed in the table below.

<Programme> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
IsTimeshifted	Boolean		NO	NO	True means that this programme is a time-shifted broadcast of an earlier programme. Typically used for "+1 hour" channels.
LiveEvent	String	5	NO	NO	Tells if event is live or not. No relation with Catchup or NPVR functionality. Allowed values: 'true' or 'false'.

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<Programme> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
RecommendedProgrammeIds	String	4000	NO	NO	<p>A semi-colon separated list without whitespace of programme Ids recommended for this programme (this info is coming from the recommendation engine or from the customer) with rank (integer >= 0) using the following pattern: <ProgrammeId><separator><Rank> The separator is a single slash ("/"). If Rank == 0, no rank management. The higher the rank value, the more highly recommended is the referenced programme. A referenced programme may be scheduled before or after the current one, and may be on a different channel; it may not be included in the same xml file. A particular programme Id should appear only once in the list. It is the responsibility of the person or system supplying the values to respect this rule. The CMS will NOT check the uniqueness of IDs. Following schedule updates the CMS does not re-validate the contents of the recommendation EPG fields; it is expected that users of this data, e.g. the end user device, will react intelligently if given a reference to a programme that it cannot identify.</p> <p>The max length is in bytes.</p>
RecommendedVoditemIds	String	4000	NO	NO	<p>The same format and usages rules as the field RecommendedProgrammeIds, except that ID's refer to Voditem's whose content is recommended with respect to this programme.</p> <p>The max length is in bytes.</p>

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<Programme> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Showing	String	20	NO	NO	Showing status. Allowed values in Mapping table TYPES.Showing, see § 4.14. E.g.: Premiere, Normal, Last Viewing
SOCU_filename	String	255	NO	NO	Name of the asset file when this event is available via CatchUp/StartOver functionality.
IsDownload2GoAuth	Boolean		NO	NO	Specified if the content/event is available for the feature D2G
Presenters	String		NO	NO	Name of presenters are listed in order of importance.
Commentators	String		NO	NO	Name of commentators are listed in order of importance.
Words	String		NO	YES	List of words extracted from the description. Used for search purpose
Hearing_Impaired	String		NO	NO	The language of the content for hearing impaired persons. Uses 3 letter codes according to ISO 639-2.
Visual_Impaired	String		NO	NO	The language of the content for visual impaired persons. Uses 3 letter codes according to ISO 639-2.

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<Programme> Specific Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ContentValidityDuration	String	4000	NO	NO	<p>A semi-colon separated list of duration and ProfileId pairs or only durations. The format of each element of the list is <Duration>/<ProfileId> or just <Duration> where <Duration> is an integer. If <Duration> = 0, such values/profiles are ignored (for example: if value = 0/LYS0001012;4/LYS0001011 then the profile LYS0001012 is ignored and its profile value is considered). In case of duplicate values for profile, only first occurrence is considered (for example: if value = 3/LYS0001012;4/LYS0001012 then '3' is considered). If multiple durations are specified without ProfileId, only the first occurrence which is > 0 is considered (for example: if value = 0;2;4 then '2' is considered). If the value is null or empty, duration from the respective profile is considered. Following schedule updates the CMS does not re-validate the contents of the recommendation EPG fields; it is expected that users of this data, e.g. the end user device, will react intelligently if given a reference to a program that it cannot identify.</p> <p>The max length is in bytes.</p>

2.6 <Promotion> EPG fields

The EPG fields for promotions are listed in the table below.

For promotion versions, the following fields are inherited from the main promotion:

Definition

<Promotion> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Definition	String	10	NO	NO	The picture definition. Allowed values in Mapping table TYPES.VideoDefinition, see § 4.15 E.g.: HD, SD
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
IsDownload2GoAuth	Boolean		NO	NO	Specified if the content/ event is available for the feature D2G

2.7 <Image> EPG fields

Image versions do not inherit any fields from the main image except 'IsDownload2GoAuth' EPG field.

The EPG fields for images are listed in the table below.

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<Image> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ImageType	String	4000	NO	NO	The image type. Allowed values in mapping table: TYPES.ImageType see § 4.8
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
IsDownload2GoAuth	Boolean		NO	NO	Specified if the content/ event is available for the feature D2G

2.8 <Service> EPG fields

The EPG fields for BTV services (also referred to as channels) are listed in the table below. Note that in this chapter the words "service" and "channel" are used interchangeably.

For channel versions, the following fields are inherited from the main channel:

- Categories
- DvbCategories
- Description
- PromoImages
- Rating
- Title

The CMS BTV import does not support importing channels, so none of these fields may be imported; all values must be set via the CMS GUI.

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<Service> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
CarryingNetwork	String	200	NO	NO	List of semi-colon separated decimal values representing the list of DVB triplets linked to this channel. The decimal value calculation according to DVB triplet is customer dependent.
Categories	String	200	NO	NO	List of semi-colon separated keywords classifying the content of this programme. Allowed values in mapping table: TYPES.Category See chapter § 4.3 For versions, inherited from the main channel.
Description	String	1000	NO	YES	The description of the service For versions, inherited from the main channel.
DvbCategories	String	100	NO	NO	List of DVB genres and sub-genres. Each genre / sub-genre is specified in the form A:B:0:0 where A and B are a single HEX digit and interpreted according to DVB content nibble specification. See § 4.17 for the list of allowed values. Multiple entries are separated by semi-colon. Example: 1:6:0:0; B:1:0:0 For versions, inherited from the main channel. A project specific genre/subgenre classification may also be used and will be entered via values of the form 0:0:C:D

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<Service> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
NetworkLocation	String	300	NO	NO	Intended to provide the location of the A/V stream of the channel on the network. Used to hold the URL for adaptive streaming. The value entered in the CMS is copied as-is; the CMS does not validate the format of this field's value. In case of Harmonic OS, the value must be of the form: http ://<delivery-ip>/Content/HLS/Live/Channel(<channel-name>)/index.m3u8 Only present on channel versions, not present on main channels.
OriginatingNetwork	String	200	NO	NO	The original broadcaster of the service
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
PromoImages	String	4000	NO	NO	A semi-colon separated list of URL of promoting pictures. The value entered in the CMS is copied as-is; the CMS does not validate the format of this field's value. The CMS does NOT attempt to access the URL's to verify the existence of the image files. The max length is in bytes. For versions, inherited from the main channel.

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<Service> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
Rating	String	32	YES	NO	Parental rating of the programme contents of this channel. The set of allowed values are customer specific. The pre-configured allowed values are integer values with the standard DVB interpretation: the minimum recommended age is the specified value + 3 years. They are defined in mapping table: TYPES.ParentalRating See chapter § 4.10 For versions, inherited from the main channel.
Title	String	100	YES	YES	The name of the service. In the CMS it is mandatory for the title field to be filled-in for at least one of the locales, it is not necessary for values to be provided for all the locales. For versions, inherited from the main channel.
SourceId*	String	4000	NO	NO	Identifier of the stream to record.
StartOverLocation	String	4000	NO	NO	Intended to provide the location of the A/V stream of the channel on the network. Used to hold the URL for adaptive streaming for StartOver. The value entered in the CMS is copied as-is; the CMS does not validate the format of this field's value. In case of Harmonic VOS360, the value must be of the form: http://{delivery-hostname}/Content/HLS/StartOver/channel(name={serviceId},startTi me={startTime})/index.m3u8 Only present on channel versions, not present on main channels.
IsLicenseStoreAllowed *	Boolean		NO	NO	True- Indicates that the license for live content will be stored and there is no need to re-acquire the license when the player is restarted.

* On channel versions only

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2.9 <Product> EPG fields

Within the CMS, all types of products have the same set of EPG fields and are listed in the table below. However the following fields have no sense for BTM products and should be left empty for these types:

LicenceDuration
 ViewingNumber

<Product> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
LicenseDuration	String	20	NO	NO	Consumption window, meaning the number of seconds from the license generation time during which a user can watch the content. If it is not specified, the DRM license generated will be in "absolute" mode. Otherwise it will be in "relative" mode. Only relevant for VOD products.
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
ProfileName	String	40	NO	NO	This product profile name allows associating a product to a profile managed externally to the CMS. Allowed values in mapping table: TYPES.ProfileName, see § 4.11
TitleForProduct	String	42	NO	YES	Billing title of the product. This is the same use as the title attribute in <Product> except that here we can specify for alternative languages.

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<Product> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
ViewingNumber	Integer		NO	NO	Number of time a user can see the content sold once purchased. If it is set to 0 or omitted, there is no limitation. Only relevant for VOD products.
AllowDownload2Go	Boolean		NO	NO	Specify if the contents that are part of the product can be downloaded or not. Only Contents that are authorized for download will be downloadable at the end

2.10 <Catalogue> EPG fields

No EPG fields are defined for catalogues.

2.11 <Node> EPG Fields

The EPG fields for catalogue nodes are listed in the table below.

<Node> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
BarkerChannelRef	String	200	NO	NO	The URI to the barker channel promoting this node.

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<Node> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
NodeLayoutInfo	String	4000	NO	NO	This field will be used to define the layout the application should use to display the page corresponding to this node. E.g. Id allowing the STB application to know how to compose images in the page. The max length is in bytes.
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.
PromoImages	String	4000	NO	NO	A semi-colon separated list of URL of promoting pictures for this node of the catalogue. The value entered in the CMS is copied as-is; the CMS does not validate the format of this field's value. The CMS does NOT attempt to access the URL's to verify the existence of the image files. The max length is in bytes.
Rating	String	32	YES	NO	Parental rating of the content included in this node. The CMS does not apply any validation to ensure the consistency between this value and those of the specific contents included in the node. The set of allowed values are customer specific. The pre-configured allowed values are integer values with the standard DVB interpretation: the minimum recommended age is the specified value + 3 years. They are defined in mapping table: TYPES.ParentalRating See chapter § 4.10

<Node> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
RecommendationQuery	String	4000	NO	NO	In case the operator wants to keep the CMS for On Demand Catalogue tree creation and structure for all catalogue browsing, recommended nodes can be integrated seamlessly. A sub-catalogue structure, with all node information but without the content can be created – each node transporting in the new RecommendationQuery field all the relevant data for the application to query the Recommendation Engine (or Metadata Engine) directly. The max length is in bytes.
Title	String	100	YES	YES	The display name of the node.

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2.12 <VodItem> EPG fields

The EPG fields for Voditems are listed in the table below.

<VodItem> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
DisplayPriority	String		NO	NO	Use to order the Item in the STB. The value will be a semi-colon separated list of string using the following format: <NodeRef>/<Position> E.g.: "LYS01/0;LYS02/3" Where the digit after the slash is the VodItem's relative position in the node with the ID given before the slash. Lowest values come first. Position value of the DisplayPriority has a maximum value of 256.
PrivateMetadata	String	4000	NO	NO	Generic field used to pass directly data from the customer to the end user device without any CMS processing. One possible use is to pass a list of key-word / value pairs separated by semi-colons. No validation will be done by the CMS on the value of this field. The max length is in bytes.

<VodItem> Fields					
Key	Data Type	Max Length	Mandatory	Localized	Description and allowed values
RecommendedVodItemIds	String	4000	NO	NO	<p>A semi-colon separated list of voditem Ids recommended for this voditem (this info is coming from the recommendation engine or from the customer) with rank (integer >= 0) using the following pattern: <VodItemId><separator><Rank></p> <p>The separator is a single slash ("/").</p> <p>If Rank == 0, no rank management.</p> <p>The higher the rank value, the more highly recommended is the referenced Vod Item.</p> <p>A particular VodItem Id should appear only once in the list. It is the responsibility of the person or system supplying the values to respect this rule. The CMS will NOT check the uniqueness of IDs.</p> <p>Following VOD catalogue updates the CMS does not re-validate the contents of previously ingested the recommendation EPG field values; it is expected that users of this data, e.g. the end user device, will react intelligently if given a reference to a VodItem that it cannot identify.</p> <p>The max length is in bytes.</p>

3. <Property> fields definition

The CMS BTM and VOD xml import interfaces include generic fields on certain ingested objects. These fields are ingested via <Property> elements. The field is identified by the element's "key" attribute, and the field value is the element's payload.

The allowed keys are configured via mapping tables stored in the CMS database. This chapter provides the description of the fields that are pre-configured for a new customer project. Modifications to these configurations may cause the CMS functionality that uses them to fail or behave un-expectedly.

The set of allowed keys is dependent upon the type or sub-type of the owning data object.

Properties are not localized.

3.1 <DrmInfo> properties under <Content>

The list of <DrmInfo> properties is configured in the mapping tables

METADATA.TYPES.CONTENT_CAS_INFO.[Security-device-sub-type]

Where [Security-device-sub-type] is replaced by the name of the sub-type of the security device referenced in the DrmInfo.

<DrmInfo> properties		
Device sub-type	Key	Description, usage rules, and allowed values
IrdetoKMS	Ext_event_id	Value to be used in the Irdeto PES workflow to be filled into the ACSET corresponding field. This parameter shall uniquely identify the event by means of its external event ID. A string of max length 16 characters. The value is optional for the ingest, but a value must be filled in before the corresponding Irdeto workflow is executed. The CMS will not check the uniqueness of the values.
IrdetoKMS	RetentionDuration	Retention duration used to limit playback on STB managed by an Irdeto KMS. A 12 character string of digits, representing a time duration in the form YYMMDDhhmmss The value is optional for the ingest, but a value must be filled in before the corresponding Irdeto workflow is executed.

3.2 <CasInfo> properties under <Product>

The list of <CasInfo> properties is configured in the mapping tables

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METADATA.TYPES.PRODUCT_CAS_INFO.[Security-device-sub-type]
Where [Security-device-sub-type] is replaced by the name of the sub-type of the security device referenced in the CasInfo.

<CasInfo> properties		
Device sub-type	Key	Description, usage rules, and allowed values
IrdetoControl	PolicyGroupId	Specifies the Policy Group ID to be used in the Irdeto CPS encryption workflow. Only used on BTV subscription products when they are applied to an Irdeto encryption of a VOD content sold via subscription. An optional string of max 50 characters When not filled-in, a default value will be used in the encryption workflow.
NagraCLK NagraELK	BusinessProductType	Specifies the specific sub-type of BTV product (Subscription or PPV). An optional non-negative integer. Allowed values are configured in the Nagra CAS. If not set by the CMS, the CAS's default value will be filled in when the product is synchronized with the CAS system.
NagraCLK NagraELK	MopId	Specifies the MOP ID of the BTV product (Subscription or PPV). An optional non-negative integer. Allowed values are configured in the Nagra CAS. If not set by the CMS, the CAS's default value will be filled in when the product is synchronized with the CAS system.

4. Mapping tables pre-configuration

This chapter lists the mapping table contents of the enumerations that are pre-configured in the CMS database for a new customer project.

When used to configure the choices for an EPG or meta-data field in the CMS, the entry from the "Key" column in the tables below is stored in the CMS database and also used as the payload of the corresponding <EpgElement> entry in the interfaces. The entry from the "Value" column is shown in the CMS GUI; this entry may either be a localization key, or a non-localised text displayed as-is.

For the standard mappings that use localisation keys for their values, if extended on-site it is not mandatory to create new localization keys for the new entries. In this case the display value is entered directly in the "Value" column of the mapping. Doing this avoids the need to synchronize the localization files with the CMS R&D team - necessary to avoid site customizations being lost at the deployment of a new CMS release.

The descriptions below mention the maximum allowed length of the mapping key values. Note that it is up to the user configuring the mappings to respect these lengths. The CMS does not validate the mapping entry lengths. Failure to respect these maximum lengths will cause validation errors when trying to save the owner data object after having selected such values for the EPG field.

Some of the descriptions below are defined as "OptionalEnumerations". If one of these mappings is configured without any entry the associated EPG data is not restricted to any set of value.

4.1 TYPES.AudioMode

Maximum allowed length of key values is 20 characters.

Key	Value	Comment
Dual Mono	Dual Mono	
Mono	Mono	
5.1	5.1	
Nicam Stereo	Nicam Stereo	
Undefined	Undefined	
SRS	SRS	
THX	THX	

4.2 TYPES.AuthenticationType

Key	Value	Comment
HTTP_DIGEST	HTTP_DIGEST	Type of authentication to be used while accessing web services

4.3 TYPES.Category

This mapping table is an "OptionalEnumeration".

Key	Value	Comment
Action	Action	
Action-Adventure	Action-Adventure	
Adult	Adult	
Adventure	Adventure	
Children	Children	
Comedy	Comedy	
Documentary	Documentary	
Drama	Drama	
EnEspanol	EnEspanol	
Family	Family	
Horror	Horror	
International	International	
Kids-Family	Kids-Family	
Library	Library	
NewRelease	NewRelease	
Romance	Romance	
ScienceFiction	ScienceFiction	
SciFi-Horror	SciFi-Horror	
Sport	Sport	
Suspense	Suspense	
Suspense-Thriller	Suspense-Thriller	
ThreeDayRental	ThreeDayRental	
Thriller	Thriller	
Uncensored	Uncensored	
War	War	

4.4 TYPES.Colours

Maximum allowed length of key values is 20 characters.

Key	Value	Comment
Colour	Colour	
Colourised	Colourised	
BlackAndWhite	BlackAndWhite	

4.5 TYPES.ContentWarnings

Maximum allowed length of key values is technically 100 characters. However since the EPG fields that use this mapping is a list of values whose maximum length is 100 characters, individual key values will need to be much smaller; 10 characters is a guideline.

Key	Value	Comment
bl	Bad language	

4.6 TYPES.CountryCodeISO2

This mapping table contains all the 2 letter country codes from ISO-3166-1 ([2]) The whole list is not presented here, just a few typical examples.

Key	Value (Localisation key)	Comment, localized text in English
GB	EPG_DAT_Countries_ISO2_GB	United Kingdom
FR	EPG_DAT_Countries_ISO2_FR	France
CH	EPG_DAT_Countries_ISO2_CH	Switzerland
CN	EPG_DAT_Countries_ISO2_CN	China

4.7 TYPES.CurrencyCodeISO

This mapping table contains 3 letter currency codes from ISO4217 ([3]) It will contain only the currencies that are pertinent to the project, and not the whole list from the ISO standard.

Key	Value (Localisation key)	Comment, localized text in English
EUR	EPG_DAT_Currency_ISO_EUR	EUR – Euro (Euro member)
USD	EPG_DAT_Currency_ISO_USD	USD – Dollars (United States of America)
CHF	EPG_DAT_Currency_ISO_CHF	CHF – Francs (Switzerland)

4.8 TYPES.ImageType

Key	Value	Comment
MOVIES	MOVIES	

4.9 TYPES.LanguageCodeISO3

This mapping table contains all the 3 letter language codes from ISO639-2 ([1]) The whole list is not presented here, just a few typical examples.

Key	Value (Localisation key)	Comment, localized text in English
eng	EPG_DAT_Languages_ISO3_eng	English
fra	EPG_DAT_Languages_ISO3_fre	French
zho	EPG_DAT_Languages_ISO3_zho	Chinese

4.10 TYPES.ParentalRating

Maximum allowed length of key values is 32 characters.

Key	Value (Localisation key)	Comment, localized text in English
0	EPG_DAT_Parental_Rating_0	Undefined
1	EPG_DAT_Parental_Rating_1	Suitable for small children
2	EPG_DAT_Parental_Rating_2	Unsuitable for under 5
3	EPG_DAT_Parental_Rating_3	Unsuitable for under 6
4	EPG_DAT_Parental_Rating_4	Unsuitable for under 7
5	EPG_DAT_Parental_Rating_5	Unsuitable for under 8
6	EPG_DAT_Parental_Rating_6	Unsuitable for under 9
7	EPG_DAT_Parental_Rating_7	Unsuitable for under 10
8	EPG_DAT_Parental_Rating_8	Unsuitable for under 11
9	EPG_DAT_Parental_Rating_9	Unsuitable for under 12
10	EPG_DAT_Parental_Rating_10	Unsuitable for under 13
11	EPG_DAT_Parental_Rating_11	Unsuitable for under 14
12	EPG_DAT_Parental_Rating_12	Unsuitable for under 15
13	EPG_DAT_Parental_Rating_13	Unsuitable for under 16
14	EPG_DAT_Parental_Rating_14	Unsuitable for under 17
15	EPG_DAT_Parental_Rating_15	Adult

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4.11 TYPES.ProfileName

Maximum allowed length of key values is 40 characters.

Key	Value	Comment
general	general	
basic	basic	
premium	premium	

4.12 TYPES.Regions

Maximum allowed length of key values is 300 characters to match standard enumerated types definitions.

The regions required by a customer project must be configured in this mapping table when the CMS is first deployed on site. It is not intended that the preconfigured entry "DefaultRegion" is selected; it is a place-holder to ensure the mapping table exists in the CMS database.

Key	Value	Comment
DefaultRegion	DefaultRegion	

4.13 TYPES.ScreenFormat

Maximum allowed length of key values is 20 characters.

Key	Value	Comment
Undefined	Undefined	
16:9	16:9	
4:3	4:3	
Widescreen	Widescreen	

4.14 TYPES.Showing

Maximum allowed length of key values is 20 characters.

Key	Value	Comment
Premiere	Premiere	
Normal	Normal	
Last Viewing	Last Viewing	

4.15 TYPES.VideoDefinition

Maximum allowed length of key values is 10 characters.

Key	Value	Comment
SD	Standard Definition	
HD	High Definition	
3D	3D	

4.16 TYPES.JITProfiles

This type is used for JITP (JUST IN TIME Packaging) Capture/VOD profiles. This should be updated with the profiles used on Harmonic Recorder for each encoding supported.

Key	Value	Comment
HLS_1	HLS_1	HTTP Live Streaming
SS_2	SS_2	Smooth Streaming
DASH_3	DASH_3	Dynamic Adaptive Streaming over HTTP

4.17 DVB genre & sub-genre

In order to validate during an import that the DVB genre and sub-genre values correspond to entries with explicitly defined entries, the CMS uses the mapping table TYPES.DvbSubGenre.

Each genre / sub-genre is specified in the form A:B:0:0 where A and B are a single HEX digit. The allowed combinations of A:B are held in the mapping table, i.e. without the 3rd & 4th digits that are required to be set to "0:0" for the format of the EPG field DvbCategories.

DVB genre & sub-genre codes			
Genre	Movie/Drama	Genre	News/Currents affairs
1:0:0:0	Movie/Drama (general)	2:0:0:0	News/Current affairs (general)
1:1:0:0	Detective/Thriller	2:1:0:0	News/Weather report
1:2:0:0	Adventure/Western/War	2:2:0:0	News magazine
1:3:0:0	Science fiction/Fantasy/Horror	2:3:0:0	Documentary
1:4:0:0	Comedy	2:4:0:0	Discussion/Interview/Debate
1:5:0:0	Soap/Melodrama/Folkloric		
1:6:0:0	Romance		
1:7:0:0	Serious/Classical/Religious/Historical movie/Drama		
1:8:0:0	Adult movie/Drama		
Genre	Show/Game show	Genre	Sports
3:0:0:0	Show/Game show	4:0:0:0	Sport (general)
3:1:0:0	Game show/Quiz/Contest	4:1:0:0	Special events (Olympic Games, World cup, etc.)
3:2:0:0	Variety show	4:2:0:0	Sport magazines
3:3:0:0	Talk show	4:3:0:0	Football/Soccer
Genre	Children's/Youth programmes	4:4:0:0	Tennis/Squash
5:0:0:0	Children's/Youth programmes	4:5:0:0	Team sports (excluding football)
5:1:0:0	Pre-school children's programmes	4:6:0:0	Athletics
5:2:0:0	Entertainment programmes for 6 to 14	4:7:0:0	Motor sport
5:3:0:0	Entertainment programmes for 10 to 16	4:8:0:0	Water sport
5:4:0:0	Informational/Educational/School programmes	4:9:0:0	Winter sports
5:5:0:0	Cartoons/Puppets	4:A:0:0	Equestrian
		4:B:0:0	Material sports

DVB genre & sub-genre codes			
Genre	Music/Ballet/Dance	Genre	Arts/Culture (without music)
6:0:0:0	Music/Ballet/Dance (general)	7:0:0:0	Arts/Culture (without music, general)
6:1:0:0	Rock/Pop	7:1:0:0	Performing arts
6:2:0:0	Serious music/Classical music	7:2:0:0	Fine arts
6:3:0:0	Folk/Traditional Music	7:3:0:0	Religion
6:4:0:0	Jazz	7:4:0:0	Popular culture/Traditional arts
6:5:0:0	Musical/Opera	7:5:0:0	Literature
6:6:0:0	Ballet	7:6:0:0	Film/Cinema
Genre	Social/Political issues/Economics	7:7:0:0	Experimental film/Video
8:0:0:0	Social/Political issues/Economics (general)	7:8:0:0	Broadcasting/Press
8:1:0:0	Magazines/Reports/Documentary	7:9:0:0	New media
8:2:0:0	Economics/Social advisory	7:A:0:0	Arts/Culture magazines
8:3:0:0	Remarkable people	7:B:0:0	Fashion
Genre	Education/Science/Factual topics	Genre	Leisure hobbies
9:0:0:0	Education/Science/Factual topics (general)	A:0:0:0	Leisure hobbies (general)
9:1:0:0	Nature/Animals/Environment	A:1:0:0	Tourism/Travel
9:2:0:0	Technology/Natural sciences	A:2:0:0	Handicraft
9:3:0:0	Medicine/Physiology/Psychology	A:3:0:0	Motoring
9:4:0:0	Foreign countries/Expedition	A:4:0:0	Fitness & Health
9:5:0:0	Social/Spiritual sciences	A:5:0:0	Cooking
9:6:0:0	Further education	A:6:0:0	Advertisement/Shopping
9:7:0:0	Languages	A:7:0:0	Gardening
Genre	Special characteristics		
B:0:0:0	Original language		
B:1:0:0	Black & White		
B:2:0:0	Unpublished		
B:3:0:0	Live broadcast		

Acronyms

Acronym	Stands for	Definition
BTV	Broadcast TeleVision	Linear broadcast of content, as opposed to Video on demand.
CMS	Content Management System	Backend system managing content, traffic and scheduling data
DRM	Digital Rights Management	Umbrella term to cover all sorts of active or passive mechanisms controlling the availability of locally stored digital content
DVB	Digital Video Broadcasting	Consortium of companies establishing common international standards for digital broadcasting
EPG	Electronic Program Guide	Depending on the context, refers either to the set-top box application providing a display of the channel schedule on the subscriber TV screen, or either to the whole schedule process: schedule information building in the IMS, transmission on the network
GMT	Greenwich Mean Time	Today called Coordinated Universal Time (UTC). Reference time for CAS.
GUI	Graphical User Interface	Graphical (rather than purely textual) user interface to a computer
HDCP	High-bandwidth Digital Content Protection	Content protection for high-bandwidth interfaces to digital displays, such as DVI
HEX	Hexadecimal	Base-16 system
ID	Identifier	Unique value associated to an element to identify it.
ISO	International Organization for Standardization	ISO edicts norms about everything. For CAS, used norms concern in particular language and country codes.
NDA	Non-Disclosure Agreement	A legal contract between at least two parties that outlines confidential material, knowledge, or information that the parties wish to share with one another for certain purposes, but wish to restrict access to by third parties
SRS	Software Requirement Specification	Document explaining what an application has to provide
STB	Set Top Box	Television interface device receiving, demultiplexing and descrambling the television signal. Houses the smart card that gives authorization for descrambling and provides the control word. Syn: decoder, receiver, integrated receiver device, set-top unit,
URL	Uniform Resource Locator	Address of a file (resource) accessible on the Internet.
VOD	Video On Demand	Umbrella term for a wide set of technologies whose common goal is to enable individuals to select video streams from a central server for viewing on a television or computer screen
XE		
YES		

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