EBU

OPERATING EUROVISION AND EURORADIO

TECH 3293

EBU CORE METADATA SET (EBUCore)

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Introduction

'The EBUCore is a metadata specification designed for users with different needs'.

This is version 1.4 of the “EBUCore” metadata set.

EBUCore has been purposefully designed as a minimum and flexible list of attributes to describe audio and video resources for a wide range of broadcasting applications including archives, exchange and production in the context of a Service Oriented Architecture. It is also a metadata schema with well defined syntax and semantics for easier implementation.

EBUCore is based on the Dublin Core to maximise interoperability with the community of Dublin Core users such as the European Digital Library 'Europeana'. EBUCore expands the list of elements originally defined in EBU Tech 3293-2001 for radio archives, also based on Dublin Core.

EBUCore 1.4 takes into account latest developments in the Semantic Web and Linked Open Data communities. EBUCore 1.4 is available as a RDF ontology entirely compatible with the W3C Media Annotation Working Group ontology, which model is common and based on the EBU Class Conceptual Data Model (Tech.3351). A RDF/OWL representation of the EBUCore schema is given in Annex B. The definitions in EBUCore 1.4 have been refined. The schema structure has been reinforced for registration in EBU's Class 13 in SMPTE. The EBU ontology has been updated to complement EBU's CCDM (Tech 3351) and improve mapping with other ontologies of the audiovisual sector such as Mediamap.

The EBUCore is a living specification and more updates are already announced on the definition of the audio format metadata, which will be published in a subsequent version of the specification.

More information on EBU metadata activities is provided on the EBU TECHNICAL website (http://tech.ebu.ch/metadata).

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EBU Core Metadata Set
(EBU Core)

EBU Committee	*First Issued*	*Revised*	*Re-issued*
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1. Scope

Metadata is essential to broadcasting.

The "EBUCore" set of metadata defined in this specification has been identified as being the minimum information needed to describe radio and television content.

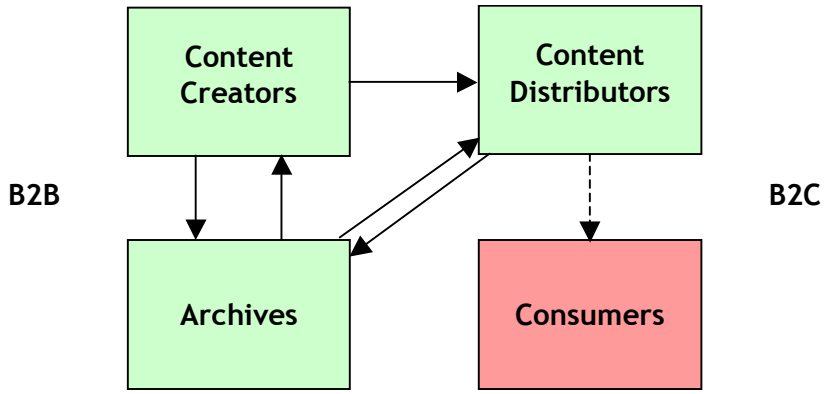


Figure 1: Archiving - a core process to define metadata

"If you can't find it, you don't have it!". This should not happen in modern IT-based production environments. Metadata is the glue between production operations in particular moving towards Service Oriented Architecture and file-based production. Documenting audiovisual resources with EBUCore information is a minimum requirement corresponding to fundamental investment with guaranteed return.

This specification addresses the creation, management and preservation of material. . EBUCore facilitates programme exchanges between broadcasters or between production facilities in distributed and cloud environments. Beyond production, EBUCore can be used to describe content for distribution (broadcast, broadband Internet, mobile or hybrid delivery). EBUCore is also the default set of technical and descriptive metadata used by FIMS, the Framework of Interoperable Media Services.

The core set of metadata presented in EBUCore is the Dublin Core for media. The Dublin Core is being used as a core metadata set by librarians and museums in cultural heritage projects. The EBUCore is recommended when describing and providing access to audiovisual content.

EBUCore 1.4 takes into account latest developments in the Semantic Web and Linked Open Data communities. EBUCore 1.4 is available as a RDF ontology entirely compatible with the W3C Media Annotation Working Group ontology, which model is common and based on the EBU Class Conceptual Data Model (Tech.3351). A RDF/OWL representation of the EBUCore schema is given in Annex B.

The definitions in EBUCore 1.4 have been refined. The schema structure has been reinforced for registration as EBU's Class 13 in SMPTE. The EBU ontology has been updated to complement EBU's CCDM (Tech 3351) and improve mapping with other ontologies of the audiovisual sector such as Mediamap.

2. Core Metadata Set

2.1 Introduction

EBUCore is a collection of basic descriptive and technical/strutural metadata elements used to describe audiovisual content including in Dublin Core centric environments. It is directly compatible with the EBU Class Conceptual Data Model (Tech 3351) leading to its compliant use in Semantic Web and Service Oriented Architectures.

EBUCore is the Dublin Core for media.

The characterisation and semantics of each element is organised through the following structure:

a) Name: this is the name of the element

b) Cardinality: this is the number of times an elements can be used when describing a piece of content

c) Requirement: this states whether is element is required or optional

d) Definition: this provides a short unambiguous description of the element and its scope of use

e) Format: defines the type or format of the element e.g. a complex type or text or URI

f) Schema: give a syntactic view of the element representation in the EBUCore schema

g) UML representation

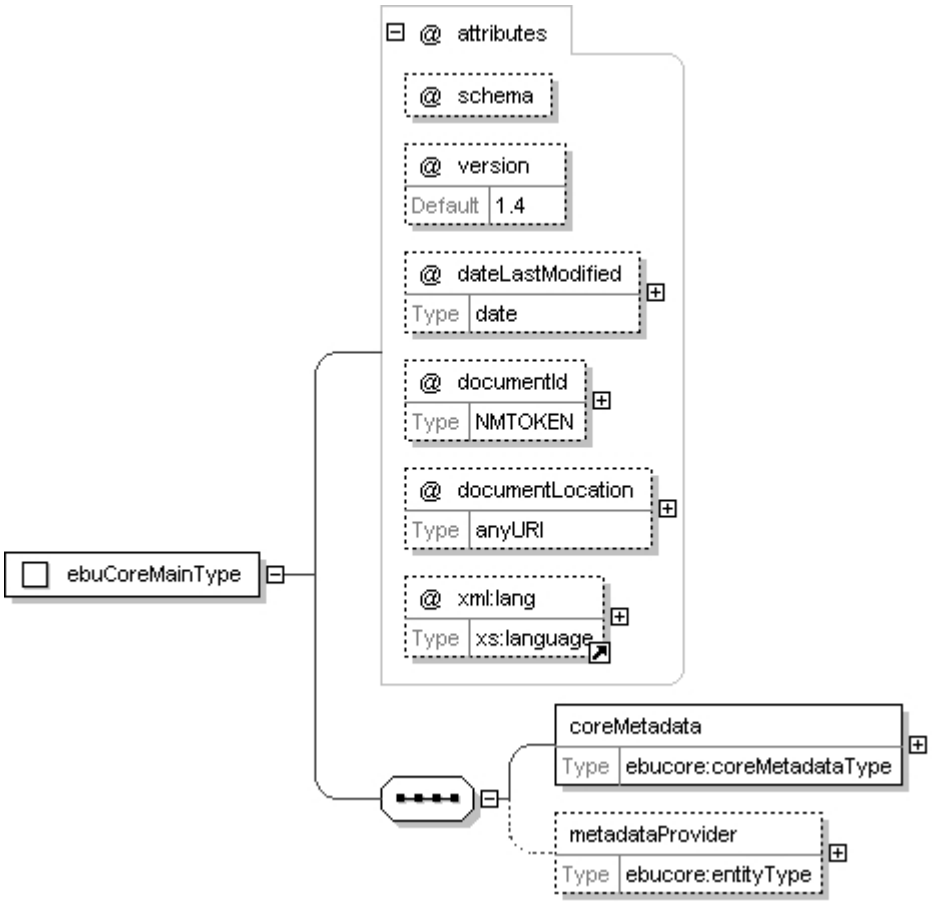
h) Semantic for each element and attribute with reference data and examples

The EBUCore is a living specification and more updates are already announced on the definition of the audio format metadata, which will be published in a subsequent version of the specification.

2.2 EBUCore schema root element

ebuCoreMain

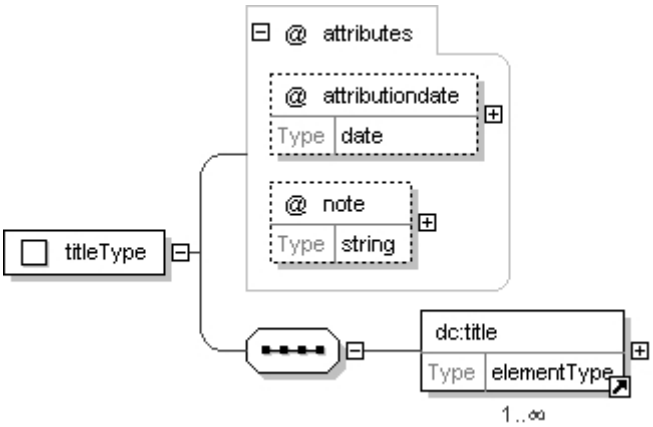
Name	**ebuCoreMain**
Cardinality	Unique occurrence per instance.
Requirement	Mandatory
Definition	ebuCoreMain is the root element of the EBUCore schema and associated instances.
Format	ebuCoreMainType
Schema	Root



@schema	An attribute to identify the schema.
@version	An attribute to identify the version of the schema in use.
@dateLastModified	The data when the schema was last modified to become the current version.
@documentId	A document identifier for instances.
@documentLocation	A URI pointing to where the document can be accessed.
@xml:lang	An attribute to define the by default the language used in a metadata instance. Note: this language definition can be superseded at element and attribute level when applicable or required.
coreMetadata	The core element of the EBUCore schema containing the minimum core set of elements.
metadataProvider	An element to provide information on the person or organisation creating and publishing EBUCore metadata instances. See ebucore:entityType

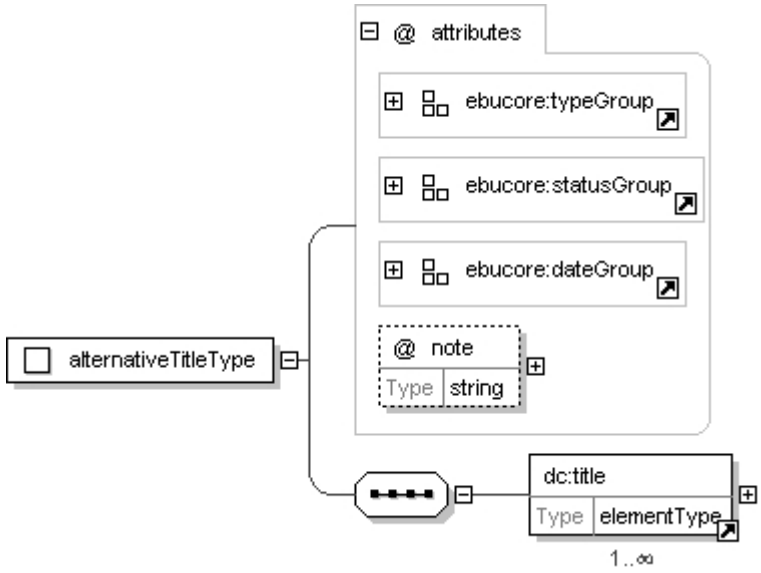
2.3 Core Metadata Set Elements and Semantics

Title

Name	**Title**
Cardinality	Multiple occurrences of the same Title are possible in different languages.
Requirement	Mandatory
Definition	A Title is the 'main' name given to a resource e.g. a media item, a media object, or a sequence as specified by the associated title type. It corresponds for a series to the series title, for a programme to the programme title, for an item to the item title, etc. Titles are recorded as they appear. The Title is the name by which a resource is formally known and that everyone should use to refer to or search for that particular resource. The Title may be provided in several languages. If present, the attributionDate attribute indicates when the Title was attributed.
Format	ebucore:titleType
Schema	/ebucore:coreMetadataType/ebucore:title
	
dc:title	Free-text to provide the main title by which the resource is known. The title can be provided in different languages. The language in which the title is provided can be provided using the dc:elementType's lang attribute. Example: 'the fifth element'
@ attributionDate	The date at which the title was attributed
@ note	A note element to provide additional contextual information.

Name	**Alternative Title**
Cardinality	Multiple
Requirement	Optional

Definition	An Alternative Title is the name other than the 'main' Title given to a resource. The type of title is defined by the typeGroup of attributes. The status of the title is defined by the statusGroup of attributes. Alternative Titles are recorded as they appear. An Alternative Title may be attributed to a resource for several reasons described using the status (e.g. working title) and type (e.g. series title) attributes. The alternativeTitle may be provided in several languages. It is sometimes common practice to put dates into the alternativeTitle. If present, the attributionDate (indicating when the alternativeTitle was attributed) in the date attribute should be consistent.
Format	ebucore:alternativeTitleType
Schema	/ebucore:coreMetadataType/ebucore:alternativeTitle

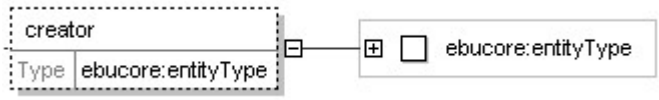


dc:title	Free-text to provide alternative titles by which the resource is known. The same title in different languages can be provided for a particular type. The language in which the title is provided can be provided using the dc:elementType's lang attribute.
@ typeGroup	The Alternative Title Type descriptor indicates the type of resource to which the Alternative Title applies e.g. a programme or a series.
@ typeLabel	Free text to define the type of resource. Example: 'series'
@ typeLink	A link to a term in a classification scheme Optional default reference data: ebu_ObjectTypeCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_ObjectTypeCodeCS.xml#5
@ typeDefinition	An optional definition. Example: the 'title' of the series that the resource is an episode of
@ statusGroup	The statusGroup is used to define the status of the Title such as short, long, full, abridged, working, transmission, published, international, subtitle, original, secondary, alternative, pledged, etc. The name of the format can be provided in the form of a text label, or a link to a code of a classification scheme, optionally accompanied by a definition. the status 'main' shall not be used for alternativeTitle as this applies to the Title only.

@ statusLabel	Free text to define the status of the title of the resource. Example: statusLabel: working (for 'working title')
@ statusLink	A link to a term or only identify a classification scheme Optional default reference data: ebu_TitleStatusCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_TitleStatusCodeCS.xml#6
@ statusDefinition	An optional definition. Example: a temporary title, which is different from the formal title under which the content has been published
@ dateGroup	See ebucore:dateGroup
@ note	A note element to provide additional contextual information on the title

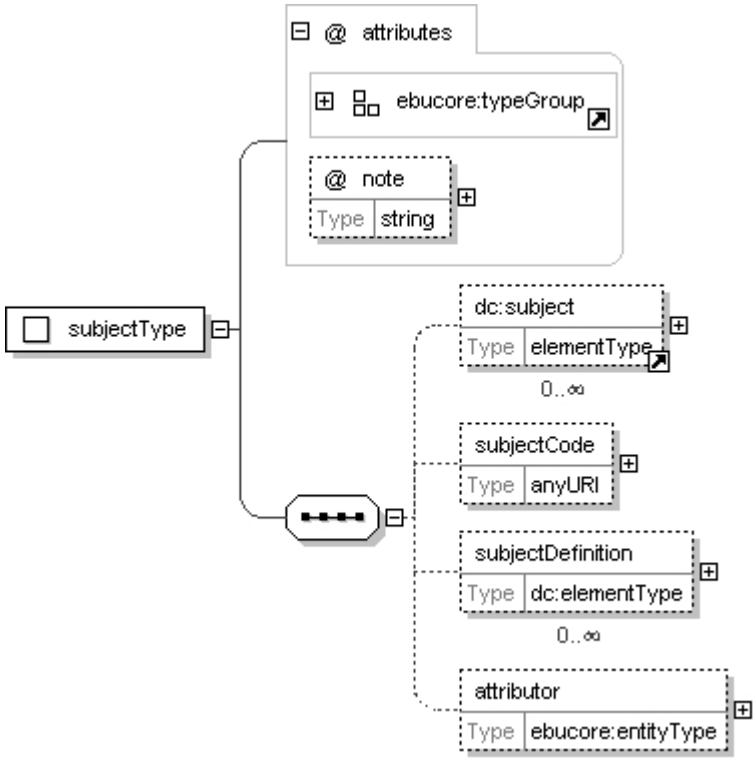
Creator

Name	**Creator**
Cardinality	Multiple
Requirement	Optional
Definition	The descriptor creator identifies an 'entity' (a person, group of persons or organisation) primarily responsible for creating the content of the resource and has intellectual rights associated with the content. Different roles may be considered as representing a creator, e.g. a producer, an author, etc. In the ontology, Creator is a sub-class of Contributor.
Format	ebucore:entityType
Schema	/ebucore:coreMetadataType/ebucore:creator



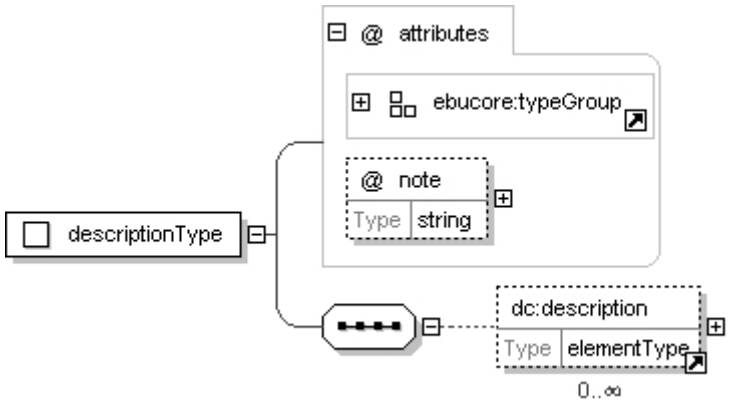
For semantics, see 'entityType'

Subject

Name	Subject
Cardinality	Multiple
Requirement	Optional
Definition	The generalised topic that represents the intellectual content of the resource. Typically, a subject is expressed by keywords, key phrases, optionally in different languages. Free text, controlled vocabularies, authorities, or formal classification schemes (codes) may be employed when selecting descriptive subject terms. Persons as subjects are also placed here. Genre of the content is defined under element “ebucore:type/ebucore:genre”.
Format	ebucore:subjectType
Schema	/ebucore:coreMetadataType/ebucore:subject
	
dc:subject	Free text to provide subjects. A subject can be provided in multiple languages for a given type. The language is defined using the dc:elementType's lang attribute. Example: ‘News’ in "UK-en", "Bulletin d'information" in "fr"
subjectCode	A link or code to / within a classification scheme. Optional default reference data: - Library of Congress Subject Heading (LCSH), Library of Congress Classification (LCC), Medical Subject Headings (MeSH), Dewey Decimal Classification (DDC), Dansk decimalklassedeling 5.utgave (DK5), Klassifikasjonssystem för svenska bibliotek (SAB), Universal Decimal Classification (UDC), Norske emneord - http://cv.iptc.org/newscodes/subjectcode/ Example: http://cv.iptc.org/newscodes/subjectcode/#15065000
subjectDefinition	An optional definition. A definition can be provided in different languages. Example: ‘the subject is about tennis (sport, game)’
attributor	A person or organisation having defined /attributed the subject (e.g. a user tag)

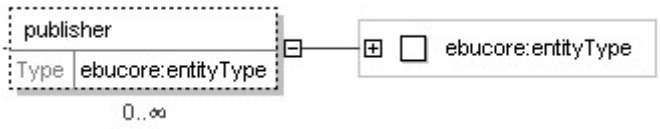
@ typeGroup	To define the source of reference for subject such as a reference document or classification scheme.
@ typeLabel	Free text to define the type. Example: 'IPTC Subject Code Classification Scheme' (EBU subset)
@ typeLink	A link to a term or only identify a classification scheme Example: http://cv.iptc.org/newscodes/subjectcode/
@ typeDefinition	An optional definition. Example: the IPTC subject codes formatted using the EBU classification Scheme schema.
@ note	A note element to provide additional contextual information

Description

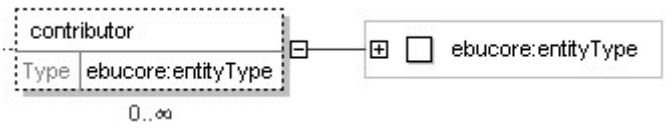
Name	**Description**
Cardinality	Multiple
Requirement	Optional
Definition	Free-form text or a narrative to report general notes, abstracts, or summaries about the intellectual content of a resource. The information may be in the form of a paragraph giving an individual program description, anecdotal interpretations, or brief content reviews. The description may also consist of outlines, lists, bullet points, edit decision lists, indexes, or tables of content, a reference to a graphical representation of content or even a pointer (URI, URL) to an external resource. A running order can also be provided as a description. For a Radio or television programme a running order can be used as description. A description can be provided in different languages.
Format	ebucore:descriptionType
Schema	/ebucore:coreMetadataType/ebucore:description/dc:description
	
dc:description	Free text to provide a description of the resource. The description can be repeated in different languages as specified by the entityType's lang attribute. The type of description is defined in the type group of attributes.
@ typeGroup	To define the form of presentation for the information: Annotation, abstract, summary, review, table of content, synopsis, shot list, edit decision list, promotional information, purpose, script, outline, rundown, selection/excerpt, transcript, bookmarks, theme, highlights, running order, etc.
@ typeLabel	Free text to define the type. Example: 'summary', 'table of content'

@ typeLink	A link to a term or only identify a classification scheme Optional default reference data: ebu_DescriptionTypeCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_DescriptionTypeCodeCS.xml#4 (summary)
@ typeDefinition	An optional definition. Example: 'A short description of the resource'
@ note	A note element to provide additional contextual information

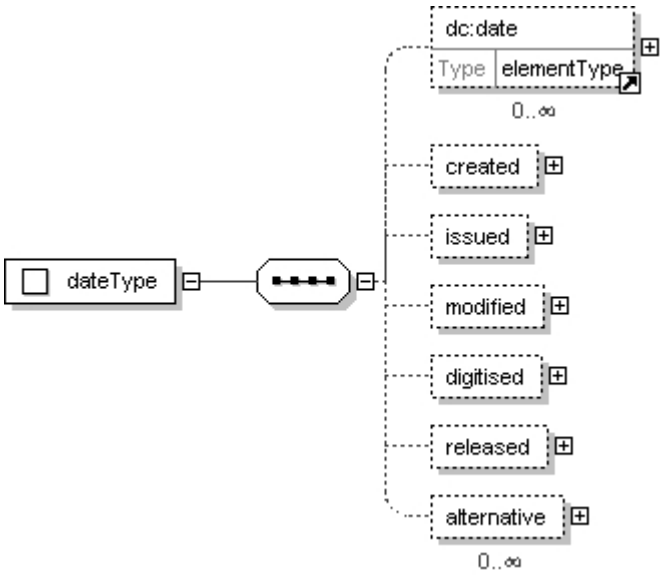
Publisher

Name	**Publisher**
Cardinality	Multiple
Requirement	Optional
Definition	A publisher is a person, an organization, or a service / department. Typically, the name of a Publisher should be used to indicate the entity primarily responsible for distributing or making a resource available to others e.g. by broadcasting, selling, leasing, renting and other modes of distribution.
Format	ebucore:entityType
Schema	/ebucore:coreMetadataType/ebucore:publisher
	
For semantics, see 'entityType'	

Contributor

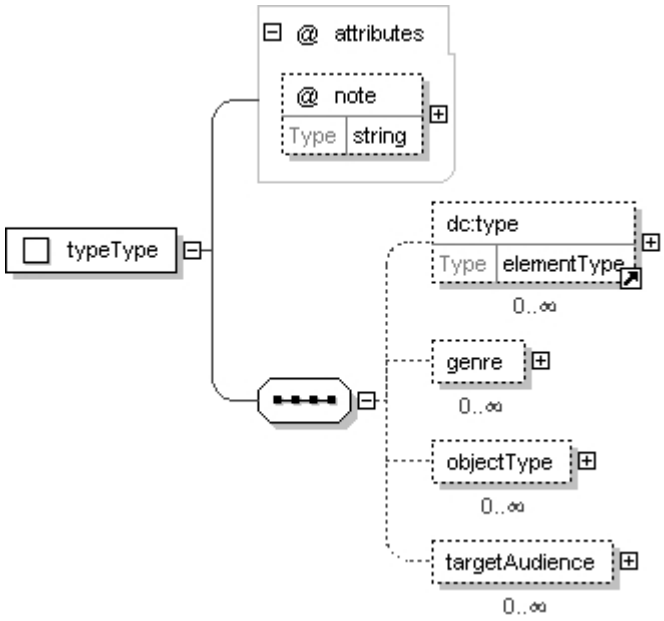
Name	**Contributor**
Cardinality	Multiple
Requirement	Optional
Definition	The descriptor contributor identifies a person or organization that has made substantial creative contributions to the content of a resource. Refers particularly (but not only) to participation in front of the camera. If in doubt whether an entity is a creator or contributor use the element contributor.
Format	ebucore:entityType
Schema	/ebucore:coreMetadataType/ebucore:contributor
	
For semantics, see 'entityType'	

Date

Name	**Date**
Cardinality	Multiple
Requirement	Optional
Definition	Dates associated with events occurring during the life of the resource. Typically, Date will be associated with the creation, modification or availability of the resource.
Format	ebucore:dateType
Schema	/ebucore:coreMetadataType/ebucore:date
	
dc:date	An element to provide a date in the xml:date format or any other textual form, optionally in different languages.
created	An element to specify the creation date and optionally time for a particular version or rendition of a resource across its life cycle. It is the moment in time that the media item was finalized during its production process and is forwarded to other divisions or agencies to make it ready for publication or distribution.
@dateGroup	See ebucore:dateGroup
issued	Date of formal issuance (e.g. publication) of the resource. Specifies the formal date for a particular version or rendition of a resource has been made ready or officially released for distribution, publication or consumption, e.g. the broadcasting date of a radio programme. A specific time may also be associated with the date.
@dateGroup	See ebucore:dateGroup
modified	Date and optionally time on which the resource was last changed.
@dateGroup	See ebucore:dateGroup
digitised	Date and optionally time on which the resource was digitised.
@dateGroup	See ebucore:dateGroup
released	Date and optionally time on which the resource was released.
@dateGroup	See ebucore:dateGroup
copyrighted	Date and optionally time on which the resource was copyrighted.
@dateGroup	See ebucore:dateGroup
alternative	To define an alternative date important to qualify the resource. The type of date, e.g. "duplicated" is defined by the user.

@dateGroup	See ebucore:dateGroup
@typeGroup	To define the type of alternative date being instantiated (using a label, or a link to a classification scheme, with an optional definition) Example: typeLabel=”ingested”; typeDefinition=”the date and time at which content was ingested”

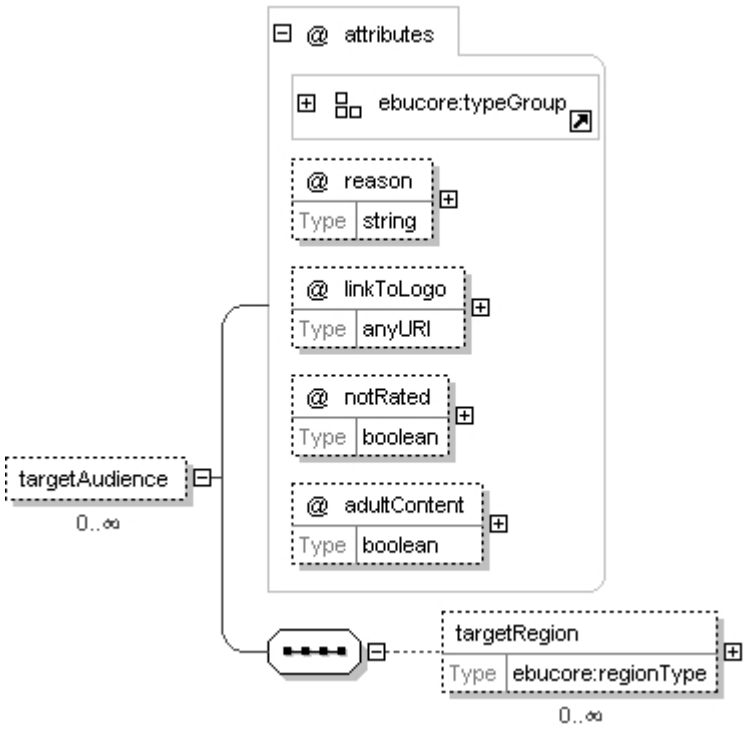
Type

Name	**Type**
Cardinality	Multiple
Requirement	Optional
Definition	The nature or genre or target audience of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary or classification scheme. To describe the physical or digital manifestation of the resource, use the FORMAT element.
Format	ebucore:typeType
Schema	/ebucore:coreMetadataType/ebucore:type
	
dc:type	Free text to provide ‘type’ information other than ‘genre’ or ‘objectType’, possibly in different languages defined by the elementType’s lang attribute
genre	To define the ‘genre’ categorising the resource. Content genre is often described through more than one single term.
@ typeGroup	A group of attributes to describe the genre.
@ typeLabel	Free text field. This can be used to repeat the term name of the classification scheme term identified by a typeLink. Example: ‘non-fiction/information’

@ typeLink	A link to a term or only identify a classification scheme Optional default reference data: ebu_ContentAlertSchemeCodeCS ebu_ContentGenreCS ebu_EditorialFormatCodeCS ebu_IntentionCodeCS tva_ContentCommercialCS tva_ContentAlertCS Example: http://www.ebu.ch/metadata/cs/ebu_ContentGenreCS.xml#3.1
@ typeDefinition	An optional definition.
objectType	To define the type of real of abstract media object that the resource consists of or relates to (e.g. a programme, an item, shot, clip, scene). See Figure 2 for an example of business objects class model using EBU's CCDM).
@ typeGroup	A group of attribute to describe the objectType.
@ typeLabel	Free text field. This can also repeat the term name of the classification scheme term identified by a typeLink.
@ typeLink	A link to a term or only identify a classification scheme Reference data: ebu_ObjectTypeCS Example: http://www.ebu.ch/metadata/cs/ebu_ObjectTypeCS.xml#8 (scene)
@ typeDefinition	An optional definition. Example: 'A short description of the resource'
targetAudience	To define the 'target audience' categorising the resource. See target audience below.

Target Audience

Name	Target Audience
Cardinality	Multiple
Requirement	Optional
Definition	The target audience of the resource. Recommended best practice is to select a value from a controlled vocabulary or classification scheme.
Format	ebucore:targetAudience
Schema	/ebucore:coreMetadataType/ebucore:type/ebucore:targetAudience

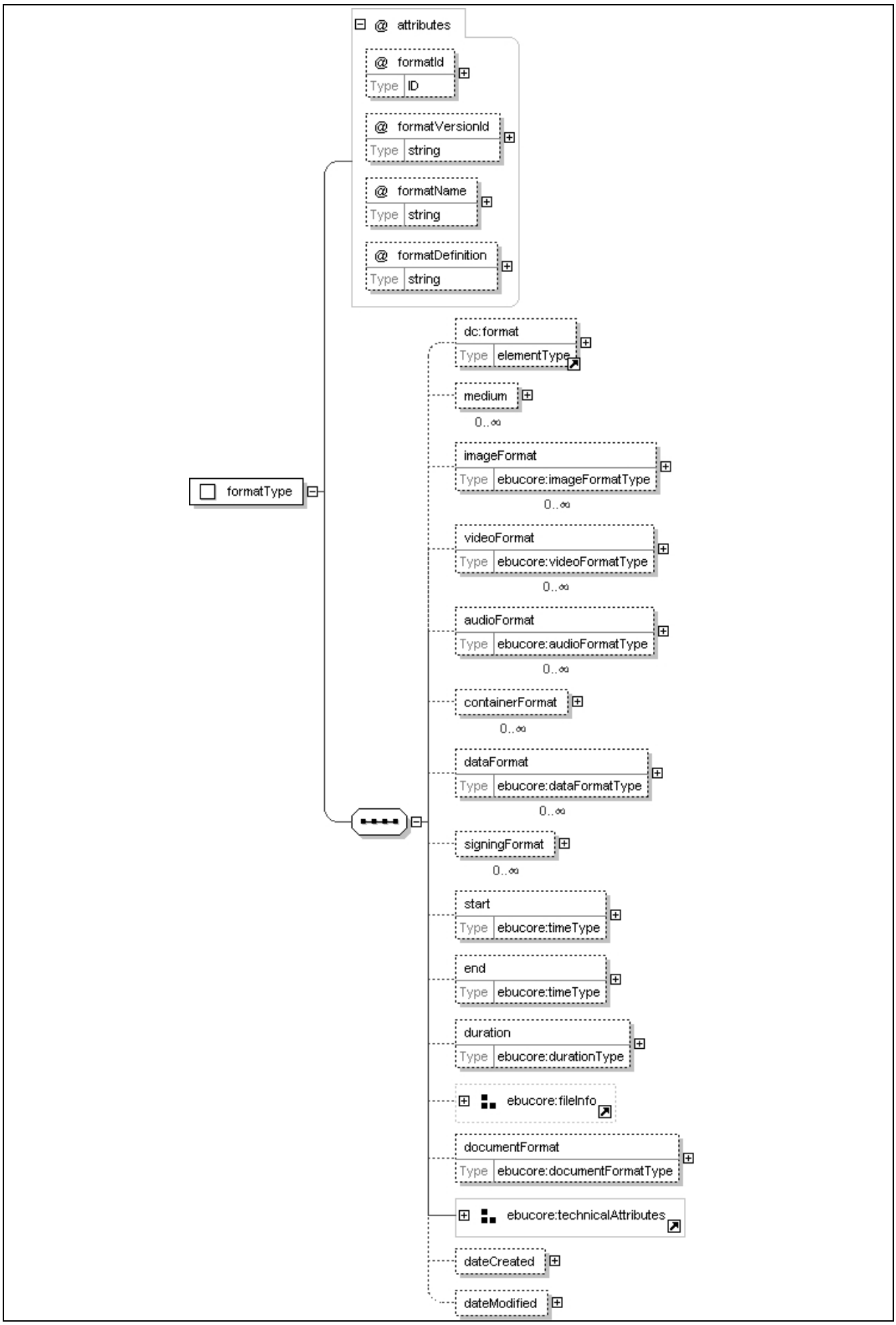


targetAudience	To define the 'target audience' categorising the resource.
@ typeGroup	A group of attributes to describe the target audience (parental guidance, geographical or occupantional groups, etc.).
@ typeLabel	Free text field. This can be used to repeat the term name of the classification scheme term identified by a typeLink. Example: 'General'
@ typeLink	A link to a term or only identify a classification scheme Reference data: ebu_IntendedAudienceCodeCS ebu_ParentalGuidanceCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_ParentalGuidanceCodeCS.xml#48.1
@ typeDefinition	An optional definition. Example: code for MPAA 'general' rating
reason	The reason, if any, why a particular audience has been identified
linkToLogo	A URI to point to the location of a pictogram representative of the targeted audience
notRated	A flag to indicate that the media resource has not been rated (if set to true)
adultContent	A flag to indicate is the media resource contains adult content (if set to true)
targetRegion	To define target regions. See regionType below.

IMPORTANT NOTE: A key EBUCore extension to the DublinCore 'Type' element is the objectType. An EBUCore instance description applies to a variety of media resources (also business objects / classes). EBUCore doesn't enforce any particular naming for the different business objects used in production. As an example the choice is left to use 'segment', 'item', 'shot', 'clip', 'scene' or something else. Implementers can define their own names for business objects using the objectType, although they may prefer to simply use the default concept of 'media business object'. Object specific descriptive and technical simple metadata is what the EBUCore is addressing. This provides a suitable basis for upcoming service-based media production.

Format

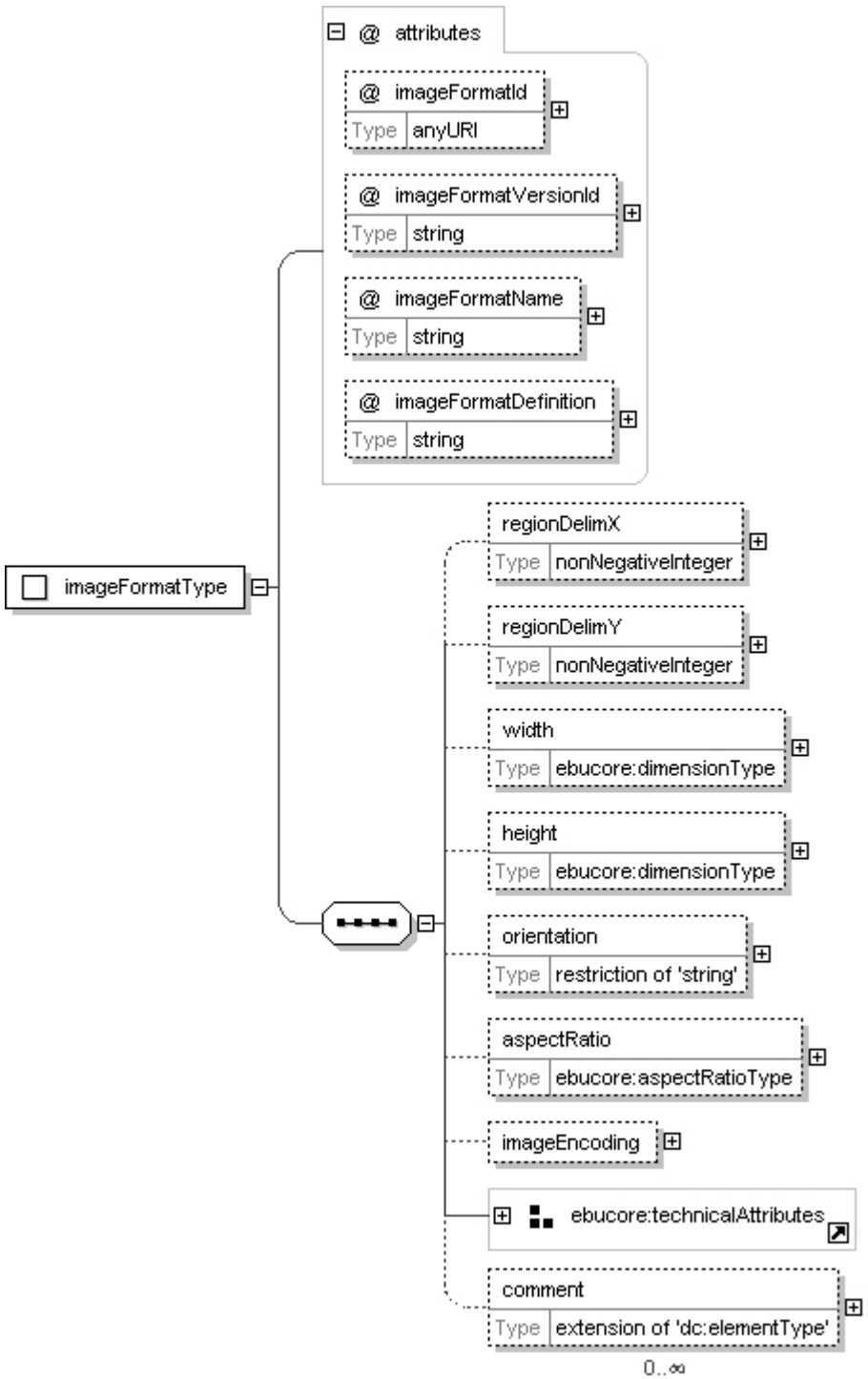
Name	**Format**
Cardinality	Mutiple per manifestation of a resource
Requirement	Optional
Definition	Technical metadata information on the physical or digital manifestations / instances of the resource. Use the descriptor Format to identify the formats in which a particular resource exist in a physical or digital form. Physical form = an actual physical form that occupies physical space, e.g. a tape. Digital form = a digital file residing on a server or hard drive. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource. Format gathers all technical metadata about a content instance on video, audio, data, etc. It can be flexibility augmented at will by users using the technicalAttribute constructs. Combining the flexibility of the 'Format' and 'Part' elements allows the description of a large range of technical metadata that is optionally associated to timelines. The 'format' element is optional, which means a valid EBUCore description may only contain descriptive information.
Format	ebucore:formatType
Schema	/ebucore:coreMetadataType/ebucore:format


@ attributes
@ formatId
Type ID
@ formatVersionId
Type string
@ formatName
Type string
@ formatDefinition
Type string
formatType
dc:format
Type elementType
medium
0..∞
imageFormat
Type ebucore:imageFormatType
0..∞
videoFormat
Type ebucore:videoFormatType
0..∞
audioFormat
Type ebucore:audioFormatType
0..∞
containerFormat
0..∞
dataFormat
Type ebucore:dataFormatType
0..∞
signingFormat
0..∞
start
Type ebucore:timeType
end
Type ebucore:timeType
duration
Type ebucore:durationType
ebucore:fileInfo
documentFormat
Type ebucore:documentFormatType
ebucore:technicalAttributes
dateCreated
dateModified

dc:format	Free text to provide information on the format
medium	The material or physical carrier of the resource. If a file, it should be the carrier format.
@ typeGroup	To define the type of medium in which the resource is available.
@ typeLabel	Free text field. Example: D5 format HDTV digital television tape
@ typeLink	A link to a term or only identify a classification scheme Optional default reference data: ebu_StorageMediaTypeCode (extension to IBTN, EBU Tech Doc 3279 - http://tech.ebu.ch/docs/tech/tech3279.pdf) Example: http://www.ebu.ch/metadata/cs/ebu_StorageMediaTypeCodeCS.xml#D5H
@ typeDefinition	An optional definition.
imageFormat	To provide information on the image format. See Image Format below.
videoFormat	To provide information on the video format. See Video Format below.
audioFormat	To provide information on the audio format. See Audio Format below.
containerFormat	To provide information on the Container Format in complement to stream encoding information
@ formatGroup	To define the file format of the resource.
@ formatLabel	Free text field. Example: mpeg TS
@ formatLink	A link to a term or only identify a classification scheme Reference data: ebu_ContainerFormatCS Example: http://www.ebu.ch/metadata/cs/ebu_ContainerFormatCS.xml#7.2.2
@ formatDefinition	An optional definition. Example: 'The file format or wrapper defined by ISO/IEC (so called MPEG Transport Stream)'
dataFormat	To provide information on the captioning and ancillary data formats. See Format Data Format below.
signingFormat	To provide information on the signing format, if used. See Format Signing Format below
start	The beginning point for playback of a time-based media item, such as digital video or audio. Use in combination with Format Duration to identify a sequence or segment of a media item that has a fixed start time and end time. See Format Start & Format Duration below
end	The ending point for playback of a time-based media item, such as digital video or audio. Use in combination with Format Start to identify a sequence or segment of a media item. See Format End below
duration	The time duration/extent of the resource. Format Duration is an alternative to Format End for identifying the extent of a sequence or segment. See Format Start, Format End & Format Duration below
fileInfo	To provide information on the physical representation of the simple essence. This can be a simple file or a more complex structure (a package). See the fileInfo element group.
documentFormat	To provide information on the document format. See Document Format below.
technicalAttributes	An extension element to allow users and implementers to define their own technical attributes. See Technical Attributes below.
@dateCreated	A date to indicate when the content instance was created / generated in this format.
@dateModified	A date to indicate when the content instance format was modified.

@formatId	An Identifier of type ID to identify a specific format in which the resource is available or has been published and allow cross references within an EBUCore instance description e.g. in relation to rights or publication events. (See the 'guidelines and Q&A' section to learn how to make best use of this attribute)
@formatVersionId	An identifier to identify a specific version of a format.
@formatName	A name attributed to a particular format. (See the 'guidelines and Q&A' section to learn how to make best use of this attribute)
@formatDefinition	A definition of the format information being provided either technical or editorial in nature.

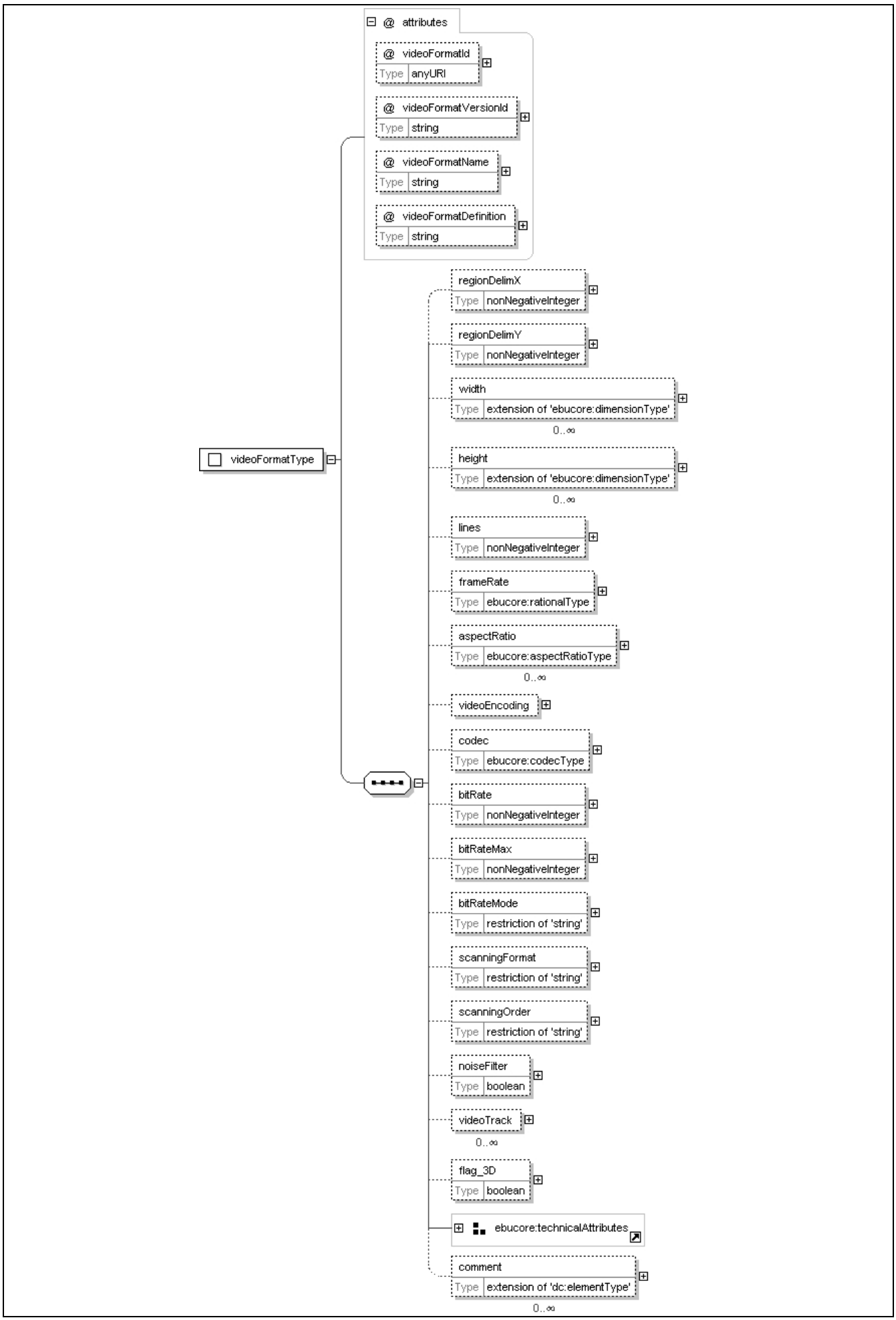
Name	**Format Image Format**
Cardinality	unique per Format
Requirement	Optional
Definition	A description of image characteristics of the resource to provide technical information such as width, height, orientation, encoding.
Format	ebucore:imageFormatType
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:imageFormat



regionDelimX	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimX is the coordinate on the horizontal axis and uses the same unit as the width attribute.

regionDelimY	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimY is the coordinate on the vertical axis uses the same unit as the height attribute.
width	The width of the image or picture. Used as numerator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the width is expressed.
height	The height of the image or picture. Used as denominator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the height is expressed.
orientation	To express the orientation of the image, i.e. 'portrait' or 'landscape'.
aspectRatio	The aspect ratio of the image.
imageEncoding	Used to express the encoding parameters of the resource e.g. jpeg, tiff, H264 frame.
@ typeGroup	The type group attributes provide the information on the encoding format
@ typeLabel	Free text. Example: ‘JPEG'
@ typeLink	Link to a classification scheme. Optional default reference data: ebu_ImageCompressionCodeCS, Example: http://www.ebu.ch/metadata/cs/ebu_ImageCompressionCodeCS.xml#1
@ typeDefinition	Free text for an optional definition. Example: ‘standard file format for compressing pictures so they can be stored or sent by e-mail more easily. **JPEG** is an abbreviation for `Joint Photographic Experts Group'
technicalAttributes	An extension element to allow users and implementers to define their own technical attributes. See Technical Attributes below.
comment	to provide comments related to the image.
@imageFormatId	An Identifier to identify a specific format in which the resource is available or has been published.
@imageFormatVersionId	An identifier to identify a particular version of the image format.
@imageFormatName	A name attributed to a particular format.
@imageFormatDefinition	A definition of the format information being provided either technical or editorial in nature.

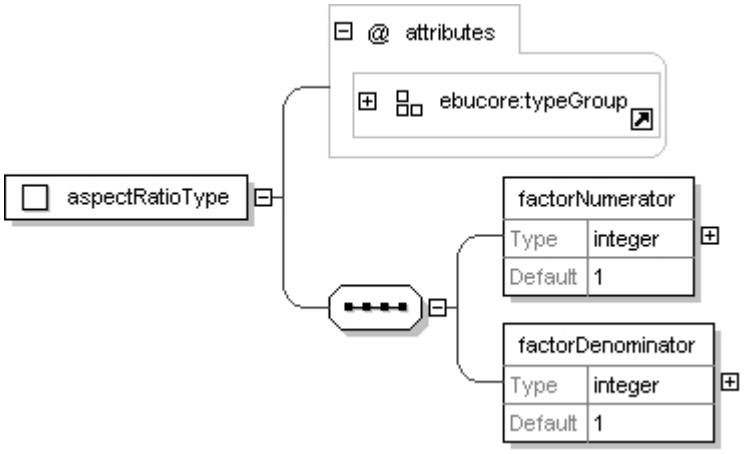
Name	**Format Video Format**
Cardinality	unique per Format
Requirement	Optional
Definition	A description of video characteristics of the resource to provide technical information such as colour, greyscale or black and white colour schemes, frame rate, sampling rate, scanning format, encoding, track configuration.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat


@ attributes
@ videoFormatId
Type anyURI
@ videoFormatVersionId
Type string
@ videoFormatName
Type string
@ videoFormatDefinition
Type string
videoFormatType
regionDelimX
Type nonNegativeInteger
regionDelimY
Type nonNegativeInteger
width
Type extension of 'ebucore:dimensionType'
0..∞
height
Type extension of 'ebucore:dimensionType'
0..∞
lines
Type nonNegativeInteger
frameRate
Type ebucore:rationalType
aspectRatio
Type ebucore:aspectRatioType
0..∞
videoEncoding
codec
Type ebucore:codecType
bitRate
Type nonNegativeInteger
bitRateMax
Type nonNegativeInteger
bitRateMode
Type restriction of 'string'
scanningFormat
Type restriction of 'string'
scanningOrder
Type restriction of 'string'
noiseFilter
Type boolean
videoTrack
0..∞
flag_3D
Type boolean
ebucore:technicalAttributes
comment
Type extension of 'dc:elementType'
0..∞

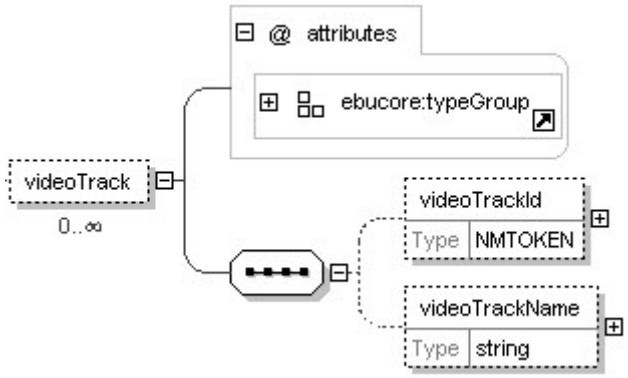
regionDelimX	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimX is the coordinate on the horizontal axis and uses the same unit as the width attribute.
regionDelimY	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimY is the coordinate on the vertical axis uses the same unit as the height attribute.
width	The width of the image or picture. Used as numerator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the width is expressed.
@typeGroup	An attribute typeGroup to define the nature of the width
height	The height of the image or picture. Used as denominator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the height is expressed.
@typeGroup	An attribute typeGroup to define the nature of the height
lines	The number of actives lines in the video picture.
frameRate	The frequency (rate) at which frames are displayed in frames per second. The frameRate is of type rational.
aspectRatio	The value of the ratio of the width by the height of the video expressed in the format defined by the aspectRatioType. See Aspect Ratio below.
videoEncoding	Used to express the encoding parameters of the resource e.g. H264 for a video channel.
@ typeGroup	The type attribute group provides information on the encoding format.
@ typeLabel	Free text. Example: ‘H264 Main Profile @ Level 1’
@ typeLink	Link to a classification scheme. Optional default reference data: ebu_VideoCompressionCodeCS, Example: http://www.ebu.ch/metadata/cs/ebu_VideoCompressionCodeCS.xml#9.2.1
@ typeDefinition	Free text for an optional definition. Example: ‘the video compression scheme H264, main profile, level1 as specified by ISO/IEC’
codec	An element of type codecType to describe a hardware or software implementation of a codec.
bitRate	The video bit rate in bits per second (bps).
bitRateMode	To precise if the bitRate corresponds to a 'constant' or 'variable' bitRate. In the case of a variable bitRate, the bitRate is the average bitRate. 'none' shall be used when the information is not available.
scanningFormat	An element to define if the frame display mode is 'progressive' (one full frame after the other) or 'interlaced' (even and uneven lines are split into two interlaced frames sent one after the other). 'none' shall be used when the information is not available.
scanningOrder	The position ('top' or 'bottom') from which the image has been scanned. 'none' shall be used when the information is not available.
noiseFilter	A flag to indicate if a noise has been used (True or False).
videoTrack	To describe the main features of video tracks such as in mutliview systems See VideoTrack below.
flag_3D	A flag to signal stereoscopic content

technicalAttributes	An extension element to allow users and implementers defining their own technical attributes. See Technical Attributes below.
comment	To provide comments related to the video.
@videoFormatId	An Identifier to identify a specific format in which the resource is available or has been published.
@videoFormatVersionId	An identifier to identify a particular version of the image format.
@videoFormatName	A name attributed to a particular format.
@videoFormatDefinition	A definition of the format information being provided either technical or editorial in nature.

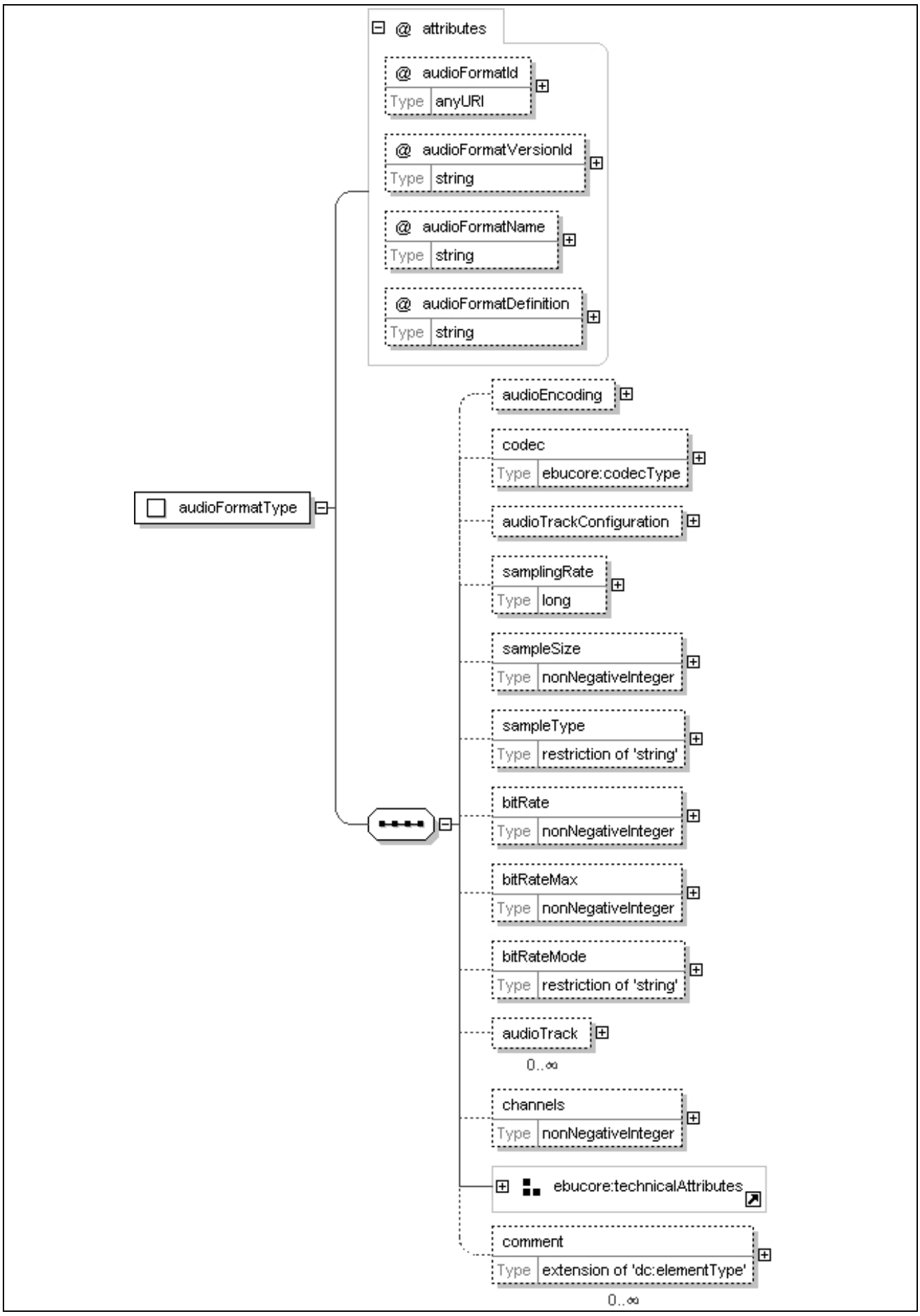
Name	**Format Video Format Aspect Ratio**
Cardinality	Unique per Image Format and multiple per Video Format.
Requirement	Optional
Definition	Used to describe the aspect ratio of the video resource and its nature.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:aspectRatio



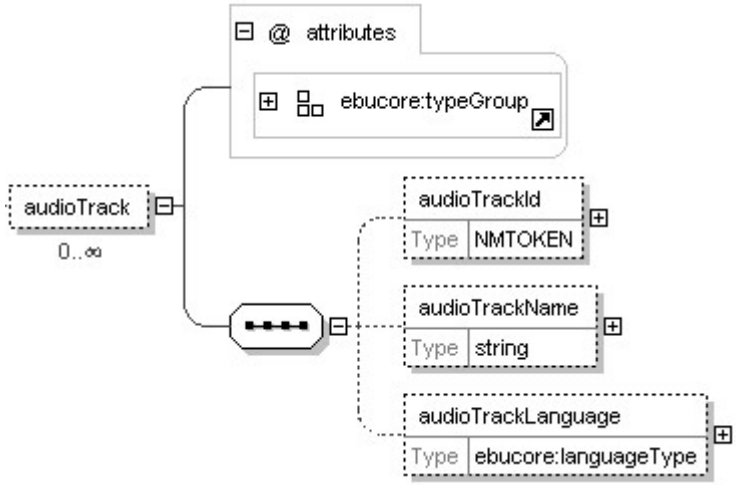
factorNumerator	The numerator of the ratio
factorDenominator	The denominator of the ratio
typeGroup	A group of type attributes (label, link definition) to define the nature of the aspect ratio e.g. "display" for display aspect ratio

Name	Format Video Format Video Track
Cardinality	Multiple per Video Format per Channel.
Requirement	Optional
Definition	Used to describe the different video tracks of the resource by identifying their type, ID and name.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:videoTrack
	
videoTrackId	An optional identifier applied to each track
videoTrackName	An optional name given to each track
@ typeGroup	To define the purpose of the track e.g. the viewing angle
@ typeLabel	Free text. Example: 'main'
@ typeLink	Link to a classification scheme.
@ typeDefinition	Free text for an optional definition.

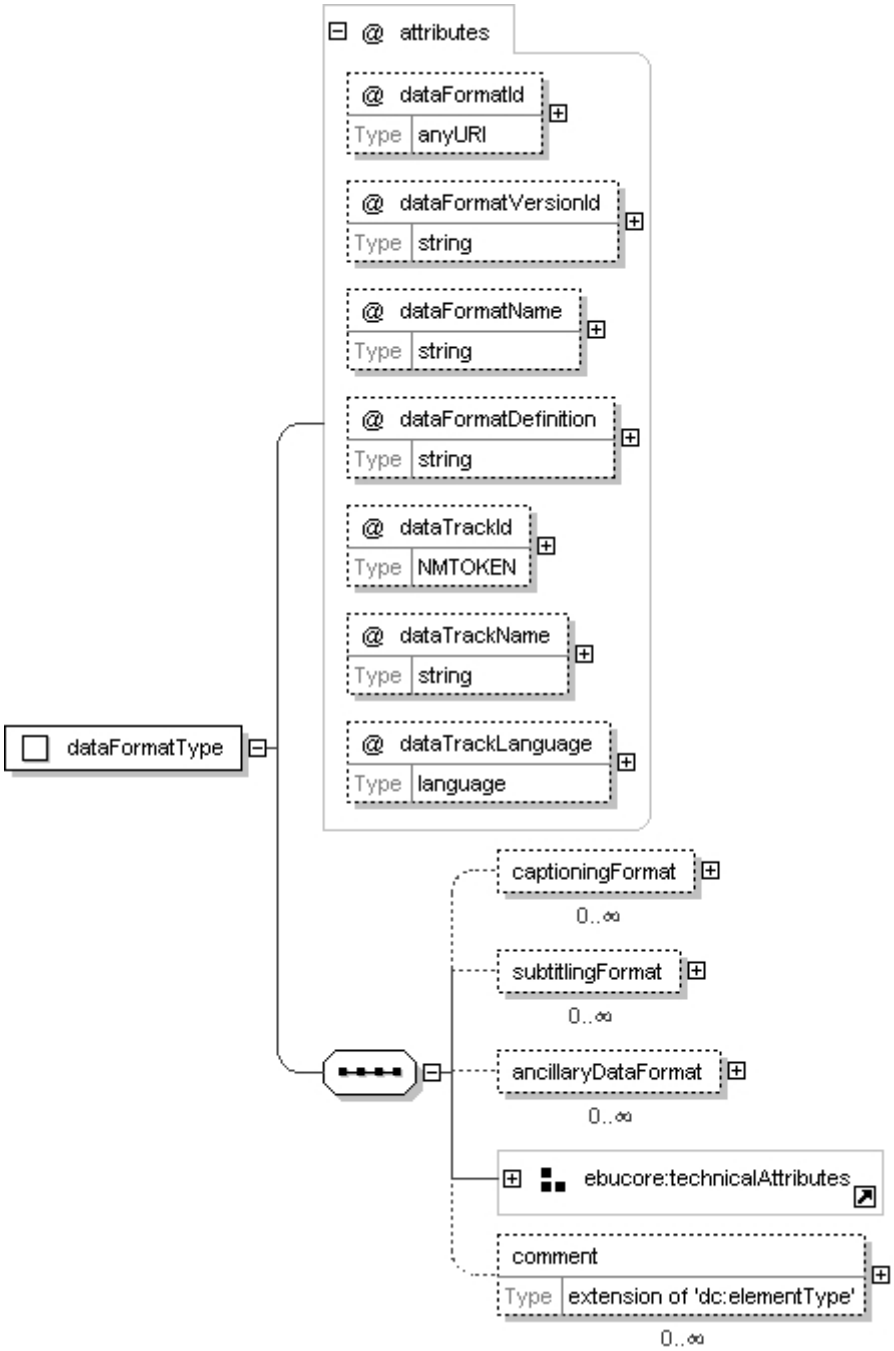
Name	Format Audio Format
Cardinality	Unique per Encoding
Requirement	Optional
Definition	To provide information on the Audio Format
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:audioFormat


@ attributes
@ audioFormatId
Type anyURI
@ audioFormatVersionId
Type string
@ audioFormatName
Type string
@ audioFormatDefinition
Type string
audioFormatType
audioEncoding
codec
Type ebucore:codecType
audioTrackConfiguration
samplingRate
Type long
sampleSize
Type nonNegativeInteger
sampleType
Type restriction of 'string'
bitRate
Type nonNegativeInteger
bitRateMax
Type nonNegativeInteger
bitRateMode
Type restriction of 'string'
audioTrack
0..∞
channels
Type nonNegativeInteger
ebucore:technicalAttributes
comment
Type extension of 'dc:elementType'
0..∞

audioEncoding	To define the audio compression format of the resource e.g. AAC for an audio channel.
@ typeGroup	A group of attributes to describe the audio compression format.
@ typeLabel	Free text. Example: 'MPEG-4 AAC Profile @ Level 1'
@ typeLink	Link to a classification scheme. Optional default reference data: ebu_AudioCompressionCodeCS, Example: http://www.ebu.ch/metadata/cs/ebu_AudioCompressionCodeCS.xml#10.9.1
@ typeDefinition	Free text for an optional definition. Example: 'the audio compression scheme MPEG4, AAC profile, level1 as specified by ISO/IEC'
codec	An element of type codecType to describe a hardware or software implementation of a codec.
audioTrackConfiguration	To describe the audio track configuration. Used to express the arrangement or audio tracks e.g. 'stereo', '2+1', 'surround', 'surround (7+1)'
@ typeGroup	A group of attributes to describe the audio track configuration.
@ typeLabel	Free text. Example: 'surround'
@ typeLink	Link to a classification scheme. Optional default reference data: ebu_AudioFormatCodeCS
@ typeDefinition	Free text for an optional definition.
samplingRate	The frequency at which the audio essence is sampled in samples per second.
sampleSize	The size of each audio sample in bits.
sampleType	The type of audio sample.
bitRate	The audio bit rate in bits per second (bps).
bitRateMax	To express the maximum bit rate in bits per second (bps)
bitRateMode	To precise if the bitRate corresponds to a 'constant' or 'variable' bitRate. In the case of a variable bitRate, the bitRate is the average bitRate. 'none' shall be used when the information is not available.
audioTrack	To describe the track allocation e.g. in conformance with EBU R123 See Audio Track below.
audioChannel	The total number of audio channels.
technicalAttributes	An extension element to allow users and implementers defining their own technical attributes. See Technical Attributes below.
comment	to provide comments related to the audio.
@audioFormatId	An Identifier to identify a specific format in which the resource is available or has been published.
@audioFormatVersionId	An identifier to identify a particular version of the audio format.
@audioFormatName	A name attributed to a particular format.
@audioFormatDefinition	A definition of the format information being provided either technical or editorial in nature.

Name	**Format Audio Format Audio Track**
Cardinality	Multiple per Audio Format
Requirement	Optional
Definition	A description of some or all of the audio tracks part of the audio track configuration: track type, track ID, track name and language (for what purpose) used if relevant
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:audioFormat/ebucore:audioTrack
	
audioTrackId	An optional identifier applied to each track.
audioTrackName	An optional name given to each track.
audioTrackLanguage	The language used in the audio track and possible purpose refinement using languageType's typeGroup attributes.
@ typeGroup	To define the purpose of the track.
@ typeLabel	Free text. Optional default reference data: ebu_AudioChannelPurposeCodeCS Example: 'dubbing'
@ typeLink	Link to a classification scheme.
@ typeDefinition	Free text for an optional definition.

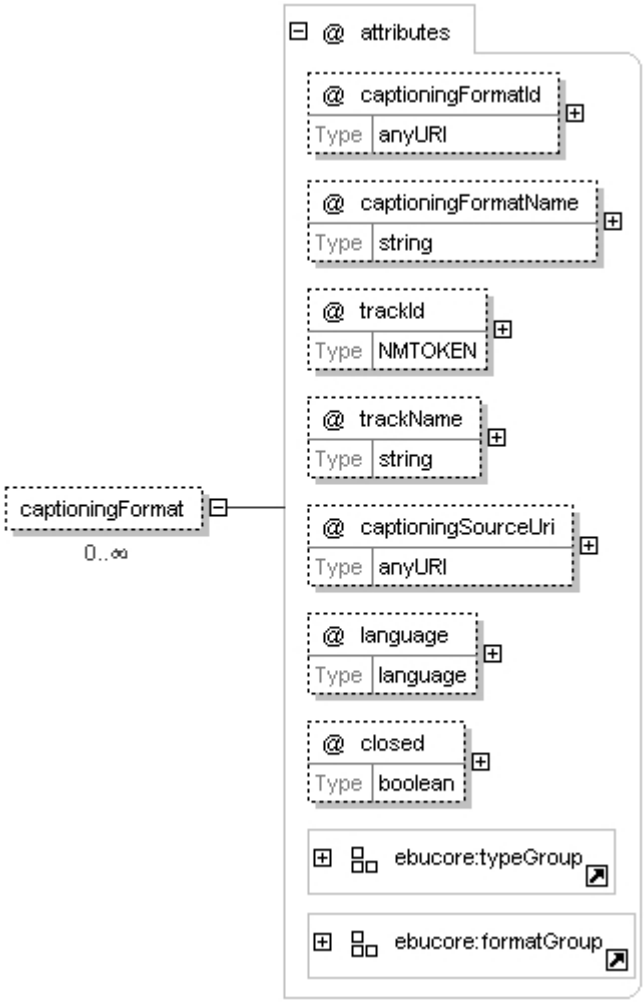
Name	Format Data Format
Cardinality	Multiple per format
Requirement	Optional
Definition	To provide information on captioning and ancillary data formats optionally used in the resource
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:dataFormat



captioningFormat	Information on the captioning format used in the media resource. See captioningFormat.
subtitlingFormat	Information on the subtitling format used in the media resource. See subtitlingFormat.
ancillaryDataFormat	Information on ancillary data available in the media resource.
technicalAttributes	An extension element to allow users and implementers defining their own technical attributes. See Technical Attributes below.

comment	to provide comments related to the data.
@dataFormatId	An Identifier to identify a specific format in which the resource is available or has been published.
@dataFormatVersionId	An identifier to identify a particular version of the format.
@dataFormatName	A name attributed to a particular format.
@dataFormatDefinition	A definition of the format information being provided either technical or editorial in nature.
@dataTrackId	An identifier associated with the track carrying the data
@dataTrackName	A name associated with the track carrying the data
@dataTrackLanguage	The language used in the data track

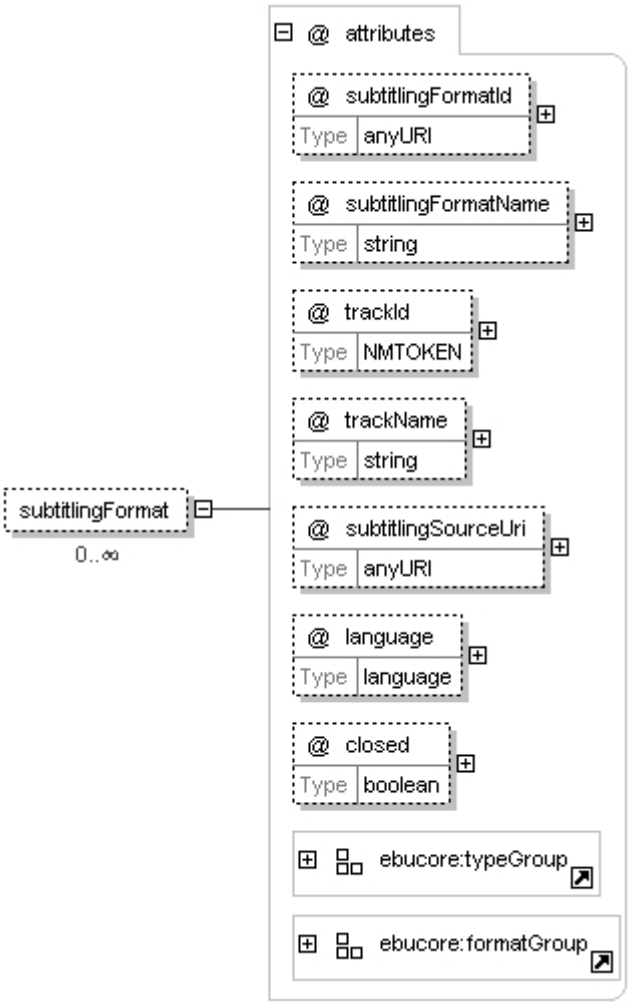
Name	**Format Captioning Format**
Cardinality	Multiple per data format
Requirement	Optional
Definition	To provide information on the language, purpose and format of captoning if used in the resource. EBU R133 defines captioning as applying to hard of hearing captions for improved accessibility. Captions include indications of the speakers and relevant sound effects.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:dataFormat/ ebucore:captioningFormat



@trackId	An identifier associated to the captioning track

@trackName	An name associated to the captioning track
@language	The language in which the caption is delivered. Example: en-UK
@ typeGroup	To define the purpose of the captioning information
@ typeLabel	Free text. Example: hard of hearing
@ typeLink	Link to a classification scheme.
@ typeDefinition	Free text for an optional definition.
@ formatGroup	To define the format of captioning being used
@ formatLabel	Example: closed caption
@ formatLink	Link to a classification scheme.
@ formatDefinition	Free text for an optional definition.
@captioningSourceUri	An optional URI from which the captioning material can be accessed
@captioningFormatId	An identifier associated to the captioning format
@captioningFormatName	An name associated to the captioning format
@closed	A flag to indicate if closed captioning is used (if set to true). Otherwise, open captioning is used and captions are burnt in the picture

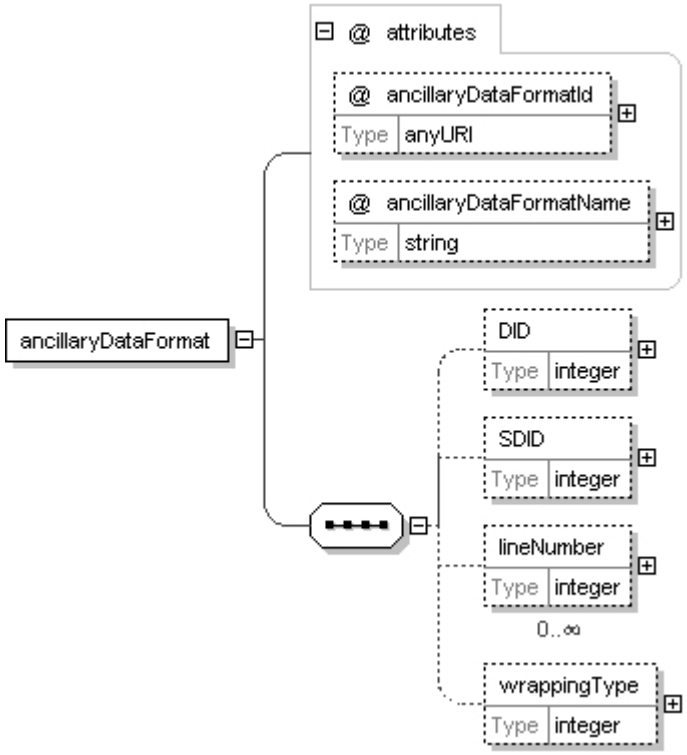
Name	**Format Subtitling Format**
Cardinality	Multiple per data format
Requirement	Optional
Definition	To provide information on the language, purpose and format of subtitling if used in the resource. As defined in EBU R133, one of the main purposes of subtitling is the transcription and translation of dialogs in other languages.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:dataFormat/ ebucore:subtitlingFormat



@trackId	An identifier associated to the subtitling track
@trackName	An name associated to the subtitling track
@language	The language in which the subtitle is delivered. Example: en-UK
@ typeGroup	To define the purpose of the subtitling information
@ typeLabel	Free text. Example: translation
@ typeLink	Link to a classification scheme.
@ typeDefinition	Free text for an optional definition.
@ formatGroup	To define the format of subtitling being used
@ formatLabel	Example: closed subtitle
@ formatLink	Link to a classification scheme.
@ formatDefinition	Free text for an optional definition.

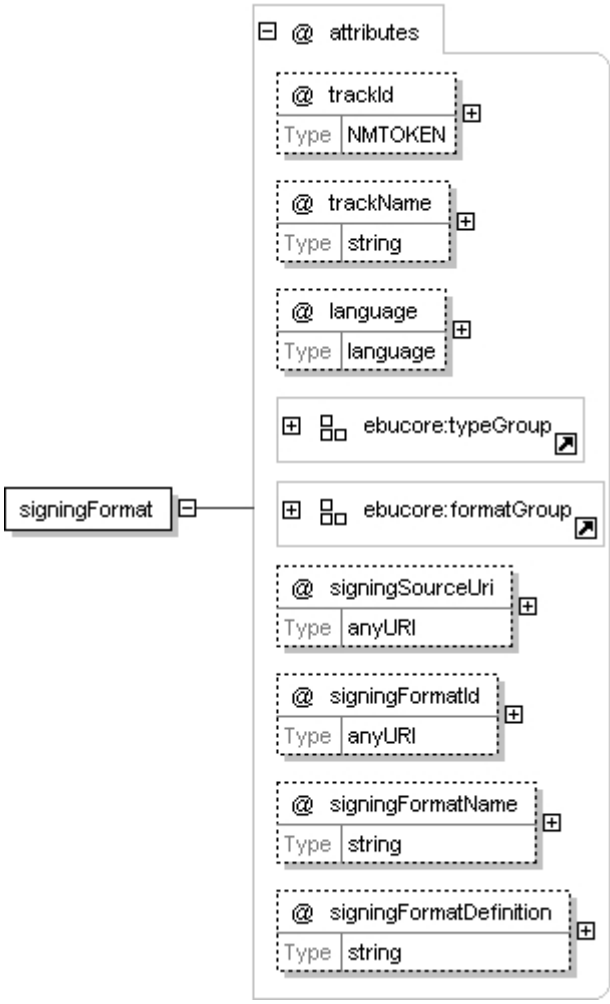
@subtitlingSourceUri	An optional URI from which the subtitling material can be accessed
@subtitlingFormatId	An identifier associated to the subtitling format
@subtitlingFormatName	An name associated to the subtitling format
@closed	A flag to indicate if closed subtitling is used (if set to true). Otherwise, open subtitling is used and subtitles are burnt in the picture

Name	**Format Ancillary Data Format**
Cardinality	Multiple per data format
Requirement	Optional
Definition	Used to provide information on ancillary data format and purpose. This type provides information on the Ancillary Data packet type. See SMPTE 291M, SMPTE 436M.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:formatebucore:dataFormat/ ebucore:ancillaryDataFormat



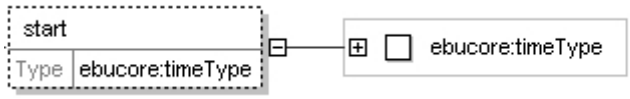
DID	ANC DID value
SDID	ANC SDID value
lineNumber	Video line number containing the ANC packets of this type
wrappingType	Indicates HANC or VANC, and what field in which packets should be stored. See SMPTE 436M for legal values.
@ancillaryDataFormatId	An identifier associated to the ancillary data format
@ancillaryDataFormatName	An name associated to the ancillary data format

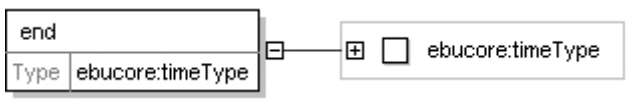
Name	**Format Signing Format**
Cardinality	Multiple per format
Requirement	Optional
Definition	To provide information on the language, purpose and format of signing if used in the resource.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:signingFormat



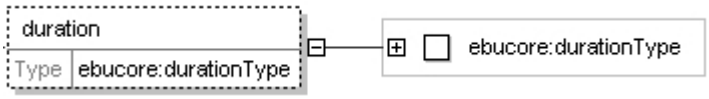
@trackId	An identifier associated to the signing track
@trackName	An name associated to the signing track
@language	The language in which the signing is delivered.
@ typeGroup	To define the purpose of the signing
@ typeLabel	Free text. Example: transcription
@ typeLink	Link to a classification scheme.
@ typeDefinition	Free text for an optional definition.
@ formatGroup	To define the format of captioning use
@ formatLabel	Free text Example: English sign language

@ formatLink	Link to a classification scheme. Optional default reference data: ebu_SignLanguageCodeCS Example: ebu_SignLanguageCodeCS#sgn-en-GB
@ formatDefinition	Free text for an optional definition.
signingSourceUri	The address at which a signing resource can be found or accessed from
signingFormatId	An identifier associated to the signing format
signingFormatName	An name associated to the signing format
signingFormatDefinition	A definition associated to the signing format

Name	**Format Start**
Cardinality	Unique per Medium or Part
Requirement	Optional
Definition	The beginning point for playback of a time-based resource, such as within a digital video or audio track. Used in combination with Duration to identify a sequence or segment of a resource that has a fixed start time and end time. The start time can be expressed in different time forms inc. a timecode, normal play time, a number of edit units or user custom time references.
Format	Ebucore:timeType
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:start
	
For semantics, see timeType	

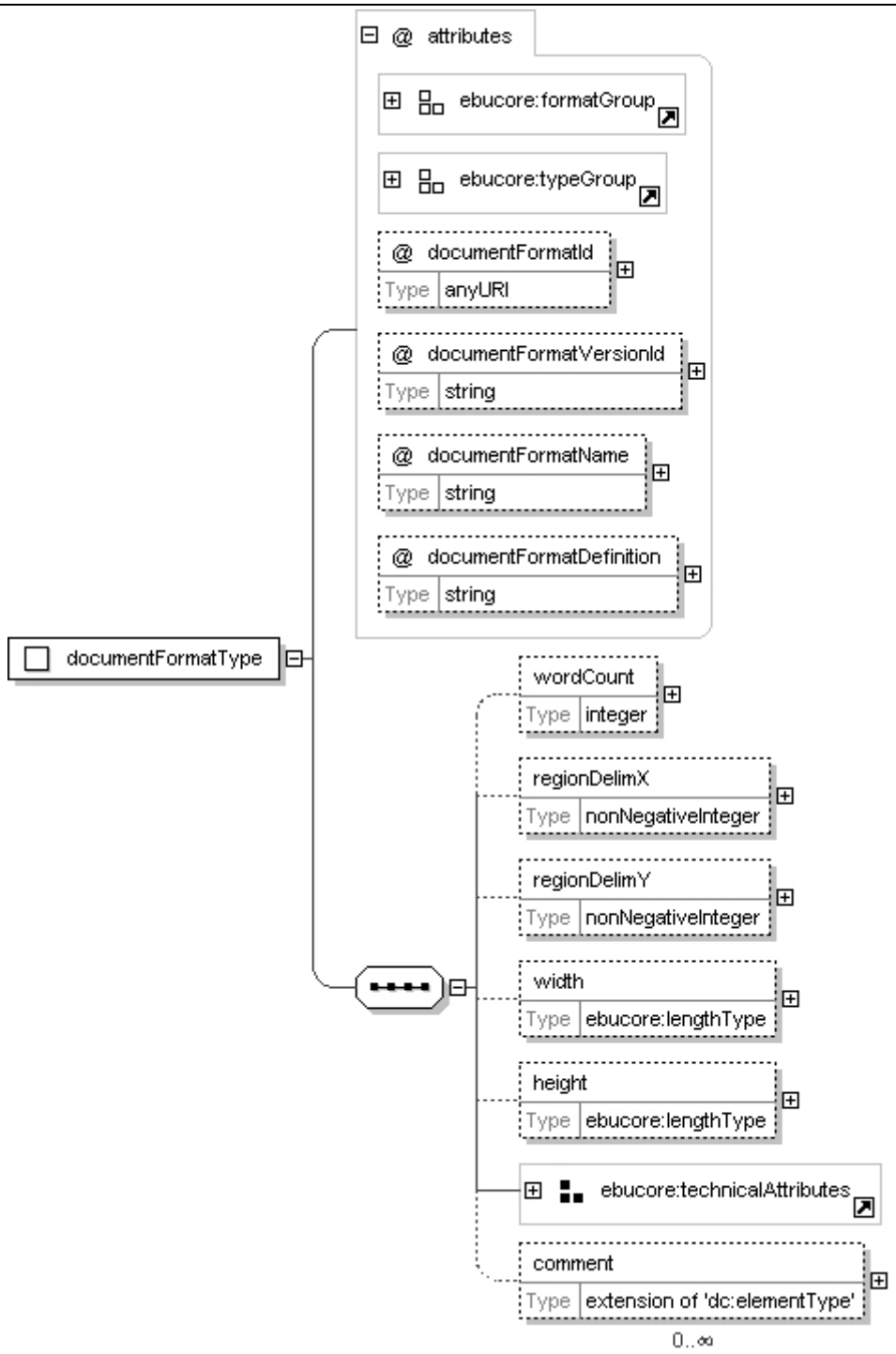
Name	**Format End**
Cardinality	Unique per Medium or Part
Requirement	Optional
Definition	The end point for playback of a time-based resource, such as within a digital video or audio track. Used in combination with Start to identify a sequence or segment of a resource that has a fixed start time and end time. The end time can be expressed in different time forms inc. a timecode, normal play time, a number of edit units or user custom time references. The use of the End time is exclusive to the use of Duration.
Format	Ebucore:timeType
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:end
	
For semantics, see timeType	

Name	Format Duration
Cardinality	Unique per Medium or Part
Requirement	Optional
Definition	Time-based duration (extent) of the resource. The duration can be expressed in different time forms inc. a timecode, normal play time, a number of edit units or user defined time references. The use of Duration is exclusive to the use of End time.
Format	Ebucore:durationType
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:duration



For semantics, see durationType

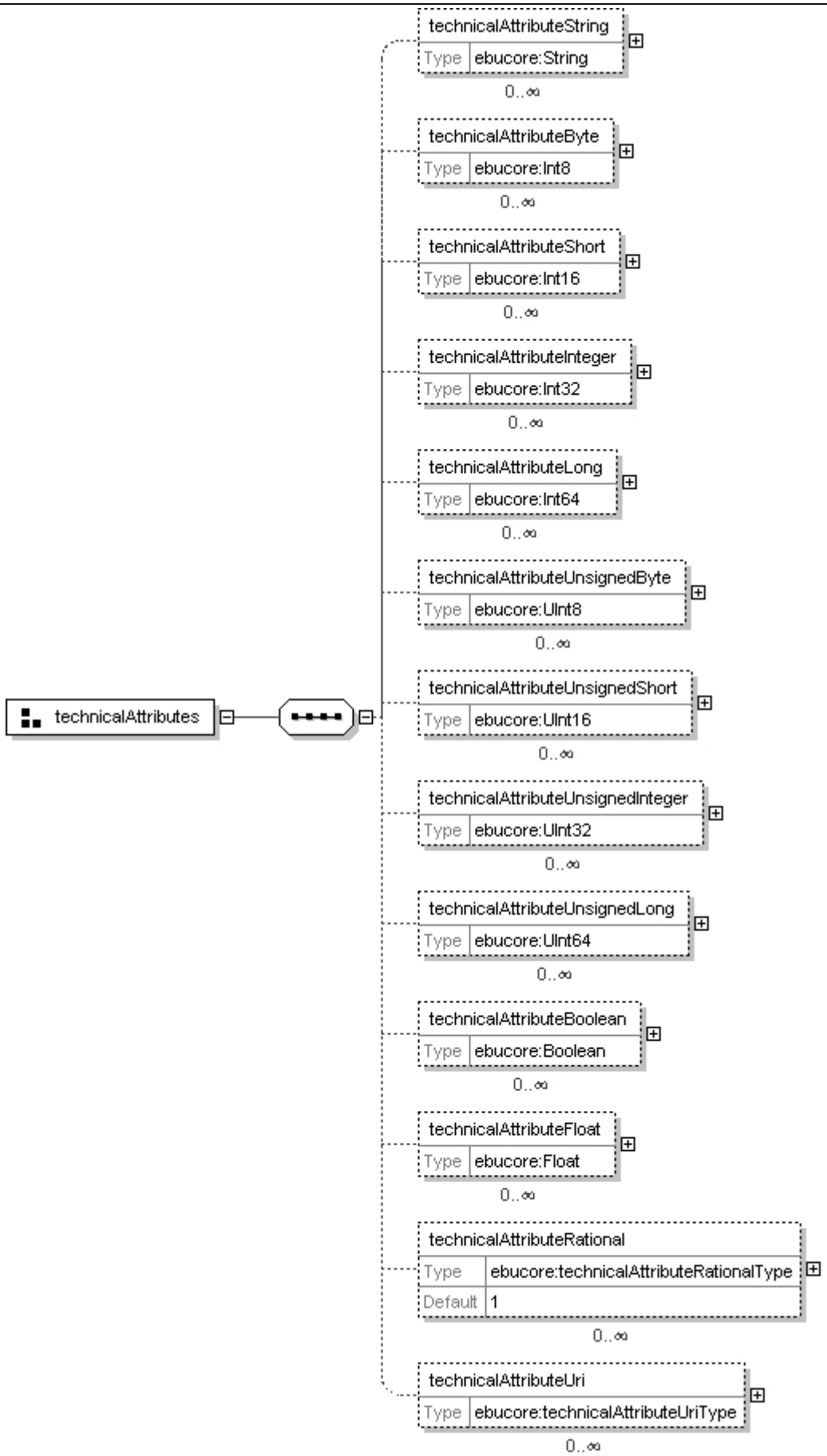
Name	Format Document Format
Cardinality	unique per Format
Requirement	Optional
Definition	A description of characteristics of the resource if a document.
Format	ebucore:documentFormatType
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:documentFormat



@ formatGroup	To define the type of format of the document'
@ formatLabel	Free text.
@ formatLink	Link to a classification scheme.
@ formatDefinition	Free text for an optional definition.
@ typeGroup	To define the type of document.
@ typeLabel	Free text.
@ typeLink	Link to a Classification Scheme,
@ typeDefinition	Free text.
wordCount	The number of words contained in the document.

regionDelimX	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimX is the coordinate on the horizontal axis and uses the same unit as the width attribute.
regionDelimY	The identification of a region in a document, an image or a video is done by defining the coordinates of the bottom left corner of the region. The region is defined from this point of reference using the width and height properties. regionDelimY is the coordinate on the vertical axis uses the same unit as the height attribute.
width	The width of the image or picture. Used as numerator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the width is expressed.
height	The height of the image or picture. Used as denominator to define the aspect ratio for video content.
@unit	An attribute to specify the unit in which the height is expressed.
technicalAttributes	To provide a user defined technical attribute. See Technical Attributes below.
comment	to provide comments related to the document.
@documentFormatId	An identifier associated to the document format.
@documentFormatVersionId	An identifier associated with a particular version of the format definition
@documentFormatName	An name associated to the document format.
@documentFormatDefinition	A definition associated to the document format.

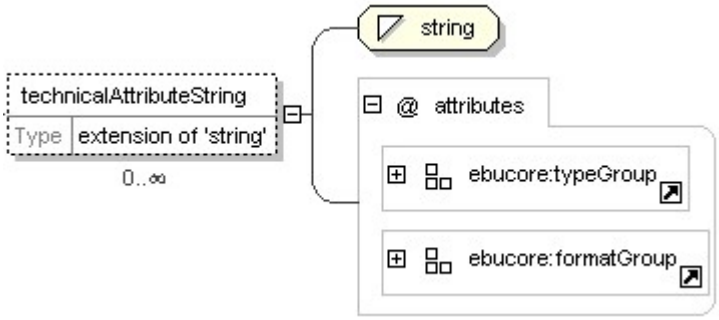
Name	**Technical Attributes**
Cardinality	Multiple
Requirement	Optional
Definition	Allows users / implementers to define their own technical parameters.
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:TechnicalAttributes /ebucore:coreMetadataType/ebucore:format/ebucore:imageFormat/ ebucore:imageTechnicalAttributes /ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ ebucore:videoTechnicalAttributes /ebucore:coreMetadataType/ebucore:format/ebucore:audioFormat/ ebucore:audioTechnicalAttributes /ebucore:coreMetadataType/ebucore:format/ebucore:documentFormat/ ebucore:documentTechnicalAttributes



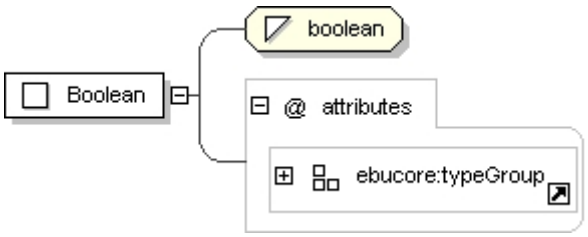
TechnicalAttributeString	A technical attribute of type string.
TechnicalAttributeByte	A technical attribute of type 'byte' also called int8.

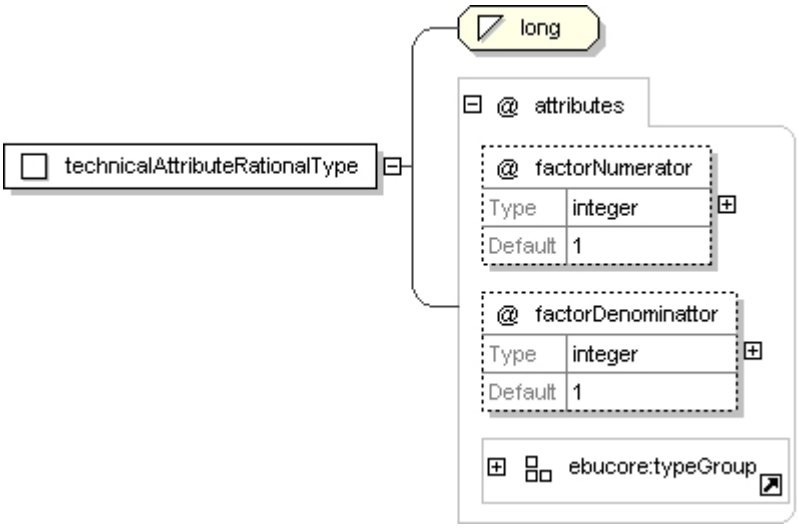
TechnicalAttributeShort	A technical attribute of type 'short' also called int16.
TechnicalAttributeInteger	A technical attribute of type 'integer' also called int32.
TechnicalAttributeLong	A technical attribute of type 'long' also called int64.
TechnicalAttributeUnisgnedByte	A technical attribute of type 'byte' also called UInt8.
TechnicalAttributeUnisgnedShort	A technical attribute of type 'short' also called UInt16.
TechnicalAttributeUnisgnedInteger	A technical attribute of type 'integer' also called UInt32.
TechnicalAttributeUnsignedLong	A technical attribute of type 'long' also called UInt64.
TechnicalAttributeBoolean	A technical attribute of type 'boolean'.
TechnicalAttributeFloat	A technical attribute of type 'float' or 'double'.
TechnicalAttributeRational	A technical attribute of type 'rational'.
TechnicalAttributeUri	A technical attribute of type 'URI'.

Name	**Technical AttributeString**
Cardinality	Multiple
Requirement	Optional
Definition	Allows users / implementers to define their own technical parameters as ‘string’ for which a format can be defined to restrict the string format.
Format	Complex type
Schema	See TechnicalAttributes

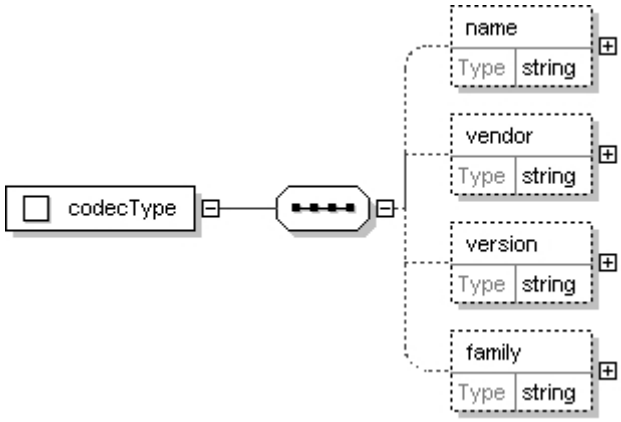


TechnicalAttribute String	A string containing the value of the string technical attribute, which format may be further specified using the formatGroup attributes. This applies to all technicalAttributeString inc. audio and video Example: ‘B&W’ or ‘50’
@ typeGroup	To define the attribute
@ typeLabel	Free text Example: ‘colour mode’ or ‘frame rate’
@ typeLink	A link to a classification scheme Optional default reference Data: ebu_ColourCodeCS; ebu_VideoFrameRateCS Examples: http://www.ebu.ch/metadata/cs/ebu_ColourCodeCS.xml#4 http://www.ebu.ch/metadata/cs/ebu_VideoFrameRateCS.xml#3
@ typeDefinition	An optional definition
@ formatGroup	To define a structure for use in the string field, if required
@ formatLabel	Free text Example: ‘free text’
@ formatLink	A link to a classification scheme
@ formatDefinition	An optional definition

Name	**Technical Attribute Byte - Short - Integer - Long - UnsignedByte - UnsignedShort - UnsignedInteger - UnsignedLong - Boolean - Float - URI**
Cardinality	Multiple
Requirement	Optional
Definition	Allows users / implementers to define their own technical parameters using the type attribute of their need.
Format	Complex type
Schema	See TechnicalAttributes
Technical Attribute structure common to Byte - Short - Integer - Long - UnsignedByte - UnsignedShort - UnsignedInteger - UnsignedLong - Boolean - Float - URI extending the corresponding xml datatype accordingly 	
TechnicalAttributeboolean, byte, short, integer, long, unsigned, float, URIS	The value of the technical attribute
@ typeGroup	To define the attribute
@ typeLabel	Free text Example: averageBitrateFlag, bitrate
@ typeLink	A link to a classification scheme
@ typeDefinition	Free text Example: ‘a flag indicating that the video bitrate corresponds to an average bitrate’

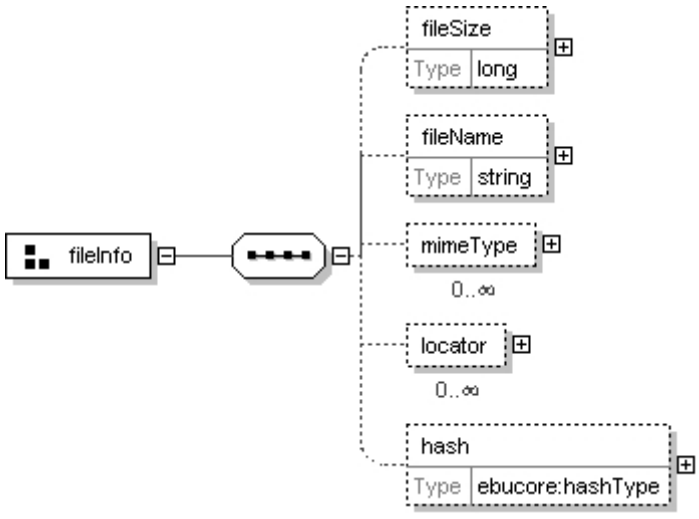
Name	Technical Attribute Rational
Cardinality	Multiple
Requirement	Optional
Definition	Allows users / implementers to define their own technical parameters as 'rational'.
Format	Complex type
Schema	See TechnicalAttributes
	
TechnicalAttribute Rational	A rational expressed by it numerator and denominator
@ typeGroup	To define the attribute
@ typeLabel	Free text
@ typeLink	A link to a classification scheme
@ typeDefinition	Free text
factorNumerator	The rational numerator
factorDenominator	The rational denominator

Name	Format Video Format Codec; Format Audio Format Codec
Cardinality	One per Video Format, one per Audio Format.
Requirement	Optional
Definition	Used to describe an hardware or software codec
Format	Complex type
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:codec



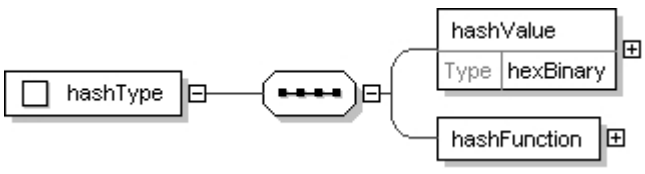
name	The name of the hardware or software codec implementation / product
vendor	The name of the company developing / retailing the product
version	The version of the product release used to encode essence
family	The family of products to which the codec belongs to, if applicable

Name	Format File Info
Cardinality	One per Format
Requirement	Optional
Definition	Used to provide information on a particular essence realisation or instance
Format	elementGroup
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:fileInfo

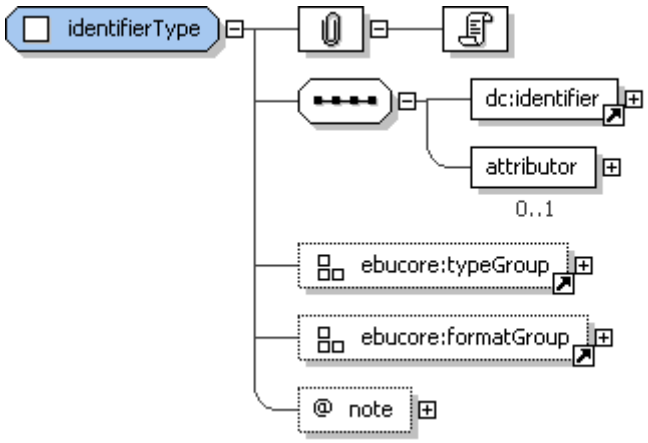


fileSize	To indicate the storage requirements or file size of a digital resource. The file size is expressed in bytes. In the case of a structured complex package, the size is the sum of all components of the package.

fileName	To indicate the name of the file or package containing the resource.
mimeType	An element of typeGroup type to define the MIME type of the resource e.g. as a component, a file or a package.
@ typeGroup	To define the MIME type of the resource is available.
@ typeLabel	Free text field. Example: video only, P2 package, MXF
@ typeLink	A link to a term or only identify a classification scheme Optional default reference data: MIME Type (http://www.iana.org/assignments/media-types/) ebu_MediaTypeCS Example: http://www.ebu.ch/metadata/cs/ebu_MediaTypeCS.xml#7.1.2
@ typeDefinition	An optional definition. Example: 'the resource contains only video footage'
locator	One (or more) "address for a resource". For an organisation or producer acting as caretaker for a media resource, Format Location may contain information about a specific e.g. tape name, shelf location for an asset, including an organisation's name, departmental name, shelf id. And contact information. The Format Location for a data file or web page may include a complete URI with a domain, path, filename or html URL. See http://tools.ietf.org/html/rfc3986. Example: Archives Building A, Row J, Shelf 2", "d://playout/server/content.mpg", http://www.ebu.ch/CorporateVideo.avi The storage structure to be found at the locator address may be complex and form of sub-directories e.g. for video, audio and data.
@ typeGroup	To define the type of locator (e.g. a storage structure) in which the resource is available, and to provide additional contextual information.
@ typeLabel	Free text field.
@ typeLink	A link to a term or only identify a classification scheme
@ typeDefinition	An optional definition with e.g. information about the address at which the locator is pointing.
hash	A code calculated to verify the intergity of the content of a file or package. See hashType below.

Name	**Format File Info Hash**
Cardinality	One per Format File Info
Requirement	Optional
Definition	Used to provide information on a particular essence realisation or instance.
Format	elementGroup
Schema	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:fileInfo / ebucore:hash
	
hashValue	The value of the hash code calculated to verify the integrity of the file / package.
hashFunction	The algorithm used to calculate the hash code associated with an essence file. The hash function is of typeGroup type.

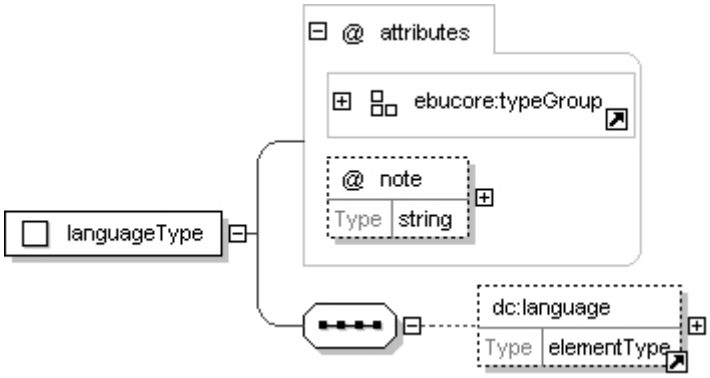
Identifier

Name	Identifier
Cardinality	Multiple
Requirement	Mandatory
Definition	A unique, unambiguous reference or identifier for a resource within a given context. Best practice is to identify the resource (whether analogue or digital) by means of a string or number corresponding to an established or formal identification system if one exists. Otherwise, use an identification method that is in use within your agency, station, production company, office, or institution. It is also possible to enter more than one, different but still unique, identifier for the same resource.
Format	ebucore:identifierType
Schema	/ebucore:coreMetadataType/ebucore:identifier/dc:identifier
	
dc:identifier	Free text to provide an identifier. Example: 06.0A.2B.34.01.01.01.01
attributor	To identify the source of attribution of the identifier, attributor is of entityType
@ typeGroup	Used to define the type of Identifier used e.g. ‘main’ or ‘secondary’.
@ typeLabel	Free text Example: ‘main’
@ typeLink	A link to a classification scheme
@ typeDefinition	Free text Example: ‘main identifier attributed to the resource’
@ formatGroup	Use to define the format and possibly syntax of the identifier. Used in combination with the resource Identifier. It can denote the agency or institution which specified or assigned it.
@formatLabel	Free text Example: SMPTE Unique Material Identifier (UMID)
@ formatLink	A link to a classification scheme Optional default reference data: ebu_IdentifierTypeCodeCS, URI - Unique Resource Identifier: http://tools.ietf.org/html/rfc3986 Example: http://www.ebu.ch/metadata/cs/ebu_IdentifierTypeCodeCS.xml#1.1
@ formatDefinition	Free text Example: ‘a unique identifier as defined by SMPTE 330M’

Source

Name	Source
Cardinality	Multiple
Requirement	Optional
Definition	Reference to the resource (s) from which the current resource is derived in whole or in part. If no label or number is available, the title and/or the statement of responsibility etc. of the digitized recording is recorded here. For a digitized radio programme the production number is normally given here. The Recommended best practice is to use a unique identifier to identify the physical source that has been used to create the digital resource. In the case of a digitized analogue recording, it is the recording used for digitization which is the source. For commercial recordings the label and number is normally given here. A language can optionally be defined using the xml:lang attribute. Example: Eurovision feed 2007-07-16T19:20:30.45+01:00
Format	elementType
Schema	/ebucore:coreMetadataType/dc:source

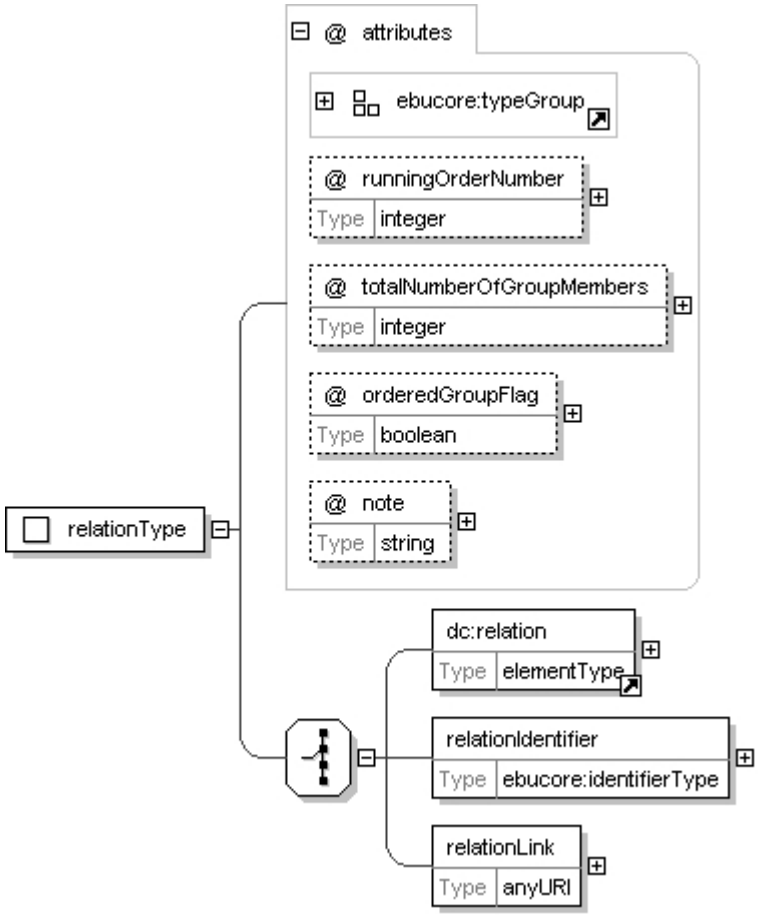
Language

Name	Language
Cardinality	Multiple
Requirement	Optional
Definition	Identifies languages and their use in the intellectual content of the resource. Recommended best practice for the values of the Language element is defined by RFC 5646. Recommended is the use of a two-letter Language Code (taken from the ISO Standard 639), followed optionally, by a two-letter Country Code (taken from the ISO Standard 3166), preferably expressed using capital letters. For example, 'en' for English, 'fr' for French, or 'en-UK' for English used in the United Kingdom.. More contextual information can be provided using the “note” attribute.
Format	languageType
Schema	/ebucore:coreMetadataType/ebucore:language
	
dc:language	Use to identify the language. Optional default reference data: ebu_Iso639_1LanguageCodeCS, ebu_Iso639_2LanguageCodeCS, ebu_Iso3166CountryCodeCS
@ typeGroup	Used to identify the purpose of use of the language.
@ typeLabel	Free text Example: ‘main original language’

@ typeLink	A link to a classification scheme Reference data: ebu_LanguagePurposeCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_LanguagePurposeCodeCS.xml#1.1
@ typeDefinition	Free text Example: 'the main language as originally created/captured for the resource'
@note	A note for additional contextual information.

Relation

Name	**Relation**
Cardinality	Multiple per relation
Requirement	Optional
Definition	Recommended best practice is to reference the resource (to which the current resource under description is related) by means of a string or number conforming to a formal identification system. Relation is used to show the relation in content to another resource. For example, "IsPartOf" is used to show the relation between a part of a radio programme and the whole programme or between a track and a record album. A resource can be identified by its title, or an identifier (possibly a URI). The related item has its own separate metadata record. Relation is used to provide a name, an identification number or ID, or a locator where the related item can be found.
Format	relationType
Schema	/ebucore:coreMetadataType/ebucore:relation

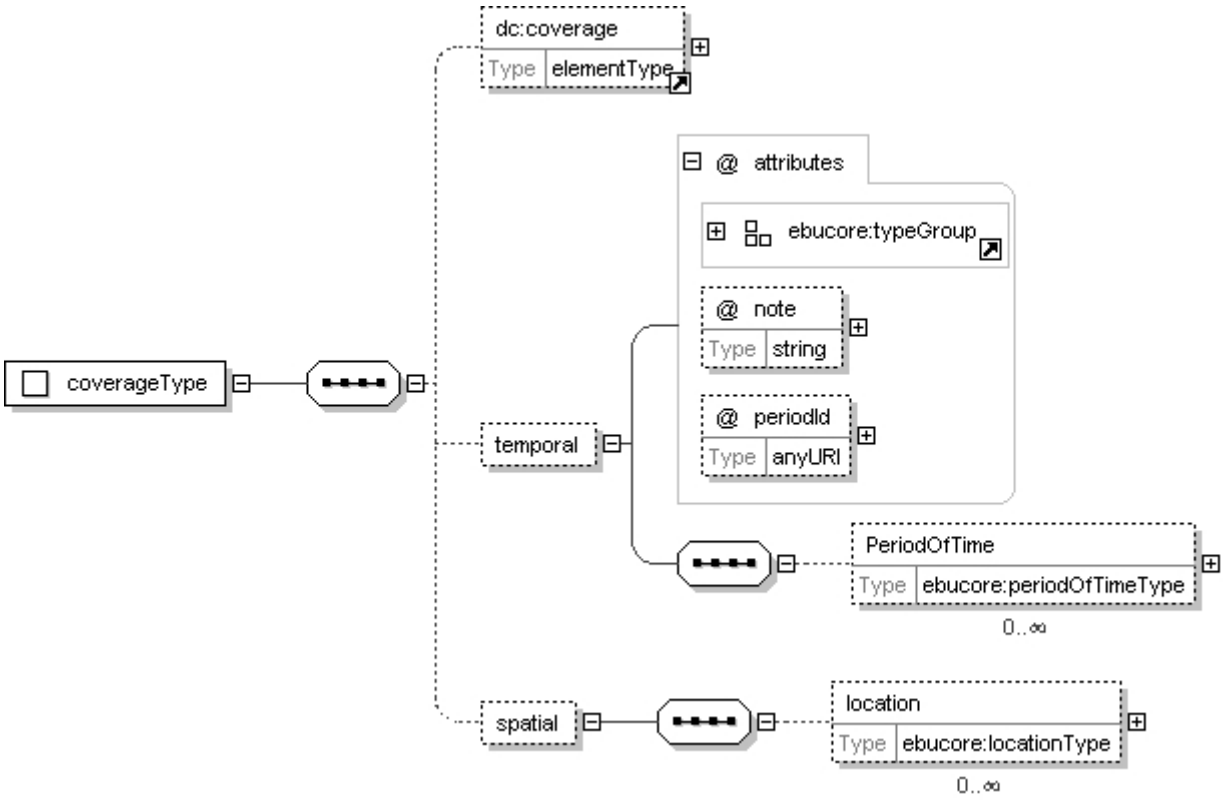


dc:relation	Free text to provide the identification of the resource linked by the relation

relationIdentifier	See identifierType Example : 06.0A.2B.34.01.01.01.01,
relationLink	A URI to identify a link to a resource Example: http://www.etf.zk/EbuCoreVideo.mpg
@ typeGroup	Used to identify the nature of the relationship to another resource, e.g. identifies ways in which the resource is related by intellectual content to some other resource. The relation type shall be used if none of the following EBUCore predefined relations (implemented in the schema) can be used: isVersionOf / hasVersion isReplacedBy / replaces isRequiredBy / requires isPartOf / hasPart hasTrackPart isReferencedBy / references isFormatOf / hasFormat isMemberOf / hasMember
@ typeLabel	Free text Example: 'IsTrailerOf'
@ typeLink	A link to a classification scheme Optional default reference data: tva_HowRelatedCS, ebu_HowrelatedCS Example: http://www.ebu.ch/metadata/cs/tva_HowRelatedCS.xml#1.2
@ typeDefinition	Free text Example: 'the current resource is a trailer of the resource identified by one of the relation elements: dc:relation or relationidentifier or relationLink'
@runningOrder	If set (true), optional field to indicate that the relation is hierarchical and that there is an order in which content is chronologically related, which would be described in a Description element.
@totalNumberOfGroup Members	The total number of members is the group the content is related to, when applicable.
@orderedGroupFlag	A flag set to 'True' if the group is ordered, i.e. if members must be published in a given order.
@note	A note for additional contextual information

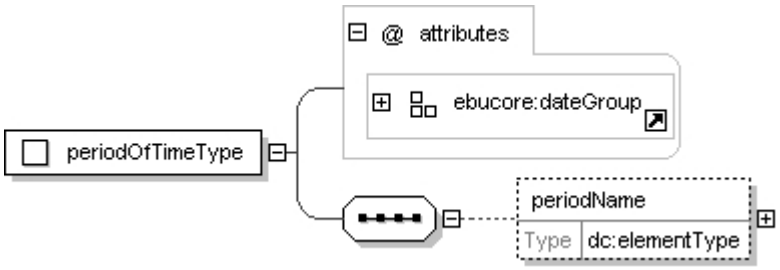
Coverage

Name	Coverage
Cardinality	Unique
Requirement	Optional
Definition	Coverage is used to show various time and place aspects of the subject of the content. Coverage will typically include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names) and that, where appropriate, named places or time periods be used in preference to numeric identifiers such as sets of coordinates or date ranges.
Format	coverageType
Schema	/ebucore:coreMetadataType/ebucore:coverage

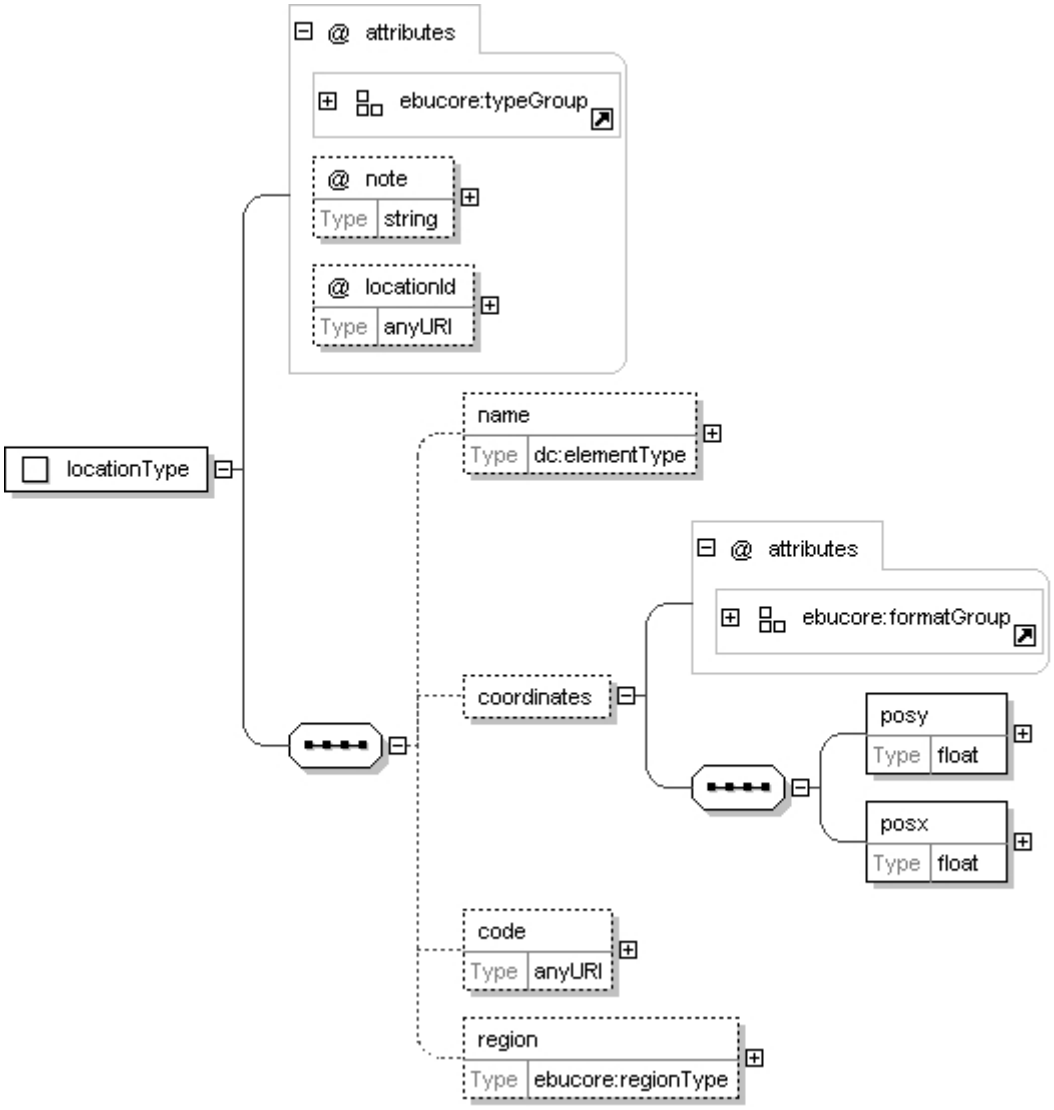


dc:coverage	Free text to provide temporal or spatial / geographical information about what is shown in the resource
temporal	Temporal characteristics of the content of the resource. To indicate e.g. dates, times or periods specific to the resource in complement to Description.
periodOfTime	The period of time depicted in the resource. See periodOfTimeType below.
@ typeGroup	To precise the type of temporal information provided.
@ typeLabel	Free text Example: 'Fictional action date'
@ typeLink	A link to a classification scheme
@ typeDefinition	Free text Example: 'the date at which the event presented is supposed to take place'
@note	A note to provide additional contextual information
@periodId	An attribute to identify the time period.

spatial	Spatial characteristics of the content of the resource.
location	To indicate e.g. specific place and location aspects of the resource in complement to Description. See locationType below.

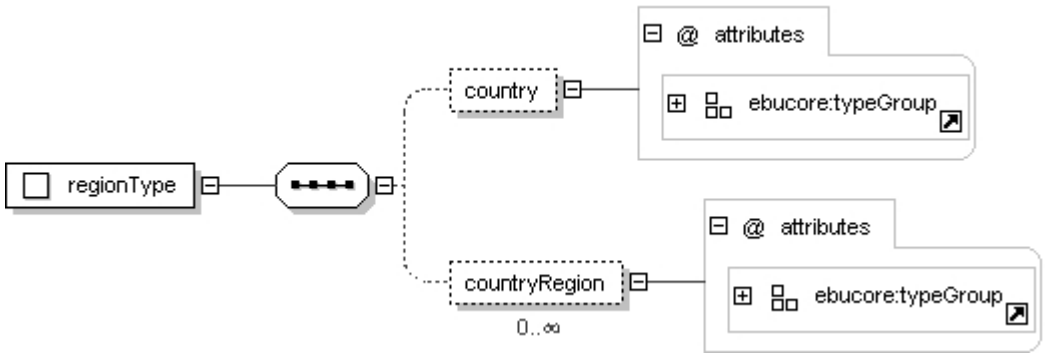
Name	**Period of Time**
Cardinality	Multiple
Requirement	Optional
Definition	Period of Time is used to describe a particular time point or period
Format	periodOfTimeType
Schema	/ebucore:coreMetadataType/ebucore:coverage/ebucore:temporal/ebucore:periodOfTime
	
@ dateGroup	See ebucore:dateGroup.
periodName	A name by which a period is known

Name	Location
Cardinality	Multiple
Requirement	Optional
Definition	Location is used to describe a particular place related to the resource
Format	locationType
Schema	/ebucore:coreMetadataType/ebucore:coverage/ebucore:spatial/ebucore:location



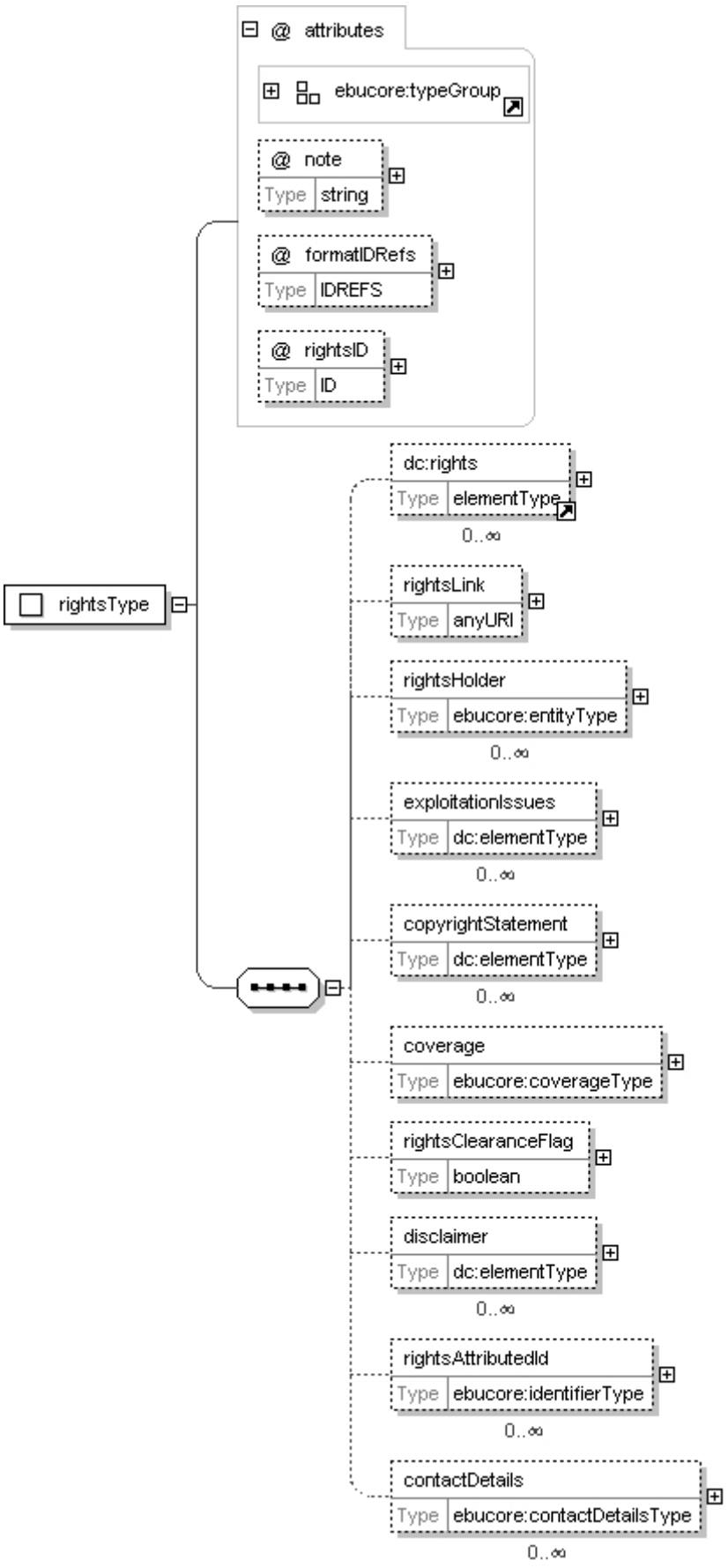
name	The name of the place or location Reference data: Thesaurus of Geographic Names, ebu:cityCodeCS Example: 'London'
coordinates	The spatial coordinates
@formatGroup	An attribute group to define the format used to express the coordinates.
posx	The longitude of the place or location Example:-015
posy	The latitude of the place or location Example: 51.49
code	The code under the which the place or location may be known / referenced Reference data: ebu:UNTerritoryCodeCS, ebu:Iso3166CountryCodeCS. Example: 'W1AA 4WW'

region	To define a region as a country and or region(s) within a country. See regionType below.
@ typeGroup	To precise the type of place and location information provided.
@ typeLabel	Free text Example: 'city'
@ typeLink	A link to a classification scheme
@ typeDefinition	Free text Example: 'to provide a name of a city'
@note	A note to provide additional contextual information
@locationId	An attribute to identify the place or location.

Name	**Region**
Cardinality	Multiple
Requirement	Optional
Definition	Region is used to describe a particular country or region of a country related to the resource
Format	regionType
Schema	/ebucore:coreMetadataType/ebucore:coverage/ebucore:spatial/ebucore:location/ebucore:region
	
country	A country is defined either as text using typeLabel or as a link to a term in a controlled vocabulary using typeLink
countryRegion	A region in a country is defined either as text using typeLabel or as a link to a term in a controlled vocabulary using typeLink

Rights

Name	**Rights**
Cardinality	Multiple
Requirement	Optional
Definition	An all-purpose field to identify information (rights management statement or reference to a service providing such information e.g. via a URL) about copyright, intellectual property rights or other property rights held in and over a resource, stating whether access is open or restricted in some way. If dates, times, territories and availability periods are associated with a right, they should be included. If the Rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.
Format	ebucore:rightstype
Schema	/ebucore:coreMetadataType/ebucore:rights

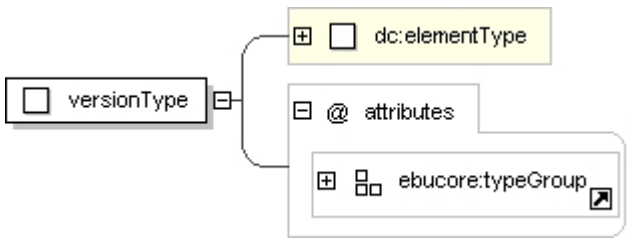


dc:rights	An element to express any form of rights related matters.
@typeGroup	Used to define the type of rights expressed.

@typeLabel	Free text definition of the type or rights expressed in dc:rights. Example: 'Licence'
@typeLink	A link to a term or only identify a classification scheme. Reference data: ebu_RightsTypeCodeCS
@typeDefinition	An optional definition of the type. Example: 'the terms and conditions under which the resource can be used'
@note	A note for additional contextual information.
@formatIDRefs	An attribute to identify content manifestations / instances to which the rights apply in the form of a list of formatIDs. Note: EBUCore also allows the definition of a description 'Part' using the 'Part' element with only a 'Rights' and associated 'Format' elements.
rightsHolder	To identify the person or organisation holding or managing the rights related to the resource. See ebucore:entityType
exploitationIssues	Use to state any other restrictions, such as non-rights ones, e.g. legal. State by media, territory, scope (restriction on whole item or extracts) and possibly language. The presence of this information can be used by asset management system implementing traffic lights like mechanism to signal that content may be subject to particular restrictions to be clarified before exploitation.
copyrightStatement	Use to state copyright statements over the resource.
coverage	To express temporal and spatial domains of application of the rights. Specifies e.g. a specific start date, end date or period for the availability of the item or the date from which the rights or exploitation issues apply. It may refer to start dates for the availability of an item that is used within a particular geographical area e.g. broadcast locally, regionally, nationally or internationally, or for web-based distribution. A specific time may also be associated with the date. See ebucore:coverageType
rightsClearanceFlag	A flag ('true' or 'false') to signal is rights have been cleared and the resource can be exploited or not.
disclaimer	An element to express a disclaimer on liabilities.
rightsId	An identifier attributed by a third party authority such as after exploitation clearance. see ebucore:identifierType
contactDetails	The contact details of the manager of the rights of the resource in the organisation

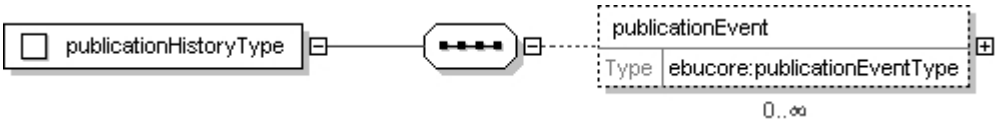
Version

Name	**Version**
Cardinality	Unique
Requirement	Optional
Definition	Expresses the version type of the resource. Example: 'UK version', 'home video version'
Format	Free text possibly in different languages identified by elementType's 'lang' attribute.
Schema	/ebucore:coreMetadataType/ebucore:version



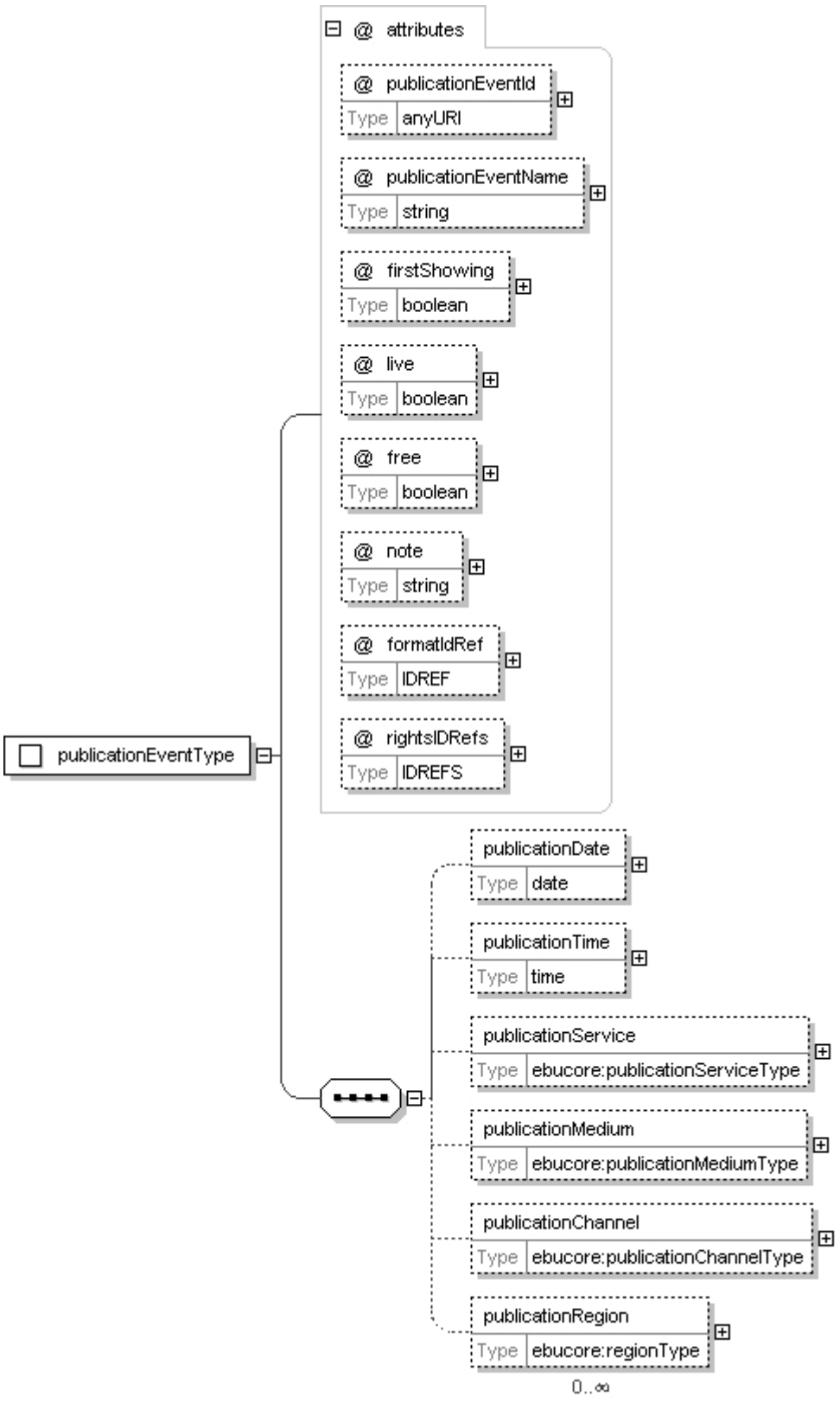
dc:element	To provide version information optionally in different languages
@typeGroup	To define a type of version using a typeLabel or a typeLink (to a term in a classification scheme) with an optional typeDefinition.

Publication History

Name	**Publication History**
Cardinality	Unique
Requirement	Optional
Definition	To provide information about the publication history.
Schema	/ebucore:coreMetadataType/ebucore:publicationHistory
	
publicationEvent	The publicationHistory is a collection of publicationEvents.

Publication Event

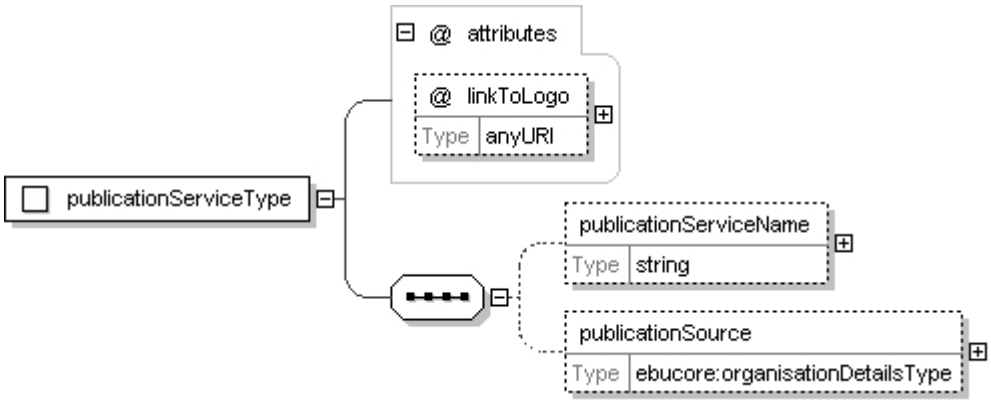
Name	**Publication Event**
Cardinality	Multiple
Requirement	Optional
Definition	To provide information about publication events.
Schema	/ebucore:coreMetadataType/ebucore:publicationHistory/ebucore:publicationEvent



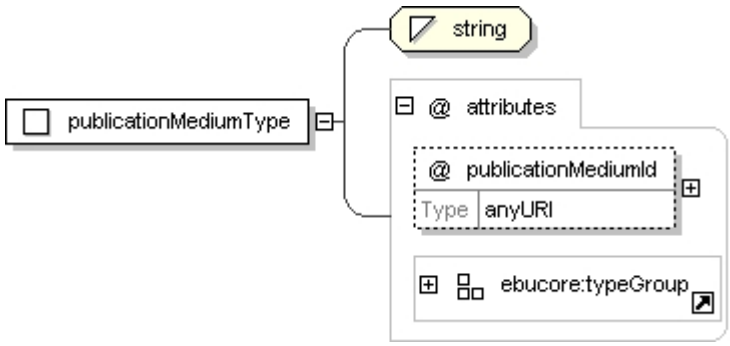
publicationEvent	The publicationHistory is a collection of publicationEvents.
@publicationEventId	An identifier associated to a publicationEvent
@publicationEventName	A name attributed to the publicationEvent
@firstShowing	A flag set to 'True' if the publicationEvent is the first time the content was published.
@live	A flag set to 'True' if the publicationEvent is 'live'.

@free	A flag set to 'True' if the publicationEvent is 'free' to access.
@note	A free text note to provide additional contextual information
@formatIDRef	A reference identifier to a formatID to associate a particular format with the publicationEvent.
@rightsIDRefs	One or more reference identifiers to rightsID to associate distribution rights with the publicationEvent
publicationDate	The first publication date (xsd:date type)
publicationTime	The first publication time (xsd:time type)
publicationChannel	The channel on which the title was first published. An element to provide the name of the distributionChannel through which the publicationEvent has been released. See publicationChannelType.
publicationMedium	The medium on which the title was first published. An element to provide the name of the distributionMedium on which the resource has been released. See publicationmediumType.
publicationService	An element to provide the name of the service operating the publicationChannel through which the publicationEvent has been released and the identification of the publicationSource (e.g. broadcaster). See publicationServiceType.
publicationRegion	The geographical region where publication has occurred. See regionType.

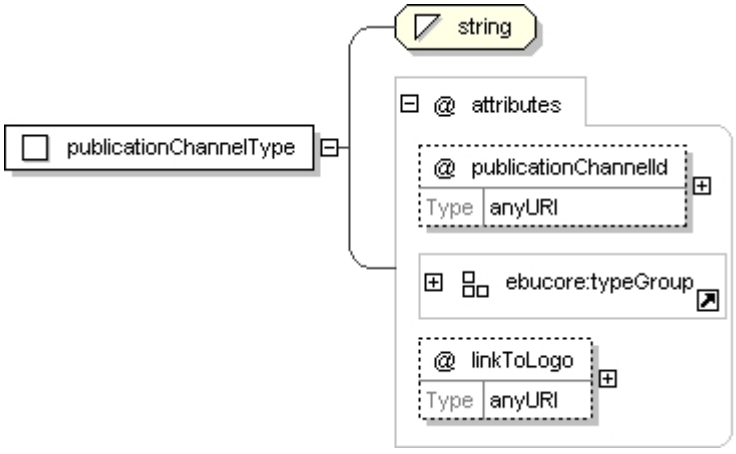
Publication Service

Name	**Publication Service**
Cardinality	Unique
Requirement	Optional
Definition	To provide information about the publication Service.
Schema	/ebucore:coreMetadataType/ebucore:publicationHistory/ ebucore:publicationEvent/ ebucore:publicationService
	
publicationService	To identify the service through which the publicationEvent was provided.
@linkToLogo	A link to a logo visually identifying the publicationService.
publicationServiceName	A name attributed to the publicationService
publicationSource	To identify the organisation owning / hosting the publicationService

Publication Medium

Name	**Publication Medium**
Cardinality	Unique
Requirement	Optional
Definition	To provide information about the publication medium related to a particular publication event.
Schema	/ebucore:coreMetadataType/ebucore:publicationHistory/ ebucore:publicationEvent/ebucore:publicationMedium
	
publicationMedium	The publicationMedium associated with a publicationEvent, identified by its name.
publicationMediumId	An identifier associate to the medium.
@typeGroup	An attribute typeGroup allows providing additional information on the type of medium used to publish the content (e.g. file or tape).

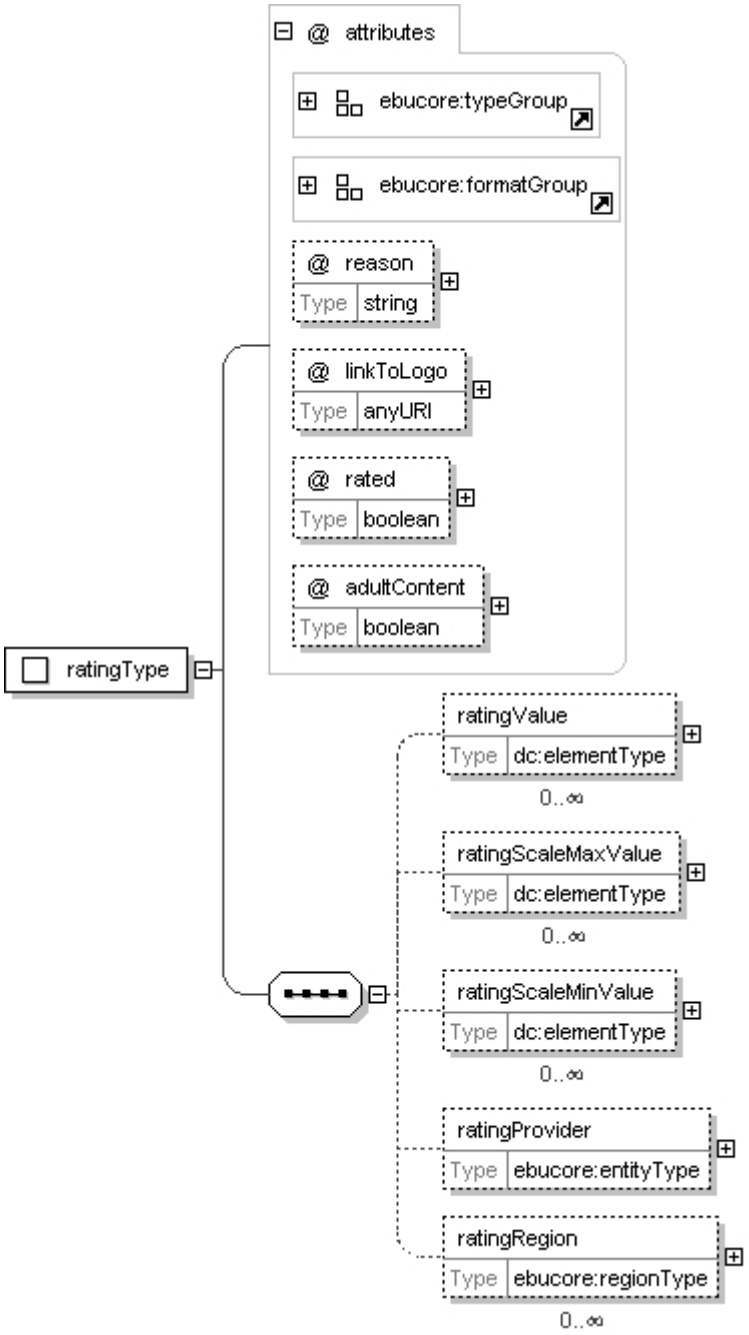
Publication Channel

Name	**Publication Channel**
Cardinality	Unique
Requirement	Optional
Definition	To provide information about the publication channel associated with a particular publication event.
Schema	/ebucore:coreMetadataType/ebucore:publicationHistory/ ebucore:publicationEvent/ebucore:publicationChannel
	
publicationChannel	The publicationChannel associated with a publicationEvent and identrified by its name.
@publicationChannelId	An identifier associated with the publicationChannel

@typeGroup	An attribute typeGroup allows providing additional information on the type of channel used to publish the content (e.g. online or broadcast).
@linkToLogo	A link to a logo for the visual identification of a publicationChannel.

Rating

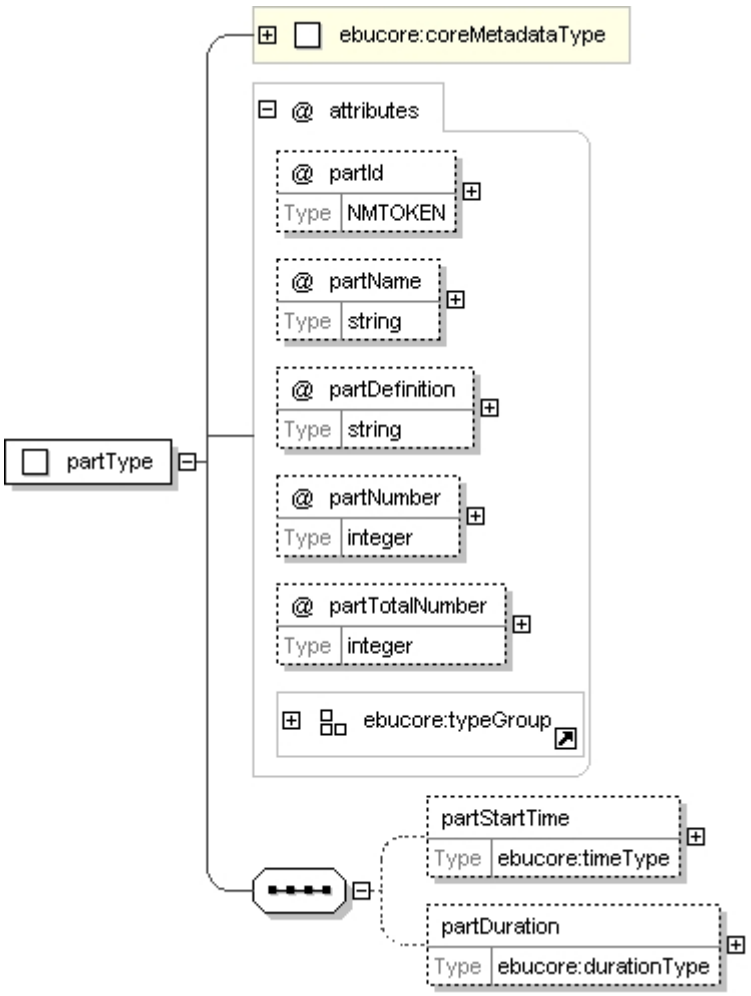
Name	**Rating**
Cardinality	Multiple
Requirement	Optional
Definition	To provide rating values of the resource.
Format	Ebucore:ratingType
Schema	/ebucore:coreMetadataType/ebucore:rating



@ formatGroup	To define the type of format of the rating used'
@ formatLabel	Free text.
@ formatLink	Link to a classification scheme.
@ formatDefinition	Free text for an optional definition.
@ typeGroup	To define the type of rating used.
@ typeLabel	Free text.
@ typeLink	Link to a Classification Scheme,
@ typeDefinition	Free text.
@reason	The reason, if any, why a particular audience has been identified
@linkToLogo	A URI to point to the location of a pictogram representative of the rating score
@notRated	A flag to indicate that the media resource has not been rated (if set to true)
@adultContent	A flag to indicate is the media resource contains adult content (if set to true)
ratingValue	The value given to the rating e.g. a number or else. Of dc:elementType to allow the definition of a language is the value is e.g. an expression, which can be expressed in different languages.
ratingScaleMaxValue	Provides the maximum value of the rating scale
ratingScaleMinValue	Provides the minimum value of the rating scale
ratingProvider	To identify the provider, a person or organisation, of the rating value
ratingRegion	To define a region associated with the rating. See regionType.

Part

Name	**Part**
Cardinality	Multiple
Requirement	Optional
Definition	To identify parts/segments/fragments within the resource and provide a wide range of descriptive or technical information optionally associated to timelines.
Format	ebucore:coreMetadataType
Schema	/ebucore:coreMetadataType/ebucore:part

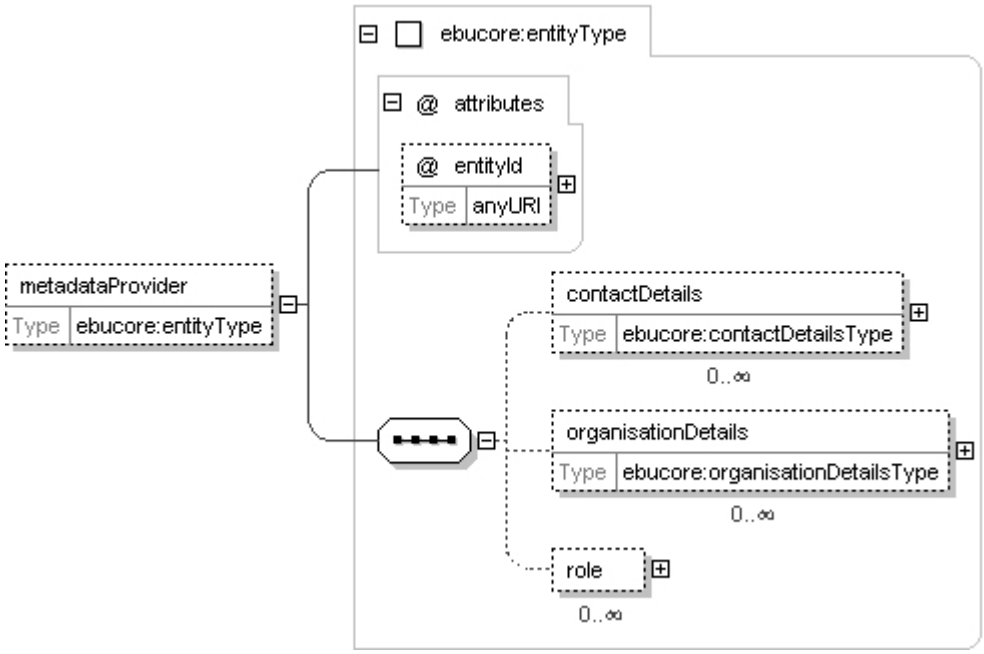


coreMetadataType	A part can be described using all metadata aspects of the coreMetadata element.
@partId	An identifier associated with a part.
@partName	A name associated with a part.
@partDefinition	A definition associated with a part.
@partNumber	A number associated with a part in a group/series of parts.
@partTotalNumber	The total number of parts in group that the current part is a member of.
@typeGroup	A typeGroup of attributes to define a type for the part. EBUCore supports a wide range of part types to address technical and descriptive needs.
partStartTime	An element to provide a start time in different possible formats
partDuration	An element to provide a duration in different possible formats

The "guidelines and Q&A" section of this specification proposes different uses of the 'Part' element.

Metadata Provider

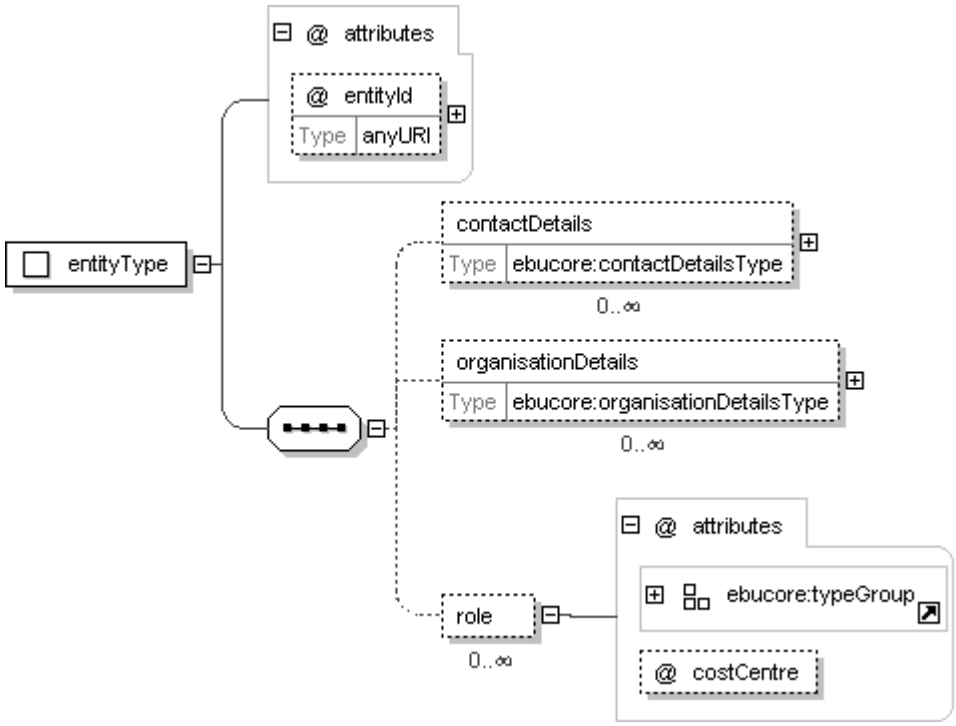
Name	**Metadata Provider**
Cardinality	Unique per metadata instance
Requirement	Required
Definition	Identifies the metadata provider,i.e. a person or organisation. The organisation Id or name would provide the archive ID or name required for OAI metadata harvesting operation.
Format	ebucore:entityType
Schema	/ebucore:coreMetadataType/ebucore:metadataProvider



@entityId	An identifier to uniquely identify a metadata provider
contactDetails	An element to provide contact details. See ebucore:entityType
organisationDetails	An element to provide organisation details. See ebucore:entityType
Role	An element of typeGroup type to refine the role of the metadata provider

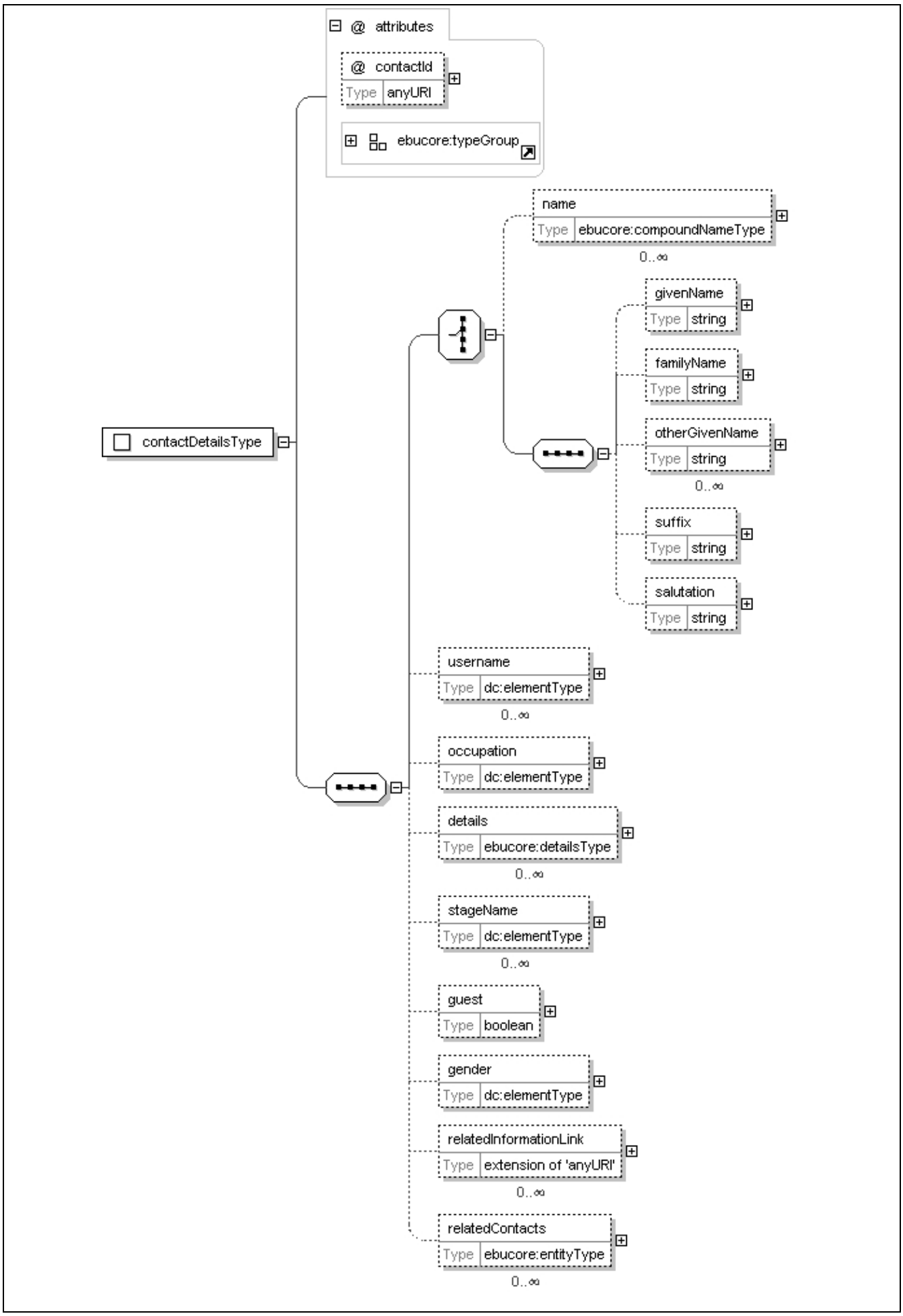
Entity (Contact Details, Organisation Details, Role), Note

Name	Entity
Cardinality	Unique
Requirement	Optional
Definition	Provides details information about a person, a group of persons, or organisation
Format	ebucore:entityType
Schema	/ebucore:coreMetadataType/ebucore:creator/ebucore:entity /ebucore:coreMetadataType/ebucore:contributor/ebucore:entity /ebucore:coreMetadataType/ebucore:publisher/ebucore:entity /ebucore:coreMetadataType/ebucore:rights//ebucore:rightsOwner/ebucore:entity /ebucore:coreMetadataType/ebucore:rights//ebucore:metadataProvider/ebucore:entity

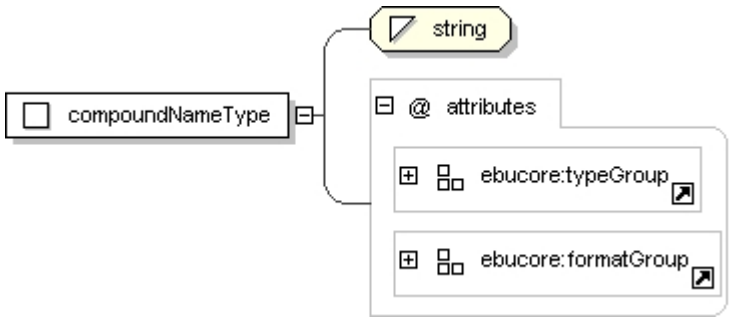


@entityId	An attribute to uniquely identify the person or organisation.
contactDetails	See contactDetailsType
organisationDetails	See organisationDetailsType
role	To define or refine the role of the entity, person or organisation
@typeGroup	Used to define the type of role.
@typeLabel	Free text definition of the type or rights expressed in dc:rights. Example: 'Director'
@typeLink	A link to a term or only identify a classification scheme. Reference data: ebu_RoleCodeCS Example: http://www.ebu.ch/metadata/cs/ebu_RoleCodeCS.xml#20.16
@typeDefinition	An optional definition of the type. Example: 'the terms and conditions under which the resource can be used'
@costCentre	A cost centre associated with the function / role of the entity

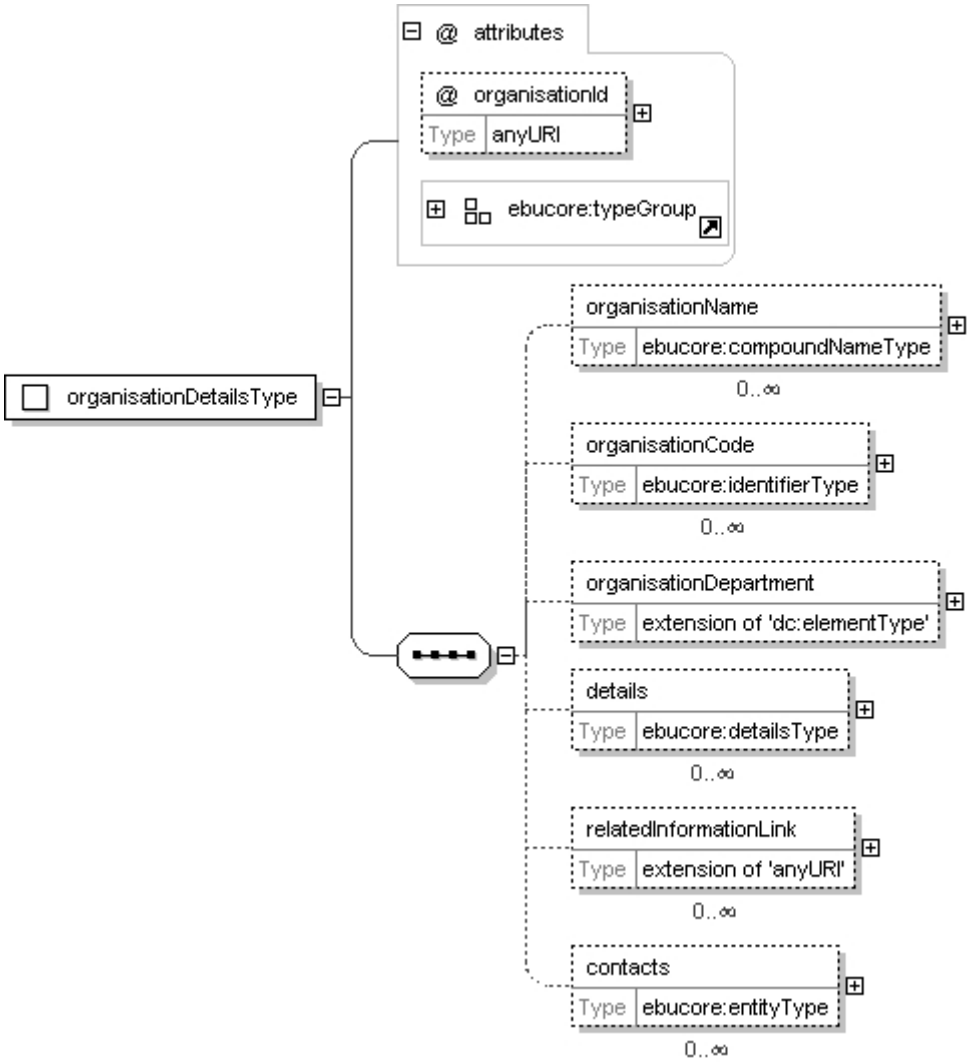
Name	Contact Details
Cardinality	Multiple per Entity
Requirement	Optional
Definition	Minimum information providing means to further identify and contact a person.
Format	ebucore:contactDetailsType
Schema	../ebucore:entity/contactDetails


@ attributes
@ contactId
Type anyURI
ebucore:typeGroup
contactDetailsType
name
Type ebucore:compoundNameType
0..∞
givenName
Type string
familyName
Type string
otherGivenName
Type string
0..∞
suffix
Type string
salutation
Type string
username
Type dc:elementType
0..∞
occupation
Type dc:elementType
details
Type ebucore:detailsType
0..∞
stageName
Type dc:elementType
0..∞
guest
Type boolean
gender
Type dc:elementType
relatedInformationLink
Type extension of 'anyURI'
0..∞
relatedContacts
Type ebucore:entityType
0..∞

name	To provide the full name of a person inc. other given names, salutation and suffix when relevant. See compoundNameType below.
salutation	Mr, Ms, Dr, Pr, etc.
givenName	Alternatively to provide the given name by which a person is called.
otherGivenName	An element to provide additional given names.
familyName	To provide the additionally the family name of a person to complement the givenName.
suffix	Junior, Jr, Senior, etc.
username	To provide a username to alternatively identify tag and rating providers
occupation	To provide information on the contact/person job and position.
details	To provide the contact details of a contact / person. See detailsType
stageName	To record the name that the person has been attributed on stage Examples: 'character name' or 'interviewer'
guest	A flag to indicate if the contact/person was present as a guest
gender	To provide easy identification of the gender of a contact person
relatedInformationLink	To provide links to resource where more information is provided about that contact person (e.g. third party website, press article).
relatedContacts	To provide a list of contacts through which the person can alternatively be contacted. See ebucore:entityType.
@contactId	An attribute to uniquely identify a contact.
@typeGroup	An attribute group to define a type of contact

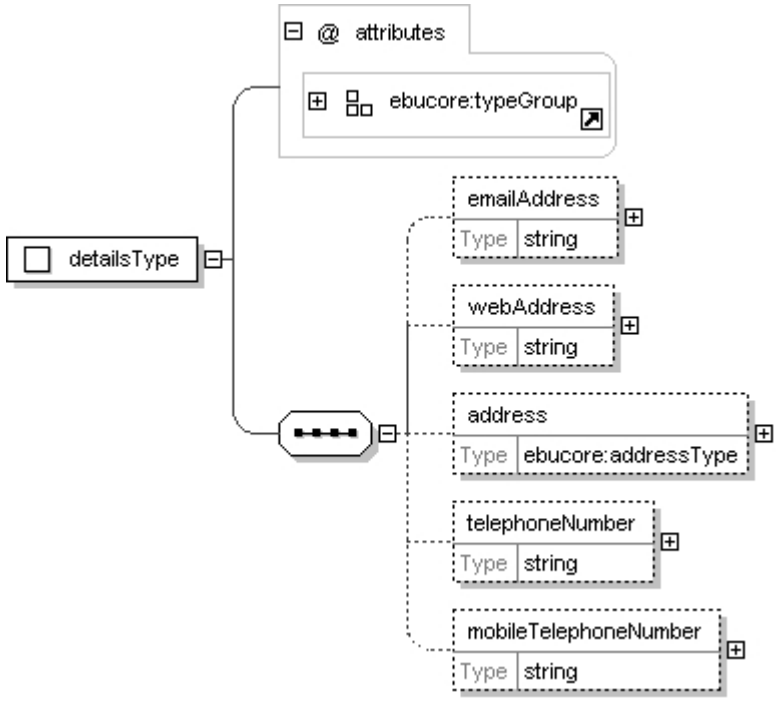
Name	**Name / Compound Name**
Cardinality	Multiple per contact details
Requirement	Optional
Definition	To provide free or formatted ways ot expressing names of different sorts.
Format	ebucore:compoundNameType
Schema	../ebucore:entity/ebucore:contactDetails/ebucore:name
	
string	To provide the full (or other type of) name of a person inc. other given names, salutation and suffix when relevant in a free text or formatted manner.
@typeGroup	To provide a particular function for the use of the name in the format optionally specified by the formatGroup attributes, e.g. "display name"
@formatGroup	To specify a format in which a name is provided.

Name	Organisation Details
Cardinality	Unique per Entity
Requirement	Optional
Definition	Minimum information providing means to further identify and contact an organisation.
Format	ebucore:organisationDetailsType
Schema	../ebucore:entity/organisationDetails



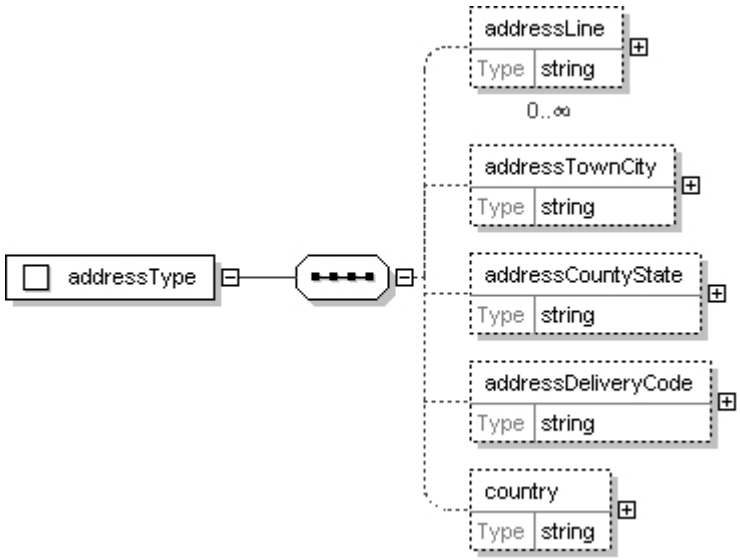
organisationName	To provide the name of an organisation. See Name and compoundNameType above.
organisationCode	To provide a code associated with the organisation. See IdentifierType.
organisationDepartment	To identify a specific department within an organisation
details	To provide the details of an organisation. See detailsType
contacts	To provide a list of contacts/persons through which the organisation can be contacted. See ebucore:entityType.
@organisationId	An attribute to uniquely identify an organisation.
@typeGroup	An attribute group to define a type of organisation

Name	Details
Cardinality	Unique per organisation or contact
Requirement	Optional
Definition	The contact details of a contact/person or organisation
Format	ebucore:detailsType
Schema	../ebucore:entity/ebucore:personDetails/ebucore:details ../ebucore:entity/ebucore:organisationDetails/ebucore:details



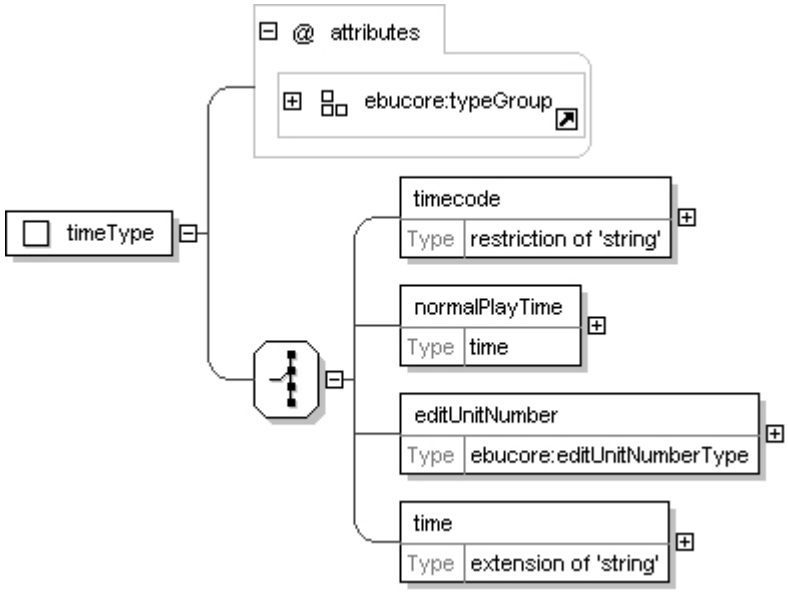
@typeGroup	Used to define the type of details e.g. office or private.
@typeLabel	Free text.
@typeLink	A link to a term or only identify a classification scheme.
@typeDefinition	An optional definition of the type.
emailAddress	The email address of a contact or organisation
webAddress	The web address of a contact or organisation
address	The address of a contact or organisation, See addressType.
telephoneNumber	The telephone number of a contact or organisation.
mobileTelephoneNumber	The mobile telephone number of a contact or organisation.

Name	Address
Cardinality	Unique per Entity
Requirement	Optional
Definition	The address of a contact/person or organisation
Format	ebucore:nameType
Schema	../ebucore:entity/ebucore:personDetails/ebucore:name



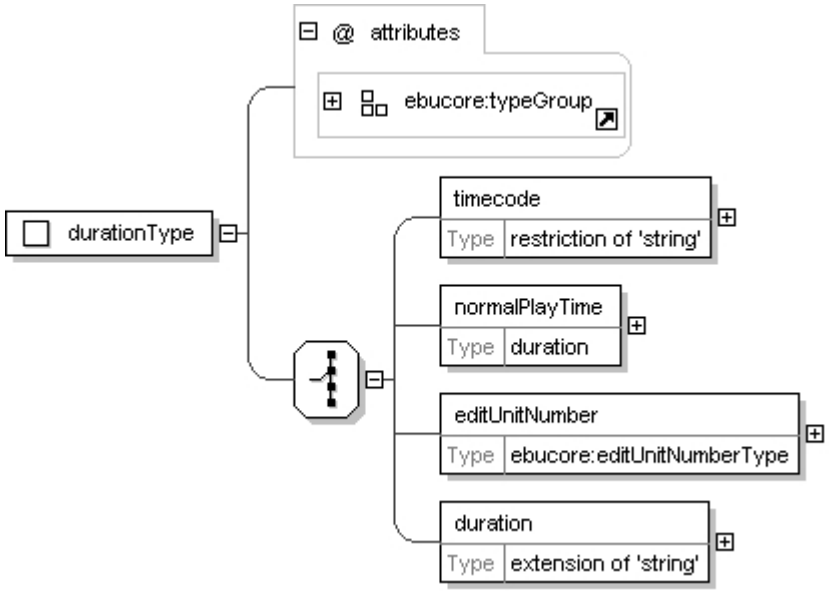
adressLine	One or more address lines.
adressTownCity	The name of the city/town of the address.
addressCountyState	The optional name of the county / state of the address.
adressDeliveryCode	The delivery code of the address.
Country	The country of residence.

timeType

Name	**timeType**
Cardinality	Unique per EditUnitElement element
Requirement	
Definition	To express a time reference
Format	ebucore:timeType
Schema	Applies to several elements in the schema
	
timecode	A time reference expressed in timecode using the ST 12-1:2008 (Timecode) format. Example: 00:00:10:24
normalPlayTime	A time reference expressed using usual time representation: RFC 2326, ISO 8601. Example: 12:05:35.4
editUnitNumber	A time reference expressed in a number of edit units from the start time. See editUnitNumberType below.
time	A time reference expressed as a value of time, which format can be defined using the formatGroup attributes.
@formatGroup	To define the format, possibly custom, in which the time will be expressed.
@typeGroup	To define a type of time.

durationType

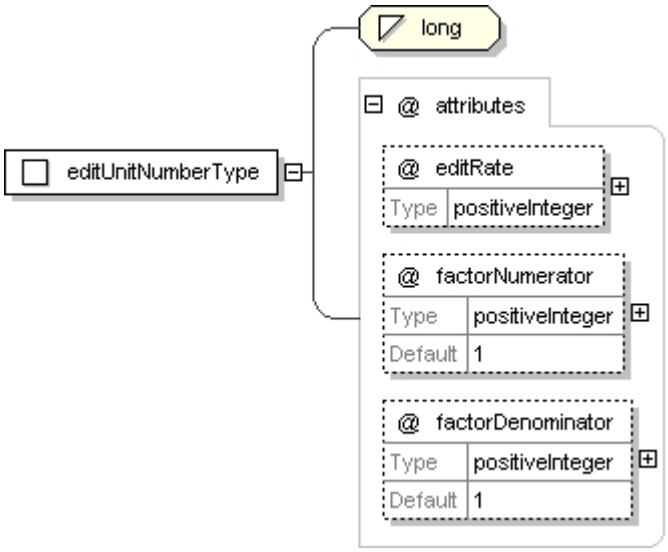
Name	durationType
Cardinality	Unique per EditUnitElement element
Requirement	
Definition	To express a duration
Format	ebucore:durationType
Schema	Applies to several elements in the schema



timecode	A duration expressed in timecode using the ST 12-1:2008 (Timecode) format. Example: 00:00:10:24
normalPlayTime	A duration expressed using usual time representation: RFC 2326, ISO 8601. Example: PT1H31M25S
editUnitNumber	The number of edit units from the the start time to the end of the resource. See editUnitNumberType below.
duration	A duration expressed as a value of time, which format can be defined using the formatGroup attributes.
@formatGroup	To define the format, possibly custom, in which the time will be expressed.
@typeGroup	To define a type of duration.

editUnitNumberType

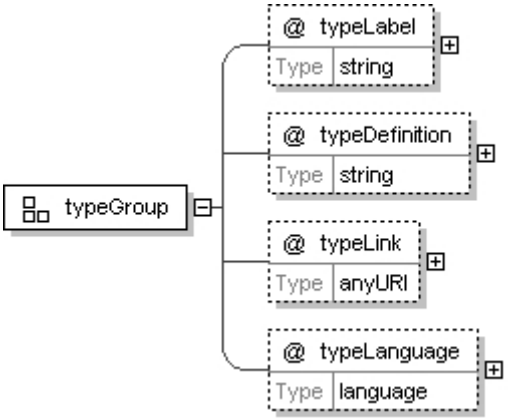
Name	EditUnitNumberType
Cardinality	Unique per EditUnitElement element
Requirement	
Definition	To express a number of edit unit. The Edit Unit is either the fraction of a second (frame period for video or sample period for audio) calculated as the inverse of the editRate (video frame rate or audio sample rate) of the resource, possibly corrected by a factor provided in the denominator and numerator attributes, or the smallest amount of time per unit (e.g. a second or millisecond). editUnit =1/(editRate*(factorNumerator/factorDenominator)) The start time is in this case an integer indicating a number of Edit Units, i.e. the corresponding editUnitNumber.
Format	ebucore:editUnitNumberType
Schema	Applies to several elements in the schema
Example	frame 3300 in a video at a frame rate of 29.97 fps will be expressed as: <editUnitNumber editRate="30" factorNumerator="1000" factorDenominator="1001">3300</editUnitNumber> In this case the edit unit is editUnit = 1/ (30*(1000/1001))



@editRate	The base reference for the material, i.e. the frame rate for video or sample rate for audio
@factorNumerator	The numerator of the correction factor if applicable, Value is '1' by default.
@factorDenominator	The denominator of the correction factor if applicable Value is '1' by default.

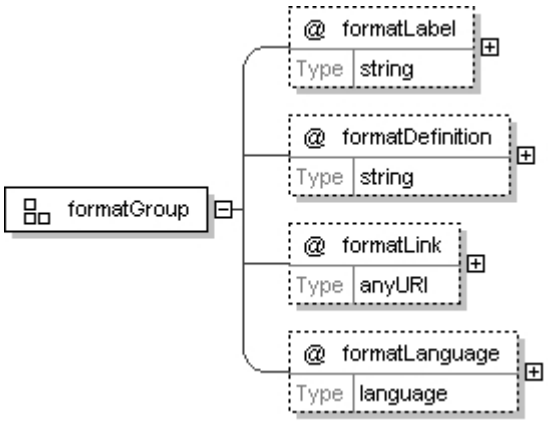
Attribute groups

Name	Type Group
Cardinality	Unique per element
Requirement	Optional
Definition	To define a contextual type
Format	ebucore:typeGroup (xsd:attributeGroup)
Schema	Applies to several elements in the schema

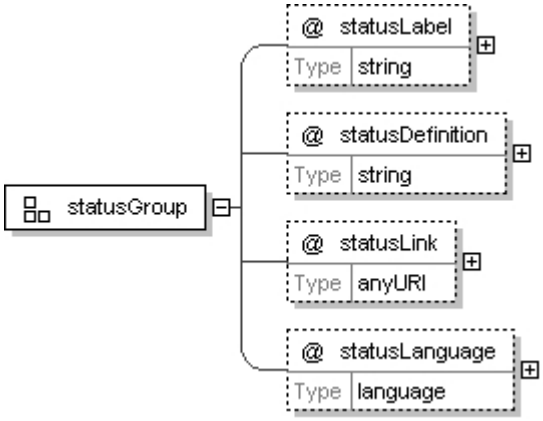


typeLabel	Free text.
typeDefinition	An optional definition.
typeLink	A URI to e.g. a classification scheme term.
typeLanguage	The language in which the typeGroup metadata is provided

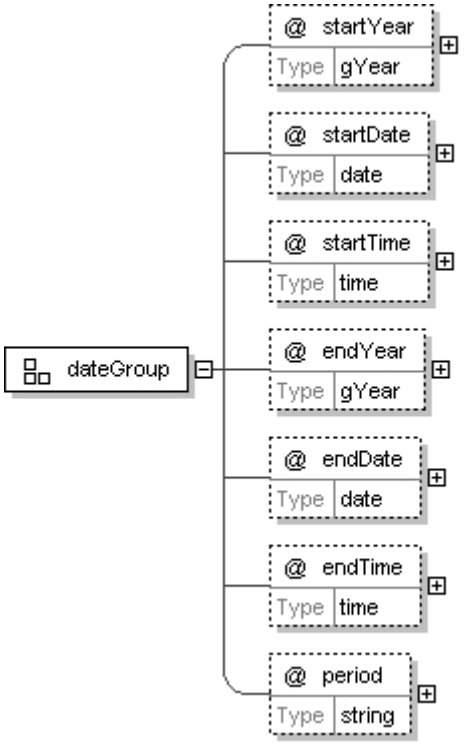
Name	**Format Group**
Cardinality	Unique per element
Requirement	Optional
Definition	To define a format
Format	ebucore:formatGroup (xsd:attributeGroup)
Schema	Applies to several elements in the schema



formatLabel	Free text.
formatDefinition	An optional definition.
formatLink	A URI to e.g. a classification scheme term.
formatLanguage	The language in which the formatGroup metadata is provided

Name	Status Group
Cardinality	Unique per element
Requirement	Optional
Definition	To define a status
Format	ebucore:statusGroup (xsd:attributeGroup)
Schema	Applies to several elements in the schema
	
statusLabel	Free text.
statusDefinition	An optional definition.
statusLink	A URI to e.g. a classification scheme term.
statusLanguage	The language in which the statusGroup metadata is provided.

Name	date Group
Cardinality	Unique per element
Requirement	Optional
Definition	To define a date and or time
Format	ebucore:dateGroup (xsd:attributeGroup)
Schema	Applies to several elements in the schema



startYear	To express a start year
startDate	To express a start date
startTime	To express a start time
endYear	To express an end year
endDate	To express an end date
endTime	To express an end time

3. Implementation Guidelines / Questions & Answers

3.1 General remarks

Several aspects of the specification are left to the appreciation of the implementer (e.g. regarding the mapping to pre-existing in-house metadata schemas).

Reference data and controlled vocabularies identified in the specification are proposed by default but can be extended or replaced. In order to maximise interoperability in case of e.g. exchange, it is recommended that extensions or alternative reference data be duly documented, maintained and made available to other users e.g. as open permanent resources on the Internet.

The schema is built as an extension to the Simple Dublin Core to facilitate transformation to the Simple Dublin Core representation as required by certain applications such as the European Digital Library. For the same reason, it is recommended to use predefined 'relation' properties.

EBUcore can be used to develop similar descriptions using different approaches. The implementers are left the choice of the method within their respective domains of application and interoperability.

3.2 Titles in different languages

How do I express a title of a given type in different languages?

The MAIN title is expressed using the title element in which dc:title is repeated in as many languages as required using the dc:element.

Any other type of alternative title is expressed using alternativeTitle for which the type is defined and within which dc:title is repeated in as many languages as required using the dc:element.

There can therefore be as many alternativeTitle as required type of alternativeTitle, each one grouping its expression in one or more languages.

```
<ebucore:alternativeTitle typeLabel="secondary title" typeLanguage="en-US"
statusLabel="working title" startDate="2012-05-04">
     <dc:title xml:lang="en">Additional secondary title</dc:title>
     <dc:title xml:lang="fr">Title additionnel et secondaire</dc:title>
</ebucore:alternativeTitle>
```

Note: the same applies to other elements built around a similar structure such as description, subject, rights, etc.

3.3 Reference data

Controlled vocabularies are mainly provided in the form of lists of terms organised as Classification Schemes (CS). These CSs are structured to allow access to terms within a predefined hierarchical vocabulary list (thesaurus). Each list is uniquely identified by its namespace (URI[1], in the form of a URN[2] or URL[3]) and 'Alias'. EBU namespaces are expressed in accordance to RFC5174[4]. A Classification Term is defined by a unique key (termID) or a name as follows:

Example:

```
<ClassificationScheme uri="urn:ebu:metadata-cs:ContentGenreCS:2008">
  <Alias>GenreCS</Alias>
   <Term termID="3.1">
      <Name xml:lang="en">NON-FICTION / INFORMATION</mpeg7:Name>
            <Term key="3.1.1">
                  <Name xml:lang="en">News</mpeg7:Name>
            </Term>
            <!-etc.-->
</ClassificationScheme>
```

It is an important implementation requirement to ensure that these resources are accessible by the metadata recipient. Classification schemes shall preferably be available as resources on the open

[1] Unique Resource Identifier - http://tools.ietf.org/html/rfc3986

[2] Unique Resource Namespace - http://tools.ietf.org/html/rfc3986

[3] Unique Resource Locator - http://tools.ietf.org/html/rfc3986

[4] EBU Namespace - http://tools.ietf.org/html/rfc5174

Internet via maintained URLs. In this case URIs shall respect the following syntax:

URL#termID e.g. http://www.ebu.ch/metadata/cs/ebu_ContentGenreCS.xml#3.1

A conforming parser uses that URI to resolve the termID reference to a resource, whether physical or logical. Once the termID has been resolved, the term name can be accessed (e.g. 'News' in the above example). The resolution method is left to the appreciation of each recipient.

URIs (URLs) can be replaced by aliases to provide a more concise, application-specific way of referring to classification terms as long as a look-up table is provided describing the relationship between Aliases and URIs.

If 'GenreCS' is the alias for "http://www.ebu.ch/metadata/cs/ebu_ContentGenreCS.xml".In the above example, 'News' could be identified through "GenreCS#3.1".

EBU Classification Schemes are also published in the SKOS (Simple Knowledge Organisation System) format using RDF/OWL for use as linked data.

3.4 Video and Audio time point references

EBUCore uses three methods to identify video and audio time point references:

a. a time duration according to ISO 8601 or IETF RFC 3339
b. timecodes as defined by SMPTE in specification ST 12-1:2008
c. a number of edit units, which are the fraction of time calculated as the inverse of the framerate for video, or the inverse of the sample rate for audio.

Audiovisual entities generally embed the property of having a "Timeline", which comes from the fact that the AV work is conceived to be played for a defined "Duration", and all the events characteristic of the AV work itself are located on the Timeline.

The Timeline concept applies to AV 'editorial entities' as well as to the 'physical entities' inc. their 'technical parameters', which are the sources providing the AV material for actual realisations.

A typical application of the timeline mechanism is for identifying the location of a given AV-entity A which is a part (in time) of another AV-entity B.

As B has got its own duration D(B), we can say that A, with its own duration D(A), is located at point S of the Timeline of B.

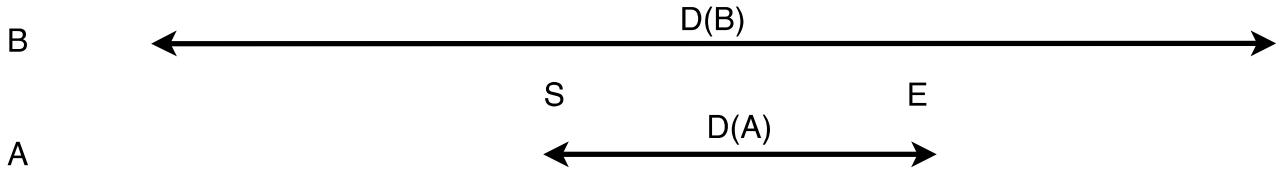


Figure 2: Illustration of a timeline

This means that if A is located on the Timeline of B, from S to E, then E=S+D(A).

In EBUCore there are two mechanisms for expressing a position on a Timeline:

d. the "Elapsed Time", which gives the time elapsed on the Timeline of the reference entity (B in the example above) from its beginning.
   - the data type for that is a ISO 8601 duration(e.g. PT1M5.0S) or IETF RFC 3339;

- the reference point for the elapsed time is always the beginning of the reference entity.

e. the “Elapsed Units” which give the same information in terms of the number of Edit Units (which are countable)

- this is to be preferred because it ensures that Timeline markers fall on the boundary of the Edit Unit;
- duration of the EditUnit must be known unambiguously and indicated, otherwise it is better to use the “Elapsed Time”.

The two mechanisms mentioned above can also be used to locate the position of an AV-entity on the Timeline of a material source.

However there are contexts, in terms of the type of source, where the information in those terms is not available or it’s possibly ambiguous. For instance, identifying the position on a clip within a video-tape in terms of “Elapsed Time” or “Elapsed Units” from the “BOT (Beginning of Tape) is very difficult in practice. The BOT position itself may be not precise enough. In those cases, typically, the position on material source (e.g. the tape) is indicated by the “TimeCode”, which is a label recorded together with the EditUnit.

Although the “TimeCode” mechanism doesn’t provide any certainty about the uniqueness of the point on the Timeline (the same TimeCode might be repeated) and neither it provides reliable information on Duration (“TimeCode” is not constrained to be continuous), this is the way on which legacy production systems rely for editing and for saving EDLs (Editing Decision Lists).

This is the reason why EBUCore also supports the indication of TimeCodes for all the cases where the Timeline positioning deals with material sources.

However it is recommended to also provide, if available, the information in terms of elapsed time or edit units.

Alternatively, a user may use the user defined time and duration formats to express time and duration as a number of seconds and fractions of seconds. Other user defined formats can be used.

3.5 Using the extended 'part' element

3.5.1 Defining editorial 'parts' of a media resource

Since its introduction in a previous version of EBUCore, as described in the preceding section, the 'Part' element was introduced to identify editorial segments of content within a media resource.

There are many different editorial reasons why 'parts' (or e.g. segments, sequences, scenes) could be identified within a timeline. For example, content can be split into a set of purposefully constructed sequences designed to facilitate user navigation (e.g. DVD chapters). 'Parts' can also be identified when a particular actor appears (e.g. as the result of face recognition processing or using user labelling). It can also be used to identify, for example, news items (internal, affairs, news report, weather report…) within a news programme.

Two mechanisms allow such 'parts' to be identified and described in EBUCore.

The first solution consists of using the 'part' element, which provides a description of 'parts' (and parts of parts) within one metadata instance.

The second solution consists of using the 'hasPart' or 'hasTrackPart' relations pointing to objects being described on their own with separate EBUCore metadata instances for each 'part'.

3.5.2 Using the 'part' element beyond editorial segmentation

Following work done within the EBU on acquisition metadata, the definition of the 'part' element has been extended to allow any form of partitioned description, editorial or technical, optionally bound to a specific timeline.

How can technical parameters be traced individually along a specific timeline?

In order to describe the changing value of a technical attribute over time, all that is needed is to identify that the 'Part' element is used for this purpose through an appropriate 'formatId' or 'formatName'. Time segments are defined by sub-parts. The 'format' element contains the value of the technical attribute associated to a 'start', 'end' and/or 'duration' time points.

```
<ebucore:part partId="CameraMetadata">
  <ebucore:part partId="part_CameraMetadata_1">
  <!-- FIRST TIME SEGMENT WITH A PARTICULAR SET OF CAMERA SETTINGS -->
     <ebucore:format>
        <ebucore:start>
           <ebucore:editUnitNumber editRate="60" factorDenominator="1001"
           factorNumerator="1000">200</ebucore:editUnitNumber>
        </ebucore:start>
        <ebucore:duration>
           <ebucore:editUnitNumber editRate="60" factorDenominator="1001"
           factorNumerator="1000">800</ebucore:editUnitNumber>
        </ebucore:duration>
        <ebucore:technicalAttributeString typeLabel="AutoExposureMode"
        typeDefinition="a value from RP224" formatLabel="Universal Label">
        06.0E.2B.34.04.01.01.0B.05.10.01.01.01.02.00.00
        </ebucore:technicalAttributeString>
        <ebucore:technicalAttributeUInt16 typeLabel="ISOSpeed" typeDefinition="ISO12232">
        800</ebucore:technicalAttributeUInt16>
    </ebucore:format>
  </ebucore:part>
  <ebucore:part  partId="part_CameraMetadata_2">
  <!-- SECOND TIME SEGMENT WITH A DIFFERENT SET OF CAMERA SETTINGS -->
    <ebucore:format>
          <ebucore:start>
            <ebucore:editUnitNumber editRate="60" factorDenominator="1001"
            factorNumerator="1000">1000</ebucore:editUnitNumber>
          </ebucore:start>
          <ebucore:duration>
            <ebucore:editUnitNumber editRate="60" factorDenominator="1001"
            factorNumerator="1000">630</ebucore:editUnitNumber>
          </ebucore:duration>
          <ebucore:technicalAttributeString typeLabel="AutoExposureMode"
          typeDefinition="a value from RP224" formatLabel="Universal Label">
          06.0E.2B.34.04.01.01.0B.05.10.01.01.01.02.00.00
          </ebucore:technicalAttributeString>
          <ebucore:technicalAttributeUInt16 typeLabel="ISOSpeed" typeDefinition="ISO12232">
          1600</ebucore:technicalAttributeUInt16>
      </ebucore:format>
   </ebucore:part>
</ebucore:part>
```

Example - Camera parameter evolution associated to a timeline

3.6 Definition of (programme) groups using EBUCore

EBUCore fully supports the description of groups and collections using the appropriate relations such as isMemberOf or isEpisodeOf.

Similar mechanisms can be used to identify different parts composing a media resource using e.g. hasPart.

3.7 Definition of versions of programmes

There can be many reasons why a programme is declared to be a version of a particular source (e.g. a shorter version, a different language, with or without captioning, but also available on different mediums such as a file, a tape, a disk).

The best approach to identify versions is to use relations such as hasVersion. The relation links two instances and their respective descriptions highlighting differences such as given above as examples.

3.8 How to use the technicalAttribute construct

The following example illustrates how to use the technical attribute patterns within EBUCore. The average bitrate can be expressed as:

a. a technicalAttributeString

```
<ebucore:technicalAttributeString typeLabel="averageBitrate" typeDefinition="the average
bitrate" formatLabel="integer">123456789</ebucore:technicalAttributeString>
```

b. a technicalAttributeLong

```
<ebucore:technicalAttributeLong typeLabel="typeLabel26">123456789
</ebucore:technicalAttributeLong>
```

The choice is left to the implementer within his domain of interoperability. Some implementations use only the technicalAttributeString, which allows defining/replacing all simple datatypes with only one structure. It can also be used for more complex datatypes such as the technicalAttributeRational structure by defining a template in the format attribute, etc.

3.9 Expression of Loudness parameters using open technical attributes

EBU Tech 3343 and EBU R 128 establish a predictable and well-defined method of measuring the loudness level for news, sports, advertisements, drama, music, promotions, film etc. throughout the broadcast chain and thereby help professionals to create robust specifications for ingest, production, play-out and distribution to a multitude of platforms. EBU R 128 is based entirely on open standards and aims to harmonise the way we produce and measure audio internationally.

EBUCore allows the EBU R 128 loudness technical parameters to be specified, namely:

f. the Programme Loudness value, using an audioFormat/technicalAttributeInt8technicalAttribute of type BWF_LOUDNESS_VALUE in LUFS, and definition of the unit as 'LUFS: Loudness Unit referenced to digital Full Scale' - recommended value = -23.0 LUFS.

g. the Loudness Range (LRA) in LU, using an audioFormat/technicalAttributeInt8 of type BWF_LOUDNESS_RANGE , and definition of the unit as 'LU: Loudness Unit' -1 LU = 1 dB.

h. the TruePeak Level (TPL) in dBTP, using an audioFormat/technicalAttributeInt8 of type BWF_MAX_TRUE_PEAK_LEVEL, and definition of the unit as 'dBTP: decibel True Peak' - recommended value = -1 dBTP.

i. the MaxMomentaryLoudness in LUFS, using an audioFormat/technicalAttributeInt8 of type BWF_MAX_MOMENTARY_LOUDNESS, and definition of the unit as 'LUFS: Loudness Unit referenced to digital Full Scale'.

j. the MaxShortTermLoudness in LUFS, using an audioFormat/technicalAttributeInt8 of type BWF_MAX_SHORT_TERM_LOUDNESS, and definition of the unit as 'LUFS: Loudness Unit referenced to digital Full Scale'.

3.10 Defining user tags using EBUCore's Subject

It is now common to 'tag' content. Tags can be issued by professionals like content creators or content providers, or by users.

In EBUCore, tags are defined as 'subjects' of typeLabel="tag" issued by 'attributors' (persons or organisations).

3.11 Examples of use of locator type

The locator attribute in format now has a type attribute to specify what the locator is being used for. A locator can point to an object of typeLabel "resource", "thumbnail", "landing page", etc.

Relations can also be used to point to related external objects.

3.12 Linking formats to publication instances

The format attribute now has an associated formatId attribute, which can be referenced to through the publication channel's formatRef attribute. This allows which format is being used for a particular publication to be specified.

3.13 Linking formats to expressions of rights

The format attribute now has an associated formatId attribute, which can be referenced by the rights' formatIDRefs attribute. This allows specifying which formats (content instances) are covered by the associated rights.

3.14 Best practices for labels and links

Several EBUCore elements and attributes propose to define their value through a "label" and/ or a "link".Links can be used to define a relationship in the sense of linked data. A typical case of linked data consists of pointing to classification scheme term via its identifier.

However, when available, the corresponding term of similar value should also be provided as a 'label' to facilitate mapping.

3.15 Original format of a transcoded media resource

How can I use EBUCore to provide information on the current and original format of a resource?

This can simply be made by describing two videoFormat elements, one with the videoFormatName="original" and for example another one with the videoFormatName="current".

The same approach can be extended using format name (audio, video…) such as 'first generation', 'second generation', etc.

3.16 Published when, where and in which format?

The publicationHistory defines the "channel(s)" (broadcast or else) on which a media resource has been published. Each channel has an associated optional formatIdRef attribute that allows linking the publication instance to a particular media resource instance in a specific format identified by its formatId of XML ID type.

3.17 Distributed storage of media resources: where and in which format?

Each media resource instance defined by its format can be associated to a locator where it is stored. The attribute typeGroup can be used to provide additional information on the nature and usage of the storage.

3.18 Extending EBUCore

There are many different ways of extending a schema:

1. Users can extend a schema using proprietary definitions within a particular namespace. Only these users know how the schema has been extended, which is not a problem if used within walled garden application domains.
2. Some schemas provide extension points to add elements or attributes of anyType under xs:any namespace. Such addition can be done without any particular structure or order e.g. within a new namespace specific to the user.
3. A schema can be redefined within its native namespace by extending complex types. User files can be validated and exchanged against the extended reference schema. In this context, extensions are more constrained and support stricter validation.

In all cases, it is the responsibility of the user to share the definitions of its extensions with third parties for the purpose of interoperability.

The 3rd approach is the recommended solution for extending EBUCore.

3.19 More questions?

The guidelines and questions presented in this specification address queries received from a variety of EBUCore implementers. EBUCore can sustain more scenraios.

If you have additional questions on how to use EBUCore, please forward your queries to metadata@ebu.ch. You will receive personalised advice and answers will enrich this section of the EBUCore specification, with your permission.

4. Compliance

EBUCore doesn't pretend to cover everyone's needs in detail. EBUCore is an open framework allowing each user to adapt it to his own needs!

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EBUCore is flexible and adaptable in nature. For example, thanks to the extended nature of the 'Part' element, description can be implemented in different ways. Each implementer will define best practice, inc. additional compliance rules specific to its implementation and own domain of interoperability.

5. Maintenance

The EBU Core Metadata Set is maintained by the EBU and suggestions for corrections or additions can be made by mailing to (metadata@ebu.ch). EBU members can also provide feedback via the EBU Technical Department's website:

(http://tech.ebu.ch/MetadataMaintenanceSpecifications).

Contributions will be subject to peer review by the metadata experts participating in EBU metadata Strategic Programmes and projects (http://tech.ebu.ch/groups/mim).

6. Download Zone

Filename	Doc. description	Contents
www.ebu.ch/metadata/schemas/EBUCore/20130107/EBU_CORE_20130107.zip	XML Schema	EBU_CORE_20130107.xsd , xml.xsd, simpledc20021212.xsd
http://www.ebu.ch/metadata/cs/EBU_cs_p.zip	EBU Classification Schemes	periodically updated list of EBU Classification Schemes
http://www.ebu.ch/metadata/ontologies/ebucore/ebucore.rdf http://www.ebu.ch/metadata/ontologies/ebucore/ (html documentation)	RDF/OWL Schema	ebucore.rdf
http://www.ebu.ch/metadata/ontologies/skos/EBU_cs_skos_p.zip	EBU SKOS Classification Schemes	Periodically updated list of EBU Classification Schemes in RDF

7. Useful links

AES (http://www.aes.org)

Dublin Core (http://dublincore.org)

EBU Metadata (http://tech.ebu.ch/metadata/)

EBU Loudness (http://tech.ebu.ch/docs/tech/tech3343.pdf)

EBU BWF (http://tech.ebu.ch/docs/tech/tech3285.pdf)

EUScreen (http://www.euscreen.eu)

FIMS (http://wiki.amwa.tv/ebu, http://fims.tv)

IOC – International Olympic Committee (http://www.olympic.org/uk/sports/)

W3C SKOS (http://www.w3.org/2004/02/skos/)

ISO (http://www.iso.org)

ISO 4217 – Currency codes:
http://www.iso.org/iso/en/prods-services/popstds/currencycodeslist.html

ISO 3166-1 – Country codes (English):
http://www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html

ISO 3166-1 – Country codes (French):
http://www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-fr1.html

ISO 639 – Language codes : http://www.loc.gov/standards/iso639-2/

IETF

RFC 3339 (Date and time on the Internet): http://tools.ietf.org/html/rfc3339

RFC5174 (EBU namespace): http://tools.ietf.org/html/rfc5174

IANA MIME Type: http://www.iana.org/assignments/media-types/

Thesaurus of Geographic Names: http://www.getty.edu/research/tools/vocabulary/tgn/index.html

8. Bibliography

k. EBU Technical Information I36-2003 – Metadata Implementation considerations for Broadcasters

l. EBU Tech 3293-2001 – Core Metadata Set for Radio Archives

m. EBU Tech 3295 – P-META Metadata Library

n. EBU Tech 3343 - Practical guidelines for Production and Implementation of EBU R 128

o. EBU Tech 3351 - Class Conceptual Data Model

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Annex A: EBUCore Metadata Set Schema

The EBUCore Metadata schema is used to generate EBUCore Metadata instances formed of an ebuCoreMain document.

The ebuCoreMain document contains several attributes required to contribute to OAI (Open Archive Initiative) for metadata harvesting. These attributes include the name of the schema (in case the schema location urn would not be present), the version of the schema used to generate the document, the date of last modification of the document and a unique identifier associated to the document. The name of the contributing archive is given by the metadata provider's organisation name or ID.

Resource related information is provided by the coreMetadata element.

The reference schema is available from the download links in § 6 (Download Zone) of this document.

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Annex B: EBUCore and Semantic Web

The EBUCore RDF/OWL schema (so called EBUCore ontology) is a semantic rich alternative of the EBUCore schema. The EBUCore ontology has been designed to complement classes and properties of the EBU Class Conceptual Data Model (Tech 3351 - CCDM). The business object names have been selected to offer maximum harmonisation with other audiovisual ontologies. The hierarchy of the EBUCore RDF class model reflects accurately the structure of the EBUCore XML schema.

The EBUCore RDF/OWL schema by nature also reflects the flexibility proposed in the XML schema.

The EBUCore RDF ontology can be accessed from this location as a permanent de-referenceable resource: http://www.ebu.ch/metadata/ontologies/ebucore/. The server has been set up to allow client requests for xml/rdf or html content.

4. If your application makes use of RDF content, set the request to accept xml/rdf content. In this case, a URI such as http://www.ebu.ch/metadata/ontologies/ebucore/ebucore#targetAudience will be transformed into http://www.ebu.ch/metadata/ontologies/ebucore/ebucore.rdf#targetAudience and the rdf file will be opened.
5. The link http://www.ebu.ch/metadata/ontologies/ebucore/ebucore.rdf gives direct access to the rdf file.
6. If the client is set to accept html requests, http://www.ebu.ch/metadata/ontologies/ebucore/ebucore#targetAudience will be transformed into http://www.ebu.ch/metadata/ontologies/ebucore/index.html#targetAudience and access will be provided to the ontology html documentation. The link http://www.ebu.ch/metadata/ontologies/ebucore/ gives direct access to the html documentation.

More information on server setups can be found at the following address (Best Practice Recipes for Publishing RDF Vocabularies): http://www.w3.org/TR/swbp-vocab-pub/

The EBU server has been set up following Recipe 3 with a default to RDF.

The EBUCore ontology has been designed to use "cool URIs" with "hash namespaces".

Important Notes:

7. SubClasses inherit properties from upper classes;
8. Custom classes can be added;
9. Custom object and data properties can also be added but adding classes and using predefined EBUCore properties is recommended;
10. Ids are intrinsic properties of classes (defined by their URIs);
11. Types, formats, status (see the attribute groups in the XML schema) shall be implemented through the definition of sub-classes (e.g. manufacturer would be defined as a sub-class of organisation if the defined as such in the organisation typeGroup attributes);
12. Terms that can be derived from Classification Schemes, such as Genre or Role, shall be treated as Classes. If expressed in SKOS, such Classes are sub-classes of the SKOS Concept Class. If a term identifier (e.g. a SKOS Concept) is not available, additional properties associated to the Class can be used through a blank node;

Figure B.1 represents the overall EBUCore ontology structure including asserted mappings to W3C's ma-ont ontology. The EBUCore RDF/OWL schema and EBU Classification Schemes in SKOS/RDF are available from the 'download zone' of the specification.

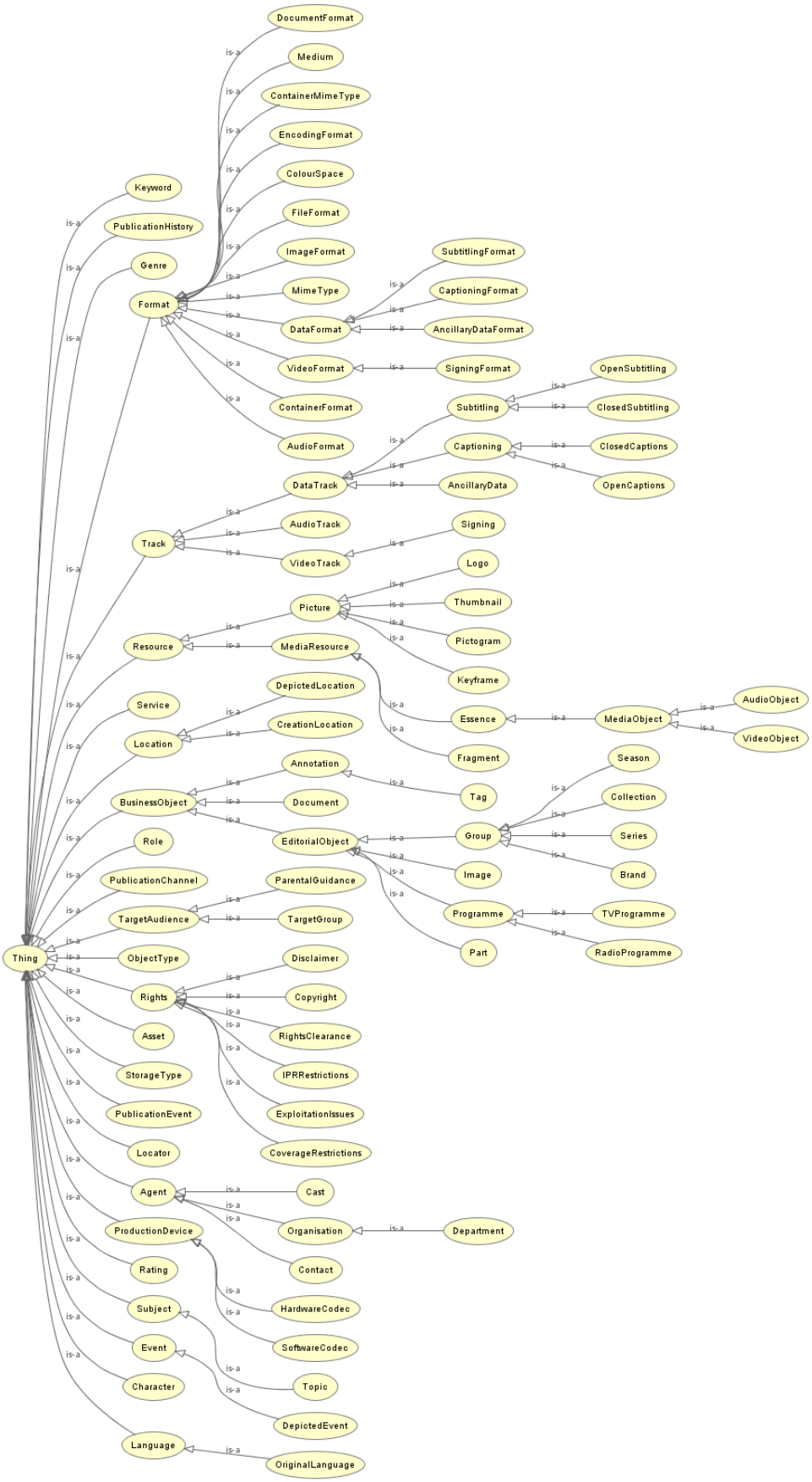

Figure B.1: EBUCore ontology