The *TV-Anytime* Forum

Specification Series: S-3

On:

Metadata

(Normative)

Part A: Metadata Schemas

Document: SP003v13 Part A
Final Specification, Version 1.3
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Series Overview

This is the third in a series of "S-series" specification documents produced by the *TV-Anytime* Forum. These documents establish the fundamental specifications for the services, systems and devices that will conform to the *TV-Anytime* standard, to a level of detail that is implementable for compliant products and services.

As is common practice in such standardization efforts, these specification documents were preceded by requirements documents ("R-series"), which define the requirements for the *TV-Anytime* services, systems, and devices.

Congruent with the structure defined in the initial *TV-Anytime* Call for Contributions (TV014r3), these specifications are parsed into three major areas: Metadata, Content Referencing and Rights Management and Protection. Within these general areas, four specifications have been developed to date: Metadata (S-3), Content Referencing (S-4), Bi-directional Metadata (S-6) and Metadata Protection (S-7). A specification for Rights Management and Protection (S-5) is still under development. See the several *TV-Anytime* Calls for Contributions for more detail on the derivation and background of these categories and their respective roles in the *TV-Anytime* standardization process.

The other two documents released to date in the *TV-Anytime* S-series are intended to define the context and system architecture in which the standards in S-3, S-4, S-6 and S-7 are to be implemented in "Phase 1" of the TV-Anytime environment. The first document in the series (S-1) provides benchmark business models against which the *TV-Anytime* system architecture is evaluated to ensure that the specification enable key business applications. The next document in the series (S-2) presents the *TV-Anytime* System Architecture. These two documents are placed ahead of the other three for their obvious introductory value. (Note that S-1 and S-2 are largely informative documents, while the remainder of the S-series is normative. Also note that a "Phase 2" of the *TV-Anytime* process is currently underway, in which additional requirements and specifications that will build on Phase 1 are being developed. Readers are encouraged to check the *TV-Anytime* Forum's website at www.tv-anytime.org for the most recent status of its specifications.)

Although each of the S-series documents is intended to stand alone, a complete and coherent sense of the *TV-Anytime* system standard can be gathered by reading all of the Phase 1 specification documents in numerical order.

Metadata Specification S-3
Document Revision History

Change History	
16 Feb 2001	Initial release S-3, Version 1.0
14 Apr 2001	Released corrections to Version 1.0 as V1.0R1
17 Aug 2001	Initial release S-3, Version 1.1
21 Dec 2001	Released Corrigenda 1 to S-3, Version 1.1
5 Apr 2002	Released Corrigenda 2 to S-3, Version 1.1
5 Apr 2002	Released Provisional Specification S-3, Version 1.2
28 June 2002	Released Final Specification S-3, Version 1.2 (SP003v12, Parts A &B)
02 July 2002	Working Draft of the Version 1.2 of the S3 specification
27 Sept 2002	Released Provisional Specification S-3, Version 1.3
15 Dec 2002	Final SP003v13

IMPORTANT NOTICE: This version of the specification (PART A) is NOT backward compatible with its previous versions. Changes have been made to improve the soundness of the schemas, as well as for easing encoding and fragmentation of TV-Anytime descriptions for transport and delivery. It now includes a revised version of the MPEG7 stub, taking into account recent corrections of the MPEG7 MDS Standard. It also includes a revised version of the W3C XML stub. Backward compatibility shall be maintained from this version of the specification (SP003v13) onwards.

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About the TV-Anytime Forum

The global *TV-Anytime* Forum is an association of organizations that seeks to develop specifications to enable audio-visual and other services based on mass-market high volume digital storage in consumer platforms – simply referred to as *personal media storage*.

The *TV-Anytime* Forum was formed at an inaugural meeting held in Newport Beach, California, USA, on 27-29 September 1999. It has started work to develop open specifications designed to allow Consumer Electronics Manufacturers, Content Creators, Telcos, Broadcasters and Service Providers to exploit personal media storage.

As part of its formation, the *TV-Anytime* Forum has established four fundamental objectives for the organization, which are:

- The *TV-Anytime* Forum will define specifications that will enable applications to exploit persistent personal media storage in consumer electronics platforms.
- The *TV-Anytime* Forum is network independent with regard to the means for content delivery to consumer electronics equipment, including various DTV delivery mechanisms (e.g. ATSC, DVB, DBS and others) as well as the Internet and enhanced TV systems.
- The *TV-Anytime* Forum will develop specifications for interoperable and integrated systems, from content creators/providers, through service providers, to the consumers.
- The *TV-Anytime* Forum will specify the necessary security structures to protect the interests of all parties involved.

Member organizations from Europe, the USA, and Asia, are drawn from a wide variety of industries: Traditional Broadcasters, Internet Broadcasters, Content Owners, Service Providers, Telcos, Consumer Electronics Manufacturers, IT Industries, Professional Equipment Manufacturers, Component Manufacturers and Software Vendors.

The *TV-Anytime* Forum invites participation from all interested organizations. Membership is open to all who sign the TVAF Membership Agreement. Meetings are held approximately every two months in Europe, the USA, and Asia.

For more information or to become involved with the work of the *TV-Anytime* Forum, visit the *TV-Anytime* Forum (www.tv-anytime.org) or contact:

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1. Scope

We use the term "metadata" to mean descriptive data about content, such as programme title and synopsis. We call such metadata "attractors" because they can attract a consumer to content. Attractors allow consumers to find, navigate and manage content from various sources. In addition to attractors, metadata as defined by TV-Anytime also includes information about user preferences and history. User preference information, such as favorite actors or TV shows, is included within the scope of TV-Anytime metadata to allow software agents to select content on the consumer's behalf.

The set of metadata described in this document was selected in order to satisfy the usage scenarios listed in the TV-Anytime business models requirements document R-1. The formal definitions of metadata schemas should be read in conjunction with the system specification defining how they could be used in an end-to-end system

TV-Anytime only defines the metadata format for metadata that may be exchanged between various entities such as between the content provider and consumer, among consumers, or between a third-party metadata provider and the consumer.

In **PART A**, XML is the “representation format” used to define the schemas of the TV-Anytime Metadata Specification S-3, Version 1.3 (SP003v13 PartA). Although XML Schema is used to define how metadata is represented in XML, it can also be used to describe equivalent, non-XML representations of the same metadata.

PART B of the TV-Anytime Metadata Specification S-3, Version 1.3 (SP003v13 PartB) addresses the formatting of metadata including a recommended binary format, fragmentation, encapsulation of fragments and indexing of metadata descriptions. The TV-Anytime Systems Specification S-2, Version 1.3 (SP002v13) defines how these schemas are used in an end-to-end system. Note that the transport of metadata is out of scope of TV-Anytime, but that it has identified requirements. Other bodies such as DVB, ATSC and ARIB will specify the appropriate transport mechanisms for their respective systems. Furthermore, the manner in which metadata is stored, accessed and used on the PDR is also out of scope of this specification.

2. Glossary of Terms

Attractor	A metadata element that is accessible by the consumer in order to aid in the content selection process, thus attracting the consumer. Examples include the title and name of an actor in a television programme
Application	A specific set of functions running on the PDR. Some applications use metadata, either automatically or under *consumer* control
Content Creator	The producers of the content
Content Reference	A pointer to a specific content item
Content Provider	An entity that acts as the agent for and is the prime exploiter of the content
Description Scheme	A formal definition of a metadata schema written in the MPEG-7 Description Definition Language [3].
Descriptor	A metadata element, such as an attractor or other information about content such as the key frame index of a piece of video
Enhanced TV	Television that includes additional information and/or applications related to content, but does not use a return path
Interactive TV	Television that includes additional information and/or applications related to content and which takes advantage of a return path
Life Cycle	The process of creation, usage, storage, and deletion of metadata
Location Resolution	The process of establishing the address (location and time) of a specific content instance from its CRID
Namespace	An identifier associated with a set of XML schemas that globally identifies those schemas so that they can be referenced externally. A globally unique namespace ensures that the names of types defined by schemas in that namespace do not conflict with types of the same name defined elsewhere.
Metadata	Generally, data about content, such as the title, genre and summary of a television programme. In the context of *TV-Anytime*, metadata also includes consumer profile and history data.
Metadata Schema	A set of rules describing the syntax and semantics of metadata
Metadata System	The collection of components that allows the end-to-end operation of the *TV-Anytime* metadata solution
Programme	An editorially coherent piece of content. Typically, a programme is acquired by the PDR as a whole.
Programme Group	One or more programmes that are grouped together. TV-Anytime defines several types of programme groups such as “series” and “programme compilation”.
Return Path	Part of the bi-directional distribution system from the consumer to service provider
Segment	A continuous portion of a piece of content, for example a single news topic in a news programme.
Segmentation	The process of creating segments from a piece of content.

2.1 Abbreviations

ATSC-DASE	A set of application programming interfaces currently being standardized by the Advanced Television Systems Committee for the digital broadcast of multimedia and applications in North America and other regions
CFC	Call for Contributions
CRID	Content Reference IDentifier, an identifier for content that is independent of its location
DDL	Description Definition Language, the language used to define description schemes in MPEG-7. See [3].
DVB-MHP	A set of application programming interfaces being standardized by Digital Video Broadcasting Project for the digital broadcast of multimedia and applications in Europe, Asia, and other regions
EBU p/meta	A metadata format specified by the European Broadcasting Union
EPG	Electronic Programme Guide: A means of presenting available content to the consumer, allowing selection of desired content
HTML	Hypertext Markup Language
IPR	Intellectual Property Rights
MPEG-7	Ongoing effort by the Motion Pictures Expert Group to specify a standard set of content-related metadata applicable to a broad range of applications
PDR	Personal Digital Recorder
SMPTE	Society of Motion Picture & Television Engineers. Also a standard for video production metadata.
XML	Extensible Markup Language

3. Introduction

Metadata is generally defined as “data about data”. Within the *TV-Anytime* environment, the most visible parts of metadata are the attractors/descriptors or hyperlinks used in electronic programme guides, or in Web pages. This is the information that the consumer or agent will use to decide whether or not to acquire a particular piece of content.

The *TV-Anytime* metadata system allows the consumer to find, navigate and manage content from a variety of internal and external sources including, for example, enhanced broadcast, interactive TV, Internet and local storage. It defines a standard way to describe consumer profiles including search preferences to facilitate automatic filtering and acquisition of content by agents on behalf of the consumer. Consumers, as used in this document, include educators and students, who may use selected programme segments in the classroom or laboratory.

There is a need to associate metadata with content to facilitate human and automated searching for content of interest. Such metadata includes descriptive elements and attractors to aid the search process as well as elements essential to the acquisition, capture and presentation processes; content rights, formats, duration, etc. Many of these descriptive elements can be found in electronic programme guides and HTML documents.

The process of creation and evolution of metadata for an individual content item may involve many organizations during the course of creation, distribution and delivery to the consumer. Thus, there is a clear need to define a common metadata framework and a standard set of metadata elements in order to ensure a high level of interoperability within the chain from content creation to content delivery.

4. TV-Anytime Metadata Data Model

4.1 TV-Anytime Metadata Process Model

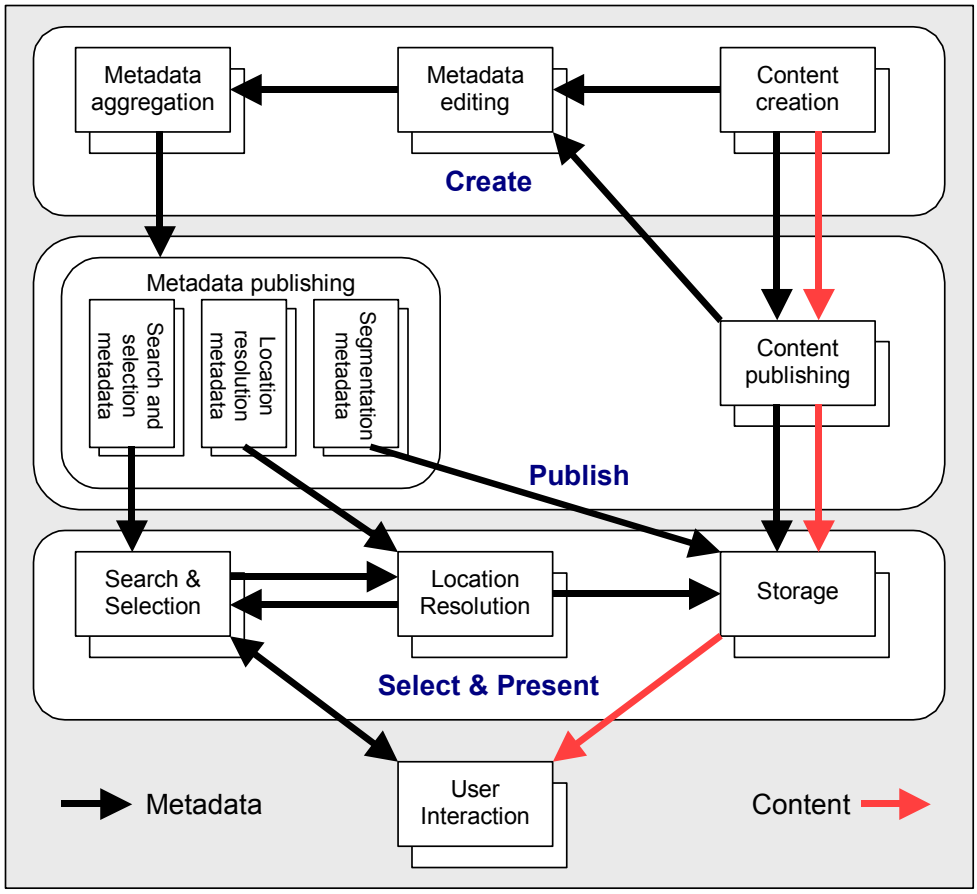


Figure 1 Metadata and Content flow

Figure 1 shows the flow of metadata and content through various stages of creation and delivery to the end consumer.

This model clearly identifies the separation of the processing of metadata and content while at the same time illustrating the parallels between the processing of metadata and content. User profile and history metadata is generated during the selection and presentation process.

Content creation

The content creation process represents the production of a piece of content or a programme. During the production process, the programme content is created and information about the programme may also be captured. At this stage, however, the metadata is unlikely to be in a form that can be directly exposed to a user – some form of editing will be required before the description of the programme can be published.

Content publishing

Once content has been created, the content is then available for publication by a content publisher. This could be, for example, as part of a broadcast service or as a publication on the Internet. The content publishing process defines instantiations of programmes – in other words, one output from the content publishing process is information about 'where' the

programme can be found. In the broadcast case, this means a schedule for the services that are published.

Metadata editing

The metadata editing process takes *raw* information from the content creation and publishing processes and edits this into a form that is suitable for representing the content to the end consumer. The output of this process is edited metadata for the programmes and/or metadata describing the location of these programmes.

Metadata aggregation

In order to support a given TV-Anytime system, it is likely that metadata from a number of independent content creators and publishers will need to be aggregated. It is important to recognize that the process of metadata aggregation may result in the original metadata being changed.

Metadata publishing

Without prejudice to whether or not a TV-Anytime system is horizontally or vertically integrated, an aggregated metadata set will need to be published to both the content selection and location resolution processes. The content selection process will be largely concerned with the metadata describing programmes but may also involve use of the programme location metadata. The location resolution service will simply require information about the location of programmes.

Content selection

The content selection process may occur through the direct involvement of the consumer or may be performed on the consumer's behalf by a software agent. In order for a software agent to function correctly, metadata describing the consumer and his preferences will need to be provided to the content selection process. This may be either inferred from the consumer 's past history of content selection or by the explicit specification of preferences by the user (or a combination of the two). Note that the content selection process may be, in part, affected by knowledge of the programme's location.

Location resolution

The process of location resolution is simply one of discovering where (or when) a programme can be found. Details of this discovery process can be found in the TV-Anytime Content Referencing Specification.

The following sections comprise the normative specification of the TV-Anytime metadata system.

4.2 TV-Anytime Metadata Structure Model

Two modelling approaches are used in the following sections.

We first introduce a simple data modelling methodology (Figure 2) that allows us to describe metadata structure at a high level in a manner independent of any particular representation. This syntax allows relationships between TV-Anytime entities to be clearly stated (*e.g.*, one-to-many), as well as enabling the powerful concept of inheritance, which allows specific types of entity to be derived from generic types.

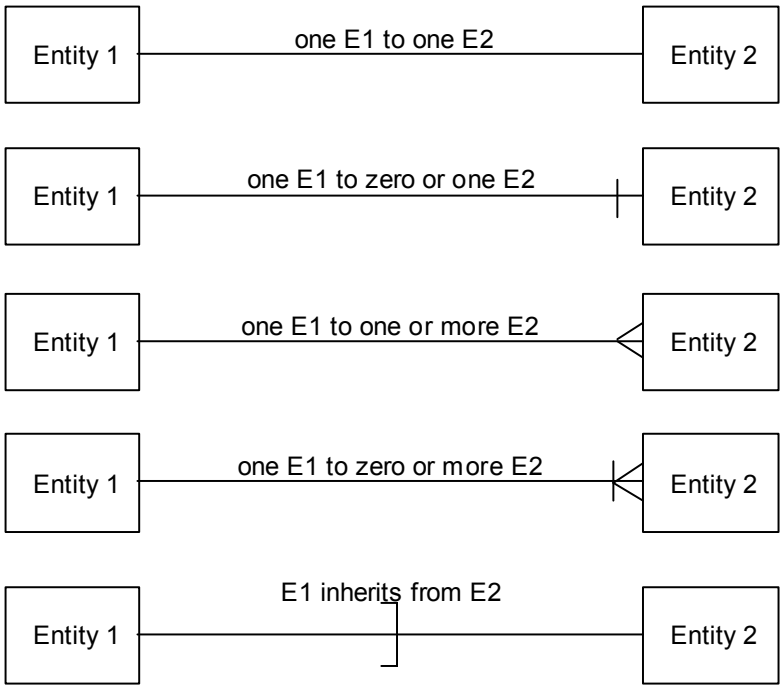


Figure 2 Basic Entity-Relation graph syntax

The other modelling approach followed by TV-Anytime is the representation of the metadata schemas using a UML-like (Unified Modelling Language) language defined in more details in Appendix D.

4.3 CRID and Metadata

The cornerstone of TV-Anytime metadata is the CRID, described in TV-Anytime specification S-4. As a content reference identifier, the CRID refers to a piece of content, though in some cases it may refer to one or more other CRIDs.

The CRID also acts as the link that connects different content-related metadata descriptions (see Figure 3).

We classify content-related metadata as either *content description metadata* or *instance description metadata.*

As shown in Figure 3, content description metadata is general information about a piece of content that does not change regardless of how the content is published or broadcast. It includes information such as the content's title, textual description, and genre. Typically, the content creator assigns content description metadata before publication.

Instance description metadata describes a particular instance of a piece of content, including information such as the content location, usage rules (pay-per-view, etc.), and delivery parameters (*e.g.*, video format). Instance description metadata is assigned by the content provider as a part of the publication of content. During the search and selection process, a consumer may use both general content and instance descriptions.

A third category of metadata called consumer metadata includes usage history data (logging data), annotation metadata, and user preferences.

Figure 3 shows these four types of metadata and how the CRID for an individual content item (*i.e.*, a CRID that does not resolve into further CRIDs) is used to tie them all together. This is not a complete list of all TV-Anytime metadata; only a few representative metadata entities are shown.

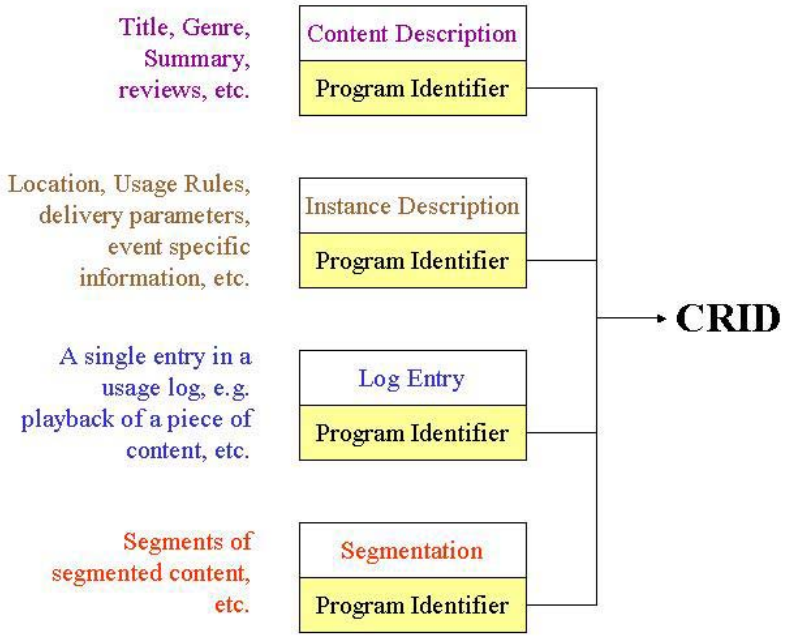


Figure 3 Metadata that references a programme CRID

Figure 4 shows some of the major kinds of TV-Anytime metadata and their relationships. Programme metadata describes information about single programmes, such as the title, genre, etc. A programme is defined to be a editorially coherent piece of content which is typically acquired as a whole. The programme is referenced via a programme CRID ("leaf CRID"), *i.e.,* a CRID that resolves to a single programme.

The same programme may be found in any number of locations, as is defined by the location resolution process. This relationship is indicated via the one-to-many relationship link from "Programme" to "Programme Location".

Programmes can be grouped into "Programme Group" elements such that a group may contain any number of programmes, and a programme can be a member of any number of groups. Furthermore, programme groups themselves can be part of other programme groups as depicted in Figure 4. A programme group is uniquely identified by a group CRID. Note that as described in the S-4 document, the format of a CRID does not indicate by itself whether that CRID resolves to a programme or a list of CRIDs. Several types of programme groups are defined in this specification. A third party may define additional programme group types.

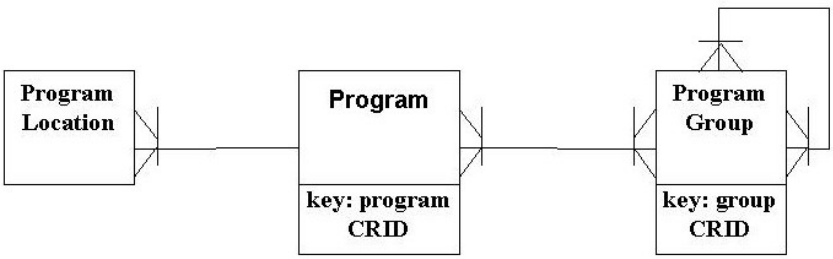


Figure 4 Relationship between major kinds of TV-Anytime metadata

5. Metadata Definitions

For the purpose of interoperability, the TV-Anytime Forum has adopted XML as the common representation format for metadata. XML offers many advantages: it allows for extensibility, supports the separation of data from the application, and is widely used. XML schema is mainly used to represent the data model. TV-Anytime descriptions may however be instantiated in a format other than textual. TV-Anytime has described some of these mechanisms such as binary encoding in PART B of this specification. .

5.1 Use of MPEG-7

A *metadata schema* is the formal definition of the structure and type of metadata. TV-Anytime uses the MPEG-7 Description Definition Language (DDL) [3] to describe metadata structure as well as the XML encoding of metadata. DDL is based on XML schema as recommended by W3C in [1].

TV-Anytime uses several MPEG-7 datatypes as collected in the MPEG7 stub attached to this specification. TV-Anytime also uses MPEG-7 Classification Schemes.

5.2 TV-Anytime Metadata Namespace

TV-Anytime metadata description schemes that have been developed under the auspices of the TV-Anytime Forum are associated with the TV-Anytime metadata XML namespace. The TV-Anytime metadata namespace is defined as:

```
xmlns:tva="urn:tva:metadata:2002"
```

TV-Anytime metadata includes description schemes defined by XML as included in the XML stub attached to this specification.

```
xmlns="http://www.w3.org/2001/XMLSchema"
<import namespace="http://www.w3.org/XML/1998/namespace"
schemaLocation="./xml_2001.xsd"/>
```

TV-Anytime also includes description schemes defined by MPEG-7 as included in the MPEG7 stub attached to this specification, which use the MPEG-7 namespace as described in [2] .

```
xmlns:mpeg7="urn:mpeg:mpeg7:schema:2001"
<import namespace="urn:mpeg:mpeg7:schema:2001"
schemaLocation="./mpeg7_tva.xsd"/>
```

All TVA metadata documents must be fully namespace qualified and must declare the TVA metadata namespace.

5.3 Content Description Metadata

This section describes metadata that describes content independently of any particular instantiation of that content.

5.3.1 Content Description Requirements

The content description model must be able to represent the following concepts:

1. A simple programme
2. A programme with a number of different versions (e.g. edits for sex/violence/language, director's cut, etc.)
3. A programme that has been divided into a number of parts for publication (e.g. a 3 hour film shown in 2 parts on different days)
4. A programme that is a concatenation of a sequence of other programmes identified as an aggregated programme

5. A series of programmes that can be ordered (e.g. episodes in a numerical order) or unordered and bounded or unbounded
6. A collection of series and individual programmes that have the same programme concept – i.e. a show (e.g. all series of 'Only Fools and Horses' together with the Christmas specials)
7. A publication of a programme that may have publication dependent attributes (e.g. a film showing as tribute to a recently deceased actor which would have a different description)

5.3.2 TV-Anytime Content Description model

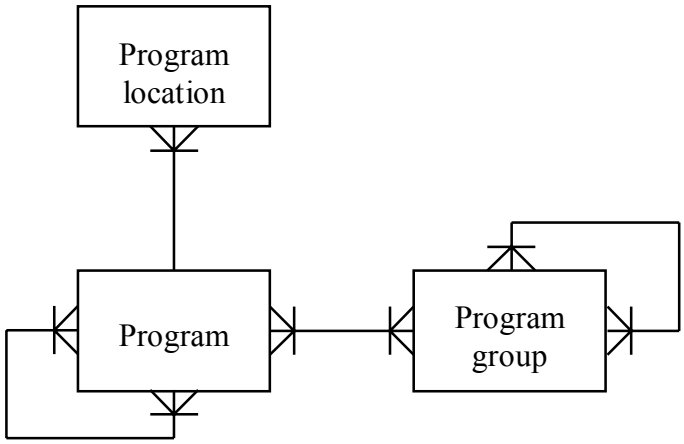


Figure 5 TV-Anytime Content Description Model

Entity definitions

- **"Program"** - the programme represents an editorially coherent piece of content.
- **"Program group"** - the programme group entity simply represents a grouping of programmes. A number of different types of group have been identified, such as series, show, aggregate (magazine) programme, and programme concept. Programme groups can also contain other programme groups.
- **"Program location" -** A programme location contains information about one instance (or "publication event") of a programme. Multiple programme locations from the same service provider can be grouped to form a schedule.

Relationship definitions

1. **"Program to Program" location** (zero to many) – a given programme can appear at any number of programme locations (e.g. schedule events) and a given programme location instantiates one programme
2. **"Program to Program Group"** (many to many) – a given programme can be a member of any number of programme groups and a given programme group can contain any number of programmes
3. **"Program Group to Program Group"** (many to many) – a given arbitrary programme group can contain any number of programme groups and a given programme group can be a member of many programme groups.
4. **"Program to Program" (many to many)** - a programme can be part of one or more aggregated programmes and aggregated programmes contain one or more than one programme.

5.3.3 Basic types

The simple and complex utility types defined below are used throughout the TV Anytime schema specification.

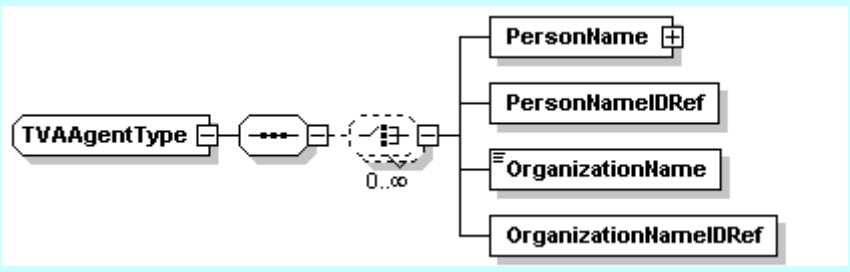
```
<simpleType name="TVAIDType">
  <restriction base="string">
    <whiteSpace value="collapse"/>
  </restriction>
</simpleType>

<simpleType name="TVAIDRefType">
  <restriction base="string">
    <whiteSpace value="collapse"/>
  </restriction>
</simpleType>

<simpleType name="TVAIDRefsType">
  <list itemType="tva:TVAIDRefType"/>
</simpleType>

<simpleType name="CRIDType">
  <restriction base="anyURI">
    <pattern value="(c|C)(r|R)(i|I)(d|D)://.*/.*"/>
  </restriction>
</simpleType>

<complexType name="CRIDRefType">
  <attribute name="crid" type="tva:CRIDType" use="required"/>
</complexType>

<complexType name="FlagType">
  <attribute name="value" type="boolean" use="required"/>
</complexType>

<complexType name="TVATimeType">
  <sequence>
    <element name="TimePoint" type="mpeg7:timePointType"/>
    <element name="Duration" type="mpeg7:durationType"
    minOccurs="0"/>
  </sequence>
</complexType>
```

Name	Definition
TVAIDType	A simple type used to indicate uniqueness within a metadata description
TVAIDRefType	A simple type used to refer to an identifier of the TVAIDType
TVAIDRefsType	A simple type used to refer to multiple identifiers of the TVAIDType
CRIDType	A type to represent a CRID as a URI reference
CRIDRefType	A complex type that allows a reference to be made to a CRID
crid	The value of the CRID being referenced
FlagType	A type that can be used to indicate simple boolean values

value	Denotes the value of a boolean flag - can be "true" (default) or "false."
TVATimeType	Used to designate absolute time properties
TimePoint	Used to designate a point in time
Duration	Used to designate a period of time

```
<complexType name="ControlledTermType">
  <sequence>
    <element name="Name" minOccurs="0">
      <complexType>
        <simpleContent>
          <extension base="mpeg7:TextualType">
            <attribute name="preferred" type="boolean" use="optional"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="Definition" type="mpeg7:TextualType"
    minOccurs="0"/>
  </sequence>
  <attribute name="href" type="mpeg7:termReferenceType"
  use="required"/>
</complexType>
```

Name	Definition
ControlledTermType	A complex type used to make a reference to a Controlled Term. In addition the 'Name' and 'Definition' of the term can optionally be included. If included and the referenced list of controlled terms are not available, the inline description can be used, otherwise the appropriate controlled term list should be used to obtain the definitive 'Name' and 'Definition'.
Name	A classification term
preferred	An optional attribute to indicate that the given controlled term is the preferred instance e.g. in a list
Definition	A definition of a classification term
href	A URN used to point to a classification term within a classification scheme




```
<complexType name="TVAAgentType">
  <sequence>
```

```
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="PersonName" type="mpeg7:PersonNameType"/>
      <element name="PersonNameIDRef">
        <complexType>
          <attribute name="ref" type="tva:TVAIDRefType"
          use="required"/>
        </complexType>
      </element>
      <element name="OrganizationName" type="mpeg7:TextualType"/>
      <element name="OrganizationNameIDRef">
        <complexType>
          <attribute name="ref" type="tva:TVAIDRefType"
          use="required"/>
        </complexType>
      </element>
    </choice>
  </sequence>
</complexType>

<attributeGroup name="fragmentIdentification">
  <attribute name="fragmentId" type="tva:TVAIDType" use="optional"/>
  <attribute name="fragmentVersion" type="unsignedLong"
  use="optional"/>
</attributeGroup>
```

Name	Definition
TVAAgentType	An element used to describe a person
PersonName	Specifies the name of a person. Defined as an MPEG7 datatype, PersonNameType (See [2] for a detailed description)
PersonNameIDRef	An element used to point to a PersonName held in a CreditsInformationTable
ref	An attribute containing a TVAIDRef.
OrganisationName	Specifies the name of an organisation. Defined as an MPEG7 datatype, TextualType (See [2] for s detailed description)
OrganisationNameIDRef	An element used to point to an OrganisationName
ref	An attribute containing a TVAIDRef.
fragmentIdentification	An element used to identify a (meta)data fragment.
fragmentId	An element used to point to a particular fragment using a TVAIDRef. The fragmentID for bi-directional shall be a superset of the fragment_id defined in Part B for unidirectional.
fragmentVersion	A version number associated to the identified fragment. A change to any item within the fragment shall cause the fragment version to be modified.

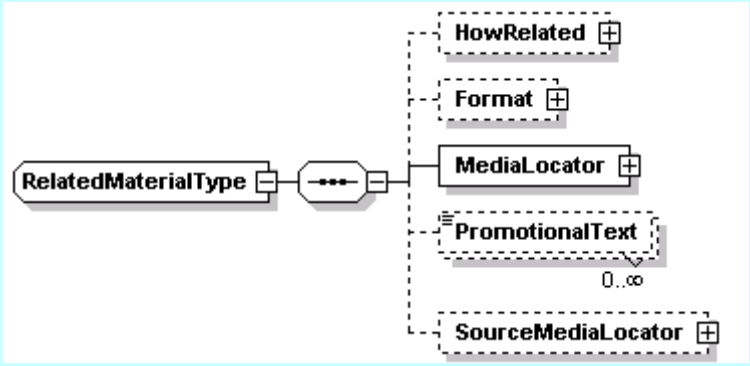
5.3.4 Description

The following simple and complex types define descriptive attributes of content.

```
<complexType name="KeywordType">
  <simpleContent>
    <extension base="mpeg7:TextualType">
      <attribute name="type" use="optional" default="main">
        <simpleType>
          <restriction base="NMTOKEN">
            <enumeration value="main"/>
            <enumeration value="secondary"/>
            <enumeration value="other"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </simpleContent>
</complexType>

<complexType name="GenreType">
  <complexContent>
    <extension base="tva:ControlledTermType">
      <attribute name="type" use="optional" default="main">
        <simpleType>
          <restriction base="string">
            <enumeration value="main"/>
            <enumeration value="secondary"/>
            <enumeration value="other"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>

<simpleType name="SynopsisLengthType">
  <restriction base="string">
    <enumeration value="short"/>
    <enumeration value="medium"/>
    <enumeration value="long"/>
  </restriction>
</simpleType>

<complexType name="SynopsisType">
  <simpleContent>
    <extension base="mpeg7:TextualType">
      <attribute name="length" type="tva:SynopsisLengthType"
     use="optional"/>
    </extension>
  </simpleContent>
</complexType>
```

Name	Definition
KeywordType	A datatype for specifying a keyword associated to a programme
type	Indicates the type / ranking order of importance of the keyword describing the multimedia content.

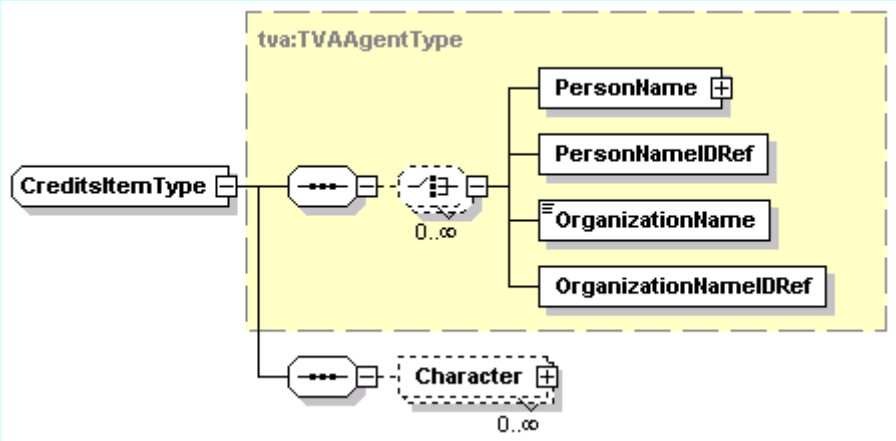
	The types of keywords are defined as follows: • *main* – The specified keyword is the main, or primary, descriptive keyword. This is the default value. • *secondary* – The specified keyword is a complementary descriptive keyword. • *other* – The specified keyword is another complementary descriptive keyword.
`GenreType`	A datatype for specifying a genre for the programme.
`type`	Indicates the type of the genre of the multimedia content. The types of genres are defined as follows: • *main* – The specified genre is the main, or primary. This is the default value. • *secondary* – The specified genre is a secondary genre, such as a subgenre. • *other* – The specified genre is an alternative genre, such as one defined or used by 3rd parties.
`SynopsisLengthType`	An enumeration of the possible values of the length qualifier for a synopsis. The possible values of this enumerated type are as follows: • *short* – the length of the synopsis will not exceed 90 alphabetical characters • *medium* – the length of the synopsis will not exceed 180 alphabetical characters • *long* – the length of the synopsis will not exceed 1200 alphabetical characters
`SynopsisType`	A complex type to define a synopsis
`length`	The length of the synopsis. This attribute is optional. If no length is specified, then the synopsis may be of any length.




```
<complexType name="RelatedMaterialType">
  <sequence>
    <element name="HowRelated" type="tva:ControlledTermType"
```

```
    minOccurs="0"/>
    <element name="Format" type="tva:ControlledTermType"
    minOccurs="0"/>
    <element name="MediaLocator" type="mpeg7:MediaLocatorType"/>
    <element name="PromotionalText" type="mpeg7:TextualType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="SourceMediaLocator" type="mpeg7:MediaLocatorType"
    minOccurs="0"/>
  </sequence>
</complexType>
```

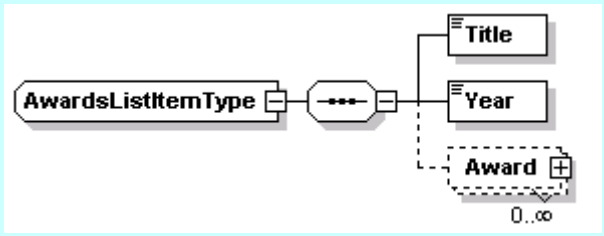
Name	Definition
RelatedMaterialType	A complex type that refers to other media assets that are related to the AV content (e.g. programme) that is described
HowRelated	Specifies the nature of the relationship between the described AV content and the related media assets
Format	Specifies the type (e.g. file format) of the media asset (optional). The format can either be specified as a free term, or chosen from the MPEG-7 "FileFormatCS" classification scheme listed in section B.2.11 of [2], or the MPEG-7 IPTCMimeTypeCS.
MediaLocator	Specifies the location of the media asset. Defined as an MPEG-7 datatype, MediaLocatorType (See Sec. 6.5.2 of [2] for a detailed description).
PromotionalText	Provides promotional information about the link, which can be used as an additional attractor. e.g. record Pride & Prejudice series)
SourceMediaLocator	Optionally specifies the location of the current content, to which this description is associated e.g. The trailer. Defined as an MPEG-7 datatype, MediaLocatorType (See Sec. 6.5.2 of [2] for a detailed description).

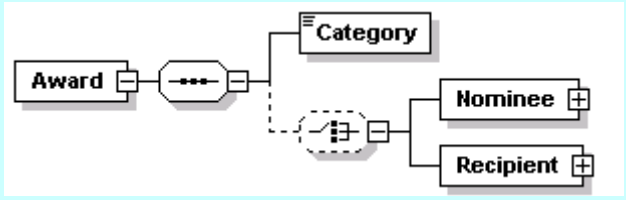



```
<complexType name="CreditsItemType">
  <complexContent>
    <extension base="tva:TVAAgentType">
```

```
      <sequence>
        <element name="Character" type="mpeg7:PersonNameType"
        minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
        <attribute name="role" type="mpeg7:termReferenceType"
        use="required"/>
    </extension>
  </complexContent>
</complexType>

<complexType name="CreditsListType">
  <sequence>
    <element name="CreditsItem" type="tva:CreditsItemType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
</complexType>
```

Name	Definition
CreditsItemType	A tva complex type that defines one item for inclusion in a credits list for the specified programme based on an extension of the TVAAgentType
Character	Specifies the name of a character played by an actor. Defined as an MPEG7 datatype, PersonNameType (See [2] for s detailed description)
role	An attribute of a CreditsItem used to refer to a role classification term (e.g. actor, producer, director) using the MPEG7 termReferenceType.
CreditsListType	A complex type that defines a list of credits for the specified programme
CreditsItem	An element of tva:CreditsItemType used to constitute a list of credits

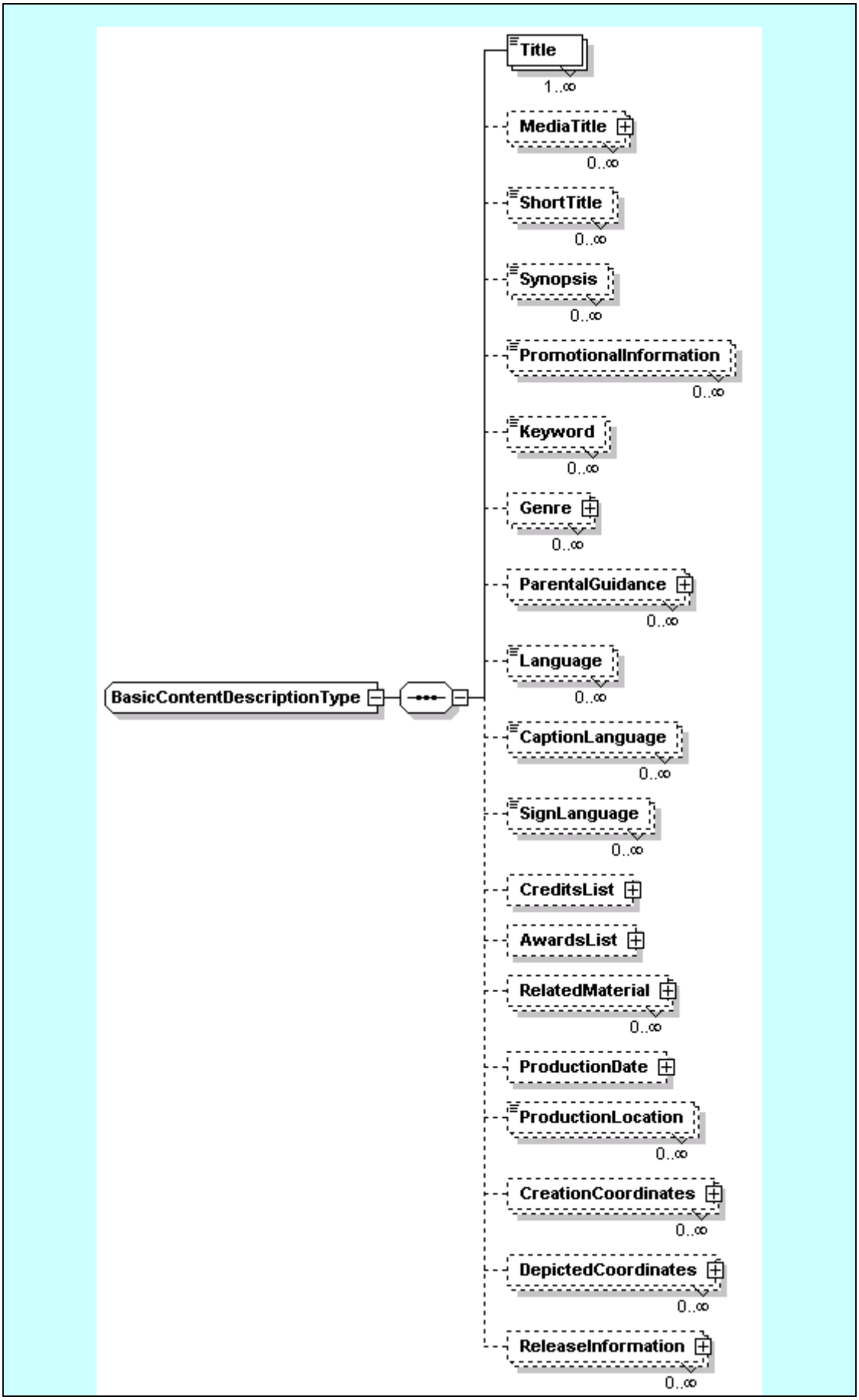





```
<complexType name="AwardsListItemType">
  <sequence>
    <element name="Title" type="mpeg7:TextualType"/>
    <element name="Year" type="gYear"/>
    <element name="Award" minOccurs="0" maxOccurs="unbounded">
```

```
      <complexType>
        <sequence>
          <element name="Category" type="mpeg7:TextualType"/>
          <choice minOccurs="0">
            <element name="Nominee" type="tva:CreditsItemType"/>
            <element name="Recipient" type="tva:CreditsItemType"/>
          </choice>
        </sequence>
      </complexType>
    </element>
  </sequence>
</complexType>

<complexType name="AwardsListType">
  <sequence>
    <element name="AwardsListItem" type="tva:AwardsListItemType"
     maxOccurs="unbounded"/>
  </sequence>
</complexType>
```

Name	Definition
AwardsListItemType	A complex type that defines a list of the awards that the specified programme has won or been nominated for
Title	Specifies the name or title of the award or the award organization (e.g. BAFTA, Oscar, etc.)
Year	Specifies the year when the programme won, or was nominated for, the award
Award	Specifies detailed information about the particular award(s) of nomination(s) for the programme
Category	Specifies the category in which the programme won the award or the nomination
Nominee	Specifies the person(s) who won the nomination in the given category. Defined as a TV-Anytime datatype, CreditsItemType.
Recipient	Specifies the person(s) or the organization who won the award in the given category. Defined as a TV-Anytime datatype, CreditsItemType.
AwardsListType	A complex type that defines a list of awards and/or award nominations for the specified programme
AwardsListItem	Describes the award(s) or nomination(s) from a single award organization


BasicContentDescriptionType
Title
1..∞
MediaTitle
0..∞
ShortTitle
0..∞
Synopsis
0..∞
PromotionalInformation
0..∞
Keyword
0..∞
Genre
0..∞
ParentalGuidance
0..∞
Language
0..∞
CaptionLanguage
0..∞
SignLanguage
0..∞
CreditsList
AwardsList
RelatedMaterial
0..∞
ProductionDate
ProductionLocation
0..∞
CreationCoordinates
0..∞
DepictedCoordinates
0..∞
ReleaseInformation
0..∞

```
<complexType name="BasicContentDescriptionType">
  <sequence>
    <element name="Title" type="mpeg7:TitleType"
    maxOccurs="unbounded"/>
    <element name="MediaTitle" type="mpeg7:TitleMediaType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="ShortTitle" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <simpleContent>
          <extension base="mpeg7:TitleType">
            <attribute name="length" type="unsignedShort"
           use="required"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="Synopsis" type="tva:SynopsisType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="PromotionalInformation" type="mpeg7:TextualType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="Keyword" type="tva:KeywordType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="Genre" type="tva:GenreType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="ParentalGuidance"
    type="mpeg7:ParentalGuidanceType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="Language" type="mpeg7:ExtendedLanguageType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="CaptionLanguage" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <simpleContent>
          <extension base="language">
            <attribute name="closed" type="boolean" use="optional"
           default="true"/>
            <attribute name="supplemental" type="boolean"
           use="optional" default="false"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="SignLanguage" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <simpleContent>
          <extension base="language">
            <attribute name="primary" type="boolean" use="optional"/>
            <attribute name="translation" type="boolean"
           use="optional"/>
            <attribute name="type" type="string" use="optional"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="CreditsList" type="tva:CreditsListType"
    minOccurs="0"/>
    <element name="AwardsList" type="tva:AwardsListType"
    minOccurs="0"/>
    <element name="RelatedMaterial" type="tva:RelatedMaterialType"
```

```
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="ProductionDate" type="tva:TVATimeType"
    minOccurs="0"/>
    <element name="ProductionLocation" type="mpeg7:regionCode"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="CreationCoordinates" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="CreationDate" type="tva:TVATimeType"
          minOccurs="0"/>
          <element name="CreationLocation" type="mpeg7:regionCode"
          minOccurs="0"/>
        </sequence>
      </complexType>
    </element>
    <element name="DepictedCoordinates" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="DepictedDate" type="tva:TVATimeType"
          minOccurs="0"/>
          <element name="DepictedLocation" type="mpeg7:PlaceType"
          minOccurs="0"/>
        </sequence>
      </complexType>
    </element>
    <element name="ReleaseInformation" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="ReleaseDate" minOccurs="0">
            <complexType>
              <choice>
                <element name="DayAndYear" type="date"/>
                <element name="Year" type="gYear"/>
              </choice>
            </complexType>
          </element>
          <element name="ReleaseLocation" type="mpeg7:regionCode"
          minOccurs="0"/>
        </sequence>
      </complexType>
    </element>
  </sequence>
</complexType>
```

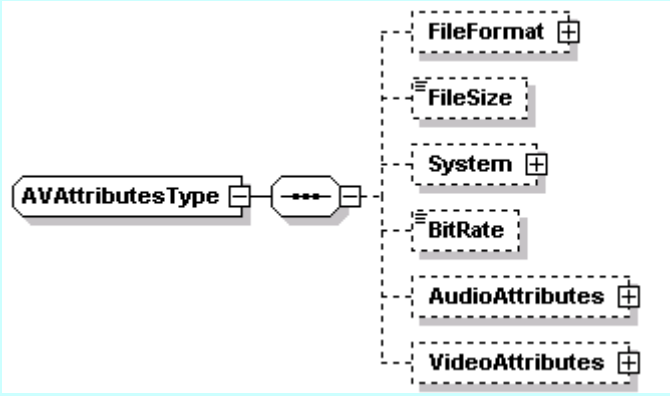
Name	Definition
`BasicContentDescriptionType`	A complex type that defines standard programme description elements.
`Title`	A title of the programme. A programme can have multiple titles, e.g. in different languages. Defined as an MPEG-7 datatype, `TitleType` (See Sec. 9.2.2 in [2] for a detailed specification).
`MediaTitle`	A media asset (e.g. image) that can be used as a 'title' for a programme. Content that is not part of the original programme can be specified and used

	as a (promotional) AV title. Defined as an MPEG-7 datatype, `TitleMediaType` (See Sec. 9.2.2 in [2] for a detailed specification).
`ShortTitle`	A shortened version of the programme title that defines how the title should be truncated for presentation purposes.
`length`	Indicates the number of alphabetical characters in the short title. The recommended maximum value of this required attribute is 80.
`Synopsis`	A textual description of the programme.
`PromotionalInformation`	A textual description containing promotional information
`Keyword`	A list of keywords for the programme. A keyword can be a single word or an entire phrase made up of multiple words. Defined as a TV-Anytime datatype, KeywordType
`Genre`	A genre for the programme. The thesaurus in Appendix B defines the normative TV-Anytime set of genres.
`ParentalGuidance`	A parental rating code for the programme. Defined as an MPEG-7 datatype, `ParentalGuidanceType` (See Sec. 9.2.3 of [2] for a detailed specification).
`Language`	Describes one spoken language for the programme. There may be more than one spoken language specified for a programme.
`CaptionLanguage`	Describes one language of the caption information included with the programme. The type of the caption information associated with the programme is denoted by the closed attribute. Closed captions can be turned on or off by the user, while open captions (or subtitles) are part of the picture itself and remain visible.
`closed`	Indicates whether the specified caption is closed. Default value of the attribute is true; if the attribute is set to false, then the provided caption description refers to open captions/subtitles.
`supplemental`	Indicates whether the captions provide descriptions of the scene for the benefit of hearing or visually impaired, in addition to a direct translation of the spoken words. Closed captions may include such descriptive information, such as speaker identification, and non-speech sounds that would be missed.
`SignLanguage`	Specifies the sign language provided for the multimedia content, and, optionally, qualifies the use of signing as a primary language and/or as a translation of the spoken dialogue.
`primary`	Indicates if the sign language is the primary language of the content or not, i.e, if the content is produced specifically for the hearing impaired or

	not.
translation	Indicates if the sign language is a translation of the spoken dialogue or not.
type	Indicates the type (e.g. BSL - British Sign Language) of the specified sign language
CreditsList	The list of credits (e.g. actors, directors, etc.) for the programme
AwardsList	The list of awards and/or award nominations for the programme
RelatedMaterial	A reference to any other material related to a programme
ProductionDate	The date or time period when the programme was produced, defined as a tva:TVATimeType
ProductionLocation	The country in which the programme was produced. Defined as an MPEG-7 datatype, regionCode (See Sec. 5.6.4 of [2] for a detailed specification).
CreationCoordinates	Describes the location(s) and date(s) of creation of the programme (optional).
CreationDate	The date or period when the programme was created (optional). Defined as tva:TVATimeType
CreationLocation	The location where the programme was created. Defined as an MPEG-7 datatype, regionCode (See Sec. 5.6.4 of [2] for a detailed specification).
DepictedCoordinates	Describes the location(s) and date(s) depicted in the programme (optional).
DepictedDate	The date or period when the programme was created (optional). Defined as tva:TVATimeType
DepictedLocation	The location where the programme was created. Defined as an MPEG-7 datatype, PlaceType (See Sec. 7.5.2 of [2] for a detailed specification).
ReleaseInformation	Information about the country and date of release of a programme.
ReleaseDate	The date when the programme was released.
DayAndYear	The day, month, and year that the programme was released on
Year	The year (only) that the programme was released in
ReleaseLocation	The country where the programme was released. Defined as an MPEG-7 datatype, regionCode (See Sec. 5.6.4 of [2] for a detailed specification).

5.3.5 Audio and video information

The following simple and complex types define technical attributes of audio and video.




```
<complexType name="AVAttributesType">
  <sequence>
    <element name="FileFormat" type="tva:ControlledTermType"
    minOccurs="0"/>
    <element name="FileSize" type="unsignedLong" minOccurs="0"/>
    <element name="System" type="tva:ControlledTermType"
    minOccurs="0"/>
    <element name="BitRate" minOccurs="0">
      <complexType>
        <simpleContent>
          <extension base="nonNegativeInteger">
            <attribute name="variable" type="boolean" use="optional"
            default="false"/>
            <attribute name="minimum" type="unsignedLong"
            use="optional"/>
            <attribute name="average" type="unsignedLong"
            use="optional"/>
            <attribute name="maximum" type="unsignedLong"
            use="optional"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="AudioAttributes" minOccurs="0">
      <complexType>
        <sequence>
          <element name="Coding" type="tva:ControlledTermType"
          minOccurs="0"/>
          <element name="NumOfChannels" type="unsignedShort"
          minOccurs="0"/>
          <element name="MixType" type="tva:ControlledTermType"
          minOccurs="0"/>
        </sequence>
      </complexType>
    </element>
    <element name="VideoAttributes" minOccurs="0">
      <complexType>
        <sequence>
          <element name="Coding" type="tva:ControlledTermType"
          minOccurs="0"/>
          <element name="Scan" type="tva:ScanType" minOccurs="0"/>
```

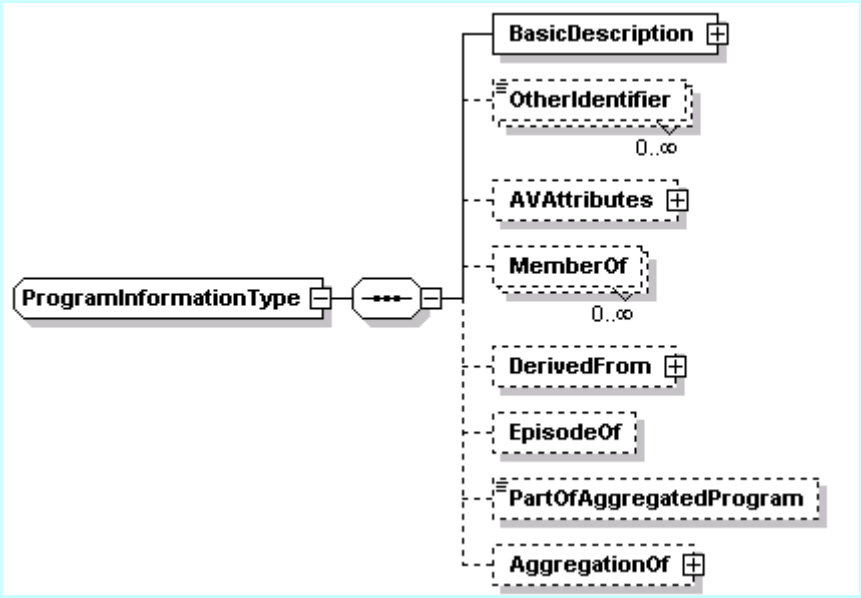
```
        <element name="HorizontalSize" type="unsignedShort"
        minOccurs="0"/>
        <element name="VerticalSize" type="unsignedShort"
        minOccurs="0"/>
        <element name="AspectRatio" type="tva:AspectRatioType"
        minOccurs="0" maxOccurs="2"/>
        <element name="Color" type="tva:ColorType" minOccurs="0"/>
      </sequence>
    </complexType>
    </element>
  </sequence>
</complexType>

<simpleType name="ScanType">
  <restriction base="string">
    <enumeration value="interlaced"/>
    <enumeration value="progressive"/>
  </restriction>
</simpleType>

<simpleType name="ColorTypeType">
  <restriction base="string">
    <enumeration value="color"/>
    <enumeration value="blackAndWhite"/>
    <enumeration value="blackAndWhiteAndColor"/>
    <enumeration value="colorized"/>
  </restriction>
</simpleType>

<complexType name="ColorType">
  <attribute name="type" type="tva:ColorTypeType" use="required"/>
</complexType>

<simpleType name="RatioType">
  <restriction base="string">
    <pattern value="\d+:\d+"/>
  </restriction>
</simpleType>

<complexType name="AspectRatioType">
  <simpleContent>
    <extension base="tva:RatioType">
      <attribute name="type" use="optional" default="original">
        <simpleType>
          <restriction base="string">
            <enumeration value="original"/>
            <enumeration value="publication"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </simpleContent>
</complexType>
```

Name	Definition
AVAttributesType	A complex type defining a set of elements describing audio and/or video using the AudioAttributes and VideoAttributes.

FileFormat	Describes the file format of the programme instance.
FileSize	Indicates the size, in bytes, of the file where the programme instance is stored.
System	Describes the broad media format of the programme instance. This term should be taken from the MPEG-7 "SystemCS" classification scheme listed in section B.2.30 of [2].
BitRate	Indicates the nominal bit rate in bits/s of the programme instance.
variable	Indicates whether the BitRate is variable or fixed. If the BitRate is variable, three optional attributes can be used to specify the minimum, maximum and average bitrates.
minimum	Indicates the minimum numerical value for the BitRate in case of variable bit rate.
average	Indicates the average numerical value for the BitRate in case of variable bit rate.
maximum	Indicates the maximum numerical value for the BitRate in case of variable bit rate.
AudioAttributes	A complex type defining a set of elements that describe audio characteristics
Coding	The coding format of the audio. This term should be taken from the MPEG-7 "AudioCodingFormatCS " classification scheme listed in section B.2.3 of [2], i.e. AC3, DTS, MP3, MPEG-1, MPEG-2 Layer III, MPEG-2 AAC, MPEG-4, AMR
NumOfChannels	The number of channels of audio : e.g. 1 for mono, 2 for stereo or more for multi-channel audio
MixType	The type of the audio mix. This term should be taken from the MPEG-7 "AudioPresentationCS" ClassificationScheme listed in section B.2.6 of [2], i.e. no sound, mono, stereo, surround, home theatre 5.1 and movie theater
VideoAttributes	A complex type defining a set of elements that describe video characteristics
Coding	The coding format of the video. This term should be taken from the MPEG-7 "VisualCodingFormatCS " classification scheme listed in section B.2.34 of [2].
Scan	The scan type of the video
HorizontalSize	The horizontal size in pixels of the video
VerticalSize	The vertical size in pixels of the video
AspectRatio	The aspect ratio of the video. There may be two aspect ratios associated with a programme: the original aspect ratio that the programme is available in, and the aspect ratio of a particular instance of the programme.
Color	The color format of the video (e.g. black and white)

ScanType	A simple enumerated type defining the allowable values of the ScanType element above. ScanType can take on the value interlaced or progressive.
ColorTypeType	A simple enumerated type defining the allowable values of the ColorType instantiated in the Color element above. Allowed values are: • color – the content was produced using a color video format • blackAndWhite – the content was produced using a black and white video format • blackAndWhiteAndColor – the content contains a mixture of video that was originally produced in color and content that was produced in black and white • colorized – the content was originally produced using a black and white video format, and color was added after original production
ColorType	A complex type, with a single attribute describing the color format using one of the ColorTypeType values
type	The type of color format
RatioType	A data type that allows ratios to be specified in the form 'h:v' where h and v represent horizontal and vertical dimensions, respectively
AspectRatioType	Denotes the aspect ratio of the programme. This element can denote the aspect ratio of the original programme as well as that of its instances, through the use of type attribute.
type	Denotes whether the specified aspect ratio is associated with the original programme (original) or its published instance (publication). The default value of the attribute is original.

5.3.6 Programme information




```
<complexType name="ProgramInformationType">
  <sequence>
    <element name="BasicDescription"
    type="tva:BasicContentDescriptionType"/>
    <element name="OtherIdentifier" type="mpeg7:UniqueIDType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="AVAttributes" type="tva:AVAttributesType"
    minOccurs="0"/>
    <element name="MemberOf" type="tva:BaseMemberOfType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="DerivedFrom" type="tva:DerivedFromType"
    minOccurs="0"/>
    <element name="EpisodeOf" type="tva:EpisodeOfType"
    minOccurs="0"/>
    <element name="PartOfAggregatedProgram" type="tva:CRIDType"
    minOccurs="0"/>
    <element name="AggregationOf" minOccurs="0">
      <complexType>
        <sequence>
          <element name="AggregatedProgram" type="tva:CRIDRefType"
          minOccurs="2" maxOccurs="unbounded"/>
        </sequence>
        <attribute name="type" use="required">
          <simpleType>
            <restriction base="string">
              <enumeration value="omnibus"/>
              <enumeration value="magazine"/>
            </restriction>
          </simpleType>
        </attribute>
      </complexType>
    </element>
  </sequence>
  <attribute name="programId" type="tva:CRIDType" use="required"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
```

```
</complexType>

<complexType name="EpisodeOfType">
  <complexContent>
    <extension base="tva:BaseMemberOfType"/>
  </complexContent>
</complexType>

<complexType name="BaseMemberOfType" abstract="true">
  <complexContent>
    <extension base="tva:CRIDRefType">
      <attribute name="index" type="unsignedInt" use="optional"/>
    </extension>
  </complexContent>
</complexType>

<complexType name="MemberOfType">
  <complexContent>
    <extension base="tva:BaseMemberOfType"/>
  </complexContent>
</complexType>

<complexType name="BaseDerivationReasonType" abstract="true"/>

<complexType name="DerivationReasonType">
  <complexContent>
    <extension base="tva:BaseDerivationReasonType">
      <attribute name="value" use="required">
        <simpleType>
          <restriction base="string">
            <enumeration value="violence"/>
            <enumeration value="language"/>
            <enumeration value="sex"/>
            <enumeration value="duration"/>
            <enumeration value="other"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>

<complexType name="DerivedFromType">
  <complexContent>
    <extension base="tva:BaseMemberOfType">
      <sequence>
        <element name="DerivationReason"
        type="tva:BaseDerivationReasonType" minOccurs="0"
        maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

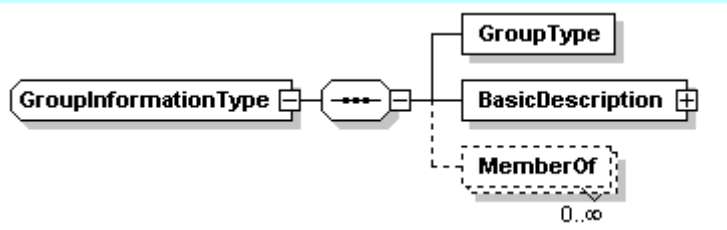
Name	Definition
`ProgramInformationType`	A complex type that describes a programme
`BasicDescription`	The description of the programme

OtherIdentifier	A code that can be used in addition to the CRID to identify a piece of content (e.g. a ISAN) as different CRIDs can be allocated to identical content
AVAttributes	Audio-visual attributes that are applicable to the programme as originated
MemberOf	A list of groups of which the programme is a member
DerivedFrom	Indicates a programme from which the current programme is derived
OmnibusOf	An optional list of programmes for which this programme is an 'omnibus edition'
PartOfAggretatedProgram	An element used to specify that content is part of an aggregated programme, e.g. an Omnibus or a Magazine
AggregationOf	An element used to describe aggregated programmes
AggregatedProgram	An element of CRIDRefType pointing to a an aggretated programme to which this programme belongs to
type	An aggregated programme can be of two distinct types: * Omnibus: an omnibus programme is defined as a single programme that contains a sequence of individual programmes that may be edited to provide a coherent single programme. It is typically used to provide a summary of a week's episodes of a daily series * Magazine: a magazine programme is a programme in its own right that contains other, definite smaller programmes. One example is a children's magazine programme which contains live studio material along with cartoons or episodes of a children's drama programme.
programId	The CRID for the programme
fragmentIdentification	Used to identify the fragment of data to which this description belongs to
EpisodeOfType	A complex type that instantiates the BaseMemberOfType. EpisodeOfType is equivalent to MemberOfType, and indicates membership of a series
BaseMemberOfType	An abstract type, based on CRIDReferenceType, that references a group
index	An index for the programme within the specified group. This would be used, for example, to specify an episode number for a programme in a series
MemberOfType	A complex type that instantiates the BaseMemberOfType.
BaseDerivationReasonType	An abstract type for defining programme derivation

	criteria
DerivationReasonType	An enumerated list of the default TVA criteria for deriving a programme version from a programme concept.
value	Permitted values are violence, language, sex, duration and other.
DerivedFromType	A complex type that instantiates the BaseMemberOfType. DerivedFromType is equivalent to MemberOfType and EpisodeOfType, and indicates that a programme version has been derived from a generic programme concept. Note: this element cannot be used in the context of a GroupInformationType
DerivationReason	The reason for the derivation of the programme version.

5.3.7 Group Information

```
<complexType name="BaseProgramGroupTypeType" abstract="true"/>

<complexType name="ProgramGroupTypeType">
  <complexContent>
    <extension base="tva:BaseProgramGroupTypeType">
      <attribute name="value" use="required">
        <simpleType>
          <restriction base="string">
            <enumeration value="series"/>
            <enumeration value="show"/>
            <enumeration value="programConcept"/>
            <enumeration value="programCompilation"/>
            <enumeration value="otherCollection"/>
            <enumeration value="otherChoice"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>
```




```
<complexType name="GroupInformationType">
  <sequence>
    <element name="GroupType" type="tva:BaseProgramGroupTypeType"/>
    <element name="BasicDescription"
     type="tva:BasicContentDescriptionType"/>
    <element name="MemberOf" type="tva:BaseMemberOfType"
     minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="groupId" type="tva:CRIDType" use="required"/>
```

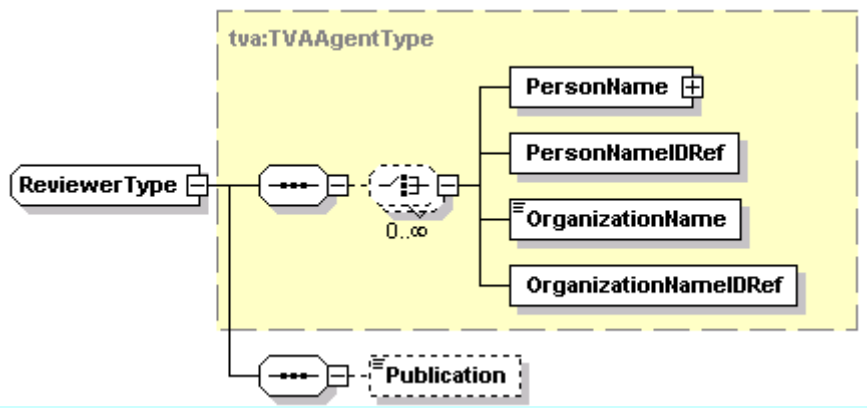
```
  <attribute name="ordered" type="boolean" default="false"
  use="optional"/>
  <attribute name="numOfItems" type="unsignedInt" use="optional"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
</complexType>
```

Name	Definition
BaseProgramGroupTypeType	An abstract type for defining programme grouping criteria
ProgramGroupTypeType	An enumerated list of the TVA-defined programme groups.
value	The allowed values for this field are as follows: *series* – an ordered or unordered collection of programmes that is shown in a sequence (e.g. “Friendz” season 1, episodes "1 to n"). An unbounded series (e.g. an ongoing drama series) may be considered to be a serial *show* – a programme theme that is typically be associated with a collection of series (e.g. all episodes of Friends) *programConcept* – the editorial concept for a programme from which specific programme versions have been derived (e.g. the concept of “Blood Runner” as opposed to “Blood Runner – The Director’s Cut” as a specific version of that concept) *programCompilation* – a collection of programmes that is used to allow segments from multiple programmes to be combined in segment groups. When used in conjunction with segmentation information, a programmeCompilation programme group allows, for example, several related news segments from different news programmes to be grouped for playback in sequence. *otherCollection* – can be used for any group not defined in the preceding list where all members of the group should be acquired if the group is selected. It can also be used to define a "magazine" – a collection of individual programmes that are shown as a group because they are editorially coherent (e.g. a general sports programme with individual sub-programmes covering different events) *otherChoice* – can be used for any other grouping of content not represented in the list above and from where only one member of the group should be acquired is the group is selected
GroupInformationType	A complex type to describe a group
GroupType	The type of the group (e.g. series) - required
BasicDescription	The description of the group

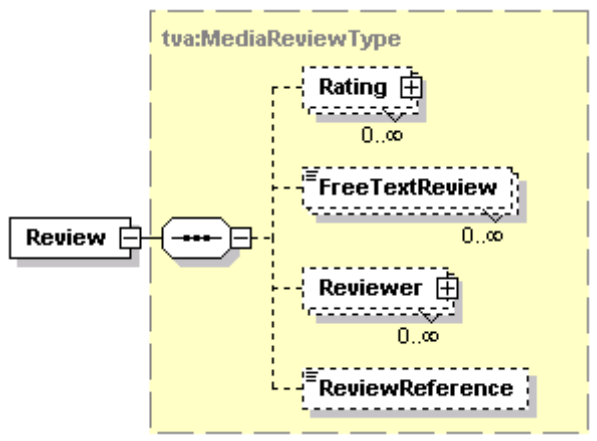
Name	Definition
MemberOf	A list of other groups of which this group is a member.
groupId	A unique CRID that identifies the group
ordered	Optional boolean flag that indicates whether or not the group is ordered (false by default). If ordered is "true" the index attribute of the related MemberOf element must be specified.
numOfItems	Optional indication of the total number of members in the group. This is of significance for series where an episode needs to referred to as episode # of n
fragmentIdentification	Used to identify the fragment of data to which this description belongs to

5.3.8 Media Review DS

The MediaReview DS provides third-party reviews of AV content, such as a critic's review of a movie. Independent programme reviews can be presented to users to aid them in programme selection.



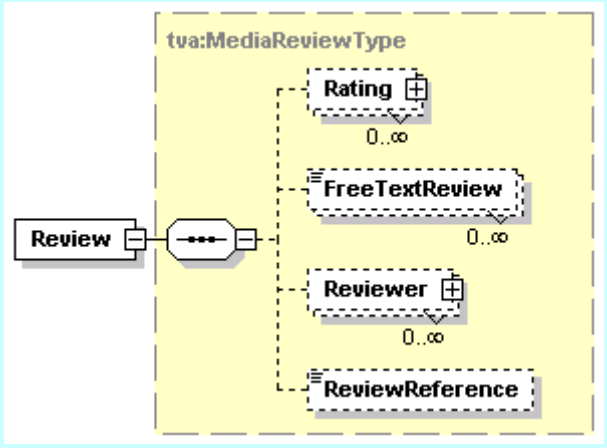

```
<complexType name="ReviewerType">
  <complexContent>
    <extension base="tva:TVAAgentType">
      <sequence>
        <element name="Publication" type="mpeg7:TextualType"
        minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```




```
<complexType name="MediaReviewType">
  <sequence>
    <element name="Rating" type="mpeg7:RatingType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="FreeTextReview" type="mpeg7:TextualType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="Reviewer" type="tva:ReviewerType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="ReviewReference" type="anyURI" minOccurs="0"/>
  </sequence>
</complexType>
```

Name	Definition
ReviewerType	A TV-Anytime complex type based on the TVAAgentType to specify a reviewer
Publication	Specifies the name of a publication. Defined as an MPEG7 datatype, TextualType (See [2] for a detailed description)
MediaReviewType	Describes a review for a given multimedia content.
Rating	Specifies the rating value and criterion used in the review. Defined as an MPEG-7 datatype, RatingType (See Sec. 8.1.6 of [2] for a detailed description).
FreeTextReview	Describes a free-text review of the multimedia content without reference to a rating scheme. There can be multiple instances of the review, each in a different language. Defined as an MPEG-7 datatype, TextualType (See Sec. 7.3.1.1 of [2] for a detailed description).
Reviewer	Describes the reviewer/critic of the multimedia content. Defined as a TV-Anytime datatype, ReviewerType.
ReviewReference	Describes the location of the material from where the review may have been extracted or quoted, e.g. the TV magazine that published the review, an interview from where the review was transcribed, etc.

Additionally, TV-Anytime defines the following schemas for dealing with MediaReview instances.




```
<complexType name="ProgramReviewTableType">
  <sequence>
    <element name="Review" maxOccurs="unbounded">
      <complexType>
        <complexContent>
          <extension base="tva:MediaReviewType">
            <attribute name="programId" type="tva:CRIDType"
            use="required"/>
            <attributeGroup ref="tva:fragmentIdentification"/>
          </extension>
        </complexContent>
      </complexType>
    </element>
  </sequence>
</complexType>
```

Name	*Definition*
`ProgramReviewTableType`	A complex type that provides tabulated descriptions of reviews associated with (multiple) programmes
`Review`	Describes the review associated with a single programme
`programId`	Defines a reference to the CRID of the programme for which the review(s) are provided
`fragmentIdentification`	Used to identify the fragment of data to which this description belongs to

5.3.9 Common core set of Metadata

We have defined the descriptive metadata that can be associated with content above. Because TV-Anytime metadata will be processed on a variety of devices, including devices with extremely limited resources, we classify the above metadata into required, recommended and optional metadata elements.

5.3.9.1 Mandatory

Name	**Requirement**
`Title`	All `ProgramInformation` and `GroupInformation` objects shall contain a meaningful `Title` field.

5.3.9.2 Recommended

Name	Guideline
`Synopsis`	It is recommended that all `ProgramInformation` and `GroupInformation` objects contain a meaningful `Synopsis` element.
`Genre`	It is recommended that all `ProgramInformation` and `GroupInformation` objects contain a meaningful set of `classification` elements.
`Language/CaptionLanguage/ SignLanguage`	It is recommended that all `ProgramInformation` and `GroupInformation` objects contain a set of meaningful language-related elements to define the spoken, subtitle and audio description properties of the content.
`MemberOf`	It is recommended that `ProgramInformation` and `GroupInformation` objects shall use the `MemberOf` element.
`CreditsList`	It is recommended that the following value for the role attribute of CreditsItem be provided in a CreditsList: Director, Provider, KeyTalent, KeyCharacter, Writer

5.3.10 Optional Metadata (Informative)

All other metadata defined in this specification are optional.

5.4 Instance Description Metadata

In the previous section, we dealt with *content description* metadata, which associates metadata with a piece of content. The key for linking content metadata to content is the CRID. In this section, we describe *instance description* metadata. Instance description metadata is useful in cases where there are meaningful differences between instances of the same content (that is, instances of content that share the same CRID). Instance description metadata is linked to a particular event-related instance of content..

5.4.1 Programme location entities

A programme location contains information about one instance (or “publication event”) of a programme. Multiple programme locations from the same service provider can be grouped to form a schedule.

A metadata provider aggregates a set of programme locations (e.g. schedules) into a `ProgramLocationTable`, as described in Section 5.7.1, and includes this table in a TV-Anytime metadata instance document.

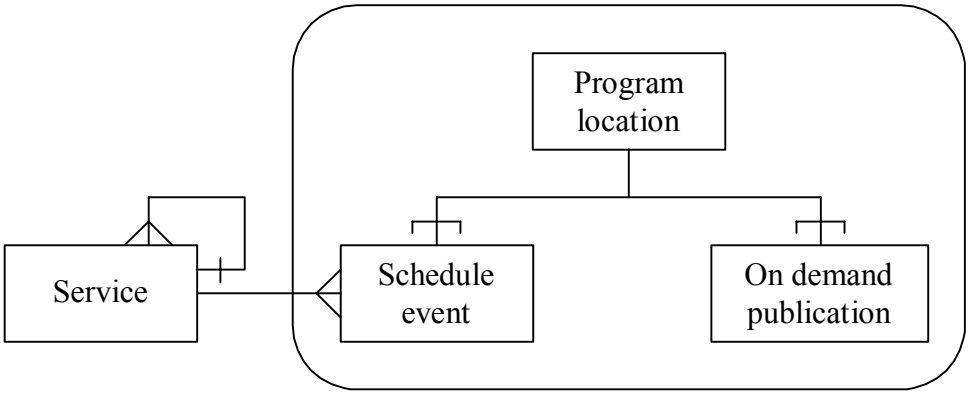


Figure 6 Single Programme Location Data Model: depicts the high-level data model for programme location.

Entity definitions

- **Program location** - the programme location represents a generic programme location, regardless of the nature of the medium it addresses - two obvious examples being broadcast services and the Web. The principle feature of a programme location is that it may 'contain' at most one programme.
- **Schedule event** - the schedule event is a specific type of programme location that is appropriate for describing broadcast programme locations. The schedule event associates a given broadcast location (service, time and duration) with a given programme.
- **Service** - the service entity represents a distinct (according to content) stream of broadcast material. A service is carried in some form of physical channel but the two entities are not synonymous as a given service can be broadcast on a variety of physical channels.

For syntactic convenience, TV-Anytime provides a mechanism to group a series of schedule events from the same provider using the `ScheduleType`. The `ScheduleType` allows the metadata provider to specify a given service just once, and then provide a list of schedule events associated with that service.

5.4.2 Programme Location

Figure 7 is useful in understanding how the abstract model above has been implemented in this specification.

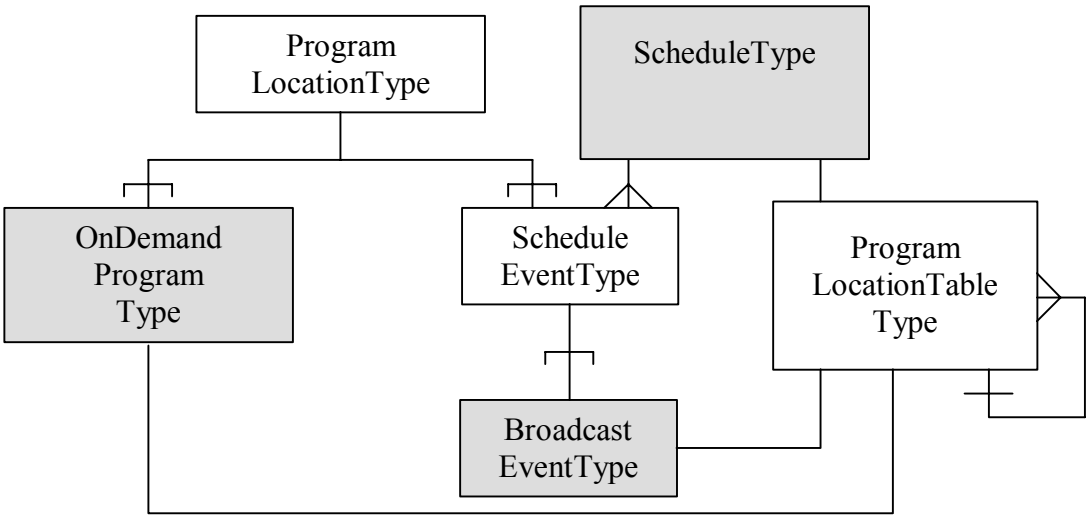
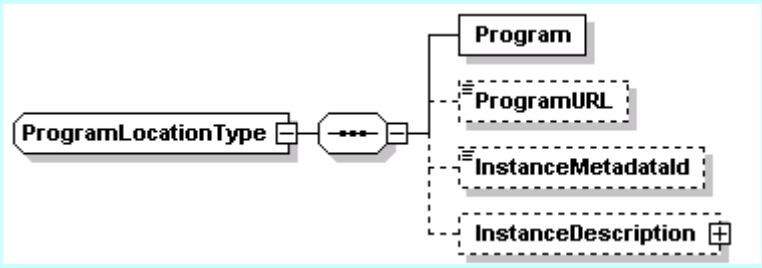


Figure 7 `ProgramLocationType` and related types

Figure 7 shows the `ProgramLocationType`, and a number of related types. The types in shaded boxes may be used as entries in a programme location table (see section 5.7.1).

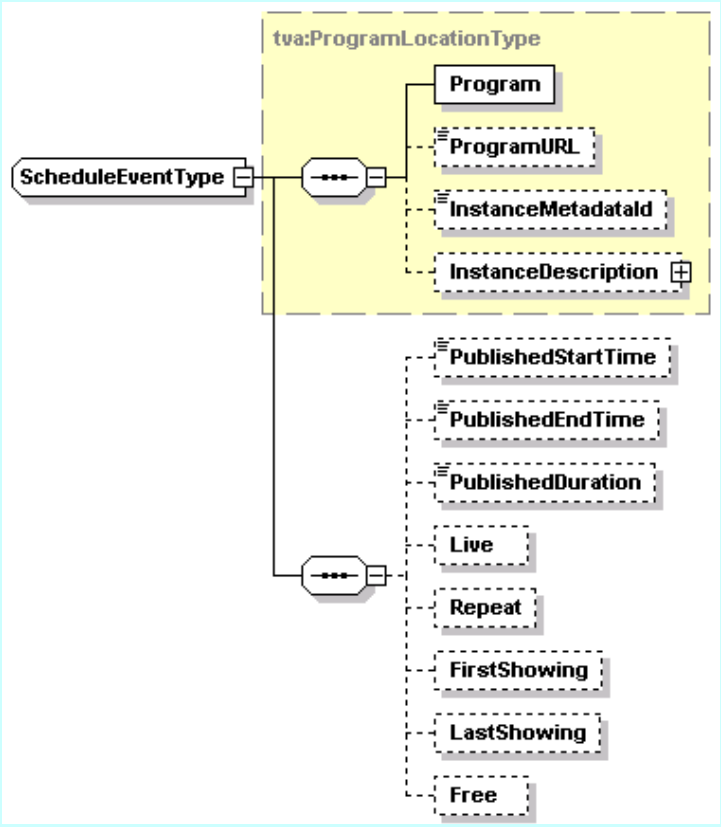
`ProgramLocationType` is an abstract type that represents one EPG entry. Derived types are `OnDemandProgramLocationType` and `BroadcastEventType`. The definition and semantics of each type are described below.

```
<simpleType name="InstanceMetadataIdType">
  <restriction base="anyURI">
    <pattern value="(i|I)(m|M)(i|I):(([^/]+)/)?([^/]+)"/>
  </restriction>
</simpleType>
```



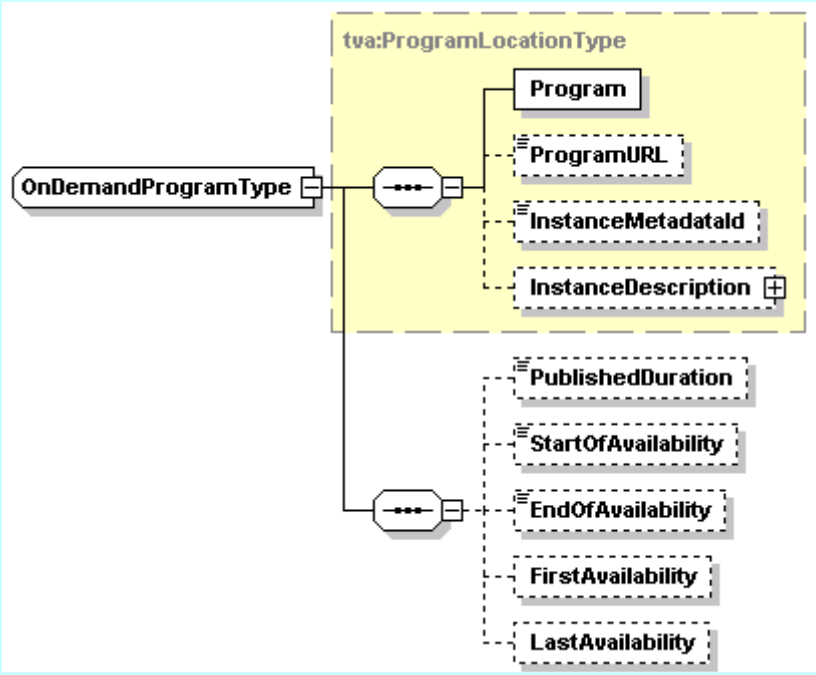

```
<complexType name="ProgramLocationType" abstract="true">
  <sequence>
    <element name="Program" type="tva:CRIDRefType"/>
    <element name="ProgramURL" type="anyURI" minOccurs="0"/>
    <element name="InstanceMetadataId"
     type="tva:InstanceMetadataIdType" minOccurs="0"/>
    <element name="InstanceDescription"
     type="tva:InstanceDescriptionType" minOccurs="0"/>
```

```
  </sequence>
</complexType>

<complexType name="ScheduleType">
  <sequence>
    <element name="ScheduleEvent" type="tva:ScheduleEventType"
    maxOccurs="unbounded"/>
  </sequence>
  <attribute name="serviceIDRef" type="tva:TVAIDRefType"
  use="required"/>
  <attribute name="start" type="dateTime" use="optional"/>
  <attribute name="end" type="dateTime" use="optional"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
</complexType>
```



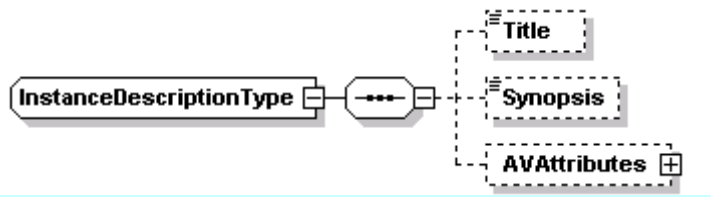

```
<complexType name="ScheduleEventType">
  <complexContent>
    <extension base="tva:ProgramLocationType">
      <sequence>
        <element name="PublishedStartTime" type="dateTime"
        minOccurs="0"/>
        <element name="PublishedEndTime" type="dateTime"
        minOccurs="0"/>
        <element name="PublishedDuration" type="duration"
        minOccurs="0"/>
        <element name="Live" type="tva:FlagType" minOccurs="0"/>
        <element name="Repeat" type="tva:FlagType" minOccurs="0"/>
          <element name="FirstShowing" type="tva:FlagType"
        minOccurs="0"/>
        <element name="LastShowing" type="tva:FlagType"
        minOccurs="0"/>
        <element name="Free" type="tva:FlagType" minOccurs="0"/>
```

```
      </sequence>
    </extension>
  </complexContent>
</complexType>

<complexType name="BroadcastEventType">
  <complexContent>
    <extension base="tva:ScheduleEventType">
      <attribute name="serviceIDRef" type="tva:TVAIDRefType"
      use="optional"/>
      <attributeGroup ref="tva:fragmentIdentification"/>
    </extension>
  </complexContent>
</complexType>
```




```
<complexType name="OnDemandProgramType">
  <complexContent>
    <extension base="tva:ProgramLocationType">
      <sequence>
        <element name="PublishedDuration" type="duration"
        minOccurs="0"/>
        <element name="StartOfAvailability" type="dateTime"
        minOccurs="0"/>
        <element name="EndOfAvailability" type="dateTime"
        minOccurs="0"/>
        <element name="FirstAvailability" type="tva:FlagType"
        minOccurs="0"/>
        <element name="LastAvailability" type="tva:FlagType"
        minOccurs="0"/>
      </sequence>
      <attributeGroup ref="tva:fragmentIdentification"/>
    </extension>
  </complexContent>
</complexType>

<complexType name="OnDemandServiceType">
  <sequence>
```

```
    <element name="OnDemandProgram" type="tva:OnDemandProgramType"
    maxOccurs="unbounded"/>
  </sequence>
  <attribute name="serviceIDRef" type="tva:TVAIDRefType"
  use="required"/>
</complexType>
```




```
<complexType name="InstanceDescriptionType">
  <sequence>
    <element name="Title" type="mpeg7:TitleType" minOccurs="0"/>
    <element name="Synopsis" type="tva:SynopsisType" minOccurs="0"/>
    <element name="AVAttributes" type="tva:AVAttributesType"
    minOccurs="0"/>
  </sequence>
</complexType>
```

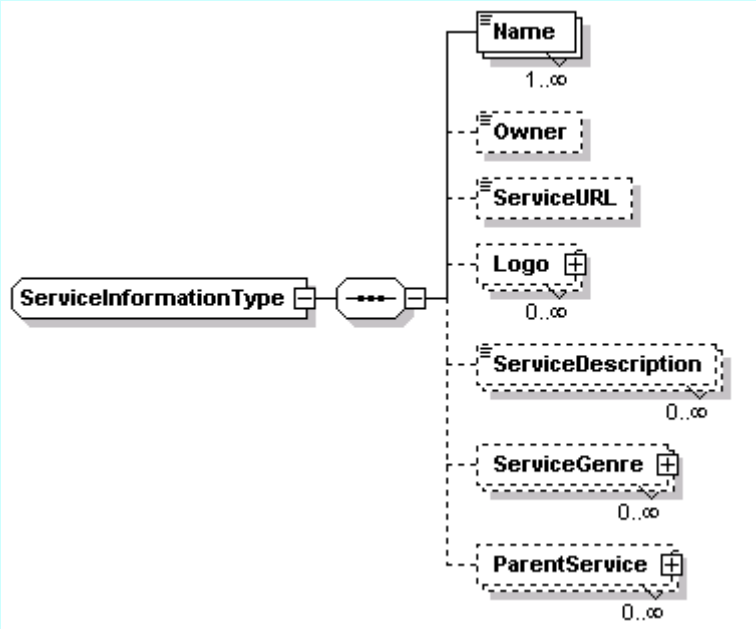
Name	Definition
`InstanceMetadataIDType`	A simple type used to instantiate InstanceMetadataID
`ProgramLocationType`	An abstract type that represents a single programme.
`Program`	A reference to the CRID that this description describes.
`ProgramURL`	An element specifying a programme location
`InstanceMetadataId`	An optional identifier that shall identify a particular location related to a CRID (i.e. a programme). This identifier shall be unique within the CRID domain and have the same life cycle as the CRID.
`InstanceDescription`	Descriptive metadata about this instance of content. Instance metadata is mostly comprised of technical information such as encoding formats; however, a particular instance may also include a synopsis that overrides any synopsis that might have been defined in a corresponding `ProgramInformation` instance.
`ScheduleType`	A complex type derived representing a series of schedule events that are associated with one service.
`ScheduleEvent`	A list of schedule events
`start`	Start of the period covered by the schedule
`end`	End of the period covered by the schedule
`serviceIDRef`	An attribute of Schedule used to identify the service on which the scheduled events will be

	broadcast. Its value references a ServiceInformation element
`fragmentIdentification`	Used to identify the fragment of data to which this description belongs to
`ScheduleEventType`	A complex type derived from `ProgramLocationType` that describes a broadcast event that is part of a schedule (*i.e.*, where the service is already known). Note that instances of `ScheduleEventType` will always be included in a `Schedule` instance.
`PublishedStartTime`	The time at which the programme is advertised as starting. Note that this will typically be different from the actual exact start time. The precise start time is provided by the location resolution mechanism, as part of a locator.
`PublishedEndTime`	The time at which the programme is advertised as ending. Note that this will typically be different from the actual exact end time. The precise end time can be provided by the location resolution mechanism, as part of a locator.
`PublishedDuration`	The advertised duration of the programme. The actual duration is provided by the location resolution mechanism, in the form of a locator. When all published time parameters are provided, PublishedDuration must equal the difference between PublishedEndTime and PublishedStartTime
`Live`	A flag to indicate if the programme is a live broadcast
`Repeat`	A flag to indicate if the programme is a repeat
`FirstShowing`	A flag to indicate if this instance is a 'first showing'
`LastShowing`	A flag to indicate if this instance is a 'last showing'. Typically this will be used for film services that repeat films over a given period
`Free`	A flag to indicate if access to this instance of the programme is free
`BroadcastEventType`	A complex type derived from `ScheduleEventType` that allows individual events to be described outside the context of a schedule (i.e. where the service cannot be inferred)
`serviceIDRef`	An optional attribute of BroadcastEvent used to identify the service on which this event will be broadcast. Its value references a ServiceInformation element
`fragmentIdentification`	Used to identify the fragment of data to which this description belongs to
`OnDemandProgramType`	A complex type derived from `ProgramLocationType` used to describe instances that can be acquired on demand (as

	opposed to broadcast).
PublishedDuration	The advertised duration of the programme. The actual duration is provided by the location resolution mechanism, in the form of a locator.
StartOfAvailability	The time and date that this programme will first be available.
EndOfAvailability	The time and date that this programme will no longer be available.
FirstAvailability	True if this publication is the first publication of the content, false otherwise.
LastAvailability	True if this publication is the last publication of the content, false otherwise.
fragmentIdentification	Used to identify the fragment of data to which this description belongs to
OnDemandServiceType	A complex type used to describe and identify an OnDemandService
OnDemandProgram	A list of OnDemandProgram proposed by the OnDemandService
serviceIDRef	An identifier used to identify the OnDemandService to which is associated the list of OnDemandProgram
InstanceDescriptionType	Complex type used to describe programme instances.
Title	A title of the programme. An instance of a programme can have a different title. Defined as an MPEG-7 datatype, TitleType (See Sec. 9.2.2 in [2] for a detailed specification). When this element exists, it completely overrides any Title that might exist for the corresponding ProgramInformation object.
Synopsis	A textual description of this instance. Typically, the synopsis for a programme will be described in the ProgramInformation type, and the instance description will not contain a synopsis. However, in some cases the metadata provider may wish to supply a synopsis for a particular instance of content that includes event-specific information (for example, a showing of a film that is a tribute to a recently deceased director). When this element exists, it completely overrides any Synopsis that might exist for the corresponding ProgramInformation object.
AVAttributes	Technical (audio-visual) attributes about this particular instance. The audio-visual attributes specified in the instance description completely override their counterparts in the programme information.

5.4.3 Service information

```
<complexType name="ServiceRefType">
  <sequence>
    <element name="ValidPeriod" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="ValidFrom" type="dateTime" minOccurs="0"/>
          <element name="ValidTo" type="dateTime" minOccurs="0"/>
        </sequence>
      </complexType>
    </element>
  </sequence>
  <attribute name="serviceIDRef" type="tva:TVAIDRefType"
  use="required"/>
</complexType>
```




```
<complexType name="ServiceInformationType">
  <sequence>
    <element name="Name" type="string" maxOccurs="unbounded"/>
    <element name="Owner" type="string" minOccurs="0"/>
    <element name="ServiceURL" type="anyURI" minOccurs="0"/>
    <element name="Logo" type="mpeg7:MediaLocatorType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="ServiceDescription" type="tva:SynopsisType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="ServiceGenre" type="tva:GenreType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="ParentService" type="tva:ServiceRefType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="serviceId" type="tva:TVAIDType" use="required"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
</complexType>
```

Name	Definition
ServiceRefType	A complex type that allows a reference to be made to a service
ValidPeriod	An optional time window that can be applied to the reference. If only ValidFrom is specified, then the service reference is assumed to be valid any time after ValidFrom. If only ValidTo is specified, then the service reference is assumed to be valid any time up until the ValidTo time. (In some regions, the same physical channel is allocated to more than one service. Thus, multiple service "timeshare" the same channel. In such cases, ValidPeriod can be used to describe the time period during which a service is valid.)
ValidFrom	Start time and date from which the reference is valid
ValidTo	End time and date from which the reference is valid
serviceIDRef	The service that is being referenced. Its value references a ServiceInformation element
ServiceInformationType	A complex type that allows a service to be described
Name	The name of the service
Owner	The brand owner of the service
ServiceURL	An optional URL for the service e.g. a DVB URL. This URL allows the receiver to identify the associated physical service. This element should be consistent with the possible BroadcastURL in events that reference this ServiceInformation element.
Logo	A network logo, such as an image or jingle.
ServiceDescription	An element describing the service
ServiceGenre	A genre that characterizes the programming on the service
ParentService	A reference to a parent service when the service being described inherits a part of its schedule from another service (e.g. regional variations from a national service). Note that multiple parent services may be specified on a time exclusive basis (e.g. references to different parts of the same service)
serviceId	The unique ID for the service
fragmentIdentification	Used to identify the fragment of data to which this description belongs to

5.5 Consumer Metadata

5.5.1 Usage History DS

This section presents a description scheme for describing usage history information gathered over extended periods of time. The collected usage history provides a list of the actions carried out by the user for an observation period, which can subsequently be used by automatic analysis methods to generate user preferences.

A standardized format for exchange of usage history information is important for ensuring interoperability between various devices and platforms. Collection and representation of usage history information in a standardized format are relevant to various application areas and usage scenarios identified by the TV-Anytime Forum, which include the following:

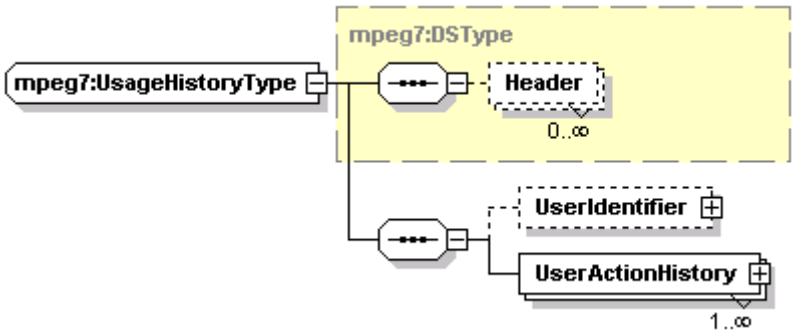
- Tracking and monitoring the content viewed by individual members of a household.
- Building a personalized TV guide by tracking user viewing habits.
- Selling viewing history to advertisers.
- Tracking and monitoring content usage for more efficient content development.
- Selling of usage data by service provider.
- Compensating the user for making his/her usage history data available to content providers.

The TV-Anytime Forum Usage History schema is based on the UsageHistory DS as specified in ISO/IEC 15938-5 [2], section 15.2.

A description instance contains a UserIdentifier element, which specifies the user or the group of users whose content consumption information is provided. The usage history is specified by the UserActionHistory Description Scheme, which contains multiple lists of the actions performed by the user over an observation period. Note that multiple, non-overlapping observation periods can be specified for an action list. Each action list is action-type specific; *i.e.*, a single list contains actions of a certain type (such as "play" or "record") only. The specific types of actions that are tracked (i.e. the values allowed for the ActionType element) are defined as members of a classification scheme/thesaurus[1], which enables new types of actions to be supported in the future (by augmenting). Associated with every user action are the time of the action, the CRID of the programme for which the action took place, and optional referencing elements which allow related links or resources about the action to be provided. It is assumed that descriptions for the programmes cited in the action history are readily accessible through the provided content reference IDs.

The following sections contain a specification of the syntax and semantics of the UsageHistory description scheme.

5.5.1.1 Usage History DS

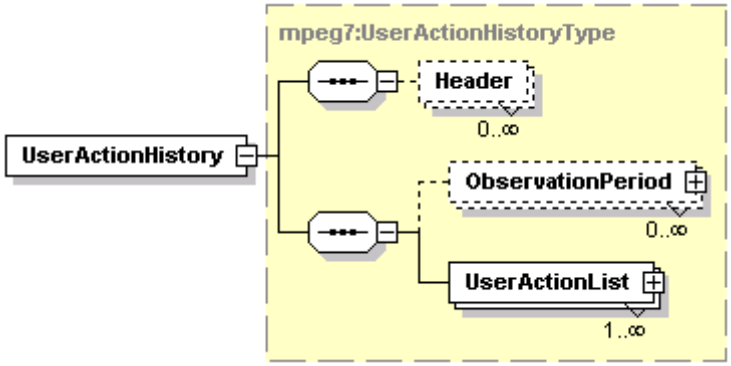


[1] The default thesaurus is provided in Appendix A.

The UsageHistory DS describes the audiovisual content consumption history for a user, as lists of the actions performed by the user over an observation period.

The specification of the UsageHistory DS is given in section 15.2.1 of [2]. Syntax of the UsageHistory DS is specified in section 15.2.1.1 in [2]. Semantics of the Usage History DS are specified in section 15.2.1.2 in [2].

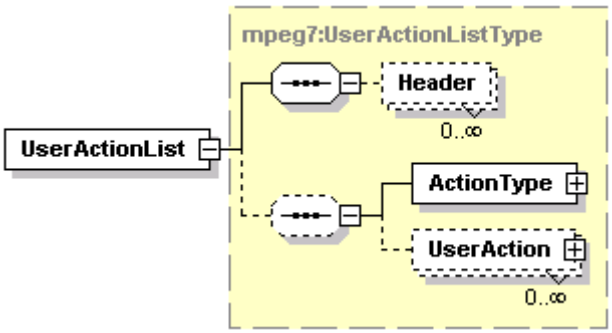
5.5.1.2 UserActionHistory DS



The UserActionHistory DS describes multiple user action lists, each of which provides a temporally ordered log of a specific type of user action, such as “Record” or “Play,” regarding audiovisual content.

The specification of the UserActionHistory DS is given in section 15.2.2 of [2]. Syntax of the UserActionHistory DS is specified in section 15.2.2.1 in [2]. Semantics of the UserActionHistory DS are specified in section 15.2.2.2 in [2].

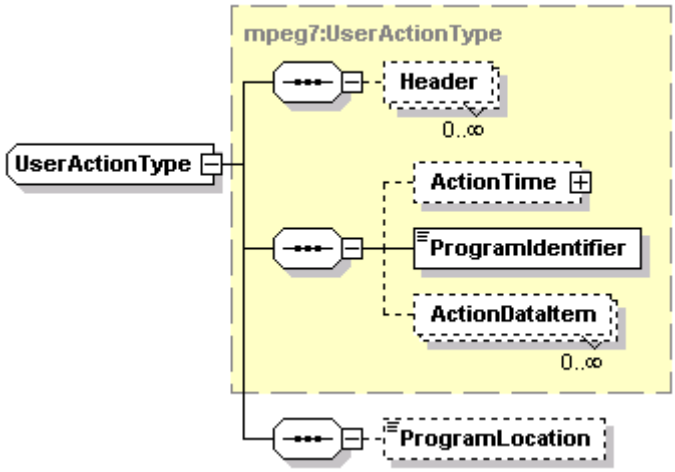
5.5.1.3 UserActionList DS



The UserActionList description scheme specifies a structured list of user action items, organized according to action type. Every UserAction is associated with a single programme or content entity only. A default TV-Anytime classification scheme of valid user actions is provided in Appendix A.

The specification of the UserActionList DS is given in section 15.2.3 of [2]. Syntax of the UserActionList DS is specified in section 15.2.3.1 in [2]. Semantics of the UserActionList DS are specified in section 15.2.3.2 in [2].

5.5.1.4 UserAction DS



The UserAction description scheme provides detailed information about individual user actions, including the time of occurrence, duration, associated CRID of the programme, location of the programme, and references to related content descriptions and material.

The TV-Anytime Forum UserAction DS is an extension of the UserAction DS specified in section 15.2.4 of [2], as follows.

```
<complexType name="UserActionType">
  <complexContent>
    <extension base="mpeg7:UserActionType">
      <sequence>
        <element name="ProgramLocation" type="anyURI" minOccurs="0"
        maxOccurs="1"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Syntax of the base UserAction DS is specified in section 15.2.4.1 in [2]. Semantics of the base UserAction DS are specified in section 15.2.4.2 in [2]. The semantics of the additional element in the TV-Anytime Forum UserAction DS is as follows.

Name	Definition
`ProgramLocation`	An optional element describing the location of the programme associated with the user action.

In order to ensure full compliance with the CRID definition as stated by the TVA Content Referencing Specification, the `ProgramIdentifier` element of the `UserAction` description scheme is constrained as follows:

- If the `type` attribute of `ProgramIdentifier` element is instantiated in descriptions compliant to the TVA Metadata Specification, it shall be set to the value “CRID“
- The `ProgramIdentifier` element instances in descriptions compliant to the TVA Metadata Specification shall specify a CRID that complies with the syntax defined in the TVA Content Referencing Specification.

Furthermore, in TV-Anytime descriptions, the `ActionDataItem` element of the base UserAction DS may contain an Instance Metadata ID (see Section 5.4.2).

5.5.1.5 Informative Examples

Informative examples of the usage history description schemes presented in this section are provided in section 15.2 of [2].

5.5.2 User Preferences DS

This section contains description schemes that facilitate description of user's preferences pertaining to consumption of multimedia material. User preference descriptions can be correlated with media descriptions to search, filter, select and consume desired content. Correspondence between user preference and media descriptions facilitates accurate and efficient personalization of content access and content consumption.

In particular, usage scenarios enabled by these schemes include the following:

- Identification of multiple users.
- Filtering according to a rich combination of user preferences on genre, time, date, channel, etc.
- Accurate and effective agent operation by featuring a well-defined mapping between user preferences and media descriptions.
- Prioritization of sources of information in combination with other preferences such as genres, titles, etc.
- Specification of preferences (e.g., for a favorite actor) for a particular time duration.
- Specification of preferred keywords in connection with other preferences, such as genre (e.g., news).
- Specification of preferred critics and critic's ratings.
- Description of consumer's desire to keep the entire, or selected parts of preference data private.
- Specification of preferences for genre and source preference combinations.
- Descriptions of preferences for particular kinds of highlights (e.g., highlights of certain durations or highlights composed of segments containing certain events).
- Exchange of personal profiles under consumer control.
- Specification of profiles for different countries.

The TV-Anytime Forum UserPreferences schema is based on the UserPreferences description scheme (DS) as defined in ISO/IEC 15938-5 [2], section 15.

The UserPreferences DS is associated with a particular user (or group of users) by means of the UserIdentifier DS. The main entity in the diagram, the UsagePreferences DS, contains two main components, the BrowsingPreferences DS and the FilteringAndSearchPreferences DS. The BrowsingPreferences DS can be used to specify preferences on the way the content is consumed, and contains SummaryPreferences. The FilteringAndSearchPreferences DS can be used to specify preferences on the type of content to be searched, filtered, selected and consumed. This DS contains the ClassificationPreferences DS, CreationPreferences DS and SourcePreferences DS.

The UserPreferences DS enables users to specify preferences that apply only in a particular context, in terms of time and place, using the PreferenceCondition DS. The UserPreferences DS allows users to specify the relative importance of their preferences with respect to each other. The DS enables users to indicate whether their preferences or parts of their preferences should be kept private or not. The DS also enables users to indicate whether the automatic update of their usage preferences description, e.g., by an agent, should be permitted or not. The ClassificationPreferences DS is used to specify user preferences related to classification of the content, e.g., preferred genre, preferred country of origin or preferred language. The CreationPreferences DS is used to specify user's preferences related to the creation description of AV content, such as preference on a particular title, or a

favorite actor, or period of time within which the content was created. The SourcePreferences DS is used to specify preferences for the source of the media, such as its medium, or its distributor or publisher.

In general, `UserPreferences` descriptions can be constructed manually or automatically. A `UserPreferences` description may be constructed based on explicit input from the audiovisual content user. Alternatively, a `UserPreferences` description may be constructed automatically based on the user's content usage history.

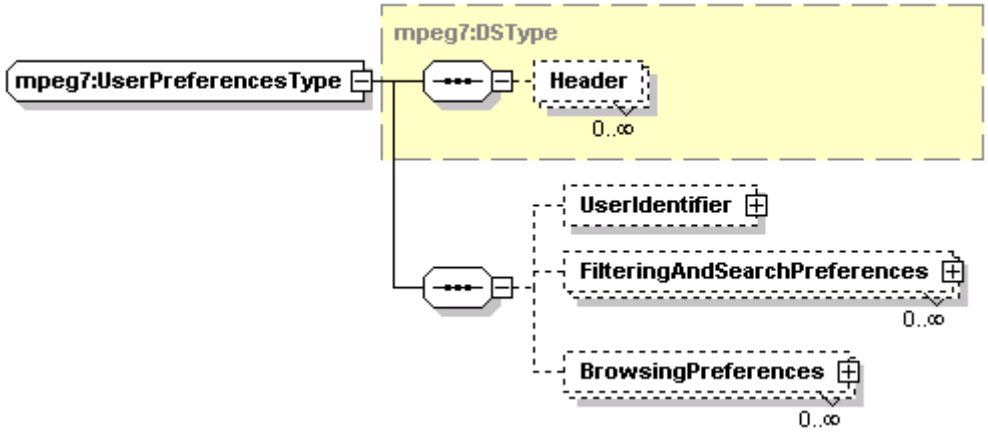
The following sections contain a specification of the syntax and semantics of the UserPreferences description scheme. Some of the following sections also contain tables that provide a mapping from individual elements (and attributes) of a user preference description to individual elements (and attributes) of programme descriptions. The first column of each table specifies the name of an element (or attribute) of a user preference description. The second column of each table specifies the name(s) of one or more elements (or attributes) of a programme description that the preference element (or attribute) maps to. Note that elements in both the first and second columns of each table may contain further children elements (or attributes) that may be including in the mapping implicitly. Note that these mappings are example mappings and are not normative.

5.5.2.1 Basic User Preference Elements

The `PreferenceCondition` DS is used to specify a combination of time and/or place to be associated with a particular set of user preferences. The `userChoice` datatype is used to indicate the value of a condition set by a user, with respect to actions taken by a processor of descriptions. The `preferenceValue` datatype is used to describe the relative significance of a particular preference element.

The specifications of these basic user preference elements are given in section 15.2.2 of [2]. Syntax of the basic user preference elements is specified in section 15.2.2.2 of [2]. Semantics of the basic user preference elements are specified in section 15.2.2.3 of [2].

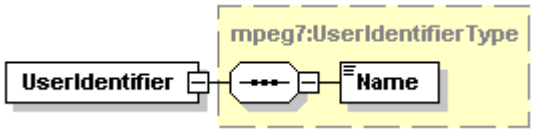
5.5.2.2 UserPreferences DS



The UserPreferences DS is used to describe a user's preferences for consumption of multimedia material. Correspondence between user preference information and media descriptions allows personalization of content access and content consumption.

The specification of the UserPreferences DS is given in section 15.2.3 of [2]. Syntax of the UserPreferences DS is described in section 15.2.3.2 of [2]. Semantics of the UserPreferences DS is described in section 15.2.3.3 of [2].

5.5.2.3 UserIdentifier DS



The UserIdentifier DS may be used to associate a specific user (or set of users) with a particular user preference description, or to identify a particular user preference description, or to distinguish multiple user preference descriptions.

The specification of the UserPreference DS is given in section 15.2.4 of [2]. Syntax of the UserIdentifier DS is specified in section 15.2.4.2 in [2]. Semantics of the UserIdentifier DS are specified in section 15.2.4.3 in [2].

The `UserIdentifier` datatype may be used to identify a particular user preference description and distinguish it from other user preference descriptions. The `Name` element may contain the user's actual name, a nickname, a user's account name or email address, or any other name. The same user may have multiple user preference descriptions, each identified by a different value of `Name`, for use under different usage conditions. Also, a group of persons can use a single set of user preferences, using a single identifier for the group.

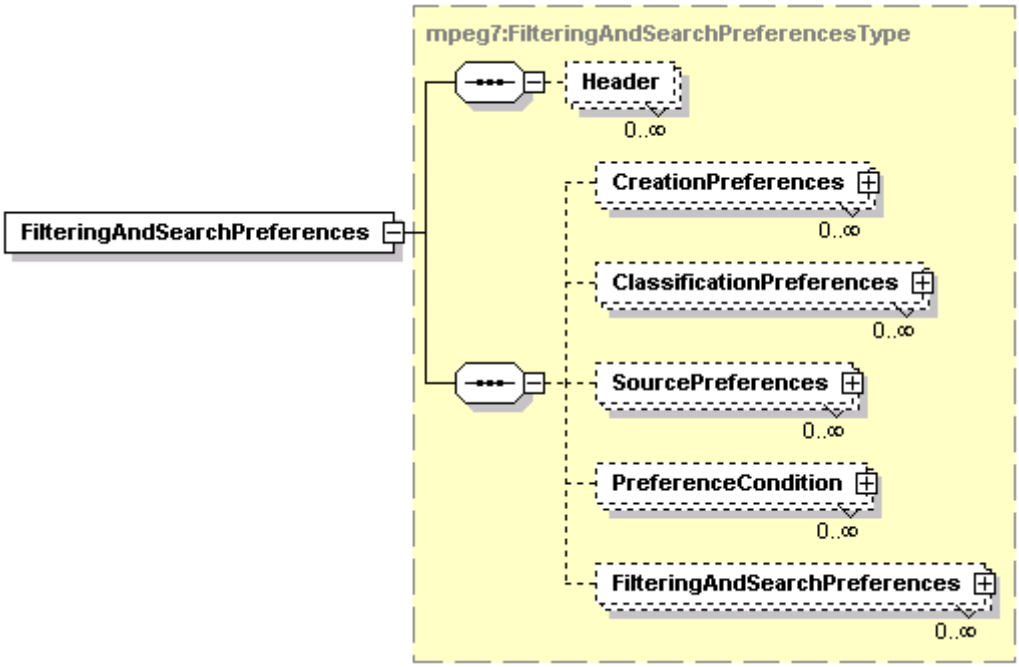
TV-Anytime Forum compliant implementations should by default maintain user identification as private data. To achieve the exchange of user preference descriptions between the user(s) and a service provider while maintaining anonymity of the user(s), the following options are suggested.

a) The `UserIdentifier` element is optional within the `UserPreferences` DS; therefore, a valid user preference description can be exchanged that simply does not contain this element.

b) The `Name` element of the `UserIdentifier` datatype can contain any value of string-type; therefore, this element could contain an arbitrary value, selected by the user, that does not allow identification of the user.

Note that the `protected` attribute of the `UserIdentifier` datatype can be set (under user control) to indicate whether the user identifier information should remain private or not (see section 15.2.4.3 in [2]). By default, the value of `protected` is true.

5.5.2.4 FilteringAndSearchPreferences DS

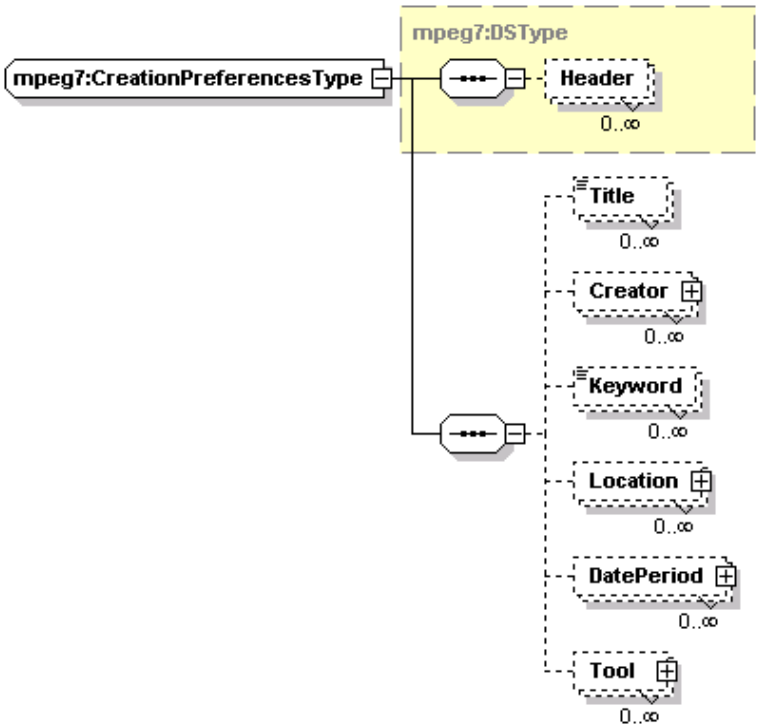


The FilteringAndSearchPreferences DS specifies a user's filtering and/or searching preferences for audio-visual content. These preferences can be specified in terms of creation-, classification- and source-related properties of the content. The FilteringAndSearchPreferences DS is a container of CreationPreferences, ClassificationPreferences and SourcePreferences.

The specification of the FilteringAndSearchPreferences DS is given in section 15.2.5 of [2]. Syntax of the FilteringAndSearchPreferences DS is specified in section 15.2.5.2 in [2]. Semantics of the FilteringAndSearchPreferences DS are specified in section 15.2.5.3 in [2].

Note that the `protected` attribute of the `FilteringAndSearchPreferences` DS can be set (under user control) to indicate whether the contained user preference information should remain private or not (see section 15.2.4.3 in [2]). By default, the value of `protected` is true. Because a single user preferences description can contain multiple `FilteringAndSearchPreferences` elements, it is possible to separately describe preferences that should be kept private and other preferences that do not have to be kept private.

5.5.2.5 CreationPreferences DS



The CreationPreferences DS specifies a user's preferences about the creation-related properties of AV content, such as favorite actors etc.

The specification of the CreationPreferences DS is given in section 15.2.6 of [2]. Syntax of the CreationPreferences DS is specified in section 15.2.6.2 in [2]. Semantics of the CreationPreferences DS are specified in section 15.2.6.3 in [2].

The default Classification Scheme for the `Role` element of the `Creator` element of the CreationPreferences DS is specified in Appendix A.

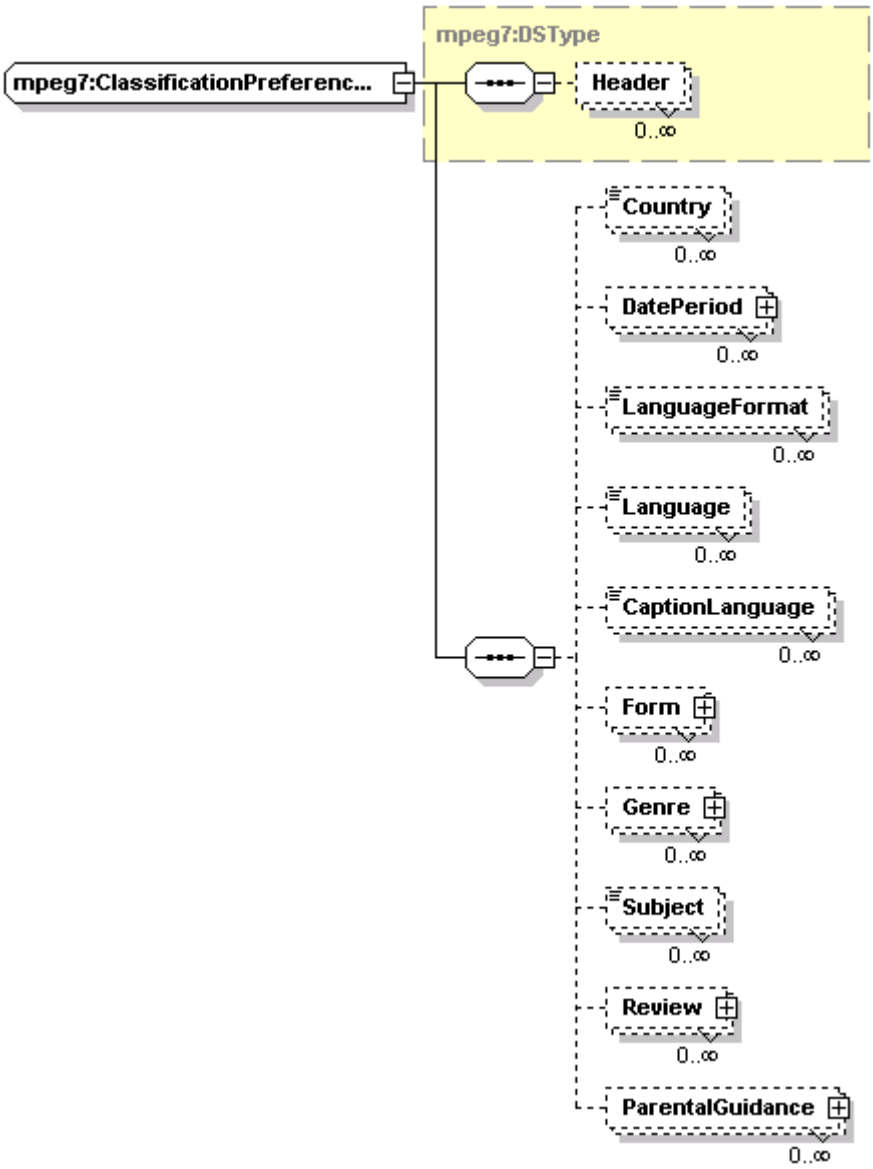
The `Tool` element of the CreationPreferences DS is not used in this specification.

The following table provides an informative example mapping of elements (and attributes) from UserPreferences/FilteringAndSearchPreferences/CreationPreferences to elements (and attributes) of a programme description.

Element/attribute Name	*Mapping*
Title	ProgramInformationTable/ProgramInformation/BasicDescription/Title
	ProgramInformationTable/ProgramInformation/BasicDescription/ShortTitle
	SegmentInformationTable/SegmentInformation/Description/Title
Creator	ProgramInformationTable/ProgramInformation/BasicDescription/CreditsList/CreditsItem
Keyword	ProgramInformationTable/ProgramInformation/BasicDescription/Title
	ProgramInformationTable/ProgramInformation/BasicDescription/ShortTitle
	ProgramInformationTable/ProgramInformation/BasicDescription/Keyword
	ProgramInformationTable/ProgramInformation/BasicDescription/Synopsis
	SegmentInformationTable/SegmentInformation/Description/Title
	SegmentInformationTable/SegmentInformation/Description/Keyword

Element/attribute Name	*Mapping*
	SegmentInformationTable/SegmentInformation/Description/Synopsis
Location	ProgramInformationTable/ProgramInformation/BasicDescription/CreationCoordinates/CreationLocation
DatePeriod	ProgramInformationTable/ProgramInformation/BasicDescription/CreationCoordinates/CreationDate
Tool	*This element is not used in this specification.*

5.5.2.6 ClassificationPreferences DS



The ClassificationPreferences DS is used to convey a user's preferences about various classifications of the content, such as preferred genre or language.

The specification of the ClassificationPreferences DS is given in section 15.2.7 of [2]. Syntax of the ClassificationPreferences DS is specified in section 15.2.7.2 in [2]. Semantics of the ClassificationPreferences DS are specified in section 15.2.7.3 in [2].

The default Classification Scheme for the `Genre` element of the ClassificationPreferences DS is specified in Appendix C. Multiple `Genre` elements may be used, where each

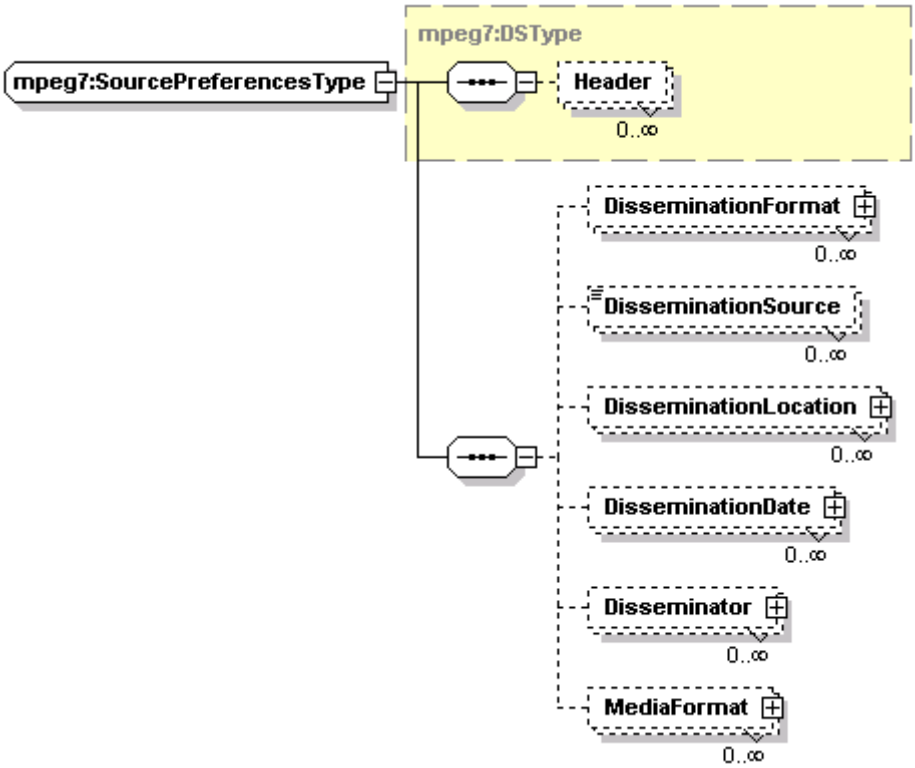
expresses a value from different parts of the multi-dimensional content classification scheme, as described in Appendix B.

The `Form` element of the ClassificationPreferences DS is not used in this specification.

The following table provides an informative example mapping of elements (and attributes) from UserPreferences/FilteringAndSearchPreferences/ClassificationPreferences to elements (and attributes) of a programme description.

Element/attribute Name	*Mapping*
Country	ProgramInformationTable/ProgramInformation/BasicDescription/ReleaseLocation
DatePeriod	ProgramInformationTable/ProgramInformation/BasicDescription/ReleaseDate
LanguageFormat	ProgramInformationTable/ProgramInformation/BasicDescription/Language ProgramInformationTable/ProgramInformation/BasicDescription/CaptionLanguage ProgramInformationTable/ProgramInformation/BasicDescription/SignLanguage
Language	ProgramInformationTable/ProgramInformation/BasicDescription/Language
CaptionLanguage	ProgramInformationTable/ProgramInformation/BasicDescription/CaptionLanguage
Form	*This element is not used in this specification.*
Genre	ProgramInformationTable/ProgramInformation/BasicDescription/Genre
Subject	ProgramInformationTable/ProgramInformation/BasicDescription/Title ProgramInformationTable/ProgramInformation/BasicDescription/ShortTitle ProgramInformationTable/ProgramInformation/BasicDescription/Keyword ProgramInformationTable/ProgramInformation/BasicDescription/Synopsis SegmentInformationTable/SegmentInformation/Description/Title SegmentInformationTable/SegmentInformation/Description/Keyword SegmentInformationTable/SegmentInformation/Description/Synopsis
Review	ProgramReviewTable/ProgramReviews/Review
ParentalGuidance	ProgramInformationTable/ProgramInformation/BasicDescription/ParentalGuidance

5.5.2.7 SourcePreferences DS



The SourcePreferences DS is used to convey preferences on the source of the AV content, such as publisher or channel of distribution. The specification of the SourcePreferences DS is given in section 15.2.8 of [2]. Syntax of the SourcePreferences DS is specified in section 15.2.8.2 in [2]. Semantics of the SourcePreferences DS are specified in section 15.2.8.3 in [2].

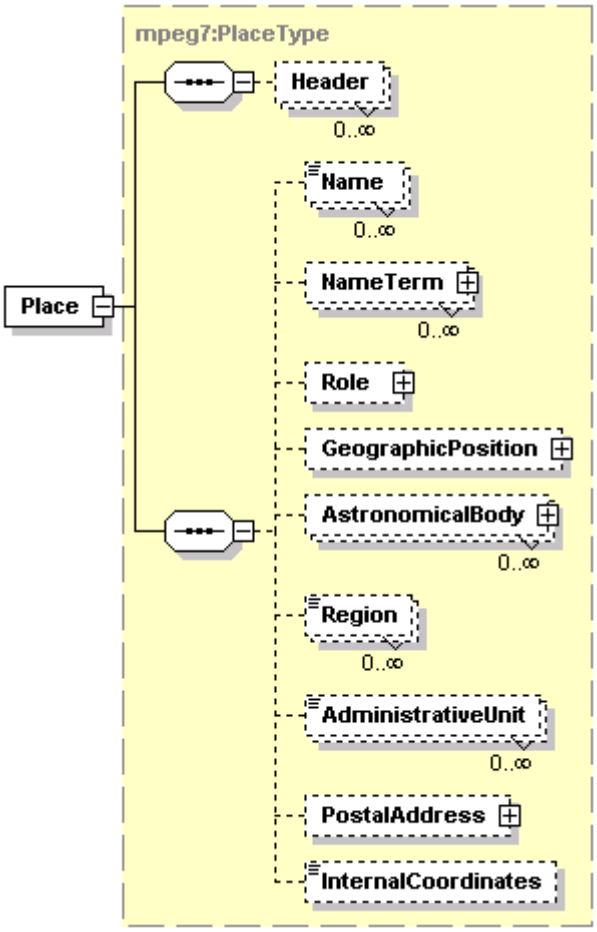
The `DisseminationFormat` element, the `DisseminationLocation` element and the `noEncryption` attribute of the SourcePreferences DS are not used in this specification.

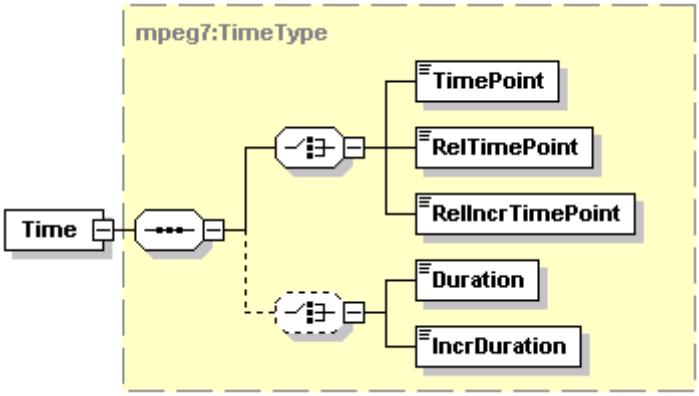
The following table provides an informative example mapping of elements (and attributes) from UserPreferences/FilteringAndSearchPreferences/SourcePreferences to elements (and attributes) of a programme description.

Element/attribute Name	*Mapping*
DisseminationFormat	*This element is not used in this specification.*
DisseminationSource	ServiceInformationTable/ServiceInformation/Name
DisseminationLocation	*This element is not used in this specification.*
DisseminationDate	ProgramLocationTable/BroadcastEvent/PublishedTime & PublishedDuration
	ProgramLocationTable/Schedule/ScheduleEvent/PublishedTime & PublishedDuration
	ProgramLocationTable/OnDemandProgram/StartOfAvailability & EndOfAvailability
	ProgramLocationTable/OnDemandService/OnDemandProgram/StartOfAvailability & EndOfAvailability
Disseminator	ServiceInformationTable/ServiceInformation/Owner
MediaFormat	ProgramInformationTable/ProgramInformation/AVAttributes
	ProgramLocationTable/BroadcastEvent/InstanceDescription/AVAttributes
	ProgramLocationTable/Schedule/ScheduleEvent/InstanceDescription/AVAttributes
	ProgramLocationTable/OnDemandProgram/InstanceDescription/AVAttributes
	ProgramLocationTable/OnDemandService/OnDemandProgram/InstanceDescription/AVAtt

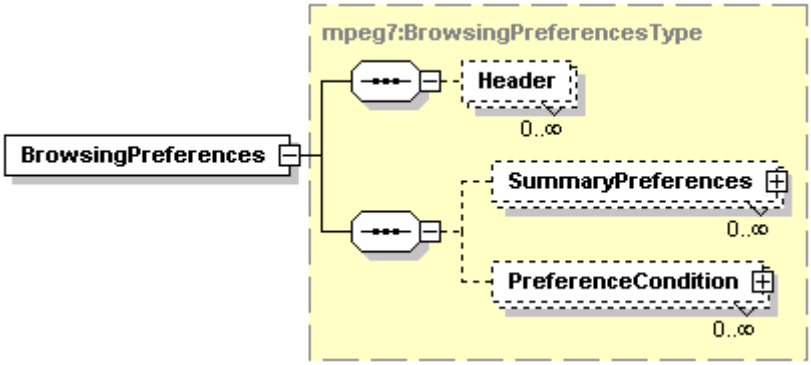
Element/attribute Name	*Mapping*
	ributes
NoRepeat	ProgramLocationTable/BroadcastEvent/Repeat ProgramLocationTable/Schedule/ScheduleEvent/Repeat
noEncryption	*This attribute is not used in this specification.*
NoPayPerUse	ProgramLocationTable/BroadcastEvent/Free ProgramLocationTable/Schedule/ScheduleEvent/Free

5.5.2.8 PreferenceCondition DS





5.5.2.9 BrowsingPreferences DS

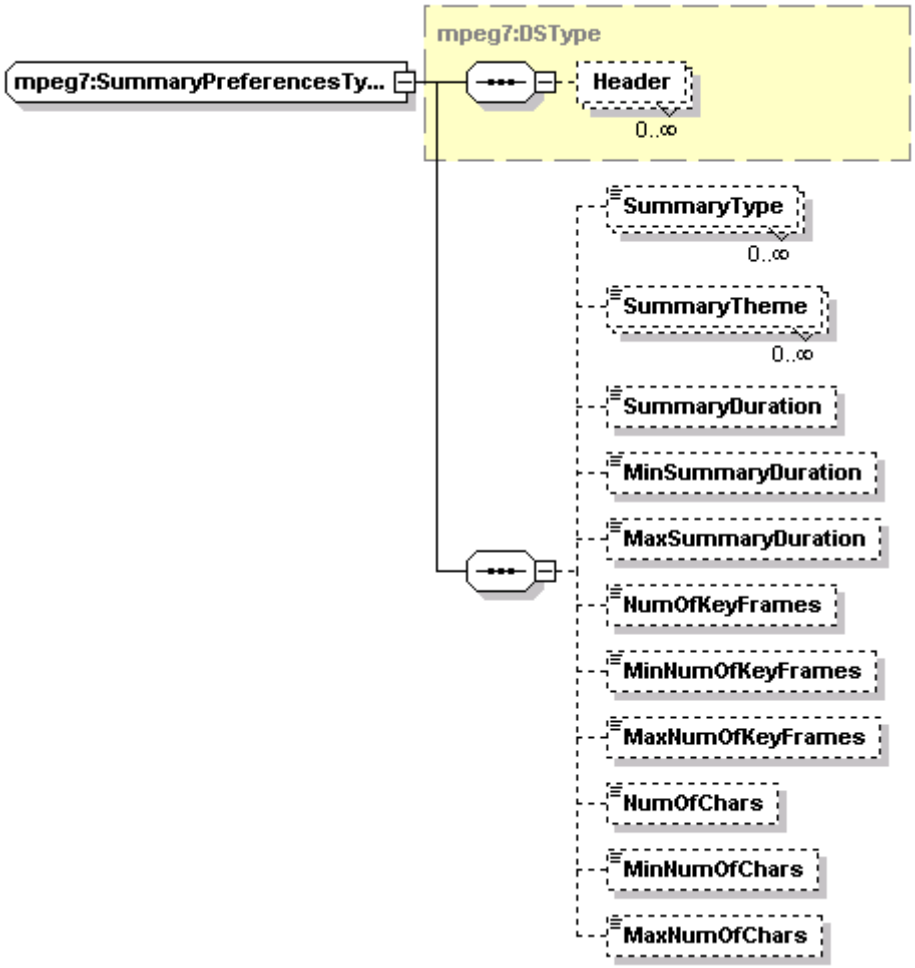


The BrowsingPreferences DS is used to specify a user's preferences for navigating and accessing multimedia content. The BrowsingPreferences DS is a container of SummaryPreferences.

The specification of the BrowsingPreferences DS is given in section 15.2.9 of [2]. Syntax of the BrowsingPreferences DS is specified in section 15.2.9.2 in [2]. Semantics of the BrowsingPreferences DS are specified in section 15.2.9.3 in [2].

Note that the `protected` attribute of the `BrowsingPreferences` DS can be set (under user control) to indicate whether the contained user preference information should remain private or not (see section 15.2.4.3 in [2]). By default, the value of `protected` is true. Because a single user preferences description can contain multiple `BrowsingPreferences` elements, it is possible to separately describe preferences that should be kept private and other preferences that do not have to be kept private.

5.5.2.10 SummaryPreferences DS



The SummaryPreferences DS describes a user's preferences for nonlinear navigation of media especially with respect to visualization and sonification of AV content.

The specification of the SummaryPreferences DS is given in section 15.2.10 of [2]. Syntax of the BrowsingPreferences DS is specified in section 15.2.10.2 in [2]. Semantics of the BrowsingPreferences DS are specified in section 15.2.10.3 in [2].

The following table provides an informative example mapping of elements (and attributes) from UserPreferences/BrowsingPreferences/SummaryPreferences to elements (and attributes) of a programme description.

Element/attribute Name	*Mapping*
SummaryType	SegmentInformationTable/SegmentGroupInformation/GroupType
SummaryTheme	SegmentInformationTable/SegmentInformation/Description/Title SegmentInformationTable/SegmentInformation/Description/Synopsis SegmentInformationTable/SegmentInformation/Description/Keyword
SummaryDuration	SegmentInformationTable/SegmentGroupInformation/duration
MinSummaryDuration	SegmentInformationTable/SegmentGroupInformation/duration
MaxSummaryDuration	SegmentInformationTable/SegmentGroupInformation/duration
NumOfKeyFrames	SegmentInformationTable/SegmentGroupInformation/numberOfKeyFrames
MinNumOfKeyFrames	SegmentInformationTable/SegmentGroupInformation/numberOfKeyFrames
MaxNumOfKeyFrames	SegmentInformationTable/SegmentGroupInformation/numberOfKeyFrames

Element/attribute Name	*Mapping*
NumOfChars	SegmentInformationTable/SegmentInformation/Description/Synopsis SegmentInformationTable/ProgramInformation/BasicDescription/Synopsis
MinNumOfChars	SegmentInformationTable/SegmentInformation/Description/Synopsis ProgramInformationTable/ProgramInformation/BasicDescription/Synopsis
MaxNumOfChars	SegmentInformationTable/SegmentInformation/Description/Synopsis ProgramInformationTable/ProgramInformation/BasicDescription/Synopsis

5.6 Segmentation Metadata

Segmentation refers to the ability to define, access and manipulate temporal intervals (*i.e.*, segments) within an AV stream. By associating metadata with segments and segment groups, it is possible to restructure and re-purpose an input AV stream to generate alternative consumption and navigation modes. Such modes could include, for example, a summary of the content with highlights, or a set of bookmarks that point to "topic headings" within the stream. Such metadata can be provided by service providers or broadcasters as a value-added feature, and/or generated by viewers themselves. Applications include, for example, repurposing of content for educational purposes.

5.6.1 Segmentation Metadata: Definitions and Requirements

In this section we present an overview of segmentation, including definitions of terminology and a list of requirements for common applications.

An entity-relationship diagram of the various components of a (segmented) programme is shown in Figure 8. The properties and relationships of each entity are provided in more detail in the following paragraphs.

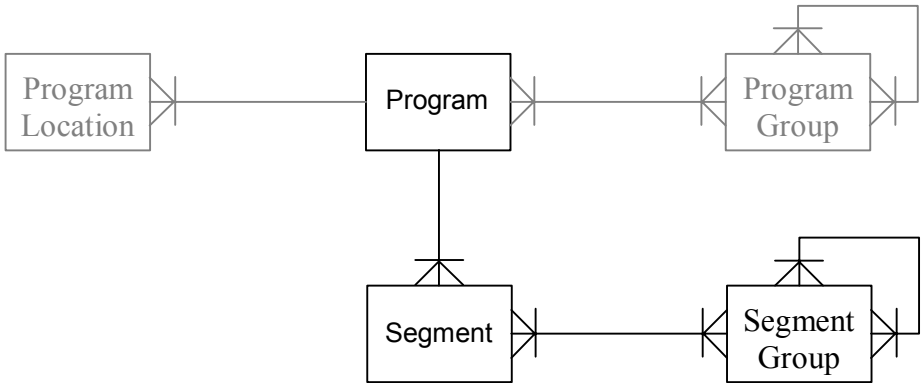


Figure 8 Entity-relationship graph for the segmentation-related components of a TVA system

Entity Definitions:

Program – the programme represents an editorially coherent piece of content unambiguously identified by a CRID.

Program Group – the programme group entity defines a grouping of programmes. Programme groups can also contain other programme groups. The relevant group type for segmentation applications is the 'Program Compilation' group type, which allows Segments from multiple programmes to be combined in Segment Groups.

Program Location – Program Location provides a physical location where the programme is available. A programme may be available at multiple programme locations; selection of a

particular programme location is performed during the location resolution process. The timelines of different instances of a programme identified by a given CRID are assumed to be identical; hence it is inconsequential for the segmentation description which location is selected during the resolution process.

Segment – A segment is a continuous fragment of a programme. A particular segment can belong to a single programme only, but it can be a member of multiple segment groups.

Segment Group – denotes a collection of segments that are grouped together, for a particular purpose or due to a shared property. A segment group can contain segments, or other segment groups.

Relationship Definitions:

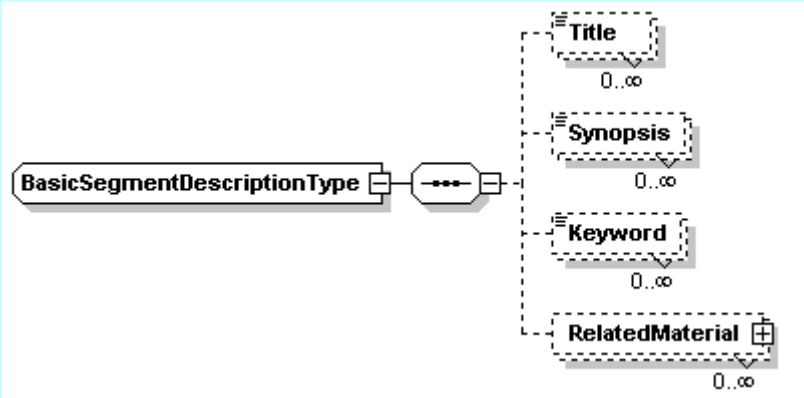
Program-to-Segment: A Segment is part of a single programme, which is identified by its CRID. A Programme can contain multiple segments.

Segment-to-Segment Group: A Segment can belong to zero or more Segment Groups. A Segment Group can contain zero or more Segments (possibly from multiple Programmes).

Segment Group-to-Segment Group: A Segment Group can be a member of zero or more Segment Groups, and it can contain zero or more Segment Groups. A Segment Group may contain either segments, or subgroups, but not both (*This latter constraint is imposed by the syntax and semantics of the description schemes*).

5.6.2 Basic Segment Description

The following complex type defines descriptive properties of segments.



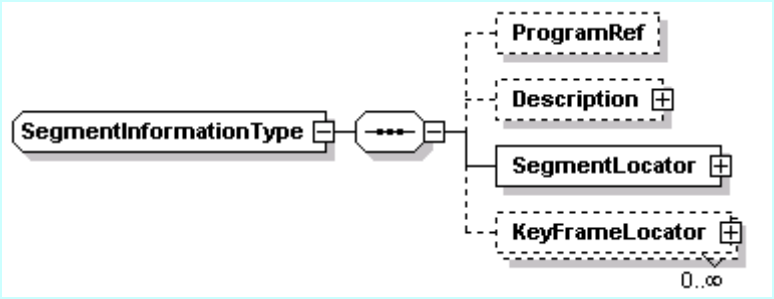

```
<complexType name="BasicSegmentDescriptionType">
  <sequence>
    <element name="Title" type="mpeg7:TitleType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="Synopsis" type="tva:SynopsisType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="Keyword" type="tva:KeywordType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="RelatedMaterial" type="tva:RelatedMaterialType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
</complexType>
```

Name	Definition
`BasicSegmentDescriptionType`	Defines basic segment description

`Title`	A title of the segment (optional). A segment can have several titles when necessary, e.g. in different languages.
`Synopsis`	A synopsis or textual description of the segment (optional). A segment can have several synopses when necessary, e.g. in different languages or lengths.
`Keyword`	A list of keywords associated with the segment (optional). A segment can have several keywords when necessary, e.g. in different languages.
`RelatedMaterial`	A link to external material related to the segment (optional). A segment can have multiple links.

5.6.3 Segment Information

The following element and complex type define a segment.



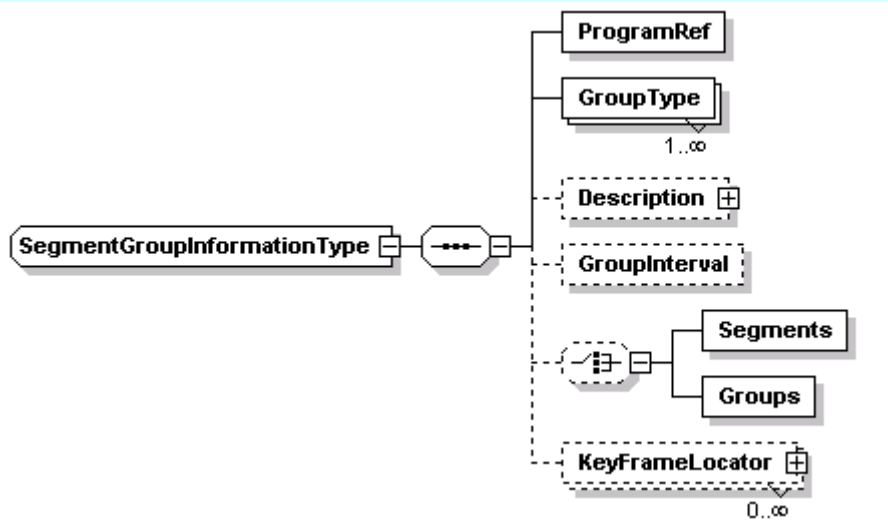

```
<complexType name="SegmentInformationType">
  <sequence>
    <element name="ProgramRef" type="tva:CRIDRefType" minOccurs="0"/>
      <element name="Description"
     type="tva:BasicSegmentDescriptionType" minOccurs="0"/>
    <element name="SegmentLocator" type="mpeg7:MediaTimeType"/>
    <element name="KeyFrameLocator" type="mpeg7:MediaTimeType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="segmentId" type="tva:TVAIDType" use="required"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
</complexType>
```

Name	Definition
`SegmentInformationType`	Defines an individual segment.
`ProgramRef`	A reference to the programme this segment belongs to. When the `ProgramRef` element is not instantiated within a segment, the programme that the segment belongs to is specified by the `ProgramRef` element of (one of) its parent segment group(s). When the segment is a direct member of a segment group that defines a programme compilation (i.e., the `ProgramRef` element of the parent segment group references a CRID associated with a Program Compilation), the `ProgramRef` element of the segment will

	reference the CRID of the particular programme that the segment belongs to
`Description`	A description of the content of the segment.
`SegmentLocator`	Locates the segment within a programme (instance) in terms of start time and duration (optional). Defined as an MPEG-7 datatype, `MediaTimeType` (See Sec. 6.4.10 of [2] for a detailed description). If the duration is not specified, the segment ends at the end of the programme. If the `timeBase` attribute for the `SegmentLocator` element is not present, the time base for the segment is taken to be the start point of the programme identified by the associated CRID. If the `timeUnit` attribute for the `SegmentLocator` element is not present, the default time unit provided with the `SegmentInformationTable` description is adopted. If the `timeBase/timeUnit` attributes of the `SegmentLocator` element are present, their values override the defaults provided in the `SegmentInformationTable`.
`KeyFrameLocator`	Locates a key frame of the segment within a programme in terms of a time point (optional). Defined as an MPEG-7 datatype, `MediaTimeType` (See Sec. 6.4.10 of [2] for a detailed description). `MediaDuration` and `MediaIncrDuration` elements of a `KeyFrameLocator` element shall not be used. Multiple key frames may be associated with a single segment. If the `timeBase` and/or `timeUnit` attributes for the `KeyFrameLocator` element are instantiated, they override the default or global time base and time unit definitions provided with the `SegmentInformationTable` description.
`segmentId`	The unique identifier of the segment of TVAIDType type.
`fragmentIdentification`	Used to identify the fragment of data to which this description belongs to

5.6.4 Segment Group Information

The following element and complex types define segment grouping.




```
<complexType name="SegmentGroupInformationType">
  <sequence>
    <element name="ProgramRef" type="tva:CRIDRefType"/>
    <element name="GroupType" type="tva:BaseSegmentGroupTypeType"
    maxOccurs="unbounded"/>
    <element name="Description"
    type="tva:BasicSegmentDescriptionType" minOccurs="0"/>
    <element name="GroupInterval" minOccurs="0">
    <complexType>
      <attribute name="ref" type="tva:TVAIDRefType" use="optional"/>
      </complexType>
    </element>
    <choice minOccurs="0">
      <element name="Segments">
        <complexType>
          <attribute name="refList" type="tva:TVAIDRefsType"
          use="required"/>
        </complexType>
      </element>
      <element name="Groups">
        <complexType>
          <attribute name="refList" type="tva:TVAIDRefsType"
          use="required"/>
        </complexType>
      </element>
    </choice>
    <element name="KeyFrameLocator" type="mpeg7:MediaTimeType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="groupId" type="tva:TVAIDType" use="required"/>
  <attribute name="ordered" type="boolean" default="true"
  use="optional"/>
  <attribute name="numberOfSegments" type="unsignedShort"
  use="optional"/>
  <attribute name="numberOfKeyFrames" type="unsignedShort"
  use="optional"/>
  <attribute name="duration" type="mpeg7:mediaDurationType"
```

```
  use="optional"/>
  <attribute name="topLevel" type="boolean" use="optional"/>
  <attributeGroup ref="tva:fragmentIdentification"/>
</complexType>

<complexType name="BaseSegmentGroupTypeType" abstract="true"/>

<complexType name="SegmentGroupTypeType">
  <complexContent>
    <extension base="tva:BaseSegmentGroupTypeType">
      <attribute name="value" use="required">
        <simpleType>
          <restriction base="string">
            <enumeration value="highlights"/>
            <enumeration value="highlights/objects"/>
            <enumeration value="highlights/events"/>
            <enumeration value="bookmarks"/>
            <enumeration value="bookmarks/objects"/>
            <enumeration value="bookmarks/events"/>
            <enumeration value="themeGroup"/>
            <enumeration value="preview"/>
            <enumeration value="preview/title"/>
            <enumeration value="preview/slideshow"/>
            <enumeration value="tableOfContents"/>
            <enumeration value="synopsis"/>
            <enumeration value="shots"/>
            <enumeration value="insertionPoints"/>
            <enumeration value="alternativeGroups"/>
            <enumeration value="other"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>
```

Name	Definition
`SegmentGroupInformationType`	Defines an individual segment group
`ProgramRef`	A reference to the programme this segment group belongs to. When the member segments/groups are collected from different programmes, the `ProgramRef` element references the CRID of a programme group of type "`programCompilation`." This CRID is resolved into the individual programmes CRIDs.
`GroupType`	The type of the segment group.
`Description`	A description of the content of the segment group
`GroupInterval`	References a single segment that defines the temporal range of the segment group. . In the example of a football game, GroupInterval would be used to indicate that all the members of the segment group are available within the specified time interval, e.g. the first half.
`Segments`	Defines the segments that are part of this group by

Name	Definition
	providing a list of references to the identifiers of elements of type `SegmentInformationType` (optional). The order of the references to segments in this list determines the temporal playback order of segments within this group.
`Groups`	Defines the segment groups that are subgroups of this group by providing a list of references to the identifiers of elements of type `SegmentGroupInformationType` (optional). The order of the references to segment groups in this list determines their ordering within this group.
`KeyFrameLocator`	Locates a key frame of the segment group within a programme in terms of a time point (optional). Defined as an MPEG-7 datatype, `MediaTimeType` (See Sec. 6.4.10 of [2] for a detailed description). `MediaDuration` and `MediaIncrDuration` elements of a `KeyFrameLocator` element shall not be used. Multiple key frames may be associated with a single segment group.
`groupId`	The unique identifier of the segment group
`ordered`	Specifies whether the given segment group presents an ordered playback list (i.e. whether order of the segment or segment groups within the given segment group is significant) (optional). The value of the attribute should match the semantics of the associated SegmentGroupType (e.g. highlights for "ordered" and bookmarks for "unordered").
`numberOfSegments`	The number of segments in the segment group (optional). The value of this attribute specifies only the segments that are direct members of the segment group.
`numberOfKeyFrames`	The number of key frames in the segment group (optional). The value of this attribute specifies only the key frames of the segments that are direct members of the segment group.
`duration`	The sum of the durations of the segments contained within this group (optional). This duration corresponds to the sum of the durations of the segments that are direct members of the segment group.
`topLevel`	Specifies whether the given segment group is a top-level group (optional).
`fragmentIdentification`	Used to identify the fragment of data to which this description belongs to
`BaseSegmentGroupTypeType`	An abstract type that specifies the valid types of segment groups.
`SegmentGroupTypeType`	An enumerated list of the TVA-defined segment group types. The allowed types are defined as

Name	Definition
	follows: *highlights* - The group of segments represents selected highlights from one or more programmes. A segment group of this type requires continuous playback. *highlights/objects* - The group of segments represents selected highlights from a programme (or programmes) that share a common object or objects (e.g. *Seinfeld* highlights with Kramer). A segment group of this type requires continuous playback. *highlights/events* - The group of segments represents selected highlights from a programme (or programmes) that share a common event or events (e.g. touchdowns in the Super Bowl). A segment group of this type requires continuous playback. *bookmarks* - The segment group defines a set of access points to a programme. If the member segments of a segment group of type *bookmarks* contain segment duration information, this duration information shall be ignored, and the segments shall be treated as "open-ended." A segment group of this type does not require continuous playback. *bookmarks/objects* - The segment group defines a set of access points to a programme, where the selected access points share a common object or objects. If the member segments of a segment group of type *bookmarks/objects* contain segment duration information, this duration information shall be ignored, and the segments shall be treated as "open-ended." A segment group of this type does not require continuous playback. *bookmarks/events* - The segment group defines a set of access points to a programme, where the selected access points share a common event or events. If the member segments of a segment group of type *bookmarks/events* contain segment duration information, this duration information shall be ignored, and the segments shall be treated as "open-ended." A segment group of this type does not require continuous playback. *themeGroup* – The segment group comprises segments that share a common topic or theme. The common theme can be specified in the segment group description. A theme group does not necessarily require direct continuous playback. *preview* - The segment group defines a preview of a programme. A segment group of this type

Name	Definition
	requires continuous playback. *preview/title* - The segment group defines a preview of a programme, where the preview serves as a promotional title or trailer for the programme. A segment group of this type requires continuous playback. *preview/slideshow* - The segment group defines a preview of a programme, where the preview serves as a compact slideshow of the programme content. A segment group of this type requires continuous playback. *tableOfContents* - The segment group defines a navigable table of contents for the programme. A segment group of this type does not require continuous playback. *synopsis* - The segment group provides a summary or synopsis of the programme. A segment group of this type requires continuous playback. *shots* - The segment group provides a list of the shots in the programme. A segment group of this type does not require continuous playback. *insertionPoints* – The segment group provides a list of segments which function as insertion points into the programme of interest; e.g. temporal locations of the commercials to be shown during a programme. The duration information associated with member segments in a segment group of type `insertionPoints` is ignored, since the member segments only determine the time instances in the original programme where additional content is to be inserted. A segment group of this type does not require continuous playback. *alternativeGroups* - Each member of this type of segment group provides an alternative view or representation, with the same functionality but different durations or levels of detail. A segment group of this type does not require continuous playback. *other* – any other segment group type.

Validity constraints:

Various validity constraints are imposed on the proposed description scheme to ensure that (i) it fits the data model of Figure 1, and (ii) the sequence and relationships of the various segments and segment groups are unambiguously defined. These constraints, which are implicit in the description schemes, are outlined below also for clarity:

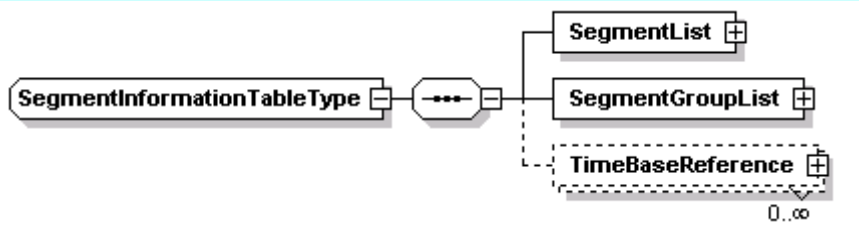
- A segment group may contain either segments, or subgroups, but not both.

- A segment group of type "`alternativeGroups`" may not contain segments and shall only contain subgroups.
- A segment group of any type other than "`tableOfContents`" and "`alternativeGroups`" may only contain segments. A group of type "`tableOfContents`" may contain other segment groups of type "`tableOfContents`."

These validity constraints reduce the complexity of the resulting descriptions by limiting the degree of nesting in the hierarchy. The navigation order of segments or segment groups is determined by the order of references to the segments in a segment group.

5.6.5 Segment Information Table

The following element and complex type define a structure for holding all segmentation-related metadata.




```
<complexType name="SegmentInformationTableType">
  <sequence>
    <element name="SegmentList">
      <complexType>
        <sequence>
          <element name="SegmentInformation"
          type="tva:SegmentInformationType" minOccurs="1"
          maxOccurs="unbounded"/>
        </sequence>
      </complexType>
    </element>
    <element name="SegmentGroupList">
      <complexType>
        <sequence>
          <element name="SegmentGroupInformation"
          type="tva:SegmentGroupInformationType" minOccurs="0"
          maxOccurs="unbounded"/>
        </sequence>
      </complexType>
    </element>
    <element name="TimeBaseReference" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <choice>
          <element name="RefMediaTime"
          type="mpeg7:mediaTimePointType"/>
          <element name="RefURI" type="anyURI"/>
        </choice>
      </complexType>
    </element>
  </sequence>
  <attribute name="timeUnit" type="mpeg7:mediaDurationType"
  use="optional" default="PT1N1000F"/>
</complexType>
```

Name	Definition
SegmentInformationTableType	Defines a structure for holding all segmentation-related metadata
SegmentList	The list of the segments in the SegmentInformationTable
SegmentInformation	Text that contains information related to each segment
SegmentGroupList	The list of the segment groups in the SegmentInformationTable
SegmentGroupInformation	Text that contains information about a group of segments
TimeBaseReference	Defines the time base reference(s) for the current description. Multiple time base references can be specified for a single SegmentInformationTable. These references can be referred to by the timeBase attributes of the SegmentLocator and KeyFrameLocator elements of the description. If no TimeBaseReference is provided in the description, the time base is taken to be the start point of the programme identified by the associated CRID.
RefMediaTime	Specifies the time base reference using an element of MPEG-7 type mediaTimePointType (See Sec. 6.4.11 of [2] for a detailed description)
RefURI	Specifies the time base reference using an element of type anyURI
timeUnit	Specifies the duration of the time intervals used in the incremental specifications of relative time points and duration. Default time unit is milliseconds.

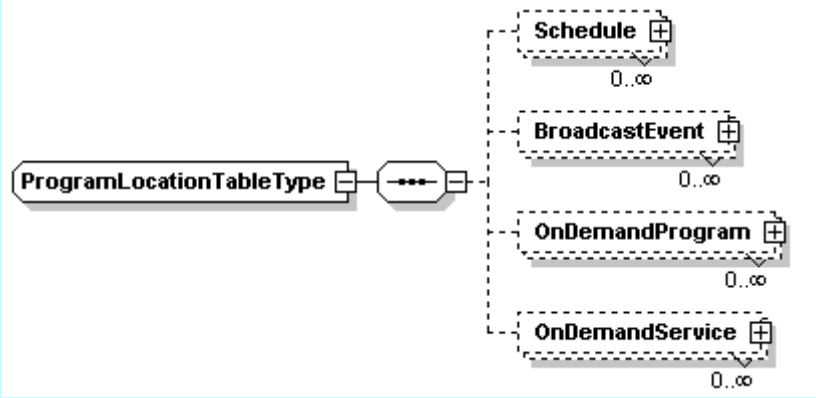
5.7 TV Anytime documents

TV-Anytime metadata is structured into self-contained documents. Each document has a single top-level element that encloses all other TV-Anytime metadata, as described below.

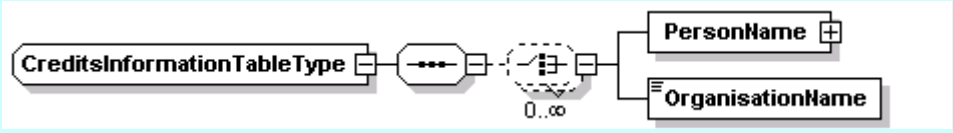
5.7.1 Information tables

```
<complexType name="ProgramInformationTableType">
  <sequence>
    <element name="ProgramInformation"
     type="tva:ProgramInformationType" minOccurs="0"
     maxOccurs="unbounded"/>
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>

<complexType name="GroupInformationTableType">
  <sequence>
    <element name="GroupInformation" type="tva:GroupInformationType"
     minOccurs="0" maxOccurs="unbounded"/>
```

```
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>
```




```
<complexType name="ProgramLocationTableType">
  <sequence>
    <element name="Schedule" type="tva:ScheduleType" minOccurs="0"
    maxOccurs="unbounded"/>
    <element name="BroadcastEvent" type="tva:BroadcastEventType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="OnDemandProgram" type="tva:OnDemandProgramType"
    minOccurs="0" maxOccurs="unbounded"/>
    <element name="OnDemandService" type="tva:OnDemandServiceType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>

<complexType name="ServiceInformationTableType">
  <sequence>
    <element name="ServiceInformation"
    type="tva:ServiceInformationType" minOccurs="0"
    maxOccurs="unbounded"/>
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>
```




```
<complexType name="CreditsInformationTableType">
  <sequence>
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="PersonName">
        <complexType>
          <complexContent>
            <extension base="mpeg7:PersonNameType">
              <attribute name="personNameId" type="tva:TVAIDType"
              use="required"/>
              <attributeGroup ref="tva:fragmentIdentification"/>
            </extension>
          </complexContent>
        </complexType>
      </element>
```

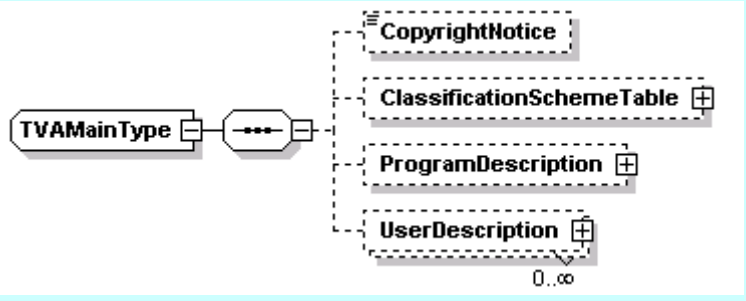
```
      <element name="OrganisationName">
        <complexType>
          <simpleContent>
            <extension base="mpeg7:TextualType">
              <attribute name="organizationNameId" type="tva:TVAIDType"
              use="required"/>
              <attributeGroup ref="tva:fragmentIdentification"/>
            </extension>
          </simpleContent>
        </complexType>
      </element>
    </choice>
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>

<element name="TVAContentLinks">
  <complexType>
    <sequence>
      <element name="RelatedMaterial" type="tva:RelatedMaterialType"
     maxOccurs="unbounded"/>
    </sequence>
  </complexType>
</element>
```

Name	Definition
ProgramInformationTableType	A complex type that contains a table of programme information records
ProgramInformation	A list of programme information records
copyrightNotice	Specifies the copyright information for the programme information table.
GroupInformationTableType	A complex type that contains a table of group information records
GroupInformation	A list of group information records
copyrightNotice	Specifies the copyright information for the group information table.
ProgramLocationTableType	A complex type that contains a table of programme location records
Schedule	A list of Schedule records, There can be more than one schedule per serviceId. Such schedules would be temporarily exclusive. It is recommended to list schedule events by time order to facilitate timely extraction and access to the information.
BroadcastEvent	A list of BroadcastEvent records
OnDemandProgram	A list of OnDemandProgram records
OnDemandService	A list of OnDemandService Records
copyrightNotice	Specifies the copyright information for the programme location table.
ServiceInformationTable	A complex type that contains a table of service

	information records
ServiceInformation	A list of service information records
copyrightNotice	Specifies the copyright information for the service information table.
CreditsInformationTableType	A complex type that contains the credits information for the content..
PersonName	An element giving the name of a person referenced in a CreditsListItem
personNameId	A unique identifier for the name of a person referenced in a CreditsListItem.
fragmentIdentification	
OrganizationName	An element giving the name of an organisation referenced in a CreditsListItem
organizationNameId	A unique identifier for the name of an organization referenced in a CreditsListItem.
fragmentIdentification	Used to identify the fragment of data to which this description belongs to
copyrightNotice	Specifies the copyright information for the credits information table.
TVAContentLinks	A complex type used to encapsulate one or more RelatedMaterialType elements. This type forms the root element of an instance document, used to describe links between related content, where the source content may or may not be identified by a CRID. It is a requirement of the delivery system to provide a mechanism to bind these TVAContentLinks with the source content.
RelatedMaterial	Provides a means of describing content, which is in someway linked to the current source content. e.g. Movie being trailered.

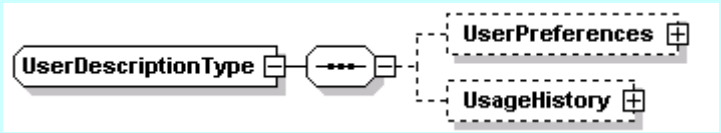
5.7.2 TV Anytime programme information document

```
<!-- ################################################ -->
<!-- Definition of TVAMain DS                         -->
<!-- ################################################ -->
```

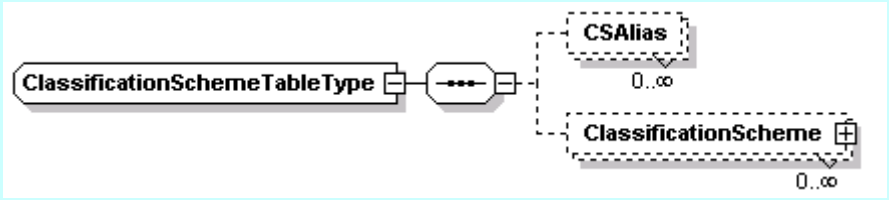



```
<element name="TVAMain" type="tva:TVAMainType"/>
<complexType name="TVAMainType">
  <sequence>
    <element name="CopyrightNotice" type="string" minOccurs="0"/>
    <element name="ClassificationSchemeTable"
```

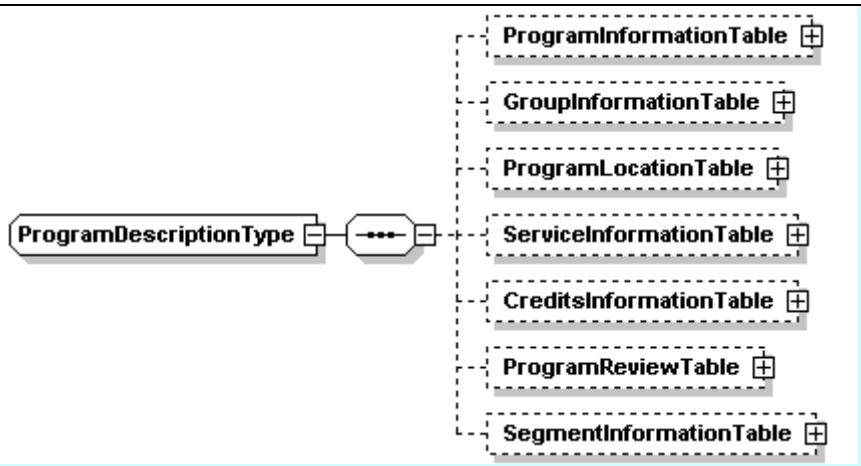
```
    type="tva:ClassificationSchemeTableType" minOccurs="0"/>
   <element name="ProgramDescription"
    type="tva:ProgramDescriptionType" minOccurs="0"/>
   <element name="UserDescription" type="tva:UserDescriptionType"
    minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute ref="xml:lang" default="en" use="optional"/>
  <attribute name="publisher" type="string" use="optional"/>
  <attribute name="publicationTime" type="dateTime" use="optional"/>
  <attribute name="rightsOwner" type="string" use="optional"/>
  <attribute name="version" type="unsignedInt" use="optional"/>
</complexType>
```




```
<complexType name="UserDescriptionType">
  <sequence>
    <element name="UserPreferences" type="mpeg7:UserPreferencesType"
    minOccurs="0"/>
    <element name="UsageHistory" type="mpeg7:UsageHistoryType"
    minOccurs="0"/>
  </sequence>
</complexType>
```




```
<complexType name="ClassificationSchemeTableType">
  <sequence>
    <element name="CSAlias" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <complexContent>
          <extension base="mpeg7:ClassificationSchemeAliasType">
            <attributeGroup ref="tva:fragmentIdentification"/>
          </extension>
        </complexContent>
      </complexType>
    </element>
    <element name="ClassificationScheme" minOccurs="0"
    maxOccurs="unbounded">
      <complexType>
        <complexContent>
          <extension base="mpeg7:ClassificationSchemeType">
            <attributeGroup ref="tva:fragmentIdentification"/>
          </extension>
        </complexContent>
      </complexType>
    </element>
  </sequence>
</complexType>
```




```
<complexType name="ProgramDescriptionType">
  <sequence>
    <element name="ProgramInformationTable"
     type="tva:ProgramInformationTableType" minOccurs="0"/>
    <element name="GroupInformationTable"
     type="tva:GroupInformationTableType" minOccurs="0"/>
    <element name="ProgramLocationTable"
     type="tva:ProgramLocationTableType" minOccurs="0"/>
    <element name="ServiceInformationTable"
     type="tva:ServiceInformationTableType" minOccurs="0"/>
    <element name="CreditsInformationTable"
     type="tva:CreditsInformationTableType" minOccurs="0"/>
    <element name="ProgramReviewTable"
     type="tva:ProgramReviewTableType" minOccurs="0"/>
    <element name="SegmentInformationTable"
     type="tva:SegmentInformationTableType" minOccurs="0"/>
  </sequence>
</complexType>
```

Name	Definition
TVAMain	The root element for a TVA schema valid instance document that provides a complete description
TVAMainType	Specifies the root element for a TVA schema valid instance document that provides a complete description
copyrightNotice	Specifies the copyright information for the TVAMain document.
ClassificationSchemeTable	Contains the classification schemes used by the various descriptions in the TVA document and their aliases (optional)
ProgramDescription	Contains elements for description of programmes
UserDescription	Contains elements for description of a user's preferences or content consumption history
xml:lang	Specifies the language of the description. Default is 'English.'
publisher	Specifies the name of the publisher of the description

publicationTime	Specifies the time the metadata description was published.
rightsOwner	Specifies the entity that holds the rights to the description
version	Specified the version of the description
UserDescriptionType	A complex data type for listing user preferences and user viewing/usage history
UserPreferences	Contains elements for description of a user's preferences
UsageHistory	Contains elements for description of a user's usage/viewing history
ClassificationSchemeTableType	A complex data type for listing the classification schemes used by the various descriptions in the TVA document and their aliases
CSAlias	Specifies an alias for a classification scheme referenced by a URI (optional). Defined as MPEG-7 type ClassificationSchemeAliasType (See Sec. 7.3.7 of [2] for a detailed description).
fragmentIdentification	Used to identify the fragment of data that this description belongs to
ClassificationScheme	Specifies a complete classification scheme that is transmitted as part of the TVA description document (optional). Defined as MPEG-7 type ClassificationSchemeType (See Sec. 7.3.2 of [2] for a detailed description).
fragmentIdentification	Used to identify the fragment of data that this description belongs to
ProgramDescriptionType	A complex type that aggregates the tables that contain programme description metadata
ProgramInformationTable	The programme information table
GroupInformationTable	The group information table
ProgramLocationTable	The programme location table
ServiceInformationTable	The service information table
CreditsInformationTable	The credits information table
ProgramReviewTable	The programme review table
SegmentInformationTable	The segment information table

6. The TVA Metadata Framework (Informative)

6.1 The XML-based TV-Anytime metadata framework

There are different contexts where it might be preferred to continuously use XML in its textual form. Binarisation allows saving bandwidth and maximizing the performance of the system (parsing at the binary level is more efficient). The transport and extraction of textual or binarised XML it out of the scope of TV-Anytime, which is agnostic to the delivery means. The choice of XML as a representation format is still compatible with the delivery of metadata originated in another format. Part B of this specification addresses the encoding and structuring of TV-Anytime metadata.

Figure 9 shows how the system can be fed by different metadata descriptions encoded in different XML or non-XML formats.

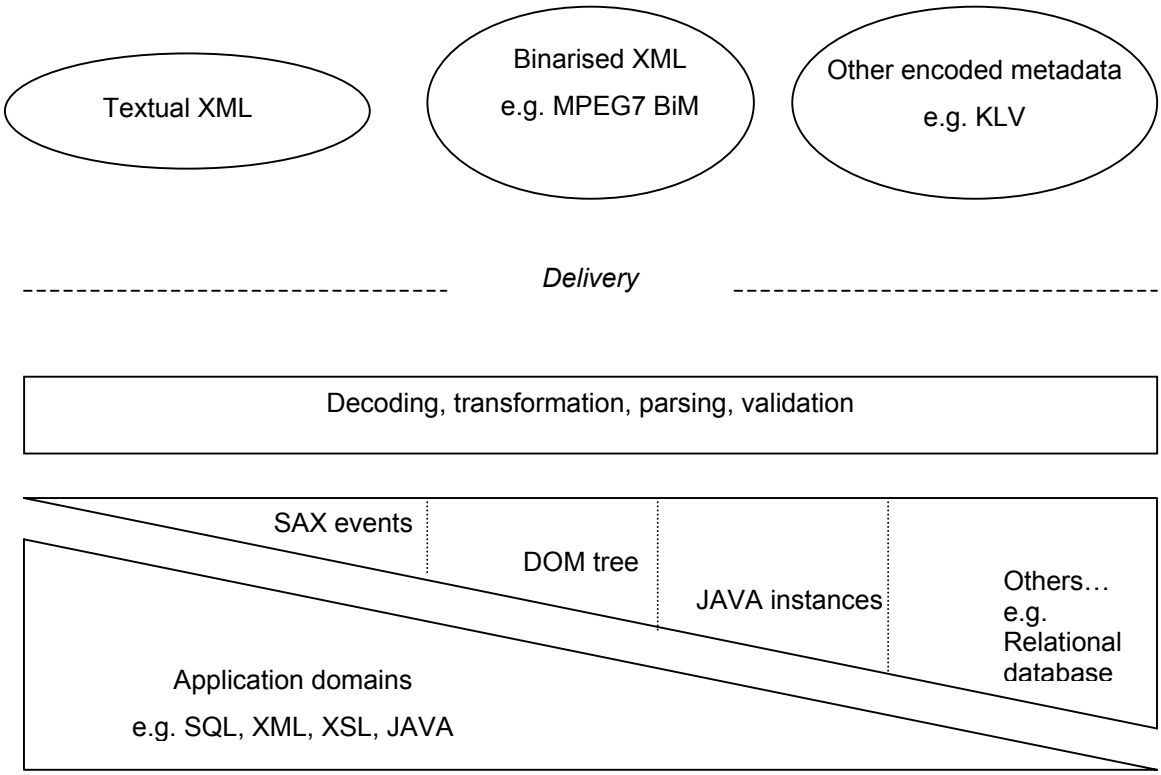


Figure 9 The XML-based TVA metadata framework

After delivery, metadata descriptions can be decoded, transformed, parsed and validated, as necessary. TV-Anytime does not specify how this should be implemented. But this is the gateway to different application domains that allows TV-Anytime to be platform independent.

6.2 Metadata Security considerations

The TV-Anytime specification provides a rich set of metadata. This metadata can be considered as an asset requiring protection. Therefore, a protection scheme may be required to handle the usage of such data. Definition of a "proper" protection scheme depends on the nature of the metadata. For example, a critical security issue for user description information would be the protection of user privacy. On the other hand, while preventing illegal copying of programme related information is another important issue, more importantly may be the control of the usage of such data related to the value-added services based on this data.

The protection of metadata shall allow distinguishing between three different usages, .i.e copy, modify and view. These will apply differently to content or user related information.

A) Content description metadata usage rules

It is reasonable to assume that a 3rd party, not the user him/herself, provides this information and also its usage control information to the user. In the case of content information, the usages may apply as follows:

Copy

This refers to copying the received metadata in a local storage or copying it to another 3rd party.

Modify

As an example. a user might want to index his favorite shots from provided segmentation data. Or the consumer may want to customise data provided by the service provider.

View (Consume)

An application is allowed "viewing", i.e. accessing and processing, metadata.

B) User description metadata usage rulesTV-Anytime User Description Metadata contains usage history and user preferences. By definition, it contains user private information; that needs to be protected against unauthorised access. However, it is expected that some user information will be exchanged.

Copy

Private user data may be copied to a 3rd party by way of a bi-directional network. There could be several levels and forms of grant that the user allows to the 3rd party, i.e. will a third party be allowed to copy this data to another third party, or can it process it itself for use in targeting.

Modify

It may or may not desirable to allow a user to modify or delete his/her user preferences. In some devices, it may be possible that agent software automatically modifies user preferences based on usage history.

View (Consume)

A typical usage is when users view and search for programmes in the usage history and then play or record the chosen programme, or an agent filters and searches for programmes according to the user preferences.

Privacy

Access to private data, locally or remotely by a third party, should be well controlled. Note that the `protected` attribute of the `UserIdentifier` datatype can be set (under user control) to indicate whether the user identifier information should remain private or not (see section 15.2.4.3 in [2]). By default, the value of `protected` is true.

In addition to the respect of these usage rules, metadata security requires the following:

- The integrity of data should be maintained.
- It shall possible to protect this information either globally or at varying levels of granularity.
- It should be possible to authenticate sources of metadata.

7. References

[1] XML Schema, W3C Recommendations (version 20010502), available at:

http://www.w3.org/TR/2001/REC-xmlschema-0-20010502

http://www.w3.org/TR/2001/REC-xmlschema-1-20010502

http://www.w3.org/TR/2001/REC-xmlschema-2-20010502

[2] Text of ISO/IEC 15938-5 Information Technology - Multimedia content description interface - Part 5 Multimedia Description Schemes, 2001.

[3] Text of ISO/IEC 15938-2 Information Technology - Multimedia content description interface - Part 2 Description Definition Language, 2001.

Appendix A TV-Anytime Classification schemes

1. Introduction

The Classification Scheme DS is an MPEG-7 tool for the provision of controlled terminology for use in classification. It is defined in section 7.3 of the MPEG-7 MDS specification [2]. The MDS specification also shows how URNs can be used to uniquely identify CSs and terms within CSs, as well as the use of CS aliasing to provide a more concise, application-specific way of referring to classification terms.

The syntax for naming TVA CSs is closely modeled on that used for MPEG-7 CSs and takes the form:

"urn:tva:metadata:cs:*SchemeName*".

The first four structural components, which always take the form "urn:tva:metadata:cs", indicate that a CS is being named within the TVA metadata CS namespace. The terminating component, SchemaName, uniquely names the CS within the namespace, e.g.: "urn:tva:metadata:cs:IntentionCS". In addition, the SchemaName may, if required, include one or more version qualifiers separated from the name by a colon, e.g.: "urn:tva:metadata:cs:IntentionCS:2002".

An informative set of Classification Schemes has been developed by TVA to provide a universally applicable default set of classification terms. In addition to - or as a total or partial replacement - for these default CSs, implementers may create and make use of other CSs to meet specific regional or other special requirements (see section 3 of Appendix B).

2. ActionType CS

```
<ClassificationScheme uri="urn:tva:metadata:cs:ActionTypeCS:2002">
  <Term termID="1">
    <Name xml:lang="en">Audio-Video</Name>
    <Definition xml:lang="en">Actions Related to Audio and
Video</Definition>
  </Term>
  <Term termID="1.1">
    <Name xml:lang="en">PlayRecording</Name>
    <Definition xml:lang="en">Play content from a
recording</Definition>
  </Term>
  <Term termID="1.2">
    <Name xml:lang="en">PlayStream</Name>
    <Definition xml:lang="en">Play content from input
stream</Definition>
  </Term>
  <Term termID="1.3">
    <Name xml:lang="en">Record</Name>
    <Definition xml:lang="en">Record input stream to local storage
media</Definition>
  </Term>
  <Term termID="1.4">
    <Name xml:lang="en">Preview</Name>
    <Definition xml:lang="en">View or listen to a summary of the
input stream</Definition>
  </Term>
  <Term termID="1.5">
    <Name xml:lang="en">Pause</Name>
    <Definition xml:lang="en">Pause the input stream</Definition>
  </Term>
```

```
  <Term termID="1.6">
    <Name xml:lang="en">FastForward</Name>
    <Definition xml:lang="en">Fast forward the input
stream</Definition>
  </Term>
  <Term termID="1.7">
    <Name xml:lang="en">Rewind</Name>
    <Definition xml:lang="en">Rewind the input stream</Definition>
  </Term>
  <Term termID="1.8">
    <Name xml:lang="en">SkipForward</Name>
    <Definition xml:lang="en">Skip forward over a portion of the
input stream</Definition>
  </Term>
  <Term termID="1.9">
    <Name xml:lang="en">SkipBackward</Name>
    <Definition xml:lang="en">Skip backward over a portion of the
input stream</Definition>
  </Term>
  <Term termID="1.1">
    <Name xml:lang="en">Mute</Name>
    <Definition xml:lang="en">Turn sound off</Definition>
  </Term>
  <Term termID="1.11">
    <Name xml:lang="en">VolumeUp</Name>
    <Definition xml:lang="en">Increase volume</Definition>
  </Term>
  <Term termID="1.12">
    <Name xml:lang="en">VolumeDown</Name>
    <Definition xml:lang="en">Reduce volume</Definition>
  </Term>
  <Term termID="1.13">
    <Name xml:lang="en">Loop/Repeat</Name>
    <Definition xml:lang="en">Repeat/loop (part of) the input
stream</Definition>
  </Term>
  <Term termID="1.14">
    <Name xml:lang="en">Shuffle</Name>
    <Definition xml:lang="en">Randomly select next track</Definition>
  </Term>
  <Term termID="1.15">
    <Name xml:lang="en">SkipToStart</Name>
    <Definition xml:lang="en">Go to the beginning of the
stream</Definition>
  </Term>
  <Term termID="1.16">
    <Name xml:lang="en">SkipToEnd</Name>
    <Definition xml:lang="en">Go to the end of the
stream</Definition>
  </Term>
  <Term termID="1.17">
    <Name xml:lang="en">CopyCD</Name>
    <Definition xml:lang="en">Copy all or part of a CD</Definition>
  </Term>
  <Row/>
  <Term termID="2">
    <Name xml:lang="en">Video </Name>
    <Definition xml:lang="en">Actions Related to Video</Definition>
  </Term>
  <Term termID="2.1">
```

```
    <Name xml:lang="en">Zoom</Name>
    <Definition xml:lang="en">Zoom (in) to the on-screen image or
sequence</Definition>
  </Term>
  <Term termID="2.2">
    <Name xml:lang="en">SlowMotion</Name>
    <Definition xml:lang="en">View input stream in slow
motion</Definition>
  </Term>
  <Term termID="2.3">
    <Name xml:lang="en">CCOn</Name>
    <Definition xml:lang="en">Closed caption is on</Definition>
  </Term>
  <Term termID="2.4">
    <Name xml:lang="en">StepForward</Name>
    <Definition xml:lang="en">Advance to next frame</Definition>
  </Term>
  <Term termID="2.5">
    <Name xml:lang="en">StepBackward</Name>
    <Definition xml:lang="en">Return to previous frame</Definition>
  </Term>
  <Term termID="3">
    <Name xml:lang="en">Data</Name>
    <Definition xml:lang="en">Actions Related to Miscellaneous
Data</Definition>
  </Term>
  <Term termID="3.1">
    <Name xml:lang="en">ClickThrough</Name>
    <Definition xml:lang="en">Follow an available link</Definition>
  </Term>
  <Term termID="3.2">
    <Name xml:lang="en">ScrollUp</Name>
    <Definition xml:lang="en">Scroll up in a web page/composite
page</Definition>
  </Term>
  <Term termID="3.3">
    <Name xml:lang="en">ScrollDown</Name>
    <Definition xml:lang="en">Scroll down in a web page/composite
page</Definition>
  </Term>
  <Term termID="3.4">
    <Name xml:lang="en">ViewGuide</Name>
    <Definition xml:lang="en">View program/resource
guide</Definition>
  </Term>
  <Term termID="3.5">
    <Name xml:lang="en">SavePage</Name>
    <Definition xml:lang="en">Save web page/composite
page</Definition>
  </Term>
  <Term termID="3.6">
    <Name xml:lang="en">PrintPage</Name>
    <Definition xml:lang="en">Print web page/composite
page</Definition>
  </Term>
  <Term termID="3.7">
    <Name xml:lang="en">Search</Name>
    <Definition xml:lang="en">Search the web or local
resources</Definition>
  </Term>
```

```
  <Term termID="3.8">
    <Name xml:lang="en">SubmitForm</Name>
    <Definition xml:lang="en">Submit a form with requested
information</Definition>
  </Term>
  <Term termID="3.9">
    <Name xml:lang="en">SubmitQuery</Name>
    <Definition xml:lang="en">Submit a query</Definition>
  </Term>
  <Term termID="3.1">
    <Name xml:lang="en">Archive</Name>
    <Definition xml:lang="en">Archive content to persistent local
storage media</Definition>
  </Term>
  <Term termID="4">
    <Name xml:lang="en">Commerce</Name>
    <Definition xml:lang="en">Actions Related to
Commerce</Definition>
  </Term>
  <Term termID="4.1">
    <Name xml:lang="en">Buy</Name>
    <Definition xml:lang="en">Purchase a product or item</Definition>
  </Term>
  <Term termID="4.2">
    <Name xml:lang="en">AddToWishList</Name>
    <Definition xml:lang="en">Designate a product or item as possible
future purchasing item</Definition>
  </Term>
  <Term termID="4.3">
    <Name xml:lang="en">AddToCart</Name>
    <Definition xml:lang="en">Designate a product or item as
potential immediate purchase item</Definition>
  </Term>
</ClassificationScheme>
```

3. HowRelated CS

```
<ClassificationScheme uri="urn:tva:metadata:cs:HowRelatedCS:2002">
  <Term termID="1">
    <Name xml:lang="en">Trailer</Name>
    <Definition xml:lang="en">
      Relation: The current A/V content is a trailer for the programme
identifying the CRID
      Example: Record the film being trailed
    </Definition>
  </Term>
  <Term termID="2">
    <Name xml:lang="en">GroupTrailer</Name>
    <Definition xml:lang="en">
      Relation: The current A/V content is a trailer for the group of
programmes identified by the CRID
      Example: Record a forthcoming series being trailed
    </Definition>
  </Term>
  <Term termID="3">
    <Name xml:lang="en">Sibling</Name>
    <Definition xml:lang="en">
      Relation: The programme identified by the CRID is a sibling of
the current A/V content
```

```
     Example: Record the next episode in a series whilst watching an
earlier episode
    </Definition>
  </Term>
  <Term termID="4">
    <Name xml:lang="en">Alternative</Name>
    <Definition xml:lang="en">
     Relation: The CRID identifies an alternative version of a
programme with the same editorial content of the current A/V stream
     Example: Whilst watching a programme the user discovers that a
high definition version is available elsewhere
    </Definition>
  </Term>
  <Term termID="5">
    <Name xml:lang="en">Parent</Name>
    <Definition xml:lang="en">
     Relation: A group of programmes identified by the CRID contain
the programme which is the current A/V content
     Example: "Record an entire series, whilst watching one of the
episodes"
    </Definition>
  </Term>
  <Term termID="6">
    <Name xml:lang="en">Recommendation</Name>
    <Definition xml:lang="en">
     Relation: The broadcaster considers there to be a relationship
between the current A/V content and the programme identified by the
CRID
     Example: Record a programme which the broadcaster recommends
because of what the user is watching
    </Definition>
  </Term>
  <Term termID="7">
    <Name xml:lang="en">GroupRecommendation</Name>
    <Definition xml:lang="en">
     Relation: The broadcaster considers there to be a relationship
between the current A/V content and the group of programmes
identified by the CRID
     Example: Record a series which the broadcaster recommends
because of what the user is watching
    </Definition>
  </Term>
  <Term termID="8">
    <Name xml:lang="en">Commercial Advert</Name>
    <Definition xml:lang="en">
     Relation: A product or service featured in the current A/V
content is being advertised elsewhere. The CRID identifies the A/V
content of that advert
     Example: The user is watching a film containing a desirable
product. If the user indicates interest in that product an advert is
captured providing further information.
    </Definition>
  </Term>
  <Term termID="9">
    <Name xml:lang="en">Direct product purchase </Name>
    <Definition xml:lang="en">
     Relation: A product or service is directly linked to the
programme being watched and can be purchased directly from this
linked resource
```

```
     Example: The user is watching a film containing a desirable
product or service. (The recipe book from a cookery series for
instance) If the user indicates interest in that product they are
taken to a web page (or interactive application) which is able to
fulfil their purchasing requirement
    </Definition>
  </Term>
  <Term termID="10">
    <Name xml:lang="en">For more information</Name>
    <Definition xml:lang="en">
     Relation: A programme has additional information in the form of
text./graphics/interactive app/web content
     Example: The user watching a programme for which the content
provider has made available additional information. If the user
indicates interest they are taken directly to that additional content
    </Definition>
  </Term>
  <Term termID="11">
    <Name xml:lang="en">Programme review information</Name>
    <Definition xml:lang="en">
     Relation: A programme has a review or critique that may be of
interest to the user in deciding whether to continue to watch
     Example: The user can look at he additional information and use
it to decide whether to continue watching the programme
    </Definition>
  </Term>
  <Term termID="12">
    <Name xml:lang="en">Recap</Name>
    <Definition xml:lang="en">
     Relation: A programme in a series has a text or av recap
     Example: The user can chose to read/watch a recap if they have
missed a previous episode or forgotten the thread of the series
    </Definition>
  </Term>
  <Term termID="13">
    <Name xml:lang="en">The making of</Name>
    <Definition xml:lang="en">
     Relation: The broadcaster has produced a "making of" programme
or  information
     Example: "The user, if interested can view the background to how
the programme was made"
    </Definition>
  </Term>
  <Term termID="14">
    <Name xml:lang="en">Support</Name>
    <Definition xml:lang="en">
     Relation: A programme that contains issues the user may wish to
enquire about
     Example: The user can find out if there is support in the form
of a telephone help line, postal or email address or web page that
provides them with the ability to seek advice on the subject matter
of the programme.
    </Definition>
  </Term>
</ClassificationScheme>
```

4. TVARoleCS

```
<ClassificationScheme  uri="urn:tva:metadata:cs:TVARoleCS:2002">
  <Import href="urn:mpeg:mpeg7:cs:RoleCS:2001"/>
  <Term termID="V708">
```

```
    <Name xml:lang="en">Dubber</Name>
  </Term>
  <Term termID="V709">
    <Name xml:lang="en">Key character</Name>
  </Term>
  <Term termID="V106">
    <Name xml:lang="en">Key talent</Name>
  </Term>
  <Term termID="V43">
    <Name xml:lang="en">Participant</Name>
  </Term>
  <Term termID="V813">
    <Name xml:lang="en">Puppeteer</Name>
  </Term>
  <Term termID="V710">
    <Name xml:lang="en">Stunts</Name>
  </Term>
  <Term termID="V80">
    <Name xml:lang="en">Choreographer</Name>
  </Term>
  <Term termID="V484">
    <Name xml:lang="en">Costume Designer</Name>
  </Term>
  <Term termID="V83">
    <Name xml:lang="en">Director of Photography</Name>
  </Term>
  <Term termID="V714">
    <Name xml:lang="en">Fight Director</Name>
  </Term>
  <Term termID="V487">
    <Name xml:lang="en">Floor Manager</Name>
  </Term>
  <Term termID="V490">
    <Name xml:lang="en">Post-Production Editor</Name>
  </Term>
  <Term termID="V715">
    <Name xml:lang="en">Script Supervisor</Name>
  </Term>
  <Term termID="V716">
    <Name xml:lang="en">Second Assistant Director</Name>
  </Term>
  <Term termID="V717">
    <Name xml:lang="en">Second Unit Director</Name>
  </Term>
  <Term termID="V718">
    <Name xml:lang="en">Sound Designer</Name>
  </Term>
  <Term termID="V76">
    <Name xml:lang="en">Adaptor</Name>
  </Term>
  <Term termID="V2">
    <Name xml:lang="en">Scenario</Name>
  </Term>
  <Term termID="V94">
    <Name xml:lang="en">Treatment/Programme Proposal</Name>
  </Term>
  <Term termID="V807">
    <Name xml:lang="en">Choir</Name>
  </Term>
  <Term termID="V42">
    <Name xml:lang="en">Conductor</Name>
  </Term>
  <Term termID="V808">
    <Name xml:lang="en">Ensemble</Name>
  </Term>
  <Term termID="V810">
    <Name xml:lang="en">Librettist</Name>
```

```
  </Term>
  <Term termID="V811">
    <Name xml:lang="en">Lyricist</Name>
  </Term>
  <Term termID="V719">
    <Name xml:lang="en">Music Arranger</Name>
  </Term>
  <Term termID="V809">
    <Name xml:lang="en">Music Group</Name>
  </Term>
  <Term termID="V88">
    <Name xml:lang="en">Orchestra</Name>
  </Term>
  <Term termID="V103">
    <Name xml:lang="en">Announcer</Name>
  </Term>
  <Term termID="V720">
    <Name xml:lang="en">Causeur</Name>
  </Term>
  <Term termID="V32">
    <Name xml:lang="en">Commentary or Commentator</Name>
  </Term>
  <Term termID="V483">
    <Name xml:lang="en">Correspondent</Name>
  </Term>
  <Term termID="V486">
    <Name xml:lang="en">Editor/Producer (News)</Name>
  </Term>
  <Term termID="V30">
    <Name xml:lang="en">Editor-in-chief</Name>
  </Term>
  <Term termID="V31">
    <Name xml:lang="en">Editor-of-the-Day</Name>
  </Term>
  <Term termID="V96">
    <Name xml:lang="en">Expert</Name>
  </Term>
  <Term termID="V97">
    <Name xml:lang="en">Interviewed Guest</Name>
  </Term>
  <Term termID="V721">
    <Name xml:lang="en">News Reader</Name>
  </Term>
  <Term termID="V117">
    <Name xml:lang="en">Witness</Name>
  </Term>
  <Term termID="V19">
    <Name xml:lang="en">Commissioning Broadcaster</Name>
  </Term>
  <Term termID="V55">
    <Name xml:lang="en">Manufacturer</Name>
  </Term>
  <Term termID="V20">
    <Name xml:lang="en">Production Company</Name>
  </Term>
  <Term termID="V22">
    <Name xml:lang="en">Production Department</Name>
  </Term>
  <Term termID="V724">
    <Name xml:lang="en">Assistant Chief Lighting Technician</Name>
  </Term>
  <Term termID="V498">
    <Name xml:lang="en">Broadcast Assistant</Name>
  </Term>
  <Term termID="V725">
    <Name xml:lang="en">Carpenter</Name>
  </Term>
```

```
<Term termID="V727">
  <Name xml:lang="en">Dialogue Coach</Name>
</Term>
<Term termID="V728">
  <Name xml:lang="en">Draughtsman</Name>
</Term>
<Term termID="V485">
  <Name xml:lang="en">Dresser</Name>
</Term>
<Term termID="V489">
  <Name xml:lang="en">Graphic Designer</Name>
</Term>
<Term termID="V729">
  <Name xml:lang="en">Hairdresser</Name>
</Term>
<Term termID="V44">
  <Name xml:lang="en">Illustrator</Name>
</Term>
<Term termID="V730">
  <Name xml:lang="en">Leadman</Name>
</Term>
<Term termID="V496">
  <Name xml:lang="en">Scenic Operative</Name>
</Term>
<Term termID="V77">
  <Name xml:lang="en">Set Dresser</Name>
</Term>
<Term termID="V82">
  <Name xml:lang="en">Visual Editor</Name>
</Term>
<Term termID="V734">
  <Name xml:lang="en">Assistant Visual Editor</Name>
</Term>
<Term termID="V735">
  <Name xml:lang="en">Clapper Loader</Name>
</Term>
<Term termID="V736">
  <Name xml:lang="en">Focus Puller</Name>
</Term>
<Term termID="V737">
  <Name xml:lang="en">Foley Artist</Name>
</Term>
<Term termID="V738">
  <Name xml:lang="en">Foley Editor</Name>
</Term>
<Term termID="V739">
  <Name xml:lang="en">Foley Mixer</Name>
</Term>
<Term termID="V488">
  <Name xml:lang="en">Graphic Assistant</Name>
</Term>
<Term termID="V740">
  <Name xml:lang="en">Grip</Name>
</Term>
<Term termID="V741">
  <Name xml:lang="en">Key Grip</Name>
</Term>
<Term termID="V742">
  <Name xml:lang="en">Matte Artist</Name>
</Term>
<Term termID="V45">
  <Name xml:lang="en">Photographer</Name>
</Term>
<Term termID="V743">
  <Name xml:lang="en">Pyrotechnician</Name>
</Term>
<Term termID="V494">
```

```
    <Name xml:lang="en">Rigger</Name>
  </Term>
  <Term termID="V744">
    <Name xml:lang="en">Second Assistant Camera</Name>
  </Term>
  <Term termID="V745">
    <Name xml:lang="en">Sound Mixer</Name>
  </Term>
  <Term termID="V49">
    <Name xml:lang="en">Sound Recordist</Name>
  </Term>
  <Term termID="V105">
    <Name xml:lang="en">Special Effects</Name>
  </Term>
  <Term termID="V746">
    <Name xml:lang="en">Vision mixer</Name>
  </Term>
  <Term termID="V748">
    <Name xml:lang="en">Animal Trainer</Name>
  </Term>
  <Term termID="V749">
    <Name xml:lang="en">Armourer</Name>
  </Term>
  <Term termID="V812">
    <Name xml:lang="en">Computer programmer</Name>
  </Term>
  <Term termID="V79">
    <Name xml:lang="en">Consultant</Name>
  </Term>
  <Term termID="V750">
    <Name xml:lang="en">Greensman</Name>
  </Term>
  <Term termID="V751">
    <Name xml:lang="en">Location Manager</Name>
  </Term>
  <Term termID="V493">
    <Name xml:lang="en">Programme Production Researcher</Name>
  </Term>
  <Term termID="V495">
    <Name xml:lang="en">Runner</Name>
  </Term>
  <Term termID="V753">
    <Name xml:lang="en">Sign Language</Name>
  </Term>
  <Term termID="V754">
    <Name xml:lang="en">Subtitles</Name>
  </Term>
  <Term termID="V95">
    <Name xml:lang="en">Translation</Name>
  </Term>
  <Term termID="V755">
    <Name xml:lang="en">Transportation Manager</Name>
  </Term>
  <Term termID="V497">
    <Name xml:lang="en">Assistant Producer</Name>
  </Term>
  <Term termID="V110">
    <Name xml:lang="en">Casting</Name>
  </Term>
  <Term termID="V491">
    <Name xml:lang="en">Production Manager</Name>
  </Term>
  <Term termID="V492">
    <Name xml:lang="en">Production Secretary</Name>
  </Term>
</ClassificationScheme>
```

5. IntentionCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:IntentionCS:2002">
   <!-- ##################################################################
-->
   <!-- INTENTION
-->
   <!--Definition: The broadcaster's primary apparent intention in
transmitting the programme   -->
   <!-- ##################################################################
-->
   <Term termID="1.1">
      <Name xml:lang="en">ENTERTAINMENT</Name>
      <Definition xml:lang="en">Programme intended primarily to evoke
relaxation, feelings of pleasure and/or awareness of beauty.</Definition>
   </Term>
   <Term termID="1.1.1">
      <Name xml:lang="en">Pure entertainment</Name>
   </Term>
   <Term termID="1.1.2">
      <Name xml:lang="en">Informative entertainment</Name>
      <Definition xml:lang="en">Programmes intended primarily to entertain
but with informative elements.</Definition>
   </Term>
   <Term termID="1.2">
      <Name xml:lang="en">INFORMATION</Name>
      <Definition xml:lang="en">Programme intended primarily to inform about
current facts, situations, events, theories or forecasts, or to provide
explanatory background information and advice.  Information programme
content has to be non-durable, that is to say that one could not imagine
that the same programme would be transmitted e.g. one year later without
losing most of its relevance.
Examples: news, documentaries about current subjects, consumer information,
charity fund raising.
Restriction: Not: sports coverages
 </Definition>
   </Term>
   <Term termID="1.2.1">
      <Name xml:lang="en">Government</Name>
      <Definition xml:lang="en">Official material broadcast on behalf of the
government of the country concerned.
Examples: A short message warning of the dangers of using fireworks, AIDS
awareness campaigns etc</Definition>
   </Term>
   <Term termID="1.2.2">
      <Name xml:lang="en">Pure information</Name>
   </Term>
   <Term termID="1.2.3">
      <Name xml:lang="en">Infotainment</Name>
      <Definition xml:lang="en">Programmes intended primarily to inform but
with entertaining elements. </Definition>
   </Term>
   <Term termID="1.2.4">
      <Name xml:lang="en">Advice</Name>
      <Definition xml:lang="en">Programme intended to advise about matters of
personal interest such as consumer prices and quality, financial matters,
health, or, for the interest of special groups, weather or traffic
information</Definition>
   </Term>
   <Term termID="1.3">
      <Name xml:lang="en">EDUCATION</Name>
      <Definition xml:lang="en">Programme primarily intended to increase
knowledge about non-current subjects in a didactic or non-didactic way, or
to religiously inspire.</Definition>
   </Term>
   <Term termID="1.3.1">
      <Name xml:lang="en">School Programmes</Name>
```

```
   </Term>
   <Term termID="1.3.1.1">
      <Name xml:lang="en">Primary</Name>
      <Definition xml:lang="en">Youth education in the first stages: between
the ages of approx 4 and 12/13 </Definition>
   </Term>
   <Term termID="1.3.1.2">
      <Name xml:lang="en">Secondary</Name>
      <Definition xml:lang="en">Youth Education in the second stage - between
the ages of approx 12/13 and 18</Definition>
   </Term>
   <Term termID="1.3.1.3">
      <Name xml:lang="en">Tertiary</Name>
      <Definition xml:lang="en">University/College education</Definition>
   </Term>
   <Term termID="1.3.2">
      <Name xml:lang="en">Lifelong/further education</Name>
      <Definition xml:lang="en">Adult education: Additional learning such as
post graduate and distance learning </Definition>
   </Term>
   <Term termID="1.4">
      <Name xml:lang="en">PROMOTIONAL</Name>
      <Definition xml:lang="en">Intended to promote content. Produced by the
broadcaster or media owner. eg trails for TV/Radio</Definition>
   </Term>
   <Term termID="1.5">
      <Name xml:lang="en">ADVERTISING</Name>
      <Definition xml:lang="en">Intended to inform consumers about commercial
products and services. Produced by/on behalf the owners/sellers of the
product or service.
Example: Interstitial commercials </Definition>
   </Term>
   <Term termID="1.6">
      <Name xml:lang="en">Retail</Name>
      <Definition xml:lang="en">Full length programmes designed to sell a
product or service to the consumer.
      Example: Programmes on a shopping channel and advertorials.
      </Definition>
   </Term>
   <Term termID="1.7">
      <Name xml:lang="en">Fund-raising</Name>
      <Definition xml:lang="en">Appeals for charities and other recognised
good causes. Examples: Telethons and disaster appeal programmes
</Definition>
   </Term>
   <Term termID="1.8">
      <Name xml:lang="en">ENRICHMENT</Name>
      <Definition xml:lang="en">Programme primarily intended to increase
knowledge about non-current subjects in a didactic or non-didactic way, or
to religiously inspire. Enrichment programme content has to be durable, that
is to say, one could very well imagine that the programme would be broadcast
one year later, without loosing its relevance.
Examples: travelogues, war documentaries, educational programmes, religious
programmes.
 </Definition>
   </Term>
   <Term termID="1.8.1">
      <Name xml:lang="en">General enrichment</Name>
      <Definition xml:lang="en">Programme primarily intended to increase
knowledge about non current subjects in a non-didactic way.</Definition>
   </Term>
   <Term termID="1.8.2">
      <Name xml:lang="en">Inspirational enrichment</Name>
      <Definition xml:lang="en">Programme based on different forms of
religious beliefs or intended to edify the audience.</Definition>
   </Term>
</ClassificationScheme>
```

6. FormatCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:FormatCS:2002">
   <!-- ##################################################################
-->
   <!-- FORMAT
-->
   <!--Definition: This dimension is used to classify programmes as to their
formal structure, in other words:       how does the programme look,
regardless of the subject with which the programme is dealing. -->
   <!-- ##################################################################
-->
   <Term termID="2.1">
      <Name xml:lang="en">STRUCTURED   </Name>
      <Definition xml:lang="en">All programmes dealing with facts,
situations, opinions, theories and forecasts.</Definition>
   </Term>
   <Term termID="2.1.1 ">
      <Name xml:lang="en">Bulletin</Name>
      <Definition xml:lang="en">Programme with formal desk presentation,
usually interspersed with visual material.
Example: News Bulletin, Weather forecast.
</Definition>
   </Term>
   <Term termID="2.1.2">
      <Name xml:lang="en">Magazine</Name>
      <Definition xml:lang="en">Programme consisting of separate items which
has at least one common quality and presented under one main
heading.</Definition>
   </Term>
   <Term termID="2.1.3">
      <Name xml:lang="en">Commented event</Name>
      <Definition xml:lang="en">An outside event covered by the broadcaster
and with an accompanying commentary, and transmitted live or deferred
(within 24 hours).
Example: Soccer match, theatre relay, parliamentary debate.
</Definition>
   </Term>
   <Term termID="2.1.4">
      <Name xml:lang="en">Documentary</Name>
      <Definition xml:lang="en">Programme concerning a single theme,
involving descriptive and/or interpretative commentaries, illustrations,
I/vs, statements, photos etc</Definition>
   </Term>
   <Term termID="2.1.5">
      <Name xml:lang="en">Discussion/Interview/Debate</Name>
      <Definition xml:lang="en">Mainly verbal programme in which more than
one person participates.</Definition>
   </Term>
   <Term termID="2.1.6">
      <Name xml:lang="en">Lecture/Speech/Presentation</Name>
      <Definition xml:lang="en">Mainly verbal programme in which only one
person participates.</Definition>
   </Term>
   <Term termID="2.1.7">
      <Name xml:lang="en">Textual (incl. relayed teletext)</Name>
      <Definition xml:lang="en">Programme consisting only of alphanumerical
information.</Definition>
   </Term>
   <Term termID="2.1.8">
      <Name xml:lang="en">Phone-in</Name>
      <Definition xml:lang="en">Programme with content primarily generated by
contributions from the general audience either on the telephone or by
sending in emails/letters</Definition>
   </Term>
   <Term termID="2.1.9">
      <Name xml:lang="en">DJ with discs</Name>
```

```
      <Definition xml:lang="en">Programme (usually in audio only) in which a
specialist presenter introduces muic or otgher pre-recorded
elements</Definition>
   </Term>
   <Term termID="2.2">
      <Name xml:lang="en">REPRESENTATION/PLAY </Name>
      <Definition xml:lang="en">Programme consisting of a prose or verse
composition, one telling a story, written for or as if for performance by
actors, puppets.
Example: Soap opera, Shakespeare play, Monty Python, radio play. Not:
documantary or informational programme whose subject is drama</Definition>
   </Term>
   <Term termID="2.2.1">
      <Name xml:lang="en">Fictional portrayal of life </Name>
      <Definition xml:lang="en">Programme performed by live actors. E.g.
Performed drama</Definition>
   </Term>
   <Term termID="2.2.2">
      <Name xml:lang="en">Readings</Name>
      <Definition xml:lang="en">Programmes consisting of readings of poems,
stories or other literary works.</Definition>
   </Term>
   <Term termID="2.2.3">
      <Name xml:lang="en">Representation with puppets </Name>
      <Definition xml:lang="en">Programme consisting of a dramatic work,
performed with puppet/claymation.
Example: The Muppet Show, Thunderbirds, Postman Pat, magic Roundabout.
      </Definition>
   </Term>
   <Term termID="2.3">
      <Name xml:lang="en">CARTOON/ANIMATION</Name>
      <Definition xml:lang="en">Programme consisting of a dramatic work,
constructed frame by frame without resource to live images </Definition>
   </Term>
   <Term termID="2.3.1">
      <Name xml:lang="en">Anime</Name>
      <Definition xml:lang="en">Japanese animation style</Definition>
   </Term>
   <Term termID="2.3.2">
      <Name xml:lang="en">Computer </Name>
      <Definition xml:lang="en">Virtual reality generated
      Example: Disney's Antz, Toy Story etc.
      </Definition>
   </Term>
   <Term termID="2.3.3">
      <Name xml:lang="en">Cartoon</Name>
      <Definition xml:lang="en">Images drawn cell by cell
      Example: Disneys Pinocchio, The Flintstones, Tom and Jerry.
      </Definition>
   </Term>
   <Term termID="2.4">
      <Name xml:lang="en">SHOW </Name>
   </Term>
   <Term termID="2.4.1">
      <Name xml:lang="en">Hosted show</Name>
      <Definition xml:lang="en">Programme, that can be regarded neither as
non-fiction nor as drama  or music/dance in which one or more  persons
fulfill the role of presenter,  host, quiz or games master, announcer,
chairperson or speaker and where the rest of the participants are generally
members of the public</Definition>
   </Term>
   <Term termID="2.4.1.1">
      <Name xml:lang="en">Simple Game show</Name>
      <Definition xml:lang="en">Programme in which the content is primarily
contained within the studio and the prizes or rewards (if any) to the
participant(s) may be regarded as conservative.
Example: University Challenge.
```

```
</Definition>
   </Term>
   <Term termID="2.4.1.2">
      <Name xml:lang="en">Big Game show</Name>
      <Definition xml:lang="en">Programme produced on a grand scale in which
the prizes or rewards are considered generous
Example: Who want's to be a millionaire.
</Definition>
   </Term>
   <Term termID="2.4.2">
      <Name xml:lang="en">Panel-show</Name>
      <Definition xml:lang="en">A programme of a light entertainment nature
which is presented by a more or less fixed group of people (panel).
Programme, that can be regarded neither as non-fiction nor as drama or
concert.
Example: The Paul Daniels Show;  Der Rudi Carrell Show.
</Definition>
   </Term>
   <Term termID="2.4.2.1">
      <Name xml:lang="en">Simple Game show</Name>
   </Term>
   <Term termID="2.4.2.2">
      <Name xml:lang="en">Big Game show</Name>
   </Term>
   <Term termID="2.4.3">
      <Name xml:lang="en">Non-hosted show</Name>
      <Definition xml:lang="en">Programme, that can be regarded neither as
non-fiction nor as drama  or music/dance in which no one fulfill the role of
presenter,  host, quiz or games master, announcer, chairperson or
speaker</Definition>
   </Term>
   <Term termID="2.4.4">
      <Name xml:lang="en">Standup comedian(s)</Name>
      <Definition xml:lang="en">Programme performed by a single. a pair or a
group of comedians performing directly towards the audience</Definition>
   </Term>
   <Term termID="2.5">
      <Name xml:lang="en">ARTISTIC PERFORMANCE </Name>
      <Definition xml:lang="en">Music,Dance,Mime etc. TV programmes
(predominantly) consisting of music, dance or ballet.</Definition>
   </Term>
   <Row/>
   <Term termID="2.7">
      <Name xml:lang="en">INTERACTIVE</Name>
      <Definition xml:lang="en">Formats making use of a range of features
such as local application support, return path and direct viewer
interaction</Definition>
   </Term>
   <Term termID="2.7.1">
      <Name xml:lang="en">LOCAL INTERACTIVITY</Name>
      <Definition xml:lang="en">Formats that happen in the 'box' where
broadcast 'data' is processed locally giving a sense of dynamic
choice</Definition>
   </Term>
   <Term termID="2.7.1.1">
      <Name xml:lang="en">Static informational</Name>
      <Definition xml:lang="en">Services (news or entertainment) where the
information is fixed and does not update</Definition>
   </Term>
   <Term termID="2.7.1.2">
      <Name xml:lang="en">Dynamic informational</Name>
      <Definition xml:lang="en">Services where the information is dynamic and
updates regularly from the broadcast stream</Definition>
   </Term>
   <Term termID="2.7.1.3">
      <Name xml:lang="en">Viewing chats</Name>
```

```
      <Definition xml:lang="en">The show displays chats taking place over
local and remote systems</Definition>
   </Term>
   <Term termID="2.7.1.4">
      <Name xml:lang="en">Quiz - Basic multiple choice</Name>
      <Definition xml:lang="en">Using any key number, ft, or arrows
etc</Definition>
   </Term>
   <Term termID="2.7.1.5">
      <Name xml:lang="en">Quiz - Text or number entry answers</Name>
      <Definition xml:lang="en">Entering real text or numbers into a
format</Definition>
   </Term>
   <Term termID="2.7.1.6">
      <Name xml:lang="en">Re-ordering</Name>
      <Definition xml:lang="en">Competitions based on moving lists into
correct orders</Definition>
   </Term>
   <Term termID="2.7.1.7">
      <Name xml:lang="en">Positional</Name>
      <Definition xml:lang="en"> Challenges or games such as 'Spot the Ball',
clicking on quess where something is</Definition>
   </Term>
   <Term termID="2.7.1.8">
      <Name xml:lang="en">Sync quiz</Name>
      <Definition xml:lang="en">Synchronised with audio and/or video (the
programme)</Definition>
   </Term>
   <Term termID="2.7.1.9">
      <Name xml:lang="en">Timer quiz </Name>
      <Definition xml:lang="en">Quiz synchronised with audio and/or
video</Definition>
   </Term>
   <Term termID="2.7.1.10">
      <Name xml:lang="en">Elimination and timer</Name>
      <Definition xml:lang="en">Against the clock</Definition>
   </Term>
   <Term termID="2.7.1.11">
      <Name xml:lang="en">Categories</Name>
      <Definition xml:lang="en">Selecting from batches of
questions</Definition>
   </Term>
   <Term termID="2.7.1.12">
      <Name xml:lang="en">Level based quiz/game</Name>
      <Definition xml:lang="en">Cannot move on without completing last level
- Difficulty or linear challenge…</Definition>
   </Term>
   <Term termID="2.7.1.13">
      <Name xml:lang="en">Following a sequence</Name>
      <Definition xml:lang="en">Temporal, simon says, red next then green
etc</Definition>
   </Term>
   <Term termID="2.7.1.14">
      <Name xml:lang="en">Local multi player</Name>
      <Definition xml:lang="en">Players using the same box in the same
space</Definition>
   </Term>
   <Term termID="2.7.1.15">
      <Name xml:lang="en">Multi stream audio-video</Name>
      <Definition xml:lang="en">Services where the interaction is based
mostly around alternate, parallel streamed audio or video
access</Definition>
   </Term>
   <Term termID="2.7.1.16">
      <Name xml:lang="en">Enhanced advertisement</Name>
      <Definition xml:lang="en">Local interaction, more information locally
etc</Definition>
```

```
   </Term>
   <Term termID="2.7.1.17">
      <Name xml:lang="en">Logic based games</Name>
   </Term>
   <Term termID="2.7.1.18">
      <Name xml:lang="en">Word games</Name>
   </Term>
   <Term termID="2.7.1.19">
      <Name xml:lang="en">Positional games</Name>
   </Term>
   <Term termID="2.7.1.20">
      <Name xml:lang="en">Board games</Name>
   </Term>
   <Term termID="2.7.1.21">
      <Name xml:lang="en">Text based gaming</Name>
   </Term>
   <Term termID="2.7.1.22">
      <Name xml:lang="en">Dynamic 2D/3D graphics</Name>
   </Term>
   <Term termID="2.7.2">
      <Name xml:lang="en">INTERMITTENT RESPONSE</Name>
      <Definition xml:lang="en">Formats that require an intermittent or
continuous return path</Definition>
   </Term>
   <Term termID="2.7.2.1">
      <Name xml:lang="en">Single impulse vote</Name>
      <Definition xml:lang="en">ala 'clap-ometer' - mass aggregation of
single hit 'press red now if you think this' type votes</Definition>
   </Term>
   <Term termID="2.7.2.2">
      <Name xml:lang="en">Impulse vote from choices</Name>
      <Definition xml:lang="en">Vote from range of items - favourite act,
band etc</Definition>
   </Term>
   <Term termID="2.7.2.3">
      <Name xml:lang="en">Impulse Yes/No vote</Name>
      <Definition xml:lang="en">Impulse vote from two choices
yes/no</Definition>
   </Term>
   <Term termID="2.7.2.4">
      <Name xml:lang="en">Impulse vote with a value </Name>
      <Definition xml:lang="en">Vote for something to happen with a value
attached - eg: how many tins of baked beans should he eat</Definition>
   </Term>
   <Term termID="2.7.2.5">
      <Name xml:lang="en">Submit answers/form</Name>
      <Definition xml:lang="en">Press now to send off answers or details -
quiz or competition</Definition>
   </Term>
   <Term termID="2.7.2.6">
      <Name xml:lang="en">SMS using mobile</Name>
      <Definition xml:lang="en">Sending text from mobile into iTV or web
platforms</Definition>
   </Term>
   <Term termID="2.7.2.7">
      <Name xml:lang="en">SMS using TV remote</Name>
      <Definition xml:lang="en">Entry of messages using TV number/letter
keys</Definition>
   </Term>
   <Term termID="2.7.2.8">
      <Name xml:lang="en">Impulse gambling</Name>
      <Definition xml:lang="en">Using intermittent persistently protected
connection to place real or fantasy bets</Definition>
   </Term>
   <Term termID="2.7.2.9">
      <Name xml:lang="en">Impulse transaction</Name>
```

```
      <Definition xml:lang="en">Using intermittent persistently protected
connection to buy product - T or ECommerce</Definition>
   </Term>
   <Term termID="2.7.2.10">
      <Name xml:lang="en">Multi player TS networked services/games</Name>
      <Definition xml:lang="en">Multi point networking in either time-shifted
mode</Definition>
   </Term>
   <Term termID="2.7.2.11">
      <Name xml:lang="en">Interactive advertisement</Name>
      <Definition xml:lang="en">Local interaction, request for more info,
details even link to impulse transaction etc</Definition>
   </Term>
   <Term termID="2.7.3">
      <Name xml:lang="en">ALWAYS ON CONNECTION</Name>
      <Definition xml:lang="en">Formats that ideally require a continuous
connection to be delivered</Definition>
   </Term>
   <Term termID="2.7.3.1">
      <Name xml:lang="en">Chat Forum</Name>
      <Definition xml:lang="en">Using built in platform
functionality</Definition>
   </Term>
   <Term termID="2.7.3.2">
      <Name xml:lang="en">Chat Forum via web </Name>
      <Definition xml:lang="en">STB with other infrastructure layer eg: web
chat engine in web browser on top of proprietary api</Definition>
   </Term>
   <Term termID="2.7.3.3">
      <Name xml:lang="en">Threaded mail discussions</Name>
      <Definition xml:lang="en">Listed as discussion threads such as usenet
type </Definition>
   </Term>
   <Term termID="2.7.3.4">
      <Name xml:lang="en">Point to point</Name>
      <Definition xml:lang="en">Show enables/includes one to one
mailing</Definition>
   </Term>
   <Term termID="2.7.3.5">
      <Name xml:lang="en">3rd party point to point</Name>
      <Definition xml:lang="en">Using 3rd party peer to peer (one to one)
chat facility layered over the show</Definition>
   </Term>
   <Term termID="2.7.3.6">
      <Name xml:lang="en">Voice chat using mic capability</Name>
      <Definition xml:lang="en">Speech to text engine enabling chat/mailing
using IP for example</Definition>
   </Term>
   <Term termID="2.7.3.7">
      <Name xml:lang="en">Dual player networked services/games</Name>
      <Definition xml:lang="en">One to one, peer networking</Definition>
   </Term>
   <Term termID="2.7.3.8">
      <Name xml:lang="en">Multi player RT networked services/games</Name>
      <Definition xml:lang="en">Multi point networking in real
time</Definition>
   </Term>
   <Term termID="2.7.3.9">
      <Name xml:lang="en">Gambling services</Name>
      <Definition xml:lang="en">Using continuous persistently protected
connection</Definition>
   </Term>
   <Term termID="2.7.3.10">
      <Name xml:lang="en">Impulse transaction</Name>
      <Definition xml:lang="en">Using intermittent persistently protected
connection to buy product - T or ECommerce</Definition>
   </Term>
```

```
   <Term termID="2.7.3.11">
      <Name xml:lang="en">Non-linear audio-video</Name>
      <Definition xml:lang="en">Services where the interaction is based
mostly around choosing alternate audio or video files - VOD and AOD, maybe
combined with 2.1.1.15 (multi stream)</Definition>
   </Term>
</ClassificationScheme>
```

7. ContentCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:ContentCS:2002">
   <!-- ##################################################################
-->
   <!--CONTENT
-->
   <!-- Definition: This dimension is used to classify programmes according
to their content or subject. Unlike in the case of the form dimension, it is
essential to hear the programme.                                        -->
   <!-- ##################################################################
-->
   <Term termID="3.1">
      <Name xml:lang="en">NON-FICTION </Name>
   </Term>
   <Term termID="3.1.1">
      <Name xml:lang="en">News </Name>
      <Definition xml:lang="en">Time-sensitive information</Definition>
   </Term>
   <Term termID="3.1.1.1">
      <Name xml:lang="en">Daily news</Name>
   </Term>
   <Term termID="3.1.1.2">
      <Name xml:lang="en">Special news/edition </Name>
   </Term>
   <Term termID="3.1.1.3">
      <Name xml:lang="en">Special Reports  </Name>
   </Term>
   <Term termID="3.1.1.4">
      <Name xml:lang="en">Commentary  </Name>
   </Term>
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used - instead refer to 3.6 Music</Definition>
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programme: </Definition>
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      <Definition xml:lang="en">Programme about (the world of)
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literature, history, mathematics and philosophy.</Definition>
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industrial processes.</Definition>
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zoology.</Definition>
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physics.</Definition>
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as means of commercial aviation. Elements concerning private pilots and
general aviation should go in leisure/Hobbies, aviation (3.3.34) Programme
consisting of elements on aviation as sport should go in
(3.2.14)</Definition>
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   <Name xml:lang="en">Bowling</Name>
</Term>
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   <Name xml:lang="en">Chess</Name>
</Term>
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   <Name xml:lang="en">Dance sport</Name>
</Term>
<Term termID="3.2.9.6">
   <Name xml:lang="en">Darts</Name>
</Term>
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</Term>
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   <Name xml:lang="en">Snooker</Name>
</Term>
<Term termID="3.2.9.9">
   <Name xml:lang="en">Tug-of-war</Name>
</Term>
<Term termID="3.2.9.10">
   <Name xml:lang="en">Balle Pelote</Name>
</Term>
<Term termID="3.2.9.11">
   <Name xml:lang="en">Basque Pelote</Name>
</Term>
<Term termID="3.2.9.12">
   <Name xml:lang="en">Trickshot</Name>
</Term>
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   <Name xml:lang="en">Gymnastics </Name>
</Term>
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   <Name xml:lang="en">Assymetric bars</Name>
</Term>
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   <Name xml:lang="en">Beam</Name>
</Term>
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   <Name xml:lang="en">Horse</Name>
</Term>
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   <Name xml:lang="en">Mat</Name>
</Term>
<Term termID="3.2.10.5">
   <Name xml:lang="en">Parallel bars</Name>
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   <Name xml:lang="en">Rings</Name>
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   <Name xml:lang="en">Equestrian</Name>
</Term>
<Term termID="3.2.11.1">
   <Name xml:lang="en">Cart</Name>
</Term>
<Term termID="3.2.11.2">
```

```
      <Name xml:lang="en">Dressage</Name>
   </Term>
   <Term termID="3.2.11.3">
      <Name xml:lang="en">Horse racing</Name>
   </Term>
   <Term termID="3.2.11.4">
      <Name xml:lang="en">Polo</Name>
   </Term>
   <Term termID="3.2.11.5">
      <Name xml:lang="en">Jumping</Name>
   </Term>
   <Term termID="3.2.11.6">
      <Name xml:lang="en">Crossing</Name>
   </Term>
   <Term termID="3.2.11.7">
      <Name xml:lang="en">Trotting</Name>
      <Definition xml:lang="en">Horse with two wheel cart and a
jockey</Definition>
   </Term>
   <Term termID="3.2.12">
      <Name xml:lang="en">Adventure sports</Name>
   </Term>
   <Term termID="3.2.12.1">
      <Name xml:lang="en">Archery</Name>
   </Term>
   <Term termID="3.2.12.2">
      <Name xml:lang="en">Extreme sports</Name>
   </Term>
   <Term termID="3.2.12.3">
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   </Term>
   <Term termID="3.2.12.4">
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   </Term>
   <Term termID="3.2.12.5">
      <Name xml:lang="en">Orienteering</Name>
   </Term>
   <Term termID="3.2.12.6">
      <Name xml:lang="en">Shooting</Name>
   </Term>
   <Term termID="3.2.12.7">
      <Name xml:lang="en">Sport acrobatics</Name>
   </Term>
   <Term termID="3.2.12.8">
      <Name xml:lang="en">Rafting</Name>
   </Term>
   <Term termID="3.2.13">
      <Name xml:lang="en">Strength-based sports</Name>
   </Term>
   <Term termID="3.2.13.1">
      <Name xml:lang="en">Body-building</Name>
   </Term>
   <Term termID="3.2.13.2">
      <Name xml:lang="en">Boxing</Name>
   </Term>
   <Term termID="3.2.13.3">
      <Name xml:lang="en">Combative sports</Name>
   </Term>
   <Term termID="3.2.13.4">
      <Name xml:lang="en">Power-lifting</Name>
   </Term>
   <Term termID="3.2.13.5">
      <Name xml:lang="en">Weight-lifting</Name>
   </Term>
   <Term termID="3.2.13.6">
      <Name xml:lang="en">Wrestling</Name>
   </Term>
```

```
   <Term termID="3.2.14">
      <Name xml:lang="en">Air sports</Name>
      <Definition xml:lang="en">Programme consisting of elements on aviation
as sport. Elements concerning commercial aviation should be categoriesed in
Air Transport (3.1.8.1) and elements concerning   private pilots and general
aviation should go in leisure/Hobbies, aviation (3.3.34) </Definition>
   </Term>
   <Term termID="3.2.14.1">
      <Name xml:lang="en">Ballooning</Name>
   </Term>
   <Term termID="3.2.14.2">
      <Name xml:lang="en">Hang gliding</Name>
   </Term>
   <Term termID="3.2.14.3">
      <Name xml:lang="en">Sky diving</Name>
   </Term>
   <Term termID="3.2.14.4">
      <Name xml:lang="en">Delta-plane</Name>
   </Term>
   <Term termID="3.2.14.5">
      <Name xml:lang="en">Parachuting</Name>
   </Term>
   <Term termID="3.2.14.6">
      <Name xml:lang="en">Kiting</Name>
   </Term>
   <Term termID="3.2.14.7">
      <Name xml:lang="en">Aeronautics</Name>
   </Term>
   <Term termID="3.2.14.8">
      <Name xml:lang="en">Gliding</Name>
      <Definition xml:lang="en">Airplane without engine </Definition>
   </Term>
   <Term termID="3.2.14.9">
      <Name xml:lang="en">Flying</Name>
      <Definition xml:lang="en">Airplane wit engine(s)</Definition>
   </Term>
   <Term termID="3.2.14.10">
      <Name xml:lang="en">Aerobatics</Name>
   </Term>
   <Term termID="3.2.15">
      <Name xml:lang="en">Golf</Name>
   </Term>
   <Term termID="3.2.16">
      <Name xml:lang="en">Fencing</Name>
   </Term>
   <Term termID="3.2.17">
      <Name xml:lang="en">Dog racing</Name>
   </Term>
   <Term termID="3.2.18">
      <Name xml:lang="en">Casting</Name>
   </Term>
   <Term termID="3.2.19">
      <Name xml:lang="en">Maccabi</Name>
   </Term>
   <Term termID="3.2.20">
      <Name xml:lang="en">Modern Pentathlon</Name>
   </Term>
   <Term termID="3.2.21">
      <Name xml:lang="en">Sombo</Name>
   </Term>
   <Term termID="3.3">
      <Name xml:lang="en">LEISURE/HOBBY</Name>
   </Term>
   <Term termID="3.3.1">
      <Name xml:lang="en">Do-it-yourself</Name>
      <Definition xml:lang="en">Where the consumer is given advice on how to
perform home improvements themselves</Definition>
```

```
   </Term>
   <Term termID="3.3.2">
      <Name xml:lang="en">Cookery</Name>
   </Term>
   <Term termID="3.3.3">
      <Name xml:lang="en">Gardening</Name>
   </Term>
   <Term termID="3.3.4">
      <Name xml:lang="en">Travel/Tourism</Name>
   </Term>
   <Term termID="3.3.5">
      <Name xml:lang="en">Adventure/Expeditions</Name>
   </Term>
   <Term termID="3.3.6">
      <Name xml:lang="en">Fishing</Name>
   </Term>
   <Term termID="3.3.7">
      <Name xml:lang="en">Outdoor  </Name>
      <Definition xml:lang="en">Hiking, rambling, </Definition>
   </Term>
   <Term termID="3.3.8">
      <Name xml:lang="en">Pet</Name>
   </Term>
   <Term termID="3.3.9">
      <Name xml:lang="en">Craft/Handicraft  </Name>
      <Definition xml:lang="en">Sewing, model making, pottery</Definition>
   </Term>
   <Term termID="3.3.10">
      <Name xml:lang="en">Art</Name>
   </Term>
   <Term termID="3.3.11">
      <Name xml:lang="en">Music</Name>
      <Definition xml:lang="en">teaching how to play musical imstruments on
learning how to appreciate music</Definition>
   </Term>
   <Term termID="3.3.12">
      <Name xml:lang="en">Board Games</Name>
      <Definition xml:lang="en">monopoply, mah jong etc</Definition>
   </Term>
   <Term termID="3.3.13">
      <Name xml:lang="en">Computer Games </Name>
      <Definition xml:lang="en">programme about games played on a
computer</Definition>
   </Term>
   <Term termID="3.3.14">
      <Name xml:lang="en">Card Cames</Name>
      <Definition xml:lang="en">bridge, poker,  etc</Definition>
   </Term>
   <Term termID="3.3.15">
      <Name xml:lang="en">Fitness / Keep-fit</Name>
   </Term>
   <Term termID="3.3.16">
      <Name xml:lang="en">Personal health</Name>
   </Term>
   <Term termID="3.3.17">
      <Name xml:lang="en">Car</Name>
   </Term>
   <Term termID="3.3.18">
      <Name xml:lang="en">Motorcycle  /Motoring</Name>
   </Term>
   <Term termID="3.3.19">
      <Name xml:lang="en">Fashion</Name>
   </Term>
   <Term termID="3.3.20">
      <Name xml:lang="en">Life/ House Keeping/Lifestyle  </Name>
   </Term>
   <Term termID="3.3.21">
```

```
      <Name xml:lang="en">Technology/Computing</Name>
   </Term>
   <Term termID="3.3.22">
      <Name xml:lang="en">Gaming</Name>
      <Definition xml:lang="en">Non card games such as roulette, craps,
etc</Definition>
   </Term>
   <Term termID="3.3.23">
      <Name xml:lang="en">Shopping</Name>
      <Definition xml:lang="en">Consumer shopping advice: Not a programme
designed to sell a specific product to the consumer</Definition>
   </Term>
   <Term termID="3.3.24">
      <Name xml:lang="en">Adult</Name>
   </Term>
   <Term termID="3.3.25">
      <Name xml:lang="en">Road safety</Name>
   </Term>
   <Term termID="3.3.26">
      <Name xml:lang="en">Consumer advice</Name>
   </Term>
   <Term termID="3.3.27">
      <Name xml:lang="en">Employment Advice</Name>
   </Term>
   <Term termID="3.3.28">
      <Name xml:lang="en">Boating</Name>
   </Term>
   <Term termID="3.3.29">
      <Name xml:lang="en">Parenting</Name>
   </Term>
   <Term termID="3.3.30">
      <Name xml:lang="en">Self-help</Name>
   </Term>
   <Term termID="3.3.31">
      <Name xml:lang="en">Collectibles</Name>
   </Term>
   <Term termID="3.3.32">
      <Name xml:lang="en">Jewellery</Name>
   </Term>
   <Term termID="3.3.33">
      <Name xml:lang="en">Beauty</Name>
   </Term>
   <Term termID="3.3.34">
      <Name xml:lang="en">Aviation</Name>
      <Definition xml:lang="en">Programme consisting of elements on aviation
as a hobby, eg private pilots and general aviation. Elements concerning
commercial avaiaton should be categoriesed in Air Transport (3.1.8.1) and
elements concerning Aviation as a sport should be in 3.2.14 and its sub-
categories  </Definition>
   </Term>
   <Term termID="3.4">
      <Name xml:lang="en">FICTION </Name>
      <Definition xml:lang="en">Programme consisting of a prose or verse
composition, resp. one telling a story, written for or as if for performance
by actors, puppets or animated.</Definition>
   </Term>
   <Term termID="3.4.1">
      <Name xml:lang="en">General light drama</Name>
      <Definition xml:lang="en">Drama written after approximately 1918 and
without literary or cultural pretensions.</Definition>
   </Term>
   <Term termID="3.4.2">
      <Name xml:lang="en">Soap</Name>
      <Definition xml:lang="en">Dramatized serial programme dealing with
easy-to-grasp situations performed by a limited cast.</Definition>
   </Term>
   <Term termID="3.4.2.1">
```

```
      <Name xml:lang="en">Soap Opera</Name>
   </Term>
   <Term termID="3.4.2.2">
      <Name xml:lang="en">Soap Special</Name>
   </Term>
   <Term termID="3.4.2.3">
      <Name xml:lang="en">Soap Talk</Name>
   </Term>
   <Term termID="3.4.3">
      <Name xml:lang="en">Romance</Name>
   </Term>
   <Term termID="3.4.4">
      <Name xml:lang="en">Legal Melodrama</Name>
      <Definition xml:lang="en">Drama production where thr primary action
takes place in law courts and/or law firms.</Definition>
   </Term>
   <Term termID="3.4.5">
      <Name xml:lang="en">Medical melodrama</Name>
      <Definition xml:lang="en">Drama production situated in hospitals and/or
dealing with medical subjects.</Definition>
   </Term>
   <Term termID="3.4.6">
      <Name xml:lang="en">Action</Name>
   </Term>
   <Term termID="3.4.6.1">
      <Name xml:lang="en">Adventure</Name>
   </Term>
   <Term termID="3.4.6.2">
      <Name xml:lang="en">Disaster</Name>
   </Term>
   <Term termID="3.4.6.3">
      <Name xml:lang="en">Mystery</Name>
   </Term>
   <Term termID="3.4.6.4">
      <Name xml:lang="en">Detective</Name>
   </Term>
   <Term termID="3.4.6.5">
      <Name xml:lang="en">Historical/epic</Name>
   </Term>
   <Term termID="3.4.6.6">
      <Name xml:lang="en">Horror</Name>
   </Term>
   <Term termID="3.4.6.7">
      <Name xml:lang="en">Science fiction</Name>
   </Term>
   <Term termID="3.4.6.8">
      <Name xml:lang="en">War</Name>
   </Term>
   <Term termID="3.4.6.9">
      <Name xml:lang="en">Western</Name>
   </Term>
   <Term termID="3.4.6.10">
      <Name xml:lang="en">Thriller</Name>
   </Term>
   <Term termID="3.4.6.11">
      <Name xml:lang="en"> sports</Name>
   </Term>
   <Term termID="3.4.6.12">
      <Name xml:lang="en">Martial arts</Name>
   </Term>
   <Term termID="3.4.6.13">
      <Name xml:lang="en">Epic</Name>
      <Definition xml:lang="en">Dramatized narrative about the deeds of a
traditional or historical hero or heroes and/or dealing with or
characterized by events of historical or legendary importance.</Definition>
   </Term>
   <Term termID="3.4.7">
```

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      <Name xml:lang="en">Fantasy/Fairy tale</Name>
   </Term>
   <Term termID="3.4.8">
      <Name xml:lang="en">Erotica</Name>
   </Term>
   <Term termID="3.4.9">
      <Name xml:lang="en">Drama based on real events (docudrama)</Name>
      <Definition xml:lang="en">Drama based upon reality sometimes with
documentary inserts.</Definition>
   </Term>
   <Term termID="3.4.10">
      <Name xml:lang="en">Musical</Name>
   </Term>
   <Term termID="3.4.11">
      <Name xml:lang="en">Comedy</Name>
      <Definition xml:lang="en">Drama in a humourous style.</Definition>
   </Term>
   <Term termID="3.4.12">
      <Name xml:lang="en">Effect Movies </Name>
   </Term>
   <Term termID="3.4.13">
      <Name xml:lang="en">Classical drama</Name>
      <Definition xml:lang="en">Drama written before approximately
1918.</Definition>
   </Term>
   <Term termID="3.4.14">
      <Name xml:lang="en">Period drama</Name>
      <Definition xml:lang="en">Drama depicting events before
1918</Definition>
   </Term>
   <Term termID="3.4.15">
      <Name xml:lang="en">Contemporary drama</Name>
      <Definition xml:lang="en">Drama written after approximately 1918 and
with literary and/or cultural value.</Definition>
   </Term>
   <Term termID="3.4.16">
      <Name xml:lang="en">Religious</Name>
   </Term>
   <Term termID="3.4.17">
      <Name xml:lang="en">Poems / Stories</Name>
   </Term>
   <Term termID="3.4.18">
      <Name xml:lang="en">biography, </Name>
   </Term>
   <Term termID="3.4.19">
      <Name xml:lang="en">psychological drama</Name>
   </Term>
   <Term termID="3.5">
      <Name xml:lang="en">AMUSEMENT</Name>
   </Term>
   <Term termID="3.5.1">
      <Name xml:lang="en">Game show</Name>
   </Term>
   <Term termID="3.5.2">
      <Name xml:lang="en">Quiz/Contest</Name>
      <Definition xml:lang="en">Competitions calling into play the
competitors' special knowledge and intelligence.</Definition>
   </Term>
   <Term termID="3.5.3">
      <Name xml:lang="en">Variety Show</Name>
      <Definition xml:lang="en">Programme with various performers such as
comedians, magicians, singers etc.. </Definition>
   </Term>
   <Term termID="3.5.4">
      <Name xml:lang="en">Surprise show</Name>
      <Definition xml:lang="en">"Programme of ""dream comes true"" type.
"</Definition>
```

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   </Term>
   <Term termID="3.5.5">
      <Name xml:lang="en">Reality show</Name>
   </Term>
   <Term termID="3.5.6">
      <Name xml:lang="en">Candid camera</Name>
      <Definition xml:lang="en">Programme in which the recording device is
hidden so the participants are not aware they are being
recorded</Definition>
   </Term>
   <Term termID="3.5.7">
      <Name xml:lang="en">Comedy</Name>
   </Term>
   <Term termID="3.5.7.1">
      <Name xml:lang="en">Broken comedy</Name>
      <Definition xml:lang="en">Humorous and/or satirical programme
consisting of short dramatical seqences, sketches, performed by
comedians.</Definition>
   </Term>
   <Term termID="3.5.7.2">
      <Name xml:lang="en">Romantic comedy</Name>
   </Term>
   <Term termID="3.5.7.3">
      <Name xml:lang="en">Sitcom</Name>
      <Definition xml:lang="en">Dramatized series in a humourous style and
performed by a more or less fixed cast. </Definition>
   </Term>
   <Term termID="3.5.7.4">
      <Name xml:lang="en">Satire</Name>
   </Term>
   <Term termID="3.5.9">
      <Name xml:lang="en">Humour</Name>
      <Definition xml:lang="en">Programme without sketches or “broken drama”,
consisting (mainly)  of verbal jokes, gags, bloopers etc.</Definition>
   </Term>
   <Term termID="3.5.10">
      <Name xml:lang="en">Magic/hypnotism</Name>
   </Term>
   <Term termID="3.5.11">
      <Name xml:lang="en">Circus</Name>
   </Term>
   <Term termID="3.5.12">
      <Name xml:lang="en">Dating show</Name>
   </Term>
   <Term termID="3.5.13">
      <Name xml:lang="en">Bullfighting</Name>
   </Term>
   <Term termID="3.5.14">
      <Name xml:lang="en">Rodeo</Name>
   </Term>
   <Term termID="3.5.15">
      <Name xml:lang="en">Airshow</Name>
      <Definition xml:lang="en">A programme depicting an organised event of
an aironautical nature</Definition>
   </Term>
   <Term termID="3.6">
      <Name xml:lang="en">MUSIC</Name>
   </Term>
   <Term termID="3.6.1">
      <Name xml:lang="en">Classical music </Name>
      <Definition xml:lang="en">Serious music including chamber,
instrumental, operatic, symphonic, vocal and choral music.</Definition>
   </Term>
   <Term termID="3.6.1.1">
      <Name xml:lang="en">Early</Name>
      <Definition xml:lang="en">Music written before the middle of the 17th
Century.</Definition>
```

```
   </Term>
   <Term termID="3.6.1.2">
      <Name xml:lang="en">Classical </Name>
      <Definition xml:lang="en">Serious music from the middle of the 18th
until the end of the 19th Century.</Definition>
   </Term>
   <Term termID="3.6.1.3">
      <Name xml:lang="en">Romantic</Name>
   </Term>
   <Term termID="3.6.1.4">
      <Name xml:lang="en">Contemporary</Name>
      <Definition xml:lang="en">Serious music from the 20th Century
onwards.</Definition>
   </Term>
   <Term termID="3.6.1.5">
      <Name xml:lang="en">Light classical</Name>
      <Definition xml:lang="en">Music by Strauss, Lehar etc.</Definition>
   </Term>
   <Term termID="3.6.1.6">
      <Name xml:lang="en">Middle Ages</Name>
   </Term>
   <Term termID="3.6.1.7">
      <Name xml:lang="en">Renaissance </Name>
   </Term>
   <Term termID="3.6.1.8">
      <Name xml:lang="en">Baroque</Name>
   </Term>
   <Term termID="3.6.1.9">
      <Name xml:lang="en">Opera</Name>
   </Term>
   <Term termID="3.6.1.10">
      <Name xml:lang="en">Solo instruments (e.g. Piano)</Name>
   </Term>
   <Term termID="3.6.1.11">
      <Name xml:lang="en">Chamber</Name>
   </Term>
   <Term termID="3.6.1.12">
      <Name xml:lang="en">Symphonic</Name>
   </Term>
   <Term termID="3.6.1.13">
      <Name xml:lang="en">Vocal</Name>
   </Term>
   <Term termID="3.6.1.14">
      <Name xml:lang="en">Choral</Name>
   </Term>
   <Term termID="3.6.2">
      <Name xml:lang="en">Jazz</Name>
      <Definition xml:lang="en">Indigenous American popular music, born in
New Orleans of African slaves social circumstances. The jazz idiom is
characterized by certain syncopations over strongly reiterated rhythms in
which improvisation plays an important part.</Definition>
   </Term>
   <Term termID="3.6.2.1">
      <Name xml:lang="en">New Orleans/early jazz</Name>
   </Term>
   <Term termID="3.6.2.2">
      <Name xml:lang="en">Big band/Swing/Dixie</Name>
      <Definition xml:lang="en">e.g Glenn Miller, Chris Barber</Definition>
   </Term>
   <Term termID="3.6.2.3">
      <Name xml:lang="en">Blues/soul jazz</Name>
      <Definition xml:lang="en">e.g. L. Armstrong, </Definition>
   </Term>
   <Term termID="3.6.2.4">
      <Name xml:lang="en">Bop/hard bop/bebop</Name>
      <Definition xml:lang="en">e.g. Sonny Rollings, Oscar Peterson, J.
Coltrane, T. Monk</Definition>
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   </Term>
   <Term termID="3.6.2.5">
      <Name xml:lang="en">Traditional/smooth</Name>
   </Term>
   <Term termID="3.6.2.6">
      <Name xml:lang="en">Cool/free</Name>
      <Definition xml:lang="en">e.g. Modern Jazz Quartet</Definition>
   </Term>
   <Term termID="3.6.2.7">
      <Name xml:lang="en">Modern/Acid/Avant-garde</Name>
   </Term>
   <Term termID="3.6.2.8">
      <Name xml:lang="en">Latin &amp;amp; World jazz</Name>
      <Definition xml:lang="en">e.g. Manu Dibango</Definition>
   </Term>
   <Term termID="3.6.2.9">
      <Name xml:lang="en">Pop jazz/jazz funk</Name>
   </Term>
   <Term termID="3.6.2.10">
      <Name xml:lang="en">Acid jazz / fusion</Name>
      <Definition xml:lang="en">e.g. G. Benson, Miles Davis</Definition>
   </Term>
   <Term termID="3.6.3">
      <Name xml:lang="en">Background music</Name>
   </Term>
   <Term termID="3.6.3.1">
      <Name xml:lang="en">Middle-of-the-road</Name>
      <Definition xml:lang="en">Music which, in varying circumstances, gives
pleasure to the widest possible spectrum of the music-loving
audience.</Definition>
   </Term>
   <Term termID="3.6.3.2">
      <Name xml:lang="en">Easy listening</Name>
   </Term>
   <Term termID="3.6.3.3">
      <Name xml:lang="en">Ambient</Name>
   </Term>
   <Term termID="3.6.3.4">
      <Name xml:lang="en">Mood music</Name>
   </Term>
   <Term termID="3.6.3.5">
      <Name xml:lang="en">Oldies</Name>
   </Term>
   <Term termID="3.6.3.6">
      <Name xml:lang="en">Love songs</Name>
   </Term>
   <Term termID="3.6.3.7">
      <Name xml:lang="en">Dance hall</Name>
   </Term>
   <Term termID="3.6.3.8">
      <Name xml:lang="en">Soundtrack</Name>
   </Term>
   <Term termID="3.6.3.9">
      <Name xml:lang="en">Trailer</Name>
   </Term>
   <Term termID="3.6.3.10">
      <Name xml:lang="en">Showtunes</Name>
   </Term>
   <Term termID="3.6.3.11">
      <Name xml:lang="en">TV</Name>
   </Term>
   <Term termID="3.6.3.12">
      <Name xml:lang="en">Cabaret</Name>
   </Term>
   <Term termID="3.6.3.13">
      <Name xml:lang="en">Instrumental</Name>
   </Term>
```

```
   <Term termID="3.6.3.14">
      <Name xml:lang="en">Sound clip</Name>
   </Term>
   <Term termID="3.6.3.15">
      <Name xml:lang="en">Retro</Name>
   </Term>
   <Term termID="3.6.4">
      <Name xml:lang="en">Pop-rock  </Name>
      <Definition xml:lang="en">The most central and widely circulated types
of popular music, in particular rock and roll, etc.</Definition>
   </Term>
   <Term termID="3.6.4.1">
      <Name xml:lang="en">Pop </Name>
      <Definition xml:lang="en">e.g. early Beatles</Definition>
   </Term>
   <Term termID="3.6.4.2">
      <Name xml:lang="en">Chanson/ballad</Name>
      <Definition xml:lang="en">e.g Juliette Gréco, Leonard
Cohen</Definition>
   </Term>
   <Term termID="3.6.4.3">
      <Name xml:lang="en">Traditional rock and roll</Name>
      <Definition xml:lang="en">e.g. Elvis Presley</Definition>
   </Term>
   <Term termID="3.6.4.4">
      <Name xml:lang="en">Soft/slow rock</Name>
      <Definition xml:lang="en">e.g. Paul Simon, James Taylor,..</Definition>
   </Term>
   <Term termID="3.6.4.5">
      <Name xml:lang="en">Classic/dance/pop-rock</Name>
      <Definition xml:lang="en">e.g. Michael Jackson, Spice Girls, Johnny
Halliday, Rolling Stones</Definition>
   </Term>
   <Term termID="3.6.4.6">
      <Name xml:lang="en">Folk </Name>
      <Definition xml:lang="en">e.g. Bob Dylan</Definition>
   </Term>
   <Term termID="3.6.4.7">
      <Name xml:lang="en">Punk/funk rock</Name>
   </Term>
   <Term termID="3.6.4.8">
      <Name xml:lang="en">New Age</Name>
   </Term>
   <Term termID="3.6.4.9">
      <Name xml:lang="en">Instrumental/Band/symphonic rock/jam bands</Name>
   </Term>
   <Term termID="3.6.4.10">
      <Name xml:lang="en">Progressive/alternative/indie/experimental/art-
rock</Name>
   </Term>
   <Term termID="3.6.4.11">
      <Name xml:lang="en">Seasonal/holiday</Name>
      <Definition xml:lang="en">e.g. Christmas</Definition>
   </Term>
   <Term termID="3.6.4.12">
      <Name xml:lang="en">Japanese  pop-rock</Name>
   </Term>
   <Term termID="3.6.4.13">
      <Name xml:lang="en">Karaoke / singing contests</Name>
   </Term>
   <Term termID="3.6.5">
      <Name xml:lang="en">Blues/Rhythm and blues/Soul/Gospel</Name>
   </Term>
   <Term termID="3.6.5.1">
      <Name xml:lang="en">Blues</Name>
   </Term>
   <Term termID="3.6.5.2">
```

```
      <Name xml:lang="en">R &amp;amp; B</Name>
   </Term>
   <Term termID="3.6.5.3">
      <Name xml:lang="en">Soul</Name>
   </Term>
   <Term termID="3.6.5.4">
      <Name xml:lang="en">Gospel</Name>
   </Term>
   <Term termID="3.6.6">
      <Name xml:lang="en">Country and Western</Name>
   </Term>
   <Term termID="3.6.7">
      <Name xml:lang="en">Rap/Hip Hop/Reggae</Name>
   </Term>
   <Term termID="3.6.7.1">
      <Name xml:lang="en">Rap/Christian rap</Name>
   </Term>
   <Term termID="3.6.7.2">
      <Name xml:lang="en">Hip Hop/Trip-Hop</Name>
   </Term>
   <Term termID="3.6.7.3">
      <Name xml:lang="en">Reggae</Name>
   </Term>
   <Term termID="3.6.7.4">
      <Name xml:lang="en">Ska/Gangsta</Name>
   </Term>
   <Term termID="3.6.8">
      <Name xml:lang="en">Electronic/Club/Urban/Dance</Name>
   </Term>
   <Term termID="3.6.8.1">
      <Name xml:lang="en">Acid/Punk/Acid Punk</Name>
   </Term>
   <Term termID="3.6.8.2">
      <Name xml:lang="en">Disco</Name>
   </Term>
   <Term termID="3.6.8.3">
      <Name xml:lang="en">Techno/Euro-Techno/Techno-
Industrial/Industrial</Name>
   </Term>
   <Term termID="3.6.8.4">
      <Name xml:lang="en">House/Techno House</Name>
   </Term>
   <Term termID="3.6.8.5">
      <Name xml:lang="en">Rave</Name>
   </Term>
   <Term termID="3.6.8.6">
      <Name xml:lang="en">Jungle/tribal</Name>
   </Term>
   <Term termID="3.6.8.7">
      <Name xml:lang="en">Trance</Name>
   </Term>
   <Term termID="3.6.8.8">
      <Name xml:lang="en">Punk</Name>
   </Term>
   <Term termID="3.6.8.9">
      <Name xml:lang="en">Garage/psychadelic</Name>
   </Term>
   <Term termID="3.6.8.10">
      <Name xml:lang="en">Metal/Death metal/Pop metal</Name>
   </Term>
   <Term termID="3.6.8.11">
      <Name xml:lang="en">Drum and Bass</Name>
   </Term>
   <Term termID="3.6.8.12">
      <Name xml:lang="en">Pranks</Name>
   </Term>
   <Term termID="3.6.8.13">
```

```
      <Name xml:lang="en">Grunge</Name>
   </Term>
   <Term termID="3.6.8.14">
      <Name xml:lang="en">Dance/dance-pop</Name>
   </Term>
   <Term termID="3.6.9">
      <Name xml:lang="en">World/Traditional/Ethnic/Folk music</Name>
      <Definition xml:lang="en">Music that is the product of a tradition that
has been evolved through the process of oral transmission.</Definition>
   </Term>
   <Term termID="3.6.9.1">
      <Name xml:lang="en">Africa</Name>
   </Term>
   <Term termID="3.6.9.2">
      <Name xml:lang="en">Asia</Name>
   </Term>
   <Term termID="3.6.9.3">
      <Name xml:lang="en">Australia/Oceania</Name>
   </Term>
   <Term termID="3.6.9.4">
      <Name xml:lang="en">Caribbean</Name>
   </Term>
   <Term termID="3.6.9.5">
      <Name xml:lang="en">Europe</Name>
   </Term>
   <Term termID="3.6.9.6">
      <Name xml:lang="en">Latin America</Name>
   </Term>
   <Term termID="3.6.9.7">
      <Name xml:lang="en">Middle East</Name>
   </Term>
   <Term termID="3.6.9.8">
      <Name xml:lang="en">North America</Name>
   </Term>
   <Term termID="3.6.10">
      <Name xml:lang="en">Hit-Chart/Song Requests  </Name>
   </Term>
   <Term termID="3.6.11">
      <Name xml:lang="en">Children's Songs  </Name>
   </Term>
   <Term termID="3.6.12">
      <Name xml:lang="en">Event music</Name>
   </Term>
   <Term termID="3.6.12.1">
      <Name xml:lang="en">wedding</Name>
   </Term>
   <Term termID="3.6.12.2">
      <Name xml:lang="en">sports,</Name>
   </Term>
   <Term termID="3.6.12.3">
      <Name xml:lang="en">Ceremonial/Chants</Name>
   </Term>
   <Term termID="3.6.13">
      <Name xml:lang="en">spoken</Name>
   </Term>
   <Term termID="3.6.14">
      <Name xml:lang="en">Dance</Name>
   </Term>
   <Term termID="3.6.14.1">
      <Name xml:lang="en">Ballet</Name>
   </Term>
   <Term termID="3.6.14.2">
      <Name xml:lang="en">Tap</Name>
   </Term>
   <Term termID="3.6.14.3">
      <Name xml:lang="en">Modern </Name>
   </Term>
```

```
<Term termID="3.6.14.4">
   <Name xml:lang="en">Classical </Name>
</Term>
<Term termID="3.7">
   <Name xml:lang="en">INTERACTIVE GAMES</Name>
</Term>
<Term termID="3.7.1">
   <Name xml:lang="en">Content games categories </Name>
</Term>
<Term termID="3.7.1.1">
   <Name xml:lang="en">Action</Name>
</Term>
<Term termID="3.7.1.2">
   <Name xml:lang="en">Adventure</Name>
</Term>
<Term termID="3.7.1.3">
   <Name xml:lang="en">Fighting</Name>
</Term>
<Term termID="3.7.1.4">
   <Name xml:lang="en">Online</Name>
</Term>
<Term termID="3.7.1.5">
   <Name xml:lang="en">Platform</Name>
</Term>
<Term termID="3.7.1.6">
   <Name xml:lang="en">Puzzle</Name>
</Term>
<Term termID="3.7.1.7">
   <Name xml:lang="en">RPG/ MUDs</Name>
</Term>
<Term termID="3.7.1.8">
   <Name xml:lang="en">Racing</Name>
</Term>
<Term termID="3.7.1.9">
   <Name xml:lang="en">Simulation</Name>
</Term>
<Term termID="3.7.1.10">
   <Name xml:lang="en">Sports</Name>
</Term>
<Term termID="3.7.1.11">
   <Name xml:lang="en">Strategy</Name>
</Term>
<Term termID="3.7.1.12">
   <Name xml:lang="en">Wrestling</Name>
</Term>
<Term termID="3.7.1.13">
   <Name xml:lang="en">Classic/Retro</Name>
</Term>
<Term termID="3.7.2">
   <Name xml:lang="en">STYLE</Name>
</Term>
<Term termID="3.7.2.1">
   <Name xml:lang="en">Logic based</Name>
</Term>
<Term termID="3.7.2.2">
   <Name xml:lang="en">Word games</Name>
</Term>
<Term termID="3.7.2.3">
   <Name xml:lang="en">Positional</Name>
</Term>
<Term termID="3.7.2.4">
   <Name xml:lang="en">Board games</Name>
</Term>
<Term termID="3.7.2.5">
   <Name xml:lang="en">Text environments</Name>
</Term>
<Term termID="3.7.2.6">
```

```
      <Name xml:lang="en">Dynamic 2D/3D graphics</Name>
   </Term>
   <Term termID="3.7.2.7">
      <Name xml:lang="en">Non-linear video</Name>
   </Term>
</ClassificationScheme>
```

8. ContentCommercialCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:ContentCommercialCS:2002">
   <!-- ##################################################################
-->
   <!-- CONTENT, extension for commercial products.
-->
   <!-- Definition: This dimension is used to classify programmes according
to their content or subject. Unlike in the case of the form dimension, it is
essential to hear the programme.    -->
   <!-- ##################################################################
-->
   <Term termID="3.50">
      <Name xml:lang="en">Commercial/Products</Name>
   </Term>
   <Term termID="3.50.1">
      <Name xml:lang="en">Agriculture, forestry and fishery products </Name>
   </Term>
   <Term termID="3.50.1.1">
      <Name xml:lang="en">Products of agriculture, horticulture and market
gardening</Name>
   </Term>
   <Term termID="3.50.1.2">
      <Name xml:lang="en">Live animals and animal products</Name>
   </Term>
   <Term termID="3.50.1.3">
      <Name xml:lang="en">Forestry and logging products</Name>
   </Term>
   <Term termID="3.50.1.4">
      <Name xml:lang="en">Fish and other fishing products</Name>
   </Term>
   <Term termID="3.50.2">
      <Name xml:lang="en">Ores and minerals; electricity, gas and water
"</Name>
   </Term>
   <Term termID="3.50.2.1">
      <Name xml:lang="en">Coal and lignite; peat"</Name>
   </Term>
   <Term termID="3.50.2.2">
      <Name xml:lang="en">Crude petroleum and natural gas</Name>
   </Term>
   <Term termID="3.50.2.3">
      <Name xml:lang="en">Uranium and thorium ores</Name>
   </Term>
   <Term termID="3.50.2.4">
      <Name xml:lang="en">Metal ores</Name>
   </Term>
   <Term termID="3.50.2.5">
      <Name xml:lang="en">Stone, sand and clay</Name>
   </Term>
   <Term termID="3.50.2.6">
      <Name xml:lang="en">Other minerals</Name>
   </Term>
   <Term termID="3.50.2.7">
      <Name xml:lang="en">Electricity, town gas, steam and hot water</Name>
   </Term>
   <Term termID="3.50.2.8">
      <Name xml:lang="en">Water</Name>
   </Term>
   <Term termID="3.50.3">
```

```
      <Name xml:lang="en">Food products, beverages and tobacco; textiles,
apparel and leather products "</Name>
   </Term>
   <Term termID="3.50.3.1">
      <Name xml:lang="en">Meat, fish, fruit, vegetables, oils and fats</Name>
   </Term>
   <Term termID="3.50.3.2">
      <Name xml:lang="en">Dairy products</Name>
   </Term>
   <Term termID="3.50.3.3">
      <Name xml:lang="en">Grain mill products, starches and starch products;
other food products"</Name>
   </Term>
   <Term termID="3.50.3.4">
      <Name xml:lang="en">Beverages</Name>
   </Term>
   <Term termID="3.50.3.5">
      <Name xml:lang="en">Tobacco products</Name>
   </Term>
   <Term termID="3.50.3.6">
      <Name xml:lang="en">Yarn and thread; woven and tufted textile
fabrics"</Name>
   </Term>
   <Term termID="3.50.3.7">
      <Name xml:lang="en">Textile articles other than apparel</Name>
   </Term>
   <Term termID="3.50.3.8">
      <Name xml:lang="en">Knitted or crocheted fabrics; wearing
apparel"</Name>
   </Term>
   <Term termID="3.50.3.9">
      <Name xml:lang="en">Leather and leather products; footwear"</Name>
   </Term>
   <Term termID="3.50.4">
      <Name xml:lang="en">Other transportable goods, except metal products,
machinery and equipment </Name>
   </Term>
   <Term termID="3.50.4.1">
      <Name xml:lang="en">Products of wood, cork, straw and plaiting
materials</Name>
   </Term>
   <Term termID="3.50.4.2">
      <Name xml:lang="en">Pulp, paper and paper products; printed matter and
related articles"</Name>
   </Term>
   <Term termID="3.50.4.3">
      <Name xml:lang="en">Coke oven products; refined petroleum products;
nuclear fuel"</Name>
   </Term>
   <Term termID="3.50.4.4">
      <Name xml:lang="en">Basic chemicals</Name>
   </Term>
   <Term termID="3.50.4.5">
      <Name xml:lang="en">Other chemical products; man-made fibres"</Name>
   </Term>
   <Term termID="3.50.4.6">
      <Name xml:lang="en">Rubber and plastics products</Name>
   </Term>
   <Term termID="3.50.4.7">
      <Name xml:lang="en">Glass and glass products and other non-metallic
products n.e.c.</Name>
   </Term>
   <Term termID="3.50.4.8">
      <Name xml:lang="en">Furniture; other transportable goods n.e.c."</Name>
   </Term>
   <Term termID="3.50.4.9">
      <Name xml:lang="en">Wastes or scraps</Name>
```

```
   </Term>
   <Term termID="3.50.5">
      <Name xml:lang="en">Metal products, machinery and equipment </Name>
   </Term>
   <Term termID="3.50.5.1">
      <Name xml:lang="en">Basic metals</Name>
   </Term>
   <Term termID="3.50.5.2">
      <Name xml:lang="en">Fabricated metal products, except machinery and
equipment</Name>
   </Term>
   <Term termID="3.50.5.3">
      <Name xml:lang="en">General purpose machinery</Name>
   </Term>
   <Term termID="3.50.5.4">
      <Name xml:lang="en">Special purpose machinery</Name>
   </Term>
   <Term termID="3.50.5.5">
      <Name xml:lang="en">Office, accounting and computing machinery</Name>
   </Term>
   <Term termID="3.50.5.6">
      <Name xml:lang="en">Electrical machinery and apparatus</Name>
   </Term>
   <Term termID="3.50.5.7">
      <Name xml:lang="en">Radio, television and communication equipment and
apparatus</Name>
   </Term>
   <Term termID="3.50.5.8">
      <Name xml:lang="en">Medical appliances, precision and optical
instruments, watches and clocks</Name>
   </Term>
   <Term termID="3.50.5.9">
      <Name xml:lang="en">Transport equipment</Name>
   </Term>
   <Term termID="3.50.6">
      <Name xml:lang="en">Intangible assets; land; constructions;
construction services "</Name>
   </Term>
   <Term termID="3.50.6.1">
      <Name xml:lang="en">Intangible assets</Name>
   </Term>
   <Term termID="3.50.6.2">
      <Name xml:lang="en">Land</Name>
   </Term>
   <Term termID="3.50.6.3">
      <Name xml:lang="en">Constructions</Name>
   </Term>
   <Term termID="3.50.6.4">
      <Name xml:lang="en">Construction services</Name>
   </Term>
   <Term termID="3.50.7">
      <Name xml:lang="en">Distributive trade services; lodging; food and
beverage serving services; transport services; and utilities distribution
services "</Name>
   </Term>
   <Term termID="3.50.7.1">
      <Name xml:lang="en">Wholesale trade services</Name>
   </Term>
   <Term termID="3.50.7.2">
      <Name xml:lang="en">Retail trade services</Name>
   </Term>
   <Term termID="3.50.7.3">
      <Name xml:lang="en">Lodging; food and beverage serving services"</Name>
   </Term>
   <Term termID="3.50.7.4">
      <Name xml:lang="en">Land transport services</Name>
   </Term>
```

```
   <Term termID="3.50.7.5">
      <Name xml:lang="en">Water transport services</Name>
   </Term>
   <Term termID="3.50.7.6">
      <Name xml:lang="en">Air transport services</Name>
   </Term>
   <Term termID="3.50.7.7">
      <Name xml:lang="en">Supporting and auxiliary transport services</Name>
   </Term>
   <Term termID="3.50.7.8">
      <Name xml:lang="en">Postal and courier services</Name>
   </Term>
   <Term termID="3.50.7.9">
      <Name xml:lang="en">Electricity distribution services; gas and water
distribution services through mains"</Name>
   </Term>
   <Term termID="3.50.8">
      <Name xml:lang="en">Financial and related services; real estate
services; and rental and leasing services "</Name>
   </Term>
   <Term termID="3.50.8.1">
      <Name xml:lang="en">Financial intermediation, insurance and auxiliary
services</Name>
   </Term>
   <Term termID="3.50.8.2">
      <Name xml:lang="en">Real estate services</Name>
   </Term>
   <Term termID="3.50.8.3">
      <Name xml:lang="en">Leasing or rental services without operator</Name>
   </Term>
   <Term termID="3.50.9">
      <Name xml:lang="en">Business and production services </Name>
   </Term>
   <Term termID="3.50.9.1">
      <Name xml:lang="en">Research and development services</Name>
   </Term>
   <Term termID="3.50.9.2">
      <Name xml:lang="en">Professional, scientific and technical
services</Name>
   </Term>
   <Term termID="3.50.9.3">
      <Name xml:lang="en">Other professional, scientific and technical
services</Name>
   </Term>
   <Term termID="3.50.9.4">
      <Name xml:lang="en">Telecommunications services; information retrieval
and supply services"</Name>
   </Term>
   <Term termID="3.50.9.5">
      <Name xml:lang="en">Support services</Name>
   </Term>
   <Term termID="3.50.9.6">
      <Name xml:lang="en">Production services, on a fee or contract
basis</Name>
   </Term>
   <Term termID="3.50.9.7">
      <Name xml:lang="en">Maintenance and repair services</Name>
   </Term>
   <Term termID="3.50.10">
      <Name xml:lang="en">Community, social and personal services </Name>
   </Term>
   <Term termID="3.50.10.1">
      <Name xml:lang="en">Public administration and other services to the
community as a whole; compulsory social security services"</Name>
   </Term>
   <Term termID="3.50.10.2">
      <Name xml:lang="en">Education services</Name>
```

```
   </Term>
   <Term termID="3.50.10.3">
      <Name xml:lang="en">Health and social services</Name>
   </Term>
   <Term termID="3.50.10.4">
      <Name xml:lang="en">Sewage and refuse disposal, sanitation and other
environmental protection services</Name>
   </Term>
   <Term termID="3.50.10.5">
      <Name xml:lang="en">Services of membership organizations</Name>
   </Term>
   <Term termID="3.50.10.6">
      <Name xml:lang="en">Recreational, cultural and sporting services</Name>
   </Term>
   <Term termID="3.50.10.7">
      <Name xml:lang="en">Other services</Name>
   </Term>
   <Term termID="3.50.10.8">
      <Name xml:lang="en">Domestic services</Name>
   </Term>
   <Term termID="3.50.10.9">
      <Name xml:lang="en">Services provided by extraterritorial organizations
and bodies</Name>
   </Term>
</ClassificationScheme>
```

9. OriginationCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:OriginationCS:2002">
   <!-- ##########################################################################
-->
   <!-- ORIGINATION
-->
   <!-- Definition: The technical source of the material making up the
programme.  -->
   <!-- ##########################################################################
-->
   <Term termID="5.1">
      <Name xml:lang="en">STUDIO </Name>
      <Definition xml:lang="en">Programme produced in a controlled
environment by the broadcaster.</Definition>
   </Term>
   <Term termID="5.1.1">
      <Name xml:lang="en">Live</Name>
      <Definition xml:lang="en">Transmitted as the event is
happening</Definition>
   </Term>
   <Term termID="5.1.2">
      <Name xml:lang="en">As live</Name>
      <Definition xml:lang="en">Recorded and transmitted without editing post
the event.</Definition>
   </Term>
   <Term termID="5.1.3">
      <Name xml:lang="en">Edited</Name>
      <Definition xml:lang="en">Recorded and edited prior to
transmission</Definition>
   </Term>
   <Term termID="5.2">
      <Name xml:lang="en">Made on Location</Name>
      <Definition xml:lang="en">"Programme produced in a mainly ""real""
environment"</Definition>
   </Term>
   <Term termID="5.2.1">
      <Name xml:lang="en">Live</Name>
      <Definition xml:lang="en">Transmitted as the event is
happening</Definition>
   </Term>
```

```
   <Term termID="5.2.2">
      <Name xml:lang="en">As live</Name>
      <Definition xml:lang="en">Recorded and transmitted without editing post
the event.</Definition>
   </Term>
   <Term termID="5.2.3">
      <Name xml:lang="en">Edited</Name>
      <Definition xml:lang="en">Recorded and edited prior to
transmission</Definition>
   </Term>
   <Term termID="5.3">
      <Name xml:lang="en">CINEMA INDUSTRY ORIGINATED</Name>
      <Definition xml:lang="en">Productions originally made to be shown in
cinemas.</Definition>
   </Term>
   <Term termID="5.4">
      <Name xml:lang="en">MADE ON FILM (but not originating from the cinema
industry)</Name>
   </Term>
   <Term termID="5.5">
      <Name xml:lang="en">HOME VIDEO</Name>
      <Definition xml:lang="en">Programme primarily consisting of material
produced by the consumer </Definition>
   </Term>
   <Term termID="5.6">
      <Name xml:lang="en">MULTIMEDIA FORMAT (I.e. text/computer, etc.)</Name>
   </Term>
</ClassificationScheme>
```

10. IntendedAudienceCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:IntendedAudienceCS:2002">
   <!-- ##########################################################################
-->
   <!-- Intended Audience
-->
   <!-- Definition: Programme intended for special audiences defined by age,
cultural/ethnic background, profession etc.
-->
   <!-- ##########################################################################
-->
   <Term termID="4.1">
      <Name xml:lang="en">GENERAL AUDIENCE</Name>
      <Definition xml:lang="en">Programmes not intended for a specific target
group.</Definition>
   </Term>
   <Term termID="4.2">
      <Name xml:lang="en">AGE GROUPS</Name>
      <Definition xml:lang="en">The age group levels for which the programme
is primarily intended.. </Definition>
   </Term>
   <Term termID="4.2.1">
      <Name xml:lang="en">Children</Name>
   </Term>
   <Term termID="4.2.1.1">
      <Name xml:lang="en">age 4-7</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.1.2">
      <Name xml:lang="en">age 8-13</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.1.3">
      <Name xml:lang="en">age 14-15</Name>
```

```
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.2">
      <Name xml:lang="en">Young Adults </Name>
   </Term>
   <Term termID="4.2.2.1">
      <Name xml:lang="en">age 16-17</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.2.2">
      <Name xml:lang="en">age 18-20</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.2.3">
      <Name xml:lang="en">age 21-24</Name>
   </Term>
   <Term termID="4.2.3">
      <Name xml:lang="en">Adults</Name>
   </Term>
   <Term termID="4.2.3.1">
      <Name xml:lang="en">age 25-34</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.3.2">
      <Name xml:lang="en">age 35-44</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.3.3">
      <Name xml:lang="en">age 45-54</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.3.4">
      <Name xml:lang="en">age 55-64</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.3.5">
      <Name xml:lang="en">age 65+</Name>
      <Definition xml:lang="en">Age ranges are indicative and may vary
slightly in each country</Definition>
   </Term>
   <Term termID="4.2.3.6">
      <Name xml:lang="en">specific single age</Name>
      <Definition xml:lang="en">This section to be used where a programme
targets one specific age
Example: A programme targeted at those reaching the age to vote or retire.
      </Definition>
   </Term>
   <Term termID="4.2.4">
      <Name xml:lang="en">All Ages</Name>
   </Term>
   <Term termID="4.3">
      <Name xml:lang="en">SOCIAL GROUPS</Name>
   </Term>
   <Term termID="4.3.1">
      <Name xml:lang="en">Ethnic</Name>
      <Definition xml:lang="en">Programme for people differing in language
and/or culture  E.g. .Local key words to apply (ie Asian, )</Definition>
   </Term>
   <Term termID="4.3.1.1">
      <Name xml:lang="en">Immigrant groups</Name>
```

```
      <Definition xml:lang="en">Programme for non-native born people and
their immediate descendants, differing in language and/or
culture.</Definition>
   </Term>
   <Term termID="4.3.1.2">
      <Name xml:lang="en">Indiginous</Name>
      <Definition xml:lang="en">Programme for native born people and their
immediate descendants, differing in language and/or culture.</Definition>
   </Term>
   <Term termID="4.3.2">
      <Name xml:lang="en">Religious</Name>
      <Definition xml:lang="en">Local key words to apply (ie Shinto,
Christian, Hindu etc)</Definition>
   </Term>
   <Term termID="4.4">
      <Name xml:lang="en">Occupational Groups</Name>
      <Definition xml:lang="en">The occupation of the consumer for whitch the
programme is primarely intended</Definition>
   </Term>
   <Term termID="4.4.1">
      <Name xml:lang="en">AB</Name>
      <Definition xml:lang="en"> </Definition>
   </Term>
   <Term termID="4.4.1.1">
      <Name xml:lang="en">A</Name>
      <Definition xml:lang="en">Opinion former, Judge, Member of the govt
etc</Definition>
   </Term>
   <Term termID="4.4.1.2">
      <Name xml:lang="en">B</Name>
      <Definition xml:lang="en">Industry leader, Senior Govt figure,
Professionals (Doctors, Lawyers etc) etc</Definition>
   </Term>
   <Term termID="4.4.2">
      <Name xml:lang="en">C1C2</Name>
   </Term>
   <Term termID="4.4.2.1">
      <Name xml:lang="en">C1</Name>
      <Definition xml:lang="en">"""White Collar worker"""</Definition>
   </Term>
   <Term termID="4.4.2.2">
      <Name xml:lang="en">C2</Name>
      <Definition xml:lang="en">Skilled manual labourer</Definition>
   </Term>
   <Term termID="4.4.3">
      <Name xml:lang="en">DE</Name>
   </Term>
   <Term termID="4.4.3.1">
      <Name xml:lang="en">D</Name>
      <Definition xml:lang="en">General manual labourer</Definition>
   </Term>
   <Term termID="4.4.3.2">
      <Name xml:lang="en">E</Name>
      <Definition xml:lang="en">Unemployed (+ students!)</Definition>
   </Term>
   <Term termID="4.5">
      <Name xml:lang="en">OTHER SPECIAL INTEREST/OCCUPATIONAL GROUPS</Name>
      <Definition xml:lang="en">Local Keywords to apply. (ie Farmer, Student,
DIY, Angler, Gay and lesbian, </Definition>
   </Term>
   <Term termID="4.6">
      <Name xml:lang="en">GENDER</Name>
   </Term>
   <Term termID="4.6.1">
      <Name xml:lang="en">Primarily for males</Name>
   </Term>
   <Term termID="4.6.2">
```

```
      <Name xml:lang="en">Primarily for females</Name>
   </Term>
   <Term termID="4.6.3">
      <Name xml:lang="en">For Males and Females</Name>
   </Term>
   <Term termID="4.7">
      <Name xml:lang="en">GEOGRAPHICAL</Name>
      <Definition xml:lang="en">The territory for which the programme  is
primarily intended.. </Definition>
   </Term>
   <Term termID="4.7.1">
      <Name xml:lang="en">Universal</Name>
      <Definition xml:lang="en">Intended for all audiences regardless of
territory</Definition>
   </Term>
   <Term termID="4.7.2">
      <Name xml:lang="en">Continental</Name>
      <Definition xml:lang="en">Asia, European</Definition>
   </Term>
   <Term termID="4.7.3">
      <Name xml:lang="en">National</Name>
      <Definition xml:lang="en">France, S Africa</Definition>
   </Term>
   <Term termID="4.7.4">
      <Name xml:lang="en">Regional</Name>
      <Definition xml:lang="en">Mid West, Pacific Rim</Definition>
   </Term>
   <Term termID="4.7.5">
      <Name xml:lang="en">Local</Name>
      <Definition xml:lang="en">Zip Codes, Postcodes, Towns</Definition>
   </Term>
   <Term termID="4.8">
      <Name xml:lang="en">EDUCATION LEVEL</Name>
   </Term>
   <Term termID="4.8.1">
      <Name xml:lang="en">Primary</Name>
   </Term>
   <Term termID="4.8.2">
      <Name xml:lang="en">Secondary</Name>
   </Term>
   <Term termID="4.8.3">
      <Name xml:lang="en">Tertiary</Name>
   </Term>
   <Term termID="4.8.4">
      <Name xml:lang="en">Post Graduate/Life Long Learning</Name>
      <Field9> </Field9>
   </Term>
   <Term termID="4.9">
      <Name xml:lang="en">LIFESTYLE STAGES</Name>
   </Term>
   <Term termID="4.9.1">
      <Name xml:lang="en">Single</Name>
      <Definition xml:lang="en">Single person with no dependants</Definition>
   </Term>
   <Term termID="4.9.2">
      <Name xml:lang="en">Couple</Name>
      <Definition xml:lang="en">cohabiting adult with no
dependants</Definition>
   </Term>
   <Term termID="4.9.3">
      <Name xml:lang="en">Family with Children 0-3</Name>
      <Definition xml:lang="en">adult with pre school children</Definition>
   </Term>
   <Term termID="4.9.4">
      <Name xml:lang="en">Family with Children 4-7</Name>
      <Definition xml:lang="en">adult with young children</Definition>
   </Term>
```

```
   <Term termID="4.9.5">
      <Name xml:lang="en">Family with Children 8-15</Name>
      <Definition xml:lang="en">adult with older children</Definition>
   </Term>
   <Term termID="4.9.6">
      <Name xml:lang="en">Family with Children 16+</Name>
      <Definition xml:lang="en">adult with young dependant
adults</Definition>
   </Term>
   <Term termID="4.9.7">
      <Name xml:lang="en">Empty Nester</Name>
      <Definition xml:lang="en">adult whose dependants have left
home</Definition>
   </Term>
   <Term termID="4.9.8">
      <Name xml:lang="en">Retired</Name>
      <Definition xml:lang="en">single or widowed adult whose dependants have
left home</Definition>
   </Term>
</ClassificationScheme>
```

11. LanguageCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:LanguageCS:2002">
   <!-- ##########################################################################
-->
   <!-- LANGUAGE CODES   -->
   <!-- Definitions from ISO/IEC 639-1
-->
   <!--  As used and maintained by ISO 639-1
-->
   <!-- ##########################################################################
-->
   <Term termID="om">
      <Name xml:lang="en">(Afan) Oromo</Name>
   </Term>
   <Term termID="ab">
      <Name xml:lang="en">Abkhazian</Name>
   </Term>
   <Term termID="aa">
      <Name xml:lang="en">Afar</Name>
   </Term>
   <Term termID="af">
      <Name xml:lang="en">Afrikaans</Name>
   </Term>
   <Term termID="sq">
      <Name xml:lang="en">Albanian</Name>
   </Term>
   <Term termID="am">
      <Name xml:lang="en">Amharic</Name>
   </Term>
   <Term termID="ar">
      <Name xml:lang="en">Arabic</Name>
   </Term>
   <Term termID="hy">
      <Name xml:lang="en">Armenian</Name>
   </Term>
   <Term termID="as">
      <Name xml:lang="en">Assamese</Name>
   </Term>
   <Term termID="ay">
      <Name xml:lang="en">Aymara</Name>
   </Term>
   <Term termID="az">
      <Name xml:lang="en">Azerbaijani</Name>
   </Term>
   <Term termID="ba">
```

```
      <Name xml:lang="en">Bashkir</Name>
   </Term>
   <Term termID="eu">
      <Name xml:lang="en">Basque</Name>
   </Term>
   <Term termID="bn">
      <Name xml:lang="en">Bengali</Name>
   </Term>
   <Term termID="dz">
      <Name xml:lang="en">Bhutani</Name>
   </Term>
   <Term termID="bh">
      <Name xml:lang="en">Bihari</Name>
   </Term>
   <Term termID="bi">
      <Name xml:lang="en">Bislama</Name>
   </Term>
   <Term termID="br">
      <Name xml:lang="en">Breton</Name>
   </Term>
   <Term termID="bg">
      <Name xml:lang="en">Bulgarian</Name>
   </Term>
   <Term termID="my">
      <Name xml:lang="en">Burmese</Name>
   </Term>
   <Term termID="be">
      <Name xml:lang="en">Byelorussian</Name>
   </Term>
   <Term termID="km">
      <Name xml:lang="en">Cambodian</Name>
   </Term>
   <Term termID="ca">
      <Name xml:lang="en">Catalan</Name>
   </Term>
   <Term termID="zh">
      <Name xml:lang="en">Chinese</Name>
   </Term>
   <Term termID="co">
      <Name xml:lang="en">Corsican</Name>
   </Term>
   <Term termID="hr">
      <Name xml:lang="en">Croatian</Name>
   </Term>
   <Term termID="cs">
      <Name xml:lang="en">Czech</Name>
   </Term>
   <Term termID="da">
      <Name xml:lang="en">Danish</Name>
   </Term>
   <Term termID="nl">
      <Name xml:lang="en">Dutch</Name>
   </Term>
   <Term termID="en">
      <Name xml:lang="en">English</Name>
   </Term>
   <Term termID="eo">
      <Name xml:lang="en">Esperanto</Name>
   </Term>
   <Term termID="et">
      <Name xml:lang="en">Estonian</Name>
   </Term>
   <Term termID="fo">
      <Name xml:lang="en">Faeroese</Name>
   </Term>
   <Term termID="fj">
      <Name xml:lang="en">Fiji</Name>
```

```
   </Term>
   <Term termID="fi">
      <Name xml:lang="en">Finnish</Name>
   </Term>
   <Term termID="fr">
      <Name xml:lang="en">French</Name>
   </Term>
   <Term termID="fy">
      <Name xml:lang="en">Frisian</Name>
   </Term>
   <Term termID="gl">
      <Name xml:lang="en">Galician</Name>
   </Term>
   <Term termID="ka">
      <Name xml:lang="en">Georgian</Name>
   </Term>
   <Term termID="de">
      <Name xml:lang="en">German</Name>
   </Term>
   <Term termID="el">
      <Name xml:lang="en">Greek</Name>
   </Term>
   <Term termID="kl">
      <Name xml:lang="en">Greenlandic</Name>>

   </Term>
   <Term termID="gn">
      <Name xml:lang="en">Guarani</Name>
   </Term>
   <Term termID="gu">
      <Name xml:lang="en">Gujarati</Name>
   </Term>
   <Term termID="ha">
      <Name xml:lang="en">Hausa</Name>
   </Term>
   <Term termID="he">
      <Name xml:lang="en">Hebrew (former iw)</Name>
   </Term>
   <Term termID="hi">
      <Name xml:lang="en">Hindi</Name>
   </Term>
   <Term termID="hu">
      <Name xml:lang="en">Hungarian</Name>
   </Term>
   <Term termID="is">
      <Name xml:lang="en">Icelandic</Name>
   </Term>
   <Term termID="id">
      <Name xml:lang="en">Indonesian(prev in)</Name>
   </Term>
   <Term termID="ia">
      <Name xml:lang="en">Interlingua</Name>
   </Term>
   <Term termID="ie">
      <Name xml:lang="en">Interlingue</Name>
   </Term>
   <Term termID="ik">
      <Name xml:lang="en">Inupiak</Name>
   </Term>
   <Term termID="iu">
      <Name xml:lang="en">Inuktitut (Eskimo)</Name>
   </Term>
   <Term termID="ga">
      <Name xml:lang="en">Irish</Name>
   </Term>
   <Term termID="it">
      <Name xml:lang="en">Italian</Name>
```

```
  </Term>
  <Term termID="ja">
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  </Term>
  <Term termID="jw">
     <Name xml:lang="en">Javanese</Name>
  </Term>
  <Term termID="kn">
     <Name xml:lang="en">Kannada</Name>
  </Term>
  <Term termID="ks">
     <Name xml:lang="en">Kashmiri</Name>
  </Term>
  <Term termID="kk">
     <Name xml:lang="en">Kazakh</Name>
  </Term>
  <Term termID="rw">
     <Name xml:lang="en">Kinyarwanda</Name>
  </Term>
  <Term termID="ky">
     <Name xml:lang="en">Kirghiz</Name>
  </Term>
  <Term termID="rn">
     <Name xml:lang="en">Kirundi</Name>
  </Term>
  <Term termID="ko">
     <Name xml:lang="en">Korean</Name>
  </Term>
  <Term termID="ku">
     <Name xml:lang="en">Kurdish</Name>
  </Term>
  <Term termID="lo">
     <Name xml:lang="en">Laothian</Name>
  </Term>
  <Term termID="la">
     <Name xml:lang="en">Latin</Name>
  </Term>
  <Term termID="lv">
     <Name xml:lang="en">Latvian, Lettish</Name>
  </Term>
  <Term termID="ln">
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  </Term>
  <Term termID="lt">
     <Name xml:lang="en">Lithuanian</Name>
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  <Term termID="ml">
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  </Term>
  <Term termID="mt">
     <Name xml:lang="en">Maltese</Name>
  </Term>
  <Term termID="mi">
     <Name xml:lang="en">Maori</Name>
  </Term>
  <Term termID="mr">
     <Name xml:lang="en">Marathi</Name>
  </Term>
```

```
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</Term>
<Term termID="mn">
   <Name xml:lang="en">Mongolian</Name>
</Term>
<Term termID="na">
   <Name xml:lang="en">Nauru</Name>
</Term>
<Term termID="ne">
   <Name xml:lang="en">Nepali</Name>
</Term>
<Term termID="no">
   <Name xml:lang="en">Norwegian</Name>
</Term>
<Term termID="oc">
   <Name xml:lang="en">Occitan</Name>
</Term>
<Term termID="or">
   <Name xml:lang="en">Oriya</Name>
</Term>
<Term termID="ps">
   <Name xml:lang="en">Pashto, Pushto</Name>
</Term>
<Term termID="fa">
   <Name xml:lang="en">Persian</Name>
</Term>
<Term termID="pl">
   <Name xml:lang="en">Polish</Name>
</Term>
<Term termID="pt">
   <Name xml:lang="en">Portuguese</Name>
</Term>
<Term termID="pa">
   <Name xml:lang="en">Punjabi</Name>
</Term>
<Term termID="qu">
   <Name xml:lang="en">Quechua</Name>
</Term>
<Term termID="rm">
   <Name xml:lang="en">Rhaeto-Romance</Name>
</Term>
<Term termID="ro">
   <Name xml:lang="en">Romanian</Name>
</Term>
<Term termID="ru">
   <Name xml:lang="en">Russian</Name>
</Term>
<Term termID="sm">
   <Name xml:lang="en">Samoan</Name>
</Term>
<Term termID="sg">
   <Name xml:lang="en">Sangro</Name>
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   <Name xml:lang="en">Sanskrit</Name>
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   <Name xml:lang="en">Scots Gaelic</Name>
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<Term termID="sr">
   <Name xml:lang="en">Serbian</Name>
</Term>
<Term termID="sh">
   <Name xml:lang="en">Serbo-Croatian</Name>
</Term>
<Term termID="st">
```

```
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   </Term>
   <Term termID="tn">
      <Name xml:lang="en">Setswana</Name>
   </Term>
   <Term termID="sn">
      <Name xml:lang="en">Shona</Name>
   </Term>
   <Term termID="sd">
      <Name xml:lang="en">Sindhi</Name>
   </Term>
   <Term termID="si">
      <Name xml:lang="en">Singhalese</Name>
   </Term>
   <Term termID="ss">
      <Name xml:lang="en">Siswati</Name>
   </Term>
   <Term termID="sk">
      <Name xml:lang="en">Slovak</Name>
   </Term>
   <Term termID="sl">
      <Name xml:lang="en">Slovenian</Name>
   </Term>
   <Term termID="so">
      <Name xml:lang="en">Somali</Name>
   </Term>
   <Term termID="es">
      <Name xml:lang="en">Spanish</Name>
   </Term>
   <Term termID="su">
      <Name xml:lang="en">Sudanese</Name>
   </Term>
   <Term termID="sw">
      <Name xml:lang="en">Swahili</Name>
   </Term>
   <Term termID="sv">
      <Name xml:lang="en">Swedish</Name>
   </Term>
   <Term termID="tl">
      <Name xml:lang="en">Tagalog</Name>
   </Term>
   <Term termID="tg">
      <Name xml:lang="en">Tajik</Name>
   </Term>
   <Term termID="ta">
      <Name xml:lang="en">Tamil</Name>
   </Term>
   <Term termID="tt">
      <Name xml:lang="en">Tatar</Name>
   </Term>
   <Term termID="te">
      <Name xml:lang="en">Tegulu</Name>
   </Term>
   <Term termID="th">
      <Name xml:lang="en">Thai</Name>
   </Term>
   <Term termID="bo">
      <Name xml:lang="en">Tibetan</Name>
   </Term>
   <Term termID="ti">
      <Name xml:lang="en">Tigrinya</Name>
   </Term>
   <Term termID="to">
      <Name xml:lang="en">Tonga</Name>
   </Term>
   <Term termID="ts">
      <Name xml:lang="en">Tsonga</Name>
```

```
   </Term>
   <Term termID="tr">
      <Name xml:lang="en">Turkish</Name>
   </Term>
   <Term termID="tk">
      <Name xml:lang="en">Turkmen</Name>
   </Term>
   <Term termID="tw">
      <Name xml:lang="en">Twi</Name>
   </Term>
   <Term termID="ug">
      <Name xml:lang="en">Uigur</Name>
   </Term>
   <Term termID="uk">
      <Name xml:lang="en">Ukrainian</Name>
   </Term>
   <Term termID="ur">
      <Name xml:lang="en">Urdu</Name>
   </Term>
   <Term termID="uz">
      <Name xml:lang="en">Uzbek</Name>
   </Term>
   <Term termID="vi">
      <Name xml:lang="en">Vietnamese</Name>
   </Term>
   <Term termID="vo">
      <Name xml:lang="en">Volapuk</Name>
   </Term>
   <Term termID="cy">
      <Name xml:lang="en">Welsh</Name>
   </Term>
   <Term termID="wo">
      <Name xml:lang="en">Wolof</Name>
   </Term>
   <Term termID="xh">
      <Name xml:lang="en">Xhosa</Name>
   </Term>
   <Term termID="yi">
      <Name xml:lang="en">Yiddish (former ji)</Name>
   </Term>
   <Term termID="yo">
      <Name xml:lang="en">Yoruba</Name>
   </Term>
   <Term termID="za">
      <Name xml:lang="en">Zhuang</Name>
   </Term>
   <Term termID="om">
      <Name xml:lang="en">Zulu</Name>
   </Term>
</ClassificationScheme>
```

12. ContentAlertCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:ContentAlertCS:2002">
   <!-- ##################################################################
-->
   <!-- CONTENTALERT
-->
   <!--Definition: Alerting users for content in any of the categories below-
->
   <!-- ##################################################################
-->
   <Term termID="6.O">
      <Name xml:lang="en">ALERT NOT REQUIRED</Name>
   </Term>
   <Term termID="6.0.1">
```

```
      <Name xml:lang="en">No content that requires alerting in any of the
categories below</Name>
   </Term>
   <Term termID="6.1">
      <Name xml:lang="en">SEX</Name>
   </Term>
   <Term termID="6.1.1">
      <Name xml:lang="en">No sex descriptors</Name>
   </Term>
   <Term termID="6.1.2">
      <Name xml:lang="en">Obscured or implied sexual activity</Name>
   </Term>
   <Term termID="6.1.3">
      <Name xml:lang="en">Frank portrayal of sex and sexuality</Name>
   </Term>
   <Term termID="6.1.4">
      <Name xml:lang="en">Scenes of explicit sexual behaviour suitable for
adults only</Name>
   </Term>
   <Term termID="6.1.5">
      <Name xml:lang="en">Sexual Violence</Name>
   </Term>
   <Term termID="6.2">
      <Name xml:lang="en">NUDITY</Name>
   </Term>
   <Term termID="6.2.1">
      <Name xml:lang="en">No nudity descriptors</Name>
   </Term>
   <Term termID="6.2.2">
      <Name xml:lang="en">Partial nudity </Name>
   </Term>
   <Term termID="6.2.3">
      <Name xml:lang="en">Full frontal nudity</Name>
   </Term>
   <Term termID="6.3">
      <Name xml:lang="en">VIOLENCE – HUMAN BEINGS</Name>
   </Term>
   <Term termID="6.3.1">
      <Name xml:lang="en">No violence descriptors human beings</Name>
   </Term>
   <Term termID="6.3.2">
      <Name xml:lang="en">Deliberate infliction of pain to human
beings</Name>
      <Definition xml:lang="en">Example: Mild psychological or physical
violence to human beings (psychological pressure, punching, slapping,
knocking down...)</Definition>
   </Term>
   <Term termID="6.3.3">
      <Name xml:lang="en">Infliction of strong psychological or physical pain
to human beings</Name>
      <Definition xml:lang="en">Example: Heavy intimidation, torture, bloody
scenes, accidental killing of human beings…</Definition>
   </Term>
   <Term termID="6.3.4">
      <Name xml:lang="en">Deliberate killing of human beings</Name>
   </Term>
   <Term termID="6.4">
      <Name xml:lang="en">VIOLENCE - ANIMALS</Name>
   </Term>
   <Term termID="6.4.1">
      <Name xml:lang="en">No violence descriptors animals</Name>
   </Term>
   <Term termID="6.4.2">
      <Name xml:lang="en">Deliberate infliction of pain to animals</Name>
   </Term>
   <Term termID="6.4.3">
      <Name xml:lang="en">Deliberate killing of animals</Name>
```

```
   </Term>
   <Term termID="6.5">
      <Name xml:lang="en">VIOLENCE - FANTASY CHARACTERS</Name>
   </Term>
   <Term termID="6.5.1">
      <Name xml:lang="en">No violence descriptors</Name>
   </Term>
   <Term termID="6.5.2">
      <Name xml:lang="en">Deliberate infliction of pain to fantasy characters
(including animation)</Name>
   </Term>
   <Term termID="6.5.3">
      <Name xml:lang="en">Deliberate killing of fantasy characters (including
animation)</Name>
   </Term>
   <Term termID="6.6">
      <Name xml:lang="en">LANGUAGE</Name>
   </Term>
   <Term termID="6.6.1">
      <Name xml:lang="en">No language descriptors</Name>
   </Term>
   <Term termID="6.6.2">
      <Name xml:lang="en">Occasional use of mild swear words and profanities
</Name>
   </Term>
   <Term termID="6.6.3">
      <Name xml:lang="en">Frequent use of mild swear words and
profanities</Name>
   </Term>
   <Term termID="6.6.4">
      <Name xml:lang="en">Occasional use of very strong language </Name>
   </Term>
   <Term termID="6.6.5">
      <Name xml:lang="en">Frequent use of very strong language</Name>
   </Term>
   <Term termID="6.7">
      <Name xml:lang="en">DISTURBING SCENES</Name>
   </Term>
   <Term termID="6.7.1">
      <Name xml:lang="en">No disturbing scenes descriptors</Name>
   </Term>
   <Term termID="6.7.2">
      <Name xml:lang="en">Factual material that may cause distress, including
verbal descriptions of traumatic events and the telling of sensitive human
interest stories.</Name>
   </Term>
   <Term termID="6.7.3">
      <Name xml:lang="en">Mild scenes of blood and gore (including medical
procedures, injuries from accidents, terrorists attack, murder, disaster,
war)</Name>
   </Term>
   <Term termID="6.7.4">
      <Name xml:lang="en">Severe scenes of blood and gore (as 6.7.3
above)</Name>
   </Term>
   <Term termID="6.7.5">
      <Name xml:lang="en">Scenes with extreme horror effects</Name>
   </Term>
   <Term termID="6.8">
      <Name xml:lang="en">DISCRIMINATION</Name>
   </Term>
   <Term termID="6.8.1">
      <Name xml:lang="en">No discrimination descriptors</Name>
   </Term>
   <Term termID="6.8.2">
      <Name xml:lang="en">Deliberate discrimination or the portrayal of
deliberate discrimination (including discrimination on the basis of gender,
```

```
sexual orientation, race, religion, colour, nationality or ethnic
background)</Name>
   </Term>
   <Term termID="6.9">
      <Name xml:lang="en">ILLEGAL DRUGS</Name>
   </Term>
   <Term termID="6.9.1">
      <Name xml:lang="en">No illegal drugs descriptors</Name>
   </Term>
   <Term termID="6.9.2">
      <Name xml:lang="en">Portrayal of illegal drug use </Name>
   </Term>
   <Term termID="6.9.3">
      <Name xml:lang="en">Portrayal of illegal drug use with instructive
detail</Name>
   </Term>
   <Term termID="6.10">
      <Name xml:lang="en">STROBING</Name>
   </Term>
   <Term termID="6.10.1">
      <Name xml:lang="en">No strobing </Name>
   </Term>
   <Term termID="6.10.2">
      <Name xml:lang="en">Strobing that could impact on those suffering from
Photosensitive epilepsy </Name>
   </Term>
</ClassificationScheme>
```

13. MediaTypeCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:MediaType:2002">
   <!-- ##########################################################################
-->
   <!-- MEDIATYPE
-->
   <!--Definition: Defining the media type used-->
   <!-- ##########################################################################
-->
   <Term termID="7.1  ">
      <Name xml:lang="en">Linear </Name>
   </Term>
   <Term termID="7.1.1  ">
      <Name xml:lang="en">Audio only</Name>
   </Term>
   <Term termID="7.1.2">
      <Name xml:lang="en">Video only</Name>
   </Term>
   <Term termID="7.1.3">
      <Name xml:lang="en">Audio and video</Name>
   </Term>
   <Term termID="7.1.4">
      <Name xml:lang="en">Multimedia</Name>
   </Term>
   <Term termID="7.1.4.1 ">
      <Name xml:lang="en">Text</Name>
   </Term>
   <Term termID="7.1.4.2 ">
      <Name xml:lang="en">Graphics </Name>
   </Term>
   <Term termID="7.1.4.3 ">
      <Name xml:lang="en">Application</Name>
   </Term>
   <Term termID="7.2  ">
      <Name xml:lang="en">Non Linear</Name>
   </Term>
   <Term termID="7.2.1 ">
      <Name xml:lang="en">Audio only</Name>
```

```
   </Term>
   <Term termID="7.2.2">
      <Name xml:lang="en">Video only</Name>
   </Term>
   <Term termID="7.2.3">
      <Name xml:lang="en">Audio and video</Name>
   </Term>
   <Term termID="7.2.4">
      <Name xml:lang="en">Multimedia</Name>
   </Term>
   <Term termID="7.2.4.1">
      <Name xml:lang="en">Text</Name>
   </Term>
   <Term termID="7.2.4.2">
      <Name xml:lang="en">Graphics</Name>
   </Term>
   <Term termID="7.2.4.3">
      <Name xml:lang="en">Application</Name>
   </Term>
   <Term termID="7.3">
      <Name xml:lang="en">AUDIO VIDEO ENHANCEMENTS</Name>
   </Term>
   <Term termID="7.3.1">
      <Name xml:lang="en">Linear with non-sync</Name>
      <Definition xml:lang="en">Linear programme with non-syncronised, non av
content.
      Example: DTT Wimbledon.</Definition>
   </Term>
   <Term termID="7.3.2">
      <Name xml:lang="en">Linear with sync</Name>
      <Definition xml:lang="en">Linear programme with syncronised non av
content.
      Example: Weakest Link Dsat Quiz, TV Nav bar.</Definition>
   </Term>
   <Term termID="7.3.3">
      <Name xml:lang="en">Multi stream audio</Name>
      <Definition xml:lang="en">Multi, parallel stream linear audio
programme.
      Example: Parallel audio radio drama</Definition>
   </Term>
   <Term termID="7.3.4">
      <Name xml:lang="en">Multi stream video</Name>
      <Definition xml:lang="en">Multi, parallel stream linear audio/video
programme.
      Example: Interactive Wimbledon, Walking with Beasts.</Definition>
   </Term>
   <Term termID="7.3.5">
      <Name xml:lang="en">Non-linear one stream av show</Name>
      <Definition xml:lang="en">Non-linear single video/audio
programme</Definition>
   </Term>
   <Term termID="7.3.6">
      <Name xml:lang="en">Non-linear multi stream</Name>
      <Definition xml:lang="en">Non-linear multi, parallel stream video
programme</Definition>
   </Term>
   <Term termID="7.3.7">
      <Name xml:lang="en">Hybrid NVOD</Name>
      <Definition xml:lang="en">Hybrid NVOD - lcoally stored material linking
back to scheduled av content.
      Example: Viewer can choose a movie off a PDR immediately (it has been
pre-cached, watch and then they will be linked seamlessly back into a 'live'
looped channel at an appropriate point.</Definition>
   </Term>
   <Term termID="7.3.8">
      <Name xml:lang="en">Mix and match </Name>
```

```
      <Definition xml:lang="en">Video with audio programme (component) Ids
eg: BBC1 video with BBC2 audio</Definition>
   </Term>
   <Term termID="7.3.9">
      <Name xml:lang="en">Parallel 'layer controlled' audio or video support
</Name>
      <Definition xml:lang="en">Multiple decoders allow dynamic mixing of
audio or video</Definition>
   </Term>
   <Term termID="7.3.10">
      <Name xml:lang="en">Linear broadcast with online insertions</Name>
      <Definition xml:lang="en">Linear broadcast programme with dynamically
inserted online content.
      Example: Inserted ads into broadcast content, alternate tangents
against broadcast content.</Definition>
   </Term>
   <Term termID="7.3.11">
      <Name xml:lang="en">Other</Name>
   </Term>
</ClassificationScheme>
```

14. AtmosphereCS

```
<ClassificationScheme uri="urn:tva:metadata:cs:AtmosphereCS:2002">
   <!-- ##################################################################
-->
   <!-- Atmosphere
-->
   <!--Definition:  The terms used in the Atmosphere dimension are intended
to convey the key "sense" or "feeling" of the content.
   <!-- ##################################################################
-->
   <Term termID="8.1">
      <Name xml:lang="en">Alternative</Name>
      <Definition xml:lang="en">Unconventional, not mainstream</Definition>
   </Term>
   <Term termID="8.2">
      <Name xml:lang="en">Analytical</Name>
      <Definition xml:lang="en">Factual, in-depth, investigative,
probing</Definition>
   </Term>
   <Term termID="8.3">
      <Name xml:lang="en">Astonishing</Name>
      <Definition xml:lang="en">Amazing, surprising,
breathtaking</Definition>
   </Term>
   <Term termID="8.4">
      <Name xml:lang="en">Ambitious</Name>
      <Definition xml:lang="en">Far reaching, high-aims, strongly
determined</Definition>
   </Term>
   <Term termID="8.5">
      <Name xml:lang="en">Black</Name>
      <Definition xml:lang="en">Bleak, sinister, dark</Definition>
   </Term>
   <Term termID="8.6">
      <Name xml:lang="en">Breathtaking</Name>
   </Term>
   <Term termID="8.7">
      <Name xml:lang="en">Chilling</Name>
      <Definition xml:lang="en">Hair-raising, spine-tingling</Definition>
   </Term>
   <Term termID="8.8">
      <Name xml:lang="en">Coarse</Name>
      <Definition xml:lang="en">Crude, lacking refinement, rough,
lewd</Definition>
   </Term>
```

```
   <Term termID="8.9">
      <Name xml:lang="en">Compelling</Name>
      <Definition xml:lang="en">Gripping, rousing strong interest, conviction
or admiration</Definition>
   </Term>
   <Term termID="8.10">
      <Name xml:lang="en">Confrontational</Name>
   </Term>
   <Term termID="8.11">
      <Name xml:lang="en">Contemporary</Name>
      <Definition xml:lang="en">Modern in style or design, up-to-
date</Definition>
   </Term>
   <Term termID="8.12">
      <Name xml:lang="en">Crazy</Name>
      <Definition xml:lang="en">Insane, mad, foolish</Definition>
   </Term>
   <Term termID="8.13">
      <Name xml:lang="en">Cutting edge</Name>
      <Definition xml:lang="en">Leading the way, in the vanguard</Definition>
   </Term>
   <Term termID="8.14">
      <Name xml:lang="en">Eclectic</Name>
      <Definition xml:lang="en">Mixed, collection, selecting ideas &amp;amp;
styles from various sources</Definition>
   </Term>
   <Term termID="8.15">
      <Name xml:lang="en">Edifying</Name>
      <Definition xml:lang="en">Morally or intellectually
improving</Definition>
   </Term>
   <Term termID="8.16">
      <Name xml:lang="en">Exciting</Name>
      <Definition xml:lang="en">Arousing great interest or enthusiasm,
thrilling.
       Example: 'Buffy the Vampire Slayer', the series, could be classified
as having atmospheres of Exciting (intermediate), Fast-moving
(intermediate), Stylish (very), Terrifying (slightly) and Violent
(intermediate). Selection of this programme could lead to a suggestion of
'Romeo and Juliet', the modern movie, because of a match on the
classifications of Exciting, Fast-moving, Stylish and Violent.  'Romeo and
Juliet' would also have classifications of Contemporary (very), Gripping
(intermediate), Innovative (very) and Romantic (very).</Definition>
   </Term>
   <Term termID="8.17">
      <Name xml:lang="en">Fast-moving</Name>
      <Definition xml:lang="en">Rapid action, adrenaline-charged, dynamic,
energetic</Definition>
   </Term>
   <Term termID="8.18">
      <Name xml:lang="en">Frantic</Name>
      <Definition xml:lang="en">Frenzied, hurried</Definition>
   </Term>
   <Term termID="8.19">
      <Name xml:lang="en">Fun</Name>
      <Definition xml:lang="en">Lively or playful amusement, enjoyable, not
for a serious purpose</Definition>
   </Term>
   <Term termID="8.20">
      <Name xml:lang="en">Gripping</Name>
   </Term>
   <Term termID="8.21">
      <Name xml:lang="en">Gritty</Name>
      <Definition xml:lang="en">Basic, no frills</Definition>
   </Term>
   <Term termID="8.22">
      <Name xml:lang="en">Gutsy</Name>
```

```
      <Definition xml:lang="en">Full-on, no holds barred,
courageous</Definition>
   </Term>
   <Term termID="8.23">
      <Name xml:lang="en">Happy</Name>
      <Definition xml:lang="en">Feeling or showing pleasure or contentment,
upbeat, uplifting</Definition>
   </Term>
   <Term termID="8.24">
      <Name xml:lang="en">Heart-rending</Name>
      <Definition xml:lang="en">Emotionally-charged, distressing, painful,
tear-jerker</Definition>
   </Term>
   <Term termID="8.25">
      <Name xml:lang="en">Heart-warming</Name>
      <Definition xml:lang="en">Emotionally rewarding or uplifting, charming,
delightful, enchanting
      Example: 'Sleepless in Seattle', the movie, could be classified as
having atmospheres of Heart-warming (very), Humorous (intermediate),
Romantic (very) and Happy (intermediate).Selection of this programme could
lead to a suggestion of 'Friends', the series, because of a match on the
classifications of Humorous and Happy.  'Friends', itself could also have
additional classifications of Contemporary (slightly) and Fun
(intermediate).</Definition>
   </Term>
   <Term termID="8.26">
      <Name xml:lang="en">Hot</Name>
      <Definition xml:lang="en">Fresh, recent, of the moment</Definition>
   </Term>
   <Term termID="8.27">
      <Name xml:lang="en">Humorous</Name>
      <Definition xml:lang="en">Amusing, hilarious, lighthearted, witty
      Example: 'Have I Got News for You', the quiz show, could be classified
as having atmospheres of Humorous (very), Irreverent (very), and Outrageous
(intermediate). Selection of this programme could lead to a suggestion of
'Waynes World', the movie, because of a match on the classifications of
Humorous and Outrageous.  'Waynes World' would also have classifications of
Fun (very) and Silly (very).</Definition>
   </Term>
   <Term termID="8.28">
      <Name xml:lang="en">Innovative</Name>
      <Definition xml:lang="en">Ground-breaking, landmark, new ideas and
methods
      Example: Fresh.</Definition>
   </Term>
   <Term termID="8.29">
      <Name xml:lang="en">Insightful</Name>
   </Term>
   <Term termID="8.30">
      <Name xml:lang="en">Inspirational</Name>
      <Definition xml:lang="en">Uplifting, stimulating creative activity
      Example: Aspirational and enriching.</Definition>
   </Term>
   <Term termID="8.31">
      <Name xml:lang="en">Intriguing</Name>
      <Definition xml:lang="en">Arousing/inspiring curiosity</Definition>
   </Term>
   <Term termID="8.32">
      <Name xml:lang="en">Irreverent</Name>
      <Definition xml:lang="en">Anti-establishment, lacking reverence for
established principles and ways of behaving</Definition>
   </Term>
   <Term termID="8.33">
      <Name xml:lang="en">Laid back</Name>
      <Definition xml:lang="en">Calm, relaxed, easy-going</Definition>
   </Term>
   <Term termID="8.34">
```

```
      <Name xml:lang="en">Outrageous</Name>
      <Definition xml:lang="en">Shocking, in-your-face</Definition>
   </Term>
   <Term termID="8.35">
      <Name xml:lang="en">Peaceful</Name>
      <Example xml:lang="en"> including 'calming'</Example>
   </Term>
   <Term termID="8.36">
      <Name xml:lang="en">Powerful</Name>
      <Definition xml:lang="en">Influential, emotionally-charged,
strong</Definition>
   </Term>
   <Term termID="8.37">
      <Name xml:lang="en">Practical </Name>
      <Example xml:lang="en"> including 'hands-on' </Example>
   </Term>
   <Term termID="8.38">
      <Name xml:lang="en">Rollercoaster</Name>
      <Definition xml:lang="en">Emotional up and downs, unpredictable,
uncontrollable</Definition>
   </Term>
   <Term termID="8.39">
      <Name xml:lang="en">Romantic</Name>
      <Definition xml:lang="en">About love, being in love</Definition>
   </Term>
   <Term termID="8.40">
      <Name xml:lang="en">Rousing</Name>
      <Definition xml:lang="en">Stirring, energizing, exciting</Definition>
   </Term>
   <Term termID="8.41">
      <Name xml:lang="en">Sad</Name>
      <Definition xml:lang="en">Unhappy, causing sorrow, tragic,
pitiful</Definition>
   </Term>
   <Term termID="8.42">
      <Name xml:lang="en">Satirical</Name>
      <Definition xml:lang="en">Irony, used to expose folly or vice,
ridicule</Definition>
   </Term>
   <Term termID="8.43">
      <Name xml:lang="en">Serious</Name>
      <Definition xml:lang="en">Earnest, important, demanding consideration,
not frivolous</Definition>
   </Term>
   <Term termID="8.44">
      <Name xml:lang="en">Sexy</Name>
      <Definition xml:lang="en">Racy, raunchy, steamy, sexually arousing,
stimulating</Definition>
   </Term>
   <Term termID="8.45">
      <Name xml:lang="en">Shocking</Name>
      <Definition xml:lang="en">Causing shock or scandal</Definition>
   </Term>
   <Term termID="8.46">
      <Name xml:lang="en">Silly</Name>
      <Definition xml:lang="en">Foolish, imprudent, weak-minded</Definition>
   </Term>
   <Term termID="8.47">
      <Name xml:lang="en">Spooky</Name>
      <Definition xml:lang="en">Creepy, eerie, ghoulish</Definition>
   </Term>
   <Term termID="8.48">
      <Name xml:lang="en">Stunning</Name>
      <Definition xml:lang="en">Striking, visually impressive or
attractive</Definition>
   </Term>
   <Term termID="8.49">
```

```
      <Name xml:lang="en">Stylish</Name>
      <Definition xml:lang="en">Fashionable, elegant</Definition>
   </Term>
   <Term termID="8.50">
      <Name xml:lang="en">Terrifying</Name>
      <Definition xml:lang="en">Scary, causing extreme fear</Definition>
   </Term>
   <Term termID="8.51">
      <Name xml:lang="en">Thriller</Name>
      <Definition xml:lang="en">Exciting or sensational story</Definition>
   </Term>
   <Term termID="8.52">
      <Name xml:lang="en">Violent</Name>
      <Definition xml:lang="en">Involving great physical force,
violence</Definition>
   </Term>
   <Term termID="8.53">
      <Name xml:lang="en">Wacky</Name>
      <Definition xml:lang="en">Crazy, kooky, ridiculous, zany</Definition>
   </Term>
</ClassificationScheme>
```

Appendix B - Use of Classification Schemes for Multi-dimensional Content Classification

In *multi-dimensional* classification systems each content item is usually classified as many times as there are dimensions in the system. A multi-dimensional classification system can be understood as a way to describe a content item according to several coordinates in a multi-dimensional space.

In such a multi-dimensional classification system each content item is potentially classifiable in each of the dimensions used – i.e. each dimension is applicable to every program or commercial.

Each dimension is used to describe content from a single viewpoint. Classification of a program in one specific dimension may not, by itself, be meaningful. In most cases, it is only the *combination* of classification terms drawn from multiple dimensions that leads to significance.

Each dimension is structured in a hierarchical way to enable greater precision and flexibility in the description of the aspect involved.

1. Dimensions used in TVA program classification

TV-Anytime program classification is based on these dimensions:

IntentionCS

- Format
- Content
- Origination
- IntendedAudience
- Content Alert
- Media Type
- Atmosphere

For each of these dimensions, a TVA at least one default hierarchical CS of up to 3 levels has been defined. It is possible to provide terms beyond the lowest level of any CS by the use of the Keyword element.

IntentionCS

Contains terms that describe the intention of the program at the conceptual phase, e.g. entertainment, information, education. This information can be useful for the classification of early transmitted “attractors”.

uri= "urn:tva:metadata:cs:IntentionCS:2002 "

FormatCS

Contains terms that describe the format of a program, e.g. artistic performance, a magazine show, a cartoon.

uri= "urn:tva:metadata:cs:FormatCS:2002 "

ContentCS

Contains terms that describe the nature and and/or subject of the program or commercial, e.g. soccer.

uri= "urn:tva:metadata:cs:ContentCS:2002 "

ContentCommercialCS

Contains terms that describe the nature and and/or subject of a commercial.

uri= "urn:tva:metadata:cs:ContentCommercialCS:2002 "

OriginationCS

Contains terms that describe the origination of the program (e.g. live from a studio, a cinema release movie etc.).

uri= "urn:tva:metadata:cs:OriginationCS:2002 "

IntendedAudienceCS

Contains terms that describe the intended audience for the program (e.g. by gender, age, socio-economic group or educational level).

uri= "urn:tva:metadata:cs:IntendedAudienceCS:2002 "

LanguageCS

Contains terms that describe the language of the intended audience for the program.

uri= "urn:tva:metadata:cs:LanguageCS:2002 "

Content AlertCS

Provides a means of alerting a viewer that there are elements within the program they may not wish to be exposed to, i.e. a 'detractor'. Strong language, scenes of a sexual nature etc.

uri= "urn:tva:metadata:cs:ContentAlertCS:2002 "

Media TypeCS

Contains terms that describe the medium of the content (e.g. Video & Audio, a multimedia application, audio only, audio video enhancements, etc.)

uri= "urn:tva:metadata:cs:MediaTypeCS:2002 "

AtmosphereCS

Contains terms that convey the psychological or emotional ("soft") characteristics of a content item.

uri= "urn:tva:metadata:cs:AtmosphereCS:2002 "

15. Guidelines and examples

At least one classification term may be instantiated for each dimension. For Format, Origination and MediaType, when used, one term is preferable.

For Intention, Content and IntendedAudience multiple instantiations may sometimes be required to fully express the nature of the content. In these cases, if equal weight is not to be

given to each of the terms used, this should be made explicit through the use of the **type** attribute (which can take the values: main | secondary | other).

For ContentAlert multiple instantiations may often be required (inc. to indicate unambigously that the content item does *not* require an alert on the grounds of sex/violence etc.). Only one item should, however, be used for each of the sub-classes (such as sex, language or violence).

Table B-1 contains examples of the application of the TVA default content classification CSs to a diverse group of television programs.

16. Adaptation to meet regional and other special needs

Default CSs may be wholly or partially replaced by other CSs to meet regional or other special requirements. These CSs partially or wholly replace and/or extend default TVA CSs. Regional standardisation bodies and other relevant bodies will be responsible for the naming of such CSs and for designating namespaces and for hosting and the designation of access URIs. Regional and other non-TVA-default CS names shall not start with the string "tva" and their URNs shall not start with the string "urn:tva:".

Regional and special-purpose CSs shall, where possible, re-use universally applicable terms from TVA default CSs and only replace or add terms to meet specific regional or other special requirements (this can, e.g., be done using the CS import feature described in section 7.3 of the MPEG-7 MDS (W4242: Multimedia Content Description Interface — Part 5: Multimedia Description Schemes ISO/IEC FDIS 15938-5).

17. Mapping between TVA and other content classification systems

TVA provides an extensive set of classification terms in the form of its set of default CSs. The schema allows for the possibility of selecting a subset of those terms and mapping them to non-TVA sets of classification terms (which do not necessarily have to be structured in a multi-dimensional or hierarchical manner). The only TVA requirement is that the selected terms be referenced using the appropriate URN.

Where complete mapping is not possible a supplementary CS (see section 3) may be created to cover difficult-to-map terms.

TVAIntentionCS	TVAFormatCS	TVAContentCS	TVAOriginationCS	TVAContent AlertCS	TVAMedia TypeCS	Programme Title
(1.2 Information)	(2.1.1 Bulletin)	3.1.1.1 Daily News	(5.1.1 Studio Live)	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	News Bulletin
main: (1.2 INFORMATION) secondary: (1.1 ENTERTAINMENT)	(2.1.2 Magazine)	3.3 LEISURE/HOBBY	(5.1.2 As live)	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	Blue Peter (Children's Programme)
(1.1 ENTERTAINMENT)	(2.2.1 Fictional portrayal of life)	3.4.6.7 Science fiction	5.3 CINEMA INDUSTRY ORIGINATED	(6.5.2 Deliberate infliction of pain to fantasy characters)	(7.1.3 Audio Video)	Film: Terminator II
1.1 ENTERTAINMENT	2.2.1 Fictional portrayal of life	3.4.14 Period drama	5.3 CINEMA INDUSTRY ORIGINATED	6.0 ALERT NOT REQUIRED	(7.1.3 Audio Video)	Film: The Railway Children
main: 1.1 ENTERTAINMENT secondary: 1.3 Education	2.1.4 Documentary	3.1.6.2 Nature/natural sciences	5.1.3 Edited	(6.0 ALERT NOT REQUIRED)	7.3.4 Multi stream video	Walking with Beasts. (Multi stream interactive application)
1.1 ENTERTAINMENT	2.5.2 Panel-show	3.5.2 Primary Quiz Contest 3.5.7 Secondary Comedy 3.2 Sec. Secondary Sport	5.1.2 As Live	6.6.2 Occasional use of mild swear words and profanities	(7.1.3 Audio Video)	They Think It's All Over (Quiz about sport)
(1.1 ENTERTAINMENT)	(2.1.3 Commented event)	3.2.3.12 Football soccer	5.2.1 Live	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	FA cup Live (Outside Broadcast Football)
(1.1 ENTERTAINMENT)	2.1.2 Magazine	3.3 LEISURE/HOBBY	(5.2.3 Outside Broadcast Edited)	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	Antiques roadshow
(1.1 ENTERTAINMENT)	Main: (2.1.2 Magazine) Secondary: (2.6 ARTISTIC PERFORMANCE)	3.6.10 Hit-Chart/Song Requests	(5.1.3 Studio Edited)	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	Top of the pops
(1.1 ENTERTAINMENT)	2.3.3 Cartoon	3.5.8 Standup comedian(s)	(5.6 MULTIMEDIA FORMAT (i.e. text/computer, etc.))	(6.5.2 Deliberate infliction of pain to fantasy characters	(7.1.3 Audio Video)	The Simpsons

				(including animation))		
1.1 ENTERTAINMENT	2.6 ARTISTIC PERFORMANCE	Main: 3.1.2.1 Religious philosophies; Secondary: 3.1.2.3 Christianity	5.2.3 Outside Broadcast Edited	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	Songs of Praise (religious programme with Hymns
1.3.1.2	2.1.4 Documentary	3.1.5.2 Languages	(5.1.3 Studio Edited)	(6.0 ALERT NOT REQUIRED)	(7.1.3 Audio Video)	Parlez-vous? (Schools programme learning French)

Table B-1

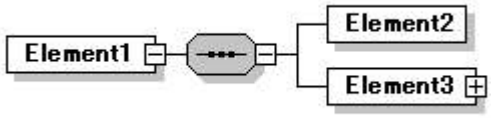
Examples of the multi-dimensional classification of television programs (source: BBC)

Appendix C - TV-Anytime Description Schemes

The TV-Anytime description schemes listed in Appendix A of this document have been aggregated into several **xsd files idenitified by the Classification Schemes' names**, included as a part of the specification zip archive forming the reference documentation.

Appendix D - Note on the use of UML-like diagram

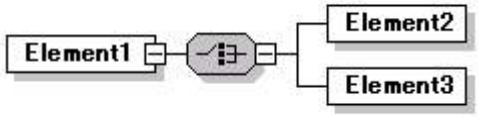
Sequence



The hexagonal symbol with the horizontal "dotted" line indicates "sequence of". This diagram says the element *Element1* consists of the sequence of elements *Element2* followed by *Element3*..

The box with a "+" mark in it at there right-hand end indicates that there is more structure to them than is shown in the diagram.

Choice



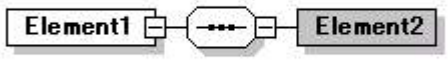
The switch-like symbol indicates a choice. In this case, a choice between the elements, *Element2* and *Element3*.

Cardinality

Optional, one

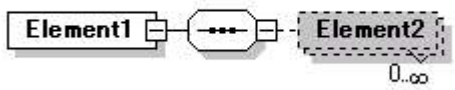
The dashed line indicates that the element *Element2* is optional. The fact that there is no cardinality indicator says that there can be at most one.

Mandatory, one



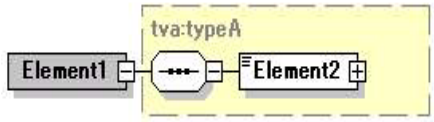
There must be exactly one of the element *Element2*.

Optional, repeating



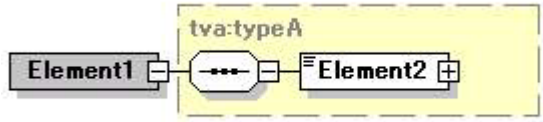
The element *Element2* is optional and may appear an indeterminate number of times. The number of times it may appear is given by the cardinality indicator meaning “zero to infinity”. Other numbs may appear to indicate different cardinalities.

Mandatory, repeating



The element *Element2* must appear at least one and may appear an indefinite number of times.

Type



The dotted box shows that element *Element1* is of type “tva:TypeA”.