

ProgramGuideML Specification

Version 1.0 Beta

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NSK NewsML Team

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1. Status of this document

This Specification describes and amplifies the ProgramGuideML version 1.0 XML Schema. Amendments to this Specification override and supercede notes in the ProgramGuideML version 1.0 XML Schema. The requirement of ProgramGuideML is to express Radio and TV listing in media-independent. We developed ProgramGuideML for news providers such as newspaper or news agency to handle Radio and TV program information as a program unit or listing table by various media.

2. Typographical conventions

Blue background is used for extracts from the formal declaration of the ProgramGuideML Schema

Yellow background is used for illustrative examples of ProgramGuideML

Light green background is used for extracts from the document of TV-Anytime. See details for “ETSI-TS 102 822 series (Broadcast and On-line services: Search, select and rightful use of content on personal storage systems)”

3. Acknowledgements

This specification is the result of a team effort by members of the RadioTV-NewsML sub working party of NSK NewsML team, Japan, with input and assistance from others.

Particular contributions are as follows:

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4. ProgramGuideML Overview

ProgramGuideML uses XML technology and compose information of radio and TV program information as simple and powerful. It is able to use optional Media type, format, and language be intermixed. It is able to provide pack by NewsML and to use to distribute it as it is. And ProgramGuideML adopts controlled vocabulary mechanism of NewsML.

[NewsMLcodeType]

It provides a method to specify one value of FormalName from the TopicSet file, which is the

collected list of candidate values as called controlled vocabulary.

`newsm1_formalname`:

There exists controlled vocabulary defining separately a list of candidates which may be set to an attribute, and its FormalName value is able to be specified in `newsm1_formalname`. The meaning of FormalName value is described in the controlled vocabulary. The value of `newsm1_formalname` should be the one of values in the controlled vocabulary, which specified separately. The usage of this attribute is the same as FormalName attribute of NewsML.

`newsm1_urn`:

The `newsm1_urn` specifies a controlled vocabulary which includes the candidates of value as `newsm1_formalname`. Actually, the kind of controlled vocabulary for each element is decided. The description form of a value follows the description of NewsML-URN in NewsML specification. The Catalog/Resource/DefaultVocabularyFor element of NewsML may point at ProgramGuideML data within DataContent and tacitly declare NewsML-URN, which

is used when `newsm1_urn` omitted. In this case, as the adjustment of controlled vocabulary can't be checked when only the inside of DataContent is extracted and used, it becomes restrictive uses. The usage of this attribute and FormalName attribute of NewsML are the same.

`newsm1_scheme`:

The `newsm1_scheme` is used in order to specify `newsm1_formalname` clearly. Although the FormalName which has Scheme in the controlled vocabulary has to specify `newsm1_scheme`, the Catalog/Resource/DefaultVocabularyFor element of NewsML may point at ProgramGuideML data within DataContent and tacitly declare Scheme, which is used when `newsm1_scheme` omitted. In this case, as the adjustment of controlled vocabulary can't be checked when only the inside of DataContent is extracted and used, it becomes restrictive uses. The usage of this attribute is the same as FormalName attribute of NewsML.

4.1. ProgramGuideML provides a framework for program information of radio and television interchange

The goal of ProgramGuideML is originally a format for interchange of program information of radio and television, however, it is used to store as a format for program information of radio and television.

4.2. ProgramGuideML is based on XML

ProgramGuideML document is a XML document, and should be obeyed the ProgramGuideML Schema. As all XML documents, ProgramGuideML document is logical object than physical. ProgramGuideML document can be compose by content of plural physical file using entity references which is decided by XML specification or pointer function within ProgramGuideML document.

4.3. ProgramGuideML is medium for media

ProgramGuideML can use combination with optional medias which are text, video, audio, graphic, other media, and new media in future.

4.4. The program is expressed with TV-Anytime

Program information expresses the element of TV-Anytime by using the Namespace.

4.5. ProgramGuideML expresses the print appearance

Layout information that specializes in the print media other than program information is expressed by ProgramGuideML.

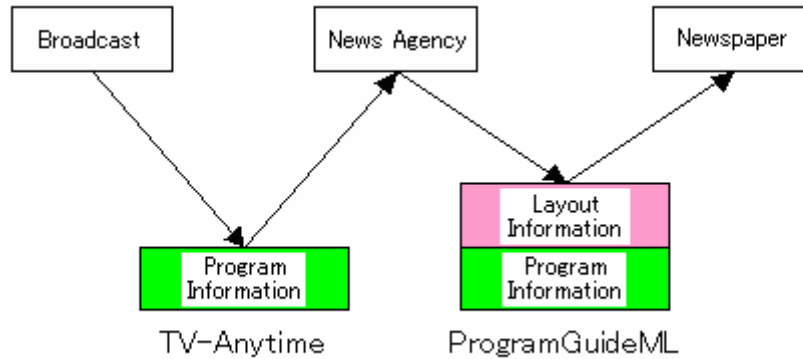
5. Structure of ProgramGuideML

ProgramGuideML adopts the structure including mapped TV-Anytime elements as well as specified elements of ProgramGuideML.

5.1. Program information consisted of TV-Anytime and specified information of ProgramGuideML

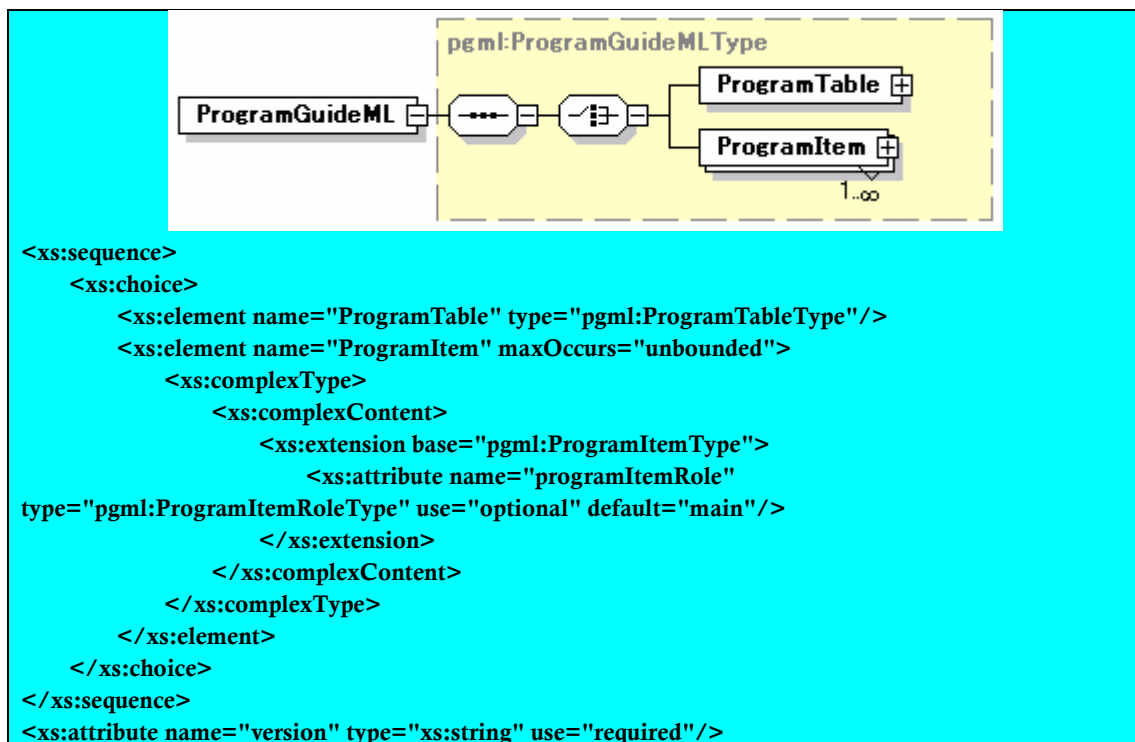
TV-Anytime (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) is metadata to express various program information subsidiary to each program such as title, broadcast time and cast. TV-Anytime fits for the usage in Web media and broadcast media. Besides those TV-Anytime containing information, ProgramGuideML has its specified information to stipulate the layout when printing the program information and allow for the usage of TV-Anytime in print media too. Therefore, news agency could receive program data from broadcasters by TV-Anytime and deliver them to newspapers as ProgramGuideML, with attaching layout information to match each print media. Each elements are explained in the

following chapters.



6. Function of ProgramGuideML

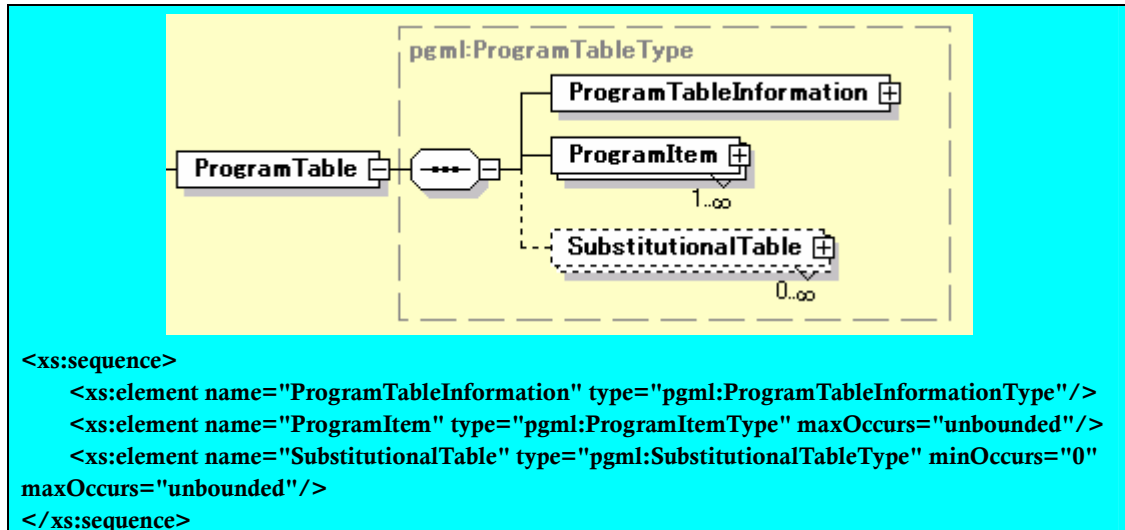
ProgramGuideML is consisted of ProgramTable element and plural ProgramItem elements. Version attribute is mandatory.



6.1. ProgramTable

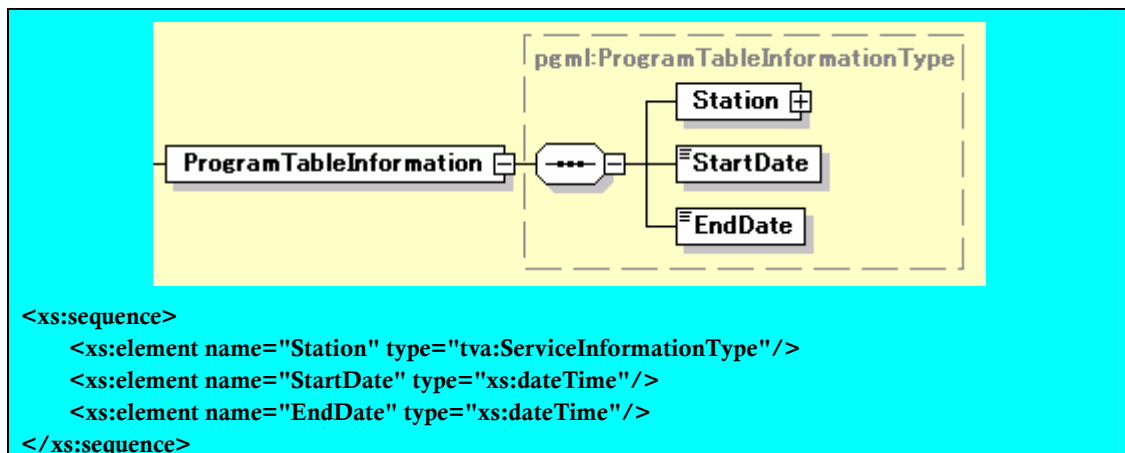
ProgramTable element expresses the program table (listing) of certain broadcaster, which is from one certain day's start time to the next day's end time. ProgramTable element is

expressed by ProgramTableInformation element, plural ProgramItem element, and zero or more SubstitutionalTable element.



6.2. ProgramTableInformation

ProgramTableInformation element set the serviceId of broadcast station expressed by ProgramItem. It has Station element, StartDate element and EndDate element, and expresses the concerned broadcaster's allowed time for broadcast from start time to end time.



6.2.1. Station

Station element expresses the name of broadcast station by serviceID. It could also express the name of concerned broadcast station. Refer to TV-Anytime documents (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) for details.

Following example express the NHK1-TV, by setting "103" in serviceId. Also, it could express the name of station by using tva:Name element.

```
<Station serviceId="103">
  <!-- Broadcast service name -->
  <tva:Name>NHK1-TV</tva:Name>
</Station>
```

6.2.2. StartDate

StartDate element expresses the broadcast start date and time in program listing.

Following example expresses the broadcast start time is 6 a.m. of February 20, 2004.

```
<StartDate>2004-02-20T06:00:00+09:00</StartDate>
```

6.2.3. EndDate

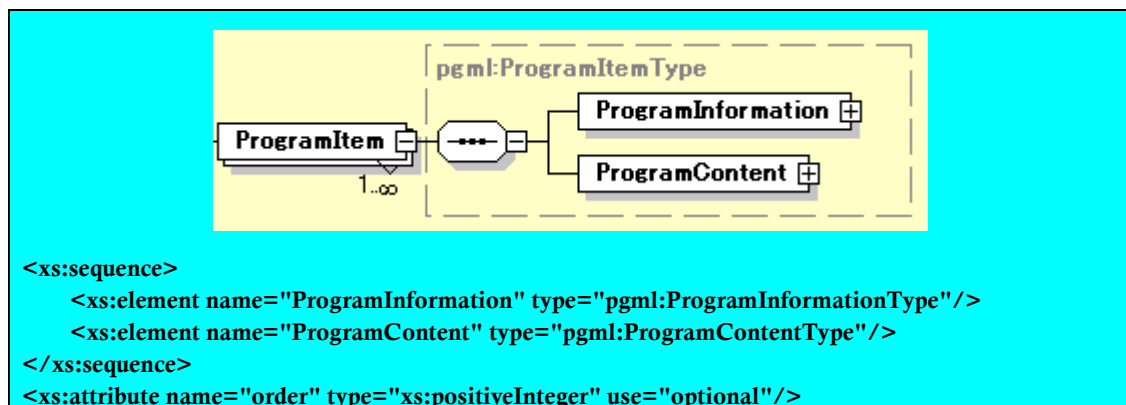
EndDate element expresses the broadcast end date and time in program listing.

Following example expresses the broadcast end time is 6 a.m. of February 21, 2004.

```
<EndDate>2004-02-21T06:00:00+09:00</EndDate>
```

6.3. ProgramItem

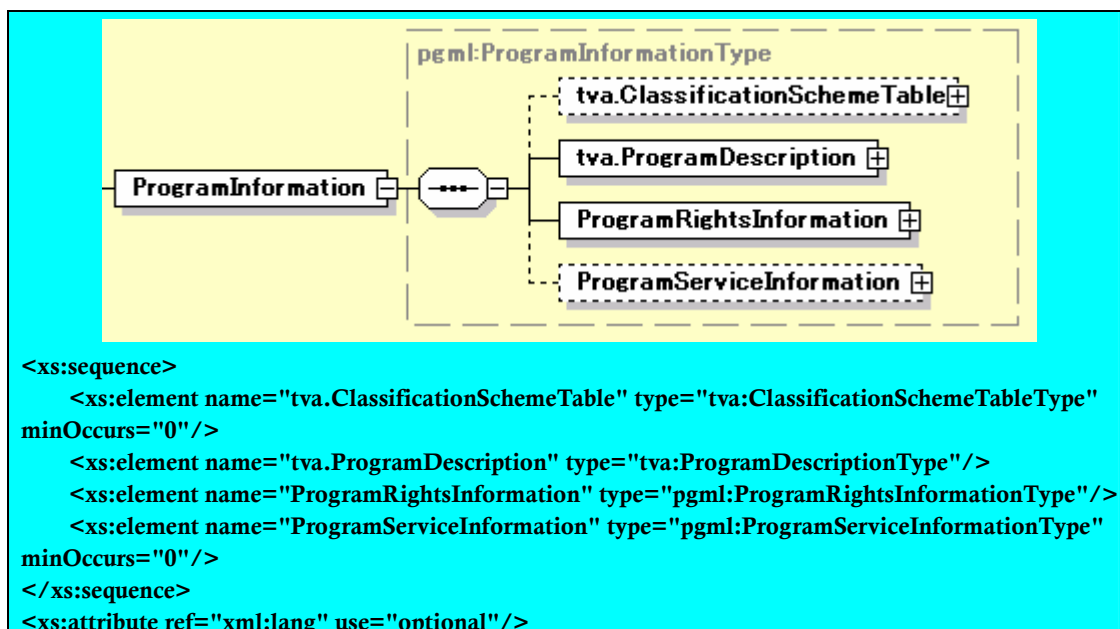
ProgramItem element is consisted of ProgramInformation element to express program information, ProgramContent element to express program layout information. Also, order attribute could set the sequential broadcasting order of ProgramItem.



6.4. ProgramInformation

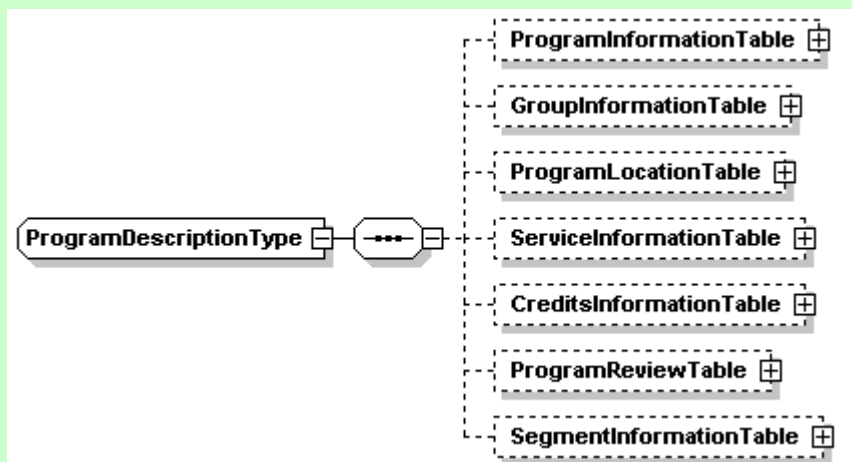
ProgramInformation element may designate tva.ClassificationSchemeTable, which is scheme table to specify such as items of dictionary (Classification Scheme: CS). Mandatory are tva.ProgramDescription to express program information and ProgramRightsInformation to

express rights information of the program. Service information of concerned broadcast program may be designated by ProgramServiceInformation. This element could express, by using xml:lang attribute, the language to describe.



6.5. tva.ProgramDescription

tva.ProgramDescription is the element to use TVA's ProgramDescriptionType (A complex type that aggregates the tables that contain program description metadata). ProgramDescriptionType of TVA has seven optional child elements; e.g. ProgramInformationTable, GroupInformationTable, ProgramLocationTable, ServiceInformationTable, CreditsInformationTable, ProgramReviewTable and SegmentInformationTable. This chapter briefly describes a part of TV-Anytime. Refer to TV-Anytime documents (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) for details.



```

<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>

```

<i>Name</i>	<i>Definition</i>
<i>ProgramDescriptionType</i>	<i>A complex type that aggregates the tables that contain program description metadata</i>
<i>ProgramInformationTable</i>	<i>The program information table</i>
<i>GroupInformationTable</i>	<i>The group information table</i>
<i>ProgramLocationTable</i>	<i>The program location table</i>
<i>ServiceInformationTable</i>	<i>The service information table</i>
<i>CreditsInformationTable</i>	<i>The credits information table</i>
<i>ProgramReviewTable</i>	<i>The program review table</i>
<i>SegmentInformationTable</i>	<i>The segment information table</i>

6.5.1. tva:ProgramInformationTable

tva:ProgramInformationTable could express zero or more ProgramInformation.

copyrightNotice attribute expresses the rights information.

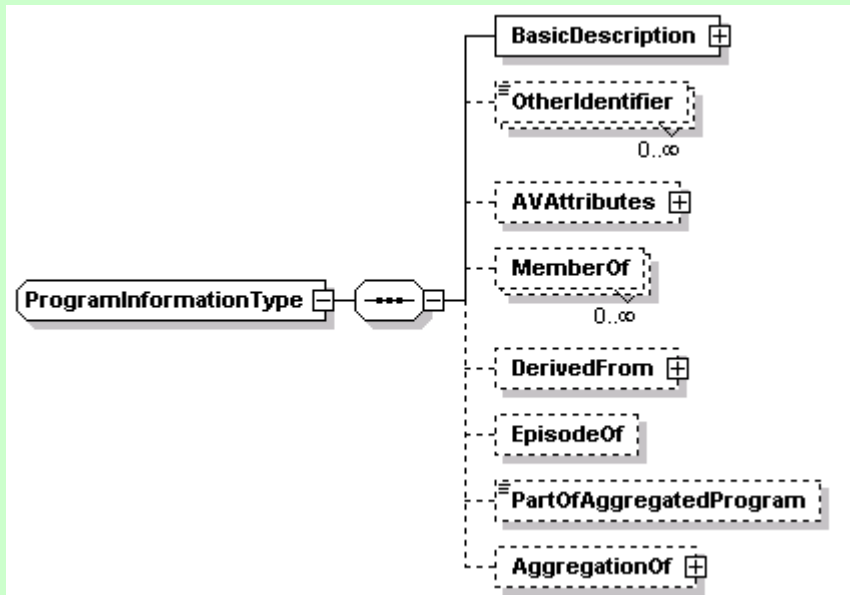
```
<complexType name="ProgramInformationTableType">
  <sequence>
    <element name="ProgramInformation" type="tva:ProgramInformationType"
      minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="copyrightNotice" type="string" use="optional"/>
</complexType>
```

<i>Name</i>	<i>Definition</i>
<i>ProgramInformationTableType</i>	<i>A complex type that contains a table of program information records</i>
<i>ProgramInformation</i>	<i>A list of program information records</i>
<i>copyrightNotice</i>	<i>Specifies the copyright information for the program information table.</i>

```
Following example expresses that the copyright belongs to NHK.  
<tva:ProgramInformationTable copyrightNotice="NHK">
```

6.5.1.1. *tva:ProgramInformation*

tva:ProgramInformation element expresses the detailed information such as Title, Synopsis, Genre, Keyword, etc. Subelements are mandatory BasicDescription, optional AVAttributes, DerivedFrom, EpisodeOf, PartOfAggregatedProgram and AggregationOf, zero or more OtherIdentifier and MemberOf. ID to identify the program (CRID) is expressed by using mandatory programId attribute. Refer to TV-Anytime documents (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) for details.



```

<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>

<i>Name</i>	<i>Definition</i>
<i>ProgramInformationType</i>	<i>A complex type that describes a program</i>
<i>BasicDescription</i>	<i>The description of the program</i>
<i>OtherIdentifier</i>	<i>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</i>
<i>AVAttributes</i>	<i>Audio-visual attributes that are applicable to the program <u>as originated</u></i>
<i>MemberOf</i>	<i>Indicates group membership of a program - for a reason other than the special cases of derivation (see <i>DerivedFrom</i>) or being an episode of a series (see <i>EpisodeOf</i>)</i>
<i>DerivedFrom</i>	<i>Indicates that a program is derived from another program (e.g. by reducing violent scenes) or possibly a program concept (see <i>ProgramGroupTypeType</i>)</i>
<i>EpisodeOf</i>	<i>Indicates a series from which the current program is an episode</i>
<i>PartOfAggregatedProgram</i>	<i>An element used to specify that content is part of an aggregated program, e.g. an Omnibus or a Magazine</i>
<i>AggregationOf</i>	<i>An element used to describe aggregated programs</i>
<i>AggregatedProgram</i>	<i>An element of <i>CRIDRefType</i> pointing to an aggregated program to which this program belongs to</i>
<i>Type</i>	<i>An aggregated program can be of two distinct types: * Omnibus: an omnibus program is defined as a single program that contains a sequence of individual programs that may be edited to provide a coherent single program. It is typically used to provide a summary of a week's episodes of a daily series * Magazine: a magazine program is a program in its own right that contains other, definite smaller programs. One example is a children's magazine program which contains live studio material along with cartoons or episodes of a children's drama program.</i>
<i>programId</i>	<i>The CRID for the program</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>
<i>EpisodeOfType</i>	<i>A complex type used to indicate membership of a series. It instantiates <i>BaseMemberOfType</i>, and is usually instantiated by the <i>EpisodeOf</i> element. In the unusual case of a program that is a member of more than one series, <i>EpisodeOfType</i> may be instantiated by <i>MemberOf</i> (using <i>xsi:type</i>)</i>
<i>BaseMemberOfType</i>	<i>An abstract type, based on <i>CRIDReferenceType</i>, that references a group (or possibly, in the case of <i>DerivedFrom</i>, a program)</i>

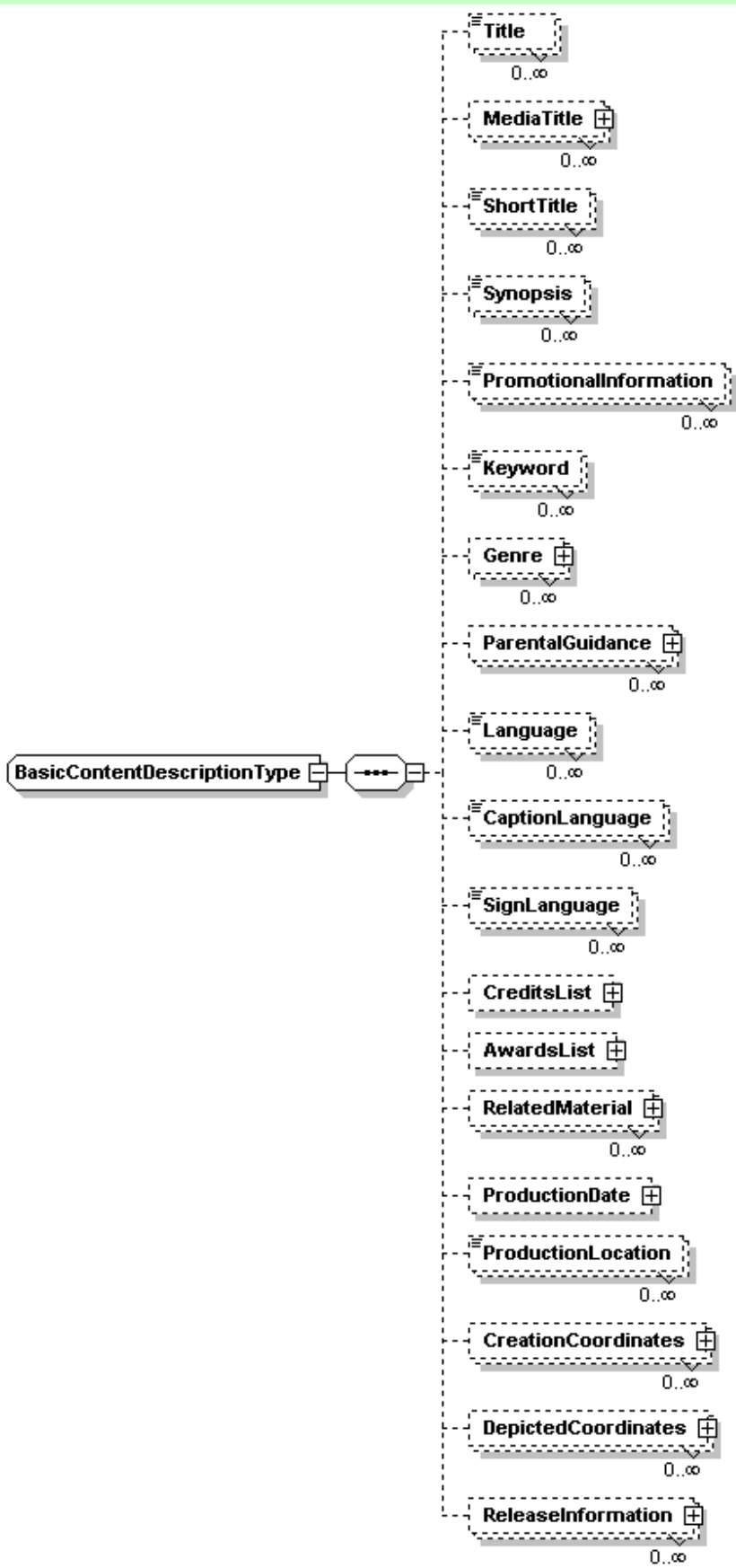
<i>Index</i>	<i>An index for the program within the specified group. This would be used, for example, to specify an episode number for a program in a series</i>
<i>MemberOfType</i>	<i>A complex type used to indicate membership of a group for a reason other than the special cases of derivation (see <i>DerivedFrom</i>) or being an episode of a series (see <i>EpisodeOf</i>). <i>MemberOfType</i> instantiates <i>BaseMemberOfType</i>, and is instantiated by the <i>MemberOf</i> element (using <i>xsi:type</i>). It is expected that as the specification evolves other types that can be instantiated by <i>MemberOf</i> will be defined.</i>
<i>BaseDerivationReasonType</i>	<i>An abstract type for defining program derivation criteria</i>
<i>DerivationReasonType</i>	<i>An enumerated list of the default TVA criteria for deriving a program version from a program concept.</i>
<i>Value</i>	<i>Permitted values are violence, language, sex, duration and other.</i>
<i>DerivedFromType</i>	<i>A complex type used to indicate that a program has been derived from a program or a program concept (see <i>ProgramGroupTypeType</i>). It instantiates <i>BaseMemberOfType</i> and is instantiated by <i>DerivedFrom</i></i>
<i>DerivationReason</i>	<i>The reason for the derivation of the program version.</i>

Following example expresses the program ID as "crd://nhk.or.jp/nhk1-tv_20030825T17051705"
 <tva:ProgramInformation programId="crd://nhk.or.jp/nhk1-tv_20030825T17051705">

6.5.1.1.1. *tva:BasicDescription*

tva:BasicDescription represents a explanation of the program using *tva:BasicContentDescriptionType*.

Tva:BasicContentDescriptionType is a complex type that defines standard program description elements.




```

<complexType name="BasicContentDescriptionType">
  <sequence>
    <element name="Title" type="mpeg7:TitleType"
      minOccurs="0" 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>
  </sequence>
</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
<i>BasicContentDescriptionType</i>	<i>A complex type that defines standard program description elements.</i>
<i>Title</i>	<i>A title of the program. A program 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).</i>
<i>MediaTitle</i>	<i>A media asset (e.g. image) that can be used as a 'title' for a program. Content that is not part of the original program 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).</i>
<i>ShortTitle</i>	<i>A shortened version of the program title that defines how the title should be truncated for presentation purposes.</i>
<i>length</i>	<i>Indicates the number of alphabetical characters in the short title. The recommended maximum value of this required attribute is 80.</i>
<i>Synopsis</i>	<i>A textual description of the program.</i>
<i>PromotionalInformation</i>	<i>A textual description containing promotional information</i>
<i>Keyword</i>	<i>A list of keywords for the program. A keyword can be a single word or an entire phrase made up of multiple words. Defined as a TV-Anytime datatype, KeywordType</i>
<i>Genre</i>	<i>A genre for the program. The thesaurus in Appendix B defines the normative TV-Anytime set of genres.</i>
<i>ParentalGuidance</i>	<i>A parental rating code for the program. Defined as an MPEG-7 datatype, ParentalGuidanceType (See Sec. 9.2.3 of [2] for a detailed specification).</i>
<i>Language</i>	<i>Describes one spoken language for the program. There may be more than one spoken language specified for a program.</i>
<i>CaptionLanguage</i>	<i>Describes one language of the caption information included with the program. The type of the caption information associated with the program 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.</i>
<i>closed</i>	<i>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.</i>
<i>supplemental</i>	<i>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.</i>
<i>SignLanguage</i>	<i>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.</i>

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

Example

```
<tva:BasicDescription>
  <tva:Title type="main" xml:lang="en-GB">Goodmorning Japan!!</tva:Title>
  <tva:Synopsis xml:lang="en-GB" length="short"> Goodmorning Japan!!</tva:Synopsis>
  <tva:Synopsis xml:lang="ja-JP" length="short">おはよう日本!!</tva:Synopsis>
```

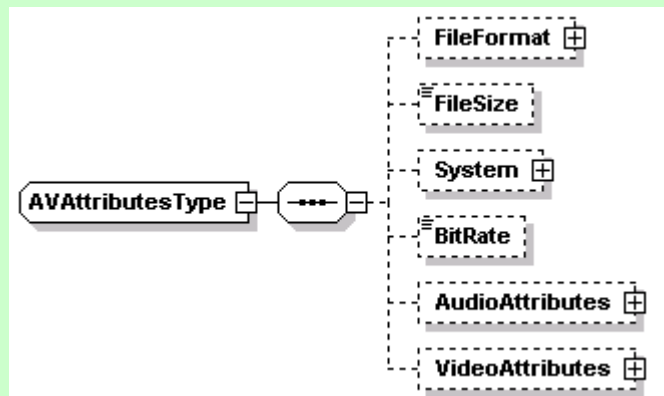
```

<tva:Keyword xml:lang="en-GB" type="main">News</tva:Keyword>
<tva:Keyword xml:lang="en-GB" type="secondary">Japan</tva:Keyword>
<tva:Genre href="urn:tva:metadata:cs:ContentCS:2002:3.1.1.1" type="main">
  <tva:Name xml:lang="en-GB">Daily news</tva:Name>
</tva:Genre>
<tva:ParentalGuidance>
  <mpeg7:MinimumAge>0</mpeg7:MinimumAge>
</tva:ParentalGuidance>
<!-- Describes one spoken language for the program. -->
<tva:Language type="original">ja</tva:Language>
<tva:Language type="dubbed">en</tva:Language>
<tva:Language type="background">ja</tva:Language>
<tva:CaptionLanguage closed="true">ja</tva:CaptionLanguage>
<tva:CaptionLanguage supplemental="true">ja</tva:CaptionLanguage>
<tva:SignLanguage primary="true" translation="true" type="JBL">ja</tva:SignLanguage>
<tva:CreditsList>
  <tva:CreditsItem role="urn:tva:metadata:TVARoleCS:ANCHOR">
    <tva:PersonName xml:lang="en-GB">
      <mpeg7:GivenName xml:lang="en-GB">*****</mpeg7:GivenName>
      <mpeg7:FamilyName xml:lang="en-GB">*****</mpeg7:FamilyName>
    </tva:PersonName>
    <tva:OrganizationName xml:lang="en-GB">***</tva:OrganizationName>
  </tva:CreditsItem>
  <tva:CreditsItem role="urn:tva:metadata:TVARoleCS:ANCHOR">
    <tva:PersonName xml:lang="en-GB">
      <mpeg7:GivenName xml:lang="en-GB">***</mpeg7:GivenName>
      <mpeg7:FamilyName xml:lang="en-GB">Suzuki</mpeg7:FamilyName>
    </tva:PersonName>
    <tva:OrganizationName xml:lang="en-GB">***</tva:OrganizationName>
  </tva:CreditsItem>
</tva:CreditsList>
<tva:DepictedCoordinates>
  <tva:DepictedLocation>NHK Studio</tva:DepictedLocation>
</tva:DepictedCoordinates>
</tva:BasicDescription>

```

6.5.1.1.2. *tva:AVAttributes*

tva:AVAttributesType expresses technical attributes such as the coding format of the sound and the image.



```

<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"/>
        </sequence>
      </complexType>
    </element>
  </sequence>
</complexType>

```

```

    <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
<i>AVAttributesType</i>	<i>A complex type defining a set of elements describing audio and/or video using the AudioAttributes and VideoAttributes.</i>
<i>FileFormat</i>	<i>Describes the file format of the program instance.</i>
<i>FileSize</i>	<i>Indicates the size, in bytes, of the file where the program instance is stored.</i>
<i>System</i>	<i>Describes the broad media format of the program instance. This term should be taken from the MPEG-7 “SystemCS” classification scheme listed in section B.2.30 of [2].</i>
<i>BitRate</i>	<i>Indicates the nominal bit rate in bits/s of the program instance.</i>
<i>variable</i>	<i>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.</i>
<i>minimum</i>	<i>Indicates the minimum numerical value for the BitRate in case of variable bit rate.</i>
<i>average</i>	<i>Indicates the average numerical value for the BitRate in case of variable bit rate.</i>
<i>maximum</i>	<i>Indicates the maximum numerical value for the BitRate in case of variable bit rate.</i>
<i>AudioAttributes</i>	<i>A complex type defining a set of elements that describe audio characteristics</i>
<i>Coding</i>	<i>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</i>
<i>NumOfChannels</i>	<i>The number of channels of audio : e.g. 1 for mono, 2 for stereo or more for multi-channel audio</i>
<i>MixType</i>	<i>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. <u>no sound, mono, stereo, surround, home theatre 5.1 and movie theater</u></i>
<i>VideoAttributes</i>	<i>A complex type defining a set of elements that describe video characteristics</i>
<i>Coding</i>	<i>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].</i>
<i>Scan</i>	<i>The scan type of the video</i>
<i>HorizontalSize</i>	<i>The horizontal size in pixels of the video</i>
<i>VerticalSize</i>	<i>The vertical size in pixels of the video</i>
<i>AspectRatio</i>	<i>The aspect ratio of the video. There may be two aspect ratios associated with a program: the original aspect ratio that the program is available in, and the aspect ratio of a particular instance of the program.</i>
<i>Color</i>	<i>The color format of the video (e.g. black and white)</i>

<i>ScanType</i>	<i>A simple enumerated type defining the allowable values of the ScanType element above. ScanType can take on the value interlaced or progressive.</i>
<i>ColorTypeType</i>	<i>A simple enumerated type defining the allowable values of the ColorType instantiated in the Color element above. Allowed values are:</i> <ul style="list-style-type: none"> • <i>color – the content was produced using a color video format</i> • <i>blackAndWhite – the content was produced using a black and white video format</i> • <i>blackAndWhiteAndColor – the content contains a mixture of video that was originally produced in color and content that was produced in black and white</i> • <i>colorized – the content was originally produced using a black and white video format, and color was added after original production</i>
<i>ColorType</i>	<i>A complex type, with a single attribute describing the color format using one of the ColorTypeType values</i>
<i>type</i>	<i>The type of color format</i>
<i>RatioType</i>	<i>A data type that allows ratios to be specified in the form 'h:v' where h and v represent horizontal and vertical dimensions, respectively</i>
<i>AspectRatioType</i>	<i>Denotes the aspect ratio of the program. This element can denote the aspect ratio of the original program as well as that of its instances, through the use of type attribute.</i>
<i>type</i>	<i>Denotes whether the specified aspect ratio is associated with the original program (original) or its published instance (publication). The default value of the attribute is original.</i>

```

<tva:AVAttributes>
  <tva:AudioAttributes>
    <!--The coding format of the audio.-->
    <tva:Coding href="urn:mpeg:MPEG7AudioCodingFormatCS:1">
      <tva:Name xml:lang="en-GB">AC3</tva:Name>
      <tva:Definition xml:lang="en-GB">Dolby AC-3</tva:Definition>
    </tva:Coding>
    <!--The number of channels of audio : e.g. 1 for mono, 2 for stereo or more for multi-channel
audio-->
    <tva:NumOfChannels>2</tva:NumOfChannels>
  </tva:AudioAttributes>
  <tva:VideoAttributes>
    <!--The scan type of the video-->
    <tva:Scan>interlaced</tva:Scan>
    <tva:VerticalSize>525</tva:VerticalSize>
    <!--A data type that allows ratios to be specified in the form 'h:v' where h and v represent
horizontal and vertical dimensions, respectively-->
    <tva:AspectRatio>4:3</tva:AspectRatio>
  </tva:VideoAttributes>
</tva:AVAttributes>

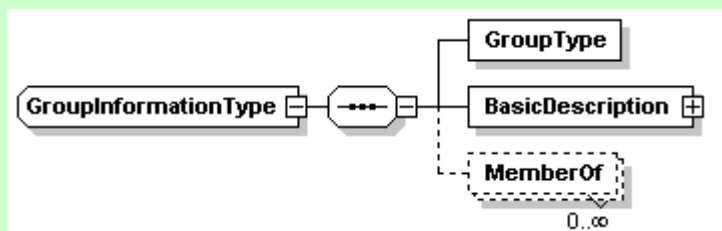
```

6.5.2. tva:GroupInformationTable

GroupInformationTableType is a complex type that contains a table of group information records.

GroupInformation expresses information on the group which is composed of related content.

```
<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="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>
```

```
<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="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>
```

```

    </restriction>
  </simpleType>
</attribute>
</extension>
</complexContent>
</complexType>

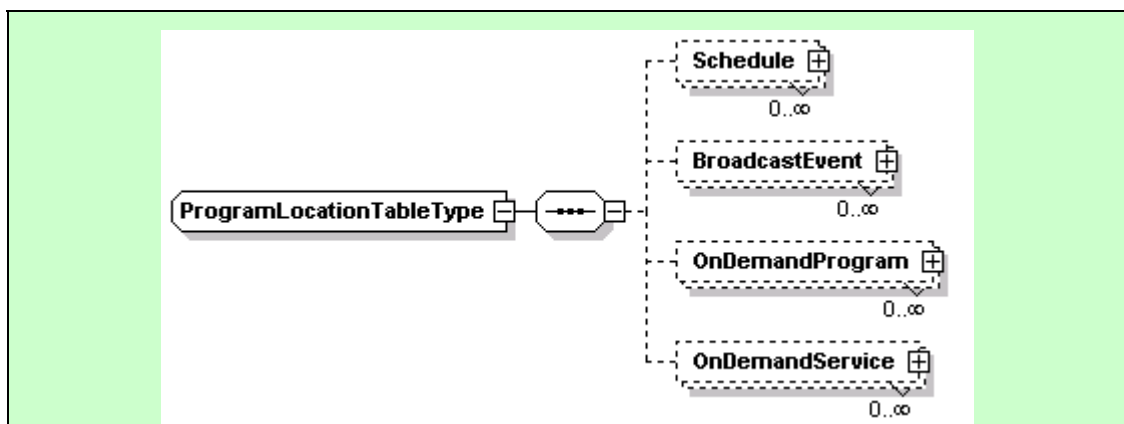
```

Name	Definition
<i>GroupInformationTableType</i>	<i>A complex type that contains a table of group information records</i>
<i>GroupInformation</i>	<i>A list of group information records</i>
<i>copyrightNotice</i>	<i>Specifies the copyright information for the group information table.</i>
<i>BaseProgramGroupTypeType</i>	<i>An abstract type for defining program grouping criteria</i>
<i>ProgramGroupTypeType</i>	<i>An enumerated list of the TVA-defined program groups.</i>
<i>value</i>	<p><i>The allowed values for this field are as follows:</i></p> <p><i>series – an ordered or unordered collection of programs that is shown in a sequence (e.g. “Friends” season 1, episodes "1 to n"). An unbounded series (e.g. an ongoing drama series) may be considered to be a serial</i></p> <p><i>show – a program theme that is typically be associated with a collection of series (e.g. all episodes of Friends)</i></p> <p><i>programConcept – the editorial concept for a program from which specific program 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)</i></p> <p><i>programCompilation – a collection of programs that is used to allow segments from multiple programs to be combined in segment groups. When used in conjunction with segmentation information, a programCompilation program group allows, for example, several related news segments from different news programs to be grouped for playback in sequence.</i></p> <p><i>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 programs that are shown as a group because they are editorially coherent (e.g. a general sports program with individual sub-programs covering different events)</i></p> <p><i>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</i></p>
<i>GroupInformationType</i>	<i>A complex type to describe a group</i>
<i>GroupType</i>	<i>The type of the group (e.g. series) - required</i>

<i>Name</i>	<i>Definition</i>
<i>BasicDescription</i>	<i>The description of the group</i>
<i>MemberOf</i>	<i>A list of other groups of which this group is a member.</i>
<i>groupId</i>	<i>A unique CRID that identifies the group</i>
<i>ordered</i>	<i>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.</i>
<i>numOfItems</i>	<i>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</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>

6.5.3. tva:ProgramLocationTable

ProgramLocationTableType is a complex type that contains a table of program location records. tva:ProgramLocation expresses information on the location of the content such as the broadcasting time.



```

<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>
  
```

<i>Name</i>	<i>Definition</i>
<i>ProgramLocationTableType</i>	<i>A complex type that contains a table of program location records</i>
<i>Schedule</i>	<i>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.</i>
<i>BroadcastEvent</i>	<i>A list of BroadcastEvent records</i>
<i>OnDemandProgram</i>	<i>A list of OnDemandProgram records</i>
<i>OnDemandService</i>	<i>A list of OnDemandService Records</i>
<i>copyrightNotice</i>	<i>Specifies the copyright information for the program location table.</i>

```

<tva:ProgramLocationTable copyrightNotice="NHK">
  <tva:BroadcastEvent serviceIDRef="103">
    <tva:Program crid="crid://nhk.or.jp/nhk1-tv_20030825T17051705"/>
    <tva:InstanceDescription>
      <tva:Title type="main" xml:lang="en-GB">Goodmorning Japan!!</tva:Title>
      <tva:AVAttributes>
        <tva:AudioAttributes>
          <!--The coding format of the audio.-->
          <tva:Coding href="urn:mpeg:MPEG7AudioCodingFormatCS:1">
            <tva:Name xml:lang="en-GB">AC3</tva:Name>
            <tva:Definition xml:lang="en-GB">Dolby AC-3</tva:Definition>
          </tva:Coding>
          <!--The number of channels of audio : e.g. 1 for mono, 2 for stereo or more for multi-channel
audio-->
          <tva:NumOfChannels>2</tva:NumOfChannels>
        </tva:AudioAttributes>
        <tva:VideoAttributes>
          <!--The scan type of the video-->
          <tva:Scan>interlaced</tva:Scan>
          <tva:VerticalSize>525</tva:VerticalSize>
          <!--A data type that allows ratios to be specified in the form 'h:v' where h and v represent
horizontal and vertical dimensions, respectively-->
          <tva:AspectRatio>4:3</tva:AspectRatio>
        </tva:VideoAttributes>
      </tva:AVAttributes>
    </tva:InstanceDescription>
    <!-- The time at which the program is advertised as starting. -->
    <tva:PublishedStartTime>2004-02-20T06:00:00+09:00</tva:PublishedStartTime>
    <!-- The time at which the program is advertised as ending. -->
    <tva:PublishedEndTime>2004-02-20T07:30:00+09:00</tva:PublishedEndTime>
    <!-- The advertised duration of the program. -->
    <tva:PublishedDuration>P0Y0M0DT1H30M</tva:PublishedDuration>
    <!--ExtentionTime-->
    <!-- <BroadcastEventTime>P0Y0M0DT00H30M</BroadcastEventTime> -->
    <tva:Live value="true"/>
  </tva:BroadcastEvent>
</tva:ProgramLocationTable>

```

```

<tva:Repeat value="false"/>
<tva:Free value="true"/>
</tva:BroadcastEvent>
</tva:ProgramLocationTable>

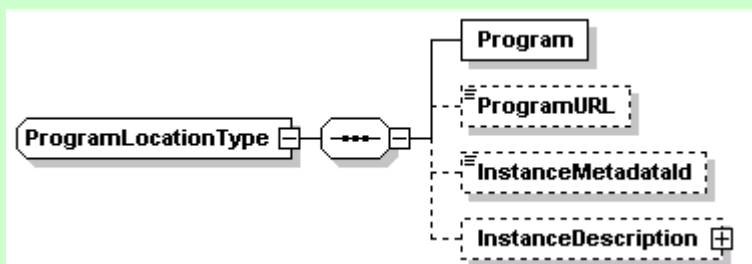
```

6.5.3.1. *tva:ScheduleType*

```

<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>

```

Name	Definition
<i>InstanceMetadataIDType</i>	<i>A simple type used to instantiate</i>

	<i>InstanceMetadataID</i>
<i>ProgramLocationType</i>	<i>An abstract type that represents a single program.</i>
<i>Program</i>	<i>A reference to the CRID that this description describes.</i>
<i>ProgramURL</i>	<i>An element specifying a program location</i>
<i>InstanceMetadataId</i>	<i>An optional identifier that shall identify a particular location related to a CRID (i.e. a program). This identifier shall be unique within the CRID domain and have the same life cycle as the CRID.</i>
<i>InstanceDescription</i>	<i>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.</i>
<i>ScheduleType</i>	<i>A complex type derived representing a series of schedule events that are associated with one service.</i>
<i>ScheduleEvent</i>	<i>A list of schedule events</i>
<i>serviceIDRef</i>	<i>An attribute of Schedule used to identify the service on which the scheduled events will be broadcast. Its value references a ServiceInformation element</i>
<i>start</i>	<i>Start of the period covered by the schedule</i>
<i>end</i>	<i>End of the period covered by the schedule</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>
<i>ScheduleEventType</i>	<i>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.</i>
<i>PublishedStartTime</i>	<i>The time at which the program 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.</i>
<i>PublishedEndTime</i>	<i>The time at which the program 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.</i>
<i>PublishedDuration</i>	<i>The advertised duration of the program. 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</i>

	<i>PublishedStartTime</i>
<i>Live</i>	<i>A flag to indicate if the program is a live broadcast</i>
<i>Repeat</i>	<i>A flag to indicate if the program is a repeat</i>
<i>FirstShowing</i>	<i>A flag to indicate if this instance is a 'first showing'</i>
<i>LastShowing</i>	<i>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</i>
<i>Free</i>	<i>A flag to indicate if access to this instance of the program is free</i>

6.5.3.2. *tva:BroadcastEvent*

```

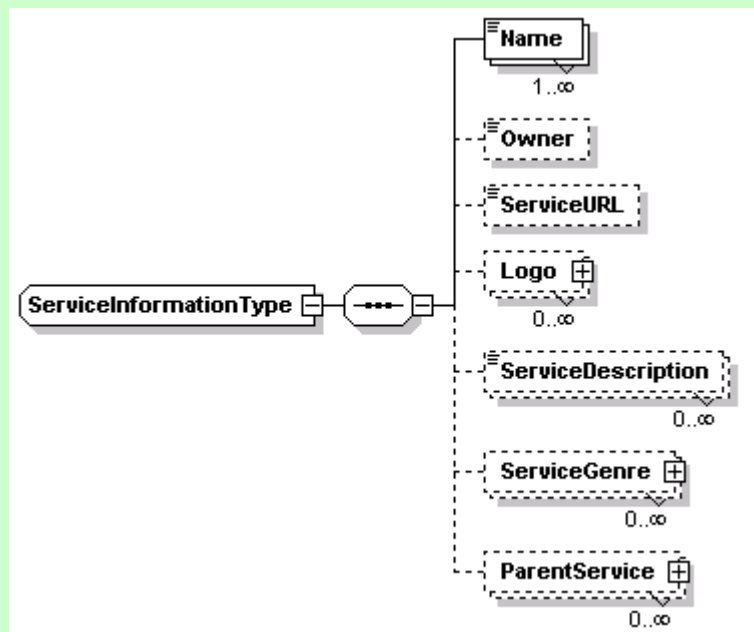
<complexType name="BroadcastEventType">
  <complexContent>
    <extension base="tva:ScheduleEventType">
      <attribute name="serviceIDRef" type="tva:TVAIDRefType"
        use="optional"/>
      <attributeGroup ref="tva:fragmentIdentification"/>
    </extension>
  </complexContent>
</complexType>

```

<i>Name</i>	<i>Definition</i>
<i>BroadcastEventType</i>	<i>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)</i>
<i>serviceIDRef</i>	<i>An optional attribute of BroadcastEvent used to identify the service on which this event will be broadcast. Its value references a ServiceInformation element</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>

6.5.4. *tva:ServiceInformationTable*

tva:ServiceInformation expresses information on the service such as the service name, the genre of the service.



```

<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>
  
```

```

<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>

<i>Name</i>	<i>Definition</i>
<i>ServiceRefType</i>	<i>A complex type that allows a reference to be made to a service</i>
<i>ValidPeriod</i>	<i>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.)</i>
<i>ValidFrom</i>	<i>Start time and date from which the reference is valid</i>
<i>ValidTo</i>	<i>End time and date from which the reference is valid</i>
<i>serviceIDRef</i>	<i>The service that is being referenced. Its value references a ServiceInformation element</i>
<i>ServiceInformationType</i>	<i>A complex type that allows a service to be described</i>
<i>Name</i>	<i>The name of the service</i>
<i>Owner</i>	<i>The brand owner of the service</i>
<i>ServiceURL</i>	<i>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.</i>
<i>Logo</i>	<i>A network logo, such as an image or jingle.</i>
<i>ServiceDescription</i>	<i>An element describing the service</i>
<i>ServiceGenre</i>	<i>A genre that characterizes the programming on the service</i>
<i>ParentService</i>	<i>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)</i>
<i>serviceId</i>	<i>The unique ID for the service</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>

```
<tva:ServiceInformationTable copyrightNotice="NHK">
  <tva:ServiceInformation serviceId="103">
    <tva:Name>NHK1-TV</tva:Name>
    <tva:ServiceGenre
href="urn:newsml:pressnet.or.jp:20020123:topicset.radiotv-BroadcastService:3" type="main">
      <tva:Name xml:lang="en-GB" preferred="1">RadioTV-</tva:Name>
    </tva:ServiceGenre>
```

```

</tva:ServiceInformation>
</tva:ServiceInformationTable>

```

6.5.5. tva:CreditsInformationTable

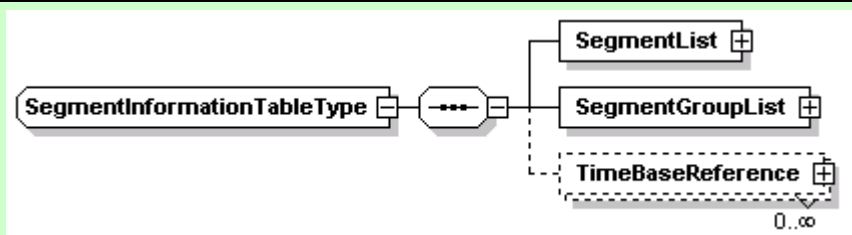
Refer to TV-Anytime documents (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) for details.

6.5.6. tva:ProgramReviewTable

tva:ProgramReview expresses the program related review. Refer to TV-Anytime documents (ETSI-TS 102 822-3-1 and ETSI-TS 102 822-4) for details.

6.5.7. tva:SegmentInformationTable

Structure to contain metadata relating to segmentation is expressed by tva:SegmentInformationTable.



```

<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>

```

<i>Name</i>	<i>Definition</i>
<i>SegmentInformationTableType</i>	<i>Defines a structure for holding all segmentation-related metadata</i>
<i>SegmentList</i>	<i>The list of the segments in the SegmentInformationTable</i>
<i>SegmentInformation</i>	<i>Text that contains information related to each segment</i>
<i>SegmentGroupList</i>	<i>The list of the segment groups in the SegmentInformationTable</i>
<i>SegmentGroupInformation</i>	<i>Text that contains information about a group of segments</i>
<i>TimeBaseReference</i>	<i>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 program identified by the associated CRID.</i>
<i>RefMediaTime</i>	<i>Specifies the time base reference using an element of MPEG-7 type mediaTimePointType (See Sec. 6.4.11 of [2] for a detailed description)</i>
<i>RefURI</i>	<i>Specifies the time base reference using an element of type anyURI</i>
<i>timeUnit</i>	<i>Specifies the duration of the time intervals used in the incremental specifications of relative time points and duration. Default time unit is milliseconds.</i>

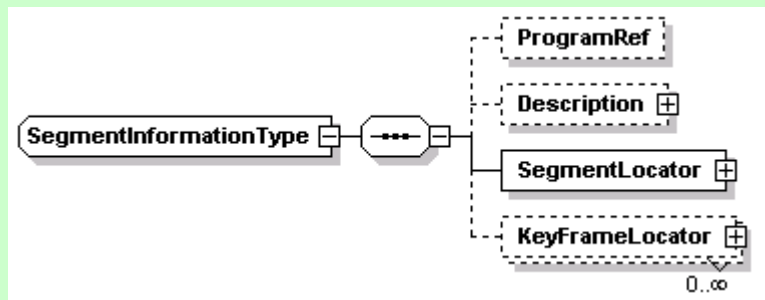
Following example expresses SegmentInformationTable in which timeUnit is PT1N1000F.
 <tva:SegmentInformationTable timeUnit="PT1N1000F">

6.5.7.1. tva:SegmentList

tva:SegmentList expresses the list of SegmentInformation.

6.5.7.1.1. tva:SegmentInformation

tva:SegmentInformation expresses the segment information.



```

<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
<i>SegmentInformationType</i>	<i>Defines an individual segment.</i>
<i>ProgramRef</i>	<i>A reference to the program this segment belongs to. When the ProgramRef element is not instantiated within a segment, the program 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 program 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 program that the segment belongs to</i>
<i>Description</i>	<i>A description of the content of the segment.</i>
<i>SegmentLocator</i>	<i>Locates the segment within a program (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 program. 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 program 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.</i>

<i>KeyFrameLocator</i>	<i>Locates a key frame of the segment within a program 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.</i>
<i>segmentId</i>	<i>The unique identifier of the segment of TVAIDType type.</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>

```
<tva:SegmentInformation segmentId="s1">
  <tva:ProgramRef crid="//nhk.or.jp/nhk1-T7001_20030825T1705"/>
  <tva:SegmentLocator>
    <mpeg7:MediaTimePoint>-0-00-00T00:00:00.00F0-00:00</mpeg7:MediaTimePoint>
    <mpeg7:MediaDuration>-P0DT0H0M0S0N00f0F-00:00Z</mpeg7:MediaDuration>
  </tva:SegmentLocator>
</tva:SegmentInformation>
```

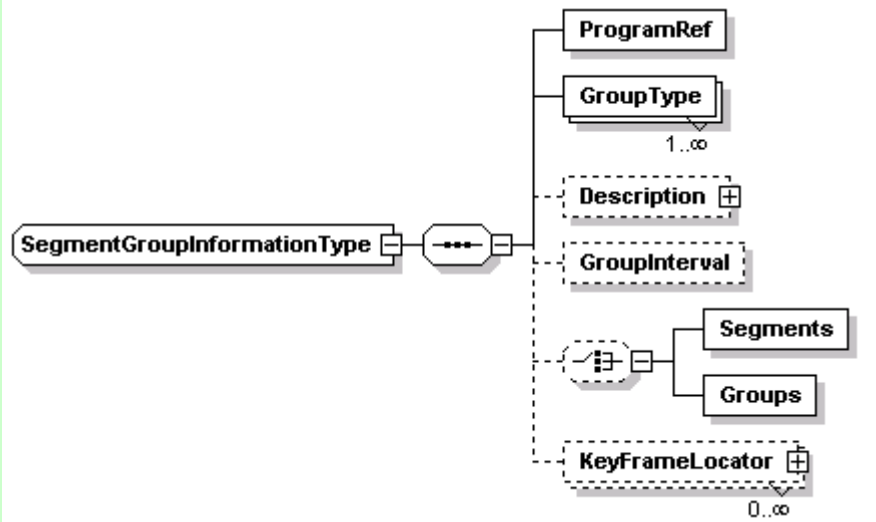
6.5.7.2. *tva:SegmentGroupList*

tva:SegmentGroupList expresses the list of SegmentGroupInformation.

```
<tva:SegmentGroupList>
  <tva:SegmentGroupInformation groupId="G1" ordered="true">
  ...
</tva:SegmentGroupInformation>
  <tva:SegmentGroupInformation groupId="G2" ordered="true">
  ...
</tva:SegmentGroupInformation>
  ...
</tva:SegmentGroupList>
```

6.5.7.2.1. *tva:SegmentGroupInformation*

tva:SegmentGroupInformation expresses the information of segment group.



```

<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>

```

<i>Name</i>	<i>Definition</i>
<i>SegmentGroupInformationType</i>	<i>Defines an individual segment group</i>
<i>ProgramRef</i>	<i>A reference to the program this segment group belongs to. When the member segments/groups are collected from different programs, the ProgramRef element references the CRID of a program group of type "programCompilation." This CRID is resolved into the individual programs CRIDs.</i>
<i>GroupType</i>	<i>The type of the segment group.</i>
<i>Description</i>	<i>A description of the content of the segment group</i>
<i>GroupInterval</i>	<i>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</i>

Name	Definition
	<i>interval, e.g. the first half.</i>
<i>Segments</i>	<i>Defines the segments that are part of this group by 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.</i>
<i>Groups</i>	<i>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.</i>
<i>KeyFrameLocator</i>	<i>Locates a key frame of the segment group within a program 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.</i>
<i>groupId</i>	<i>The unique identifier of the segment group</i>
<i>ordered</i>	<i>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").</i>
<i>numberOfSegments</i>	<i>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.</i>
<i>numberOfKeyFrames</i>	<i>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.</i>
<i>duration</i>	<i>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.</i>
<i>topLevel</i>	<i>Specifies whether the given segment group is a top-level group (optional).</i>
<i>fragmentIdentification</i>	<i>Used to identify the fragment of data to which this description belongs to</i>
<i>BaseSegmentGroupTypeType</i>	<i>An abstract type that specifies the valid types of segment groups.</i>
<i>SegmentGroupTypeType</i>	<i>An enumerated list of the TVA-defined segment group types. The allowed types are defined as follows: highlights - The group of segments represents selected highlights from one or more programs. A segment group</i>

Name	Definition
	<i>of this type requires continuous playback.</i>
	<i>highlights/objects - The group of segments represents selected highlights from a program (or programs) that share a common object or objects (e.g. Seinfeld highlights with Kramer). A segment group of this type requires continuous playback.</i>
	<i>highlights/events - The group of segments represents selected highlights from a program (or programs) that share a common event or events (e.g. touchdowns in the Super Bowl). A segment group of this type requires ordered playback.</i>
	<i>bookmarks - The segment group defines a set of access points to a program. 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.</i>
	<i>bookmarks/objects - The segment group defines a set of access points to a program, 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.</i>
	<i>bookmarks/events - The segment group defines a set of access points to a program, 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.</i>
	<i>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.</i>
	<i>preview - The segment group defines a preview of a program. A segment group of this type requires continuous playback.</i>
	<i>preview/title - The segment group defines a preview of a program, where the preview serves as a promotional title or trailer for the program. A segment group of this type requires continuous playback.</i>
	<i>preview/slideshow - The segment group defines a preview of a program, where the preview serves as a compact slideshow of the program content. A segment group of this type requires continuous playback.</i>

<i>Name</i>	<i>Definition</i>
	<p><i>tableOfContents</i> - The segment group defines a navigable table of contents for the program. A segment group of this type does not require continuous playback.</p> <p><i>synopsis</i> - The segment group provides a summary or synopsis of the program. A segment group of this type requires continuous playback.</p> <p><i>shots</i> - The segment group provides a list of the shots in the program. A segment group of this type does not require continuous playback.</p> <p><i>insertionPoints</i> - The segment group provides a list of segments which function as insertion points into the program of interest; e.g. temporal locations of the commercials to be shown during a program. The duration information associated with member segments in a segment group of type <i>insertionPoints</i> is ignored, since the member segments only determine the time instances in the original program where additional content is to be inserted. A segment group of this type does not require continuous playback.</p> <p><i>alternativeGroups</i> - 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.</p> <p><i>other</i> - any other segment group type.</p>

```

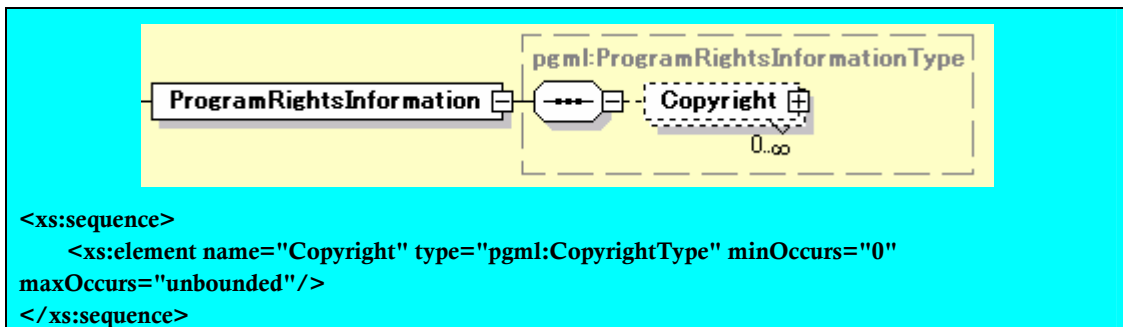
<tva:SegmentGroupInformation groupId="G1" ordered="true">
  <tva:ProgramRef crid="//nhk.or.jp/nhk1-T7001_20030825T1705"/>
  <tva:GroupType xsi:type="tva:SegmentGroupType" value="themeGroup"/>
  <tva:Description>
    <tva:Title xml:lang="en-GB" type="main">relaying</tva:Title>
    <tva:Synopsis xml:lang="en-GB" length="short">Relaying a broadcast. It will know a dangerous
fish. - Hanyu City, Suigo park - </tva:Synopsis>
  </tva:Description>
</tva:SegmentGroupInformation>

```

6.6. ProgramRightsInformation

ProgramRightsInformation element expresses both copyright information and usage rights information of broadcast program.

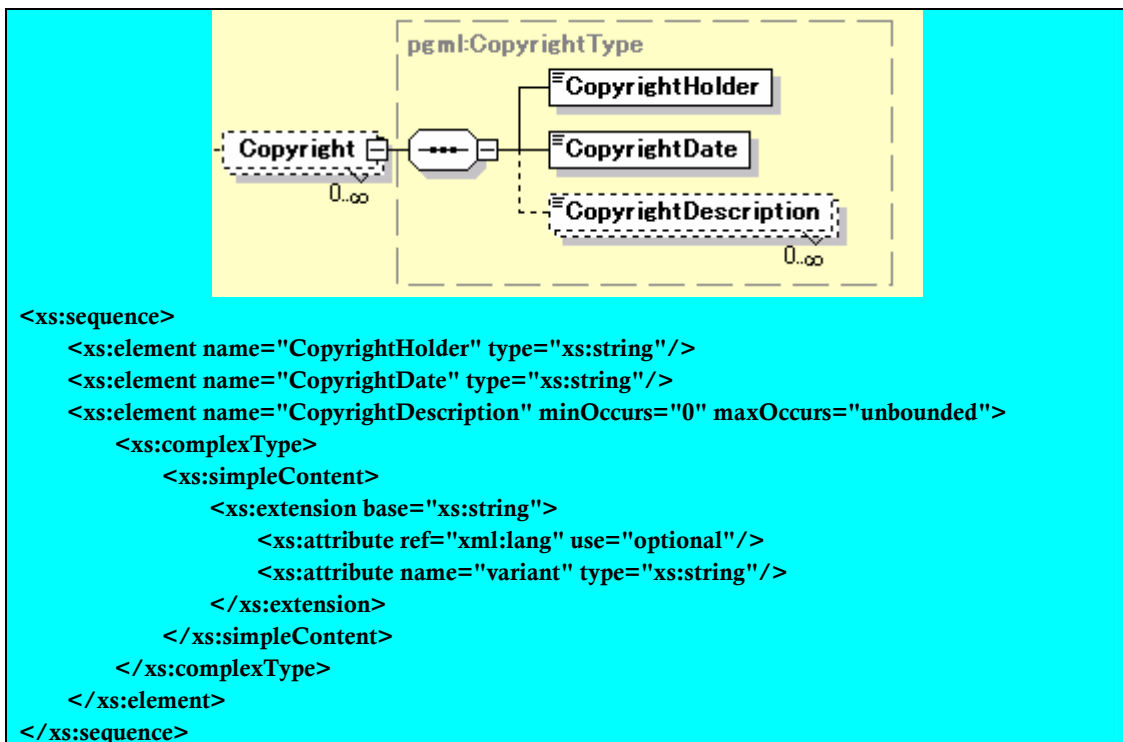
Plural Copyright element could be expressed.



6.6.1. Copyright

Copyright element expresses the copyright information of broadcast program.

Required are CopyrightHolder subelement and CopyrightDate subelement. Also, plural CopyrightDescription subelement could be used.



6.6.1.1. CopyrightHolder

CopyrightHolder element expresses the information of copyright holder of the broadcast program. This element could express, by using xml:lang attribute, the language to describe.

```

<!-- copyright information -->
Following example expresses that copyright belongs to NHK and the date copyright issued is August 20, 2003. Examples are summarized to one.
<Copyright>

```

```

<CopyrightHolder>NHK</CopyrightHolder>
<CopyrightDate>20030820</CopyrightDate>
<CopyrightDescription xml:lang="en-GB">—copyright information --</CopyrightDescription>
</Copyright>

```

6.6.1.2. *CopyrightDate*

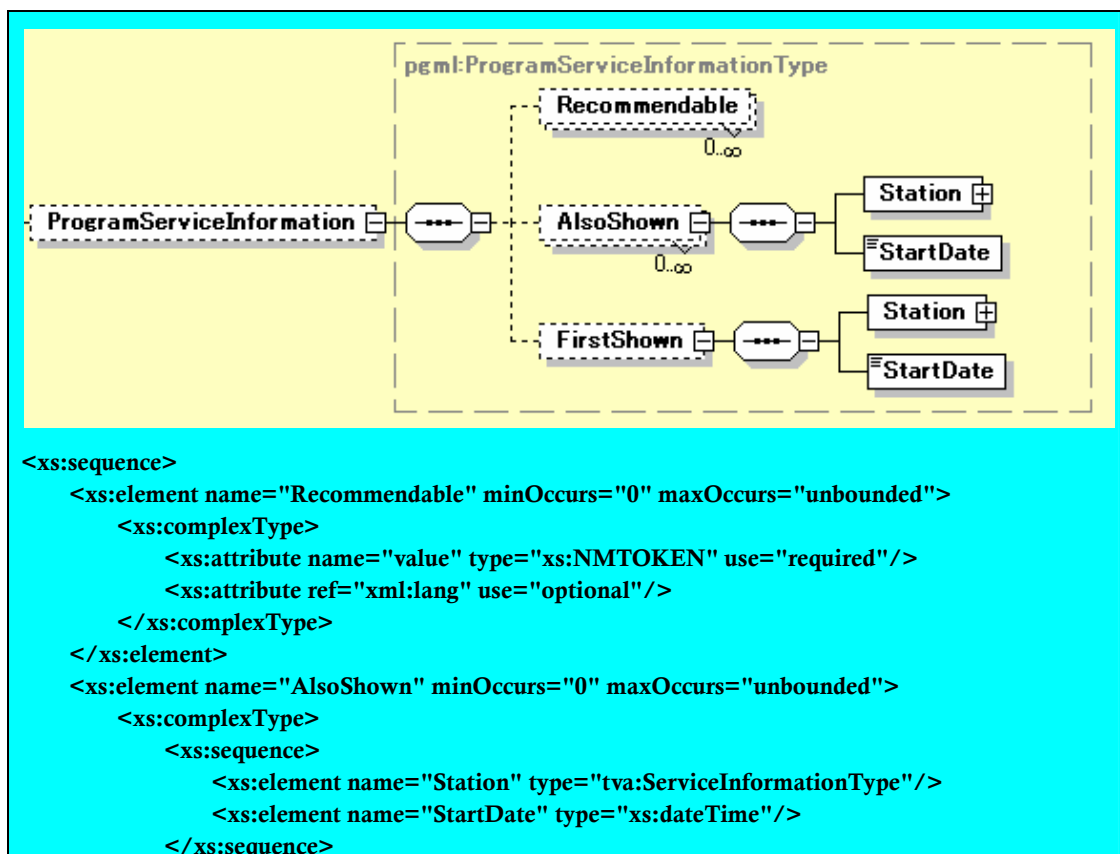
CopyrightDate element set the date that copyright of broadcast program is issued. It subjects to ISO 8601 format (CCYYMMDD). CCYY is for century, and MM for month, DD for date.

6.6.1.3. *CopyrightDescription*

CopyrightDescription element set the content of copyright. This element could express, by using xml:lang attribute, the language to describe the content of copyright. Also, by using variant attribute, it could express different descriptions of same language.

6.7. ProgramServiceInformation

ProgramServiceInformation element could express plural Recommendable element, AlsoShown element, and zero or one FirstShown element.



```

    </xs:complexType>
  </xs:element>
  <xs:element name="FirstShown" minOccurs="0">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Station" type="tva:ServiceInformationType"/>
        <xs:element name="StartDate" type="xs:dateTime"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:sequence>

```

6.7.1. Recommendable

Recommendable element set the recommendable information as to the program.

For the attribute, provider side is sure to set the value for recommendable program.

Value="1" is set to the most recommendable program, thought by provider side. Available values are from 1 to 9. Also, this element could express, by using xml:lang attribute, the language to describe.

Following example expresses the concerned program is the most recommendable.
 <Recommendable value="1"/>

6.7.2. AlsoShown

AlsoShown element could plurally set the information as to the same program broadcasted by other station or the one to be broadcast in the future.

Following example expresses the schedule information of the same program to be broadcast.

```

<AlsoShown>
  <!-- Broadcast start date and time -->
  <StartDate>2004-02-20T06:00:00+09:00</StartDate>
  <Station serviceId="103">
    <!-- Broadcast service name -->
    <tva:Name>NHK1-TV</tva:Name>
  </Station>
</AlsoShown>
<AlsoShown>
  <!-- Broadcast start date and time -->
  <StartDate>2004-03-05T06:00:00+09:00</StartDate>
  <Station serviceId="111">
    <!-- Broadcast service name -->
    <tva:Name>NTV</tva:Name>
  </Station>
</AlsoShown>

```

6.7.3. FirstShown

FirstShown element set the first broadcast date of the program.

As for the re-broadcast program, first broadcast date is set.

Following example expresses that concerned program was broadcast at first from 09:00 of March 5, 2004 at NHK1-TV.

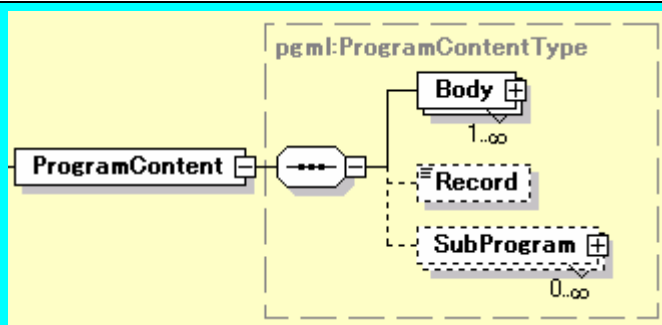
```
<FirstShown>
  <!-- First broadcast date and time -->
  <StartDate>2004-03-05T06:00:00+09:00</StartDate>
  <Station serviceId="103">
    <!-- Broadcast service name -->
    <tva:Name> NHK1-TV</tva:Name>
  </Station>
</FirstShown>
```

6.8. ProgramContent

ProgramContent element expresses the print layout information of the program.

ProgramContentId attribute is mandatory and set the ID to identify the program content. It

is consisted of plural Body element, SubProgram element, and zero or one Record element.



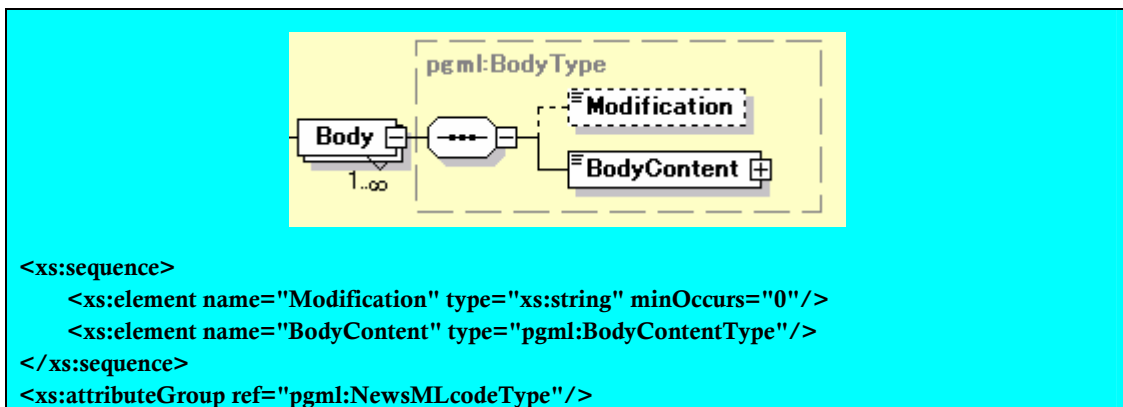
```
<xs:sequence>
  <xs:element name="Body" type="pgml:BodyType" maxOccurs="unbounded"/>
  <xs:element name="Record" minOccurs="0">
    <xs:complexType>
      <xs:simpleContent>
        <xs:extension base="xs:string">
          <xs:attributeGroup ref="pgml:NewsMLcodeType"/>
        </xs:extension>
      </xs:simpleContent>
    </xs:complexType>
  </xs:element>
  <xs:element name="SubProgram" type="pgml:SubProgramType" minOccurs="0"
maxOccurs="unbounded"/>
</xs:sequence>
<xs:attribute name="programContentId" type="xs:ID" use="required"/>
```


6.8.1. Body

Body element is the presentation information to display the program listing of newspapers, website, magazines, etc. It may have zero or one Modification element and BodyContent element.

For the attribute, type of display information of the program information is set to newsm1_formalname attribute of Body element. Followings are the newsm1_formalname attribute and the usages could be distinguished.

- program information for the distribution for newspapers
- program information for Web
- program information released by broadcast station (fixed timetable)



6.8.1.1. Modification

Modification element is to inform receiver side the changed part, in the case like program information modified.

For example, following information could be set.

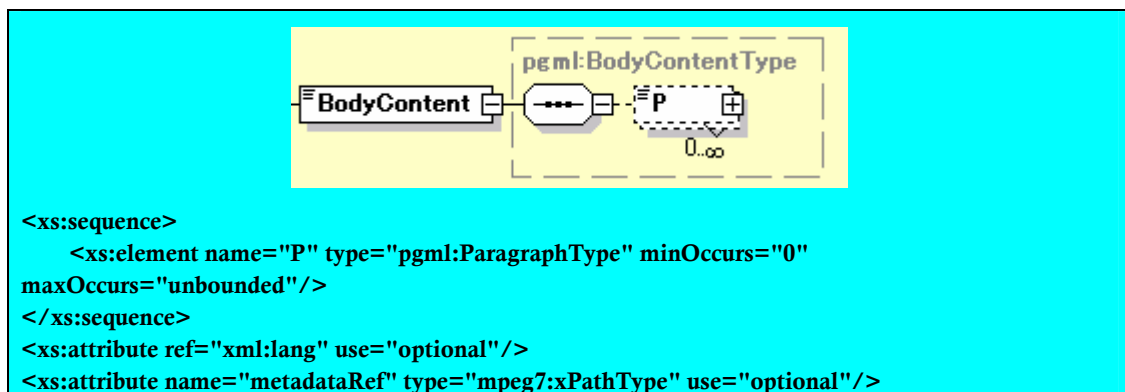
- decision of cast
- change of program
- addition of cast

Also, this element could express, by using xml:lang attribute, the language to describe.

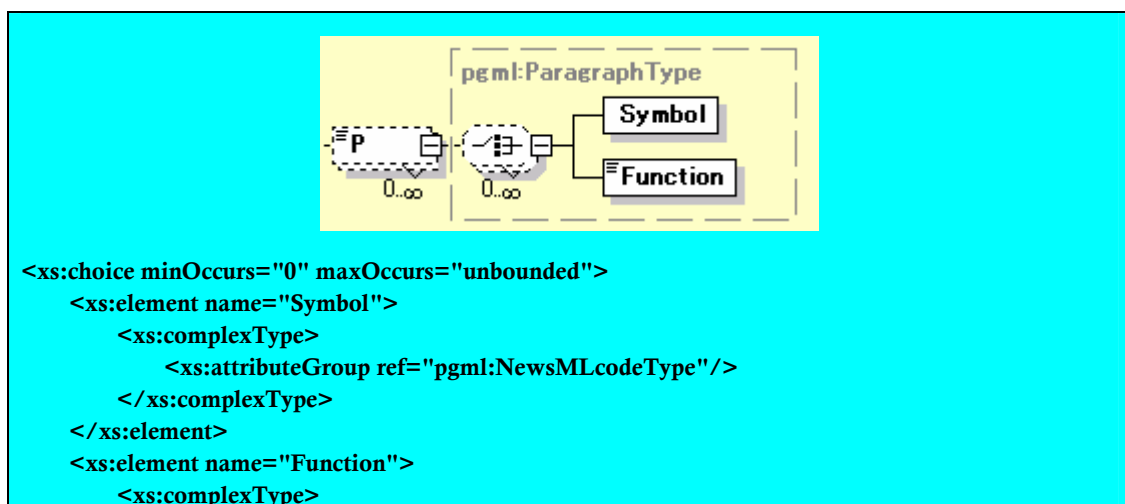
Following example expresses the information of cast was changed.
<Modification>cast changed</Modification>

6.8.1.2. *BodyContent*

BodyContent element defines the display content of program information, and has href as metadataRef attribute. Href attribute indicates the resource of external program information. P element of it has Symbol element and Function element, both of which could be written repeatedly. Also, this element could express, by using xml:lang attribute, the language to describe.



P element distinguishes each successive sentences in the display width of one frame for program, and expresses the layout per one line. Lines are inserted between <P> and </P>. P element has Symbol subelement and Function subelement. Program listing is expressed with specified symbols and marks to indicate the information as to stereo broadcast, multilingual broadcast, etc. Symbol element expresses the information like stereo broadcast, multilingual broadcast, etc. Function element is used as additional information when expressing program title as Gothic font, etc. Symbol element and Function element uses newsm1_formalname attribute as the attribute.



```

<xs:simpleContent>
  <xs:extension base="xs:string">
    <xs:attributeGroup ref="pgml:NewsMLcodeType"/>
  </xs:extension>
</xs:simpleContent>
</xs:complexType>
</xs:element>
</xs:choice>
<xs:attribute ref="xml:lang" use="optional"/>

```

```

<!-- Following example expresses the usage of Symbol element and Function element in Body
element.-->
<Body newsmml_formalname="Newspaper-A">
  <Modification>cast changed</Modification>
  <BodyContent>
    <P><Function newsmml_formalname="Gothic">Good Morning, Japan</Function></P>
    <P>Kaku Kakinume, Seiko Nakajo</P>
    <P>Tamio Miyake<Symbol newsmml_formalname="Etc"/> 12345678</P>
  </BodyContent>
</Body>

```

6.8.2. Record

Record element expresses the record reservation code (VCR code) for user to reserve the record. This code is to enhance the conveniences for program record reservation. Reservation code scheme could be expressed in newsmml_formalname.

```

<!-- Following example expresses the record reservation code.-->
<Record newsmml_formalname="G-CODE">123456 78</Record>

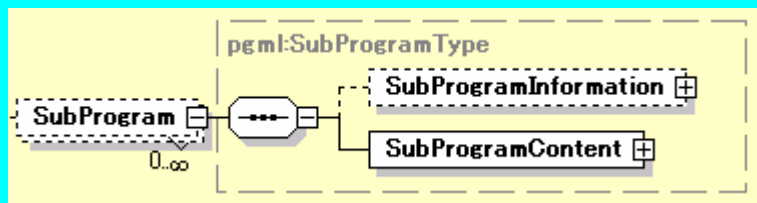
```

6.9. SubProgram

SubProgram element expresses detailed sub program which cannot be expressed in program listing.

Subelements are zero or one SubProgramInformation element and mandatory SubProgramContent element. Also, it may have xml:lang attribute, order attribute and role attribute.

xml:lang attribute could express the language to describe sub program. order attribute expresses the sequential order of sub programs. role attribute expresses the role of each.



```

<xs:sequence>
  <xs:element name="SubProgramInformation" type="pgml:SubProgramInformationType"
minOccurs="0"/>
  <xs:element name="SubProgramContent" type="pgml:SubProgramContentType"/>
</xs:sequence>
<xs:attribute ref="xml:lang" use="optional"/>
<xs:attribute name="order" type="xs:positiveInteger"/>
<xs:attribute name="role" type="xs:string"/>

```

```

<!-- Following example expresses sub program. Examples are summarized to one. -->
<SubProgram order="1" xml:lang="ja-JP" role="details added">
  <!--As for the program detail, refer to metadataRef.-->
  <SubProgramInformation metadataRef="crid://nhk.or.jp/nhk1-tv_20030825T1720">
    <tva.ProgramDescription>

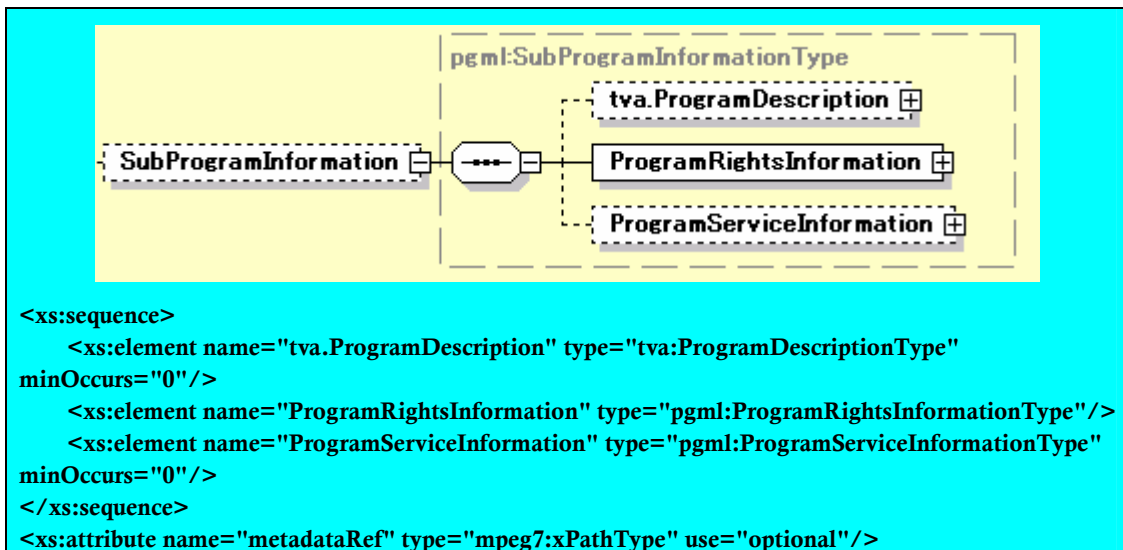
      </tva.ProgramDescription>
    <ProgramRightsInformation/>
  </SubProgramInformation>
  <SubProgramContent programContentId="NHK20030825T1720">
    <Body newsmI_formalname="Newspaper-A">
      <BodyContent>
        <P>17:20 feature program</P>
      </BodyContent>
    </Body>
  </SubProgramContent>
</SubProgram>

```

6.9.1. SubProgramInformation

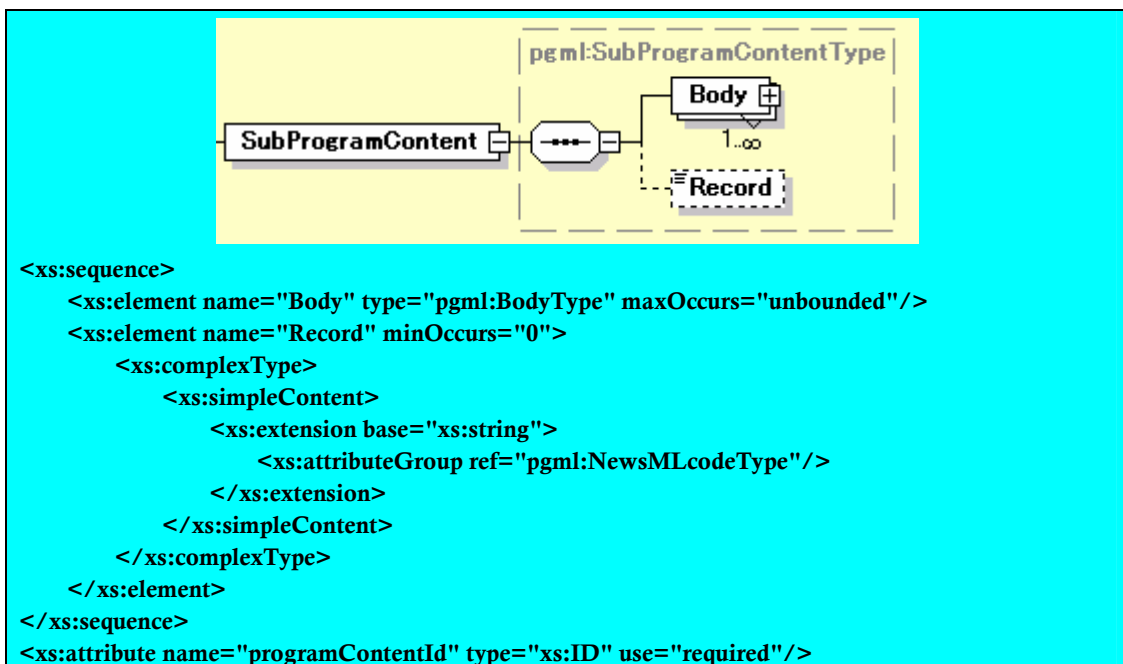
As for the details of SubProgramInformation element, refer to the sentence of ProgramInformation element.

It has href as metadataRef attribute. Href attribute could indicate the resource of external program information.



6.9.2. SubProgramContent

As for the details of SubProgramContent element, refer to the sentence of ProgramContent element. ProgramContentId attribute is mandatory and set the ID to indentify the broadcast program.

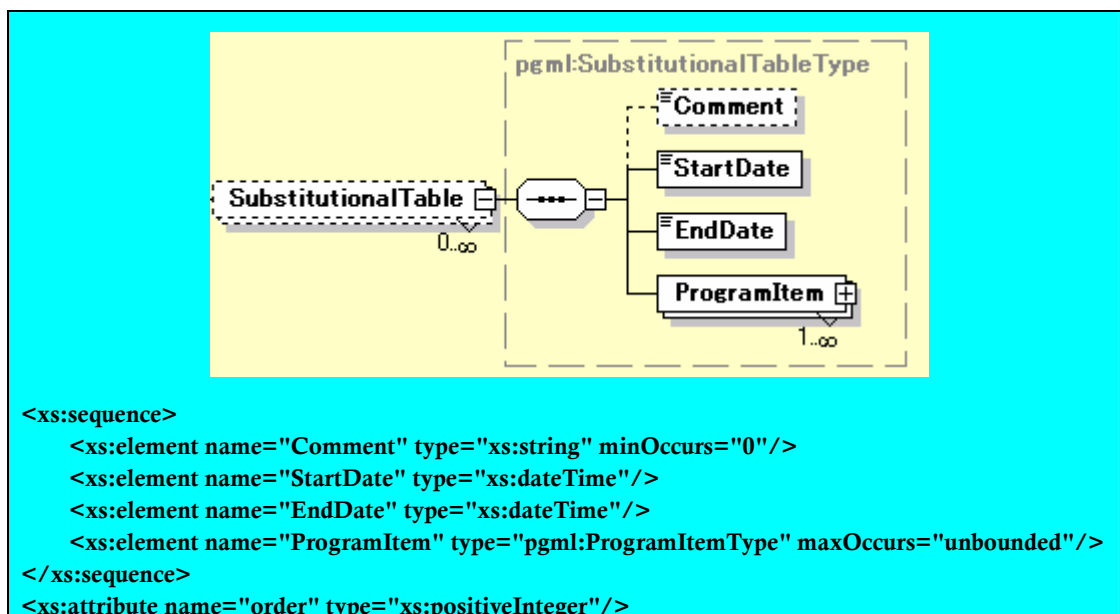


6.10. SubstitutionalTable

SubstitutionalTable element expresses the substitutional program table. It expresses the substitutional program to be broadcast when originally planned program cannot be broadcast because of rain and other reasons.

It may have order attribute as the attribute. Order attribute set the sequential order of the substitutional programs broadcast.

This element has subelements of zero or one Comment element, mandatory StartDate element and EndDate element, and may have plural ProgramItem element.



```

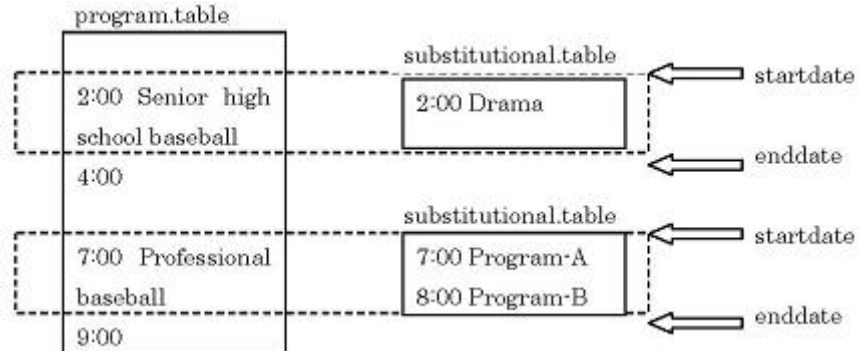
<!-- Following example expresses substitutional program information.-->
<Comment >Substitutional program</Comment >
<StartDate>2004-02-20T06:00:00+09:00</StartDate>
<EndDate>2004-02-20T07:00:00+09:00</EndDate>
<ProgramItem>
  <ProgramInformation>
    <tva.ProgramDescription>

    </tva.ProgramDescription>
    <ProgramRightsInformation/>
  </ProgramInformation>
  <ProgramContent programContentId="NHK20030825T1705">
    <!-- General layout of newspaper -->
    <Body newsmml_formalname="newspaper">
      <BodyContent>
        <P>Kansai Close-up</P>
      </BodyContent>
    </Body>
  </ProgramContent>

```

</ProgramItem>

Substitutional program may exist in plural parts in the program table.



7. Specification of Dictionary CS (Classification Scheme)

ProgramGuideML specified service information, which cannot be expressed by TV-Anytime, is expressed by using CS dictionary.

Following example expresses the CS service information.

```
<?xml version="1.0" encoding="UTF-8"?>
<ClassificationScheme uri="http://www.arib.or.jp/cs/2003/ARIBServiceCategoryCS"
domain="//TVAMain/ProgramDescription/ProgramInformationTable/ProgramInformation/BasicDescription/Genre">
  <Header xsi:type="DescriptionMetadataType">
    <Comment>
      <FreeTextAnnotation xml:lang="en">
        Lexicon for service types in Japan
      </FreeTextAnnotation>
    </Comment>
  </Header>
  <Term termID="01">
    <Name xml:lang="en">multiview</Name>
    <Definition xml:lang="ja">マルチビュー放送番組</Definition>
  </Term>
  <Term termID="02">
    <Name xml:lang="en">multichannel</Name>
    <Definition xml:lang="ja">多チャンネル連動放送番組</Definition>
  </Term>
  <Term termID="03">
    <Name xml:lang="en">bilingual</Name>
    <Definition xml:lang="ja">二ヶ国語放送番組</Definition>
  </Term>
  <Term termID="04">
    <Name xml:lang="en">multilingual</Name>
    <Definition xml:lang="ja">多国語放送番組</Definition>
  </Term>
  <Term termID="05">
    <Name xml:lang="en">multiaudio</Name>
```

```

    <Definition xml:lang="ja">音声多重放送番組</Definition>
  </Term>
  <Term termID="06">
    <Name xml:lang="en">stereo</Name>
    <Definition xml:lang="ja">ステレオ放送番組</Definition>
  </Term>
  <Term termID="07">
    <Name xml:lang="en">monoaural</Name>
    <Definition xml:lang="ja">モノラル放送番組</Definition>
  </Term>
  <Term termID="08">
    <Name xml:lang="en">coupling</Name>
    <Definition xml:lang="ja">番組連動データ放送番組</Definition>
  </Term>
  <Term termID="09">
    <Name xml:lang="en">datacast</Name>
    <Definition xml:lang="ja">独立データ放送番組</Definition>
  </Term>
  <Term termID="10">
    <Name xml:lang="en">teletext</Name>
    <Definition xml:lang="ja">文字多重放送番組</Definition>
  </Term>
  <Term termID="11">
    <Name xml:lang="en">interactive</Name>
    <Definition xml:lang="ja">双方向データ放送番組</Definition>
  </Term>
  <Term termID="12">
    <Name xml:lang="en">server-type</Name>
    <Definition xml:lang="ja">サーバー型(蓄積型)放送番組</Definition>
  </Term>
</ClassificationScheme>

```

Following example expresses the CS service information.

```

<!-- Service genre information -->
<tva:Genre href="urn:tva:metadata:cs:ARIBServiceCategoryCS:02" type="main">
  <tva:Name xml:lang="en">bilingual</tva:Name>
  <tva:Definition xml:lang="ja">二ヶ国語放送番組</tva:Definition>
</tva:Genre>
<tva:Genre href="urn:tva:metadata:cs:ARIBServiceCategoryCS:10" type="main">
  <tva:Name xml:lang="en">teletext</tva:Name>
  <tva:Definition xml:lang="ja">文字多重放送番組</tva:Definition>
</tva:Genre>
<tva:Genre href="urn:tva:metadata:cs:ARIBServiceCategoryCS:06" type="main">
  <tva:Name xml:lang="en">stereo</tva:Name>
  <tva:Definition xml:lang="ja">ステレオ放送番組</tva:Definition>
</tva:Genre>
<tva:Genre href="urn:tva:metadata:cs:ARIBServiceCategoryCS:08" type="main">
  <tva:Name xml:lang="en">coupling</tva:Name>
  <tva:Definition xml:lang="ja">番組連動データ放送番組</tva:Definition>
</tva:Genre>
<tva:Genre href="urn:tva:metadata:cs:ARIBServiceCategoryCS:12" type="main">
  <tva:Name xml:lang="en">server-type</tva:Name>
  <tva:Definition xml:lang="ja">サーバー型(蓄積型)放送番組</tva:Definition>
</tva:Genre>

```