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AMENDMENT 1
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**Information technology — Multimedia
content description interface —**

**Part 11:
MPEG-7 profile schemas**

**AMENDMENT 1: Audiovisual description
profile (AVDP) schema**

*Technologies de l'information — Interface de description du contenu
multimédia —*

Partie 11: Schémas du profil MPEG-7

*AMENDEMENT 1: Schéma du profil de description audiovisuelle
(ADVP)*

Reference number
ISO/IEC TR 15938-11:2005/Amd.1:2012(E)



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Foreword

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Amendment 1 to ISO/IEC TR 15938-11:2005 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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Information technology — Multimedia content description interface —

Part 11: MPEG-7 profile schemas

AMENDMENT 1: Audiovisual description profile (AVDP) schema

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After 3.4, add the following subclause:

3.5 AVDP Profile Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- #####
      MPEG-7 Audiovisual Description Profile (AVDP)
      based on MPEG-7 Version 2
      ##### -->

<schema xmlns="http://www.w3.org/2001/XMLSchema" xmlns:mpeg7="urn:mpeg:mpeg7:schema:2004"
xmlns:xml="http://www.w3.org/XML/1998/namespace"
targetNamespace="urn:mpeg:mpeg7:schema:2004" elementFormDefault="qualified"
attributeFormDefault="unqualified">
  <annotation>
    <documentation>
      The following schema definition corresponds to the description tools of:
        ISO/IEC 15938-1 + ISO/IEC 15938-1 COR/1 /1 + ISO/IEC 15938-1 AMD/1 (Systems)
        ISO/IEC 15938-2 (DDL)
        ISO/IEC 15938-3 + ISO/IEC 15938-3 COR/1 + ISO/IEC 15938-3 AMD/1 (Visual)
        ISO/IEC 15938-4 + ISO/IEC 15938-4 AMD/1 (Audio)
        ISO/IEC 15938-5 + ISO/IEC 15938-5 COR/1 + ISO/IEC 15938-5 AMD/1 + ISO/IEC
15938-5 AMD/2 (MDS)
    </documentation>
  </annotation>
  <!-- ##### -->
  <!-- import xml components -->
  <!-- ##### -->
  <import namespace="http://www.w3.org/XML/1998/namespace"
schemaLocation="http://www.w3.org/2001/03/xml.xsd"/>
  <annotation>
    <documentation>
      This document contains tools defined as MPEG-7 specific extention of
      XML Schema in ISO/IEC 15938-2
    </documentation>
  </annotation>
  <!-- *****-->
  <!-- ***** ISO/IEC 15938-2 DDL *****-->
```

```

<!-- *****-->
<annotation>
  <documentation>
    The following section contains tools defined in ISO/IEC 15938-2
  </documentation>
</annotation>
<!-- ##### -->
<!-- Definition of 'mpeg7:dim' for Matrix Datatype -->
<!-- ##### -->
<!-- definition of listOfPositiveIntegerForDim datatype -->
<simpleType name="listOfPositiveIntegerForDim">
  <list itemType="positiveInteger"/>
</simpleType>
<!-- definition of mpeg7:dim attribute -->
<attribute name="dim">
  <simpleType>
    <restriction base="mpeg7:listOfPositiveIntegerForDim">
      <minLength value="1"/>
    </restriction>
  </simpleType>
</attribute>
<!-- ##### -->
<!-- Definition of MPEG-7 Datatype Extensions -->
<!-- ##### -->
<!-- definition of basicTimePoint datatype -->
<simpleType name="basicTimePointType">
  <restriction base="string">
    <pattern value="\-?(\d+(\-\d{2}(\-\d{2})?)?(T\d{2}(:\d{2}(:\d{2}(:\d+(\.\d{2})?)?)?)?(F\d+)((\-\|+)\d{2}:\d{2})?)?"/>
  </restriction>
</simpleType>
<!-- definition of basicDuration datatype -->
<simpleType name="basicDurationType">
  <restriction base="string">
    <pattern value="\-?P(\d+D)?(T(\d+H)?(\d+M)?(\d+S)?(\d+N)?(\d{2}f)?)?(\d+F)?((\-\|+)\d{2}:\d{2}Z)?"/>
  </restriction>
</simpleType>
<!-- *****-->
<!-- ***** ISO/IEC 15938-3 Visual*****-->
<!-- *****-->
<annotation>
  <documentation>
    The following section contains visual tools defined in:
    ISO/IEC 15938-3 + ISO/IEC 15938-3 AMD/1 (Visual)
  </documentation>
</annotation>
<!-- ##### -->
<!-- Definition of GridLayout Datatype -->
<!-- ##### -->
<complexType name="GridLayoutType" final="#all">
  <sequence>
    <element name="Descriptor" type="mpeg7:VisualDType" maxOccurs="65025"/>
  </sequence>
  <attribute name="numOfPartX" type="mpeg7:unsigned8" use="required"/>
  <attribute name="numOfPartY" type="mpeg7:unsigned8" use="required"/>
  <attribute name="descriptorMask" use="optional">
    <simpleType>
      <restriction base="string">
        <pattern value="(0|1)*"/>
      </restriction>
    </simpleType>
  </attribute>
</complexType>

```

```

        </restriction>
    </simpleType>
</attribute>
</complexType>
<!-- ##### -->
<!-- Definition of VisualTimeSeries Datatypes -->
<!-- ##### -->
<!-- Definition of VisualTimeSeries Datatype -->
<complexType name="VisualTimeSeriesType" abstract="true">
    <sequence>
        <element name="TimeIncr" type="mpeg7:mediaDurationType"/>
    </sequence>
    <attribute name="offset" type="mpeg7:mediaDurationType" use="optional"
default="PT0S"/>
</complexType>
<!-- Definition of RegularVisualTimeSeries Datatype -->
<complexType name="RegularVisualTimeSeriesType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualTimeSeriesType">
            <sequence>
                <element name="Descriptor" type="mpeg7:VisualDType"
maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of IrregularVisualTimeSeries Datatype -->
<complexType name="IrregularVisualTimeSeriesType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualTimeSeriesType">
            <sequence maxOccurs="unbounded">
                <element name="Descriptor" type="mpeg7:VisualDType"/>
                <element name="Interval" type="mpeg7:unsigned32"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Spatial2DCoordinateSystem Header -->
<!-- ##### -->
<complexType name="Spatial2DCoordinateSystemType" final="#all">
    <complexContent>
        <extension base="mpeg7:HeaderType">
            <sequence>
                <element name="Unit" minOccurs="0">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="pixel"/>
                            <enumeration value="meter"/>
                            <enumeration value="pictureHeight"/>
                            <enumeration value="pictureWidth"/>
                            <enumeration value="pictureWidthAndHeight"/>
                        </restriction>
                    </simpleType>
                </element>
                <element name="LocalCoordinateSystem" minOccurs="0">
                    <complexType>
                        <sequence>
                            <choice>
                                <sequence maxOccurs="3">

```

```

        <element name="Pixel">
            <simpleType>
                <restriction base="mpeg7:integerVector">
                    <length value="2"/>
                </restriction>
            </simpleType>
        </element>
        <element name="CoordPoint">
            <simpleType>
                <restriction base="mpeg7:floatVector">
                    <length value="2"/>
                </restriction>
            </simpleType>
        </element>
    </sequence>
    <sequence maxOccurs="3">
        <element name="CurrPixel">
            <simpleType>
                <restriction base="mpeg7:integerVector">
                    <length value="2"/>
                </restriction>
            </simpleType>
        </element>
        <element name="SrcPixel">
            <simpleType>
                <restriction base="mpeg7:integerVector">
                    <length value="2"/>
                </restriction>
            </simpleType>
        </element>
    </sequence>
    </choice>
    <element name="MappingFunc" type="string" minOccurs="0"
maxOccurs="2"/>
    </sequence>
    <attribute name="name" type="string" use="required"/>
    <attribute name="dataSet" type="anyURI" use="optional"/>
</complexType>
</element>
<element name="IntegratedCoordinateSystem" minOccurs="0">
    <complexType>
        <sequence minOccurs="0" maxOccurs="65535">
            <element name="TimeIncr"
type="mpeg7:MediaIncrDurationType"/>
            <element name="MotionParams" type="float" minOccurs="2"
maxOccurs="12"/>
        </sequence>
        <attribute name="modelType" use="required">
            <simpleType>
                <restriction base="string">
                    <enumeration value="translational"/>
                    <enumeration value="rotationAndScaling"/>
                    <enumeration value="affine"/>
                    <enumeration value="perspective"/>
                    <enumeration value="quadratic"/>
                </restriction>
            </simpleType>
        </attribute>
        <attribute name="xOrigin" type="float" use="required"/>
        <attribute name="yOrigin" type="float" use="required"/>
    </complexType>
</element>

```



```

        </complexType>
      </element>
    </sequence>
    <attribute name="xRepr" type="mpeg7:unsigned8" use="required"/>
    <attribute name="yRepr" type="mpeg7:unsigned8" use="required"/>
    <attribute name="xSrcSize" type="positiveInteger" use="optional"/>
    <attribute name="ySrcSize" type="positiveInteger" use="optional"/>
  </extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of TemporalInterpolation Datatype -->
<!-- ##### -->
<complexType name="TemporalInterpolationType" final="#all">
  <sequence>
    <choice>
      <element name="WholeInterval">
        <complexType>
          <sequence>
            <element name="MediaIncrDuration"
type="mpeg7:MediaIncrDurationType"/>
          </sequence>
        </complexType>
      </element>
      <element name="KeyTimePoint">
        <complexType>
          <sequence>
            <element name="MediaRelIncrTimePoint"
type="mpeg7:MediaRelIncrTimePointType" minOccurs="2" maxOccurs="65535"/>
          </sequence>
        </complexType>
      </element>
    </choice>
    <element name="InterpolationFunctions" maxOccurs="15">
      <complexType>
        <sequence>
          <element name="KeyValue" minOccurs="2" maxOccurs="65535">
            <complexType>
              <simpleContent>
                <extension base="float">
                  <attribute name="type" use="optional"
default="firstOrder">
                    <simpleType>
                      <restriction base="string">
                        <enumeration value="startPoint"/>
                        <enumeration value="firstOrder"/>
                        <enumeration value="secondOrder"/>
                        <enumeration value="notDetermined"/>
                      </restriction>
                    </simpleType>
                  </attribute>
                  <attribute name="param" type="float" use="optional"
default="0.0"/>
                </extension>
              </simpleContent>
            </complexType>
          </element>
        </sequence>
      </complexType>
    </element>
  </sequence>
</complexType>
</element>

```

```

    </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of ColorSpace Datatype -->
<!-- ##### -->
<complexType name="ColorSpaceType" final="#all">
    <sequence>
        <element name="ColorTransMat" minOccurs="0">
            <simpleType>
                <restriction>
                    <simpleType>
                        <list itemType="mpeg7:unsigned16"/>
                    </simpleType>
                    <length value="9"/>
                </restriction>
            </simpleType>
        </element>
    </sequence>
    <attribute name="colorReferenceFlag" type="boolean" use="optional"
default="false"/>
    <attribute name="type" use="required">
        <simpleType>
            <restriction base="string">
                <enumeration value="RGB"/>
                <enumeration value="YCbCr"/>
                <enumeration value="HSV"/>
                <enumeration value="HMMD"/>
                <enumeration value="LinearMatrix"/>
                <enumeration value="Monochrome"/>
            </restriction>
        </simpleType>
    </attribute>
</complexType>
<!-- ##### -->
<!-- Definition of ColorQuantization Datatype -->
<!-- ##### -->
<complexType name="ColorQuantizationType" final="#all">
    <sequence maxOccurs="3">
        <element name="Component">
            <simpleType>
                <restriction base="string">
                    <enumeration value="R"/>
                    <enumeration value="G"/>
                    <enumeration value="B"/>
                    <enumeration value="Y"/>
                    <enumeration value="Cb"/>
                    <enumeration value="Cr"/>
                    <enumeration value="H"/>
                    <enumeration value="S"/>
                    <enumeration value="V"/>
                    <enumeration value="Max"/>
                    <enumeration value="Min"/>
                    <enumeration value="Diff"/>
                    <enumeration value="Sum"/>
                </restriction>
            </simpleType>
        </element>
        <element name="NumOfBins" type="mpeg7:unsigned12"/>
    </sequence>
</complexType>

```

```

<!-- ##### -->
<!-- Definition of DominantColor D
-->
<!-- ##### -->
<complexType name="DominantColorType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="ColorSpace" type="mpeg7:ColorSpaceType" minOccurs="0"/>
        <element name="ColorQuantization" type="mpeg7:ColorQuantizationType"
minOccurs="0"/>
        <element name="SpatialCoherency" type="mpeg7:unsigned5"/>
        <element name="Value" maxOccurs="8">
          <complexType>
            <sequence>
              <element name="Percentage" type="mpeg7:unsigned5"/>
              <element name="Index">
                <simpleType>
                  <restriction>
                    <simpleType>
                      <list itemType="mpeg7:unsigned12"/>
                    </simpleType>
                    <length value="3"/>
                  </restriction>
                </simpleType>
              </element>
              <element name="ColorVariance" minOccurs="0">
                <simpleType>
                  <restriction>
                    <simpleType>
                      <list itemType="mpeg7:unsigned1"/>
                    </simpleType>
                    <length value="3"/>
                  </restriction>
                </simpleType>
              </element>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ScalableColor D
-->
<!-- ##### -->
<complexType name="ScalableColorType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="Coeff" type="mpeg7:integerVector"/>
      </sequence>
      <attribute name="numOfCoeff" use="required">
        <simpleType>
          <restriction base="integer">
            <enumeration value="16"/>
            <enumeration value="32"/>
            <enumeration value="64"/>
            <enumeration value="128"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>

```

```

        <enumeration value="256"/>
      </restriction>
    </simpleType>
  </attribute>
  <attribute name="numOfBitplanesDiscarded" use="required">
    <simpleType>
      <restriction base="integer">
        <enumeration value="0"/>
        <enumeration value="1"/>
        <enumeration value="2"/>
        <enumeration value="3"/>
        <enumeration value="4"/>
        <enumeration value="6"/>
        <enumeration value="8"/>
      </restriction>
    </simpleType>
  </attribute>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ColorLayout D
-->
<!-- ##### -->
<complexType name="ColorLayoutType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="YDCCoeff" type="mpeg7:unsigned6"/>
        <element name="CbDCCoeff" type="mpeg7:unsigned6"/>
        <element name="CrDCCoeff" type="mpeg7:unsigned6"/>
        <choice>
          <element name="YACCoeff2">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="2"/>
              </restriction>
            </simpleType>
          </element>
          <element name="YACCoeff5">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="5"/>
              </restriction>
            </simpleType>
          </element>
          <element name="YACCoeff9">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="9"/>
              </restriction>
            </simpleType>
          </element>
        </choice>
      </sequence>
    </extension>
  </complexContent>
</complexType>

```

```

        </simpleType>
      </element>
      <element name="YACCCoeff14">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <length value="14"/>
          </restriction>
        </simpleType>
      </element>
      <element name="YACCCoeff20">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <length value="20"/>
          </restriction>
        </simpleType>
      </element>
      <element name="YACCCoeff27">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <length value="27"/>
          </restriction>
        </simpleType>
      </element>
      <element name="YACCCoeff63">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <length value="63"/>
          </restriction>
        </simpleType>
      </element>
    </choice>
    <choice>
      <sequence>
        <element name="CbACCCoeff2">
          <simpleType>
            <restriction>
              <simpleType>
                <list itemType="mpeg7:unsigned5"/>
              </simpleType>
              <length value="2"/>
            </restriction>
          </simpleType>
        </element>
        <element name="CrACCCoeff2">
          <simpleType>
            <restriction>
              <simpleType>
                <list itemType="mpeg7:unsigned5"/>
              </simpleType>
            </restriction>
          </simpleType>
        </element>
      </sequence>
    </choice>
  </sequence>
</element>

```

```

        </simpleType>
        <length value="2"/>
    </restriction>
</simpleType>
</element>
</sequence>
<sequence>
    <element name="CbACCoeff5">
        <simpleType>
            <restriction>
                <simpleType>
                    <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="5"/>
            </restriction>
        </simpleType>
    </element>
    <element name="CrACCoeff5">
        <simpleType>
            <restriction>
                <simpleType>
                    <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="5"/>
            </restriction>
        </simpleType>
    </element>
</sequence>
<sequence>
    <element name="CbACCoeff9">
        <simpleType>
            <restriction>
                <simpleType>
                    <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="9"/>
            </restriction>
        </simpleType>
    </element>
    <element name="CrACCoeff9">
        <simpleType>
            <restriction>
                <simpleType>
                    <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="9"/>
            </restriction>
        </simpleType>
    </element>
</sequence>
<sequence>
    <element name="CbACCoeff14">
        <simpleType>
            <restriction>
                <simpleType>
                    <list itemType="mpeg7:unsigned5"/>
                </simpleType>
                <length value="14"/>
            </restriction>
        </simpleType>
    </element>

```

```

    </element>
    <element name="CrACCcoeff14">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned5"/>
          </simpleType>
          <length value="14"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
  <sequence>
    <element name="CbACCcoeff20">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned5"/>
          </simpleType>
          <length value="20"/>
        </restriction>
      </simpleType>
    </element>
    <element name="CrACCcoeff20">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned5"/>
          </simpleType>
          <length value="20"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
  <sequence>
    <element name="CbACCcoeff27">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned5"/>
          </simpleType>
          <length value="27"/>
        </restriction>
      </simpleType>
    </element>
    <element name="CrACCcoeff27">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned5"/>
          </simpleType>
          <length value="27"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
  <sequence>
    <element name="CbACCcoeff63">
      <simpleType>
        <restriction>

```

```

        <simpleType>
            <list itemType="mpeg7:unsigned5"/>
        </simpleType>
        <length value="63"/>
    </restriction>
</simpleType>
</element>
<element name="CrACCoeff63">
    <simpleType>
        <restriction>
            <simpleType>
                <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <length value="63"/>
        </restriction>
    </simpleType>
</element>
</sequence>
</choice>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ColorStructure D
-->
<!-- ##### -->
<complexType name="ColorStructureType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Values">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned8"/>
                            </simpleType>
                            <minLength value="1"/>
                            <maxLength value="256"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
            <attribute name="colorQuant" type="mpeg7:unsigned3" use="required"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of GoFGoPColor D
-->
<!-- ##### -->
<complexType name="GoFGoPColorType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="ScalableColor" type="mpeg7:ScalableColorType"/>
            </sequence>
            <attribute name="aggregation" use="required">
                <simpleType>
                    <restriction base="string">

```



```

        <enumeration value="Average"/>
        <enumeration value="Median"/>
        <enumeration value="Intersection"/>
    </restriction>
</simpleType>
</attribute>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of HomogeneousTexture D -->
<!-- ##### -->
<!-- Definition of HomogeneousTexture D -->
<complexType name="HomogeneousTextureType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Average" type="mpeg7:unsigned8"/>
                <element name="StandardDeviation" type="mpeg7:unsigned8"/>
                <element name="Energy" type="mpeg7:textureListType"/>
                <element name="EnergyDeviation" type="mpeg7:textureListType"
minOccurs="0"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of textureList datatype -->
<simpleType name="textureListType">
    <restriction>
        <simpleType>
            <list itemType="mpeg7:unsigned8"/>
        </simpleType>
        <length value="30"/>
    </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of TextureBrowsing D -->
>
<!-- ##### -->
<complexType name="TextureBrowsingType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Regularity">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="irregular"/>
                            <enumeration value="slightlyRegular"/>
                            <enumeration value="regular"/>
                            <enumeration value="highlyRegular"/>
                        </restriction>
                    </simpleType>
                </element>
                <sequence maxOccurs="2">
                    <element name="Direction">
                        <simpleType>
                            <restriction base="string">
                                <enumeration value="noDirectionality"/>
                                <enumeration value="0Degree"/>
                                <enumeration value="30Degree"/>

```

```

        <enumeration value="60Degree"/>
        <enumeration value="90Degree"/>
        <enumeration value="120Degree"/>
        <enumeration value="150Degree"/>
    </restriction>
</simpleType>
</element>
<element name="Scale">
    <simpleType>
        <restriction base="string">
            <enumeration value="fine"/>
            <enumeration value="medium"/>
            <enumeration value="coarse"/>
            <enumeration value="veryCoarse"/>
        </restriction>
    </simpleType>
</element>
</sequence>
</extension>
</complexType>
<!-- ##### -->
<!-- Definition of EdgeHistogram D -->
>
<!-- ##### -->
<complexType name="EdgeHistogramType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="BinCounts">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned3"/>
                            </simpleType>
                            <length value="80"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of RegionShape D -->
->
<!-- ##### -->
<complexType name="RegionShapeType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="MagnitudeOfART">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned4"/>
                            </simpleType>
                            <length value="35"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>

```

```

        </simpleType>
      </element>
    </sequence>
  </extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ContourShape D -->
->
<!-- ##### -->
<!-- Definition of ContourShape D -->
<complexType name="ContourShapeType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="GlobalCurvature" type="mpeg7:curvatureType"/>
        <element name="PrototypeCurvature" type="mpeg7:curvatureType"
minOccurs="0"/>
        <element name="HighestPeakY" type="mpeg7:unsigned7"/>
        <!-- VIDEO COR/1 -->
        <element name="Peak" minOccurs="0" maxOccurs="62">
          <complexType>
            <attribute name="peakX" type="mpeg7:unsigned6" use="required"/>
            <attribute name="peakY" type="mpeg7:unsigned3" use="required"/>
          </complexType>
        </element>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of curvature datatype -->
<simpleType name="curvatureType">
  <restriction>
    <simpleType>
      <list itemType="mpeg7:unsigned6"/>
    </simpleType>
    <length value="2"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of Shape3D D -->
-->
<!-- ##### -->
<complexType name="Shape3DType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="Spectrum">
          <simpleType>
            <restriction>
              <simpleType>
                <list itemType="mpeg7:unsigned12"/>
              </simpleType>
              <maxLength value="255"/>
            </restriction>
          </simpleType>
        </element>
        <element name="PlanarSurfaces" type="mpeg7:unsigned12"/>
        <element name="SingularSurfaces" type="mpeg7:unsigned12"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>

```

```

        <attribute name="bitsPerBin" type="mpeg7:unsigned4" use="optional"
default="12"/>
    </extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of CameraMotion D -->
->
<!-- ##### -->
<!-- Definition of CameraMotion D -->
<complexType name="CameraMotionType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Segment" type="mpeg7:CameraMotionSegmentType"
minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of CameraMotionSegment Datatype -->
<complexType name="CameraMotionSegmentType" abstract="true">
    <sequence>
        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
        <element name="FocusOfExpansion" type="mpeg7:FocusOfExpansionType"
minOccurs="0"/>
    </sequence>
</complexType>
<!-- Definition of MixtureCameraMotionSegment Datatype -->
<complexType name="MixtureCameraMotionSegmentType" final="#all">
    <complexContent>
        <extension base="mpeg7:CameraMotionSegmentType">
            <sequence>
                <element name="FractionalPresence"
type="mpeg7:FractionalPresenceType"/>
                <element name="AmountOfMotion" type="mpeg7:MixtureAmountOfMotionType"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of NonMixtureCameraMotionSegment Datatype -->
<complexType name="NonMixtureCameraMotionSegmentType">
    <complexContent>
        <extension base="mpeg7:CameraMotionSegmentType">
            <sequence>
                <element name="AmountOfMotion"
type="mpeg7:NonMixtureAmountOfMotionType"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of FocusOfExpansion Datatype -->
<complexType name="FocusOfExpansionType">
    <sequence>
        <element name="HorizontalPosition" type="float"/>
        <element name="VerticalPosition" type="float"/>
    </sequence>
</complexType>
<!-- Definition of FractionalPresence Datatype -->
<complexType name="FractionalPresenceType" final="#all">

```

```

<sequence>
  <element name="TrackLeft" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="TrackRight" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="BoomDown" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="BoomUp" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="DollyForward" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="DollyBackward" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="PanLeft" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="PanRight" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="TiltDown" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="TiltUp" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="RollClockwise" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="RollAnticlockwise" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="ZoomIn" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="ZoomOut" type="mpeg7:unsigned7" minOccurs="0"/>
  <element name="Fixed" type="mpeg7:unsigned7" minOccurs="0"/>
</sequence>
</complexType>
<!-- Definition of MixtureAmountOfMotion Datatype -->
<complexType name="MixtureAmountOfMotionType" final="#all">
  <sequence>
    <element name="TrackLeft" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="TrackRight" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="BoomDown" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="BoomUp" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="DollyForward" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="DollyBackward" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="PanLeft" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="PanRight" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="TiltDown" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="TiltUp" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="RollClockwise" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="RollAnticlockwise" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="ZoomIn" type="mpeg7:unsigned11" minOccurs="0"/>
    <element name="ZoomOut" type="mpeg7:unsigned11" minOccurs="0"/>
  </sequence>
</complexType>
<!-- Definition of NonMixtureAmountOfMotion Datatype -->
<complexType name="NonMixtureAmountOfMotionType">
  <choice>
    <element name="TrackLeft" type="mpeg7:unsigned11"/>
    <element name="TrackRight" type="mpeg7:unsigned11"/>
    <element name="BoomDown" type="mpeg7:unsigned11"/>
    <element name="BoomUp" type="mpeg7:unsigned11"/>
    <element name="DollyForward" type="mpeg7:unsigned11"/>
    <element name="DollyBackward" type="mpeg7:unsigned11"/>
    <element name="PanLeft" type="mpeg7:unsigned11"/>
    <element name="PanRight" type="mpeg7:unsigned11"/>
    <element name="TiltDown" type="mpeg7:unsigned11"/>
    <element name="TiltUp" type="mpeg7:unsigned11"/>
    <element name="RollClockwise" type="mpeg7:unsigned11"/>
    <element name="RollAnticlockwise" type="mpeg7:unsigned11"/>
    <element name="ZoomIn" type="mpeg7:unsigned11"/>
    <element name="ZoomOut" type="mpeg7:unsigned11"/>
    <element name="Fixed">
      <complexType/>
    </element>
  </choice>
</complexType>
<!-- ##### -->

```

```

<!-- Definition of MotionTrajectory D
-->
<!-- ##### -->
<complexType name="MotionTrajectoryType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <choice>
          <element name="CoordRef">
            <complexType>
              <attribute name="ref" type="IDREF" use="required"/>
              <attribute name="spatialRef" type="boolean" use="required"/>
            </complexType>
          </element>
          <element name="CoordDef">
            <complexType>
              <sequence>
                <element name="Repr" minOccurs="0">
                  <complexType>
                    <attribute name="x" type="mpeg7:unsigned8"
use="required"/>
                    <attribute name="y" type="mpeg7:unsigned8"
use="required"/>
                  </complexType>
                </element>
              </sequence>
              <attribute name="units" use="required">
                <simpleType>
                  <restriction base="string">
                    <enumeration value="pictureHeight"/>
                    <enumeration value="pictureWidth"/>
                    <enumeration value="pictureWidthAndHeight"/>
                    <enumeration value="meter"/>
                  </restriction>
                </simpleType>
              </attribute>
            </complexType>
          </element>
        </choice>
        <element name="Params" type="mpeg7:TemporalInterpolationType"/>
      </sequence>
      <attribute name="cameraFollows" type="boolean" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ParametricMotion D
-->
<!-- ##### -->
<complexType name="ParametricMotionType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <choice>
          <element name="CoordRef">
            <complexType>
              <attribute name="ref" type="IDREF" use="required"/>
              <attribute name="spatialRef" type="boolean" use="required"/>
            </complexType>
          </element>

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```

        <element name="CoordDef">
            <complexType>
                <attribute name="originX" type="float" use="required"/>
                <attribute name="originY" type="float" use="required"/>
            </complexType>
        </element>
    </choice>
    <element name="MediaDuration" type="mpeg7:MediaIncrDurationType"/>
    <element name="Parameters">
        <simpleType>
            <restriction base="mpeg7:floatVector">
                <maxLength value="12"/>
            </restriction>
        </simpleType>
    </element>
</sequence>
<attribute name="motionModel" use="required">
    <simpleType>
        <restriction base="string">
            <enumeration value="translational"/>
            <enumeration value="rotationOrScaling"/>
            <enumeration value="affine"/>
            <enumeration value="perspective"/>
            <enumeration value="quadratic"/>
        </restriction>
    </simpleType>
</attribute>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MotionActivity D -->
-->
<!-- ##### -->
<complexType name="MotionActivityType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Intensity">
                    <simpleType>
                        <restriction base="mpeg7:unsigned3">
                            <minInclusive value="1"/>
                            <maxInclusive value="5"/>
                        </restriction>
                    </simpleType>
                </element>
                <element name="DominantDirection" type="mpeg7:unsigned3"
minOccurs="0"/>
                <element name="SpatialDistributionParams" minOccurs="0">
                    <complexType>
                        <attribute name="numOfShortRuns" type="mpeg7:unsigned6"
use="required"/>
                        <attribute name="numOfMediumRuns" type="mpeg7:unsigned5"
use="required"/>
                        <attribute name="numOfLongRuns" type="mpeg7:unsigned5"
use="required"/>
                    </complexType>
                </element>
                <element name="SpatialLocalizationParams" minOccurs="0">
                    <complexType>

```

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        <choice>
          <element name="Vector4">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned3"/>
                </simpleType>
                <length value="4"/>
              </restriction>
            </simpleType>
          </element>
          <element name="Vector16">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned3"/>
                </simpleType>
                <length value="16"/>
              </restriction>
            </simpleType>
          </element>
          <element name="Vector64">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned3"/>
                </simpleType>
                <length value="64"/>
              </restriction>
            </simpleType>
          </element>
          <element name="Vector256">
            <simpleType>
              <restriction>
                <simpleType>
                  <list itemType="mpeg7:unsigned3"/>
                </simpleType>
                <length value="256"/>
              </restriction>
            </simpleType>
          </element>
        </choice>
      </complexType>
    </element>
    <element name="TemporalParams" minOccurs="0">
      <simpleType>
        <restriction>
          <simpleType>
            <list itemType="mpeg7:unsigned6"/>
          </simpleType>
          <length value="5"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of RegionLocator Datatype

```



```

<!-- ##### -->
<!-- Definition of RegionLocator Datatype -->
<complexType name="RegionLocatorType" final="#all">
  <sequence>
    <element name="CoordRef" minOccurs="0">
      <complexType>
        <attribute name="ref" type="IDREF" use="required"/>
        <attribute name="spatialRef" type="boolean" use="optional"
default="false"/>
      </complexType>
    </element>
    <element name="Box" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <simpleContent>
          <extension base="mpeg7:BoxListType">
            <attribute name="unlocatedRegion" type="boolean" use="optional"
default="false"/>
          </extension>
        </simpleContent>
      </complexType>
    </element>
    <element name="Polygon" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="Coords" type="mpeg7:IntegerMatrixType"/>
        </sequence>
        <attribute name="unlocatedRegion" type="boolean" use="optional"
default="false"/>
      </complexType>
    </element>
  </sequence>
</complexType>
<!-- Definition of BoxList Datatype -->
<complexType name="BoxListType">
  <simpleContent>
    <restriction base="mpeg7:IntegerMatrixType"/>
  </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of SpatioTemporalLocator Datatype -->
<!-- ##### -->
<!-- Definition of SpatioTemporalLocator Datatype -->
<complexType name="SpatioTemporalLocatorType" final="#all">
  <sequence>
    <element name="CoordRef" minOccurs="0">
      <complexType>
        <attribute name="ref" type="IDREF" use="required"/>
        <attribute name="spatialRef" type="boolean" use="required"/>
      </complexType>
    </element>
    <choice maxOccurs="unbounded">
      <element name="FigureTrajectory" type="mpeg7:FigureTrajectoryType"/>
      <element name="ParameterTrajectory" type="mpeg7:ParameterTrajectoryType"/>
      <element name="MediaTime" type="mpeg7:MediaTimeType"/>
    </choice>
  </sequence>
</complexType>
<!-- Definition of FigureTrajectory Datatype -->
<complexType name="FigureTrajectoryType" final="#all">
  <sequence>

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```

        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
        <element name="Vertex" type="mpeg7:TemporalInterpolationType" minOccurs="3"
maxOccurs="unbounded"/>
        <element name="Depth" type="mpeg7:TemporalInterpolationType" minOccurs="0"/>
    </sequence>
    <attribute name="type" use="required">
        <simpleType>
            <restriction base="string">
                <enumeration value="rectangle"/>
                <enumeration value="ellipse"/>
                <enumeration value="polygon"/>
            </restriction>
        </simpleType>
    </attribute>
</complexType>
<!-- Definition of ParameterTrajectory Datatype -->
<complexType name="ParameterTrajectoryType" final="#all">
    <sequence>
        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
        <element name="InitialRegion" type="mpeg7:RegionLocatorType"/>
        <element name="Params" type="mpeg7:TemporalInterpolationType" minOccurs="0"/>
        <element name="Depth" type="mpeg7:TemporalInterpolationType" minOccurs="0"/>
    </sequence>
    <attribute name="motionModel" use="required">
        <simpleType>
            <restriction base="string">
                <enumeration value="still"/>
                <enumeration value="translation"/>
                <enumeration value="rotationAndScaling"/>
                <enumeration value="affine"/>
                <enumeration value="perspective"/>
                <enumeration value="parabolic"/>
            </restriction>
        </simpleType>
    </attribute>
    <attribute name="ellipseFlag" type="boolean" use="optional" default="false"/>
</complexType>
<!-- ##### -->
<!-- Definition of FaceRecognition D -->
>
<!-- ##### -->
<complexType name="FaceRecognitionType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="Feature">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned5"/>
                            </simpleType>
                                <length value="48"/>
                            </restriction>
                        </simpleType>
                    </element>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
<!-- ***** -->

```

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<!-- ***** ISO/IEC 15938-4 Visual AMD/1
*****-->
<!-- *****-->
<!-- ##### -->
<!-- Definition of MPEG-7 GofGopFeatureType -->
<!-- ##### -->
<complexType name="GofGopFeatureType">
  <sequence>
    <element name="Descriptor" type="mpeg7:VisualDType"/>
  </sequence>
  <attribute name="aggregation" use="optional">
    <simpleType>
      <restriction base="string">
        <enumeration value="Average"/>
        <enumeration value="Median"/>
        <enumeration value="SplitMerge"/>
      </restriction>
    </simpleType>
  </attribute>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 ColorTemperatureType -->
<!-- ##### -->
<complexType name="ColorTemperatureType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>
        <element name="BrowsingCategory">
          <simpleType>
            <restriction base="string">
              <enumeration value="hot"/>
              <enumeration value="warm"/>
              <enumeration value="moderate"/>
              <enumeration value="cool"/>
            </restriction>
          </simpleType>
        </element>
        <element name="SubRangeIndex" type="mpeg7:unsigned6"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 IlluminationInvariantColorType -->
<!-- ##### -->
<complexType name="IlluminationInvariantColorType">
  <choice>
    <element name="DominantColor" type="mpeg7:DominantColorType"/>
    <element name="ScalableColor" type="mpeg7:ScalableColorType"/>
    <element name="ColorLayout" type="mpeg7:ColorLayoutType"/>
    <element name="ColorStructure" type="mpeg7:ColorStructureType"/>
  </choice>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 ShapeVariationType -->
<!-- ##### -->
<complexType name="ShapeVariationType" final="#all">
  <complexContent>
    <extension base="mpeg7:VisualDType">
      <sequence>

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        <element name="StaticShapeVariation">
            <simpleType>
                <restriction>
                    <simpleType>
                        <list itemType="mpeg7:unsigned4"/>
                    </simpleType>
                    <length value="35"/>
                </restriction>
            </simpleType>
        </element>
        <element name="DynamicShapeVariation">
            <simpleType>
                <restriction>
                    <simpleType>
                        <list itemType="mpeg7:unsigned4"/>
                    </simpleType>
                    <length value="35"/>
                </restriction>
            </simpleType>
        </element>
        <element name="StatisticalVariation">
            <simpleType>
                <restriction>
                    <simpleType>
                        <list itemType="mpeg7:unsigned4"/>
                    </simpleType>
                    <length value="35"/>
                </restriction>
            </simpleType>
        </element>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 "AdvancedFaceRecognitionType" -->
<!-- ##### -->
<complexType name="AdvancedFaceRecognitionType" final="#all">
    <complexContent>
        <extension base="mpeg7:VisualDType">
            <sequence>
                <element name="FourierFeature">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned5"/>
                            </simpleType>
                            <minLength value="24"/>
                            <maxLength value="63"/>
                        </restriction>
                    </simpleType>
                </element>
                <element name="CentralFourierFeature">
                    <simpleType>
                        <restriction>
                            <simpleType>
                                <list itemType="mpeg7:unsigned5"/>
                            </simpleType>
                            <minLength value="24"/>
                            <maxLength value="63"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>

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        </restriction>
      </simpleType>
    </element>
    <sequence minOccurs="0">
      <element name="CompositeFeature">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <minLength value="0"/>
            <maxLength value="63"/>
          </restriction>
        </simpleType>
      </element>
      <element name="SubregionCompositeFeature">
        <simpleType>
          <restriction>
            <simpleType>
              <list itemType="mpeg7:unsigned5"/>
            </simpleType>
            <minLength value="0"/>
            <maxLength value="63"/>
          </restriction>
        </simpleType>
      </element>
    </sequence>
  </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of media-centric visual DSs -->
<!-- ##### -->
<!-- Definition of MPEG-7 Still Region Feature Type -->
<!-- ##### -->
<complexType name="StillRegionFeatureType">
  <complexContent>
    <extension base="mpeg7:VisualDSType">
      <sequence>
        <!-- List of features available -->
        <!-- Color Distribution -->
        <!-- for the region with limited number of colors -->
        <element name="DominantColor" type="mpeg7:DominantColorType"
minOccurs="0"/>
        <!-- for generic applications -->
        <element name="ScalableColor" type="mpeg7:ScalableColorType"
minOccurs="0"/>
        <!-- for high-level applications requesting precise retrieval -->
        <element name="ColorStructure" type="mpeg7:ColorStructureType"
minOccurs="0"/>
        <!-- Spatial Distribution of Color -->
        <element name="ColorLayout" type="mpeg7:ColorLayoutType"
minOccurs="0"/>
        <!-- Color Temperature -->
        <element name="ColorTemperature" type="mpeg7:ColorTemperatureType"
minOccurs="0"/>
        <!-- Illumination Independent Color -->
        <element name="IlluminationCompensatedColor"
type="mpeg7:IlluminationInvariantColorType" minOccurs="0"/>

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```

        <!-- Spatial Distribution of edges -->
        <element name="Edge" type="mpeg7:EdgeHistogramType" minOccurs="0"/>
        <!-- Homogeneous Patterns -->
        <!-- It is applicable only to the picture with homogeneous pattern -->
        <element name="HomogeneousPattern" type="mpeg7:HomogeneousTextureType"
minOccurs="0"/>

        <!-- In case only rough browsing is requested -->
        <element name="TextureBrowsing" type="mpeg7:TextureBrowsingType"
minOccurs="0"/>

        <!-- Shape -->
        <!-- for shape mask-->
        <element name="ShapeMask" type="mpeg7:RegionShapeType" minOccurs="0"/>
        <!-- for contour -->
        <element name="Contour" type="mpeg7:ContourShapeType" minOccurs="0"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 VideoSegmentFeatureType -->
<!-- ##### -->
<complexType name="VideoSegmentFeatureType">
    <complexContent>
        <extension base="mpeg7:VisualDSType">
            <sequence>
                <!-- List of features available -->
                <!-- Temporal transition of frame feature -->
                <element name="TemporalTransition" type="mpeg7:VisualTimeSeriesType"
minOccurs="0" maxOccurs="unbounded"/>
                <!-- Representative feature over all frame in the sequence -->
                <element name="RepresentativeFeature" type="mpeg7:GofGopFeatureType"
minOccurs="0" maxOccurs="unbounded"/>
                <!-- motion activity -->
                <element name="MotionActivity" type="mpeg7:MotionActivityType"
minOccurs="0"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 MovingRegionFeatureType -->
<!-- ##### -->
<complexType name="MovingRegionFeatureType">
    <complexContent>
        <extension base="mpeg7:VideoSegmentFeatureType">
            <sequence>
                <!-- List of features available -->
                <!-- description of statistical characteristics of shape changes -->
                <element name="ShapeVariation" type="mpeg7:ShapeVariationType"
minOccurs="0"/>
                <!-- description of motion characteristics -->
                <choice minOccurs="0">
                    <element name="ParametricMotion" type="mpeg7:ParametricMotionType"/>
                    <element name="MotionTrajectory" type="mpeg7:MotionTrajectoryType"/>
                </choice>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ***** -->

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<!-- ***** ISO/IEC 15938-4 AUDIO *****-->
<!-- *****-->
<annotation>
  <documentation>
    This section contains tools defined in:
      ISO/IEC 15938-4 + ISO/IEC 15938-4 AMD/1 (Audio)
  </documentation>
</annotation>
<!-- ##### -->
<!-- Definition of AudioLLDScalar D -->
<!-- ##### -->
<complexType name="AudioLLDScalarType" abstract="true">
  <complexContent>
    <extension base="mpeg7:AudioDType">
      <choice>
        <element name="Scalar" type="float"/>
        <element name="SeriesOfScalar" maxOccurs="unbounded">
          <complexType>
            <complexContent>
              <extension base="mpeg7:SeriesOfScalarType">
                <attribute name="hopSize" type="mpeg7:mediaDurationType"
default="PT10N1000F"/>
              </extension>
            </complexContent>
          </complexType>
        </element>
      </choice>
      <attribute name="confidence" type="mpeg7:zeroToOneType" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioLLDVector D -->
<!-- ##### -->
<complexType name="AudioLLDVectorType" abstract="true">
  <complexContent>
    <extension base="mpeg7:AudioDType">
      <choice>
        <element name="Vector" type="mpeg7:floatVector"/>
        <element name="SeriesOfVector" maxOccurs="unbounded">
          <complexType>
            <complexContent>
              <extension base="mpeg7:SeriesOfVectorType">
                <attribute name="hopSize" type="mpeg7:mediaDurationType"
default="PT10N1000F"/>
              </extension>
            </complexContent>
          </complexType>
        </element>
      </choice>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioWaveform D -->
<!-- ##### -->
<complexType name="AudioWaveformType">
  <complexContent>
    <extension base="mpeg7:AudioLLDScalarType">
      <attribute name="minRange" type="float" use="optional"/>
    </extension>
  </complexContent>
</complexType>

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        <attribute name="maxRange" type="float" use="optional"/>
    </extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of audioSpectrumAttributeGrp -->
<!-- ##### -->
<attributeGroup name="audioSpectrumAttributeGrp">
    <attribute name="loEdge" type="float" default="62.5"/>
    <attribute name="hiEdge" type="float" default="16000"/>
    <attribute name="octaveResolution" use="optional">
        <simpleType>
            <restriction base="string">
                <enumeration value="1/16"/>
                <enumeration value="1/8"/>
                <enumeration value="1/4"/>
                <enumeration value="1/2"/>
                <enumeration value="1"/>
                <enumeration value="2"/>
                <enumeration value="4"/>
                <enumeration value="8"/>
            </restriction>
        </simpleType>
    </attribute>
    <!-- Edge values are in Hertz -->
</attributeGroup>
<!-- ##### -->
<!-- Definition of AudioSpectrumEnvelope D -->
<!-- ##### -->
<complexType name="AudioSpectrumEnvelopeType">
    <complexContent>
        <extension base="mpeg7:AudioLLDVectorType">
            <attributeGroup ref="mpeg7:audioSpectrumAttributeGrp"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioPower D -->
<!-- ##### -->
<complexType name="AudioPowerType">
    <complexContent>
        <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSpectrumCentroid D -->
<!-- ##### -->
<complexType name="AudioSpectrumCentroidType">
    <complexContent>
        <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSpectrumSpread D -->
<!-- ##### -->
<complexType name="AudioSpectrumSpreadType">
    <complexContent>
        <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
</complexType>

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<!-- ##### -->
<!-- Definition of AudioFundamentalFrequency D -->
<!-- ##### -->
<complexType name="AudioFundamentalFrequencyType">
  <complexContent>
    <extension base="mpeg7:AudioLLDScalarType">
      <attribute name="loLimit" type="float" default="25"/>
      <attribute name="hiLimit" type="float" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioHarmonicity D -->
<!-- ##### -->
<complexType name="AudioHarmonicityType">
  <complexContent>
    <extension base="mpeg7:AudioDType">
      <sequence>
        <element name="HarmonicRatio" type="mpeg7:AudioLLDScalarType"/>
        <element name="UpperLimitOfHarmonicity"
type="mpeg7:AudioLLDScalarType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSpectrumFlatness D -->
<!-- ##### -->
<complexType name="AudioSpectrumFlatnessType">
  <complexContent>
    <extension base="mpeg7:AudioLLDVectorType">
      <attribute name="loEdge" type="float" default="250"/>
      <attribute name="hiEdge" type="float" default="16000"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSpectrumBasis D -->
<!-- ##### -->
<complexType name="AudioSpectrumBasisType">
  <complexContent>
    <extension base="mpeg7:AudioLLDVectorType">
      <attributeGroup ref="mpeg7:audioSpectrumAttributeGrp"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSpectrumProjection D -->
<!-- ##### -->
<complexType name="AudioSpectrumProjectionType">
  <complexContent>
    <extension base="mpeg7:AudioLLDVectorType"/>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of LogAttackTime D -->
<!-- ##### -->
<complexType name="LogAttackTimeType">
  <complexContent>
    <extension base="mpeg7:AudioLLDScalarType"/>
  </complexContent>
</complexType>

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    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of HarmonicSpectralCentroid D -->
  <!-- ##### -->
  <complexType name="HarmonicSpectralCentroidType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of HarmonicSpectralDeviation D -->
  <!-- ##### -->
  <complexType name="HarmonicSpectralDeviationType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of HarmonicSpectralSpread D -->
  <!-- ##### -->
  <complexType name="HarmonicSpectralSpreadType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of HarmonicSpectralVariation D -->
  <!-- ##### -->
  <complexType name="HarmonicSpectralVariationType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of SpectralCentroid D -->
  <!-- ##### -->
  <complexType name="SpectralCentroidType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of TemporalCentroid D -->
  <!-- ##### -->
  <complexType name="TemporalCentroidType">
    <complexContent>
      <extension base="mpeg7:AudioLLDScalarType"/>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of ScalableSeries datatype -->
  <!-- ##### -->
  <complexType name="ScalableSeriesType" abstract="true">
    <sequence>
      <element name="Scaling" minOccurs="0" maxOccurs="unbounded">
        <complexType>
          <attribute name="ratio" type="positiveInteger" use="required"/>
          <attribute name="numOfElements" type="positiveInteger" use="required"/>
        </complexType>
      </element>
    </sequence>
  </complexType>

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    </element>
  </sequence>
  <attribute name="totalNumOfSamples" type="positiveInteger" use="required"/>
</complexType>
<!-- ##### -->
<!-- Definition of SeriesOfScalar datatype -->
<!-- ##### -->
<complexType name="SeriesOfScalarType">
  <complexContent>
    <extension base="mpeg7:ScalableSeriesType">
      <sequence>
        <element name="Raw" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Min" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Max" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Mean" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Random" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="First" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Last" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Variance" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Weight" type="mpeg7:floatVector" minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SeriesOfScalarBinary datatype -->
<!-- ##### -->
<complexType name="SeriesOfScalarBinaryType">
  <complexContent>
    <extension base="mpeg7:SeriesOfScalarType">
      <sequence>
        <element name="VarianceScalewise" type="mpeg7:FloatMatrixType"
minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SeriesOfVector datatype -->
<!-- ##### -->
<complexType name="SeriesOfVectorType">
  <complexContent>
    <extension base="mpeg7:ScalableSeriesType">
      <sequence>
        <element name="Raw" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Min" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Max" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Mean" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Random" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="First" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Last" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Variance" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="Covariance" type="mpeg7:FloatMatrixType" minOccurs="0"/>
        <element name="VarianceSummed" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="MaxSqDist" type="mpeg7:floatVector" minOccurs="0"/>
        <element name="Weight" type="mpeg7:floatVector" minOccurs="0"/>
      </sequence>
      <attribute name="vectorSize" type="positiveInteger" default="1"/>
    </extension>
  </complexContent>

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</complexType>
<!-- ##### -->
<!-- Definition of SeriesOfVectorBinary datatype -->
<!-- ##### -->
<complexType name="SeriesOfVectorBinaryType">
  <complexContent>
    <extension base="mpeg7:SeriesOfVectorType">
      <sequence>
        <element name="VarianceScalewise" type="mpeg7:FloatMatrixType"
minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SilenceHeader header -->
<!-- ##### -->
<complexType name="SilenceHeaderType">
  <complexContent>
    <extension base="mpeg7:HeaderType">
      <attribute name="minDuration" type="mpeg7:mediaDurationType"
use="required"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Silence D -->
<!-- ##### -->
<complexType name="SilenceType">
  <complexContent>
    <extension base="mpeg7:AudioDType">
      <attribute name="confidence" type="mpeg7:zeroToOneType" default="1.0"/>
      <attribute name="minDurationRef" type="anyURI" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSignature DS -->
<!-- ##### -->
<complexType name="AudioSignatureType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="Flatness" type="mpeg7:AudioSpectrumFlatnessType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of InstrumentTimbre DS -->
<!-- ##### -->
<complexType name="InstrumentTimbreType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="LogAttackTime" type="mpeg7:LogAttackTimeType"
minOccurs="0"/>
        <element name="HarmonicSpectralCentroid"
type="mpeg7:HarmonicSpectralCentroidType" minOccurs="0"/>

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        <element name="HarmonicSpectralDeviation"
type="mpeg7:HarmonicSpectralDeviationType" minOccurs="0"/>
        <element name="HarmonicSpectralSpread"
type="mpeg7:HarmonicSpectralSpreadType" minOccurs="0"/>
        <element name="HarmonicSpectralVariation"
type="mpeg7:HarmonicSpectralVariationType" minOccurs="0"/>
        <element name="SpectralCentroid" type="mpeg7:SpectralCentroidType"
minOccurs="0"/>
        <element name="TemporalCentroid" type="mpeg7:TemporalCentroidType"
minOccurs="0"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of HarmonicInstrumentTimbre DS -->
<!-- ##### -->
<complexType name="HarmonicInstrumentTimbreType">
    <complexContent>
        <extension base="mpeg7:AudioDSType">
            <sequence>
                <element name="LogAttackTime" type="mpeg7:LogAttackTimeType"/>
                <element name="HarmonicSpectralCentroid"
type="mpeg7:HarmonicSpectralCentroidType"/>
                <element name="HarmonicSpectralDeviation"
type="mpeg7:HarmonicSpectralDeviationType"/>
                <element name="HarmonicSpectralSpread"
type="mpeg7:HarmonicSpectralSpreadType"/>
                <element name="HarmonicSpectralVariation"
type="mpeg7:HarmonicSpectralVariationType"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of PercussiveInstrumentTimbre DS -->
<!-- ##### -->
<complexType name="PercussiveInstrumentTimbreType">
    <complexContent>
        <extension base="mpeg7:AudioDSType">
            <sequence>
                <element name="LogAttackTime" type="mpeg7:LogAttackTimeType"/>
                <element name="SpectralCentroid" type="mpeg7:SpectralCentroidType"/>
                <element name="TemporalCentroid" type="mpeg7:TemporalCentroidType"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SpokenContentHeader header -->
<!-- ##### -->
<complexType name="SpokenContentHeaderType">
    <complexContent>
        <extension base="mpeg7:HeaderType">
            <sequence>
                <choice maxOccurs="unbounded">
                    <element name="WordLexicon" type="mpeg7:WordLexiconType"/>
                    <element name="PhoneLexicon" type="mpeg7:PhoneLexiconType"/>
                </choice>
                <!-- Information about the word and phone lexicons used to -->
                <!-- represent the speech -->
            </sequence>
        </extension>
    </complexContent>
</complexType>

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        </choice>
        <element name="ConfusionInfo" type="mpeg7:ConfusionCountType"
minOccurs="0" maxOccurs="unbounded"/>
        <element name="DescriptionMetadata"
type="mpeg7:DescriptionMetadataType" minOccurs="0"/>
        <element name="SpeakerInfo" type="mpeg7:SpeakerInfoType"
maxOccurs="unbounded"/>
        <!-- Information about the speakers in the audio -->
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SpeakerInfo header -->
<!-- ##### -->
<complexType name="SpeakerInfoType">
    <complexContent>
        <extension base="mpeg7:HeaderType">
            <sequence>
                <element name="SpokenLanguage" type="language"/>
                <element name="Person" type="mpeg7:PersonType" minOccurs="0"/>
                <element name="WordIndex" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="WordIndexEntry" maxOccurs="unbounded">
                                <complexType>
                                    <sequence>
                                        <element name="IndexEntry"
type="mpeg7:SpokenContentIndexEntryType" maxOccurs="unbounded"/>
                                    </sequence>
                                    <attribute name="key" use="required">
                                        <simpleType>
                                            <list itemType="mpeg7:WordLexiconIndexType"/>
                                        </simpleType>
                                    </attribute>
                                </complexType>
                            </element>
                        </sequence>
                        <attribute name="defaultLattice" type="anyURI" use="required"/>
                    </complexType>
                </element>
                <element name="PhoneIndex" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="PhoneIndexEntry" maxOccurs="unbounded">
                                <complexType>
                                    <sequence>
                                        <element name="IndexEntry"
type="mpeg7:SpokenContentIndexEntryType" maxOccurs="unbounded"/>
                                    </sequence>
                                    <attribute name="key" use="required">
                                        <simpleType>
                                            <list
itemType="mpeg7:PhoneLexiconIndexType"/>
                                        </simpleType>
                                    </attribute>
                                </complexType>
                            </element>
                        </sequence>
                        <attribute name="defaultLattice" type="anyURI" use="required"/>
                    </complexType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>

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        </complexType>
      </element>
    </sequence>
    <attribute name="phoneLexiconRef" type="anyURI" use="optional"/>
    <attribute name="wordLexiconRef" type="anyURI" use="optional"/>
    <attribute name="confusionInfoRef" type="anyURI" use="optional"/>
    <attribute name="descriptionMetadataRef" type="anyURI" use="optional"/>
    <attribute name="provenance" use="required">
      <simpleType>
        <restriction base="NMTOKEN">
          <enumeration value="unknown"/>
          <enumeration value="ASR"/>
          <enumeration value="manual"/>
          <enumeration value="keyword"/>
          <enumeration value="parsing"/>
        </restriction>
      </simpleType>
    </attribute>
  </extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SpokenContentIndexEntry datatype -->
<!-- ##### -->
<complexType name="SpokenContentIndexEntryType">
  <attribute name="node" type="mpeg7:unsigned16" use="required"/>
  <attribute name="block" type="mpeg7:unsigned16" use="required"/>
  <attribute name="lattice" type="anyURI" use="optional"/>
</complexType>
<!-- ##### -->
<!-- Definitions of SpokenContent Word and Phone datatypes -->
<!-- ##### -->
<simpleType name="WordType">
  <restriction base="string"/>
</simpleType>
<simpleType name="PhoneType">
  <restriction base="string"/>
</simpleType>
<simpleType name="WordLexiconIndexType">
  <restriction base="mpeg7:unsigned32"/>
</simpleType>
<simpleType name="PhoneLexiconIndexType">
  <restriction base="mpeg7:unsigned16"/>
</simpleType>
<!-- ##### -->
<!-- Definition of Lexicon header -->
<!-- ##### -->
<complexType name="LexiconType" abstract="true">
  <complexContent>
    <extension base="mpeg7:HeaderType">
      <attribute name="numOfOriginalEntries" type="positiveInteger"
use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of WordLexiconType (Audio AMD/1) -->
-->
<!-- ##### -->
<!-- ##### -->

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<!-- Definition of WordLexiconType -->
<!-- ##### -->
<complexType name="WordLexiconType">
  <complexContent>
    <extension base="mpeg7:LexiconType">
      <sequence>
        <element name="Token">
          <complexType>
            <simpleContent>
              <extension base="mpeg7:WordType">
                <attribute name="linguisticUnit" use="optional"
default="word">
                  <simpleType>
                    <union>
                      <simpleType>
                        <restriction base="NMTOKEN">
                          <enumeration value="word"/>
                          <enumeration value="syllable"/>
                          <enumeration value="morpheme"/>
                          <enumeration value="phrase"/>
                          <enumeration value="component"/>
                          <enumeration value="stem"/>
                          <enumeration value="affix"/>
                          <enumeration value="nonspeech"/>
                          <enumeration value="other"/>
                        </restriction>
                      </simpleType>
                      <simpleType>
                        <restriction
base="mpeg7:termAliasReferenceType"/>
                      </simpleType>
                      <simpleType>
                        <restriction
base="mpeg7:termURIReferenceType"/>
                      </simpleType>
                    </union>
                  </simpleType>
                </attribute>
                <attribute name="representation" use="optional"
default="orthographic">
                  <simpleType>
                    <restriction base="NMTOKEN">
                      <enumeration value="orthographic"/>
                      <enumeration value="nonorthographic"/>
                    </restriction>
                  </simpleType>
                </attribute>
              </extension>
            </simpleContent>
            <!-- New attribute V2 -->
          </complexType>
        </element>
      </sequence>
      <attribute name="phoneticAlphabet" type="mpeg7:phoneticAlphabetType"
use="optional"/>
    </extension>
    <!-- New attribute V2 -->
  </complexContent>
</complexType>
<!-- ##### -->

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<!-- Definition of phoneticAlphabet datatype -->
<!-- ##### -->
<simpleType name="phoneticAlphabetType">
  <restriction base="NMTOKEN">
    <enumeration value="sampa"/>
    <enumeration value="ipaSymbol"/>
    <enumeration value="ipaNumber"/>
    <enumeration value="other"/>
  </restriction>
  <!-- This defines an [enumerated] type covering the phone sets. It -->
  <!-- essentially distinguishes between IPA based systems and everything -->
  <!-- else. -->
</simpleType>
<!-- ##### -->
<!-- Definition of PhoneLexicon header -->
<!-- ##### -->
<complexType name="PhoneLexiconType">
  <complexContent>
    <extension base="mpeg7:LexiconType">
      <sequence>
        <element name="Token" type="mpeg7:PhoneType" maxOccurs="65536"/>
        <!-- The maxOccurs is the upper limit of WordLexiconIndexType -->
      </sequence>
      <attribute name="phoneticAlphabet" type="mpeg7:phoneticAlphabetType"
default="sampa"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ConfusionCount header -->
<!-- ##### -->
<complexType name="ConfusionCountType">
  <complexContent>
    <extension base="mpeg7:HeaderType">
      <sequence>
        <element name="Insertion" type="mpeg7:integerVector"/>
        <element name="Deletion" type="mpeg7:integerVector"/>
        <element name="Substitution" type="mpeg7:IntegerMatrixType"/>
      </sequence>
      <attribute name="numOfDimensions" type="positiveInteger" use="required"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of the SpokenContentLattice DS -->
<!-- ##### -->
<complexType name="SpokenContentLatticeType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="Block" maxOccurs="65536">
          <complexType>
            <sequence>
              <element name="MediaTime" type="mpeg7:MediaTimeType"/>
              <element name="Node" maxOccurs="65536">
                <complexType>
                  <sequence>
                    <element name="WordLink" minOccurs="0"
maxOccurs="127">
                </sequence>
              </complexType>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </extension>
  </complexContent>
</complexType>

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                                <complexContent>
                                    <extension
base="mpeg7:SpokenContentLinkType">
                                <attribute name="word"
type="mpeg7:WordLexiconIndexType" use="required"/>
                                </extension>
                                </complexContent>
                                </complexType>
                                </element>
                                <element name="PhoneLink" minOccurs="0"
maxOccurs="127">
                                <complexType>
                                    <complexContent>
                                        <extension
base="mpeg7:SpokenContentLinkType">
                                <attribute name="phone"
type="mpeg7:PhoneLexiconIndexType" use="required"/>
                                </extension>
                                </complexContent>
                                </complexType>
                                </element>
                                </sequence>
                                <attribute name="num" type="mpeg7:unsigned16"
use="required"/>
                                <attribute name="timeOffset" type="mpeg7:unsigned16"
use="required"/>
                                <attribute name="speakerInfoRef" type="anyURI"
use="optional"/>
                                </complexType>
                                </element>
                                </sequence>
                                <attribute name="defaultSpeakerInfoRef" type="anyURI"
use="required"/>
                                <attribute name="num" type="mpeg7:unsigned16" use="required"/>
                                <attribute name="audio" default="speech">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="unknown"/>
                                            <enumeration value="speech"/>
                                            <enumeration value="noise"/>
                                            <enumeration value="noisySpeech"/>
                                        </restriction>
                                <!-- This gives an approximate measure of how noisy the
-->
                                <!-- speech signal is with respect to the speech
-->
                                </simpleType>
                                </attribute>
                                </complexType>
                                </element>
                                </sequence>
                                </extension>
                                </complexContent>
                                </complexType>
                                <!-- ##### -->
                                <!-- Definition of SpokenContentLink datatype (Audio AMD/1)
-->
                                <!-- ##### -->
                                <complexType name="SpokenContentLinkType">
                                    <attribute name="probability" type="mpeg7:zeroToOneType" default="1.0"/>

```

```

    <attribute name="acousticScore" type="mpeg7:nonNegativeReal" use="optional"/>
    <attribute name="nodeOffset" type="mpeg7:unsigned16" default="1"/>
    <!-- New attribute V2 -->
  </complexType>
  <!-- ##### -->
  <!-- Definition of Melody DS -->
  <!-- ##### -->
  <complexType name="MelodyType">
    <complexContent>
      <extension base="mpeg7:AudioDSType">
        <sequence>
          <element name="Meter" type="mpeg7:MeterType" minOccurs="0"/>
          <element name="Scale" type="mpeg7:scaleType" minOccurs="0"/>
          <element name="Key" type="mpeg7:KeyType" minOccurs="0"/>
          <choice>
            <element name="MelodyContour" type="mpeg7:MelodyContourType"/>
            <element name="MelodySequence" type="mpeg7:MelodySequenceType"
maxOccurs="unbounded"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of MelodyContour DS -->
  <!-- ##### -->
  <complexType name="MelodyContourType">
    <complexContent>
      <extension base="mpeg7:AudioDSType">
        <sequence>
          <element name="Contour" type="mpeg7:contourType"/>
          <element name="Beat" type="mpeg7:beatType"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of Meter D -->
  <!-- ##### -->
  <complexType name="MeterType">
    <complexContent>
      <extension base="mpeg7:AudioDType">
        <sequence>
          <element name="Numerator">
            <simpleType>
              <restriction base="integer">
                <minInclusive value="1"/>
                <maxInclusive value="128"/>
              </restriction>
            </simpleType>
          </element>
          <element name="Denominator">
            <simpleType>
              <restriction base="integer">
                <enumeration value="1"/>
                <enumeration value="2"/>
                <enumeration value="4"/>
                <enumeration value="8"/>
                <enumeration value="16"/>
                <enumeration value="32"/>
              </restriction>
            </simpleType>
          </element>
        </sequence>
      </extension>
    </complexContent>
  </complexType>

```

```

        <enumeration value="64"/>
        <enumeration value="128"/>
    </restriction>
</simpleType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of contour datatype -->
<!-- ##### -->
<simpleType name="contourType">
    <list>
        <simpleType>
            <restriction base="integer">
                <minInclusive value="-2"/>
                <maxInclusive value="+2"/>
            </restriction>
        </simpleType>
    </list>
</simpleType>
<!-- ##### -->
<!-- Definition of beat datatype -->
<!-- ##### -->
<simpleType name="beatType">
    <list itemType="integer"/>
</simpleType>
<!-- ##### -->
<!-- Definition of Scale datatype -->
<!-- ##### -->
<!-- Information about a scale -->
<!-- array of a repeatable span of notes, in semitones from base pitch -->
<simpleType name="scaleType">
    <restriction base="mpeg7:floatVector"/>
</simpleType>
<!-- ##### -->
<!-- Definition of MelodyKey DS -->
<!-- ##### -->
<!-- Information about the key -->
<complexType name="KeyType">
    <complexContent>
        <extension base="mpeg7:AudioDSType">
            <sequence>
                <element name="KeyNote">
                    <complexType>
                        <simpleContent>
                            <extension base="mpeg7:degreeNoteType">
                                <attribute name="display" type="string" use="optional"/>
                            </extension>
                        </simpleContent>
                    </complexType>
                </element>
            </sequence>
            <attribute name="accidental" type="mpeg7:degreeAccidentalType"
default="natural"/>
            <attribute name="mode" type="mpeg7:termReferenceType" use="optional"/>
        </extension>
    </complexContent>
</complexType>

```

```

<simpleType name="degreeNoteType">
  <restriction base="string">
    <enumeration value="C"/>
    <enumeration value="D"/>
    <enumeration value="E"/>
    <enumeration value="F"/>
    <enumeration value="G"/>
    <enumeration value="A"/>
    <enumeration value="B"/>
  </restriction>
</simpleType>
<simpleType name="degreeAccidentalType">
  <restriction base="string">
    <enumeration value="flat"/>
    <enumeration value="natural"/>
    <enumeration value="sharp"/>
    <enumeration value="doubleSharp"/>
    <enumeration value="doubleFlat"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of MelodySequence DS -->
<!-- ##### -->
<complexType name="MelodySequenceType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="StartingNote" minOccurs="0">
          <complexType>
            <sequence>
              <element name="StartingFrequency" type="float"
minOccurs="0"/>
              <element name="StartingPitch" minOccurs="0">
                <complexType>
                  <sequence>
                    <element name="PitchNote">
                      <complexType>
                        <simpleContent>
                          <extension
base="mpeg7:degreeNoteType">
                            <attribute name="display"
type="string" use="optional"/>
                        </extension>
                      </simpleContent>
                    </complexType>
                  </sequence>
                  <attribute name="accidental"
type="mpeg7:degreeAccidentalType" default="natural"/>
                  <attribute name="height" type="integer"
use="optional"/>
                </complexType>
              </element>
            </sequence>
          </complexType>
        </element>
        <element name="NoteArray" maxOccurs="unbounded">
          <complexType>
            <complexContent>
              <extension base="mpeg7:AudioDSType">

```

```

        <sequence>
            <element name="Note" maxOccurs="unbounded">
                <complexType>
                    <sequence>
                        <element name="Interval" type="float"/>
                        <element name="NoteRelDuration"
type="float"/>
                        <element name="Lyric"
type="mpeg7:TextualType" minOccurs="0"/>
                    </sequence>
                </complexType>
            </element>
        </sequence>
    </extension>
</complexContent>
</complexType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- *****-->
<!-- ***** ISO/IEC 15938-3 Audio AMD/1 *****-->
<!-- *****-->
<!-- *****-->
<!-- #####-->
<!-- Definition of AudioSignalQuality DS AMD/1 -->
<!-- #####-->
<complexType name="AudioSignalQualityType">
    <complexContent>
        <extension base="mpeg7:AudioDSType">
            <sequence>
                <!-- Summaries-->
                <element name="Operator" type="mpeg7:PersonType" minOccurs="0"/>
                <element name="UsedTool" type="mpeg7:CreationToolType" minOccurs="0"/>
                <element name="BackgroundNoiseLevel"
type="mpeg7:BackgroundNoiseLevelType"/>
                <element name="RelativeDelay" type="mpeg7:RelativeDelayType"/>
                <element name="Balance" type="mpeg7:BalanceType"/>
                <element name="DcOffset" type="mpeg7:DcOffsetType"/>
                <element name="CrossChannelCorrelation"
type="mpeg7:CrossChannelCorrelationType"/>
                <element name="Bandwidth" type="mpeg7:BandwidthType"/>
                <!-- High Level Feature-->
                <element name="TransmissionTechnology"
type="mpeg7:TransmissionTechnologyType" minOccurs="0"/>
                <!-- Events-->
                <element name="ErrorEventList" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="ErrorEvent" type="mpeg7:ErrorEventType"
minOccurs="0" maxOccurs="unbounded"/>
                        </sequence>
                    </complexType>
                </element>
            </sequence>
            <attribute name="IsOriginalMono" type="boolean"/>
            <attribute name="BroadcastReady" type="boolean" use="optional"/>
        </extension>
    <!-- Attributes-->

```

```

        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of BackgroundNoiseLevel D -->
    <!-- ##### -->
    <complexType name="BackgroundNoiseLevelType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType"/>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of CrossChannelCorrelation D -->
    <!-- ##### -->
    <complexType name="CrossChannelCorrelationType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType"/>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of RelativeDelay D -->
    <!-- ##### -->
    <complexType name="RelativeDelayType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType">
                <attribute name="Reliability" type="mpeg7:zeroToOneType" use="optional"/>
            </extension>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of Balance D -->
    <!-- ##### -->
    <complexType name="BalanceType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType"/>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of DcOffset D -->
    <!-- ##### -->
    <complexType name="DcOffsetType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType"/>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of Bandwidth D -->
    <!-- ##### -->
    <complexType name="BandwidthType">
        <complexContent>
            <extension base="mpeg7:AudioLLDVectorType"/>
        </complexContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of Transmission Technology Type -->
    <!-- ##### -->
    <complexType name="TransmissionTechnologyType">
        <complexContent>
            <extension base="mpeg7:ControlledTermUseType"/>
        </complexContent>
    </complexType>

```

```

<!-- ##### -->
<!-- Definition of ErrorEvent DS -->
<!-- ##### -->
<complexType name="ErrorEventType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="ErrorClass" type="mpeg7:ControlledTermUseType"/>
        <element name="ChannelNo" type="positiveInteger"/>
        <element name="TimeStamp" type="mpeg7:MediaTimeType"/>
        <element name="Relevance" type="mpeg7:unsigned4"/>
        <element name="DetectionProcess">
          <simpleType>
            <restriction base="string">
              <enumeration value="manual"/>
              <enumeration value="automatic"/>
            </restriction>
          </simpleType>
        </element>
        <element name="Status">
          <simpleType>
            <restriction base="string">
              <enumeration value="undefined"/>
              <enumeration value="checked"/>
              <enumeration value="needs restoration"/>
              <enumeration value="restored"/>
              <enumeration value="deleted"/>
            </restriction>
          </simpleType>
        </element>
        <element name="Comment" type="mpeg7:TextAnnotationType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Audio Tempo DS -->
<!-- ##### -->
<complexType name="AudioTempoType">
  <complexContent>
    <extension base="mpeg7:AudioDSType">
      <sequence>
        <element name="BPM" type="mpeg7:AudioBPMType"/>
        <element name="Meter" type="mpeg7:MeterType" minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioBPMType -->
<!-- ##### -->
<complexType name="AudioBPMType">
  <complexContent>
    <extension base="mpeg7:AudioLLDScalarType">
      <attribute name="loLimit" type="float" use="optional"/>
      <attribute name="hiLimit" type="float" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ***** -->

```



```

<!-- ***** ISO/IEC 15938-5 MDS *****-->
<!-- *****-->
<annotation>
  <documentation>
    This section contains MDS tools defined in ISO/IEC 15938-5
  </documentation>
</annotation>
<!-- ##### -->
<!-- Definition of MPEG-7 Base types (4.2) -->
<!-- ##### -->
<!-- Definition of MPEG-7 base type -->
<complexType name="Mpeg7BaseType" abstract="true">
  <complexContent>
    <restriction base="anyType"/>
  </complexContent>
</complexType>
<!-- Definition of generic D -->
<complexType name="DType" abstract="true">
  <complexContent>
    <extension base="mpeg7:Mpeg7BaseType"/>
  </complexContent>
</complexType>
<!-- Definition of generic DS -->
<complexType name="DSType" abstract="true">
  <complexContent>
    <extension base="mpeg7:Mpeg7BaseType">
      <sequence>
        <element name="Header" type="mpeg7:HeaderType" minOccurs="0"
maxOccurs="unbounded"/>
      </sequence>
      <attribute name="id" type="ID" use="optional"/>
      <attributeGroup ref="mpeg7:mediaTimePropertyGrp"/>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of Visual D -->
<complexType name="VisualDType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DType"/>
  </complexContent>
</complexType>
<!-- Definition of Audio D (MDS AMD/1) -->
<complexType name="AudioDType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DType">
      <attribute name="channels" type="mpeg7:integerVector" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of Visual DS -->
<complexType name="VisualDSType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType"/>
  </complexContent>
</complexType>
<!-- Definition of Audio DS (MDS AMD/1) -->
<complexType name="AudioDSType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType">
      <attribute name="channels" type="mpeg7:integerVector" use="optional"/>
    </extension>
  </complexContent>
</complexType>

```

```

        </extension>
    </complexContent>
</complexType>
<!-- Definition of Header datatype -->
<complexType name="HeaderType" abstract="true">
    <complexContent>
        <extension base="mpeg7:Mpeg7BaseType">
            <attribute name="id" type="ID" use="optional"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MPEG-7 root element (4.3) (COR/1) -->
<!-- ##### -->
<!-- Definition of Mpeg7 Type (COR/1) -->
<complexType name="Mpeg7Type" abstract="true">
    <sequence>
        <element name="DescriptionProfile" type="mpeg7:DescriptionProfileType"
minOccurs="1"/>
        <element name="DescriptionMetadata" type="mpeg7:DescriptionMetadataType"
minOccurs="1"/>
    </sequence>
</complexType>
<!-- Definition of DescriptionProfileType (COR/1) -->
<complexType name="DescriptionProfileType">
    <attribute name="profileAndLevelIndication" use="required">
        <simpleType>
            <list itemType="anyURI"/>
        </simpleType>
    </attribute>
</complexType>
<!-- Definition of Mpeg7 Element (COR/1) -->
<element name="Mpeg7">
    <complexType>
        <complexContent>
            <extension base="mpeg7:Mpeg7Type">
                <sequence>
                    <element name="Description" type="mpeg7:CompleteDescriptionType"
maxOccurs="unbounded"/>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
</element>
<!-- ##### -->
<!-- Definition of Complete description top-level types (4.4.2) -->
<!-- ##### -->
<!-- Definition of CompleteDescription Top-level Type -->
<complexType name="CompleteDescriptionType" abstract="true">
    <sequence>
        <!--
            <element name="DescriptionMetadata" type="mpeg7:DescriptionMetadataType"
minOccurs="0"/>
        -->
    </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of Content description top-level types (4.4.3) -->
<!-- ##### -->
<!-- Definition of ContentDescription Top-level Type -->

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```

<complexType name="ContentDescriptionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:CompleteDescriptionType">
      <sequence/>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of ContentEntity Top-level Type -->
<complexType name="ContentEntityType">
  <complexContent>
    <extension base="mpeg7:ContentDescriptionType">
      <sequence>
        <element name="MultimediaContent" type="mpeg7:MultimediaContentType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of ContentAbstraction Top-level Type -->
<complexType name="ContentAbstractionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:ContentDescriptionType"/>
  </complexContent>
</complexType>
<!-- Definition of SummaryDescription Top-level Type -->
<complexType name="SummaryDescriptionType">
  <complexContent>
    <extension base="mpeg7:ContentAbstractionType">
      <sequence>
        <element name="Summarization" type="mpeg7:SummarizationType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Multimedia content entity tools (4.4.5) -->
<!-- ##### -->
<!-- Definition of MultimediaContent Content Entity -->
<complexType name="MultimediaContentType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType"/>
  </complexContent>
</complexType>
<!-- Definition of AudioVisual Content Entity -->
<complexType name="AudioVisualType">
  <complexContent>
    <extension base="mpeg7:MultimediaContentType">
      <sequence>
        <element name="AudioVisual" type="mpeg7:AudioVisualSegmentType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of DescriptionMetadata Header (4.5.3) -->
<!-- ##### -->
<!-- Definition of DescriptionMetadata Header -->
<complexType name="DescriptionMetadataType">
  <complexContent>
    <extension base="mpeg7:HeaderType">
      <sequence>

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```

        <element name="Confidence" type="mpeg7:zeroToOneType" minOccurs="0"/>
        <element name="Version" type="string" minOccurs="0"/>
        <element name="LastUpdate" type="mpeg7:timePointType" minOccurs="0"/>
        <element name="Comment" type="mpeg7:TextAnnotationType" minOccurs="0"/>
        <element name="PublicIdentifier" type="mpeg7:UniqueIDType"
minOccurs="0" maxOccurs="unbounded"/>
        <element name="PrivateIdentifier" type="string" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="Creator" type="mpeg7:CreatorType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="CreationLocation" type="mpeg7:PlaceType" minOccurs="0"/>
        <element name="CreationTime" type="mpeg7:timePointType" minOccurs="0"/>
        <element name="Instrument" type="mpeg7:CreationToolType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="Rights" type="mpeg7:RightsType" minOccurs="0"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Unsigned datatypes (5.2.2) -->
<!-- ##### -->
<!-- Definition of unsigned1 datatype -->
<simpleType name="unsigned1">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="1"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned2 datatype -->
<simpleType name="unsigned2">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="3"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned3 datatype -->
<simpleType name="unsigned3">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="7"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned4 datatype -->
<simpleType name="unsigned4">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="15"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned5 datatype -->
<simpleType name="unsigned5">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="31"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned6 datatype -->
<simpleType name="unsigned6">
    <restriction base="nonNegativeInteger">

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        <minInclusive value="0"/>
        <maxInclusive value="63"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned7 datatype -->
<simpleType name="unsigned7">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="127"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned8 datatype -->
<simpleType name="unsigned8">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="255"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned9 datatype -->
<simpleType name="unsigned9">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="511"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned10 datatype -->
<simpleType name="unsigned10">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="1023"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned11 datatype -->
<simpleType name="unsigned11">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="2047"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned12 datatype -->
<simpleType name="unsigned12">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="4095"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned13 datatype -->
<simpleType name="unsigned13">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="8191"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned14 datatype -->
<simpleType name="unsigned14">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="16383"/>
    </restriction>
</simpleType>

```

```

<!-- Definition of unsigned15 datatype -->
<simpleType name="unsigned15">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="32767"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned16 datatype -->
<simpleType name="unsigned16">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="65535"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned17 datatype -->
<simpleType name="unsigned17">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="131071"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned18 datatype -->
<simpleType name="unsigned18">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="262143"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned19 datatype -->
<simpleType name="unsigned19">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="524287"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned20 datatype -->
<simpleType name="unsigned20">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="1048575"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned21 datatype -->
<simpleType name="unsigned21">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="2097151"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned22 datatype -->
<simpleType name="unsigned22">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="4194303"/>
  </restriction>
</simpleType>
<!-- Definition of unsigned23 datatype -->
<simpleType name="unsigned23">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>

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        <maxInclusive value="8388607"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned24 datatype -->
<simpleType name="unsigned24">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="16777215"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned25 datatype -->
<simpleType name="unsigned25">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="33554431"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned26 datatype -->
<simpleType name="unsigned26">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="67108863"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned27 datatype -->
<simpleType name="unsigned27">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="134217727"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned28 datatype -->
<simpleType name="unsigned28">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="268435455"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned29 datatype -->
<simpleType name="unsigned29">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="536870911"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned30 datatype -->
<simpleType name="unsigned30">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="1073741823"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned31 datatype -->
<simpleType name="unsigned31">
    <restriction base="nonNegativeInteger">
        <minInclusive value="0"/>
        <maxInclusive value="2147483647"/>
    </restriction>
</simpleType>
<!-- Definition of unsigned32 datatype -->

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<simpleType name="unsigned32">
  <restriction base="nonNegativeInteger">
    <minInclusive value="0"/>
    <maxInclusive value="4294967295"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of zeroToOne datatype (5.3.2) -->
<!-- ##### -->
<!-- Definition of zeroToOne datatype -->
<simpleType name="zeroToOneType">
  <restriction base="float">
    <minInclusive value="0.0"/>
    <maxInclusive value="1.0"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of minusOneToOne datatype (5.3.3) -->
<!-- ##### -->
<!-- Definition of minusOneToOne datatype -->
<simpleType name="minusOneToOneType">
  <restriction base="float">
    <minInclusive value="-1.0"/>
    <maxInclusive value="+1.0"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of nonNegativeReal datatype (5.3.4) -->
<!-- ##### -->
<!-- Definition of nonNegativeReal datatype -->
<simpleType name="nonNegativeReal">
  <restriction base="double">
    <minInclusive value="0.0"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of vector datatypes (5.4.2) -->
<!-- ##### -->
<!-- Definition of integerVector datatype -->
<simpleType name="integerVector">
  <list itemType="integer"/>
</simpleType>
<!-- Definition of floatVector datatype -->
<simpleType name="floatVector">
  <list itemType="float"/>
</simpleType>
<!-- Definition of doubleVector datatype -->
<simpleType name="doubleVector">
  <list itemType="double"/>
</simpleType>
<!-- ##### -->
<!-- Definition of minusOneToOneVector datatype (5.4.3) -->
<!-- ##### -->
<!-- Definition of minusOneToOneVector datatype -->
<simpleType name="minusOneToOneVector">
  <list>
    <simpleType>
      <restriction base="float">
        <minInclusive value="-1.0"/>
        <maxInclusive value="1.0"/>
      </restriction>
    </simpleType>
  </list>
</simpleType>

```



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        </restriction>
    </simpleType>
</list>
</simpleType>
<!-- ##### -->
<!-- Definition of Matrix datatypes (5.4.4) -->
<!-- ##### -->
<!-- Definition of IntegerMatrix datatype -->
<complexType name="IntegerMatrixType">
    <simpleContent>
        <extension base="mpeg7:integerVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- Definition of FloatMatrix datatype -->
<complexType name="FloatMatrixType">
    <simpleContent>
        <extension base="mpeg7:floatVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- Definition of DoubleMatrix datatype -->
<complexType name="DoubleMatrixType">
    <simpleContent>
        <extension base="mpeg7:doubleVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of DiagonalMatrix datatypes (5.4.5) -->
<!-- ##### -->
<!-- Definition of IntegerDiagonalMatrix datatype -->
<complexType name="IntegerDiagonalMatrixType">
    <simpleContent>
        <extension base="mpeg7:integerVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- Definition of FloatDiagonalMatrix datatype -->
<complexType name="FloatDiagonalMatrixType">
    <simpleContent>
        <extension base="mpeg7:floatVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- Definition of DoubleDiagonalMatrix datatype -->
<complexType name="DoubleDiagonalMatrixType">
    <simpleContent>
        <extension base="mpeg7:doubleVector">
            <attribute ref="mpeg7:dim" use="required"/>
        </extension>
    </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of MinusOneToOneMatrix datatype (5.4.6) -->

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```

<!-- ##### -->
<!-- Definition of MinusOneToOneMatrix datatype -->
<complexType name="MinusOneToOneMatrixType">
  <simpleContent>
    <extension base="mpeg7:minusOneToOneVector">
      <attribute ref="mpeg7:dim" use="required"/>
    </extension>
  </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of probabilityVector datatype (5.5.2) -->
<!-- ##### -->
<!-- Definition of probabilityVector datatype -->
<simpleType name="probabilityVector">
  <list>
    <simpleType>
      <restriction base="float">
        <minInclusive value="0.0"/>
        <maxInclusive value="1.0"/>
      </restriction>
    </simpleType>
  </list>
</simpleType>
<!-- ##### -->
<!-- Definition of ProbabilityMatrix datatype (5.5.3) -->
<!-- ##### -->
<!-- Definition of probabilityMatrix datatype -->
<complexType name="ProbabilityMatrixType">
  <simpleContent>
    <extension base="mpeg7:probabilityVector">
      <attribute ref="mpeg7:dim" use="required"/>
    </extension>
  </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of mimeType datatype (5.6.2) -->
<!-- ##### -->
<simpleType name="mimeType">
  <restriction base="string">
    <whiteSpace value="collapse"/>
    <pattern value="[\x21;-&#x7f;-\(\)&lt;&gt;@,;:\\"/\[\]\?=?]]+/'>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of countryCode datatype (5.6.3) -->
<!-- ##### -->
<!-- Definition of countryCode datatype -->
<simpleType name="countryCode">
  <restriction base="string">
    <whiteSpace value="collapse"/>
    <pattern value="[a-zA-Z]{2}"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of regionCode datatype (5.6.4) -->
<!-- ##### -->
<!-- Definition of regionCode datatype -->
<simpleType name="regionCode">
  <restriction base="string">

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        <whiteSpace value="collapse"/>
        <pattern value="[a-zA-Z]{2}(-[a-zA-Z0-9]{1,3})?" />
    </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of currencyCode datatype (5.6.5) -->
<!-- ##### -->
<!-- Definition of currencyCode datatype -->
<simpleType name="currencyCode">
    <restriction base="string">
        <whiteSpace value="collapse"/>
        <pattern value="[a-zA-Z]{3}" />
    </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of characterSetCode datatype (5.6.6) -->
<!-- ##### -->
<!-- Definition of characterSetCode datatype -->
<simpleType name="characterSetCode">
    <restriction base="string"/>
</simpleType>
<!-- ##### -->
<!-- Definition of Reference datatypes (6.2.1) -->
<!-- ##### -->
<!-- Definition of referenceGrp attribute group -->
<attributeGroup name="referenceGrp">
    <attribute name="xpath" type="mpeg7:xPathRefType" use="optional"/>
</attributeGroup>
<!-- Definition of Reference datatype -->
<complexType name="ReferenceType">
    <attributeGroup ref="mpeg7:referenceGrp"/>
</complexType>
<!-- ##### -->
<!-- Definition of xPath datatypes (6.2.2) -->
<!-- ##### -->
<!-- Definition of xPath datatype -->
<simpleType name="XPathType">
    <restriction base="token"/>
</simpleType>
<!-- Definition of XPathRef datatype -->
<simpleType name="XPathRefType">
    <restriction base="mpeg7:xPathType">
        <pattern
value="/(?((child:)?((\i\c*)?(\i\c*)(\[\d+\])?))|\.|(\.\.))/)*(((child:)?((\i\c*)?(\i\c*)(\[\d+\])?))|\.)|((attribute::|@)((\i\c*)?(\i\c*|*)))))"/>
    </restriction>
</simpleType>
<!-- Definition of XPathSelector datatype -->
<simpleType name="XPathSelectorType">
    <restriction base="mpeg7:xPathType">
        <pattern
value="(/(|((//|/)?(((child:)?((\i\c*)?(\i\c*|*))|\.|(\.\.))((//|/)?(((child:)?((\i\c*)?(\i\c*|*))|\.|(\.\.))*)|(|/|((//|/)?(((child:)?((\i\c*)?(\i\c*|*))|\.|(\.\.))((//|/)?((child:)?((\i\c*)?(\i\c*|*))|\.|(\.\.))*)*)*)|(|/|((//|/)?(((child:)?((\i\c*)?(\i\c*|*))|\.|(\.\.))*)*)*)*)*)*)*)*)"/>
    </restriction>
</simpleType>
<!-- Definition of XPathAbsoluteSelector datatype -->
<simpleType name="XPathAbsoluteSelectorType">
    <restriction base="mpeg7:xPathSelectorType">

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        <pattern
value="(/(|((//|/)((child:)?((\i\c*:?)(\i\c*|*))|\.))*)(\|/(|((//|/)((child:)?((\i\c*
:)?(\i\c*|*))|\.))*))*"/>
        </restriction>
    </simpleType>
    <!-- Definition of xPathField datatype -->
    <simpleType name="xPathFieldType">
        <restriction base="mpeg7:xPathType">
            <pattern
value="(\./)?(((child:)?((\i\c*:?)(\i\c*|*))|\.)))*(((child:)?((\i\c*:?)(\i\c*|*))
)|\.)|((attribute::|@)((\i\c*:?)(\i\c*|*)))(\|(\./)?(((child:)?((\i\c*:?)(\i\c*|*))
)|\.)))*(((child:)?((\i\c*:?)(\i\c*|*))|\.))|((attribute::|@)((\i\c*:?)(\i\c*|*))
))*"/>
        </restriction>
    </simpleType>
    <!-- ##### -->
    <!-- Definition of UniqueID datatype (6.3.1) -->
    <!-- ##### -->
    <!-- Definition of UniqueID datatype -->
    <complexType name="UniqueIDType">
        <simpleContent>
            <extension base="string">
                <attribute name="type" type="NMTOKEN" use="optional" default="URI"/>
                <attribute name="organization" type="NMTOKEN" use="optional"/>
                <attribute name="authority" type="NMTOKEN" use="optional"/>
                <attribute name="encoding" use="optional" default="text">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="text"/>
                            <enumeration value="base16"/>
                            <enumeration value="base64"/>
                        </restriction>
                    </simpleType>
                </attribute>
            </extension>
        </simpleContent>
    </complexType>
    <!-- ##### -->
    <!-- Definition of Time datatype (6.4.2) -->
    <!-- ##### -->
    <!-- Definition of Time datatype -->
    <complexType name="TimeType">
        <sequence>
            <sequence>
                <element name="TimePoint" type="mpeg7:timePointType"/>
            </sequence>
            <sequence minOccurs="0">
                <element name="Duration" type="mpeg7:durationType"/>
            </sequence>
        </sequence>
    </complexType>
    <!-- ##### -->
    <!-- Definition of timePoint datatype (6.4.3) -->
    <!-- ##### -->
    <!-- Definition of timePoint datatype -->
    <simpleType name="timePointType">
        <restriction base="mpeg7:basicTimePointType">
            <pattern value="(\-?\d+(\-\d{2}(\-
\d{2})?)?(T\d{2}(:\d{2}(:\d{2}(:\d+)?)?)?(F\d+)?((\-|\+)\d{2}:\d{2})?)?"/>
        </restriction>
    </simpleType>

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```

</simpleType>
<!-- ##### -->
<!-- Definition of duration datatype (6.4.4) -->
<!-- ##### -->
<!-- Definition of duration datatype -->
<simpleType name="durationType">
  <restriction base="mpeg7:basicDurationType">
    <pattern value="\-?P(\d+D)?(T(\d+H)?(\d+M)?(\d+S)?(\d+N)?)(\d+F)?((\d+
|+)\d{2}:\d{2}Z)?"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of MediaTime datatype (6.4.10) -->
<!-- ##### -->
<!-- Definition of MediaTime datatype -->
<complexType name="MediaTimeType">
  <sequence>
    <sequence>
      <element name="MediaRelIncrTimePoint"
type="mpeg7:MediaRelIncrTimePointType"/>
    </sequence>
    <sequence minOccurs="0">
      <element name="MediaIncrDuration" type="mpeg7:MediaIncrDurationType"/>
    </sequence>
  </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of mediaDuration datatype (6.4.12) -->
<!-- ##### -->
<!-- Definition of mediaDuration datatype -->
<simpleType name="mediaDurationType">
  <restriction base="mpeg7:basicDurationType">
    <pattern value="\-?P(\d+D)?(T(\d+H)?(\d+M)?(\d+S)?(\d+N)?)(\d+F)?"/>
  </restriction>
</simpleType>
<!-- ##### -->
<!-- Definition of MediaIncrDuration datatype (6.4.13) -->
<!-- ##### -->
<!-- Definition of MediaIncrDuration datatype -->
<complexType name="MediaIncrDurationType">
  <simpleContent>
    <extension base="integer"/>
  </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of MediaRelIncrTimePoint datatype (6.4.15) -->
<!-- ##### -->
<!-- Definition of MediaRelIncrTimePoint datatype -->
<complexType name="MediaRelIncrTimePointType">
  <simpleContent>
    <extension base="integer"/>
  </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of mediaTimeProperty attribute group (6.4.16) -->
<!-- ##### -->
<!-- Definition of mediaTimePropertyGrp attribute group -->
<attributeGroup name="mediaTimePropertyGrp">
  <attribute name="mediaTimeBase" type="mpeg7:xPathRefType" use="optional"/>
  <attribute name="mediaTimeUnit" type="mpeg7:mediaDurationType" use="optional"/>

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</attributeGroup>
<!-- ##### -->
<!-- Definition of MediaLocator datatype (6.5.2) -->
<!-- ##### -->
<!-- Definition of MediaLocator datatype -->
<complexType name="MediaLocatorType">
  <sequence>
    <element name="MediaUri" type="anyURI"/>
    <element name="StreamID" type="nonNegativeInteger" minOccurs="0"/>
  </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of TemporalSegmentLocator datatype (6.5.4) -->
<!-- ##### -->
<!-- Definition of TemporalSegmentLocator datatype -->
<complexType name="TemporalSegmentLocatorType">
  <complexContent>
    <extension base="mpeg7:MediaLocatorType">
      <sequence minOccurs="0">
        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ImageLocator datatype (6.5.5) -->
<!-- ##### -->
<!-- Definition of ImageLocator datatype -->
<complexType name="ImageLocatorType">
  <complexContent>
    <extension base="mpeg7:MediaLocatorType">
      <sequence minOccurs="0">
        <element name="MediaRelIncrTimePoint"
type="mpeg7:MediaRelIncrTimePointType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Textual datatypes (7.3.2) -->
<!-- ##### -->
<!-- Definition of TextualBase datatype -->
<complexType name="TextualBaseType" abstract="true">
  <simpleContent>
    <extension base="string">
      <attribute ref="xml:lang" use="optional"/>
      <attribute name="phoneticTranscription" use="optional">
        <simpleType>
          <list itemType="mpeg7:PhoneType"/>
        </simpleType>
      </attribute>
      <attribute name="phoneticAlphabet" type="mpeg7:phoneticAlphabetType"
use="optional" default="sampa"/>
    </extension>
  </simpleContent>
</complexType>
<!-- Definition of Textual datatype -->
<complexType name="TextualType">
  <simpleContent>
    <extension base="mpeg7:TextualBaseType"/>
  </simpleContent>
</complexType>

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    </simpleContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of TextAnnotation datatype (7.3.3) -->
  <!-- ##### -->
  <!-- Definition of TextAnnotation datatype -->
  <complexType name="TextAnnotationType">
    <choice maxOccurs="unbounded">
      <element name="FreeTextAnnotation" type="mpeg7:TextualType"/>
      <element name="StructuredAnnotation" type="mpeg7:StructuredAnnotationType"/>
      <element name="KeywordAnnotation" type="mpeg7:KeywordAnnotationType"/>
    </choice>
    <attribute name="relevance" type="mpeg7:zeroToOneType" use="optional"/>
    <attribute name="confidence" type="mpeg7:zeroToOneType" use="optional"/>
    <attribute ref="xml:lang"/>
  </complexType>
  <!-- ##### -->
  <!-- Definition of StructuredAnnotation datatype (7.3.4) -->
  <!-- ##### -->
  <!-- Definition of StructuredAnnotation datatype -->
  <complexType name="StructuredAnnotationType">
    <sequence>
      <element name="Who" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="WhatObject" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="WhatAction" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="Where" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="When" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="Why" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
      <element name="How" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
    </sequence>
    <attribute ref="xml:lang" use="optional"/>
  </complexType>
  <!-- ##### -->
  <!-- Definition of KeywordAnnotation datatype (7.3.5) -->
  <!-- ##### -->
  <!-- Definition of KeywordAnnotation datatype -->
  <complexType name="KeywordAnnotationType">
    <sequence>
      <element name="Keyword" maxOccurs="unbounded">
        <complexType>
          <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>
      </element>
    </sequence>
  </complexType>

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        </complexType>
      </element>
    </sequence>
    <attribute ref="xml:lang" use="optional"/>
  </complexType>
<!-- ##### -->
<!-- Definition of TermDefinition DS (7.4.3) -->
<!-- ##### -->
<!-- Definition of TermDefinitionBase DS -->
<complexType name="TermDefinitionBaseType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <element name="Name" minOccurs="0" maxOccurs="unbounded">
          <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"
maxOccurs="unbounded"/>
      </sequence>
      <attribute name="termID" type="NMTOKEN"/>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of termRelationQualifier datatype -->
<simpleType name="termRelationQualifierType">
  <union>
    <simpleType>
      <restriction base="NMTOKEN">
        <enumeration value="NT"/>
        <enumeration value="BT"/>
        <enumeration value="RT"/>
        <enumeration value="US"/>
        <enumeration value="UF"/>
      </restriction>
    </simpleType>
    <simpleType>
      <restriction base="mpeg7:termAliasReferenceType"/>
    </simpleType>
    <simpleType>
      <restriction base="mpeg7:termURIReferenceType"/>
    </simpleType>
  </union>
</simpleType>
<!-- ##### -->
<!-- Definition of TermUse datatype (7.4.4) -->
<!-- ##### -->
<!-- Definition of InlineTermDefinition datatype -->
<complexType name="InlineTermDefinitionType" abstract="true">
  <sequence>
    <element name="Name" minOccurs="0" maxOccurs="unbounded">
      <complexType>
        <simpleContent>
          <extension base="mpeg7:TextualType">

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        <attribute name="preferred" type="boolean" use="optional"/>
    </extension>
    </complexContent>
</complexType>
</element>
</sequence>
</complexType>
<!-- Definition of TermUse datatype -->
<complexType name="TermUseType">
    <complexContent>
        <extension base="mpeg7:InlineTermDefinitionType">
            <attribute name="href" type="mpeg7:termReferenceType" use="optional"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ControlledTermUse datatype (7.4.5) -->
<!-- ##### -->
<!-- Definition of ControlledTermUse datatype -->
<complexType name="ControlledTermUseType">
    <complexContent>
        <extension base="mpeg7:InlineTermDefinitionType">
            <attribute name="href" type="mpeg7:termReferenceType" use="required"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of termReferenceType datatype (7.4.6) -->
<!-- ##### -->
<!-- Definition of termReference datatype -->
<simpleType name="termReferenceType">
    <union memberTypes="mpeg7:termAliasReferenceType mpeg7:termURIReferenceType"/>
</simpleType>
<simpleType name="termAliasReferenceType">
    <restriction base="NMTOKEN">
        <whiteSpace value="collapse"/>
        <pattern value="(:|^:)+(:^:)+"/>
    </restriction>
</simpleType>
<simpleType name="termURIReferenceType">
    <restriction base="anyURI"/>
</simpleType>
<!-- ##### -->
<!-- Definition of Agent DS (7.5.2) -->
<!-- ##### -->
<!-- Definition of Agent DS -->
<complexType name="AgentType" abstract="true">
    <complexContent>
        <extension base="mpeg7:DSType"/>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Person DS (7.5.3) (AMD/2) -->
<!-- ##### -->
<!-- Definition of Person DS (AMD/2) -->
<complexType name="PersonType">
    <complexContent>
        <extension base="mpeg7:AgentType">
            <sequence>
                <choice maxOccurs="unbounded">

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        <element name="Name" type="mpeg7:PersonNameType"/>
        <element name="NameTerm" type="mpeg7:ControlledTermUseType"/>
    </choice>
    <element name="Affiliation" minOccurs="0" maxOccurs="unbounded">
        <complexType>
            <choice>
                <element name="Organization" type="mpeg7:OrganizationType"/>
                <element name="PersonGroup" type="mpeg7:PersonGroupType"/>
            </choice>
        </complexType>
    </element>
    <element name="Citizenship" type="mpeg7:countryCode" minOccurs="0"
maxOccurs="unbounded"/>
    <element name="Address" type="mpeg7:PlaceType" minOccurs="0"/>
    <element name="ElectronicAddress" type="mpeg7:ElectronicAddressType"
minOccurs="0" maxOccurs="unbounded"/>
    <element name="PersonDescription" type="mpeg7:TextualType"
minOccurs="0"/>
    <element name="Nationality" type="mpeg7:countryCode" minOccurs="0"/>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of PersonGroup DS (7.5.4) -->
<!-- ##### -->
<!-- Definition of PersonGroup DS -->
<complexType name="PersonGroupType">
    <complexContent>
        <extension base="mpeg7:AgentType">
            <sequence>
                <element name="Name" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <simpleContent>
                            <extension base="mpeg7:TextualType">
                                <attribute name="type" use="optional">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="former"/>
                                            <enumeration value="variant"/>
                                            <enumeration value="main"/>
                                        </restriction>
                                    </simpleType>
                                </attribute>
                            </extension>
                        </simpleContent>
                    </complexType>
                </element>
                <element name="NameTerm" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <complexContent>
                            <extension base="mpeg7:ControlledTermUseType">
                                <attribute name="type" use="optional">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="former"/>
                                            <enumeration value="variant"/>
                                            <enumeration value="main"/>
                                        </restriction>
                                    </simpleType>
                                </attribute>
                            </extension>
                        </complexContent>
                    </complexType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>

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        </attribute>
        </extension>
    </complexContent>
</complexType>
</element>
<element name="Kind" type="mpeg7:TermUseType" minOccurs="0"/>
<element name="Member" type="mpeg7:PersonType" minOccurs="0"
maxOccurs="unbounded"/>
    <element name="Address" type="mpeg7:PlaceType" minOccurs="0"/>
    <element name="ElectronicAddress" type="mpeg7:ElectronicAddressType"
minOccurs="0"/>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Organization DS (7.5.5) -->
<!-- ##### -->
<!-- Definition of Organization DS -->
<complexType name="OrganizationType">
    <complexContent>
        <extension base="mpeg7:AgentType">
            <sequence>
                <element name="Name" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <simpleContent>
                            <extension base="mpeg7:TextualType">
                                <attribute name="type" use="optional">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="former"/>
                                            <enumeration value="variant"/>
                                            <enumeration value="main"/>
                                        </restriction>
                                    </simpleType>
                                </attribute>
                            </extension>
                        </simpleContent>
                    </complexType>
                </element>
                <element name="NameTerm" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <complexContent>
                            <extension base="mpeg7:ControlledTermUseType">
                                <attribute name="type" use="optional">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="former"/>
                                            <enumeration value="variant"/>
                                            <enumeration value="main"/>
                                        </restriction>
                                    </simpleType>
                                </attribute>
                            </extension>
                        </complexContent>
                    </complexType>
                </element>
                <element name="Kind" type="mpeg7:TermUseType" minOccurs="0"/>
                <element name="Contact" type="mpeg7:AgentType" minOccurs="0"
maxOccurs="unbounded"/>

```

```

        <element name="Address" type="mpeg7:PlaceType" minOccurs="0"/>
        <element name="ElectronicAddress" type="mpeg7:ElectronicAddressType"
minOccurs="0"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of PersonName datatype (7.5.6) (AMD/2) -->
<!-- ##### -->
<!-- Definition of PersonName datatype (AMD/2) -->
<complexType name="PersonNameType">
    <sequence>
        <choice maxOccurs="unbounded">
            <element name="GivenName" type="mpeg7:NameComponentType"/>
            <element name="LinkingName" type="mpeg7:NameComponentType" minOccurs="0"/>
            <element name="FamilyName" type="mpeg7:NameComponentType" minOccurs="0"/>
            <element name="Title" type="mpeg7:NameComponentType" minOccurs="0"/>
            <element name="Salutation" type="mpeg7:NameComponentType" minOccurs="0"/>
            <element name="Numeration" type="string" minOccurs="0"/>
        </choice>
    </sequence>
    <attribute name="dateFrom" type="mpeg7:timePointType" use="optional"/>
    <attribute name="dateTo" type="mpeg7:timePointType" use="optional"/>
    <attribute name="type" use="optional">
        <simpleType>
            <restriction base="NMTOKEN">
                <enumeration value="former"/>
                <enumeration value="variant"/>
                <enumeration value="main"/>
            </restriction>
        </simpleType>
    </attribute>
    <attribute ref="xml:lang" use="optional"/>
</complexType>
<!-- Definition of NameComponent datatype -->
<complexType name="NameComponentType">
    <simpleContent>
        <extension base="mpeg7:TextualBaseType">
            <attribute name="initial" type="string" use="optional"/>
            <attribute name="abbrev" type="string" use="optional"/>
        </extension>
    </simpleContent>
</complexType>
<!-- ##### -->
<!-- Definition of ElectronicAddress datatype (7.5.7) (AMD/2) -->
<!-- ##### -->
<!-- Definition of ElectronicAddress datatype (AMD/2) -->
<complexType name="ElectronicAddressType">
    <sequence>
        <element name="Telephone" minOccurs="0" maxOccurs="unbounded">
            <complexType>
                <simpleContent>
                    <extension base="string">
                        <attribute name="type" use="optional">
                            <simpleType>
                                <restriction base="string">
                                    <enumeration value="central"/>
                                    <enumeration value="secondary"/>
                                </restriction>
                            </simpleType>
                        </attribute>
                    </extension>
                </simpleContent>
            </complexType>
        </element>
    </sequence>

```

```

        </simpleType>
        </attribute>
        </extension>
        </simpleContent>
        </complexType>
    </element>
    <element name="Fax" type="string" minOccurs="0" maxOccurs="unbounded"/>
    <element name="Email" type="string" minOccurs="0" maxOccurs="unbounded"/>
    <element name="Url" type="anyURI" minOccurs="0" maxOccurs="unbounded"/>
</sequence>
</complexType>
<!-- ##### -->
<!-- Definition of Place DS (7.6.2) (AMD/2) -->
<!-- ##### -->
<!-- Definition of Place DS (AMD/2) -->
<complexType name="PlaceType">
    <complexContent>
        <extension base="mpeg7:DSType">
            <sequence>
                <element name="Name" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="NameTerm" type="mpeg7:ControlledTermUseType"
minOccurs="0" maxOccurs="unbounded"/>
                <element name="PlaceDescription" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="Role" type="mpeg7:TermUseType" minOccurs="0"/>
                <element name="GeographicPosition" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="Point" type="mpeg7:GeographicPointType"/>
                        </sequence>
                        <attribute name="datum" type="string" use="optional"/>
                    </complexType>
                </element>
                <element name="AstronomicalBody" type="mpeg7:TermUseType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="Region" type="mpeg7:regionCode" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="AdministrativeUnit" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <simpleContent>
                            <extension base="string">
                                <attribute name="type" type="string" use="optional"/>
                            </extension>
                        </simpleContent>
                    </complexType>
                </element>
                <choice>
                    <element name="PostalAddress" minOccurs="0">
                        <complexType>
                            <sequence>
                                <element name="AddressLine" type="mpeg7:TextualType"
maxOccurs="unbounded"/>
                                <element name="PostingIdentifier"
type="mpeg7:TextualType" minOccurs="0"/>
                            </sequence>
                            <attribute ref="xml:lang" use="optional"/>
                        </complexType>
                    </element>
                    <element name="StructuredPostalAddress" minOccurs="0">

```

```

        <complexType>
          <sequence>
            <element name="StreetNumber" type="string"
minOccurs="0"/>
            <element name="StreetName" type="string" minOccurs="0"/>
            <element name="PostalTown" type="string" minOccurs="0"/>
            <element name="City" type="string" minOccurs="0"/>
            <element name="StateProvinceCounty" type="string"
minOccurs="0"/>
            <element name="Country" type="mpeg7:countryCode"
minOccurs="0"/>
            <element name="PostingIdentifier"
type="mpeg7:TextualType" minOccurs="0"/>
          </sequence>
        </complexType>
      </element>
    </choice>
    <choice>
      <element name="InternalCoordinates" type="string" minOccurs="0"/>
      <element name="StructuredInternalCoordinates" minOccurs="0">
        <complexType>
          <sequence>
            <element name="RoomNumber" type="string" minOccurs="0"/>
            <element name="RoomName" type="string" minOccurs="0"/>
            <element name="BuildingName" type="string"
minOccurs="0"/>
          </sequence>
        </complexType>
      </element>
    </choice>
    <element name="ElectronicAddress" type="mpeg7:ElectronicAddressType"
minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute ref="xml:lang" use="optional"/>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of GeographicPoint datatype (7.6.3) -->
<!-- ##### -->
<!-- Definition of GeographicPoint datatype -->
<complexType name="GeographicPointType">
  <attribute name="longitude" use="required">
    <simpleType>
      <restriction base="double">
        <minInclusive value="-180.0"/>
        <maxInclusive value="180.0"/>
      </restriction>
    </simpleType>
  </attribute>
  <attribute name="latitude" use="required">
    <simpleType>
      <restriction base="double">
        <minInclusive value="-90.0"/>
        <maxInclusive value="90.0"/>
      </restriction>
    </simpleType>
  </attribute>
  <attribute name="altitude" type="double" use="optional"/>
</complexType>

```

```

<!-- ##### -->
<!-- Definition of Relation DS (7.7.3) (AMD/1) -->
<!-- ##### -->
<complexType name="RelationType">
  <complexContent>
    <extension base="mpeg7:DType">
      <attribute name="type" type="mpeg7:termReferenceListType" use="required"/>
      <attribute name="target" use="required">
        <simpleType>
          <restriction base="mpeg7:termReferenceListType">
            <length value="1"/>
          </restriction>
        </simpleType>
      </attribute>
      <attribute name="directed" type="boolean" use="optional" default="true"/>
      <attribute name="strength" type="mpeg7:zeroToOneType" use="optional"
default="1.0"/>
    </extension>
  </complexContent>
</complexType>
<simpleType name="termReferenceListType">
  <list itemType="mpeg7:termReferenceType"/>
</simpleType>
<!-- ##### -->
<!-- Definition of MediaInformation DS (8.2.1) -->
<!-- ##### -->
<!-- Definition of MediaInformation DS -->
<complexType name="MediaInformationType">
  <complexContent>
    <extension base="mpeg7:DType">
      <sequence>
        <element name="MediaIdentification"
type="mpeg7:MediaIdentificationType" minOccurs="0"/>
        <element name="MediaProfile" type="mpeg7:MediaProfileType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MediaIdentification D (8.2.2) -->
<!-- ##### -->
<!-- Definition of MediaIdentification D -->
<complexType name="MediaIdentificationType">
  <complexContent>
    <extension base="mpeg7:DType">
      <sequence>
        <element name="EntityIdentifier" type="mpeg7:UniqueIDType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MediaProfile DS (8.2.3) -->
<!-- ##### -->
<!-- Definition of MediaProfile DS -->
<complexType name="MediaProfileType">
  <complexContent>
    <extension base="mpeg7:DType">
      <sequence>

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        <element name="ComponentMediaProfile" type="mpeg7:MediaProfileType"
minOccurs="0" maxOccurs="unbounded"/>
        <element name="MediaFormat" type="mpeg7:MediaFormatType"
minOccurs="0"/>
        <element name="MediaQuality" type="mpeg7:MediaQualityType"
minOccurs="0"/>
        <element name="MediaInstance" type="mpeg7:MediaInstanceType"
minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MediaFormat D (8.2.4) -->
<!-- ##### -->
<!-- Definition of MediaFormat D -->
<complexType name="MediaFormatType">
    <complexContent>
        <extension base="mpeg7:DType">
            <sequence>
                <element name="Content" type="mpeg7:ControlledTermUseType"/>
                <element name="FileFormat" type="mpeg7:ControlledTermUseType"
minOccurs="0"/>
                <element name="FileSize" type="nonNegativeInteger" 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="nonNegativeInteger"
use="optional"/>
                                <attribute name="average" type="nonNegativeInteger"
use="optional"/>
                                <attribute name="maximum" type="nonNegativeInteger"
use="optional"/>
                            </extension>
                        </simpleContent>
                    </complexType>
                </element>
                <element name="VisualCoding" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="Format" minOccurs="0">
                                <complexType>
                                    <complexContent>
                                        <extension base="mpeg7:ControlledTermUseType">
                                            <attribute name="colorDomain" use="optional"
default="color">
                                                <simpleType>
                                                    <union>
                                                        <simpleType>
                                                            <restriction base="NMToken">
                                                                <enumeration
value="binary"/>
                                                                <enumeration
value="color"/>
                                                                <enumeration
value="graylevel"/>

```



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value="colorized"/>
<enumeration
  </restriction>
</simpleType>
<simpleType>
  <restriction
    base="mpeg7:termAliasReferenceType"/>
  </simpleType>
<simpleType>
  <restriction
    base="mpeg7:termURIReferenceType"/>
  </simpleType>
</union>
</simpleType>
</attribute>
</extension>
</complexContent>
</complexType>
</element>
<element name="Pixel" minOccurs="0">
  <complexType>
    <attribute name="resolution"
      type="nonNegativeInteger" use="optional"/>
    <attribute name="aspectRatio"
      type="mpeg7:nonNegativeReal" use="optional"/>
    <attribute name="bitsPer" type="nonNegativeInteger"
      use="optional"/>
  </complexType>
</element>
<element name="Frame" minOccurs="0">
  <complexType>
    <attribute name="height" type="nonNegativeInteger"
      use="optional"/>
    <attribute name="width" type="nonNegativeInteger"
      use="optional"/>
    <attribute name="aspectRatio"
      type="mpeg7:nonNegativeReal" use="optional"/>
    <attribute name="rate" type="mpeg7:nonNegativeReal"
      use="optional"/>
    <attribute name="structure" use="optional">
      <simpleType>
        <restriction base="NMTOKEN">
          <enumeration value="progressive"/>
          <enumeration value="interlaced"/>
        </restriction>
      </simpleType>
    </attribute>
  </complexType>
</element>
<element name="ColorSampling" type="mpeg7:ColorSamplingType"
  minOccurs="0"/>
</sequence>
</complexType>
</element>
<element name="AudioCoding" minOccurs="0">
  <complexType>
    <sequence>
      <element name="Format" type="mpeg7:ControlledTermUseType"
        minOccurs="0"/>
      <element name="AudioChannels" minOccurs="0">

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        <complexType>
          <simpleContent>
            <extension base="nonNegativeInteger">
              <attribute name="front"
type="nonNegativeInteger" use="optional"/>
              <attribute name="side"
type="nonNegativeInteger" use="optional"/>
              <attribute name="rear"
type="nonNegativeInteger" use="optional"/>
              <attribute name="lfe"
type="nonNegativeInteger" use="optional"/>
              <attribute name="track"
type="nonNegativeInteger" use="optional"/>
            </extension>
          </simpleContent>
        </complexType>
      </element>
      <element name="Sample" minOccurs="0">
        <complexType>
          <attribute name="rate" type="mpeg7:nonNegativeReal"
use="optional"/>
          <attribute name="bitsPer" type="nonNegativeInteger"
use="optional"/>
        </complexType>
      </element>
    </sequence>
  </complexType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- Definition of ColorSampling D -->
<complexType name="ColorSamplingType">
  <complexContent>
    <extension base="mpeg7:DType">
      <sequence>
        <element name="Lattice" minOccurs="0">
          <complexType>
            <attribute name="width" type="positiveInteger" use="required"/>
            <attribute name="height" type="positiveInteger" use="required"/>
          </complexType>
        </element>
        <element name="Field" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="Component" maxOccurs="unbounded">
                <complexType>
                  <complexContent>
                    <extension base="mpeg7:TermUseType">
                      <sequence>
                        <element name="Offset" minOccurs="0">
                          <complexType>
                            <attribute name="horizontal"
type="mpeg7:nonNegativeReal" use="required"/>
                            <attribute name="vertical"
type="mpeg7:nonNegativeReal" use="required"/>
                          </complexType>
                        </element>
                      </sequence>
                    </extension>
                  </complexContent>
                </complexType>
              </element>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </extension>
  </complexContent>
</complexType>
</element>
</sequence>
</complexType>

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                                <complexType>
                                    <attribute name="horizontal"
type="mpeg7:nonNegativeReal" use="required"/>
                                    <attribute name="vertical"
type="mpeg7:nonNegativeReal" use="required"/>
                                </complexType>
                            </element>
                        </sequence>
                    </extension>
                </complexContent>
            </complexType>
        </element>
    </sequence>
    <attribute name="temporalOrder" type="nonNegativeInteger"
use="optional"/>
    <attribute name="positionalOrder" type="nonNegativeInteger"
use="optional"/>
</complexType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MediaQuality D (8.2.6) -->
<!-- ##### -->
<!-- Definition of MediaQuality D -->
<complexType name="MediaQualityType">
    <complexContent>
        <extension base="mpeg7:DType">
            <sequence>
                <element name="QualityRating" maxOccurs="unbounded">
                    <complexType>
                        <complexContent>
                            <extension base="mpeg7:RatingType">
                                <attribute name="type" use="required">
                                    <simpleType>
                                        <restriction base="NMTOKEN">
                                            <enumeration value="subjective"/>
                                            <enumeration value="objective"/>
                                        </restriction>
                                    </simpleType>
                                </attribute>
                            </extension>
                        </complexContent>
                    </complexType>
                </element>
                <element name="RatingSource" type="mpeg7:AgentType" minOccurs="0"/>
                <element name="PerceptibleDefects" minOccurs="0">
                    <complexType>
                        <sequence>
                            <element name="VisualDefects"
type="mpeg7:ControlledTermUseType" minOccurs="0" maxOccurs="unbounded"/>
                            <element name="AudioDefects"
type="mpeg7:ControlledTermUseType" minOccurs="0" maxOccurs="unbounded"/>
                        </sequence>
                    </complexType>
                </element>
            </sequence>
        </extension>
    </complexContent>
</complexType>

```

```

    </complexContent>
  </complexType>
  <!-- Definition of Rating datatype -->
  <complexType name="RatingType">
    <sequence>
      <element name="RatingValue" type="float"/>
      <element name="RatingScheme">
        <complexType>
          <complexContent>
            <extension base="mpeg7:TermUseType">
              <attribute name="best" type="float" use="optional"/>
              <attribute name="worst" type="float" use="optional"/>
              <attribute name="style" use="required">
                <simpleType>
                  <restriction base="NMTOKEN">
                    <enumeration value="higherBetter"/>
                    <enumeration value="lowerBetter"/>
                  </restriction>
                </simpleType>
              </attribute>
            </extension>
          </complexContent>
        </complexType>
      </element>
    </sequence>
  </complexType>
  <!-- ##### -->
  <!-- Definition of MediaInstance DS (8.2.7) -->
  <!-- ##### -->
  <!-- Definition of MediaInstance DS -->
  <complexType name="MediaInstanceType">
    <complexContent>
      <extension base="mpeg7:DSType">
        <sequence>
          <element name="InstanceIdentifier" type="mpeg7:UniqueIDType"/>
          <element name="MediaLocator" type="mpeg7:MediaLocatorType"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of CreationInformation DS (9.2.1) -->
  <!-- ##### -->
  <!-- Definition of CreationInformation DS -->
  <complexType name="CreationInformationType">
    <complexContent>
      <extension base="mpeg7:DSType">
        <sequence>
          <element name="Creation" type="mpeg7:CreationType"/>
          <element name="Classification" type="mpeg7:ClassificationType"
minOccurs="0"/>
          <element name="RelatedMaterial" type="mpeg7:RelatedMaterialType"
minOccurs="0" maxOccurs="unbounded"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of Creation DS (9.2.2) -->
  <!-- ##### -->

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```

<!-- Definition of Creation DS -->
<complexType name="CreationType">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <element name="Title" type="mpeg7:TitleType" maxOccurs="unbounded"/>
        <element name="TitleMedia" type="mpeg7:TitleMediaType" minOccurs="0"/>
        <element name="Abstract" type="mpeg7:TextAnnotationType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="Creator" type="mpeg7:CreatorType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="CreationCoordinates" minOccurs="0"
maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="Location" type="mpeg7:PlaceType"
minOccurs="0"/>
              <element name="Date" type="mpeg7:TimeType" minOccurs="0"/>
            </sequence>
          </complexType>
        </element>
        <element name="CreationTool" type="mpeg7:CreationToolType"
minOccurs="0" maxOccurs="unbounded"/>
        <element name="CopyrightString" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of Title datatype -->
<complexType name="TitleType">
  <simpleContent>
    <extension base="mpeg7:TextualBaseType">
      <attribute name="type" use="optional" default="main">
        <simpleType>
          <union>
            <simpleType>
              <restriction base="NMToken">
                <enumeration value="main"/>
                <enumeration value="secondary"/>
                <enumeration value="alternative"/>
                <enumeration value="original"/>
                <enumeration value="popular"/>
                <enumeration value="opusNumber"/>
                <enumeration value="songTitle"/>
                <enumeration value="albumTitle"/>
                <enumeration value="seriesTitle"/>
                <enumeration value="episodeTitle"/>
              </restriction>
            </simpleType>
            <simpleType>
              <restriction base="mpeg7:termAliasReferenceType"/>
            </simpleType>
            <simpleType>
              <restriction base="mpeg7:termURIReferenceType"/>
            </simpleType>
          </union>
        </simpleType>
      </attribute>
    </extension>
  </simpleContent>

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    </simpleContent>
</complexType>
<!-- Definition of TitleMedia datatype -->
<complexType name="TitleMediaType">
    <sequence>
        <element name="TitleImage" type="mpeg7:ImageLocatorType" minOccurs="0"/>
        <element name="TitleVideo" type="mpeg7:TemporalSegmentLocatorType"
minOccurs="0"/>
        <element name="TitleAudio" type="mpeg7:TemporalSegmentLocatorType"
minOccurs="0"/>
    </sequence>
</complexType>
<!-- Definition of Creator datatype -->
<complexType name="CreatorType">
    <complexContent>
        <extension base="mpeg7:MediaAgentType">
            <sequence>
                <element name="Character" type="mpeg7:PersonNameType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="Instrument" type="mpeg7:CreationToolType" minOccurs="0"
maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- Definition of MediaAgent datatype -->
<complexType name="MediaAgentType">
    <sequence>
        <element name="Role" type="mpeg7:ControlledTermUseType"/>
        <choice>
            <element name="Agent" type="mpeg7:AgentType"/>
        </choice>
    </sequence>
</complexType>
<!-- Definition of CreationTool datatype -->
<complexType name="CreationToolType">
    <sequence>
        <element name="Tool" type="mpeg7:TermUseType"/>
        <element name="Setting" minOccurs="0" maxOccurs="unbounded">
            <complexType>
                <attribute name="name" type="string" use="required"/>
                <attribute name="value" type="string" use="required"/>
            </complexType>
        </element>
    </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of Classification DS (9.2.3) -->
<!-- ##### -->
<!-- Definition of Classification DS -->
<complexType name="ClassificationType">
    <complexContent>
        <extension base="mpeg7:DSType">
            <sequence>
                <element name="Form" type="mpeg7:ControlledTermUseType" minOccurs="0"/>
                <element name="Genre" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <complexContent>
                            <extension base="mpeg7:ControlledTermUseType">
                                <attribute name="type" use="optional" default="main">

```

```

        <simpleType>
          <restriction base="NMToken">
            <enumeration value="main"/>
            <enumeration value="secondary"/>
          </restriction>
        </simpleType>
      </attribute>
    </extension>
  </complexContent>
</complexType>
</element>
<element name="Subject" type="mpeg7:TextAnnotationType" minOccurs="0"/>
<element name="Purpose" type="mpeg7:ControlledTermUseType"
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"/>
      </extension>
    </simpleContent>
  </complexType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- Definition of ExtendedLanguage datatype -->
<complexType name="ExtendedLanguageType">
  <simpleContent>
    <extension base="language">
      <attribute name="type" use="optional" default="original">
        <simpleType>
          <restriction base="NMToken">
            <enumeration value="original"/>
            <enumeration value="dubbed"/>
            <enumeration value="background"/>
          </restriction>
        </simpleType>
      </attribute>
      <attribute name="supplemental" type="boolean" use="optional"
default="false"/>
    </extension>
  </simpleContent>

```

```

    </simpleContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of RelatedMaterial DS (9.2.4) -->
  <!-- ##### -->
  <!-- Definition of RelatedMaterial DS -->
  <complexType name="RelatedMaterialType">
    <complexContent>
      <extension base="mpeg7:DSType">
        <sequence>
          <element name="MaterialType" type="mpeg7:TermUseType"/>
          <element name="MediaLocator" type="mpeg7:MediaLocatorType"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of UsageInformation DS (10.2.1) -->
  <!-- ##### -->
  <!-- Definition of UsageInformation DS -->
  <complexType name="UsageInformationType">
    <complexContent>
      <extension base="mpeg7:DSType">
        <sequence>
          <!--
            <element name="Rights" type="mpeg7:RightsType" minOccurs="0"/>
            <element name="FinancialResults" type="mpeg7:FinancialType"
minOccurs="0"/>
          -->
          <element name="Availability" type="mpeg7:AvailabilityType"
minOccurs="0" maxOccurs="unbounded"/>
          <!--
            <element name="UsageRecord" type="mpeg7:UsageRecordType" minOccurs="0"
maxOccurs="unbounded"/>
          -->
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <!-- ##### -->
  <!-- Definition of Availability DS (10.2.4) -->
  <!-- ##### -->
  <!-- Definition of Availability DS -->
  <complexType name="AvailabilityType">
    <complexContent>
      <extension base="mpeg7:DSType">
        <sequence>
          <element name="InstanceRef" type="mpeg7:ReferenceType"/>
          <element name="Dissemination" type="mpeg7:DisseminationType"
minOccurs="0"/>
          <element name="AvailabilityPeriod" minOccurs="0" maxOccurs="unbounded">
            <complexType>
              <complexContent>
                <extension base="mpeg7:TimeType">
                  <attribute name="type" use="optional">
                    <simpleType>
                      <list>
                        <simpleType>
                          <union>
                            <simpleType>

```



```

value="firstShowing"/>
value="lastShowing"/>
value="conditionalAccess"/>
value="encrypted"/>
value="payPerUse"/>

<restriction base="NMTOKEN">
  <enumeration value="live"/>
  <enumeration value="repeat"/>
  <enumeration
    value="firstShowing"/>
  <enumeration
    value="lastShowing"/>
  <enumeration
    value="conditionalAccess"/>
  <enumeration
    value="encrypted"/>
  <enumeration
    value="payPerUse"/>
</restriction>
</simpleType>
<simpleType>
  <restriction
    base="mpeg7:termReferenceType"/>
  </simpleType>
</union>
</simpleType>
</list>
</simpleType>
</attribute>
</extension>
</complexContent>
</complexType>
</element>
</sequence>
</extension>
</complexContent>
</complexType>
<!-- Definition of Dissemination DS -->
<complexType name="DisseminationType">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <element name="Source" type="mpeg7:TextualType" minOccurs="0"/>
        <element name="Format" type="mpeg7:ControlledTermUseType"
minOccurs="0"/>
        <element name="Disseminator" type="mpeg7:MediaAgentType"
minOccurs="0"/>
        <element name="Location" type="mpeg7:PlaceType" minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Rights datatype (10.2.2) -->
<!-- ##### -->
<!-- Definition of Rights datatype -->
<complexType name="RightsType">
  <sequence>
    <element name="RightsID" type="mpeg7:UniqueIDType" maxOccurs="unbounded"/>
  </sequence>
</complexType>
<!-- ##### -->
<!-- Definition of Segment DS (11.2.2) -->
<!-- ##### -->
<!-- Definition of Segment DS -->

```

```

<complexType name="SegmentType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <choice minOccurs="0">
          <element name="MediaInformation" type="mpeg7:MediaInformationType"/>
          <element name="MediaLocator" type="mpeg7:MediaLocatorType"/>
        </choice>
        <element name="StructuralUnit" type="mpeg7:ControlledTermUseType"/>
        <element name="CreationInformation"
type="mpeg7:CreationInformationType" minOccurs="0"/>
        <element name="UsageInformation" type="mpeg7:UsageInformationType"
minOccurs="0"/>
        <element name="TextAnnotation" minOccurs="0" maxOccurs="unbounded">
          <complexType>
            <complexContent>
              <extension base="mpeg7:TextAnnotationType">
                <attribute name="type" use="optional">
                  <simpleType>
                    <union memberTypes="mpeg7:termAliasReferenceType
mpeg7:termURIReferenceType string"/>
                  </simpleType>
                </attribute>
              </extension>
            </complexContent>
          </complexType>
        </element>
        <element name="Relation" type="mpeg7:RelationType" minOccurs="0"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SegmentDecomposition DS (11.2.3) -->
<!-- ##### -->
<!-- Definition of SegmentDecomposition DS -->
<complexType name="SegmentDecompositionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType">
      <attribute name="criteria" use="required">
        <simpleType>
          <restriction base="string">
            <pattern value="([a-zA-Z][0-9a-zA-Z+\-\.\:]*?)?/{0,2}[0-9a-zA-
Z;/\?:@&=+\$\.\-\_!~\*'\\(\)%]+)?(#[0-9a-zA-Z;/\?:@&=+\$\.\-\_!~\*'\\(\)%]+)?"/>
          </restriction>
        </simpleType>
      </attribute>
      <attribute name="overlap" type="boolean" use="optional" default="false"/>
      <attribute name="gap" type="boolean" use="optional" default="false"/>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of SpatialSegmentDecomposition DS -->
<complexType name="SpatialSegmentDecompositionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:SegmentDecompositionType"/>
  </complexContent>
</complexType>
<!-- Definition of TemporalSegmentDecomposition DS -->

```

```

<complexType name="TemporalSegmentDecompositionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:SegmentDecompositionType"/>
  </complexContent>
</complexType>
<!-- Definition of SpatioTemporalSegmentDecomposition DS -->
<complexType name="SpatioTemporalSegmentDecompositionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:SegmentDecompositionType"/>
  </complexContent>
</complexType>
<!-- Definition of MediaSourceSegmentDecomposition DS -->
<complexType name="MediaSourceSegmentDecompositionType" abstract="true">
  <complexContent>
    <extension base="mpeg7:SegmentDecompositionType"/>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of StillRegion DS (11.4.2) (AMD/2) -->
<!-- ##### -->
<!-- Definition of StillRegion DS (AMD/2) -->
<complexType name="StillRegionType">
  <complexContent>
    <extension base="mpeg7:SegmentType">
      <sequence>
        <element name="SpatialLocator" type="mpeg7:RegionLocatorType"
minOccurs="0"/>
        <element name="MediaRelIncrTimePoint"
type="mpeg7:MediaRelIncrTimePointType" minOccurs="0"/>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element name="VisualDescriptor" type="mpeg7:VisualDType"/>
          <element name="VisualDescriptionScheme" type="mpeg7:VisualDSType"/>
          <element name="GridLayoutDescriptors" type="mpeg7:GridLayoutType"/>
        </choice>
        <element name="SpatialDecomposition"
type="mpeg7:StillRegionSpatialDecompositionType" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of StillRegionSpatialDecomposition DS (11.4.3) -->
<!-- ##### -->
<!-- Definition of StillRegionSpatialDecomposition DS -->
<complexType name="StillRegionSpatialDecompositionType">
  <complexContent>
    <extension base="mpeg7:SpatialSegmentDecompositionType">
      <sequence>
        <element name="StillRegion" type="mpeg7:StillRegionType"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of ImageText DS (11.4.4) -->
<!-- ##### -->
<!-- Definition of ImageText DS -->
<complexType name="ImageTextType">
  <complexContent>

```

```

    <extension base="mpeg7:StillRegionType">
      <sequence>
        <element name="Text" type="mpeg7:TextualType" minOccurs="0"/>
      </sequence>
      <attribute name="textType" use="optional">
        <simpleType>
          <union>
            <simpleType>
              <restriction base="NMTOKEN">
                <enumeration value="superimposed"/>
                <enumeration value="scene"/>
              </restriction>
            </simpleType>
            <simpleType>
              <restriction base="mpeg7:termAliasReferenceType"/>
            </simpleType>
            <simpleType>
              <restriction base="mpeg7:termURIReferenceType"/>
            </simpleType>
          </union>
        </simpleType>
      </attribute>
      <attribute name="fontSize" type="positiveInteger" use="optional"/>
      <attribute name="fontType" type="string" use="optional"/>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of VideoSegment DS (11.4.8) (AMD/2) -->
<!-- ##### -->
<!-- Definition of VideoSegment DS (AMD/2) -->
<complexType name="VideoSegmentType">
  <complexContent>
    <extension base="mpeg7:SegmentType">
      <sequence>
        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element name="VisualDescriptor" type="mpeg7:VisualDType"/>
          <element name="VisualDescriptionScheme" type="mpeg7:VisualDSType"/>
          <element name="VisualTimeSeriesDescriptor"
type="mpeg7:VisualTimeSeriesType"/>
        </choice>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element name="TemporalDecomposition"
type="mpeg7:VideoSegmentTemporalDecompositionType"/>
          <element name="SpatioTemporalDecomposition"
type="mpeg7:VideoSegmentSpatioTemporalDecompositionType"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of VideoSegmentTemporalDecomposition DS -->
<complexType name="VideoSegmentTemporalDecompositionType">
  <complexContent>
    <extension base="mpeg7:TemporalSegmentDecompositionType">
      <choice maxOccurs="unbounded">
        <element name="VideoSegment" type="mpeg7:VideoSegmentType"/>
        <element name="StillRegion" type="mpeg7:StillRegionType"/>
      </choice>
    </extension>
  </complexContent>
</complexType>

```

```

    </extension>
  </complexContent>
</complexType>
<!-- Definition of VideoSegmentSpatioTemporalDecomposition DS -->
<complexType name="VideoSegmentSpatioTemporalDecompositionType">
  <complexContent>
    <extension base="mpeg7:SpatioTemporalSegmentDecompositionType">
      <choice maxOccurs="unbounded">
        <element name="MovingRegion" type="mpeg7:MovingRegionType"/>
        <element name="StillRegion" type="mpeg7:StillRegionType"/>
      </choice>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of MovingRegion DS (11.4.10) (AMD/2) -->
<!-- ##### -->
<!-- Definition of MovingRegion DS (AMD/2) -->
<complexType name="MovingRegionType">
  <complexContent>
    <extension base="mpeg7:SegmentType">
      <sequence>
        <element name="SpatioTemporalLocator"
type="mpeg7:SpatioTemporalLocatorType"/>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element name="VisualDescriptor" type="mpeg7:VisualDType"/>
          <element name="VisualDescriptionScheme" type="mpeg7:VisualDSType"/>
          <element name="VisualTimeSeriesDescriptor"
type="mpeg7:VisualTimeSeriesType"/>
        </choice>
        <element name="SpatioTemporalDecomposition"
type="mpeg7:MovingRegionSpatioTemporalDecompositionType" minOccurs="0"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of MovingRegionSpatioTemporalDecomposition DS -->
<complexType name="MovingRegionSpatioTemporalDecompositionType">
  <complexContent>
    <extension base="mpeg7:SpatioTemporalSegmentDecompositionType">
      <choice maxOccurs="unbounded">
        <element name="MovingRegion" type="mpeg7:MovingRegionType"/>
        <element name="StillRegion" type="mpeg7:StillRegionType"/>
      </choice>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of VideoText DS (11.4.12) -->
<!-- ##### -->
<!-- Definition of VideoText DS -->
<complexType name="VideoTextType">
  <complexContent>
    <extension base="mpeg7:MovingRegionType">
      <sequence>
        <element name="Text" type="mpeg7:TextualType" minOccurs="0"/>
      </sequence>
      <attribute name="textType" use="optional">
        <simpleType>

```

```

        <union>
            <simpleType>
                <restriction base="NMTOKEN">
                    <enumeration value="superimposed"/>
                    <enumeration value="scene"/>
                </restriction>
            </simpleType>
            <simpleType>
                <restriction base="mpeg7:termAliasReferenceType"/>
            </simpleType>
            <simpleType>
                <restriction base="mpeg7:termURIReferenceType"/>
            </simpleType>
        </union>
    </simpleType>
</attribute>
<attribute name="fontSize" type="positiveInteger" use="optional"/>
<attribute name="fontType" type="string" use="optional"/>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSegment DS (11.5.2) -->
<!-- ##### -->
<!-- Definition of AudioSegment DS -->
<complexType name="AudioSegmentType">
    <complexContent>
        <extension base="mpeg7:SegmentType">
            <sequence>
                <element name="MediaTime" type="mpeg7:MediaTimeType"/>
                <choice minOccurs="0" maxOccurs="unbounded">
                    <element name="AudioDescriptor" type="mpeg7:AudioDType"/>
                    <element name="AudioDescriptionScheme" type="mpeg7:AudioDSType"/>
                </choice>
                <element name="TemporalDecomposition"
type="mpeg7:AudioSegmentTemporalDecompositionType" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioSegment decomposition DSs (11.5.3) -->
<!-- ##### -->
<!-- Definition of AudioSegmentTemporalDecomposition DS -->
<complexType name="AudioSegmentTemporalDecompositionType">
    <complexContent>
        <extension base="mpeg7:TemporalSegmentDecompositionType">
            <sequence>
                <element name="AudioSegment" type="mpeg7:AudioSegmentType"
maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of AudioVisualSegment DS (11.6.2) -->
<!-- ##### -->
<!-- Definition of AudioVisualSegment DS -->
<complexType name="AudioVisualSegmentType">
    <complexContent>

```

```

    <extension base="mpeg7:SegmentType">
      <sequence>
        <element name="MediaTime" type="mpeg7:MediaTimeType"/>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element name="TemporalDecomposition"
type="mpeg7:AudioVisualSegmentTemporalDecompositionType"/>
          <element name="MediaSourceDecomposition"
type="mpeg7:AudioVisualSegmentMediaSourceDecompositionType"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of AudioVisualSegmentTemporalDecomposition DS -->
<complexType name="AudioVisualSegmentTemporalDecompositionType">
  <complexContent>
    <extension base="mpeg7:TemporalSegmentDecompositionType">
      <sequence>
        <element name="AudioVisualSegment" type="mpeg7:AudioVisualSegmentType"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- Definition of AudioVisualSegmentMediaSourceDecomposition DS -->
<complexType name="AudioVisualSegmentMediaSourceDecompositionType">
  <complexContent>
    <extension base="mpeg7:MediaSourceSegmentDecompositionType">
      <choice maxOccurs="unbounded">
        <element name="VideoSegment" type="mpeg7:VideoSegmentType"/>
        <element name="StillRegion" type="mpeg7:StillRegionType"/>
        <element name="AudioSegment" type="mpeg7:AudioSegmentType"/>
      </choice>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Summarization DS (13.2.2) -->
<!-- ##### -->
<!-- Definition of Summarization DS -->
<complexType name="SummarizationType">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <element name="Summary" type="mpeg7:SummaryType"
maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of Summary DS (13.2.3) -->
<!-- ##### -->
<!-- Definition of Summary DS -->
<complexType name="SummaryType" abstract="true">
  <complexContent>
    <extension base="mpeg7:DSType">
      <sequence>
        <element name="Name" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>

```

```

        <element name="SourceID" type="mpeg7:UniqueIDType" minOccurs="0"/>
    </sequence>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of HierarchicalSummary DS (13.2.4) -->
<!-- ##### -->
<!-- Definition of HierarchicalSummary DS -->
<complexType name="HierarchicalSummaryType">
    <complexContent>
        <extension base="mpeg7:SummaryType">
            <sequence>
                <element name="SummarySegmentGroup"
type="mpeg7:SummarySegmentGroupType" maxOccurs="unbounded"/>
            </sequence>
            <attribute name="hierarchy" use="required" fixed="dependent">
                <simpleType>
                    <restriction base="NMTOKEN">
                        <enumeration value="independent"/>
                        <enumeration value="dependent"/>
                    </restriction>
                </simpleType>
            </attribute>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SummarySegmentGroup DS (13.2.6) -->
<!-- ##### -->
<!-- Definition of SummarySegmentGroup DS -->
<complexType name="SummarySegmentGroupType">
    <complexContent>
        <extension base="mpeg7:DSType">
            <sequence>
                <element name="Name" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="SummarySegment"
type="mpeg7:SummarySegmentType" maxOccurs="unbounded"/>
                <element name="SummarySegmentGroup"
type="mpeg7:SummarySegmentGroupType" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
            <attribute name="fidelity" type="mpeg7:zeroToOneType" use="optional"/>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SummarySegment DS (13.2.7) -->
<!-- ##### -->
<!-- Definition of SummarySegment DS -->
<complexType name="SummarySegmentType">
    <complexContent>
        <extension base="mpeg7:DSType">
            <sequence>
                <element name="Name" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="SourceID" type="mpeg7:UniqueIDType" minOccurs="0"/>
                <!-- <choice>
                    <element name="KeyAudioVisualClip"
type="mpeg7:TemporalSegmentLocatorType"/>

```



```

        <sequence>
            <element name="KeyVideoClip"
type="mpeg7:TemporalSegmentLocatorType" minOccurs="0"/>
            <element name="KeyAudioClip"
type="mpeg7:TemporalSegmentLocatorType" minOccurs="0"/>
        </sequence>
    </choice> -->
    <choice>
        <element name="KeyAudioVisualClip"
type="mpeg7:TemporalSegmentLocatorType"/>
        <element name="KeyVideoClip"
type="mpeg7:TemporalSegmentLocatorType"/>
        <element name="KeyAudioClip"
type="mpeg7:TemporalSegmentLocatorType"/>
    </choice>
</sequence>
    <attribute name="order" type="positiveInteger" use="optional"/>
</extension>
</complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of SequentialSummary DS (13.2.8) -->
<!-- ##### -->
<!-- Definition of SequentialSummary DS -->
<complexType name="SequentialSummaryType">
    <complexContent>
        <extension base="mpeg7:SummaryType">
            <sequence>
                <choice>
                    <element name="AudioVisualSummaryLocator"
type="mpeg7:TemporalSegmentLocatorType" minOccurs="0"/>
                    <sequence>
                        <element name="VideoSummaryLocator"
type="mpeg7:TemporalSegmentLocatorType" minOccurs="0"/>
                        <element name="AudioSummaryLocator"
type="mpeg7:TemporalSegmentLocatorType" minOccurs="0"/>
                    </sequence>
                </choice>
                <element name="VisualSummaryComponent"
type="mpeg7:VisualSummaryComponentType" minOccurs="0" maxOccurs="unbounded"/>
                <element name="AudioSummaryComponent"
type="mpeg7:AudioSummaryComponentType" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<!-- ##### -->
<!-- Definition of VisualSummaryComponent D (13.2.9) -->
<!-- ##### -->
<!-- Definition of VisualSummaryComponent D -->
<complexType name="VisualSummaryComponentType">
    <complexContent>
        <extension base="mpeg7:DType">
            <sequence>
                <element name="VideoSourceID" type="mpeg7:UniqueIDType"/>
                <element name="VideoSourceLocator"
type="mpeg7:TemporalSegmentLocatorType"/>
            </sequence>
        </extension>
    </complexContent>

```

```

</complexType>
<!-- ##### -->
<!-- Definition of AudioSummaryComponent D (13.2.10) -->
<!-- ##### -->
<!-- Definition of AudioSummaryComponent D -->
<complexType name="AudioSummaryComponentType">
  <complexContent>
    <extension base="mpeg7:DType">
      <sequence>
        <element name="AudioSourceID" type="mpeg7:UniqueIDType"/>
        <element name="AudioSourceLocator"
type="mpeg7:TemporalSegmentLocatorType"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
</schema>

```

Add Annex A:

Annex A (informative)

XSLT for generating AudioVisual Description Profile (AVDP) instance

A.1 Introduction

This Annex contains:

- an example MPEG-7 HierarchicalSummary instance
- two versions of an "XSLT to AVDP" transform
- two AVDP compliant output files obtained after XSLT transformation of the HierarchicalSummary instance.

A.2 MPEG-7 instance as input to XML transformation

The MPEG-7 HierarchicalSummary Descriptions to be converted.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<Mpeg7 xmlns="urn:mpeg:mpeg7:schema:2001" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:mpeg:mpeg7:schema:2001 .\Mpeg7-2001.xsd">
  <Description xsi:type="MediaDescriptionType">
    <MediaInformation>
      <MediaProfile>
        <MediaInstance>
          <InstanceIdentifier>0</InstanceIdentifier>
          <MediaLocator>
            <MediaUri>c:\testusers\test_stream.mpg</MediaUri>
          </MediaLocator>
        </MediaInstance>
      </MediaProfile>
    </MediaInformation>
  </Description>
  <Description xsi:type="SummaryDescriptionType">
    <Summarization mediaTimeUnit="PT1N25F">
      <Summary xsi:type="HierarchicalSummaryType" hierarchy="independent"
components="keyVideoClips keyFrames">
        <Name>HierarchicalKeyFrame Summary</Name>
        <SummaryThemeList>
          <SummaryTheme id="S1">Shots</SummaryTheme>
          <SummaryTheme id="E1">Fine</SummaryTheme>
        </SummaryThemeList>
        <SummarySegmentGroup themeIds="S1" numOfKeyFrames="53">
          <Name>Shots</Name>
          <SummarySegment>
            <KeyVideoClip>
              <MediaTime>
                <MediaRelIncrTimePoint>0</MediaRelIncrTimePoint>
                <MediaIncrDuration>9</MediaIncrDuration>
              </MediaTime>
            </KeyVideoClip>
            <KeyFrame>
              <MediaRelIncrTimePoint>0</MediaRelIncrTimePoint>
            </KeyFrame>
          </SummarySegment>
        </SummarySegmentGroup>
      </Summary>
    </Summarization>
  </Description>
</Mpeg7>
```

```

</SummarySegment>
<SummarySegment>
  <KeyVideoClip>
    <MediaTime>
      <MediaRelIncrTimePoint>36</MediaRelIncrTimePoint>
      <MediaIncrDuration>5</MediaIncrDuration>
    </MediaTime>
  </KeyVideoClip>
  <KeyFrame>
    <MediaRelIncrTimePoint>36</MediaRelIncrTimePoint>
  </KeyFrame>
</SummarySegment>
<SummarySegment>
  <KeyVideoClip>
    <MediaTime>
      <MediaRelIncrTimePoint>54</MediaRelIncrTimePoint>
      <MediaIncrDuration>16</MediaIncrDuration>
    </MediaTime>
  </KeyVideoClip>
  <KeyFrame>
    <MediaRelIncrTimePoint>54</MediaRelIncrTimePoint>
  </KeyFrame>
</SummarySegment>
<SummarySegment>
  <KeyVideoClip>
    <MediaTime>
      <MediaRelIncrTimePoint>115</MediaRelIncrTimePoint>
      <MediaIncrDuration>17</MediaIncrDuration>
    </MediaTime>
  </KeyVideoClip>
  <KeyFrame>
    <MediaRelIncrTimePoint>115</MediaRelIncrTimePoint>
  </KeyFrame>
</SummarySegment>
<SummarySegment>
  <KeyVideoClip>
    <MediaTime>
      <MediaRelIncrTimePoint>182</MediaRelIncrTimePoint>
      <MediaIncrDuration>17</MediaIncrDuration>
    </MediaTime>
  </KeyVideoClip>
  <KeyFrame>
    <MediaRelIncrTimePoint>182</MediaRelIncrTimePoint>
  </KeyFrame>
</SummarySegment>
<SummarySegment>
  <KeyVideoClip>
    <MediaTime>
      <MediaRelIncrTimePoint>247</MediaRelIncrTimePoint>
      <MediaIncrDuration>33</MediaIncrDuration>
    </MediaTime>
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```

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                <MediaIncrDuration>61</MediaIncrDuration>
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    </KeyFrame>
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</SummarySegmentGroup>
</Summary>
</Summarization>
</Description>
</Mpeg7>

```

A.3 XSLT for Converting to SummaryDescriptionType

The following XSLT generates a description of SummaryDescriptionType which is compliant to the AVDP specification.

```

<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:mpeg:mpeg7:schema:2004" xmlns:mpf="urn:mpeg:mpeg7:schema:2001"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:output method="xml" version="1.0" encoding="UTF-8" indent="yes"/>

  <xsl:variable name="MediaUriValue"
select="//mpf:Mpeg7/mpf:Description[1]/mpf:MediaInformation/mpf:MediaProfile/mpf:MediaInstance/mpf:MediaLocator/mpf:MediaUri" />
  <xsl:variable name="mediaTimeUnitValue"
select="//mpf:Mpeg7/mpf:Description[2]/mpf:Summarization/@mediaTimeUnit" />
  <xsl:variable name="hierarchyValue"
select="//mpf:Mpeg7/mpf:Description[2]/mpf:Summarization/mpf:Summary/@hierarchy" />

  <xsl:template match="/">
    <Mpeg7 xsi:schemaLocation="urn:mpeg:mpeg7:schema:2004 file:///C:/profile.xsd">
      <xsl:apply-templates select="mpf:Mpeg7"/>
    </Mpeg7>
  </xsl:template>

  <xsl:template match="mpf:Mpeg7">
    <DescriptionProfile profileAndLevelIndication="urn:mpeg:mpeg7:profiles:2011:AVDP"/>
    <DescriptionMetadata>
      <Version>1.0.0</Version>
    </DescriptionMetadata>
    <Description xsi:type="SummaryDescriptionType">
      <Summarization>

```

```

<Summary xsi:type="HierarchicalSummaryType">
  <xsl:attribute name="hierarchy">dependent</xsl:attribute>
  <xsl:attribute name="mediaTimeUnit"><xsl:value-of select="$mediaTimeUnitValue"
/></xsl:attribute>
  <xsl:attribute
name="mediaTimeBase">SummarySegmentGroup/SummarySegment/KeyVideoClip/MediaTime</xsl:attribute>
  <xsl:apply-templates
select="mpf:Description/mpf:Summarization/mpf:Summary/mpf:SummarySegmentGroup/mpf:Name[.='Shots']"/>
  <xsl:apply-templates
select="mpf:Description/mpf:Summarization/mpf:Summary/mpf:SummarySegmentGroup/mpf:Name[.='Fine']"/>
  </Summary>
</Summarization>
</Description>
</xsl:template>

<xsl:template
match="mpf:Description/mpf:Summarization/mpf:Summary/mpf:SummarySegmentGroup/mpf:Name">
  <SummarySegmentGroup>
    <Name>
      <xsl:value-of select="."/>
    </Name>
    <xsl:apply-templates select="../mpf:SummarySegment[position()=1]/mpf:KeyVideoClip"/>
    <SummarySegmentGroup>
      <Name>KeyVideoClip</Name>
      <xsl:apply-templates select="../mpf:SummarySegment/mpf:KeyVideoClip"/>
    </SummarySegmentGroup>
    <SummarySegmentGroup>
      <Name>KeyFrame</Name>
      <xsl:apply-templates select="../mpf:SummarySegment/mpf:KeyFrame"/>
    </SummarySegmentGroup>
  </SummarySegmentGroup>
</xsl:template>

<xsl:template match="mpf:SummarySegment/mpf:KeyVideoClip">
  <SummarySegment>
    <KeyVideoClip>
      <MediaUri>
        <xsl:value-of select="$MediaUriValue"/>
      </MediaUri>
      <MediaTime>
        <MediaRelIncrTimePoint><xsl:value-of select="mpf:MediaTime/mpf:MediaRelIncrTimePoint"
/></MediaRelIncrTimePoint>
        <MediaIncrDuration><xsl:value-of select="mpf:MediaTime/mpf:MediaIncrDuration"
/></MediaIncrDuration>
      </MediaTime>
    </KeyVideoClip>
  </SummarySegment>
</xsl:template>

<xsl:template match="mpf:SummarySegment/mpf:KeyFrame">
  <SummarySegment>
    <KeyVideoClip>
      <MediaUri>
        <xsl:value-of select="$MediaUriValue"/>
      </MediaUri>
      <MediaTime>
        <MediaRelIncrTimePoint><xsl:value-of select="mpf:MediaRelIncrTimePoint"
/></MediaRelIncrTimePoint>
        <MediaIncrDuration>1</MediaIncrDuration>
      </MediaTime>
    </KeyVideoClip>
  </SummarySegment>
</xsl:template>

```



```

    </KeyVideoClip>
  </SummarySegment>
</xsl:template>
</xsl:stylesheet>

```

The following is the AVDP compliant instance generated by the above XSLT.

```

<?xml version="1.0" encoding="UTF-8"?>
<Mpeg7 xmlns="urn:mpeg:mpeg7:schema:2004" xmlns:mpf="urn:mpeg:mpeg7:schema:2001"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:mpeg:mpeg7:schema:2004
file:///C:/profile.xsd">
  <DescriptionProfile profileAndLevelIndication="urn:mpeg:mpeg7:profiles:2011:AVDP"/>
  <DescriptionMetadata>
    <Version>1.0.0</Version>
  </DescriptionMetadata>
  <Description xsi:type="SummaryDescriptionType">
    <Summarization>
      <Summary xsi:type="HierarchicalSummaryType" hierarchy="dependent" mediaTimeUnit="PT1N25F"
mediaTimeBase="SummarySegmentGroup/SummarySegment/KeyVideoClip/MediaTime">
        <SummarySegmentGroup>
          <Name>Shots</Name>
          <SummarySegment>
            <KeyVideoClip>
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              <MediaTime>
                <MediaRelIncrTimePoint>0</MediaRelIncrTimePoint>
                <MediaIncrDuration>9</MediaIncrDuration>
              </MediaTime>
            </KeyVideoClip>
          </SummarySegment>
          <SummarySegmentGroup>
            <Name>KeyVideoClip</Name>
            <SummarySegment>
              <KeyVideoClip>
                <MediaUri>c:\testusers\test_stream.mpg</MediaUri>
                <MediaTime>
                  <MediaRelIncrTimePoint>0</MediaRelIncrTimePoint>
                  <MediaIncrDuration>9</MediaIncrDuration>
                </MediaTime>
              </KeyVideoClip>
            </SummarySegment>
            <SummarySegment>
              <KeyVideoClip>
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                <MediaTime>
                  <MediaRelIncrTimePoint>36</MediaRelIncrTimePoint>
                  <MediaIncrDuration>5</MediaIncrDuration>
                </MediaTime>
              </KeyVideoClip>
            </SummarySegment>
            <SummarySegment>
              <KeyVideoClip>
                <MediaUri>c:\testusers\test_stream.mpg</MediaUri>
                <MediaTime>
                  <MediaRelIncrTimePoint>54</MediaRelIncrTimePoint>
                  <MediaIncrDuration>16</MediaIncrDuration>
                </MediaTime>
              </KeyVideoClip>
            </SummarySegment>
          </SummarySegmentGroup>
        </Summary>
      </Summarization>
    </Description>
  </Mpeg7>

```

```

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  <KeyVideoClip>
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  <KeyVideoClip>
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```

```

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