

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE NORMALISATION
ISO/IEC JTC 1/SC 29/WG 11
CODING OF MOVING PICTURES AND AUDIO

ISO/IEC JTC 1/SC 29/WG 11 **M10060**

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Source: ENST
Title: Various fixes on XMT-A schema
Status: To be considered at the 65th MPEG Meeting

This document lists some bug that appeared in the XMT schema while implementing quantization and PMF on PROTO and EXTERN Proto.

1. PredictiveMFField

replace

```
<element name="InitialArrayQP">  
  <complexType>  
    <attribute name="NbBits" type="xmta:bit5" use="optional"/>  
    <attribute name="intraInterval" type="xmta:SFInt32" use="optional"/>  
    <attribute name="CompNbBits" type="xmta:bit5" use="required"/>  
    <attribute name="vq" type="xmta:MFInt32" use="required"/>  
    <attribute name="Pmin" type="xmta:MFInt32" use="required"/>  
  </complexType>  
</element>  
<element name="ArrayHeader">  
  <complexType>  
    <sequence>  
      <element ref="xmta:InitialArrayQP" minOccurs="1" maxOccurs="1"/>  
    </sequence>  
    <attribute name="NbBits" type="xmta:bit5" use="required"/>  
    <attribute name="IntraMode" type="xmta:bit2" use="required"/>  
  </complexType>  
</element>
```

with

```
<element name="InitialArrayQP">  
  <complexType>  
    <attribute name="NbBits" type="xmta:bit5" use="optional"/>  
    <attribute name="intraInterval" type="xmta:SFInt32" use="optional"/>  
    <attribute name="CompNbBits" type="xmta:bit5" use="optional"/>
```

```

    <attribute name="vq" type="xmta:MFIInt32" use="optional"/>
    <attribute name="Pmin" type="xmta:MFIInt32" use="optional"/>
  </complexType>
</element>
<element name="ArrayHeader">
  <complexType>
    <sequence>
      <element ref="xmta:InitialArrayQP" minOccurs="1" maxOccurs="1"/>
    </sequence>
    <attribute name="NbBits" type="xmta:bit5" use="optional"/>
    <attribute name="IntraMode" type="xmta:bit2" use="required"/>
  </complexType>
</element>

```

2. Proto & PredictiveMFField

Replace

```

<element name="fieldValue">
  <complexType>
    <choice>
      <element ref="xmta:IS" minOccurs="0"/>
      <element name="node" minOccurs="0" form="qualified">
        <complexType>
          <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="1"/>
        </complexType>
      </element>
      <element name="nodes" minOccurs="0" form="qualified">
        <complexType>
          <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="unbounded"/>
        </complexType>
      </element>
    </choice>
    <attribute name="name" type="string" use="required"/>
    <attribute name="colorValue" type="xmta:SFCColor" use="optional"/>
    <attribute name="colorArrayValue" type="xmta:MFCColor" use="optional"/>
    <attribute name="stringValue" type="xmta:SFSString" use="optional"/>
    <attribute name="floatValue" type="xmta:SFFloat" use="optional"/>
    <attribute name="floatArrayValue" type="xmta:MFFloat" use="optional"/>
    <attribute name="intValue" type="xmta:SFIInt32" use="optional"/>
    <attribute name="intArrayValue" type="xmta:MFIInt32" use="optional"/>
    <attribute name="booleanValue" type="xmta:SFBBool" use="optional"/>
    <attribute name="booleanArrayValue" type="xmta:MFBBool" use="optional"/>

```

```

    <attribute name="stringArrayValue" type="xmta:MFSString" use="optional"/>
    <attribute name="scriptArrayValue" type="xmta:MFScript" use="optional"/>
    <attribute name="timeValue" type="xmta:SFTIME" use="optional"/>
    <attribute name="timeArrayValue" type="xmta:MFTIME" use="optional"/>
    <attribute name="rotationValue" type="xmta:SFRotation" use="optional"/>
    <attribute name="rotationArrayValue" type="xmta:MFRotation"
use="optional"/>
    <attribute name="vector2Value" type="xmta:SFVec2f" use="optional"/>
    <attribute name="vector2ArrayValue" type="xmta:MFVec2f" use="optional"/>
    <attribute name="vector3Value" type="xmta:SFVec3f" use="optional"/>
    <attribute name="vector3ArrayValue" type="xmta:MFVec3f" use="optional"/>
    <attribute name="imageValue" type="xmta:SFIImage" use="optional"/>
  </complexType>
</element>

```

with

```

  <element name="fieldValue">
    <complexType>
      <choice>
        <element ref="xmta:IS" minOccurs="0"/>
        <element name="fieldPredictiveValue" minOccurs="0">
          <complexType>
            <sequence>
              <element ref="xmta:ArrayHeader"/>
              <element ref="xmta:ArrayOfValues" minOccurs="0" maxOccurs="1"/>
            </sequence>
          </complexType>
        </element>
        <element name="node" minOccurs="0" form="qualified">
          <complexType>
            <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="1"/>
          </complexType>
        </element>
        <element name="nodes" minOccurs="0" form="qualified">
          <complexType>
            <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="unbounded"/>
          </complexType>
        </element>
      </choice>
      <attribute name="name" type="string" use="required"/>
      <attribute name="colorValue" type="xmta:SFCColor" use="optional"/>
      <attribute name="colorArrayValue" type="xmta:MFCColor" use="optional"/>

```

```

<attribute name="stringValue" type="xmta:SFFloat" use="optional"/>
<attribute name="floatValue" type="xmta:SFFloat" use="optional"/>
<attribute name="floatArrayValue" type="xmta:MFFloat" use="optional"/>
<attribute name="intValue" type="xmta:SFInt32" use="optional"/>
<attribute name="intArrayValue" type="xmta:MFInt32" use="optional"/>
<attribute name="booleanValue" type="xmta:SFBool" use="optional"/>
<attribute name="booleanArrayValue" type="xmta:MFBool" use="optional"/>
<attribute name="stringArrayValue" type="xmta:MFString" use="optional"/>
<attribute name="scriptArrayValue" type="xmta:MFScript" use="optional"/>
<attribute name="timeValue" type="xmta:SFTIME" use="optional"/>
<attribute name="timeArrayValue" type="xmta:MFTIME" use="optional"/>
<attribute name="rotationValue" type="xmta:SFRotation" use="optional"/>
<attribute name="rotationArrayValue" type="xmta:MFRotation"
use="optional"/>
  <attribute name="vector2Value" type="xmta:SFVec2f" use="optional"/>
  <attribute name="vector2ArrayValue" type="xmta:MFVec2f" use="optional"/>
  <attribute name="vector3Value" type="xmta:SFVec3f" use="optional"/>
  <attribute name="vector3ArrayValue" type="xmta:MFVec3f" use="optional"/>
  <attribute name="imageValue" type="xmta:SFIImage" use="optional"/>
</complexType>
</element>

```

3. ExternProto

Replace

```

<element name="ProtoDeclare">
  <complexType>
    <sequence>
      <element ref="xmta:field" minOccurs="0" maxOccurs="unbounded"/>
      <element ref="xmta:ProtoDeclare" minOccurs="0"
maxOccurs="unbounded"/>
      <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="unbounded"/>
      <element ref="xmta:ROUTE" minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
    <attribute name="name" type="string" use="required"/>
    <attribute name="protoID" type="int" use="optional"/>
  </complexType>
</element>

```

with

```

<element name="ProtoDeclare">
  <complexType>
    <sequence>

```

```
    <element ref="xmta:field" minOccurs="0" maxOccurs="unbounded"/>
    <element ref="xmta:ProtoDeclare" minOccurs="0"
maxOccurs="unbounded"/>
    <group ref="xmta:SFWorldNodesType" minOccurs="0"
maxOccurs="unbounded"/>
    <element ref="xmta:ROUTE" minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="name" type="string" use="required"/>
  <attribute name="locations" type="MFString" use="optional"/>
  <attribute name="protoID" type="int" use="optional"/>
</complexType>
</element>
```