INTERNATIONAL STANDARD ISO/IEC 15938-3:2002
TECHNICAL CORRIGENDUM 1

Published 2004-03-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION
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Information technology — Multimedia content description interface —

Part 3: Visual

TECHNICAL CORRIGENDUM 1

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

Partie 3: Visuel

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 15938-3:2002 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

In 4.1, add the following subclause at the end:

4.1.1 Wrapper of the schema

The syntax of the description tools specified in this document assumes that a schema wrapper is provided, which identifies the XML Schema namespace (XML Schema) and MPEG-7 namespace:

<schema xmlns=http://www.w3.org/2001/XMLSchema xmlns:mpeg7=”urn:mpeg:mpeg7:schema:2001” targetNamespace=”urn:mpeg:mpeg7:schema:2001” elementFormDefault=”qualified” attributeFormDefault=”unqualified”>

The following tag is used to close the schema:

</schema>

ICS 35.040 **Ref. No. ISO/IEC 15938-3:2002/Cor.1:2004(E)**

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In 5.2.4, section "DescriptorID", replace:

The assignment of IDs to the descriptors is specified in Table 1.

with:

The assignment of IDs to the descriptor is specified in Table 1. The possible value of DescriptorID for GridLayout is one of 2, 4, 6, 7, 8, 12, 19, 21, and 26.

In 5.2.4, replace:

numOfPartX
This attribute specifies the number of horizontal partitions in the grid over the image.

numOfPartY
This attribute specifies the number of vertical partitions in the grid over the image.

with:

numOfPartX
This attribute specifies the number of horizontal partitions in the grid over the image. The value of "0" is forbidden for this attribute.

numOfPartY
This attribute specifies the number of vertical partitions in the grid over the image. The value of "0" is forbidden for this attribute.

In 5.3.3.4 and 5.3.4.4, add the following sentence at the end of "DescriptorID" semantics:

The following values of DescriptorID are allowed: 2, 4, 6, 7, 8, 9, 12, 19, 21, and 26.

In 5.3.3.4 and 5.3.4.4, add the following sentence at the end of "Descriptor" semantics:

The descriptor specified in this field is extracted from the frame corresponding to the start of the corresponding time interval.

In 6.2.3, replace:

ColorTransMat[j][k]	16	uimsbf

with:

ColorTransMat[j][k]	16	simsbf

In 6.5, replace all instances of "histogram", "color histogram" and "HSV color histogram" with "normalized histogram", "normalized color histogram" and "normalized HSV color histogram" respectively.

In 6.5.4, add the following sentence at the end of first paragraph of section "Bit representation of Coefficients":

If, in the encoding process, the absolute value of the difference between amplitude and offset exceeds the maximum that can be represented using the assigned number of bits BN, the value is clipped to the maximum representable value.

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In 6.5.4, section "Bit representation of Coefficients", replace:

The input to the transform is an HSV Color Histogram based on the definition of the uniform ColorQuantization descriptor with 16 bins in H, and 4 bins in each S and V (256 bins in total).

with:

The input to the transform is a normalized HSV Color Histogram based on the definition of the uniform ColorQuantization descriptor with 16 bins in H, and 4 bins in each S and V (256 bins in total). The normalization means that after determination of the HSV Color Histogram each histogram entry has to be divided by the total number of pixels in the image. Then each normalized histogram entry has a value within the interval [0,1]. Those values are subsequently uniformly quantized to 11 bits using nearest neighbour quantization.

In 6.5.4, section "Bit representation of Coefficients", remove
"
(probability)
"
from the third sentence after Table 15.

In 6.6.4, replace:

The DCT coefficients of each color component are derived from the corresponding component of local representative colors. The selection algorithm of local representative colors is not normative.

with:

The DCT coefficients of each color component are derived from the corresponding component of resized picture, whose size is 8x8, from picture data. The original picture data should be divided into 64 (8x8) blocks and representative color of each block corresponds to each element of the resized picture. The selection algorithm of representative color is informative and a typical one is recommended in ISO/IEC 15938-8.

In 6.6.4, replace:

The 8x8 DCT coefficient matrix, c[8][8], can be calculated from the 8x8 matrix of local representative colors, d[8][8], as follows

with:

The 8x8 DCT coefficient matrix, c[8][8], can be calculated from the resized picture d[8][8], as follows

In 6.6.4, replace:

It should be noted that the invalid locations in d[8][8] should be padded before the above process is performed using the average color of all valid representative colors.

with:

To apply this tool to arbitrary shaped region, the representative colors of the blocks which have no pixels inside the region should be padded with the mean value of the valid pixel of the resized picture.

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In 7.2.1, replace Eq. 4 with:

$$p_i = \int_{\omega=0^+}^{1} \int_{\theta=(0^\circ)^+}^{360^\circ} [G_{P_{s,r}}(\omega,\theta)|\omega|P(\omega,\theta)]^2 \qquad [4]$$

and Eq. 6 with:

$$q_i = \sqrt{\int_{\omega=0^+}^{1} \int_{\theta=(0^\circ)^+}^{360^\circ} \left\{ \left[G_{P_{s,r}}(\omega,\theta)|\omega|P(\omega,\theta) \right]^2 - p_i \right\}^2} \qquad [6]$$

In Table 38, 8.2.4, replace:

ArtDE	**Reconstruction value**

with:

MagnitudeOfART	**Reconstruction value**

In 8.3.2, replace the definition of element Peak *with:*

```
<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>
```

In 9.3.4, add the following sentence at the end of semantics of CoordCoodingLength:

This field can only be set to one if the value of the attribute units is "00", i.e. both horizontal and vertical coordinates are normalized by image size in the respective dimension.

In 9.5.4, replace the first sentence of SpaLocNumber semantics with:

This field, which is only present in the binary representation, specifies the number of spatially localized activity parameters and the associated grid divisions of the video frames.

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