INTERNATIONAL STANDARD ISO/IEC 14496-3:2001/Amd.2:2004
TECHNICAL CORRIGENDUM 1

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INTERNATIONAL ELECTROTECHNICAL COMMISSION • МЕЖДУНАРОДНАЯ ЭЛЕКТРОТЕХНИЧЕСКАЯ КОМИССИЯ • COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

Information technology — Coding of audio-visual objects —

Part 3:
Audio

AMENDMENT 2: Parametric coding for high-quality audio

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Codage des objets audiovisuels —

Partie 3: Codage audio

AMENDEMENT 2: Codage paramétrique pour le codage audio de haute qualité

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 14496-3:2001/Amd.2:2004 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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In ISO/IEC 14496-3:2001/Amd.2:2004, subpart 1, update Table 1.1. Replacing SSC by SSC(Transient, Sinusoid, Noise) and add a PS tool, as illustrated in the table below.

AOT/Tools	SSC(Transient, Sinusoid, Noise)	Parametric stereo
SSC	X	X

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.5.1, replace Table 8.10 with (modified parts are marked in gray):

Table 8.10 - Decoder level

decoder_ level	Level of complexity	max_nrof_sinusoids	max_nrof_den	#bits for s_nrof_ continuations	#bits for n_nrof_lsf
00	Reserved	Na	Na	Na	Na
01	Medium	60	24	6	4
10	Reserved	Na	Na	Na	Na
11	Reserved	Na	Na	Na	Na

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.5.2, replace (modified parts are marked in gray):

refresh_sinusoids_next_frame – One bit providing an additional frame look ahead for the ADPCM decoding of sinusoidal parameters. If this bit is set to %1, the next frame is a refresh frame. In that case the bit refresh_sinusoids shall be set to %1 in the next frame.

with:
refresh_sinusoids_next_frame – One bit providing an additional frame look ahead for the ADPCM decoding of sinusoidal parameters. If this bit is set to %1, the next frame is a refresh frame. In that case the bit refresh_sinusoids shall be set to %1 in the next frame. If this bit is set to %0, the next frame is not a refresh frame.

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.5.2, replace (modified parts are marked in gray):

t_phi[sf][ch][i] – For a transient of the Meixner type in sub-frame sf of channel ch, these bits represent the phase of the i-th sinusoid under the transient envelope. The decoded value is converted into a phase value in radians in the range [-π, π> and is specified for the start of the transient.

$$tp_q[i] = 2 \cdot tp_e \cdot \text{t_phi[sf][ch][i]},$$

where tp_e represents the absolute phase error ($tp_e = \frac{\pi}{32}$) and tp_q represents the dequantized absolute phase (in radians). The allowed range for t_phi is [-16, 15]; the representation level +16 is represented by –16 (because +π==-π).

with:
t_phi[sf][ch][i] – For a transient of the Meixner type in sub-frame sf of channel ch, these bits represent the phase of the i-th sinusoid under the transient envelope. The decoded value is converted into a phase value in radians in the range [-π, π> and is specified for the start of the transient.

$$tp_q[i] = 2 \cdot tp_e \cdot \text{t_phi[sf][ch][i]},$$

where tp_e represents the absolute phase error ($tp_e = \frac{\pi}{32}$) and tp_q represents the dequantized absolute phase (in radians). The allowed range for t_phi is [-16, 15].

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In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.5.2, replace (modified parts are marked in gray):

If no ICC data is sent in the bit-stream, all ICC parameters are reset to 1 (i.e. index=0). The default quantization grid for ICC is provided in Table 8.B.19.

with:
If no ICC data is sent in the bit-stream, all ICC parameters are reset to 1 (i.e. index=0). The default quantization grid for ICC is provided in Table 8.23

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.5.2, replace (modified parts are marked in gray):

iid_dt[e] – This flag describes for envelope index n, whether the IID parameters are coded differentially over time (iid_dt==%1) or over frequency (iid_dt==%0). In the case iid_mode is different from the previous envelope (e-1), iid_dt[e] shall have the value 0% forcing frequency differential coding.

with:
iid_dt[e] – This flag describes for envelope index e, whether the IID parameters are coded differentially over time (iid_dt==%1) or over frequency (iid_dt==%0). In the case iid_mode is different from the previous envelope (e-1), iid_dt[e] shall have the value 0% forcing frequency differential coding.

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.6.2.4, replace (modified parts are marked in gray):

8.6.2.4 Synthesis of sinusoids for segments without a transient
with:
8.6.2.4 Synthesis of sinusoids for segments with a transient

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.6.4.3, replace (modified parts are marked in gray):

In order to compensate for the overall delay of the hybrid analysis filterbank, the first 10 sets (6 from delay and 4 from QMF filter) of hybrid subbands are flushed and therefore not taken into account for processing.
with:
In order to compensate for the overall delay of the hybrid analysis filterbank, the first 10 sets (6 from delay and 4 from QMF filter) of hybrid subbands are flushed and therefore not taken into account for processing. Note that in Figure 8.24 this delay has already been accounted for.

In ISO/IEC 14496-3:2001/Amd.2:2004, subclause 8.6.4.4, Figure 8.24, replace caption (modified parts are marked in gray):

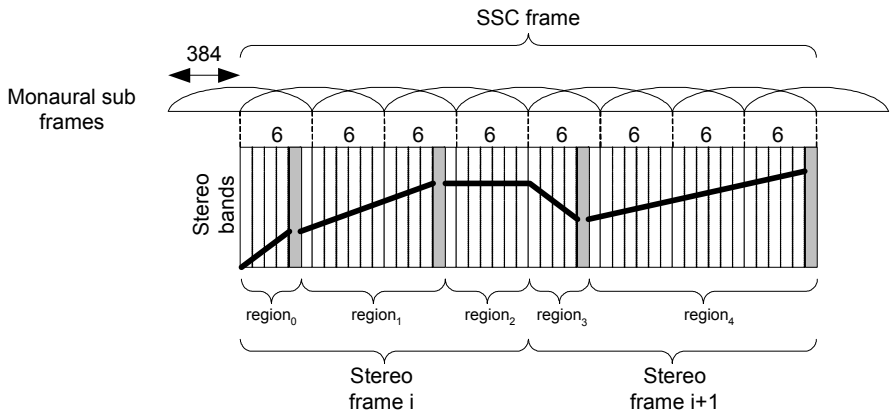

Figure 8.24 - One SSC frame comprises two stereo frames of data. The solid line illustrates the interpolation between stereo parameters for slots that have not been assigned stereo parameters to

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