



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

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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*.

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 $[-\pi, \pi>$ and is specified for the start of the transient.

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

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 $+\pi = -\pi$).

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 $[-\pi, \pi>$ and is specified for the start of the transient.

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

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 $[-16, 15]$.

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):

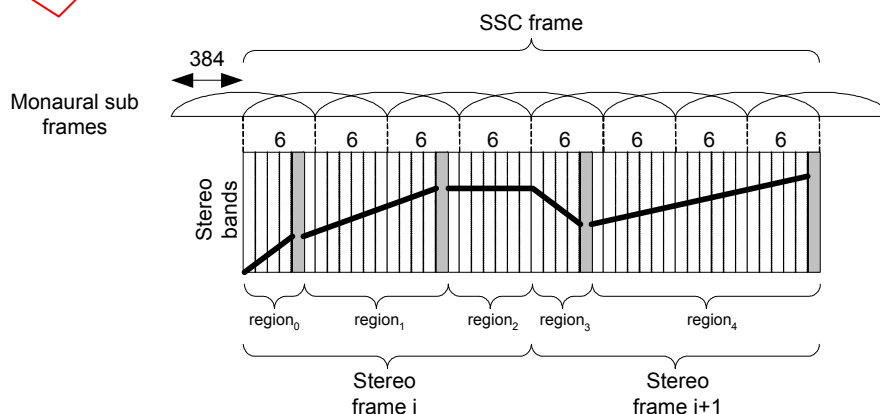


Figure 8.24 - One SSC frame comprises two stereo frames of data. The solid line illustrates the interpolation between stereo parameters for slots that have not been assigned stereo parameters to