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AMENDMENT 3
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Information technology — Generic coding of moving pictures and associated audio information —

Part 4: **Conformance testing**

AMENDMENT 3: Additional audio conformance bitstreams

Technologies de l'information — Codage générique des images animées et des informations sonores associées —

Partie 4: Essais de conformité

AMENDEMENT 3: Courants continus de bits supplémentaires pour la conformité sonore

Reference number
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this Amendment may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 3 to International Standard ISO/IEC 13818-4:1998 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

Information technology — Generic coding of moving pictures and associated audio information —

Part 4:
Conformance testing

AMENDMENT 3:
Additional audio conformance bitstreams

1) In the foreword, replace the last sentence with the following:
"Annexes A to F of this part of ISO/IEC 13818 are for information only."

2) Replace Table 2.6 with:
"

Feature	bitstream number			
	22	**23**	**35**	**37**
Layer	I	III	II	II
matrix	0	0	3	0
extension	Y	Y	N	Y
transmission channel allocation	Y	N/A	-	Y
phantom centre	N	Y	N	N
prediction	N	N	N	N
Dynamic crosstalk	N	N/A	N	N
sampling frequency	44.1	48	44.1	48
LFE	N	N	N	N
multilingual	N	N	N	
multilingual sampling frequency	-	-	-	
ancillary data	N	N	N	N
bitrate base stream	384	320	384	384
bitrate extension stream	384	320	-	384.
configuration	3/2	3/2	3/2	3/2
dematrixing	N/A	Y	N/A	
segment lists	N/A	Y	N/A	
matrix attenuation	N/A	N	N/A	
scale factor select info	N/A	N	N/A	
Split MC_ CRC				Y
NOTE bitstreams 35: Bitstream intended for accuracy test. Output represented with 24 bit resolution.				

"

3) Add the following paragraph at the end of subclause 2.6.9.2:
"

L9, S18, S19, S20 and S21 are ADTS bitstreams described in the normative part of ISO/IEC 13818-7. Although parsing the ADTS bitstream is not required for a conformant decoder, a decoder may optionally use ADTS, and so bitstreams are supplied.

DRC1, DRC2 and DRC3 are Dynamic Range Control (DRC) bitstreams described in the normative part of ISO/IEC 13818-7. The DRC syntax is backward compatible with the FILL element, so that these bitstreams must be parsed by conformant decoders. However DRC semantics is optional, making the result of decoding the DRC bitstreams informative only.
”

4) Change Table 2-10 in subclause 2.6.9.2 with:
“

Table 2-10 – Main Profile Bitstreams

	M1_fs	**M2_fs**	**M3_fs**	**DRC1_fs**	**DRC2_fs**	**DRC3_fs**
bitrate	40/64	80/128	240/512	64/128	192/384	128/256
# single channel elements	1	0	1	0	1	1
# channel pair elements	0	1	2	1	2	1
# LFE channels	0	0	1	0	1	0
# Dep coupling channels	0	0	1	0	0	0
# Indep Coupling Channels	0	0	2	0	1	0
intensity		Yes	Yes	Yes	Yes	Yes
MS		Yes	Yes	Yes	Yes	Yes
prediction	Yes	Yes	Yes	Yes	Yes	Yes
window shape		Yes	Yes			
tns		Yes	Yes	Yes	Yes	Yes
pulse data						
Multi program (2)			Yes			
Arithmetic torture		Yes				
Nonmeaningful window_sequence transitions						
Dynamic Range Control (DRC)				Yes	Yes	Yes

”

5) Change Table 2-11 in subclause 2.6.9.2 with:
“

Table 2-11 – Low Complexity Profile Bitstreams

	L1_fs	**L2_fs**	**L3_fs**	**L4_fs**	**L5_fs**	**L6_fs**	**L7_fs**	**L8_fs**	**L9_fs**
bitrate	40/64	40/64	40/64	40/64	80/128	120/ 192	240/ 384	1920/ 3072	40/64
# single channel elements	1	1	1	1	0	1	1	16	1
# channel pair elements	0	0	0	0	1	1	2	16	0
# LFE channels	0	0	0	0	0	0	1	0	0
# Dep coupling channels	0	0	0	0	0	0	1	0	0
Data stream elements	Yes								
intensity					Yes	Yes	Yes	Yes	
MS					Yes	Yes	Yes	Yes	
window shape				Yes		Yes	Yes	Yes	
tns				Yes		Yes	Yes	Yes	
pulse data				Yes		Yes	Yes	Yes	
Buffer test		Yes							Yes

Arithmetic torture							Yes		
Nonmeaningful window_sequence transitions			Yes						
ADTS									Yes

	L10_fs	**L11_fs**
bitrate	40/64	40/64
# single channel elements	1	1
# channel pair elements	0	0
# LFE channels	0	0
# Dep coupling channels	0	0
Data stream elements	Yes	Yes
intensity		
MS		
window shape		
tns		
pulse data		
Buffer test		
Arithmetic torture		
Nonmeaningful window_sequence transitions		
ADTS		

”

6) Change Table 2-12 in subclause 2.6.9.2 with:

“

Table 2-12 – SSR Profile Bitstreams

	S1_fs	**S2_fs**	**S3_fs**	**S4_fs**	**S5_fs**	**S6_fs**	**S7_fs**	**S8_fs**
bitrate	40/64	40/64	40/64	40/64	40/64	40/64	40/64	40/64
# single channel elements	1	1	1	1	1	1	1	1
# channel pair elements	0	0	0	0	0	0	0	0
# LFE channels	0	0	0	0	0	0	0	0
Data stream elements					Yes	Yes	Yes	Yes
intensity								
MS								
Gain Control	Yes	Yes	Yes					
window shape	Yes	Yes	Yes	Yes				
tns	Yes	Yes	Yes	Yes				
pulse data	Yes	Yes	Yes	Yes				
Buffer test	Yes	Yes	Yes	Yes				
Arithmetic torture								

Bandwidth	4	3	2	1	4	3	2	1
Nonmeaningful window_sequence transitions								
ADTS								

	S9_fs	**S10_fs**	**S11_fs**	**S12_fs**	**S13_fs**	**S14_fs**	**S15_fs**	**S16_fs**
bitrate	80/ 128	80/ 128	80/ 128	80/ 128	200/ 320	200/ 320	280/ 448	280/ 448
# single channel elements	0	0	0	0	1	1	1	1
# channel pair elements	1	1	1	1	2	2	3	3
# LFE channels	0	0	0	0	1	1	1	1
Data stream elements								
intensity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gain Control	Yes	Yes	Yes		Yes	Yes	Yes	Yes
window shape					Yes	Yes	Yes	Yes
tns					Yes	Yes	Yes	Yes
pulse data					Yes	Yes	Yes	Yes
Buffer test								
Arithmetic torture								
Bandwidth	4	3	2	1	4	3	4	3
Nonmeaningful window_sequence transitions								
ADTS								

	S17_fs	**S18_fs**	**S19_fs**	**S20_fs**	**S21_fs**
bitrate	40/ 64	40/ 64	40/ 64	40/ 64	40/ 64
# single channel elements	1	1	1	1	1
# channel pair elements	0	0	0	0	0
# LFE channels	0	0	0	0	0
Data stream elements					
intensity					
MS					
Gain Control	Yes	Yes	Yes	Yes	
window shape		Yes	Yes	Yes	Yes
tns		Yes	Yes	Yes	Yes
pulse data		Yes	Yes	Yes	Yes
Buffer test		Yes	Yes	Yes	Yes
Arithmetic torture					
Bandwidth	4	4	3	2	1
Nonmeaningful window_sequence transitions	Yes				
ADTS		Yes	Yes	Yes	Yes

”

7) Add Annex F:
“

Annex F
(informative)

Description of bitstream L10

Bitstream L10 demonstrates how AAC’s Data Stream Element (DSE) can be used to carry a transport within a fully conformant AAC bitstream. This bitstream illustrates a transport that is particularly well suited for a bitstream communication channel, such as a satellite communication channel. It is equally well suited to channels with or without any additional error correction, and if the channel does have error correction, to channels that do or do not report the reliability of the channel bits to the audio decoder.

In order to identify that the DSE carries the transport information defined below, the DSE element_instance_tag value 0 shall be used. The DSE’s **count** field (and **esc_count** field, if necessary) must be set to indicate the correct number of bytes in the DSE.

The function bitstream_transport(), defined in the table below, begins parsing its component bits coincident with the first bit in the DSE’s **data_stream_byte** payload.

Table F.1 – Syntax of bitstream_transport()

Syntax	No. of bits	Mnemonic
bitstream_transport()		
{		
synchword	**16**	**uimsbf**
block_len	**14**	**uimsbf**
if (**next_block_len_present**)	**1**	**uimsbf**
next_block_len	**14**	**uimsbf**
if (**block_crc_present**)	**1**	**uimsbf**
block_crc	**16**	**uimsbf**
if (**ele_prot_present**) {	**1**	**uimsbf**
num_ele	**3**	**uimsbf**
for (i=0; i<num_ele; i++) {		
if (**ele_bit_len_present**) {	**1**	**uimsbf**
ele_bit_len	**12**	**uimsbf**
if (**ele_crc_present**)	**1**	**uimsbf**
ele_crc	**16**	**rpchof**
}		
if (**is_cpe**) {	**1**	**uimsbf**
if (**ics_bit_len_present**) {	**1**	**uimsbf**
ics_bit_len	**12**	**uimsbf**
if (**ics_crc_present**)	**1**	**uimsbf**
ics0_crc	**16**	**rpchof**
ics1_crc	**16**	**rpchof**
}		
if (**next_block_info_present**) {	**1**	**uimsbf**
next_block_window_sequence	**2**	**uimsbf**
if (next_block_window_sequence == EIGHT_SHORTSEQUENCE) {		
next_block_max_sfb	**4**	**uimsbf**
next_block_scale_factor_grouping	**7**	**uimsbf**
}		
else {		
next_block_max_sfb	**6**	**uimsbf**