

---

---

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

**AMENDMENT 5: New audio profile and level  
signalling and change to audio\_type table  
entry**

*Technologies de l'information — Codage générique des images  
animées et du son associé: Systèmes*

*AMENDEMENT 5: Signalisation de nouvelles combinaisons de profil et  
de niveau de flux audio et modification de la table des types audio*

IECNORM.COM : Click to view the PDF of ISO/IEC 13818-1:2000/Amd5:2005

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

ECNORM.COM : Click to view the full PDF of ISO/IEC 13818-1:2000/AMD5:2005

© ISO/IEC 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published by ISO in 2006

Published in Switzerland

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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 document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 5 to ISO/IEC 13818-1:2000 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. H.222.0.

IECNORM.COM : Click to view the full PDF of ISO/IEC 13818-1:2000/AMD5:2005

IECNORM.COM : Click to view the full PDF of ISO/IEC 13818-1:2000/AMD5:2005

INTERNATIONAL STANDARD  
ITU-T RECOMMENDATIONInformation technology – Generic coding of moving pictures and  
associated audio information: Systems

## Amendment 5

## New audio profile and level signalling and change to audio\_type table entry

## 1) Subclause 2.6.2

Replace Table 2-39 by the following table (with the changes underlined>):

Table 2-39 – Program and program element descriptors

descriptor_tag	TS	PS	Identification
0	n/a	n/a	Reserved
1	n/a	n/a	Reserved
2	X	X	video_stream_descriptor
3	X	X	audio_stream_descriptor
4	X	X	hierarchy_descriptor
5	X	X	registration_descriptor
6	X	X	data_stream_alignment_descriptor
7	X	X	target_background_grid_descriptor
8	X	X	Video_window_descriptor
9	X	X	CA_descriptor
10	X	X	ISO_639_language_descriptor
11	X	X	System_clock_descriptor
12	X	X	Multiplex_buffer_utilization_descriptor
13	X	X	Copyright_descriptor
14	X		Maximum_bitrate_descriptor
15	X	X	Private_data_indicator_descriptor
16	X	X	Smoothing_buffer_descriptor
17	X		STD_descriptor
18	X	X	IBP_descriptor
19-26	X		Defined in ISO/IEC 13818-6
27	X	X	MPEG-4_video_descriptor
28	X	X	MPEG-4_audio_descriptor
29	X	X	IOD_descriptor
30	X		SL_descriptor
31	X	X	FMC_descriptor
32	X	X	External_ES_ID_descriptor
33	X	X	MuxCode_descriptor
34	X	X	FmxBufferSize_descriptor
35	X		MultiplexBuffer_descriptor
36	X	X	Content_labeling_descriptor

**Table 2-39 – Program and program element descriptors**

descriptor_tag	TS	PS	Identification
37	X	X	Metadata_pointer_descriptor
38	X	X	Metadata_descriptor
39	X	X	Metadata_STD_descriptor
40	X	X	AVC video descriptor
41	X	X	IPMP_descriptor (defined in ISO/IEC 13818-11, MPEG-2 IPMP)
42	X	X	AVC timing and HRD descriptor
<u>43</u>	<u>X</u>	<u>X</u>	<u>MPEG-2 AAC audio descriptor</u>
<u>44-63</u>	<u>n/a</u>	<u>n/a</u>	<u>ITU-T Rec. H.222.0   ISO/IEC 13818-1 Reserved</u>
64-255	n/a	n/a	User Private

**2) Subclause 2.6.19**

Replace Table 2-53 by the following (with the changes underlined):

**Table 2-53 – Audio type values**

Value	Description
0x00	Undefined
0x01	Clean effects
0x02	Hearing impaired
0x03	Visual impaired commentary
<u>0x04-0x7F</u>	<u>User Private</u>
<u>0x80-0xFF</u>	<u>Reserved</u>

**3) Subclause 2.6.40**

Replace Table 2-62, MPEG-4\_audio\_profile\_and\_level\_assignment values, by the following table (with the changes underlined):

**Table 2-62 – MPEG-4\_audio\_profile\_and\_level assignment values**

Value	Description
<u>0x00-0x0F</u>	<u>Reserved</u>
0x10	Main profile, level 1
0x11	Main profile, level 2
0x12	Main profile, level 3
0x13	Main profile, level 4
<u>0x14-0x17</u>	<u>Reserved</u>
0x18	Scalable Profile, level 1
0x19	Scalable Profile, level 2
0x1A	Scalable Profile, level 3
0x1B	Scalable Profile, level 4
<u>0x1C-0x1F</u>	<u>Reserved</u>

Table 2-62 – MPEG-4\_audio\_profile\_and\_level assignment values

Value	Description
0x20	Speech profile, level 1
0x21	Speech profile, level 2
0x22-0x27	Reserved
0x28	Synthesis profile, level 1
0x29	Synthesis profile, level 2
0x2A	Synthesis profile, level 3
0x2B-0x2F	Reserved
0x30	High quality audio profile, level 1
0x31	High quality audio profile, level 2
0x32	High quality audio profile, level 3
0x33	High quality audio profile, level 4
0x34	High quality audio profile, level 5
0x35	High quality audio profile, level 6
0x36	High quality audio profile, level 7
0x37	High quality audio profile, level 8
0x38	Low delay audio profile, level 1
0x39	Low delay audio profile, level 2
0x3A	Low delay audio profile, level 3
0x3B	Low delay audio profile, level 4
0x3C	Low delay audio profile, level 5
0x3D	Low delay audio profile, level 6
0x3E	Low delay audio profile, level 7
0x3F	Low delay audio profile, level 8
0x40	Natural audio profile, level 1
0x41	Natural audio profile, level 2
0x42	Natural audio profile, level 3
0x43	Natural audio profile, level 4
0x44-0x47	Reserved
0x48	Mobile audio internetworking profile, level 1
0x49	Mobile audio internetworking profile, level 2
0x4A	Mobile audio internetworking profile, level 3
0x4B	Mobile audio internetworking profile, level 4
0x4C	Mobile audio internetworking profile, level 5
0x4D	Mobile audio internetworking profile, level 6
0x4E-0x4F	Reserved
<u>0x50</u>	<u>AAC profile, level 1</u>
<u>0x51</u>	<u>AAC profile, level 2</u>
<u>0x52</u>	<u>AAC profile, level 4</u>
<u>0x53</u>	<u>AAC profile, level 5</u>
<u>0x54-0x57</u>	<u>Reserved</u>
<u>0x58</u>	<u>High efficiency AAC profile, level 2</u>
<u>0x59</u>	<u>High efficiency AAC profile, level 3</u>
<u>0x5A</u>	<u>High efficiency AAC profile, level 4</u>
<u>0x5B</u>	<u>High efficiency AAC profile, level 5</u>
<u>0x5C-0xFF</u>	<u>Reserved</u>

4) **Subclause 2.6.67**

Add the following after subclause 2.6.67:

**2.6.68 MPEG-2 AAC audio descriptor**

For individual ISO/IEC 13818-7 streams directly carried in PES packets, the MPEG-2 AAC audio descriptor defined in Table Amd.5-1 provides basic information for identifying the coding parameters of such audio elementary streams.

**Table Amd.5-1 – MPEG-2 AAC\_audio\_descriptor**

Syntax	No. of bits	Mnemonic
MPEG-2_AAC_audio_descriptor () {		
<b>descriptor_tag</b>	8	<b>uimsbf</b>
<b>descriptor_length</b>	8	<b>uimsbf</b>
<b>MPEG-2_AAC_profile</b>	8	<b>uimsbf</b>
<b>MPEG-2_AAC_channel_configuration</b>	8	<b>uimsbf</b>
<b>MPEG-2_AAC_additional_information</b>	8	<b>uimsbf</b>
}		

**Semantics of fields in MPEG-2 AAC audio descriptor**

**MPEG-2\_AAC\_profile** – This 8-bit field indicates the AAC profile according to the index in ISO/IEC 13818-7:2004 subclause 7.1 Table 31.

**MPEG-2\_AAC\_channel\_configuration** – This 8-bit field indicates the number and configuration of audio channels presented to the listener by the AAC decoder for the specified program. Values in the range from 1 to 6 indicate number and configuration of audio channels as given for "Default bitstream index number" in ISO/IEC 13818-7:2004 subclause 8.9 Table 42. All other values indicate that the number and configuration of audio channels is undefined.

**MPEG-2\_AAC\_additional\_information** – This 8-bit field indicates whether or not bandwidth extension data as defined in ISO/IEC 13818-7:2004 is embedded in the AAC bitstream according to Table Amd.5-2.

**Table Amd.5-2 – MPEG-2\_AAC\_additional\_information field values**

Value	Description
0x00	AAC data according to ISO/IEC 13818-7:2004
0x01	AAC data with Bandwidth Extension data present according to ISO/IEC 13818-7:2004
0x02-0xFF	Reserved

5) **Subclause 2.11.2.1**

Replace the following text (with the changes underlined>:

In case of an ISO/IEC 14496-3 elementary stream, before PES packetization the elementary stream data shall be first encapsulated in the LATM transport syntax defined in ISO/IEC 14496-3 / Amd.1. If a PTS is present in the PES packet header it shall refer to the first audio frame that follows the first syncword that commences in the payload of the PES packet.

to:

In case of an ISO/IEC 14496-3 elementary stream, before PES packetization the elementary stream data shall be first encapsulated in the LATM/LOAS AudioSyncStream() transport syntax defined in ISO/IEC 14496-3:2001 subclause 1.7.2. If a PTS is present in the PES packet header, it shall refer to the first audio frame that follows the first syncword that commences in the payload of the PES packet.