



**SLOVENSKI STANDARD**  
**SIST ISO/IEC 13818-1:2010/oAmd 1:2010**  
**01-julij-2010**

---

**Informacijska tehnologija - Splošno kodiranje gibljivih slik in pripadajočih avdio informacij: Sistemi**  
**Dopolnilo 1: Prenos strujnega besedila MPEG-4 in brezizgubnega avdia MPEG-4 prek sistemov MPEG-2**

Information technology - Generic coding of moving pictures and associated audio information: Systems  
AMENDMENT 1: Transport of MPEG-4 streaming text and MPEG-4 lossless audio over MPEG-2 systems

Technologies de l'information — Codage générique des images animées et des informations sonores associées: Systèmes  
AMENDEMENT 1: Transport de texte en flux MPEG-4 et d'audio sans perte MPEG-4 sur des systèmes MPEG-2

**Ta slovenski standard je istoveten z: ISO/IEC 13818-1:2007/Amd 1:2007**

---

**ICS:**

35.040	Nabori znakov in kodiranje informacij	Character sets and information coding
--------	---------------------------------------	---------------------------------------

**SIST ISO/IEC 13818-1:2010/oAmd 1:2010**      **en**



INTERNATIONAL  
STANDARD

ISO/IEC  
13818-1

Third edition  
2007-10-15

**AMENDMENT 1**  
2007-11-01

---

---

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

**AMENDMENT 1: Transport of MPEG-4  
streaming text and MPEG-4 lossless audio  
over MPEG-2 systems**

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

*AMENDEMENT 1: Transport de texte en flux MPEG-4 et d'audio sans  
perte MPEG-4 sur des systèmes MPEG-2*

---

---

Reference number  
ISO/IEC 13818-1:2007/Amd.1:2007(E)



**ISO/IEC 13818-1:2007/Amd.1:2007(E)****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.

**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2007

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 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 1 to ISO/IEC 13818-1 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 (2006)/Amd.1 (01/2007).



**INTERNATIONAL STANDARD  
ITU-T RECOMMENDATION**

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

**Amendment 1**

**Transport of MPEG-4 streaming text and MPEG-4 lossless audio over MPEG-2 systems**

**1) Subclause 1.2.3**

Add the following references to subclause 1.2.3:

- ISO/IEC 14496-3:2005/Amd.1:2007, *Low delay AAC profile*.
- ISO/IEC 14496-17:2006, *Information technology – Coding of audio-visual objects – Part 17: Streaming text format*.

**2) Subclause 2.1.1**

Replace, in the definition for access unit in subclause 2.1.1:

In the case of audio, an access unit is the coded representation of an audio frame.

by:

In the case of audio, an access unit is the coded representation of an audio frame, whereby each audio frame carries data from one or more audio channels; an audio frame may carry for example one mono channel, or two stereo channels or seven surround sound channels.

In the case of an ISO/IEC 14496-17 text stream, see ISO/IEC 14496-17 for the definition of an access unit.

**3) New subclause 2.4.2.9**

Add, after subclause 2.4.2.8:

**2.4.2.9 T-STD extensions for carriage of ISO/IEC 14496-17 text streams**

To define the decoding in the T-STD of ISO/IEC 14496-17 text streams carried in a Transport Stream, the T-STD model needs to be extended. The T-STD extension and T-STD parameters for decoding of ISO/IEC 14496-17 text streams are defined in 2.15.3.1.

**4) Subclause 2.4.3.5**

Replace, in the semantics of "discontinuity indicator" under subclause 2.4.3.5 starting from the 5th paragraph:

For the purpose of this clause, an elementary stream access point is defined as follows:

- ISO/IEC 11172-2 video and ITU-T Rec. H.262 | ISO/IEC 13818-2 video – The first byte of a video sequence header.
- ISO/IEC 14496-2 visual – The first byte of the visual object sequence header.
- ITU-T Rec. H.264 | ISO/IEC 14496-10 video – The first byte of an AVC access unit. The SPS and PPS parameter sets referenced in this and all subsequent AVC access units in the coded video stream shall be provided after this access point in the byte stream and prior to their activation.
- Audio – The first byte of an audio frame.

**ISO/IEC 13818-1:2007/Amd.1:2007 (E)**

by:

For the purpose of this clause, an elementary stream access point is defined as follows:

- ISO/IEC 11172-2 video and ITU-T Rec. H.262 | ISO/IEC 13818-2 video – The first byte of a video sequence header.
- ISO/IEC 14496-2 visual – The first byte of the visual object sequence header.
- ITU-T Rec. H.264 | ISO/IEC 14496-10 video – The first byte of an AVC access unit. The SPS and PPS parameter sets referenced in this and all subsequent AVC access units in the coded video stream shall be provided after this access point in the byte stream and prior to their activation.
- Audio – The first byte of an audio frame.
- ISO/IEC 14496-17 text stream – The first byte of a text access unit. In case in-band sample descriptions are used, each in-band sample description shall be provided in the ISO/IEC 14496-17 stream after this access point and prior to its use by an access unit.

**5) Subclause 2.4.3.7**

a) *In subclause 2.4.3.7, replace Table 2-27:*

**Table 2-27 – Stream\_id\_extension assignments**

stream_id_extension	Note	stream coding
000 0000	1	IPMP Control Information stream
000 0001	2	IPMP stream
000 0010 ... 011 1111		reserved_data_stream
100 0000 ... 111 1111		private_stream
NOTE 1 – PES packets of stream_id_extension 0b000 0000 (IPMP Control Information Stream) have a unique syntax specified in ISO/IEC 13818-11 (MPEG-2 IPMP).		
NOTE 2 – PES packets of stream_id_extension 0b000 0001 (IPMP Stream) have a unique syntax specified in ISO/IEC 13818-11 (MPEG-2 IPMP).		

by:

**Table 2-27 – Stream\_id\_extension assignments**

stream_id_extension	Note	stream coding
000 0000	1	IPMP Control Information stream
000 0001	2	IPMP stream
000 0010 ... 000 1111		ISO/IEC 14496-17 text stream
001 0000 ... 011 1111		reserved_data_stream
100 0000 ... 111 1111		private_stream
NOTE 1 – PES packets of stream_id_extension 0b000 0000 (IPMP Control Information Stream) have a unique syntax specified in ISO/IEC 13818-11 (MPEG-2 IPMP).		
NOTE 2 – PES packets of stream_id_extension 0b000 0001 (IPMP Stream) have a unique syntax specified in ISO/IEC 13818-11 (MPEG-2 IPMP).		

b) *Replace, in the semantics of PTS in subclause 2.4.3.7:*

The presentation time  $t_{pn}(k)$  shall be equal to the decoding time  $t_{dn}(k)$  for:

- audio access units;
- access units in ITU-T Rec. H.262 | ISO/IEC 13818-2 or ISO/IEC 14496-2 low delay video sequences;
- B-pictures in ISO/IEC 11172-2, ITU-T Rec. H.262 | ISO/IEC 13818-2 or ISO/IEC 14496-2 video streams.



by:

In the case of an ISO/IEC 14496-17 text stream, if a PTS is present in PES packet header, it shall refer to the first text access unit commencing in the PES packet. A text access unit commences in a PES packet if the first byte of the text access unit is present in the PES packet.

The presentation time  $t_{pn}(k)$  shall be equal to the decoding time  $t_{dn}(k)$  for:

- audio access units;
- access units in ITU-T Rec. H.262 | ISO/IEC 13818-2 or ISO/IEC 14496-2 low delay video sequences;
- B-pictures in ISO/IEC 11172-2, ITU-T Rec. H.262 | ISO/IEC 13818-2 or ISO/IEC 14496-2 video streams;
- text access units in ISO/IEC 14496-17.

## 6) Subclause 2.4.4.9

a) Replace Table 2-34 in subclause 2.4.4.9 with the following:

**Table 2-34 – Stream type assignments**

Value	Description
0x00	ITU-T   ISO/IEC Reserved
0x01	ISO/IEC 11172-2 Video
0x02	ITU-T Rec. H.262   ISO/IEC 13818-2 Video or ISO/IEC 11172-2 constrained parameter video stream
0x03	ISO/IEC 11172-3 Audio
0x04	ISO/IEC 13818-3 Audio
0x05	ITU-T Rec. H.222.0   ISO/IEC 13818-1 private_sections
0x06	ITU-T Rec. H.222.0   ISO/IEC 13818-1 PES packets containing private data
0x07	ISO/IEC 13522 MHEG
0x08	ITU-T Rec. H.222.0   ISO/IEC 13818-1 Annex A DSM-CC
0x09	ITU-T Rec. H.222.1
0x0A	ISO/IEC 13818-6 type A
0x0B	ISO/IEC 13818-6 type B
0x0C	ISO/IEC 13818-6 type C
0x0D	ISO/IEC 13818-6 type D
0x0E	ITU-T Rec. H.222.0   ISO/IEC 13818-1 auxiliary
0x0F	ISO/IEC 13818-7 Audio with ADTS transport syntax
0x10	ISO/IEC 14496-2 Visual
0x11	ISO/IEC 14496-3 Audio with the LATM transport syntax as defined in ISO/IEC 14496-3/Amd.1
0x12	ISO/IEC 14496-1 SL-packetized stream or FlexMux stream carried in PES packets
0x13	ISO/IEC 14496-1 SL-packetized stream or FlexMux stream carried in ISO/IEC 14496_sections
0x14	ISO/IEC 13818-6 Synchronized Download Protocol
0x15	Metadata carried in PES packets
0x16	Metadata carried in metadata_sections
0x17	Metadata carried in ISO/IEC 13818-6 Data Carousel
0x18	Metadata carried in ISO/IEC 13818-6 Object Carousel
0x19	Metadata carried in ISO/IEC 13818-6 Synchronized Download Protocol
0x1A	IPMP stream (defined in ISO/IEC 13818-11, MPEG-2 IPMP)
0x1B	AVC video stream as defined in ITU-T Rec. H.264   ISO/IEC 14496-10 Video
0x1C	ISO/IEC 14496-3 Audio, without using any additional transport syntax, such as DST, ALS and SLS
0x1D	ISO/IEC 14496-17 Text
0x1E-0x7E	ITU-T Rec. H.222.0   ISO/IEC 13818-1 Reserved
0x7F	IPMP stream
0x80-0xFF	User Private