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

AMENDMENT 3: Private data identification

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

AMENDEMENT 3: Identification des données privées

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. 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.

Amendment 3 to ISO/IEC 13818-1:1996 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/Amd.3.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION: SYSTEMS

AMENDMENT 3

1) Clause 2

Replace Table 2-3 with:

Table 2-3 – PID table

Value	Description
0x0000	Program Association Table
0x0001	Conditional Access Table
0x0002	Transport Stream Description Table
0x0003-0x000F	Reserved
0x00010 ... 0x1FFE	May be assigned as network_PID, Program_map_PID, elementary_PID, or for other purposes
0x1FFF	Null packet
NOTE – The transport packets with PID values 0x0000, 0x0001, and 0x0010-0x1FFE are allowed to carry a PCR.	

2) Subclause 2.4.4

a   Replace text of paragraph 2 with:

In Transport Streams, Program Specific Information is classified into five table structures as shown in Table 2-23. While these structures may be thought of as simple tables, they shall be segmented into sections and inserted in Transport Stream packets, some with predetermined PIDs and others with user selectable PIDs.

b)   *Replace Table 2-23 with:*

Table 2-23 – Program specific information

Structure Name	Stream Type	PID number	Description
Program Association Table	ITU-T Rec. H.222.0 | ISO/IEC 13818-1	0x00	Associates Program Number and Program Map Table PID
Program Map Table	ITU-T Rec. H.222.0 | ISO/IEC 13818-1	Assignment indicated in the PAT	Specifies PID values for components of one or more programs
Network Information Table	Private	Assignment indicated in the PAT	Physical network parameters such as FDM frequencies, Transponder Numbers, etc.
Conditional Access Table	ITU-T Rec. H.222.0 | ISO/IEC 13818-1	0x01	Associates one or more (private) EMM streams each with a unique PID value
Transport Stream Description Table	ITU-T Rec. H.222.0 | ISO/IEC 13818-1	0x02	Associates one or more descriptors from Table 2-39 to an entire Transport Stream

c)   *Add the following text between paragraphs 13 and 14:*

The Transport Stream Description Table is optional. When present, the Transport Stream Description is carried within Transport Stream packets that have a PID value 0x0002 as specified in Table 2-23 and shall apply to the entire Transport Stream. Sections of the Transport Stream Description shall use a table_id value of 0x03 as specified in Table 2-26 and its contents are restricted to descriptors specified in Table 2-39. The TS_description_section becomes valid when the last byte of the section required to complete the table exits B_{sys}.

3)   Subclause 2.4.4.4

Replace Table 2-26 with:

Table 2-26 – table_id assignment values

Value	Description
0x00	program_association_section
0x01	conditional_access_section(CA_section)
0x02	TS_program_map_section
0x03	TS_description_section
0x04-0x37	ITU-T Rec. H.222.0 | ISO/IEC 13818-1 reserved
0x38-0x3F	Defined in ISO/IEC 13818-6
0x40-0xFE	User private
0xFF	Forbidden

4)   New subclauses 2.4.4.12 and 2.4.4.13

Add the following text and Table 2-30-1:

2.4.4.12 Syntax of the Transport Stream section

ITU-T Rec. H.222.0 | ISO/IEC 13818-1 compliant bitstreams may carry the information defined in Table 2-30-1. ITU-T Rec. H.222.0 | ISO/IEC 13818-1 compliant decoders may decode the information defined in this table.

The Transport Stream Description Table is defined to support the carriage of descriptors as found in 2.6 for an entire Transport Stream. The descriptors shall apply to the entire Transport Stream. This table uses a table_id value of 0x03 as specified in Table 2-26 and is carried in Transport Stream packets whose PID value is 0x0002 as specified in Table 2-3.

Table 2-30-1 – The Transport Stream Description Table

Syntax	No. of bits	Mnemonic
TS_description_section() {		
table_id	8	uimsbf
section_syntax_indicator	1	bslbf
'0'	1	bslbf
reserved	2	bslbf
section_length	12	uimsbf
reserved	18	bslbf
version_number	5	uimsbf
current_next_indicator	1	bslbf
section_number	8	uimsbf
last_section_number	8	uimsbf
for (i = 0; i < N; I++) {		
descriptor()		
}		
CRC_32	32	rpchof
}		

2.4.4.13 Semantic definition of fields in the Transport Stream section

table_id – This is an 8 bit field, which shall be set to '0x03' as specified in Table 2-26.

section_length – This is a 12-bit field, the first two bits of which shall be '00'. The remaining 10 bits specify the number of bytes of the section, starting immediately following the section_length field, and including the CRC. The value in this field shall not exceed 1021 (0x3FD).

version_number – This 5-bit field is the version number of the whole Transport Stream Description Table. The version number shall be incremented by 1 modulo 32 whenever the definition of the Transport Stream Description Table changes. When the current_next_indicator is set to '1', then the version_number shall be that of the currently applicable Transport Stream Description Table. When the current_next_indicator is set to '0', then the version_number shall be that of the next applicable Transport Stream Description Table.

current_next_indicator – A 1-bit indicator, which, when set to '1', indicates that the Transport Stream Description Table sent is currently applicable. When the bit is set to '0', it indicates that the table sent is not yet applicable and shall be the next table to become valid.

section_number – This 8-bit field gives the number of this section. The section_number of the first section in the Transport Stream Description Table shall be 0x00. It shall be incremented by 1 with each additional section in the Transport Stream Description Table.

last_section_number – This 8-bit field specifies the number of the last section (that is, the section with the highest section_number) of the complete Transport Stream Description Table.

CRC_32 – This is a 32-bit field that contains the CRC value that gives a zero output of the registers in the decoder defined in Annex A after processing the entire Transport Stream Description section.

5) Subclause 2.6.1

Replace Table 2-39 with:

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
27-63	n/a	n/a	ITU-T Rec. H.222.0	ISO/IEC 13818-1 Reserved
64-255	n/a	n/a	User Private