ITU-T Telecommunication Standardization Sector
Study Group 15
Experts Group for Video Coding and Systems in ATM and
Other Network Environments

Document AVC-626
March 16, 1994

Source : BELGACOM
Title : Belgian National Body comments on MPEG-2 CD's
Purpose : Information

VOTE ON COMMITTEE DRAFT ISO/IEC CD 13818-1	
Date of circulation: 1993-12-01	Reference number:
Closing date for voting: 1994-03-15	ISO/IEC JTC 1/SC 29 **N 658**

Project Number: JTC 1.29.05.02.01

P-members have an obligation to vote

ISO/IEC JTC 1/SC 29

Title: **Coding of Audio, Picture, Multimedia and Hypermedia Information** *

* submect to JTC 1's approval

Secretariat: Japan (JISC)

Circulated to P-members of the committee for voting

BY 1994-03-15

Please send this form, duly completed, to the secretariat indicated above.

CD

Title: Information technology — Generic coding of moving pictures and associated audio information — Part 1: Systems

Please put a cross in the appropriate box(es)

Approval of the Draft:

☐ as presented

☐ with comments as given below (use separate pages as annex, if necessary)

- ☐ general
- ☐ technical
- ☐ editorial

☒ **Disapproval of the draft for reasons below** (use separate page as annex, if necessary)

- ☒ Acceptance of these reasons and appropriate changes in the text will change our vote to approval

☐ **Abstention** (for reasons below)

P-member voting National Body Name BELGIUM (IBN)

Date 1994-03-09 Signature

Contact: Narumi HIROSE, Secretariat, ISO/IEC JTC 1/SC 29
IPSJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*
Room 308-3 Kikai-Shinko-Kaikan Bldg. 3-5-8 Shiba-Koen Minato-Ku Tokyo 105 JAPAN
Tel: +81-3-3431-2808; Fax: +81-3-3431-6493; Telex: 2425340 IPSJ J;
internet: nhirose@attmail.com; MHS: G = narumi; S = hirose; A = attmail; C = jp
* A Standards Organization accredited by JISC

Comments from Belgium on doc. JTC1/SC29 N658 - CD 13818-1 - Information technology - Generic coding of moving pictures and associated audio information - Part 1 : Systems

A) The Belgian National Body dissaproves Part 1 of the Committee Draft of ISO/IEC 13818 on the grounds that :

1. In section 2.4.8.2 the Video Stream descriptor definition is unacceptably vague.

   The Belgian National Body requests that the text in this section be changed to :

   "The video stream descriptor provides basic information which identifies the coding version of an ISO video elementary stream"

   The Belgian National Body further requests that table 2-33 in section 2.4.8.3 be changed to

video_coding_version	description
reserved	reserved

2. In section 2.4.8.4 the Audio Stream descriptor definition is unacceptably vague.

   The Belgian National Body requests that the text in this section be changed to :

   "The audio stream descriptor provides basic information which identifies the coding version of an ISO audio elementary stream"

   The Belgian National Body further requests that table 2-35 in section 2.4.8.5 be changed to :

audio_coding_version	description
reserved	reserved

3. The use of a Registration Descriptor to allow the signalling of certain formats which may be registered by multiple registration authorities, as described in sections 2.4.8.8 and 2.4.8.9, is inappropriate in an ISO/IEC standard.

   The Belgian National Body requests that sections 2.4.8.8 and 2.4.8.9 be deleted.

   The Belgian delegation will be empowered to modify the decision of the Belgian National Body if the above requests are fulfilled or satisfactory alternatives are found.

B) Other comments

2.1 Definitions

2.1.8 "constrained system parameter stream: An ISO/IES 13818 Program Stream for which the constraints defined in Part 1 Clause 2.4.10. apply."

This applies to both Transport and Program Streams.

2.1.27 pack: A pack consist of a pack header followed by one or more packets. . . ."

correct to (ref 2.4.4, 5th paragraph) :

"... zero or more PES packets. . . ."

2.1.41 side information

Is the definition of this term relevant to MPEG-2?

2.4.2 Transport Stream System Target Decoder

The subsections of this subclause (System clock frequency, Input to the Transport Stream system target decoder, etc) should also be numbered.

The two paragraphs refering to skipping pictures, currently under buffering, should be under a similar heading of "skipped pictures".

" In the case of system data, data is removed from the main buffer Bsys at a constant rate of one byte per 0.3microseconds whereever there is at least one byte available in buffer Bsys".

The value of 0.3microseconds is not the value agreed within the working group. This would imply that the systems buffer was operating faster than the buffer needed for a video MP@ML video stream. The value agreed was 100microseconds. The value of 100microseconds was considered by several parties to be insufficient. A compromise value between the two should be found - based on more thorough analysis than was available in Seoul. This party would suggest 10microseconds.

It should further be stated here precisely which data is included in Bsys, and the implication, namely that the sum data rate of all the transport packets with PID==0x0000 and PID==0x0001 and the PMT_PID appropriate to the program being decoded can not exceed a fixed rate. Further it should be specified clearly whether the NIT data enters the systems buffer or not, and therefore whether it should be included in the fixed rate budget.

2.4.3.2Transport Packet Layer / 2.4.3.3 Semantic Definitions of Fields in transport packer layer

There exists syntactically within MPEG-2 syntax the concept of a third type of private stream, which shall be refered to as private_stream_3, which occurs when the data_bytes at the end of Table 2-3 ISO/IEC 13818 Transport Header are private data, as is allowed within the semantics. This private data is carried in transport packets, but not in PES packets. With the current draft it is not possible for the decoder to reliably distinguish between private data within PES packets, and private data not in PES packets.

2.4.3.3 Semantic Definitions of Fields in transport packer layer

payload_unit_start_indicator

There exists the possibility of private_stream_1 and private_stream_2 which allow the carriage of private data in PES packets. In this case the meaning of the payload_unit_start_indicator should be the same as for MPEG data. Therefore the last line under payload_unit_start_indicator should be changed to read:

"The meaning of this bit for transport packets which contain private data which is not also in PES packets (ie private_stream_3) is not defined within this international standard."

Additionally, where the pointer_field is mentioned, reference should be made to section 2.4.7.1, where the relevant syntax can be found.

data_byte

Part of the above problem lies with the semantics of data_byte.

"Data bytes shall be contiguous bytes of data from the PES stream, PSI tables or private data as indicated by the PID. ..."

From the PAT it is possible to identify which PIDs other than PID values ==0x0000 or ==0x0001 belong to PMT_PIDs or the NIT, and thereby to identify which packets contain PSI data.
From the PMTs, via the stream_type table, 2-19, it is then possible to identify whether a stream contains ISO/IEC 11172 or 13818 video or audio data, ISO/IEC 13818 private, ISO/IEC 13818 reserved or User private data. It is NOT possible to identify whether the user private data is in PES packets or not (ie. private_stream types 1 or 2, or type 3). Therefore when the "data_bytes" are received in the stream it is not currently possible to identify from the information available whether the private data is in PES packets or not.
This problem is easily solved. In order to do this, the stream_type table (table 2-19) needs to contain lines refering to:
"User private PES packets" (or alternatively private_stream_1 and

Seoul agreement
2.3.

private_stream_2 as separate entries, although this distinction could lead to inconsistencies with the stream_id), and
"User private, private_stream_3".
Additionally serious consideration should be given to the possibility of User data in private_sections, since these can be treated in the same manner as PSI data, and require the same start indicator support as PSI data; this would be a private_section_stream.
Correspondingly the semantics of data_byte should be amended to:
"Data bytes shall be contiguous bytes of data from a PES stream, PSI tables or private_stream_3 data as indicated by the PID. ..."

2.4.3.4 Adaptation Field

This section and the semantics are headed Adaptation Field, but the syntax refers to "adaptation header". "Adaptation field" should also be used for the syntax.

2.4.3.5 Semantic defintion of fields in adaptation field

For the flags the semantics define the case of flag==1, but do not explicitly state the meaning for the value of '0'. Since the policy of stating both meanings has been followed in the Transport Header, it should also be followed here, to prevent ambiguity. This requires the following additions:

Add following text to end of discontinuity_indicator semantics:

When set to '0' no discontinuity in PCR fields shall occur in the following transport packets of the same PID.

random_access_indicator: in the last paragraph of this section the meaning of the phrase "associated transport packet" is unclear. An alternative wording could be:

"In transport packets where the random_access_indicator is set to '1', there shall be an adaptation field which shall contain at least the program_clock_reference_base and program_clock_reference_extension fields."

Further, add following text to end of random_access_indicator semantics:

EITHER "When set to '0' a random access point may or may not occur. The meaning of this flag for private data is not defined."

OR "When set to '0' a random access point does not occur. The meaning of this flag for private data is not defined."

Add following text to end of elementary_stream_priority_indicator semantics:

"A '0' indicates that the payload has the same priority as all other packets

which do not have this bit set to '1'."

Add following text to end of PCR_flag semantics:

"A '0' indicates that the adaptation field does not contain any PCR fields."

Add following text to end of OPCR_flag semantics:

"A '0' indicates that the adaptation field does not contain any OPCR fields."

Add following text to end of splicing_point_flag semantics:

"A '0' indicates that a splice_countdown is not present in the adaptation field."

Correct typographical error, and add '0' case:

"transport_private_data_flag: The transport_private_data_flag is a 1 bit flag. A value of '1' indicates the adaptation field contains one or more private_data bytes. A value of '0' indicates the adaptation field does not contain any private_data bytes."

Add following text to end of the first sentence of adaptation_field_extension_flag semantics:

"A '0' indicates that an adaptation field extension is not present in the adaptation field."

program_clock_reference / original_program_clock_reference:

Within the syntax there is no program_clock_reference, nor is there an original_program_clock_reference. Rather there exists a program_clock_reference_base, and a program_clock_reference_extension, and similarly an original_program_clock_reference_base, and an original_program_clock_reference_extension. The semantics should be amended to reflect this, even if the explanation about the concept of program_clock_reference is described. Additionally reference should be made to section 2.4.9.3 "Frequency of Coding the program_clock_reference", as those readers not familiar with the document do not easily make the connection, and conclude that the coding of this field is fully optional, whereas in fact this field must be carried with a certain regularity, even though not in every transport packet.

Similarly, where O/PCR is refered to in other instances in the semantics, the term "O/PCR fields" should be used as appropriate.

splice_countdown: Typically a splice point will occur immediately after the transmission of an I-frame, that is to say immediately before its decoding. Therefore the buffer Bn could be loaded with a complete I-frame, and therefore much more than 1/8 full. Therefore the buffer fullness specification must be

reconsidered with through analysis. This work is on-going by members of the Systems Group. If the conclusion is that the current value is the only practical value, then the consequences of this must be explained. This should then be recognised and accepted by the Requirements Group.

2.4.3.7. Semantic Definition of fields in PES Packet

stream_id: reference is made to table 2-17, which contains the entries private_stream_1 and private_stream_2, however, nowhere are these terms explained. These concepts are carried over from MPEG-1. These definitions should be added, based on the relevant syntax. Some informative text in an Annex could also explain some possible uses of teh different types of private stream. The following text could be added under the table 2-17.

"private_stream_1 follows the same syntax as audio and video streams. It may contain stuffing_bytes, a buffer size field, and PTS and DTS fields. private_stream_2 is similar except that no syntax is specified for stuffing bytes, buffer sizes, PTS or DTS fields. private_stream_1 and private_stream_2 data are carried in PES packets.

PES_scrambling_control: The value 00 should indicate "unscrambled".

PES_priority: "A value of zero shall not coded when the PES_priority is carried in a Transport Stream". This sentence is wrong and therefore ambiguous. Either a value of zero shall be coded when ..., or a value of zero shall not be coded", which would be better expressed by saying the "value shall be '1' in the case..." A decision should be made by the Systems Group.

Add following text to end of data_alignment_indicator semantics:

"When set to '0' it is not defined whether any such alignment occurs or not."

Add following text to end of copyright semantics:

"When set to '0' this indicates that the material is not copyrighted."

Add following text to end of ESCR_flag semantics:

"When set to '0' it indicates that no ESCR fields are present."

Under ESCR, reference should be made to section 2.4.9.4 Frequency of coding the elementary_stream_clock_reference for the requirement on regularity of coding this field.

Add following text to end of ES_rate_flag semantics:

"When set to '0' it indicates that no ES_rate field is present."

header."

Add following text to end of P-STD_buffer_flag semantics:

"When set to '0' it indicates that these fields are not present in the PES header."

Under P-STD_buffer_size reference should also be made to Section 2.4.9.7 Frequency of coding of P-STD buffer size in PES paclet headers

Add following text to end of PES_extension_field_flag semantics:

"When set to '0' it indicates that this field is not present in the PES header."

program_packet_sequence_counter: At Transport Level, the possibility of repeating a transport packet exists, and is explicitly supported by the specification that in the case of repeated packets, the continuity_counter is not incremented. With the current definition of program_packet_sequence_counter, the possibility of repeating data at PES level is not forseen in the same manner. It may be that this would be a useful functionality for Program Streams, which go over networks with a low but non-zero probability of errors. The Systems Group should consider whether this could be a necessary or useful feature, and if necessary, it should adjust the semantics accordingly.

original_stuff_length: The size of this field is not specified in the semantics although in most cases the size is specified. Replace semantics with the following:

This 7 bit field specifies the number of stuffing bytes used in the MPEG-1 packet header.

PES_extension_field_length: The length of this field is not specified in the semantics although in most cases it is. Replace semantics with the following:

This 7 bit field specifies the length in bytes of the data following this field in the PES_extension_field.

The following text is taken from ISO 11172 (with necessary adjustment), and either this or corresponding text shall be inserted in the ISO1-13818 draft under PES_packet_data_byte.

" In the case of a private stream (type 1 or type 2), PES_packet_data_bytes are user definable and will not be defined by ISO in the future."

2.4.5 Program Stream System Target Decoder

The headings in this section should be numbered.

System Clock Frequency: The fields are defined in 2.4.6.4 on page 34.

Buffering: A separate heading called "skipped pictures" should be introduced, as this is a subject worth a clear explanation.

PES Streams

The description of a PES stream is inadequate, since it is not clear that contiguous PES packets containing data of the same elementary stream do not automatically form a PES stream. Certain fields must be present with a certain regularity, which is not explicitly explained within this section. This paragraph needs to be enhanced and reworded.

2.4.6.2 Semantic definition of fields in Program Stream

"(000001B9 in hexadecimal)" should be replaced with "(0x000001B9)" for consistency.

Table 2-15 Program Stream Pack Header

blank line after marker bit, before reserved, should be deleted.

2.4.6.4 Semantic definition of fields in program stream pack

pack_start_code

"(000001BA in hexadecimal)" should be replaced by "(0x000001BA)"

2.4.6.6 Semantic definition of fields in system header

system_header_start_code

"(000001BB in hexadecimal)" should be replaced by "(0x000001BB)"

header_length

In other parts of the specification, the length of the field is given within the semantics, therefore amend as follows. (The field size comment applies to other fields of this section also.) It should also be clearly stated whether the length of zero is permitted or not.

"This is a 16 bit field which indicates the length in bytes of the system header . . ."

stream_id: use of the words stream type in the fourth paragraph is confusing with stream_type (table 2-19). It is really a reference to the coding of the stream. For clarity the expression should be changed.

Table 2-17

The column titled "stream type" under the stream_id table could be renamed, as it is currently confused with the field stream_type. A possible suggestion could be "stream coding".

Note that the table currently does not explicitly support an ISO/IEC 11172 coded stream. Is this intentional? Could this cause confusion when MPEG-1 streams are carried in an MPEG-2 coded manner? This matter should be considered by the Systems Group.

The definitions of private_stream_1 and private_stream_2 should be given immediately after the table.

2.4.6.10 Semantic definition of fields in Program Stream Map

Table 2-19

stream_type: This table needs the inclusion of the possibility of signalling clearly a type private_stream_3 (private data not in any MPEG structure), and the relevant explanatory text. It also needs the inclusion of private_stream_1 and _2. Further a private_sections format should be considered, which would signal private data in PSI private_sections.

elementary_stream_info_length

The semantics should be corrected to refer to the "total length in bytes of the descriptors . . . "

2.4.6.11

Extend the sentence under table 2-20 for clarity.
"The rest of the PES packet header shall follow the syntax and semantics as defined in clause 2.4.3.6."

Table 2-21

The blank lines in this table are not necessary.

2.4.6.12

Throughout this section where missing, the lengths of the fields should be added to the semantics for consistency.

presentation_time_stamp

This does not occur anywhere as a field. Correct to "PTS"

intra_coded_indicator

This meaning of this bit should be clarified when the relevant stream is not video.

2.4.7 Program Specific Information

It should be clearly stated that Program Specific Information applies only to Transport Streams.

The status of the PSI data defined within ISO/IEC 13818-1 needs to be clearly stated. Annex C (informative only) states that out-of-band methods can be used to signal this data. The PSI data is necessary for successful decoding of programs within the Transport Stream, and the IBN finds that the statement in the annex is contradictory to the sentiment of 2.4.7 and false. The Belgian NB can therefore only consider the necessary data as mandatorily carried within a Transport Stream, with an out-of-band solution not being acceptable. It is proposed that the section 2.4.7 commences with the following or similar words.

"Program Specific Information shall be present in all Transport Streams. It is not required in Program Streams."

The following or similar text should be added to the of the paragraph commencing "Transport packets with a PID value of 0x0000..."

"All Transport Streams shall contain one or more transport packets with PID value 0x0000. These transport packets together shall contain a complete list of all programs within the Transport Stream. The most recently transmitted version of the table with the current_next_indicator set to '1' shall always apply to the current data in the Transport Stream. Any changes in the programs carried within the Transport Stream shall be described in an updated version of the Program Association Table, carried in Transport Packets with PID value 0x0000.

Similarly, the following or similar text should be added refering to transport packets with a PID value of 0x0001.

"Whenever one or more elementary streams within a Transport Stream are scrambled, transport packets with a PID value of 0x0001 shall be transmitted, containing CA_sections, containing CA_descriptors appropriate to the scrambled streams. The transmitted transport packets shall together form one complete version of the CA_Table. The most recently transmitted version of the table with the current_next_indicator set to '1' shall always apply to the current data in the Transport Stream. Any changes in scrambling making the existing Table invalid or incomplete shall be described in an updated version of the Conditional Access Table."

Similarly, the following or similar text should be added refering to transport

packets containing sections with table_id==0x02.

"All Transport Streams shall contain one or more transport packet with PID values which are labeled under the Program Association Table as transport packets containing Program Map Tables. Every program listed in the Program Association Table shall be described in a single section of Program Map Table. Every program shall be fully described within the Transport Stream itself. The most recently transmitted versions of the program_map_sectionswith the current_next_indicator set to '1' shall always apply to the current data within the Transport Stream. Any changes in the definition of any of the programs carried within the Transport Stream shall be described in an updated version of the corresponding section of the Program Association Table, carried in tranport packets with the PID value identified as the PMT_PID for that specific program."

Note that the appropriate changes to Annex C are also necessary, commencing with the deletion of the statement refering to out-of-band data.

Table 2-24 Program specific information

Since the contents of the Network Information Table is not defined within ISO/IEC 13818, it is proposed that this it the last entry in the table.

Stuffing bytes

The paragraph on stuffing bytes should include the explanation that when stuffing bytes occur after a section, then the rest of the transport packet shall contain only stuffing bytes. Also the wording that stuffing bytes "shall be found after the last byte of a section" is false, since this would apply that normatively stuffing must occur after the last byte. The statement should be corrected to say that stuffing_bytes "may be found after the last byte of a section".

The status of the NIT should be clearly stated within the text. The content of the table is not defined. It is possible that in some applications an NIT could have no meaning. therefore it is proposed that this table is clearly stated as being optional. The text must then be modified accordingly.

A paragraph should be added explaining in plain text how the pointer_field is applied, in the general introduction on PSI.

A paragraph should also be added here explaining how the PSI data is handled, ie that is enters the Bsys, as described in section 2.4.2. It should be clearly stated, when the decision has been made, whether the NIT is also handled in the Bsys buffer, or not.

It should also be considered whether any default behaviour will be defined in the case of otherwise illegal entries. For example, if PID0x0000 is referenced as a PMT_PID, eg for the NIT.

A paragraph should be added giving a brief description of descriptors and how they are used.

2.4.7.3 stream types

correct typographical error.

The title of this section should not be stream types, since reference is made to stream_id. "Stream coding" is a proposed alternative.

2.4.7.4 Specification of the program association table

It should be clearly stated in this section that every Transport Stream shall contain a program association table, and that the most recently transmitted example of the table with the "current_next_indicator" set to "1" shall always be correct and complete.

2.4.7.6 Semantics of fields in program association table

Table 2-27 table_id assignment values

To state simply that 0xFF is forbidden is misleading. It should at least be stated under the table that when 0xFF occurs as a table_id, then this does not refer to a table, but indicates that the rest of the transport packet is stuffed.

program_number

It should be added that the value of this field is up to the user, but that the program_number field may not take any single value more than once within one version of the PAT.

network_PID

It should be stated that the choice of the network PID is up to the user, but that it can not take one of the values reserved for other uses. It should also be stated that the presence of a network_PID is optional within a Transport Stream.

program_map_PID

It should be clearly stated that no program may have more than one program_map_PID assignment. It should also be stated that the choice of PID rests with the user, within the restriction on pre-defined PIDs.

2.4.7.7 Conditional access table definition

It should be clearly stated that when one or more elementary streams are scrambled, then a conditional access table shall be present, appropriately

coded to enable the location of the appropriate ECM stream to be found. It should also be stated that the most recently transmitted example of the table with the "current_next_indicator" set to "1" shall always be correct and complete.

It could be considered useful to refer the reader to section 2.4.8 where the coding of descriptors may be found.

2.4.7.8 Semantic definitions of fields in conditional access section

section_syntax_indicator

replace semantics with the semantics from the PAT.

2.4.7.9 Program Map Table

It should be clearly stated in this section that every Transport Stream shall contain a complete program map table, such that all the elementary streams of every program shall be fully described, and that for each program, the most recently transmitted section with the "current_next_indicator" set to "1" shall always be correct and complete.

2.4.7.10 Semantic definition of fields in Transport Stream program map section

section_syntax_indicator

replace with text from PAT.

program_number

Annex C needs amending to include the explanation promised here.

version number

Extend the existing sentence as follows or similarly:

"version_number refers to the definition of a single program, and therefore to a single section."

section_number

Correct to include size of field.

last_section_number

Correct to include size of field.

stream_type

Reference is wrong. Correct to table 2-19.

ES_info_length

This length codes the number of bytes of the descriptors following the field, since it is nowhere stated that only one descriptor is permitted to occur.

2.4.7.11 Private section

The examples promised in Annex C are missing and should be added.

2.4.7.12 Semantic definition of fields in private section

extended_table_id

This is not aligned with the name in the syntax. Either name is acceptable, but the semantics and syntax must be consistent.

2.4.8 Program and elementary stream descriptors

The distinction as to whether descriptors valid in Program Stream or Transport Streams is currently not necessary. The corresponding line of text and the two columns of "X"s should be deleted, as this provides no information.

2.4.8.1 Semantic definition of fields in stream descriptor

descriptor_tag

Table reference is wrong. Correct to table 2-31.

2.4.8.3 Semantic definitions of fields in video stream descriptor

Some entries must appear in the table.

2.4.8.5 Semantic definitions of fields in audio stream descriptor

Some entries must appear in the table.

2.4.8.6 Hierarchy descriptor

Reference should be made to elementary streams, not components. It should also be stated that this shall only be used to describe ISO/IEC 13818 video streams.

2.4.8.7 Semantic definition of fields in hierarchy descriptor

Hierarchy_layer

Correct typographical error.

2.4.8.8 Registration descriptor

Table 2-38 Registration descriptor

The bit notation for registered_id is unconventional. This could be expressed as a loop over registered_id_byte, as a function of the descriptor length.

Table 2-39 Registration authority committee

Is ISO/IEC 13818 a registration committee? Surely this should either be ISO/IEC, or ISO/IEC/JTC1/SC29/WG11.

Clarify text of RAC4, RAC5 and RAC6 as follows and correspondingly.

"RAC4 indicates that the RAC field is followed by an ETSI registered_id. . . "

2.4.8.12 Target background grid descriptor and 2.4.8.14 video window descriptor

Some explanatory text either here or in an annex is needed on how these two descriptors function together, and on possible uses, as several readers who are not members of Systems have seriously misinterpreted these sections. A diagram would be most useful.

2.4.8.17 Semantic definition of fields in Conditional access descriptor

CA_system_id

Where will a list of values be maintained, or is this field defined by the user?

CA_PID: The last sentence of this semantic is unclear, and should be improved.

2.4.8.19 Semantic definition of fields in ISO 639 language descriptor

ISO_639_language_code. The last sentence of this semantic is unclear, and should be improved. An example could be useful.

The syntax of this descriptor could be improved, such that the byte introduced to support clean_effects_flag would only be present if the length field is not a multiple of three.

2.4.8.20 System clock descriptor

It would be useful to the reader to have some explanation of when it might be advantageous to transmit this descriptor, and what it might be used for.

2.4.8.23 Semantic definition of fields in multiplex buffer utilization descriptor

This text and explanation is not clear and should be improved.

2.4.9.4 Frequency of coding the elementary_stream_clock_reference

The syntax does not contain such a field. Remove the underscores to correct.

The note should make clear that the coding of ESCRs is not mandatory in PES packets, but it is mandatory if these packets are used to create a PES stream, when the above constraint applies.

2.4.9.5 Frequency of Coding of presentation_time_stamp coding

The syntax does not contain such a field. Remove the underscores to correct.

2.4.10.1 Program Stream

Correct typographical error:

Rvmax is the peak video bit rate.

2.4.11 Compatibility with ISO/IEC 11172

Correct to

"Decoders of Program Stream as defined in ISO/IEC 13818-1 shall also support decoding of ISO/IEC 11172-1"

as decoding of the video and audio parts of 11172 is not required by a 13818-1 Program Stream decoder, but only the system part.

Annex B

page 78 line 3

Correct field names: system_audio_lock_flag and video_audio_lock_flag

page 78 paragraph commencing There is a single common system clock

It is not clear from this paragraph that there could be effectively more than one PCR in a single Tranport Stream, as each program may have its own clock reference. It is suggested to add a simple sentence: "There may be more than one program reference clock in a single Transport Stream".

page 78 Paragraph commencing "Decoders which are implemented . . . "

"do not present each picture or audio sampie exactly once." An example of this

could be useful, eg skipped pictures?

page 80 Paragraph commencing "In the Program Stream, the clock reference field .."

"have a common time base and are intended for synchronised decoding and presentation"

It is possible that several groupings of elementary stream will share the same PCR, and that the streams within each grouping are intended to be presented synchronously, but that it is not important that the groups are synchronously presented. These groups together form a common "program", since they share the same timebase, however, they may have separate and independent program_map_sections and program numbers.

Annex C Program Specific Information

Some elements which are promised in the normative section are missing from this annex.

- How to code a program definition which exceeds the permitted length.

- Suggestions on how to use private sections could be useful.

Additionally, a diagram indicating how the pointer works would be useful.

Comments on how data might usefully be split into sections would be useful.

It should be specified how the NIT is to be handled, and whether it shall normatively be present.

Any constraint on data rate resulting from the work on Bsys should be explained here.

As stated earlier, the reference to out-of-band signalling should be deleted.

On the diagram, a line connecting Program 20 in the PAT to the box labeled Program Map PID is missing.

C.2

Not all systems have fast acquisition/high random access requirements.
Not all systems require a scrambling key to be retrieved.
The PSI reference is now 2.4.7.

Annex F

The second figure below F.0.6 should be labeled F.0.7 Program Association

section. F.0.7 then becomes F.0.8 CA section.

Additional Annexes

An additional annex should be provided concerning private data, explaining about the different types of private streams and the locations where private data can be carried.

An Additional Annex is required to explain how splicing and editing can be achieved, particularly adding and dropping programs, splitting programs, joining programs, adding programs from another source etc.

VOTE ON COMMITTEE DRAFT ISO/IEC CD 13818-2	
Date of circulation: 1993-12-01	Reference number:
Closing date for voting: 1994-03-15	ISO/IEC JTC 1/SC 29 **N 659**

Project Number: JTC 1.29.05.02.02

P-members have an obligation to vote

ISO/IEC JTC 1/SC 29

Title: **Coding of Audio, Picture, Multimedia and Hypermedia Information** *

* submect to JTC 1's approval

Secretariat: **Japan (JISC)**

Circulated to P-members of the committee for voting

BY 1994-03-15

Please send this form, duly completed, to the secretariat indicated above.

CD

Title: Information technology — Generic coding of moving pictures and associated audio information — Part 2: Video

Please put a cross in the appropriate box(es)

Approval of the Draft:

☐ as presented

☒ with comments as given below (use separate pages as annex, if necessary)

- ☒ general
- ☒ technical
- ☒ editorial

☐ **Disapproval of the draft for reasons below** (use separate page as annex, if necessary)

- ☐ Acceptance of these reasons and appropriate changes in the text will change our vote to approval

☐ **Abstention** (for reasons below)

P-member voting
National Body Name BELGIUM (IBN)

Date 1994-03-09 Signature PP Rigmans

Contact: Narumi HIROSE, Secretariat, ISO/IEC JTC 1/SC 29
IPSJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*
Room 308-3 Kikai-Shinko-Kaikan Bldg. 3-5-8 Shiba-Koen Minato-Ku Tokyo 105 JAPAN
Tel: +81-3-3431-2808; Fax: +81-3-3431-6493; Telex: 2425340 IPSJ J;
internet: nhirose@attmail.com; MHS: G=narumi; S=hirose; A=attmail; C=jp
* A Standards Organization accredited by JISC

- There is an image format which is not supported in the Video draft which is refered to as Cinemascope. This has a display aspect ratio (DAR) of 1:2.21. It has been brought to our attention by broadcasters that the most attractive films are and will in the future still be produced in cinemascope format. Therefore it is proposed that this format should be supported through its inclusion in Table 6-3 - aspect_ratio_information, to allow the user to choose his format in accordance with his needs and the available hardware. Any impact that this would potentially have on the pan vector coding should be considered.

Table 6-3 could then take the following format:

aspect_ratio_information	Pel Aspect Ratio	DAR
0000	forbidden	forbidden
0001	1.0 (Square Pel)	-
0010	-	3÷4
0011	-	9÷16
0100	-	1÷2.21
0101	-	reserved
....		
1111	-	reserved

- **6.3.16 (p.55 l.8 - 13 "It is a requirement that : ...") :**

  The text lists the requirements about skipped macroblocks. We propose to add a sentence stating that the first and last macroblocks of a slice shall not be skipped.

- **8 (p.109 - ...) Slice structure :**

  We propose to add an explicit sentence about which slice structures are allowed for profiles other than Main Profile. There is only explicit specification for the allowed slice structure for Main Profile.

- **Annex B (p.125) Table B-8 :**

  We propose to add on page 99 (7.8.2) that the modification of the quantizer_scale_value is relative to the previous Macroblock of the enhancement layer (to avoid the possible confusion with the quantizer_scale_value of the Macroblock from the base layer).

- **Annex D (p.150) (D.8.2 : "A MPEG-2 bitstream that does not contain a sequence_extension is forward compatible.") :**

  On line 30, forward should be replaced by backward.

- **Annex F (page 177) :**

  In the row about the Belgian Science Policy Office, the "X" in the column A and S shall be deleted.