

SOURCE : Japan
TITLE : Proposal for ITU-T_stream_descriptors
Purpose : Proposal

1. Introduction

At Grimstad meeting we showed the provision of the ITU-T stream descriptors that should be defined in H.222.1 [1]. After the meeting we made further discussions. This document proposes the coding of ITU-T stream descriptors. These descriptors enable to multiplex video and audio streams recommended by ITU-T.

2. Policy

We decided that the ITU-T_stream_descriptors should cover all coding algorithms and picture format that are used in H.320.

3. ITU-T stream descriptors

Proposed ITU-T stream descriptors are valid when stream_type = 0x09. (ITU-T Rec. H.222.0 auxiliary at Table 2-35 Stream type assignments in H.222.0 [2])

3.1 Descriptor Tag

Descriptor_tag values 64 - 255 are assigned for 'User Private' at Table 2-39 Stream descriptors in H.222.0 [2]. We propose to assign these stream descriptors as follows;

Table 3.1-1 ITU-T stream descriptors

value	TS	PS	Identification
64	X	X	ITU-T_video_stream_descriptor
65	X	X	ITU-T_audio_stream_descriptor
66	X	X	ITU-T_data_stream_descriptor
67	X	X	ITU-T_control_stream_descriptor
68	n/a	n/a	reserved
-255			

3.2 ITU-T video stream descriptor

ITU-T video stream descriptor indicates the video coding related parameters as follows;

Table 3.2-1 ITU-T video stream descriptor

Syntax	No. of Bits	Mnemonic
ITU-T_stream_descriptor() {		
descriptor_tag	8	uimsbf
descriptor_length	8	uimsbf
coding_algorithm	8	uimsbf
if(coding_algorithm==H.261) {		
picture_format	3	uimsbf
picture_rate	3	uimsbf
reserved	2	uimsbf
}		
}		

Table 3.2-2 coding_algorithm

value	description
0x00	forbidden
0x01	H.261
0x02	reserved
-0xff	

Table 3.2-3 picture_format

value	description
000	CIF
001	QCIF
010	reserved
-111	

Table 3.2-4 picture_rate

value	description
000	1/29.97
001	2/29.97
010	3/29.97
011	4/29.97
011	reserved
-111	

3.3 ITU-T audio stream descriptor

ITU-T audio stream descriptor indicates the audio coding related parameters as follows;

Table 3.3-1 ITU-T audio stream descriptor

Syntax	No. of Bits	Mnemonic
ITU-T_stream_descriptor() { descriptor_tag descriptor_length coding_algorithm reserved }	8 8 8 8	uimsbf uimsbf uimsbf uimsbf

Table 3.3-2 coding_algorithm

value	description
0x00	forbidden
0x01	A-law
0x02	Mu-law
0x03	G.721
0x04	G.722 (mode 1)
0x05	G.722 (mode 2)
0x06	G.722 (mode 3)
0x07	G.728
0x08	reserved
-0xFF	

3.4 ITU-T control stream descriptor

ITU-T control stream descriptor indicates the protocol as follows;

Table 3.4-1 ITU-T control stream descriptor

Syntax	No. of Bits	Mnemonic
ITU-T_stream_descriptor() { descriptor_tag descriptor_length protocol reserved }	8 8 8 8	uimsbf uimsbf uimsbf uimsbf

Table 3.4-2 protocol

value	description
0x00	H.240
0x01	H.24X
0x02	reserved
-0xFF	

4. Conclusion

Indication for ITU-T video and audio coding related parameters are not defined in H.222.0|ISO/IEC 13818-1. Then ITU-T should define these indications in H.222.1. This document proposes the each code for ITU-T stream descriptors.

References

- [1]AVC-656 Necessary provision for applying H.220.0 to the H.32X terminals, July 1994, Grimstad, Norway.
- [2]AVC-644 H.222.0, Table 2-35, p.55, 10 June 1994.