ISO/IEC 13818-1:2015-07 (E)

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

Contents

Page

1.1 Scope 1
1.2 Normative references 1
2.1 Definitions 3
2.2 Symbols and abbreviations 9
2.3 Method of describing bit stream syntax 11
2.4 Transport stream bitstream requirements 12
2.5 Program stream bitstream requirements 57
2.6 Program and program element descriptors 70
2.7 Restrictions on the multiplexed stream semantics 115
2.8 Compatibility with ISO/IEC 11172 119
2.9 Registration of copyright identifiers 119
2.10 Registration of private data format 120
2.11 Carriage of ISO/IEC 14496 data 120
2.12 Carriage of metadata 132
2.13 Carriage of ISO 15938 data 140
2.14 Carriage of Rec. ITU-T H.264 | ISO/IEC 14496-10 video 140
2.15 Carriage of ISO/IEC 14496-17 text streams 157
2.16 Carriage of auxiliary video streams 158
2.17 Carriage of HEVC 158

Annex A – CRC decoder model 164
A.1 CRC decoder model 164

Annex B – Digital Storage Medium Command and Control (DSM-CC) 165
B.1 Introduction 165
B.2 General elements 166
B.3 Technical elements 168

Annex C – Program-specific information 174
C.1 Explanation of program-specific information in transport streams 174
C.2 Introduction 174
C.3 Functional mechanism 174
C.4 The mapping of sections into transport stream packets 175
C.5 Repetition rates and random access 175
C.6 What is a program? 176
C.7 Allocation of program_number 176
C.8 Usage of PSI in a typical system 176
C.9 The relationships of PSI structures 177
C.10 Bandwidth utilization and signal acquisition time 179

Annex D – Systems timing model and application implications of this Recommendation | International Standard 182
D.1 Introduction 182

Annex E – Data transmission applications 191
E.1 General considerations 191
E.2 Suggestion 191

Annex F – Graphics of syntax for this Recommendation | International Standard 192
F.1 Introduction 192

Annex G – General information 196
G.1 General information 196

Annex H – Private data 197
H.1 Private data 197

Annex I – Systems conformance and real-time interface 198
I.1 Systems conformance and real-time interface 198

Annex J – Interfacing jitter-inducing networks to MPEG-2 decoders 199

Page
J.1 Introduction ... 199
J.2 Network compliance models ... 199
J.3 Network specification for jitter smoothing ... 200
J.4 Example decoder implementations ... 201
Annex K – Splicing transport streams ... 202
K.1 Introduction ... 202
K.2 The different types of splicing point ... 202
K.3 Decoder behaviour on splices ... 203
Annex L – Registration procedure (see 2.9) ... 205
L.1 Procedure for the request of a Registered Identifier (RID) ... 205
L.2 Responsibilities of the Registration Authority ... 205
L.3 Responsibilities of parties requesting an RID ... 205
L.4 Appeal procedure for denied applications ... 206
Annex M – Registration application form (see 2.9) ... 207
M.1 Contact information of organization requesting a Registered Identifier (RID) ... 207
M.2 Statement of an intention to apply the assigned RID ... 207
M.3 Date of intended implementation of the RID ... 207
M.4 Authorized representative ... 207
M.5 For official use only of the Registration Authority ... 207
Annex N – Registration Authority diagram of administration structure (see 2.9) ... 208
Annex O – Registration procedure (see 2.10) ... 209
O.1 Procedure for the request of an RID ... 209
O.2 Responsibilities of the Registration Authority ... 209
O.3 Contact information for the Registration Authority ... 209
O.4 Responsibilities of parties requesting an RID ... 209
O.5 Appeal procedure for denied applications ... 209
Annex P – Registration application form ... 211
P.1 Contact information of organization requesting an RID ... 211
P.2 Request for a specific RID ... 211
P.3 Short description of RID that is in use and date system that was implemented ... 211
P.4 Statement of an intention to apply the assigned RID ... 211
P.5 Date of intended implementation of the RID ... 211
P.6 Authorized representative ... 211
P.7 For official use of the Registration Authority ... 211
Annex Q – T-STD and P-STD buffer models for ISO/IEC 13818-7 ADTS ... 212
Q.1 Introduction ... 212
Q.2 Leak rate from Transport Buffer ... 212
Q.3 Buffer size ... 212
Q.4 Conclusion ... 213
Annex R – Carriage of ISO/IEC 14496 scenes in Rec. ITU-T H.222.0 | ISO/IEC 13818-1 ... 215
R.1 Content access procedure for ISO/IEC 14496 program components within a program stream ... 215
R.2 Content access procedure for ISO/IEC 14496 program components within a transport stream ... 216
Annex S – Carriage of JPEG 2000 part 1 video over MPEG-2 transport streams ... 220
S.1 Introduction ... 220
S.2 J2K video access unit, J2K video elementary stream, J2K video sequence and J2K still picture ... 220
S.3 Elementary stream header (elsm) and mapping to PES packets ... 220
S.4 J2K transport constraints ... 222
S.5 Interpretation of flags in adaptation and PES headers for J2K video elementary streams ... 222
S.6 T-STD extension for J2K video elementary streams ... 222
Annex T – MIME type for MPEG-2 transport streams ... 225
T.1 Introduction ... 225
T.2 MIME type and subtype ... 225

Page
T.3 Security considerations 226
T.4 Parameters 226
Bibliography 228