INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

H.241
Amendment 1
(01/2005)

SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Communication procedures

Extended video procedures and control signals
for H.300-series terminals
Amendment 1: Signalling of the H.264 level 1b

ITU-T Recommendation H.241 (2003) – Amendment 1

ITU-T Recommendation H.241

Extended video procedures and control signals for H.300-series terminals

Amendment 1

Signalling of the H.264 level 1b

Summary

ITU-T Rec. H.241 defines the use of advanced video codecs, including ITU-T Rec. H.264, in ITU-T Recs H.310, H.320, H.321, H.322, H.323 and H.324 terminals. It also defines generic extended signalling for use with all video codecs in the H.300-series terminals.

This amendment updates Table 3/H.241 to enable signalling of the new H.264 Profiles, and Table 5/H.241 to enable the signalling of the new H.264 level 1b, introduced in ITU-T Rec. H.264 (2004).

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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As of the date of approval of this Recommendation, ITU had received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

ITU-T Recommendation H.241

Extended video procedures and control signals for H.300-series terminals

Amendment 1

Signalling of the H.264 level 1b

This amendment updates Table 3/H.241 to enable signalling of the new H.264 Profiles, and updates Table 5/H.241 to enable the signalling of the new H.264 level 1b, introduced in ITU-T Rec. H.264 (2004).

Modifications are shown with revision marks. Ellipses represent parts of the text that remain unchanged.

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2   References

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–   ITU-T Recommendation H.263 (1998), *Video coding for low bit rate communication.*

–   ITU-T Recommendation H.264 (~~2003~~2005), *Advanced video coding for generic audiovisual services.*

–   ITU-T Recommendation H.310 (1998), *Broadband audiovisual communication systems and terminals.*

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8.3.2.2   H.264 Profile parameter

See Table 3.

Table 3/H.241 – H.264 Capability Parameter – Profile

Parameter name	Profile
Parameter description	This parameter is a Boolean array.
	If bit 2 (value 64) is 1, this indicates the Baseline Profile.
	If bit 3 (value 32) is 1, this indicates the Main Profile.
	If bit 4 (value 16) is 1, this indicates the Extended Profile.
	<u>If bit 5 (value 8) is 1, this indicates the High Profile.</u>
	<u>If bit 6 (value 4) is 1, this indicates the High 10 Profile.</u>
	<u>If bit 7 (value 2) is 1, this indicates the High 4:2:2 Profile.</u>
	<u>If bit 8 (value 1) is 1, this indicates the High 4:4:4 Profile.</u>
	All other bits are reserved, shall be set to 0, and shall be ignored by receivers.
	In a decoder capability, for each bit set to 1, this means that the terminal is capable of decoding the indicated Profile(s) using the Level and other optional parameters in this Generic Capability.
	In an OpenLogicalChannel message, for each bit set to 1, this means that the logical channel contents obey all constraints of the indicated Profile(s).
	NOTE – If in the future more H.264 Profiles are defined than the number of reserved bits can accommodate, additional Profiles could be signalled by allocating another parameter for additional Profiles.
	<u>NOTE – Bit 1 remains reserved since if the three high-order bits of this parameter are set, this could create an unintentional emulation of the MBE BAS code in ITU-T Rec. H.230.</u>
Parameter identifier value	41
Parameter status	Mandatory.
	This parameter shall appear exactly once in each Generic Capability.
Parameter type	booleanArray
Supersedes	This field shall not be included.

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8.3.2.3   H.264 Level parameter

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Table 5/H.241 – Level parameter values

Level parameter value	H.264 level number
15	1
<u>19</u>	<u>1b</u>
22	1.1
29	1.2
36	1.3
43	2
50	2.1
57	2.2
64	3
71	3.1
78	3.2
85	4
92	4.1
99	4.2
106	5
113	5.1

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