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OF ITU

Q.2965.1

Amendment 1

(06/2000)

SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – B-ISDN application protocols for access signalling

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Digital subscriber signalling system No. 2 – Support of Quality of Service classes

Amendment 1

ITU-T Recommendation Q.2965.1 – Amendment 1

(Formerly CCITT Recommendation)

ITU-T Q-SERIES RECOMMENDATIONS

SWITCHING AND SIGNALLING

SIGNALLING IN THE INTERNATIONAL MANUAL SERVICE	Q.1–Q.3
INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING	Q.4–Q.59
FUNCTIONS AND INFORMATION FLOWS FOR SERVICES IN THE ISDN	Q.60–Q.99
CLAUSES APPLICABLE TO ITU-T STANDARD SYSTEMS	Q.100–Q.119
SPECIFICATIONS OF SIGNALLING SYSTEMS No. 4 AND No. 5	Q.120–Q.249
SPECIFICATIONS OF SIGNALLING SYSTEM No. 6	Q.250–Q.309
SPECIFICATIONS OF SIGNALLING SYSTEM R1	Q.310–Q.399
SPECIFICATIONS OF SIGNALLING SYSTEM R2	Q.400–Q.499
DIGITAL EXCHANGES	Q.500–Q.599
INTERWORKING OF SIGNALLING SYSTEMS	Q.600–Q.699
SPECIFICATIONS OF SIGNALLING SYSTEM No. 7	Q.700–Q.799
Q3 INTERFACE	Q.800–Q.849
DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 1	Q.850–Q.999
PUBLIC LAND MOBILE NETWORK	Q.1000–Q.1099
INTERWORKING WITH SATELLITE MOBILE SYSTEMS	Q.1100–Q.1199
INTELLIGENT NETWORK	Q.1200–Q.1699
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR IMT-2000	Q.1700–Q.1799
BROADBAND ISDN	Q.2000–Q.2999
General aspects	Q.2000–Q.2099
Signalling ATM adaptation layer (SAAL)	Q.2100–Q.2199
Signalling network protocols	Q.2200–Q.2299
Common aspects of B-ISDN application protocols for access signalling and network signalling and interworking	Q.2600–Q.2699
B-ISDN application protocols for the network signalling	Q.2700–Q.2899
B-ISDN application protocols for access signalling	**Q.2900–Q.2999**

For further details, please refer to the list of ITU-T Recommendations.

ITU-T Recommendation Q.2965.1

Digital subscriber signalling system No. 2 – Support of Quality of Service classes

AMENDMENT 1

Summary

Recommendation Q.2965.1 (03/99) covers the support of quality of service classes in a B-ISDN. This amendment of Recommendation Q.2965.1 has been prepared to provide alignment with the third edition of Recommendation I.356 (2000). In particular, this amendment allows the support of explicit signalling of the I.356 QoS class 5 in addition to the capabilities already provided in Recommendation Q.2965.1 (1999).

Source

Amendment 1 to ITU-T Recommendation Q.2965.1 was prepared by ITU-T Study Group 11 (1997-2000) and approved under the WTSC Resolution 1 procedure on 15 June 2000.

FOREWORD

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The World Telecommunication Standardization Conference (WTSC), 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 WTSC 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.

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As of the date of approval of this Recommendation, ITU had not 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.

Introduction

This amendment of Recommendation Q.2965.1 has been prepared to provide alignment with the third edition of Recommendation I.356 (2000).

In particular, Recommendation Q.2965.1 (1999) is amended in order to:

– refer to the Edition 3 of Recommendation I.356 (2000);

– support the explicit signalling of I.356 QoS class 5;

– refer to the U Class as the I.356 QoS class 4;

– include in Annex A/Q.2965.1 the valid combinations associated with the I.356 QoS class 5.

ITU-T Recommendation Q.2965.1

Digital subscriber signalling system No. 2 – Support of Quality of Service classes

AMENDMENT 1

The following list of amendments apply to Recommendation Q.2965.1 (03/1999):

1) Clause 2/Q.2965.1, Normative References

Change reference [1] to:

[1] ITU-T I.356 (2000), *B-ISDN ATM layer cell transfer performance*.

2) Clause 8.1/Q.2965.1, Quality of service parameter

Change Table 1 as follows:

Table 1/Q.2965.1 – QoS parameter information element

QoS class forward (Octet 5)

Bits

8 7 6 5 4 3 2 1	
0 0 0 0 0 0 0 0	No specific QoS class explicitly requested (Note 1)
0 0 0 0 0 0 0 1	Class 1 (stringent class) (Note 2)
0 0 0 0 0 0 1 0	Class 2 (tolerant class) (Note 2)
0 0 0 0 0 0 1 1	Class 3 (bi-level class) (Note 2)
0 0 0 0 0 1 0 0	Class 4 (U class) (Note 2)
0 0 0 0 0 1 0 1	Class 5 (stringent bi-level class) (Note 2)
1 1 1 1 1 1 1 1	Reserved (Note 3)

All other values are reserved.

QoS class backward (Octet 6)

Bits

8 7 6 5 4 3 2 1	
0 0 0 0 0 0 0 0	No specific QoS class explicitly requested (Note 1)
0 0 0 0 0 0 0 1	Class 1 (stringent class) (Note 2)
0 0 0 0 0 0 1 0	Class 2 (tolerant class) (Note 2)
0 0 0 0 0 0 1 1	Class 3 (bi-level class) (Note 2)
0 0 0 0 0 1 0 0	Class 4 (U class) (Note 2)
0 0 0 0 0 1 0 1	Class 5 (stringent bi-level class) (Note 2)
1 1 1 1 1 1 1 1	Reserved (Note 3)

All other values are reserved.

NOTE 1 – When used, the network shall provide and guarantee a quality of service compatible and consistent with the requirements indicated in the broadband bearer capability. In this case, the QoS to be provided is the implicitly requested QoS class associated to the requested ATM transfer capability (e.g. see ITU-T Q.2961.2 [4], Q.2961.3 [6], Q.2961.4 [7], Q.2961.6 [8] or Q.2934 [9]).

NOTE 2 – This QoS class is defined in ITU-T I.356 [1].

NOTE 3 – This value is reserved to promote backward compatibility with the first edition of Q.2931 (1995).

3) Annex A

Replace the entire Annex A/Q.2965.1 with the following text:

ANNEX A

Valid combinations of bearer class, broadband transfer capability, ATM traffic descriptor parameters and QoS classes

The parameters specified in the broadband bearer capability information element, the ATM traffic descriptor information element, and the QoS parameter information element of the SETUP message shall be consistent.

ITU-T Q.2961.2 [4], Q.2961.3 [6], Q.2961.4 [7], Q.2961.6 [8] and Q.2934 [9] specify the valid combinations of bearer class, broadband transfer capability and ATM traffic descriptors when the requested QoS class value is 0 ("No specific QoS class explicitly requested").

In addition and for each of the I.371 [5] ATM transfer capability, Table A.1/Q.2965.1 shows the valid combinations of bearer class, broadband transfer capability, ATM traffic descriptor parameters when the requested QoS class value is different from 0 (i.e. when a I.356 [1] QoS class is explicitly requested).

Table A.1/Q.2965.1 covers the recommended association of I.371 [5] ATM transfer capabilities with I.356 [1] QoS classes as described in Table 3/I.356 [1].

Table A.1/Q.2965.1 (Part 1/5) – DBR: Valid combinations of traffic and QoS-related parameters in the SETUP message

Broadband bearer capability			
Bearer class	A, X, FR or VP	A, X, FR or VP	A, X, FR or VP
BTC (value)	7	7	7
Traffic descriptor for a given direction			
PCR (CLP = 0)			
PCR (CLP = 0 + 1)	S	S	S
{SCR, MBS} (CLP = 0)			
{SCR, MBS} (CLP = 0 + 1)			
Signalled QoS class	1	2	4
Requested I.371 [5] ATC	DBR	DBR	DBR
Explicitly Requested I.356 [1] QoS class	Class 1 (stringent)	Class 2 (tolerant)	Class 4 (U class)

Table A.1/Q.2965.1 (Part 2/5) – SBR1: Valid combinations of traffic and QoS-related parameters in the SETUP message

Broadband bearer capability			
Bearer class	C, X, FR or VP	C, X, FR or VP	C, X, FR or VP
BTC (value)	11	11	11
Traffic descriptor for a given direction			
PCR (CLP = 0)			
PCR (CLP = 0 + 1)	S	S	S
{SCR, MBS} (CLP = 0)			
{SCR, MBS} (CLP = 0 + 1)	S	S	S
Signalled QoS class	1	2	4
Requested I.371 [5] ATC	SBR1	SBR1	SBR1
Explicitly Requested I.356 [1] QoS class	Class 1 (stringent)	Class 2 (tolerant)	Class 4 (U class)

Table A.1/Q.2965.1 (Part 3/5) – ABT: Valid combinations of traffic and QoS-related parameters in the SETUP message

Broadband bearer capability						
Bearer class	A, C, X, FR or VP	A, C, X, FR or VP	A, C, X, FR or VP	A, C, X, FR or VP	A, C, X, FR or VP	A, C, X, FR or VP
BTC (value)	16	16	16	17	17	17
Traffic descriptor for a given direction						
PCR (CLP = 0)						
PCR (CLP = 0 + 1)	S	S	S	S	S	S
{SCR, MBS} (CLP = 0)						
{SCR, MBS} (CLP = 0 + 1)	(Note)	(Note)	(Note)	(Note)	(Note)	(Note)
PCR (RM)	S	S	S	S	S	S
Signalled QoS class	1	2	4	1	2	4
Requested I.371 [5] ATC	ABT-DT	ABT-DT	ABT-DT	ABT-IT	ABT-IT	ABT-IT
Explicitly requested I.356 [1] QoS class	Class 1 (stringent)	Class 2 (tolerant)	Class 4 (U class)	Class 1 (stringent)	Class 2 (tolerant)	Class 4 (U class)
NOTE – Optional. When not specified, SCR (CLP = 0 + 1) is equal to 0 and MBS (CLP = 0 + 1) is equal to 1.						

Table A.1/Q.2965.1 (Part 4/5) – ABR: Valid combinations of traffic and QoS-related parameters in the SETUP message

Broadband bearer capability			
Bearer class	C, X, FR or VP	C, X, or FR or VP	C, X, or FR or VP
BTC (value)	12	12	12
Traffic descriptor for a given direction			
PCR (CLP = 0)			
PCR (CLP = 0 + 1)	S	S	S
{SCR, MBS} (CLP = 0)			
{SCR, MBS} (CLP = 0 + 1)			
ABR MCR	(Note)	(Note)	(Note)
Signalled QoS class	3	4	5
Requested I.371 [5] ATC	ABR	ABR	ABR
Explicitly requested I.356 [1] QoS class	Class 3 (bi-level class)	Class 4 (U class)	Class 5 (stringent bi-level)
NOTE – Optional in the user-to-network direction. Mandatory in the network-to-user direction and at the T_B reference point.			

Table A.1/Q.2965.1 (Part 5/5) – SBR2/SBR3 : Valid combinations of traffic and QoS-related parameters in the SETUP message

Broadband bearer capability						
Bearer class	C, X, FR or VP	C, X, FR or VP	C, X, FR or VP	C, X, FR or VP	C, X, FR or VP	C, X, FR or VP
BTC (value)	20	20	20	21	21	21
Traffic descriptor for a given direction						
PCR (CLP = 0)						
PCR (CLP = 0 + 1)	S	S	S	S	S	S
{SCR, MBS} (CLP = 0)	S	S	S	S	S	S
{SCR, MBS} (CLP = 0 + 1)						
Signalled QoS class	3	4	5	3	4	5
Requested I.371 [5] ATC	SBR2	SBR2	SBR2	SBR3	SBR3	SBR3
Explicitly requested I.356 [1] QoS class	Class 3 (bi-level)	Class 4 (U class)	Class 5 (stringent bi-level)	Class 3 (bi-level)	Class 4 (U class)	Class 5 (stringent bi-level)

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Series D	General tariff principles
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Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
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