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OF ITU

Q.931

Amendment 1
(12/2002)

SERIES Q: SWITCHING AND SIGNALLING

Digital subscriber Signalling System No. 1 – Network layer

ISDN user-network interface layer 3 specification for
basic call control

**Amendment 1: Extensions for the support of
digital multiplexing equipment**

ITU-T Recommendation Q.931 (1998) – Amendment 1

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ITU-T Recommendation Q.931

ISDN user-network interface layer 3 specification for basic call control

Amendment 1

Extensions for the support of digital multiplexing equipment

Summary

This amendment contains the modifications to ITU-T Rec. Q.931 (05/98) in order to accommodate the needs of DME signalling and to correct an editorial error in the coding of the Bearer capability information element. Appendix III is added to provide typical DME control procedures.

NOTE – This amendment takes into account Erratum 1 to Q.931 (05/1998) which corrects the editorial error for the coding of octet 5d (bit 1) of the V.32 Bearer capability information element in Table 4-6/Q.931.

Source

Amendment 1 to ITU-T Recommendation Q.931 (1998) was prepared by ITU-T Study Group 11 (2001-2004) and approved under the WTSA Resolution 1 procedure on 29 December 2002.

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.

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ITU-T Recommendation Q.931

ISDN user-network interface layer 3 specification for basic call control

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Extensions for the support of digital multiplexing equipment

1) Table 4-3

Add a new information element for DME signalling as follows:

Table 4-3/Q.931 – Information element identifier coding

	Reference subclause	Maximum length (octets) (Note 1)
Bits <u>8 7 6 5 4 3 2 1</u> 0 : : : : : : : : <i>Variable length information element:</i> <u>0 0 1 1 0 1 1</u> <u>Coding decoding processing</u>	<u>Appendix III</u>	(Note 4)

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2) Figure 4-11

Apply corrections to Figure 4-11/Q.931 as follows:

8	7	6	5	4	3	2	1	Octet
0	Bearer capability information element identifier							1
Length of the bearer capability contents								2
ext. 1	Coding standard			Information transfer capability				3
ext. 1	Transfer mode			Information transfer rate				4
ext. 1	Rate multiplier							4.1* (Note 1)
ext. 0/1	Layer 1 ident. 0 1		User information layer 1 protocol					5*
ext. 0/1	Synch./ asynch	Negot.	User rate					5a* (Note 2)
ext. 0/1	Intermediate rate		NIC on Tx	NIC on Rx	Flow control on Tx	Flow control on Rx	Spare 0	5b* (Note 3)
ext. 0/1	Hdr/ no Hdr	Multiframe	Mode	LLI negot.	Assignor/ee	In-band neg.	Spare 0	5b* (Note 4)
ext. 0/1	Number of stop bits		Number of data bits			Parity		5c* (Note 2)
ext. 1	Duplex mode	Modem type						5d* (Note 2)
ext. 1	Layer 2 ident. 1 0		User information layer 2 protocol					6*
ext. 0/1	Layer 3 ident. 1 1		User information layer 3 protocol					7*
ext. 0/1	Spare 0 0 0			Additional layer 3 protocol information (most significant bits)				7a* (Note 5)
ext. 1	Spare 0 0 0			Additional layer 3 protocol information (most significant bits)				7b* (Note 5)

NOTE 1 – This octet is required if octet 4 indicates multirate (64 kbit/s base rate). Otherwise, it shall not be present.

NOTE 2 – This octet may be present if octet 3 indicates *unrestricted digital information* and octet 5 indicates either of the ITU-T standardized rate adaptations V.110, I.460 and X.30 or V.120 [9]. It may also be present if octet 3 indicates 3.1 kHz audio and octet 5 indicates G.711.

NOTE 3 – This structure of octet 5b only applies if octet 5 indicates ITU-T standardized rate adaption (see Recommendations V.110 [7], I.460 [15] and X.30 [8]).

NOTE 4 – This structure of octet 5b only applies if octet 5 indicates ITU-T standardized rate adaption (see Recommendation V.120 [9]).

NOTE 5 – This octet may be included if octet 7 indicates ISO/IEC TR 9577 (Protocol Identification in the network layer).

Figure 4-11/Q.931 – Bearer capability information element