INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.2610

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TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – Common aspects of B-ISDN application protocols for access signalling and network signalling and interworking

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Usage of cause and location in B-ISDN user part and DSS2

ITU-T Recommendation Q.2610

(Previously CCITT Recommendation)

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ITU-T RECOMMENDATION Q.2610

USAGE OF CAUSE AND LOCATION IN B-ISDN USER PART AND DSS2

Summary

This Recommendation describes the usage of cause and location for Digital Subscriber System No. 2 (DSS2) and signalling system No. 7 (B-ISUP). It defines the format, encoding and semantics of the Cause information element/Cause indicator parameter and the usage of the location field.

Source

ITU-T Recommendation Q.2610 was revised by ITU-T Study Group 11 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on 3 December 1999.

FOREWORD

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The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 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, the 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.

CONTENTS

Recommendation Q.2610

USAGE OF CAUSE AND LOCATION IN B-ISDN USER PART AND DSS2

(revised in 1999)

1 Scope

This Recommendation defines the format, encoding and semantics of the Cause information element/Cause indicator parameter and the usage of the location field, in the broadband UNI and NNI signalling systems.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

[1] ITU-T Recommendation Q.850 (1998), *Usage of cause and location in the digital subscriber signalling systems No. 1 and the signalling system No. 7 ISDN user part.*

[2] ITU-T Recommendation Q.2931 (1995), *Digital subscriber signalling system No. 2 – User-network interface (UNI) layer 3 specification for basic call/connection control.*

[3] ITU-T Recommendation Q.2764 (1999), *Signalling system No. 7 B-ISDN user part (B-ISUP) – Basic call procedures.*

[4] ITU-T Recommendation Q.2971 (1995), *Digital subscriber signalling system No. 2 – User-network interface layer 3 specification for point-to-multipoint call/connection control.*

[5] ITU-T Recommendation Q.2961.2 (1997), *Digital subscriber signalling system No. 2 – Additional traffic parameters: Support of ATM transfer capability in the broadband bearer capability information element.*

[6] ITU-T Recommendation Q.2961.3 (1997), *Digital subscriber signalling system No. 2 – Additional traffic parameters: Signalling capabilities to support traffic parameters for the available bit rate (ABR) ATM transfer capability.*

[7] ITU-T Recommendation Q.2961.5 (1999), *Digital subscriber signalling system No. 2 – Additional traffic parameters: DSS2 additional traffic parameters for cell delay variation tolerance indication.*

[8] ITU-T Recommendation Q.2962 (1998), *Digital subscriber signalling system No. 2 – Connection characteristics negotiation during call/connection establishment phase.*

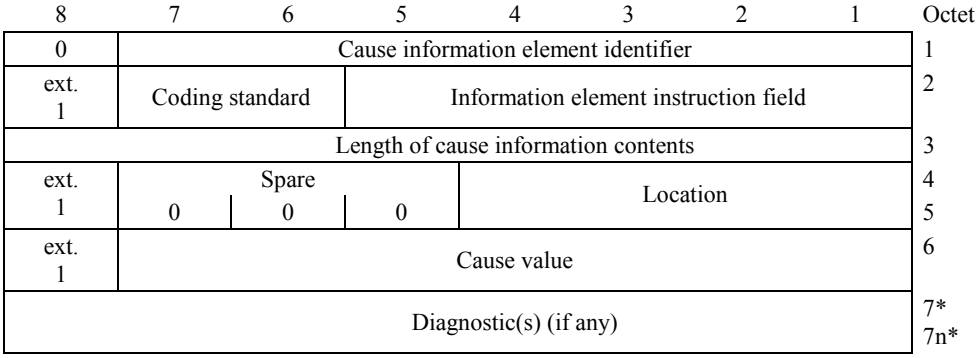
[9] ITU-T Recommendation Q.2934 (1998), *Digital subscriber signalling system No. 2 – Switched virtual path capability.*

[10] ITU-T Recommendation Q.2766.1 (1998), *Switched virtual path capability.*

3 Cause

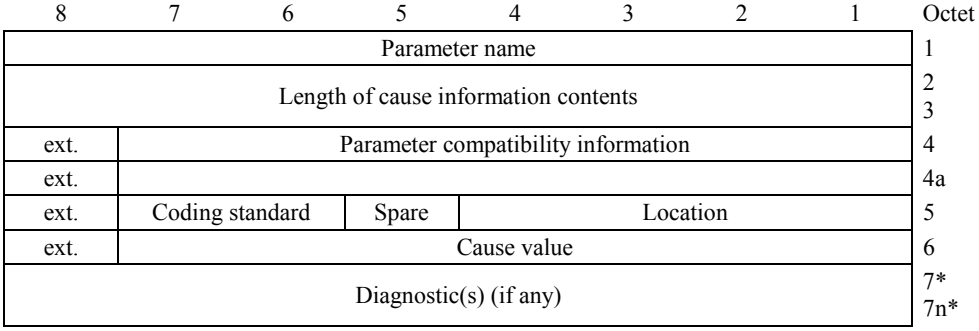
3.1 Format

The format of the DSS2 Cause information element and B-ISDN user part Cause indicator parameter is shown in Figures 1 and 2 respectively.



* Optional octets

Figure 1/Q.2610 – Detailed formatting scheme of the DSS2 Cause information element



* Optional octets

Figure 2/Q.2610 – Detailed formatting scheme of the B-ISDN user part Cause indicator parameter

3.2 Cause value

The cause values defined in 2.2.5/Q.850 [1] and 2.2.7/Q.850 [1] are applicable. In addition the following cause values are applicable:

Cause No.	Definition	Diagnostics	Application	Reference
32	Too many pending add party requests	(Not applicable)	DSS2	Q.2971 [4]
35	Requested VPCI/VCI not available	(Not applicable)	DSS2	Q.2931 [2] Q.2934 [9]
36	VPCI/VCI assignment failure	(Not applicable)	DSS2/B-ISDN user part	Q.2931 [2] Q.2764 [3] Q.2766.1 [10]

Cause No.	Definition	Diagnostics	Application	Reference
37	User cell rate not available	Identified subfield identifier	DSS2/B-ISDN user part	Q.2931 [2] Q.2764 [3] Q.2961.3 [6] Q.2961.5 [7] Q.2962 [8] Q.2766.1 [10]
45	No VPCI/VCI available	(Not applicable)	DSS2/B-ISDN user part	Q.2931 [2] 2.3.1/Q.2764 [3] Q.2934 [9] Q.2766.1 [10]
73	Unsupported combination of traffic parameters	(Not applicable)	DSS2	Q.2764 [3] Q.2971 [4] Q.2961.2 [5] Q.2962 [8] Q.2934 [9]
89	Invalid endpoint reference value	(Not applicable)	DSS2	Q.2971 [4]
93	AAL parameters cannot be supported	(Not applicable)	DSS2	Q.2931 [2]

Additional definitions:

– *Cause No. 32* – Too many pending add party request

This cause is returned when the network is unable to queue any additional add party requests.

– *Cause No. 35* – Requested VPCI/VCI not available

This cause is returned when the VPCI/VCI indicated by the requesting entity cannot be provided by the other side of the interface.

– *Cause No. 36* – VPCI/VCI assignment failure

This cause indicates that assignment of VPCI/VCI values is not functioning correctly and that maintenance should be informed.

– *Cause No. 37* – User cell rate not available

This cause is returned when the user cell rate requested by the user cannot be provided by the network.

– *Cause No. 45* – No VPCI/VCI available

This cause indicates that there is no appropriate VPCI/VCI presently available to handle the call.

– *Cause No. 73* – Unsupported combination of traffic parameters

This cause is returned when the combination of traffic parameters is illegal.

– *Cause No. 89* – Invalid endpoint reference value

This cause is returned when the invalid endpoint reference is included in the message.

– *Cause No. 93* – AAL parameters cannot be supported

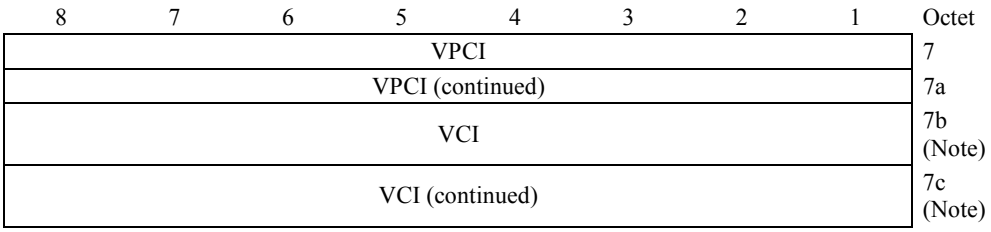
This cause is used to indicate that the requested AAL parameters cannot be provided.

3.3 Diagnostics

The diagnostics defined in 2.2.6/Q.850 [1] are applicable. In addition the diagnostics applicable to Cause No. 82, when generated within the B-ISDN, is modified as described below.

3.3.1 Cause No. 82

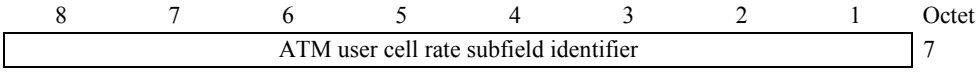
The channel identity diagnostic is encoded as follows:



NOTE – Octets 7b and 7c are present if a VCI is to be indicated with the VPCI. If only the VPCI is to be indicated octets 7b and 7c are not present.

3.3.2 Identified subfield identifier

The identified subfield identifier diagnostic is encoded as follows:



NOTE 1 – Octet 7 may be repeated to report multiple ATM user cell rate subfield identifiers.

NOTE 2 – All the subfield identifiers can be included in this field, not just the subfield identifiers for the ATM user cell rate parameters.

4 General rules for handling of the location field

The location field shall be handled as described in clause 3/Q.850 [1].

5 Handling of cause and location at the international interface

Clause 4/Q.850 [1] is applicable.

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