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**COMMON ASPECTS OF B-ISDN APPLICATION
PROTOCOLS FOR ACCESS SIGNALLING
AND NETWORK SIGNALLING
AND INTERWORKING**

**BROADBAND INTEGRATED SERVICES
DIGITAL NETWORK (B-ISDN) –
USAGE OF CAUSE AND LOCATION
IN B-ISDN USER PART AND DSS 2**

ITU-T Recommendation Q.2610
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(Previously "CCITT Recommendation")

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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 their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation Q.2610 was prepared by ITU-T Study Group 11 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 7th of February 1995.

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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SUMMARY

This Recommendation describes the interworking between the DSS 2 access interface protocol and the Broadband ISDN User Part protocol. It is part of a set of interlocking B-ISDN service and signalling Recommendations that comprise Broadband signalling Capability Set 1. This Recommendation describes the mapping tables and diagrams which support interworking between the protocols for basic call set-up and clear down.

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Recommendation Q.2610

BROADBAND INTEGRATED SERVICES DIGITAL NETWORK (B-ISDN) – USAGE OF CAUSE AND LOCATION IN B-ISDN USER PART AND DSS 2

(Geneva, 1995)

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 contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication the editions indicated were valid. As all Recommendations and other references are subject to revision, users of this Recommendation are encouraged to investigate the possibility of applying the most recent editions 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 (1993), *Use of cause and location in the digital subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN user Part.*
- [2] ITU-T Recommendation Q.2931 (1995), *Broadband Integrated Services Digital Network (B-ISDN) – Digital Subscriber Signalling No. 2 (DSS 2) – User-network interface layer 3 specification for basic call/connection control.*
- [3] ITU-T Recommendation Q.2764 (1995), *Broadband Integrated Services Digital Network (B-ISDN) – Signalling System No. 7 B-ISDN user part (B-ISUP) – Basic call procedures.*

3 Cause

3.1 Format

The format of the DSS 2 Cause information element and B-ISDN User Part Cause indicator parameter is shown in Figures 1/Q.2610 and 2/Q.2610 respectively.

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	8	7	6	5	4	3	2	1	
0	Cause information element identifier								1
1 ext	Coding standard			Information element instruction field					2
	Length of cause information contents								3 4
1 ext	0	0	0	Location					5
	Spare								
1 ext	Cause value								6
	Diagnostic(s) (if any)								7* 7n*

* Optional octets

FIGURE 1/Q.2610

Detailed formatting scheme of the DSS 2 Cause information element

	8	7	6	5	4	3	2	1	
	Parameter name								1
	Length of cause information contents								2 3
ext	Parameter compatibility information								4
ext	Parameter compatibility information								4a
ext	Coding standard		Spare		Location			5	
ext	Cause value								6
	Diagnostic(s) (if any)								7* 7n*

* Optional octets

FIGURE 2/Q.2610

Detailed formatting scheme of the B-ISDN User Part Cause indicator parameter

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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
35	Requested VPCI/VCI not available	(Not applicable)	DSS 2	5.2.3.1/Q.2931 [2] 5.2.3.2/Q.2931 [2]
36	VPCI/VCI assignment failure	(Not applicable)	DSS 2/B-ISDN User Part	5.1.2/Q.2931 [2] 5.2.3/Q.2931 [2] 2.1.2.3/Q.2764 [3]
37	User cell rate not available	Identified subfield identifier	DSS 2/B-ISDN User Part	5.1.3/Q.2931 [2] 2.3.1/Q.2764 [3] 2.3.2/Q.2764 [3]
45	No VPCI/VCI available	(Not applicable)	DSS 2/B-ISDN User Part	5.1.2.1.2/Q.2931 [2] 5.2.3.1/Q.2931 [2] 5.2.3.2/Q.2931 [2] 2.3.1/Q.2764 [3] 2.3.2/Q.2764 [3]
93	AAL parameters cannot be supported	(Not applicable)	DSS 2	Annex F/Q.2931 [2]

Additional definitions:

- *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. 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.

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3.3.1 Cause No. 82

The channel identity diagnostic is encoded as follows:

8	7	6	5	4	3	2	1	Octet
VPCI								7
VPCI (continued)								7a
VCI								7b (Note)
VCI (continued)								7c (Note)
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:

8	7	6	5	4	3	2	1	Octet
ATM user cell rate subfield identifier								7
NOTE – Octet 7 may be repeated to report multiple ATM user cell rate subfield identifiers.								

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.