

- 00 - Unknown
- 01 - Permanent
- 10 - Transient.

Note 2 - The format of the diagnostic field for causes number 57, 58 and 65 is as shown in Figure B-2/Q.699 and Table B-2a/Q.699 to B-2b/Q.699.

Note 3 - Description in [] indicates current difference in description among Recommendations Q.931 and Q.763. Further alignment may be required for those cause values, i.e., #22, #29, #50, #69 and #99.

2.6 Diagnostic(s)

Cause	Diagnostic(s)	_Recommendations_
_ 1. _Condition (Note 1)		_Q.931, Q.763 _
_ 2. _Transit Network identity		_Q.931, Q.763 _
_ 3. _Condition (Note 1)		_Q.931, Q.763 _
_ 16. _Condition (Note 1)		_Q.931, Q.763 _
_ 21. _Condition (Note 1), User supplied diagnostics		_Q.931, Q.763 _
_ 22. _New Destination [Q.931]/Called Party number (new) _ [Q.763]		_Q.931, Q.763 _
_ 29. _Facility identification [Q.931]/Rejected parameter _ [Q.763]		_Q.931, Q.730 _
_ 43. _Discarded information element identifier(s)		_Q.931 _
_ 49. _Condition (Note 2)		_Q.931 _
_ 50. _Facility identification [Q.931]/Rejected parameter _ [Q.763]		_Q.931, Q.730 _
_ 57. _Attribute identity (Note 2)		_Q.931, Q.763 _
_ 58. _Attribute identity (Note 2)		_Q.931, Q.763 _
_ 65. _Attribute identity (Note 2)		_Q.931, Q.763 _
_ 66. _Channel type		_Q.931 _
_ 69. _Facility identification [Q.931]/Rejected parameter _ [Q.763]		_Q.931, Q.730 _
_ 82. _Channel identity		_Q.931 _
_ 86. _Clearing cause		_Q.931 _
_ 88. _Incompatible parameter [Q.931]		_Q.931, Q.763 _
_ 96. _Information element identifier		_Q.931 _
_ 97. _Message Type		_Q.931, Q.763 _
_ 98. _Message Type		_Q.931 _
_ 99. _Information element identifier(s) [Q.931]/Parameter _ name(s) [Q.763]		_Q.931 Q.763 _
_ 100. _Information element identifier(s)		_Q.931 _
_ 101. _Message type		_Q.931 _
_ 102. _Timer number		_Q.931 _
_ 103. _Parameter name(s)		_ Q.763 _

Note 1 - The following coding is used:

Bit 8: 1

Bit 7-3: 00000

Bit 2-1: Condition as follows:

+	+	+	+	+	+
-	+				
_	1	1	0	_	0
_	0	0	1	1	_
					99.
					_Information element non-existent or
					_Q.931, Q.763
					_not implemented (Note 2)
					_
					_
_	1	1	0	_	0
_	1	0	0	0	_
					100.
					_Invalid information element contents
					_Q.931
					_
					_
_	1	1	0	_	0
_	1	0	1	0	_
					101.
					_Message not compatible with call
					_Q.931
					_state
					_
					_
_	1	1	0	_	0
_	1	1	0	_	0
					102.
					_Recovery on timer expiry
					_Q.931
					_
					_
_	1	1	0	_	0
_	1	0	1	0	_
					103.
					_Parameter non-existent or not
					_implemented - passed on
					_Q.763
					_
					_
_	1	1	0	_	1
_	1	1	1	0	_
					110.
					_Inconsistency in data
					_Q.730
					_
					_
_	1	1	0	_	1
_	1	1	1	1	_
					111.
					_Protocol error, unspecified
					_Q.931, Q.763
					_
+	+	+	+	+	+
-	+				
_	1	1	1	_	1
_	1	1	1	1	_
					127.
					_Interworking, unspecified
					_Q.931, Q.763
					_
+	+	+	+	+	+
-	+				

All other values are reserved.

Note 1 - In Recommendation Q.763, the words "(national use)" are added.

Note 2 - In Recommendation Q.763, the name of this cause value is "parameter non-existent or not implemented-discard". Further alignment of definition for this cause may be required.

101	0001	81.	Invalid call reference value	Q.931
101	0010	82.	Identified channel does not exist	Q.931
101	0011	83.	A suspended call exists, but this call identity does not	Q.931
101	0100	84.	Call identity in use	Q.931
101	0101	85.	No call suspended	Q.931
101	0110	86.	Call having the requested call identity has been cleared	Q.931
101	0111	87.	Called user not member of CUG	Q.730
101	1000	88.	Incompatible destination	Q.931, Q.763
101	1010	90.	Non-existent CUG	Q.730
101	1011	91.	Invalid transit network selection (Note 1)	Q.931, Q.763
101	1111	95.	Invalid message, unspecified	Q.931, Q.763
110	0000	96.	Mandatory information element is missing	Q.931
110	0001	97.	Message type non-existent or not implemented	Q.931, Q.763
110	0010	98.	Message not compatible with call state or message type non-existent or not implemented	Q.931

TABLE B-1/Q.699 (4 of 4)

Class	Value	number	Cause	Cause	Recommendations

011	0010	50.	Requested facility not subscribed	Q.931, Q.730
011	0101	53.	Outgoing calls barred within CUG	Q.730
011	0111	55.	Incoming calls barred within CUG	Q.730
011	1001	57.	Bearer capability not authorized	Q.931, Q.763
011	1010	58.	Bearer capability not presently available	Q.931, Q.763
011	1110	62.	Inconsistency in designated outgoing access information and subscriber class	Q.730
011	1111	63.	Service or option not available, unspecified	Q.931, Q.763
100	0001	65.	Bearer capability not implemented	Q.931, Q.763
100	0010	66.	Channel type not implemented	Q.931

TABLE B-1/Q.699 (3 of 4)

Class	Value	number	Cause	Cause	Recommendations
765	4321				
100	0101	69.	Requested facility not implemented	Q.931, Q.730	
100	0110	70.	Only restricted digital information bearer capability is available	Q.931, Q.763	
100	1111	79.	Service or option not implemented, unspecified	Q.931, Q.763	

001	1011	27.	Destination out of order	Q.931, Q.763
001	1100	28.	Invalid number format	Q.931, Q.763
001	1101	29.	Facility rejected	Q.931, Q.730
001	1110	30.	Response to STATUS ENQUIRY	Q.931
001	1111	31.	Normal, unspecified	Q.931, Q.763

TABLE B-1/Q.699 (2 of 4)

Class	Value	number	Cause	Recommendations
765	4321			
010	0010	34.	No circuit/channel available	Q.931, Q.763
010	0110	38.	Network out of order	Q.931, Q.763
010	1001	41.	Temporary failure	Q.931, Q.763
010	1010	42.	Switching equipment congestion	Q.931, Q.763
010	1011	43.	Access information discarded	Q.931
010	1100	44.	Requested circuit/channel not available	Q.931, Q.763
010	1111	47.	Resources unavailable, unspecified	Q.931, Q.763
011	0001	49.	Quality of service unavailable	Q.931

TABLE B-1/Q.699 (1 of 4)

Cause values

Cause value	Cause Class	Value	number	Cause	Recommendations
765	4321				
000	0001	1.		Unallocated (unassigned) number (Note 1)	Q.931, Q.763
000	0010	2.		No route to specified transit network	Q.931, Q.763
000	0011	3.		No route to destination	Q.931, Q.763
000	0100	4.		Send special information tone	Q.763
000	0101	5.		Misdialled trunk prefix	Q.763
000	0110	6.		Channel unacceptable	Q.931
000	0111	7.		Call awarded and being delivered in an established channel	Q.931
001	0000	16.		Normal call clearing	Q.931, Q.763
001	0001	17.		User busy	Q.931, Q.763
001	0010	18.		No user responding	Q.931, Q.763
001	0011	19.		No answer from user (user alerted)	Q.931, Q.763
001	0101	21.		Call rejected	Q.931, Q.763
001	0110	22.		Number changed	Q.931, Q.763
001	1010	26.		Non-selected user clearing	Q.931

B.2.4 Recommendation

B.2.5 Cause value

- (2) The cause values are listed in Table B-1/Q.699 below.

FIGURE B-1/Q.699

Format of "Cause"

B.2 Codes used in the sub-field of the "Cause"

B.2.1 Extension indicator (ext)

Bit

8

Octet continues through the next octet

(e.g. octet 1 to la)

1 last octet

B.2.2 Coding standard

B.2.3 Location

This Recommendation forms part of a set of interlocking ISDN service and signalling Recommendations. Other members of this set include the following:

- the operation of basic ISDN telephony teleservice and 64 kbit/s bearer service, which is supported in part via the interworking of the ISDN signalling systems described herein, is defined in detail in Recommendation Q. (basic service stage 2 description);
- the signalling messages and elements of procedure of layer of the Digital Subscriber Signalling System No. 1 and the ISDN User Part of Signalling System No. 7 are defined in Recommendations Q.930/931 (I.450/451) and Recommendations Q.761-Q.764 and Q.766, respectively.

2. Methodology

2.1 General

This chapter describes the methodology used to model and define interworking between the ISDN User Part and layer 3 of Digital Subscriber Signalling System No. 1. The methodology is based on the layer service concepts prescribed by the Reference Model of Open System Interconnection (OSI) for CCITT Applications (Recommendation X.200) and uses the terms and conventions defined in Recommendation X.210 (OSI Layer Service Definition Conventions).

ANNEX B

(to Recommendation Q.699)

Usage of "Cause" in Recommendations Q.937, Q.763 and Q.730

B.1 Format

Format of Q.931 Cause information element or Q.763/Q.730 Cause indicators parameter contents is shown in Figure B-1/Q.699.

SECTION 3 - INTERWORKING BETWEEN DIGITAL SUBSCRIBER SIGNALLING
SYSTEM No. 1 AND SIGNALLING SYSTEM No. 7

Recommendation Q.699

INTERWORKING BETWEEN THE DIGITAL SUBSCRIBER SIGNALLING
SYSTEM LAYER 3 PROTOCOL AND THE SIGNALLING SYSTEM No. 7
ISDN USER PART

1. General

1.1 Introduction

This Recommendation defines the interworking relationship between the layer 3 functions and protocol of Digital Subscriber Signalling System No. 1 (DSS 1) and the ISDN User Part functions and protocol of Signalling System No. 7.

The interworking between the above two signalling protocols typically may occur in an ISDN local exchange and is specified in the context of a typical call in a pure ISDN or mixed ISDN/non-ISDN environment.

1.2 Purpose

The purpose of the Recommendation is:

- a) to define how the layer 3 protocol of DSS 1 and Signalling System No. 7 ISDN User Part protocol should be used in combination with call control functions, to support the basic bearer service;
- b) to provide a logical bridge between the abstract signalling information flows, which are used in the description of ISDN services, and the corresponding messages and elements of procedure of the ISDN User-Network Interface User Part protocols.

1.3 Scope

This Recommendation is aimed at defining the interworking relationship between the call control protocol of the Digital Subscriber Signalling System No. 1 and the ISDN User Part of Signalling System No. 7.

The Recommendation defines in detail the relationship between signalling information conveyed via the Digital Subscriber Signalling System No. 1 protocol and similar signalling information conveyed via the ISDN User Part of Signalling System No. 7. The above relationship is described within the context of supporting the provision of basic bearer service for a call within an ISDN or mixed ISDN/non-ISDN environment.

1.4 Relationship to other Recommendations