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European Standard (Telecommunications series)

Integrated Services Digital Network (ISDN);
Signalling System No.7 (SS7);
ISDN User Part (ISUP) version 4 for the international interface;
Part 1: Basic services

[ITU-T Recommendations Q.761 to Q.764 (1999) modified]

Reference
REN/SPAN-01082-01

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 1 of a multi-part deliverable covering the ISDN User Part (ISUP) version 4 for the international interface, as identified below:

Part 1: **"Basic services [ITU-T Recommendations Q.761 to Q.764 (1999) modified]";**

Part 2: "ISDN supplementary service [ITU-T Recommendation Q.730 (1999) modified]";

Part 3: "Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993) modified]";

Part 4: "Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993) modified]";

Part 5: "Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993) modified]";

Part 6: "Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993) modified]";

Part 7: "Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993) modified]";

Part 8: "User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1997) modified]";

Part 9: "Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993) modified]";

Part 10: "Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992) modified]";

Part 11: "Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997) modified]";

Part 12: "Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993) and implementors guide (1998) modified]";

Part 14: "Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996) and implementors guide (1998) modified]";

Part 15: "Diversion supplementary service [ITU-T Recommendation Q.732, clauses 2 to 5 (1999) modified]";

Part 16: "Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993) modified]";

Part 17: "Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992) modified]";

Part 18:   "Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997) modified]";

Part 19:   "Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996) and implementors guide (1998) modified]";

Part 20:   "Completion of Calls on No Reply (CCNR) supplementary service [ITU-T Recommendation Q.733, clause 5 (1999) modified]";

Part 21:   "Anonymous Call Rejection (ACR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993)]";

Part 31:   "Protocol Implementation Conformance Statement (PICS) proforma specification for basic services";

Part 32:   "Test Suite Structure and Test Purposes (TSS&TP) specification for basic services";

Part 33:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for basic services";

Part 34:   "Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services";

Part 35:   "Test Suite Structure and Test Purposes (TSS&TP) specification for supplementary services";

Part 36:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for supplementary services".

National transposition dates	
Date of adoption of this EN:	13 July 2001
Date of latest announcement of this EN (doa):	31 October 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2002
Date of withdrawal of any conflicting National Standard (dow):	30 April 2002

Endorsement notice

The elements of ITU-T Recommendations Q.761, Q.762, Q.763 and Q.764 (1999) apply, with the following modifications.

NOTE: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary.

Global modifications to ITU-T Recommendations Q.761 to Q.764

Replace the clauses "Scope", "References" and "Abbreviations" with the following three clauses (Scope, References, and Abbreviations).

Scope

The present document specifies procedures to support basic bearer services and supplementary services defined for the pan-European Integrated Services Digital Network (ISDN) as provided by the European public telecommunications operators by means of the Signalling System No.7 protocol for the ISDN User Part (ISUP).

The present document does not specify the additional protocol requirements where the service is provided to the user via a telecommunications network that is not an ISDN.

Although the present document applies only to the international interconnection, the specification of functions, formats and codes of messages and signals, and actions performed at originating and destination local exchanges are retained.

Formats, codes and procedures marked for national use are included for informative purposes for the international interface specification. If these items so marked are supported within a national network and operator's network, then it is proposed that they shall be supported in this manner.

Items in the present document marked "not required" are not required to be supported.

NOTE: In the case where a national signalling system behaves differently, the international gateway exchange is to support both the concerned national and international network.

The present document is compatible with ETS 300 121 [2] (ITU-T Recommendation Q.767).

Descriptions of interworking with ITU-T Blue Book (1988) exchanges are informative only.

References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.

[1] ITU-T Recommendation E.164 (1997): "The international public telecommunication numbering plan".

NOTE: This Recommendation is also included but not published in I series under alias number I.331. Replaces former E.163 "Numbering plan". Plus Supplement 1 (1998) "Alternatives for carrier selection and network identification" and Supplement 2 (1998) "Number Portability".

[2] ETSI ETS 300 121 (1992): "Integrated Services Digital Network (ISDN); Application of the ISDN User Part (ISUP) of CCITT Signalling System No.7 for international ISDN interconnections (ISUP version 1)".

[3] ETSI EN 300 356-2: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 2: ISDN supplementary service [ITU-T Recommendation Q.730 (1999) modified]".

[4]   ETSI EN 300 356-3: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 3: Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993) modified]".

[5]   ETSI EN 300 356-4: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 4: Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993) modified]".

[6]   ETSI EN 300 356-5: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 5: Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993) modified]".

[7]   ETSI EN 300 356-6: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 6: Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993) modified]".

[8]   ETSI EN 300 356-7: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 7: Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993) modified]".

[9]   ETSI EN 300 356-8: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 8: User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1997) modified]".

[10]   ETSI EN 300 356-9: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 9: Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993) modified]".

[11]   ETSI EN 300 356-10: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 10: Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992) modified]".

[12]   ETSI EN 300 356-11: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 11: Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997) modified]".

[13]   ETSI EN 300 356-12: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 12: Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993) and implementors guide (1998) modified]".

[14]   ETSI EN 300 356-14: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 14: Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996) and implementors guide (1998) modified]".

[15]   ETSI EN 300 356-15: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 15: Diversion supplementary service [ITU-T Recommendation Q.732, clauses 2 to 5 (1999) modified]".

[16]   ETSI EN 300 356-16: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 16: Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993) modified]".

[17]   ETSI EN 300 356-17: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 17: Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992) modified]".

[18]   ETSI EN 300 356-18: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 18: Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997) modified]".

[19]   ETSI EN 300 356-19: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 19: Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996) and implementors guide (1998) modified]".

[20]   ETSI EN 300 356-20: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 20: Completion of Calls on No Reply (CCNR) supplementary service [ITU-T Recommendation Q.733, clause 5 (1999) modified]".

[21]   ETSI EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".

[22]   ETSI EN 300 485 (V1.2.3): "Integrated Services Digital Network (ISDN); Definition and usage of cause and location in Digital Subscriber Signalling System No. one (DSS1) and Signalling System No.7 ISDN User Part (ISUP) [ITU-T Recommendation Q.850 (1998), modified]".

[23]   ITU-T Recommendation X.121: "International numbering plan for public data networks".

[24]   ITU-T Recommendation F.69: "The international telex service - Service and operational provisions of telex destination codes and telex network identification codes".

Abbreviations

For the purposes of the present document, the following abbreviations apply:

3PTY	Three Party
ACR	Anonymous Call Reject
APM	Application transPort Mechanism
CCBS	Completion of Calls to Busy Subscriber
CCNR	Completion of Calls on No Reply
CD	Call Deflection
CFB	Call Forwarding Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
COLP	COnnected Line Identification Presentation
COLR	COnnected Line Identification Restriction
CONF	CONFerence call, add-on
CUG	Closed User Group
CW	Call Waiting
ECT	Explicit Call Transfer
GVNS	Global Virtual Network Service
HOLD	Call Hold
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
ITCC	International Telephony Charge Card service
MCID	Malicious Call IDentification
MLPP	Multi-Level Precedence and Preemption
MWI	Message Waiting Indication
REV	REVerse charging supplementary service

SUB	SUBaddressing
TP	Terminal Portability
UUS	User-to-User Signalling
VPN	Virtual Private Network

Throughout the text of ITU-T Recommendations Q.761 to Q.764

Replace references as shown in table 1.

Table 1

Reference in ITU-T Recommendations Q.761 to Q.764	Modified reference
ITU-T Recommendation Q.730	ITU-T Recommendation Q.730 as modified by EN 300 356-2 [3]
ITU-T Recommendation Q.731.3	ITU-T Recommendation Q.731.3 as modified by EN 300 356-3 [4]
ITU-T Recommendation Q.731.4	ITU-T Recommendation Q.731.4 as modified by EN 300 356-4 [5]
ITU-T Recommendation Q.731.5	ITU-T Recommendation Q.731.5 as modified by EN 300 356-5 [6]
ITU-T Recommendation Q.731.6	ITU-T Recommendation Q.731.6 as modified by EN 300 356-6 [7]
ITU-T Recommendation Q.731.7	ITU-T Recommendation Q.731.7 as modified by EN 300 356-11 [12]
ITU-T Recommendation Q.731.8	ITU-T Recommendation Q.731.8 as modified by EN 300 356-10 [11]
ITU-T Recommendation Q.732.2	ITU-T Recommendation Q.732.2 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.3	ITU-T Recommendation Q.732.3 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.4	ITU-T Recommendation Q.732.4 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.5	ITU-T Recommendation Q.732.5 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.7	ITU-T Recommendation Q.732.7 as modified by EN 300 356-14 [14]
ITU-T Recommendation Q.733.1	ITU-T Recommendation Q.733.1 as modified by EN 300 356-17 [17]
ITU-T Recommendation Q.733.2	ITU-T Recommendation Q.733.2 as modified by EN 300 356-16 [16]
ITU-T Recommendation Q.733.3	ITU-T Recommendation Q.733.3 as modified by EN 300 356-18 [18]
ITU-T Recommendation Q.733.4	ITU-T Recommendation Q.733.4 as modified by EN 300 356-7 [8]
ITU-T Recommendation Q.733.5	ITU-T Recommendation Q.733.5 as modified by EN 300 356-20 [20]
ITU-T Recommendation Q.734.1	ITU-T Recommendation Q.734.1 as modified by EN 300 356-12 [13]
ITU-T Recommendation Q.734.2	ITU-T Recommendation Q.734.2 as modified by EN 300 356-19 [19]
ITU-T Recommendation Q.735.1	ITU-T Recommendation Q.735.1 as modified by EN 300 356-9 [10]
ITU-T Recommendation Q.737.1	ITU-T Recommendation Q.737.1 as modified by EN 300 356-8 [9]
ITU-T Recommendation Q.761	ITU-T Recommendation Q.761 as modified by the present document
ITU-T Recommendation Q.762	ITU-T Recommendation Q.762 as modified by the present document
ITU-T Recommendation Q.763	ITU-T Recommendation Q.763 as modified by the present document
ITU-T Recommendation Q.764	ITU-T Recommendation Q.764 as modified by the present document
ITU-T Recommendation Q.767	ETS 300 121 [2]
ITU-T Recommendation Q.850	ITU-T Recommendation Q.850 as modified by EN 300 485 [22]
ITU-T Recommendation Q.931	ITU-T Recommendation Q.931 as modified by EN 300 403-1 [21]

Modifications to ITU-T Recommendation Q.761

Table 1/Q.761

Replace table 1/Q.761 by table 2.

Table 2

Function/service	National use according to ITU-T	International use according to ITU-T	International use according to the present document
Basic call			
Speech/3,1 kHz audio	+	+	+
64 kbit/s unrestricted	+	+	+
Multirate connection types (see note 1)	+	+	+
Nx64 kbit/s connection types	+	+	-
En-bloc address signalling	+	+	+
Overlap address signalling	+	+	+
Transit network selection	+	-	-
Continuity check	+	+	+
Forward transfer	-	+	+
Signalling procedures for connection type allowing fallback capability	+	+	+
Compatibility procedure	+	+	+
Simple segmentation	+	+	+
Tones and announcements	+	+	+
Propagation delay determination procedure	+	+	+
Enhanced echo control signalling procedures	+	+	+
Simple echo control signalling procedures	+	+	+
Automatic repeat attempt	+	+	+
Blocking and unblocking of circuits and circuit groups	+	+	+
Circuit group query	+	-	-
Dual seizure	+	+	+
Transmission alarm handling for digital inter-exchange circuits	+	+	+
Reset of circuits and circuit groups	+	+	+
Receipt of unreasonable signalling information	+	+	+
Access delivery information	+	+	+
Transportation of user teleservice information	+	+	+
Suspend and resume	+	+	+
Temporary trunk blocking	+	-	-
ISDN user part signalling congestion control	+	+	+
Automatic congestion control	+	+	+
Interaction between N-ISDN and INAP	+	+	+
Unequipped circuit identification code	+	-	-
ISDN user part availability control	+	+	+
MTP pause and resume	+	+	+
Overlength messages	+	+	+
Temporary alternative routing (TAR)	+	+	+
Hop counter procedure	+	+	+
Collect call request procedure	+	+	+
Hard-to-Reach	+	+	-
Calling Geodetic location procedure	+	+	+
Carrier Selection Information (see note 2)	+	-	-
Global Call Reference	+	+	+
Key: + support			
- non-support			
NOTE 1: Multirate connection types are 2×64, 384, 1 536 and 1 920 kbit/s.			
NOTE 2: This is not part of the ITU-T ISUP 2000 set of recommendations.			

Table 2/Q.761

Replace table 2/Q.761 by table 3.

Table 3

Function/service	National use according to ITU-T	International use according to ITU-T	International use according to the present document
Generic signalling procedures			
End-to-end signalling - Pass along method	+	-	-
End-to-end signalling - SCCP connection oriented	+	+	-
End-to-end signalling - SCCP connectionless	+	-	-
Generic number transfer	+	+	+
Generic digit transfer	+	-	-
Generic notification procedure	+	+	+
Service activation	+	+	+
Remote operations service (ROSE) capability	+	-	-
Network specific facilities	+	-	-
Pre-release information transport	+	+	+
Application Transport Mechanism (APM)	+	+	+
Redirection	+	-	-
Pivot Routeing	+	+	-
Supplementary services			
DDI	+	+	+
MSN	+	+	+
CLIP/CLIR	+	+	+
COLP/COLR	+	+	+
MCID	+	+	+
SUB	+	+	+
TP	+	+	+
CFU, CFB, CFNR	+	+	+
CD	+	+	+
CW	+	+	+
HOLD	+	+	+
CONF	+	+	+
3PTY	+	+	+
CUG	+	+	+
MLPP	+	+	-
UUS, service 1 (implicit)	+	+	+
UUS, service 1 (explicit)	+	+	+
UUS, service 2	+	+	+
UUS, service 3	+	+	+
ECT	+	+	+
CCBS	+	+	+
CCNR	+	+	+
MWI	-	-	+
ITCC	+	+	-
GVNS	+	+	(see note)
REV	+	-	-
ACR	-	-	+
Additional functions/services			
VPN	-	-	+
NP	+	-	-
Key: + support			
- non-support			
NOTE: GVNS is not supported as an ETSI service, but the ITU-T parameters can still be used in conjunction with Core INAP CS2.			

Subclause 6.1

Insert the following before the second last sentence:

"It is a network operator's option whether compatibility information is included for network specific messages and parameters".

Appendix A

Appendix A has the status of an informative annex.

Modifications to ITU-T Recommendation Q.762

Clause 2

Item 2.34 (release message):

Delete the sentence ~~"Where the call is to be redirected the message will also carry the redirection number"~~.

Clause 3

Insert the following new items:

3.x IN Service Compatibility: information sent in either direction indicating the IN Services being invoked in a call

3.y Carrier selection information (CSI): information sent in the forward direction to indicate the method (namely call per call or preselection) being used to invoke carrier selection

3.z Global Call Reference (GCR): information sent in the forward direction to uniquely identify a call and correlate call activities associated with that call

Clause 4

Item 4.2 (Address Presentation Restriction Indicator)

Add the following to the last sentence "It may also be used to indicate that the address cannot be ascertained, and in the case of the Calling Party Number only, to indicate that the number may not be presented to a user for reasons other than invocation of the CLIR service ("Presentation Restricted by network").

Insert the following new items:

4.xx IN Service Compatibility indication: information sent in either direction indicating the IN Services being invoked in a call

4.ax APM-user Information: information supplied by the APM-user application and conveyed in the Application Transport Parameter

4.ay Destination Address: address of the node where the APM-user application information shall be delivered

4.az Destination Address length: binary coded information indicating the number of octets in the Destination Address field

4.ay Originating Address: address of the node which has initiated the relationship with the remote APM-user application

4.ax Originating Address length: binary coded information indicating the number of octets in the Originating Address field

4.aa Network ID length indicator: binary coded information indicating the number of octets in the Network ID field

4.bb Network ID: information identifying a network

4.cc Node ID: information sent in the Global Call Reference parameter to identify the node that generated the call reference

4.dd Node ID length indicator: binary coded information indicating the number of octets in the Node ID field

4.ee Call reference ID: information sent in the Global Call Reference parameter indicating the reference associated to the call

4.ff Call reference length indicator: binary coded information indicating the number of octets in the Call Reference ID field

Modifications to ITU-T Recommendation Q.763

Subclause 1.0.5, first paragraph

Insert after the first paragraph:

"It is not necessary to check the parameter values of the parameters that are not under control of ISUP (e.g. User service information, User service information prime, User teleservice information)".

Subclause 1.2, (item e)

Not supported.

Subclause 1.2, table 3/Q.763, part 2

Not supported.

Subclause 1.13

Replace the word "ITU-T" by "ETSI" in the three instances of the word in the subclause.

Clause 1

Insert a new subclause 1.14:

1.14 Number lengths

For the international interface the number lengths to be supported by the ISUP are restricted by the limits defined by E.164 [1]. This applies to the called party number, whether signalled by the en bloc or overlap methods, and all the other number types transferred by ISUP, e.g. Calling Party Number, etc.

However, within national networks, it is acknowledged that the E.164 number length is too restrictive for some applications, and specifically various national requirements for the extension of the called party number are known. The following remarks are made with regard to extension of number lengths for use within national networks:

Interoperability problems can be foreseen with peer-to-peer interworking to earlier versions of ISUP, which may only support the parameter lengths indicated in previous versions of ISUP.

Gateway exchanges between networks using extended number lengths and the international network have to ensure that only E.164 number lengths are passed to the international network.

Table 5/Q.763

Modify table 5/Q.763 as shown in table 4.

Table 4

Parameter name	Reference (subclause)	Code
⋮	⋮	⋮
Connection Request (not required)	3.17	00001101
⋮	⋮	⋮
MLPP precedence (not required)	3.34	00111010
⋮	⋮	⋮
Pivot capability (not required)	3.84	0111 1011
Pivot routeing forward indicators (not required)	3.85	0111 1100
⋮	⋮	⋮
HTR information (not required)	3.89	1000 0010
⋮	⋮	⋮
Pivot counter (not required)	3.93	1000 0111
Pivot routeing forward information (not required)	3.94	1000 1000
Pivot routeing backward information (not required)	3.95	1000 1001
⋮	⋮	⋮
IN Service Compatibility	3.xx	1010 0010
Carrier selection information	3.yx	1010 0001
Global Call Reference	3.zx	1010 0100
⋮	⋮	⋮
Reserved for national use		01000001

Subclause 3.10, (item e)

Modify the code definition of *Address Presentation Restricted Indicator:*

11 ~~Reserved for restriction by the network~~ Presentation restricted by network

Subclause 3.17

Add "(not required)" to the Subclause title.

Subclause 3.26, (item c)

Modify the code definition of the following codes:

0000101   ~~spare~~PISN specific number (national use)
0000110 ⎤

        to ⎬   spare

1101111 ⎦

Subclause 3.26, (item e)

Modify the code definition of the following code:

     000   ~~spare~~unknown (national use)

Subclause 3.34

Add "(not required)" to the subclause title.

Subclause 3.37, bit D

Add "(not required)" to the value 1 (MLPP user) of the MLPP user indicator.

Subclause 3.54

Modify as follows:

The following codes are used in the transmission medium requirement parameter field:

```
00000000        speech
00000001        spare
00000010        64 kbit/s unrestricted
00000011        3,1 kHz audio
00000100        reserved for alternate speech (service 2)/64 kbit/s unrestricted (service 1)
00000101        reserved for alternate 64 kbit/s unrestricted (service 1)/speech (service 2)
00000110        64 kbit/s preferred
00000111        2 × 64 kbit/s unrestricted
00001000        384 kbit/s unrestricted
00001001        1 536 kbit/s unrestricted
00001010        1 920 kbit/s unrestricted
00001011        ⎫
   to           ⎬  spare
00001111        ⎭
00010000        reserved for 3 × 64 kbit/s unrestricted
00010001        reserved for 4 × 64 kbit/s unrestricted
00010010        reserved for 5 × 64 kbit/s unrestricted
00010011        spare
00010100        reserved for 7 × 64 kbit/s unrestricted
00010101        reserved for 8 × 64 kbit/s unrestricted
00010110        reserved for 9 × 64 kbit/s unrestricted
00010111        reserved for 10 × 64 kbit/s unrestricted
00011000        reserved for 11 × 64 kbit/s unrestricted
00011001        reserved for 12 × 64 kbit/s unrestricted
00011010        reserved for 13 × 64 kbit/s unrestricted
00011011        reserved for 14 × 64 kbit/s unrestricted
00011100        reserved for 15 × 64 kbit/s unrestricted
00011101        reserved for 16 × 64 kbit/s unrestricted
00011110        reserved for 17 × 64 kbit/s unrestricted
00011111        reserved for 18 × 64 kbit/s unrestricted
00100000        reserved for 19 × 64 kbit/s unrestricted
00100001        reserved for 20 × 64 kbit/s unrestricted
00100010        reserved for 21 × 64 kbit/s unrestricted
00100011        reserved for 22 × 64 kbit/s unrestricted
00100100        reserved for 23 × 64 kbit/s unrestricted
00100101        spare
00100110        reserved for 25 × 64 kbit/s unrestricted
00100111        reserved for 26 × 64 kbit/s unrestricted
00101000        reserved for 27 × 64 kbit/s unrestricted
00101001        reserved for 28 × 64 kbit/s unrestricted
00101010        reserved for 29 × 64 kbit/s unrestricted
00101011        ⎫
   to           ⎬  spare
11111111        ⎭
```

Subclause 3.62

Add "(not required)" to the subclause title.

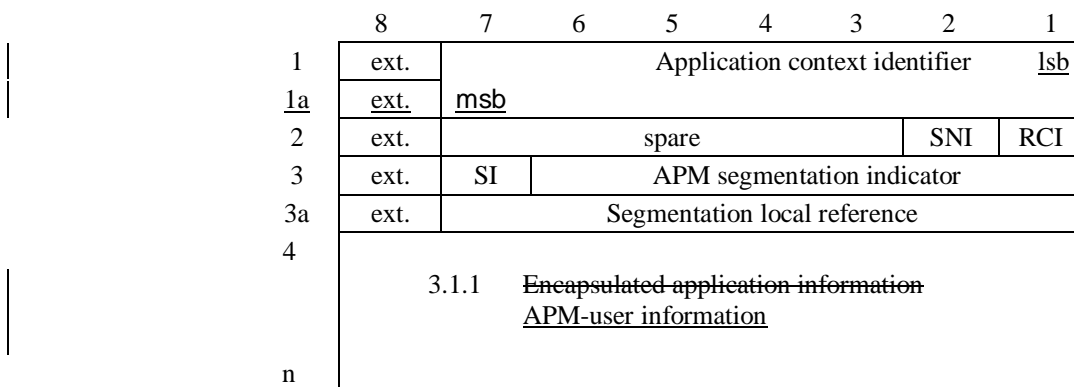## Subclause 3.66

Add "(not required)" to the subclause title.

Subclause 3.69

Not supported.

Subclause 3.82

Modify subclause 3.82:

The format of the application transport parameter field is shown in Figure 77.

	8	7	6	5	4	3	2	1
1	ext.		Application context identifier					lsb
1a	ext.	msb						
2	ext.	spare					SNI	RCI
3	ext.	SI	APM segmentation indicator					
3a	ext.	Segmentation local reference						
4 ⋮ n	3.1.1 ~~Encapsulated application information~~ APM-user information							

Figure 77/Q.763: Application transport parameter field

The following codes are used in the application transport parameter field:

a) Extension indicator (ext.): as Subclause 3.25 a).

b) Application context identifier (ACI) (Octet 1 and Octet 1a)

   b1) If the extension bit is set to 1 in octet 1, octet 1a is absent. The value contained in octet 1 Bits 1-7 shall be interpreted as follows:

   0 0 0 0 0 0 0   Unidentified Context and Error Handling (UCEH) ASE

   0 0 0 0 0 0 1   PSS1 ASE (VPN)

   0 0 0 0 0 1 0   Spare

   0 0 0 0 0 1 1   Charging ASE

   The preceding values are used by APM'98'-user applications.

   0 0 0 0 1 0 0   GAT

   0 0 0 0 1 0 1   BAT ASE

   0 0 0 0 1 1 0   Enhanced Unidentified Context and Error Handling ASE (EUCEH ASE)

   0 0 0 0 1 1 1
      to   Spare for international use
   0 1 1 1 1 1 1

   1 0 0 0 0 0 0
      to   reserved for non-standardized APM'98'-user applications
   1 1 1 1 1 1 1

b2) If the extension bit is set to 0 in octet 1, octet 1a is present. In that case, the ACI is a 14-bit field:

Octet 1a,   Octet 1,

Bits 1-7   Bits 1-7
0 0 0 0 0 0 1   0 0 0 0 0 0 0 ⌉
             to   ⎬   reserved for non-standardized APM'2000'-user applications
0 0 0 0 0 0 1   1 1 1 1 1 1 1 ⌋

0 0 0 0 0 1 0   0 0 0 0 0 0 0 ⌉
           to   ⎬   Spare for national use
1 1 1 1 1 1 1   1 1 1 1 1 1 1 ⌋

NOTE: The compatibility mechanism as defined in Q.764 is not applicable to this field.

c) *Application transport instruction indicators*

Bit 1   *Release call indicator (RCI)*

0   do not release call

1   Release call

bit 2   *Send notification indicator (SNI)*

0   do not send notification

1   Send notification

d) *APM segmentation indicator*

0 0 0 0 0 0   final segment

0 0 0 0 0 1 ⌉
   to   ⎬   indicates the number of following segments
0 0 1 0 0 1 ⌋

0 0 1 0 1 0 ⌉
   to   ⎬   Spare
1 1 1 1 1 1 ⌋

NOTE: The compatibility mechanism as defined in Q.764 is not applicable to this field.

e) *Sequence indicator (SI)*

0   Subsequent segment to first segment

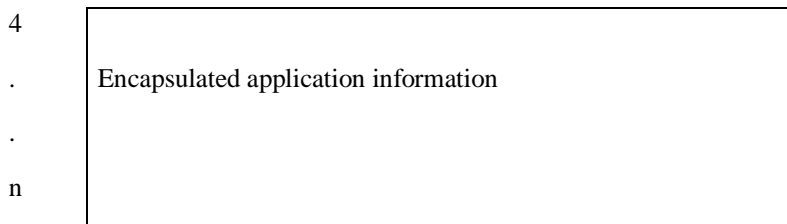1   New sequence

Segmentation local reference (SLR)

g) *APM-user information field*

The format and coding of this field depends on the Application Context Identifier.
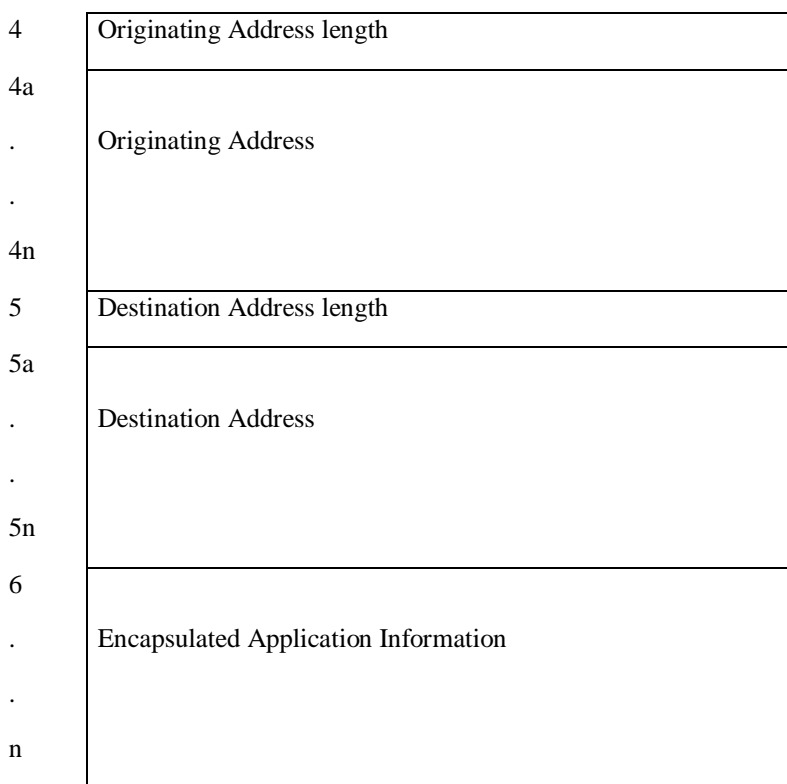
g1) If the ACI corresponds to an APM'98'-user application, then the format of the APM-user information field is shown in Figure 77.1.

4	
.	Encapsulated application information
.	
n	

Figure 77.1/Q.763: Content of the APM-user information fieldfor APM'98'-user applications

The content of this field is described in subclause *g2D)*.

g2) If the ACI corresponds to an APM'2000'-user application, then the format of the APM-user information field is shown in Figure 77.2:

4	Originating Address length
4a	
.	Originating Address
.	
4n	
5	Destination Address length
5a	
.	Destination Address
.	
5n	
6	
.	Encapsulated Application Information
.	
n	

Figure 77.2/Q.763: Content of the APM-user information field for APM'2000'-user applications

The coding of the APM-user information field is as follows:

g2 .A) Originating address length

The values are 0, 3-20.

g2. B) Destination address length

The values are 0, 3-20.

g2 .C)Originating address/Destination address

The originating address (destination address) field is not present if the originating address length (destination address length) is set to zero.

.The format of the Originating and Destination address fields is shown in Figure 77.3.

	8	7	6	5	4	3	2	1
1	O/E	Nature of address indicator						
2	INN Ind.	Numbering plan Ind.			Spare			
3	2nd address signal				1st address signal			
. .								
M	Filler (if necessary)				*n*th address signal			

Figure 77.3/Q.763: Content of the Originating address (Destination address) field

The following codes are used in the Originating address and the Destination address fields:

Odd/even indicator (O/E): as subclause 3.9 a)

2)   *Nature of address indicator*

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	reserved for subscriber number
0 0 0 0 0 1 0	unknown (national use)
0 0 0 0 0 1 1	national (significant) number
0 0 0 0 1 0 0	international number
00 0 0 0 1 0 1	network-specific number (national use)
0 0 0 0 1 1 0	network routeing number in national (significant) number format (national use)
0 0 0 0 1 1 1	network routeing number in network specific number format (national use)
	reserved for network routeing number concatenated with directory number
0 0 0 1 0 0 0	spare
0 0 0 1 0 0 1 to 1 1 0 1 1 1 1	reserved for national use
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	
1 1 1 1 1 1 1	spare

ETSI

3) *Internal network number indicator (INN ind.)*

        0 routeing to internal network number allowed

        1 routeing to internal network number not allowed

4) *Numbering plan indicator*

        0 0 0 spare

        0 0 1 ISDN (Telephony) numbering plan (Recommendation E.164) [1]

        0 1 0 spare

        0 1 1 reserved for data numbering plan (Recommendation X.121) [23]

        1 0 0 reserved for telex numbering plan (Recommendation F.69) [24]

        1 0 1 reserved for national use

        1 1 0 reserved for national use

        1 1 1 spare

5) *Address signal*

        0 0 0 0   digit 0

        0 0 0 1   digit 1

        0 0 1 0   digit 2

        0 0 1 1   digit 3

        0 1 0 0   digit 4

        0 1 0 1   digit 5

        0 1 1 0   digit 6

        0 1 1 1   digit 7

        1 0 0 0   digit 8

        1 0 0 1   digit 9

        1 0 1 0   spare

        1 0 1 1   code 11

        1 1 0 0   code 12

        1 1 0 1   spare

        1 1 1 0   spare

        1 1 1 1   spare

The most significant address signal is sent first. Subsequent address signals are sent in successive 4-bit fields.

6) *Filler:* as Subclause 3.9 f)

g2 .D)   *Encapsulated application information:*

Contains the application specific information.

The format and coding of this field is dependent upon the APM-user application and defined in the appropriate recommendation. For APM-user applications that wish to provide a service of transparent transport of information (e.g. the case where existing information elements are defined for the transport of certain information) as well as having the ability of passing additional network related information within the public network, then the following guideline is provided:

It is suggested that this field be structured such that the first octet (i.e. first octet of first segment for long APM-user information) is a pointer to information to be transported transparently. The pointer value (in binary) gives the number of octets between the pointer itself (included) and the first octet (not included) of transparent data. The pointer value all zeros is used to indicate that no transparent data is present. The range of octets between the pointer octet and the first octet of transparent data (to which the pointer octet points) contains the network related information to be passed between the applications residing within the public network. The format and coding of both the transparent information and the network related information is application specific and defined in the appropriate recommendation.

Clause 4

Modify the note in tables 21/Q.763 (ACM), 22/Q.763 (ANM), 23/Q.763 (CPG), 27/Q.763 (CON), 32/Q.763 (IAM), 51/Q.763 (APM), and 52/Q.763 (PRI):

NOTE: ~~The message may contain one or more Application transport parameter (APP) referring to different Application Context Identifiers.~~ Multiple application transport parameters (APP) can be sent in the same message, provided that they belong to different segmentation sequences.

Subclause 3.85

Not supported.

Subclause 3.89

Not supported.

Subclause 3.93

Not supported.

Subclause 3.94

Not supported.

Subclause 3.95

Not supported.

Subclause 3.xx IN Service Compatibility

The format of the IN Service Compatibility parameter field is shown in Figure X.

8	7	6	5	4	3	2	1

1 — IN Service Compatibility Indication — n
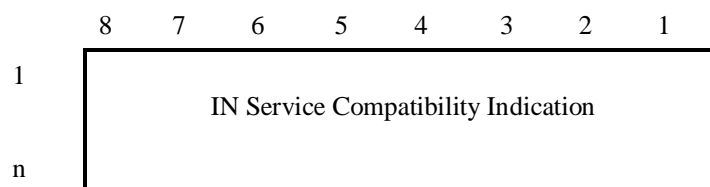
Figure X/Q.763: IN Service Compatibility parameter field

The IN Service Compatibility Indication is coded according to the content of the INServiceCompatibilityIndication parameter defined in Q.1228.

3.yx Carrier Selection Information (CSI) (national use)

The format of the Carrier Selection Information parameter field is shown in table x.

Table x

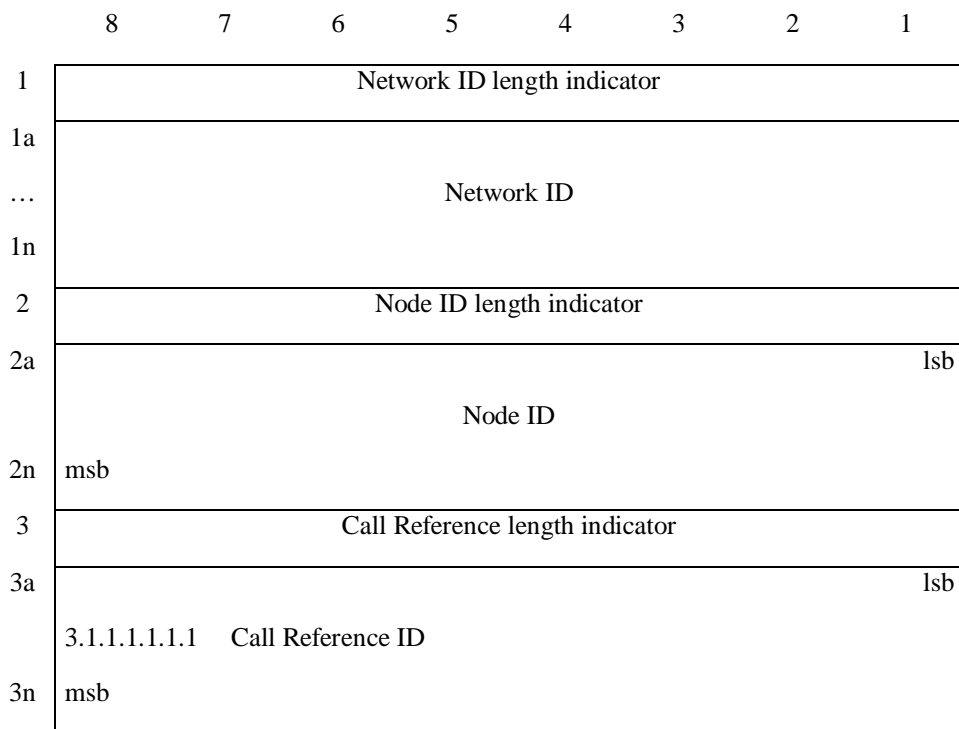| 8	7	6	5	4	3	2	1
H	G	F	E	D	C	B	A

Figure XX/Q.763: Carrier Selection Information parameter field

The following codes are used in the Carrier Selection Information parameter field:

00000000   Reserved for no indication

00000001   Selected Carrier identification pre-subscribed and no input by calling party

00000010   Reserved for selected Carrier identification pre-subscribed and input by calling party

00000011   Reserved for selected Carrier identification pre-subscribed and input by calling party undetermined

00000100   Reserved for selected Carrier identification not pre-subscribed, and input by calling party

00000101   Reserved for primary preferred carrier of the charged party

00000110   Reserved for alternative preferred carrier of the charged party

00000111   Reserved for selected carrier identification presubscription unknown (verbal) instructions from the calling party

00001000   Reserved for selected carrier identification presubscription unknown (verbal) instructions from the charged party

00001001   Reserved for emergency call handling

00001010   Carrier selected by input from calling party

00001011   Carrier selected by a network operator

00001100   ⎤

to   spare

11111110   ⎦

11111111   Reserved

3.YY Global Call Reference

	8	7	6	5	4	3	2	1
1				Network ID length indicator				
1a … 1n				Network ID				
2				Node ID length indicator				
2a 2n	msb			Node ID				lsb
3				Call Reference length indicator				
3a 3n	msb		3.1.1.1.1.1.1 Call Reference ID					lsb

Figure YY: Global Call Reference parameter field

The following codes are used in the subfields of the network identity parameter field:

1) *Network ID*

The Network ID contains the value field (coded according to ASN.1 BER) of an object identifier identifying the network. This means that the tag and length fields are omitted.

An example of such an object identifier can be the following:

-- {itu-t (0) administration (2) national regulatory authority (x) network (y)}

The value for x is the value of the national regulatory authority (one of the Data Country Codes
-- associated to the country as specified in ITU-T Recommendation X.121 shall be used for "national

--regulatory authority"),

-- The value for y is under the control of the national regulatory authority concerned,

2) *Node ID*

A binary number that uniquely identifies within the network the node which generates the call reference.

3) *Call Reference ID*

A binary number used for the call reference of the call. This is generated by the node for each call.

Modify table 21/Q.763 as shown in table 5.

Table 5

Message type: Address complete

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
HTR information (not required)	3.89	O	4-?
⋮			
Pivot routeing backward information (not required)	3.95	O	3-?
IN Service Compatibility	3.xx	O	3-?
⋮	⋮	⋮	⋮

Table 22/Q.763

Modify table 22/Q.763 as shown in table 6.

Table 6

Message type: Answer

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
Pivot routeing backward information (not required)	3.95	O	3-?
IN Service Compatibility	3.xx	O	3-?
⋮	⋮	⋮	⋮

Table 23/Q.763

Modify table 23/Q.763 as shown in table 7.

Table 7

Message type: Call progress

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
Pivot routeing backward information (not required)	3.95	O	3-?
IN Service Compatibility	3.xx	O	3-?
⋮	⋮	⋮	⋮

Table 27/Q.763

Modify table 27/Q.763 as shown in table 8.

Table 8

Message type: Connect

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
HTR information (not required)	3.89	O	4-?
⋮	⋮	⋮	⋮
Pivot routeing backward information (not required)	3.95	O	3-?
IN Service Compatibility	3.xx	O	3-?
⋮	⋮	⋮	⋮

Table 32/Q.763

Modify table 32/Q.763 as shown in table 9.

Table 9

Message type: Initial address

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
~~Circuit assignment map~~	~~3.69~~	~~O~~	~~6-7~~
⋮	⋮	⋮	⋮
Connection request (not required)	3.17	O	7-9
⋮	⋮	⋮	⋮
MLPP precedence (not required)	3.34	O	8
⋮	⋮	⋮	⋮
Pivot capability (not required)	3.84	O	3
⋮	⋮	⋮	⋮
Pivot counter (not required)	3.93	O	3
Pivot routeing forward information (not required)	3.94	O	3 - ?
IN Service Compatibility	3.xx	O	3-?
carrier selection information	3.yx	O	3
Global Call Reference	3.zx	O	8-?
⋮	⋮	⋮	⋮

Table 33/Q.763

Modify table 33/Q.763 as shown in table 10.

Table 10

Message type: Release

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
HTR information (not required)	3.89	O	4-?
⋮	⋮	⋮	⋮

Table 45/Q.763

Modify table 45/Q.763 as shown in table 11

Table 11

Message type: Facility

Parameter	Reference (subclause)	Type	Length (octets)
⋮	⋮	⋮	⋮
Pivot routeing Indicators (not required)	3.85	O	3
⋮	⋮	⋮	⋮
Pivot counter (not required)	3.93	O	3
⋮	⋮	⋮	⋮
Pivot routeing backward information (not required)	3.95	O	3-?
IN Service Compatibility	3.xx	O	3-?
⋮	⋮	⋮	⋮

Annex A

Annex A has the status of a normative annex.

Annex B

Annex B has the status of an informative annex for national use.

Modifications to ITU-T Recommendation Q.764

Subclause 2.1

Add new following sentence to the beginning of subclause 2.1:

"The number of digits supported for a call shall be independent of whether enbloc or overlap operation is used".

Subclause 2.1.1.1 (item a)

Modify as follows:

The connection types allowed are:

- speech;
- 3,1 kHz audio;
- 64 kbit/s unrestricted;
- 64 kbit/s unrestricted preferred;
- 2×64 kbit/s unrestricted; multirate connection types
- 384 kbit/s unrestricted; multirate connection types
- 1 536 kbit/s unrestricted; multirate connection types
- 1 920 kbit/s unrestricted; multirate connection types
- ~~Nx64 kbit/s unrestricted (N = 2 - 30).~~

~~NOTE: The procedure assumes that Recommendation E.172 will at an appropriate time include routing rules for the transmission medium requirement parameter value "Nx64 kbit/s unrestricted".~~

Subclause 2.1.2.1 (item a)

Modify as follows:

The connection types allowed are:

- speech;
- 3,1 kHz audio;
- 64 kbit/s unrestricted;
- 64 kbit/s unrestricted preferred;
- 2×64 kbit/s unrestricted; multirate connection types
- 384 kbit/s unrestricted; multirate connection types
- 1 536 kbit/s unrestricted; multirate connection types
- 1 920 kbit/s unrestricted; multirate connection types
- ~~Nx64 kbit/s unrestricted (N = 2 - 30).~~

~~NOTE: The procedure assumes that Recommendation E.172 will at an appropriate time include routing rules for the transmission medium requirement parameter value "Nx64 kbit/s unrestricted".~~

Subclause 2.1.13

Not supported.

Subclause 2.8.2, last paragraph

Modify last paragraph as follows:

The use of circuits for multirate calls ~~or Nx64 kbit/s connection type~~ has no effect on the blocking (unblocking) procedures, which apply on a per circuit, not per call basis.

Subclause 2.9.1.2, last paragraph

Modify last paragraph as follows:

As a circuit group may handle a mixture of 64 kbit/s and multirate connection types~~, and Nx64 kbit/s connection type~~, dual seizure by calls of different connection types is possible. In this case the initial address messages may have different circuit identification codes.

Subclause 2.9.1.3, first paragraph

~~Delete the sentence "Further study is required to determine the field of application of each method and to ensure that the two methods do inter-work satisfactorily".~~

Subclause 2.9.1.3, last paragraph

The last paragraph "It is necessary (...) with long propagation time" is applicable to both methods described.

Subclause 2.9.1.4 (item a)

Modify as follows:

  a) Where neither call involved is a multirate connection type ~~or Nx64 kbit/s connection types~~

Subclause 2.9.1.4 (item d)

Not supported.

Subclause 2.9.3.1 (item h)

Modify as follows:

  h) when the reset circuit message identifies a circuit being used by a multirate connection type ~~or Nx64 kbit/s connection type~~ call, in addition, in order to make idle all circuits used for the call but not indicated in the reset circuit message, send reset circuit messages (or circuit group reset messages) for those circuits to the affected exchange.

Subclause 2.9.3.2 (item g)

Modify as follows:

  g) when the circuit group reset message identifies circuits being used by a multirate connection type ~~or Nx64 kbit/s connection type~~ call, in addition, in order to make idle all circuits used for the call but not indicated in the circuit group reset message, send reset circuit messages (or circuit group reset messages) for those circuits to the affected exchange.

Subclause 2.9.5, third paragraph

Delete the paragraph ~~"The degree of applicability (...) is for further study"~~.

Subclause 2.9.5.1 (item e)

Modify as follows:

  "e) if a release complete message is received identifying one of the busy circuits being used by a multirate connection type ~~or Nx64 kbit/s connection type~~ call for which a release message has not been sent, the call will be cleared, all circuits made idle and a release message sent indicating the lowest circuit identification code of the multiple 64 kbit/s circuits used by the call;

Subclause 2.9.5.1 (item f)

Modify as follows:

- if the circuit is seized by a call, before receipt of a backward message required for the call set-up, the Reset Circuit Message is sent (or, in the case of a multirate connection type ~~or Nx64 kbit/s connection type~~ call, a circuit group reset message or multiple reset circuit messages are sent).

Subclause 2.9.5.2 (item i)

Delete the paragraph:

i) ~~Signalling for a facility completely provided between the originating and destination local exchanges could utilize one of the end-to-end methods defined in Recommendation Q.730 [16], i.e. such facilities do not have to be supported by transit exchanges.~~

Subclause 2.14

Modify the last paragraph as follows:

If the affected destination is a destination (Signalling Point) known by the ISDN User Part, the circuits in the idle state can be used for calls immediately.

Or as a national option this exchange shall remain locally blocked, a non-call control message requiring a response shall be sent to the distant ISDN User Part. On receipt of the response message (or any other signalling message) from the distant ISDN User Part the local blocking resulting from the previously received MTP pause primitive shall be removed.

Normal call release procedures that may have started during the period of signalling isolation continue and as such will ensure that affected circuits are returned to the idle state".

Subclause 2.16

Insert the following at the end of the subclause:

An outgoing gateway shall set the Temporary Alternative Routing (TAR) indicator to 0 (no indication) independent of the value received from the national network. An incoming gateway shall set the Temporary Alternative Routing (TAR) indicator to 0 (no indication) independent of the value received from the intermediate network.

Subclause 2.19

Not supported.

Add a new subclause 2.1.x:

2.1.x Carrier selection information (national use)

2.1.x.1 Action required at the originating local exchange

If a Carrier Selection is invoked by the user (reception of carrier selection information from the access) or by the network operator, the originating exchange shall send the Carrier Selection Information (CSI) parameter in the IAM.

NOTE: The carrier selection information received from the access can be provided by a short prefix conveyed in the called party number parameter or by other means, depending on the access signalling system (e.g. in the TNS information element in DSS1).

The CSI parameter shall be set as follows:

If call per call Carrier Selection is not invoked and there is a preselected carrier then the CSI parameter is set to "selected carrier identification pre-subscribed, and no input by calling party".

If a carrier is call per call selected then the CSI parameter is set to "Carrier selected by input of calling party".

If a carrier is selected by the network operator to which belongs the exchange then the CSI parameter is set to "carrier selected by a network operator".

If no Carrier Selection is invoked, the CSI parameter shall not be sent.

NOTE: It is admitted that this parameter can be present even if the TNS parameter is not present.

2.1.x.2 Action required at an intermediate exchange within the originating network

An intermediate exchange shall pass unchanged the CSI parameter to the subsequent exchange.

2.1.x.3 Action required at an outgoing national gateway exchange

An outgoing national gateway exchange will pass on the parameter transparently.

NOTE: It is admitted that this parameter can be present even if the TNS parameter is not present.

2.1.x.4 Action required at an incoming national gateway exchange

a) In case the network to which belongs the gateway exchange is explicitly selected: the handling of the content of the CSI parameter is a network matter. However the parameter shall not be sent to any subsequent network.

b) In case the network to which belongs the gateway exchange is not explicitly selected: the call is routed through the network with the CSI parameter unchanged.

2.1.x.5 Action required at the destination exchange

No special action required.

2.1.x.6 Action required at an international exchange

An international exchange shall discard the CSI parameter.

2.1.y Global Call Reference

The Global Call Reference parameter is generated by the first exchange in a call path that requires a globally unique call reference to be associated with a particular call.

The Global Call Reference is a combination of a Network ID field, a Node ID field and a Call Reference ID field. The Network ID field will uniquely identify the network, the Node ID field will uniquely identify the node within this network that generates the Global Call Reference parameter. The Call Reference ID field will be a unique number generated on a per call instance within this node.

The Global Call Reference parameter is sent in the forward direction in the IAM.

An intermediate exchange shall pass this parameter unchanged.

The Global Call Reference parameter shall be stored in the nodes which require this reference according to the needs of the application that uses the information.

NOTE 1: The Global Call Reference parameter may typically be used for off-line purposes (e.g. to be stored for billing applications).

NOTE 2: An exchange may delete a received Global Call Reference parameter. (e.g. at an outgoing gateway exchange).

NOTE 3: A received Global Call Reference may be overridden, (e.g. at an incoming gateway exchange).

Annex A

Annex A has the status of a normative annex.

Modify "Table A.1/Q.764 - Timers in the ISDN User Part" as follows.

| T4 | 5-15 minutes | At receipt of MTP-STATUS primitive with the cause "inaccessible remote user" or at receipt of MTP-RESUME primitive. | On expiry, or at receipt of user part available message (or any other) | Send user part test message. Start T4 | 2.13.2 |

Annex B

Annex B has the status of an informative annex.

Annex C

Annex C has the status of an informative annex.

Annex D

Annex D has the status of an informative annex.

Annex E

Annex E has the status of an informative annex.

Annex F

Annex F has the status of a normative annex.

Add the following note:

   NOTE: Exceptions and clarifications to ITU-T Recommendation Q.850 are given in EN 300 485 [22].

Annex G

Annex G has the status of a normative annex.

Annex ZA (informative):
Coding of the compatibility information for basic call procedures

It is recommended that the compatibility information should be coded as follows:

ZA.1   Successful call set-up

Editors note   The compatibility information is required for the Global Call Reference and the IN compatibility information parameters.

ZA.1.1 New messages

ZA.1.1.1 Segmentation

a) Instruction indicators:

    bit   A: Transit at intermediate exchange indicator;

           0   transit interpretation;

    bit   B: Release call indicator;

           0   do not release call;

    bit   C: Send notification indicator;

           0   do not send notification;

    bit   D: Discard message indicator;

           0   do not discard message (pass on);

    bit   E: Pass on not possible indicator;

           1   discard information;

    bits   GF: Broadband/narrowband interworking indicator;

           00   pass on.

ZA.1.2 New parameters

ZA.1.2.1 Location number

a) N^{th} upgraded parameter:

    0011 1111   location number.

b) Instruction indicators:

    bit   A: Transit at intermediate exchange indicator;

           0   transit interpretation;

bit   B: Release call indicator;

        0   do not release call;

bit   C: Send notification indicator;

        0   do not send notification;

bit   D: Discard message indicator;

        0   do not discard message (pass on);

bit   E: Discard parameter indicator;

        0   do not discard parameter (pass on);

bits   GF: Pass on not possible indicator;

        10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.1.2.2 Origination ISC point code

a) N^{th} upgraded parameter:

    0010 1011   origination ISC point code.

b) Instruction indicators:

bit   A: Transit at intermediate exchange indicator;

        0   transit interpretation;

bit   B: Release call indicator;

        0   do not release call;

bit   C: Send notification indicator;

        0   do not send notification;

bit   D: Discard message indicator;

        0   do not discard message (pass on);

bit   E: Discard parameter indicator;

        1   discard parameter;

bits   GF: Pass on not possible indicator;

        10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.1.2.3 Carrier selection information

a) Nth upgraded parameter:

    1010 0001   carrier selection information

Instruction Indicators:

    bit   A: Transit at intermediate exchange indicator;

              0   transit interpretation;

    bit   B: Release call indicator;

              0   do not release call;

    bit   C: Send notification indicator;

              0   do not send notification;

    bit   D: Discard message indicator;

              0   do not discard message (pass on);

    bit   E: Discard parameter indicator;

              0   do not discard parameter (pass on);

    bits   GF: Pass on not possible indicator;

              10   discard parameter;

    bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.1.2.4 Global Call Reference

a) Nth upgraded parameter:

    10100100   Global Call Reference

b) Instruction Indicators:

    bit   A: Transit at intermediate exchange indicator;

              0   transit interpretation;

    bit   B: Release call indicator;

              0   do not release call;

    bit   C: Send notification indicator;

              0   do not send notification;

    bit   D: Discard message indicator;

              0   do not discard message (pass on);

    bit   E: Discard parameter indicator;

              0   do not discard parameter (pass on);

    bits   GF: Pass on not possible indicator;

              10   discard parameter;

bits JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.2   Transportation of user teleservice information

ZA.2.1 New parameters

ZA.2.1.1 User teleservice information

a) N^{th} upgraded parameter:

    0011 0100   user teleservice information.

b) Instruction indicators:

    bit   A: Transit at intermediate exchange indicator;

           0   transit interpretation;

    bit   B: Release call indicator;

           0   do not release call;

    bit   C: Send notification indicator;

           0   do not send notification;

    bit   D: Discard message indicator;

           0   do not discard message (pass on);

    bit   E: Discard parameter indicator;

           0   do not discard parameter (pass on);

    bits GF: Pass on not possible indicator;

           10   discard parameter;

    bits JI: Broadband/narrowband interworking indicator;

           00   pass on.

ZA.3   Access delivery information

ZA.3.1 New parameters

ZA.3.1.1 Access delivery information

a) N^{th} upgraded parameter:

    0010 1110   access delivery information.

b) Instruction indicators:

    bit   A: Transit at intermediate exchange indicator;

           0   transit interpretation;

bit　　B:　　Release call indicator;

　　　　　　0　　　do not release call;

bit　　C:　　Send notification indicator;

　　　　　　0　　　do not send notification;

bit　　D:　　Discard message indicator;

　　　　　　0　　　do not discard message (pass on);

bit　　E:　　Discard parameter indicator;

　　　　　　0　　　do not discard parameter (pass on);

bits　GF:　　Pass on not possible indicator;

　　　　　　10　　discard parameter;

bits　JI:　　Broadband/narrowband interworking indicator;

　　　　　　00　　pass on.

ZA.4　Signalling procedures for connection type allowing fallback capability

ZA.4.1　New parameters

ZA.4.1.1 Transmission medium requirement prime

a) N^{th} upgraded parameter:

　　0011 1110　　transmission medium requirement prime.

b) Instruction indicators:

bit　　A:　　Transit at intermediate exchange indicator;

　　　　　　1　　　end node interpretation;

bit　　B:　　Release call indicator;

　　　　　　0　　　do not release call;

bit　　C:　　Send notification indicator;

　　　　　　0　　　do not send notification;

bit　　D:　　Discard message indicator;

　　　　　　0　　　do not discard message (pass on);

bit　　E:　　Discard parameter indicator;

　　　　　　1　　　discard parameter;

bits　GF:　　Pass on not possible indicator;

　　　　　　10　　discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.4.1.2 Transmission medium used

a) N^th upgraded parameter:

0011 0101   transmission medium used.

b) Instruction indicators:

bit   A: Transit at intermediate exchange indicator;

              1   end node interpretation;

bit   B: Release call indicator;

              0   do not release call;

bit   C: Send notification indicator;

              0   do not send notification;

bit   D: Discard message indicator;

              0   do not discard message (pass on);

bit   E: Discard parameter indicator;

              1   discard parameter;

bits   GF: Pass on not possible indicator;

              10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.4.1.3 User service information prime

a) N^th upgraded parameter:

0011 0000   user service information prime.

b) Instruction indicators:

bit   A: Transit at intermediate exchange indicator;

              1   end node interpretation;

bit   B: Release call indicator;

              0   do not release call;

bit   C: Send notification indicator;

              0   do not send notification;

bit   D: Discard message indicator;

              0   do not discard message (pass on);

bit   E: Discard parameter indicator;

              1   discard parameter;

bits GF: Pass on not possible indicator;

        10   discard parameter;

bits JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.5 Propagation delay determination

ZA.5.1 New parameters

ZA.5.1.1 Call history information

a) N^{th} upgraded parameter:

0010 1101   call history information.

b) Instruction indicators:

bit A: Transit at intermediate exchange indicator;

        0   transit interpretation;

bit B: Release call indicator;

        0   do not release call;

bit C: Send notification indicator;

        0   do not send notification;

bit D: Discard message indicator;

        0   do not discard message (pass on);

bit E: Discard parameter indicator;

        0   do not discard parameter (pass on);

bits GF: Pass on not possible indicator;

        10   discard parameter;

bits JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.5.1.2 Propagation delay counter

a) N^{th} upgraded parameter:

0011 0001   propagation delay counter.

b) Instruction indicators:

bit A: Transit at intermediate exchange indicator;

        0   transit interpretation;

bit B: Release call indicator;

        0   do not release call;

bit   C: Send notification indicator;

        0   do not send notification;

bit   D: Discard message indicator;

        0   do not discard message (pass on);

bit   E: Discard parameter indicator;

        0   do not discard parameter (pass on);

bits   GF: Pass on not possible indicator;

        10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.6   Echo control procedure

ZA.6.1 New messages

ZA.6.1.1 Network resource management

a) Instruction indicators:

bit   A: Transit at intermediate exchange indicator;

        0   transit interpretation;

bit   B: Release call indicator;

        0   do not release call;

bit   C: Send notification indicator;

        0   do not send notification;

bit   D: Discard message indicator;

        0   do not discard message (pass on);

bit   E: Pass on not possible indicator;

        1   discard information;

bits   GF: Broadband/narrowband interworking indicator;

        00   pass on.

ZA.6.2 New parameters

ZA.6.2.1 Echo control information

a) N^{th} upgraded parameter:

0011 0111   echo control information.

b) Instruction indicators:

bit A: Transit at intermediate exchange indicator;

0 transit interpretation;

bit B: Release call indicator;

0 do not release call;

bit C: Send notification indicator;

0 do not send notification;

bit D: Discard message indicator;

0 do not discard message (pass on);

bit E: Discard parameter indicator;

0 do not discard parameter (pass on);

bits GF: Pass on not possible indicator;

10 discard parameter;

bits JI: Broadband/narrowband interworking indicator;

00 pass on.

ZA.7 Pre-release information procedure

ZA.7.1 New messages

ZA.7.1.1 Pre-release information

a) Instruction indicators:

bit A: Transit at intermediate exchange indicator;

0 transit interpretation;

bit B: Release call indicator;

0 do not release call;

bit C: Send notification indicator;

0 do not send notification;

bit D: Discard message indicator;

0 do not discard message (pass on);

bit E: Pass on not possible indicator;

1 discard information;

bits GF: Broadband/narrowband interworking indicator;

00 pass on.

ZA.8   Support of Temporary Alternative Routing (TAR)

ZA.8.1   New parameters

ZA.8.1.1 Network management controls

a) Nth upgraded parameter:

   0101 1011   network management controls.

b) Instruction indicators:

   bit   A: Transit at intermediate exchange indicator;

              0   transit interpretation;

   bit   B: Release call indicator;

              0   do not release call;

   bit   C: Send notification indicator;

              0   do not send notification;

   bit   D: Discard message indicator;

              0   do not discard message (pass on);

   bit   E: Discard parameter indicator;

              0   do not discard parameter (pass on);

   bits   GF: Pass on not possible indicator;

              10   discard parameter;

   bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.9   Hop counter procedure

ZA.9.1   New parameters

ZA.9.1.1 Hop counter

a) Nth upgraded parameter:

   0011 1101   hop counter.

b) Instruction indicators:

   bit   A: Transit at intermediate exchange indicator;

              0   transit interpretation;

   bit   B: Release call indicator;

              0   do not release call;

bit   C: Send notification indicator;

              0   do not send notification;

bit   D: Discard message indicator;

              0   do not discard message (pass on);

bit   E: Discard parameter indicator;

              0   do not discard parameter (pass on);

bits   GF: Pass on not possible indicator;

              10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.10 Call collect request procedure

ZA.10.1 New parameters

ZA.10.1.1 Collect call request

a) Nth upgraded parameter:

0111 1001   collect call request.

b) Instruction indicators:

bit   A: Transit at intermediate exchange indicator;

              0   transit interpretation;

bit   B: Release call indicator;

              0   do not release call;

bit   C: Send notification indicator;

              0   do not send notification;

bit   D: Discard message indicator;

              0   do not discard message (pass on);

bit   E: Discard parameter indicator;

              0   do not discard parameter (pass on);

bits   GF: Pass on not possible indicator;

              10   discard parameter;

bits   JI: Broadband/narrowband interworking indicator;

              00   pass on.

ZA.11 Interaction between N-ISDN and INAP

ZA.11.1 New parameters

ZA.11.1.1 IN Service Compatibility Information

   a) Nth upgraded parameter:

     10100010   IN Service Compatibility Information.

   b) Instruction Indicators:

     bit   A: Transit at intermediate exchange indicator;

                0   transit interpretation;

     bit   B: Release call indicator;

                0   do not release call;

     bit   C: Send notification indicator;

                0   do not send notification;

     bit   D: Discard message indicator;

                0   do not discard message (pass on);

     bit   E: Discard parameter indicator;

                0   do not discard parameter (pass on);

     bits   GF: Pass on not possible indicator;

               10   discard parameter;

     bits   JI: Broadband/narrowband interworking indicator;

               00   pass on.

Annex ZB (informative):
Bibliography

ETSI EN 301 069-1: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP); Application transport mechanism; Part 1: Protocol specification [ITU-T Recommendation Q.765, modified]".

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