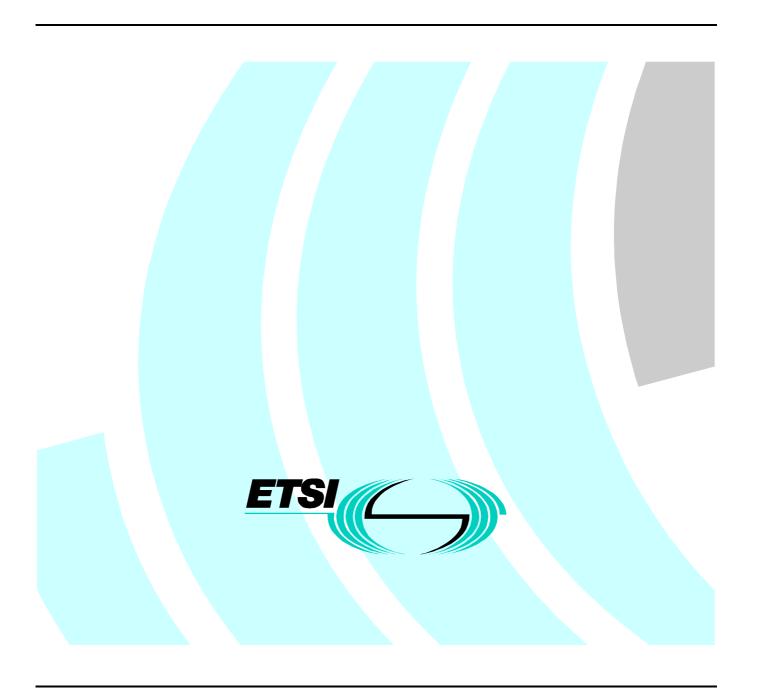
Final draft EN 300 356-1 V3.2.1 (1998-06)

European Standard (Telecommunications series)

Integrated Services Digital Network (ISDN);
Signalling System No.7;
ISDN User Part (ISUP) version 3 for the international interface;
Part 1: Basic services

[ITU-T Recommendations Q.761 to Q.764 (1997), modified]



Reference

REN/SPS-01039-1 (3ao91ioo.PDF)

Keywords

ISDN, SS7, ISUP, service, basic

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS), and is now submitted for the Voting phase of the ETSI standards Two-step Approval Procedure.

The present document is part 1 of a multi-part EN covering the ISDN User Part (ISUP) version 3 for the international interface, as identified below:

Part 1:	"Basic services";
Part 2:	"ISDN supplementary services";
Part 3:	"Calling Line Identification Presentation (CLIP) supplementary service";
Part 4:	"Calling Line Identification Restriction (CLIR) supplementary service";
Part 5:	"Connected Line Identification Presentation (COLP) supplementary service";
Part 6:	"Connected Line Identification Restriction (COLR) supplementary service";
Part 7:	"Terminal Portability (TP) supplementary service";
Part 8:	"User-to-User Signalling (UUS) supplementary service";
Part 9:	"Closed User Group (CUG) supplementary service";
Part 10:	"Subaddressing (SUB) supplementary service";
Part 11:	"Malicious Call Identification (MCID) supplementary service";
Part 12:	"Conference Call, add-on (CONF) supplementary service";
Part 14:	"Explicit Call Transfer (ECT) supplementary service";
Part 15:	"Diversion supplementary services";
Part 16:	"Call Hold (HOLD) supplementary service";
Part 17:	"Call Waiting (CW) supplementary service";
Part 18:	"Completion of Calls to Busy Subscriber (CCBS) supplementary service";
Part 19:	"Three party (3PTY) supplementary service".
Part 20:	"Completion of Calls on No Reply (CCNR) supplementary service";
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"

Proposed national transposition dates					
Date of latest announcement of this EN (doa):	3 months after ETSI publication				
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa				
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa				

Endorsement notice

The text of ITU-T Recommendations Q.761, Q.762, Q.763 and Q.764 (1997) was approved by ETSI as an EN with agreed modifications as given below.

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, Normative references, and Abbreviations):

Scope

This first part of EN 300 356 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.

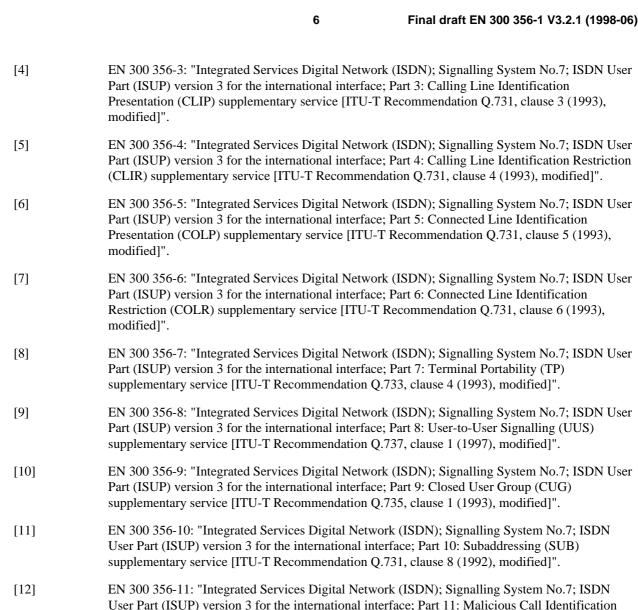
The present document is compatible with ETS 300 121 [2] (CCITT Recommendation Q.767).

Descriptions of interworking with CCITT 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, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, subsequent revisions do apply.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.
- [1] CCITT Recommendation E.164 (1997): "The international public telecommunication numbering plan; This Recommendation is also included but not published in I series under alias number I.331. Replaces former E.163 numbering plan".
- [2] 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] EN 300 356-2: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 2: ISDN supplementary services [ITU-T Recommendation Q.730 (1997), modified]".



- User Part (ISUP) version 3 for the international interface; Part 11: Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997), modified]".
- [13] EN 300 356-12: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 12: Conference call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993), modified]".
- EN 300 356-14: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN [14] User Part (ISUP) version 3 for the international interface; Part 14: Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996), modified]".
- [15] EN 300 356-15: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 15: Diversion supplementary services [ITU-T Recommendation Q.732, clauses 2 to 5 (1996), modified]".
- EN 300 356-16: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN [16] User Part (ISUP) version 3 for the international interface; Part 16: Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993), modified]".
- EN 300 356-17: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN [17] User Part (ISUP) version 3 for the international interface; Part 17: Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992), modified]".
- EN 300 356-18: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN [18] User Part (ISUP) version 3 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]	EN 300 356-19: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 19: Three party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996), modified]".
[20]	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]".
[21]	ETS 300 485: "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 (1993), modified]".
[22]	EN 301 069-1 (V1.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP); Application Transport Mechanism Part 1: Protocol specification [ITU-T Recommendation Q.765, modified]".
[23]	EN 301 062-1 (V1.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; Support of Virtual Private Network (VPN) applications with Private network Q reference point Signalling System number 1 (PSS1) information flows; Part 1: Protocol specification [ITU-T Recommendations Q.765.1 and Q.699.1, modified]".

Abbreviations

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

3PTY	Three Party
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
HOLD	Call Hold
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
MCID	Malicious Call Identification
MLPP	Multi-Level Precedence and Preemption
MWI	Message Waiting Indication
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	Modified reference		
Q.761 to Q.764			
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.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 ETS 300 485 [21]		
ITU-T Recommendation Q.931	ITU-T Recommendation Q.931 as modified by EN 300 403-1 [20]		

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 (note)	+	+	+
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 ISUP 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	+	+	+
Key: + support	•	•	•

non-support

NOTE: Multirate connection types are 2 \times 64, 384, 1 536 and 1 920 kbit/s.

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	
Generic signalling procedures for supplementary services			
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	+	+	+
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	+	+	note
REV	+	-	-
Additional functions/services			
APM	-	-	+
VPN	_	_	+

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

Table 1/Q.762

Insert new acronyms into table 1/Q.762 as shown in table 4.

Table 4

Acronym	Message
APM	Application transport
:	:
PRI	Pre-release information
:	:

Clause 2

Insert the following new items:

- **2.2A** application transport message (APM): A message sent in either direction to convey application information using the Application Transport mechanism.
- **2.33A** pre-release information message (PRI): A message to be used with the Release message for the transport of information where sending of that information in the Release message itself would cause compatibility problems with ISUP version 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:

- **3.2A** application transport: Information sent in either direction to allow the peer to peer communication of Application Transport mechanism user applications.
- **3.17A CCNR possible indicator**: Information sent in ACM(subscriber free)/CPG(alerting) to indicate the possibility to invoke a possible succeeding CCNR service request.

Modify item 3.18 as follows:

3.18 CCSS: Information sent in an initial address message indicating that a call is a CCBS <u>or a CCNR</u> call as defined in the CCBS <u>or CCNR</u> supplementary service.

Clause 4

Insert the following new items:

- **4.3A** application context identifier: A value that uniquely identifies the application using the application transport mechanism.
- **4.3B** application transport instruction indicators: Information sent in either direction indicating how an exchange should react in case the indicated application using the application transport mechanism is not supported.
- **4.3C APM segmentation indicator**: Information sent in either direction to indicate the number of remaining segments, carrying information using the application transport mechanism, that will be forwarded.
- 4.15A CCNR possible indicator: Indicator used in the CCNR possible indicator parameter in the ACM (subscriber free) / CPG (alerting) to indicate the possibility to invoke a possible succeeding CCNR service request.
- **4.33A encapsulated application information**: Application information required to be transported by the application transport mechanism.

Modify item 4.16 as follows:

- **4.16** CCSS call indicator: Information sent in the forward direction, used in a CCBS or CCNR call set-up, to distinguish this call from an ordinary call, at the destination local exchange.
- **4.99A** Segmentation local reference (SLR): A unique value to a call used to associate segments in an APM segmentation procedure.
- **4.101A** Sequence indicator: Used to indicate the beginning (first segment) of an APM segmentation procedure sequence.

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)."

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. 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 4/Q.763

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

Table 5

Message type	Reference (table)	Code
: Application transport :	: 22A :	01000001 ::
Pre-release information :	<u>32A</u> :	<u>01000010</u> :

Table 5/Q.763

Modify table 5/Q.763 as shown in table 6.

Table 6

Parameter name	Reference (subclause)	Code
	:	:
Application transport	<u>3.83</u>	<u>01111000</u>
	:	:
Connection Request (not required)	3.17	00001101
	:	i i
CCNR possible indicator	<u>3.82</u>	to be allocated
	:	:
MLPP precedence (not required)	3.34	00111010
	:	i i
Reserved for national use		01000001

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 spare
```

Subclause 3.26, (item e)

Modify the code definition of the following code:

```
000 spareunknown (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
                 2 × 64 kbit/s unrestricted
00000111
                 384 kbit/s unrestricted
00001000
00001001
                 1 536 kbit/s unrestricted
00001010
                 1 920 kbit/s unrestricted
00001011
                     spare
   to
00001111
                 reserved for 3 × 64 kbit/s unrestricted
00010000
                 reserved for 4 × 64 kbit/s unrestricted
00010001
00010010
                 reserved for 5 \times 64 kbit/s unrestricted
00010011
                 spare
00010100
                 reserved for 7 × 64 kbit/s unrestricted
                 reserved for 8 × 64 kbit/s unrestricted
00010101
                 reserved for 9 × 64 kbit/s unrestricted
00010110
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
                 reserved for 14 × 64 kbit/s unrestricted
00011011
                 reserved for 15 × 64 kbit/s unrestricted
00011100
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
                 reserved for 21 × 64 kbit/s unrestricted
00100010
                 reserved for 22 × 64 kbit/s unrestricted
00100011
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
                 reserved for 27 × 64 kbit/s unrestricted
00101000
                 reserved for 28 × 64 kbit/s unrestricted
00101001
00101010
                 reserved for 29 × 64 kbit/s unrestricted
00101011
                    spare
   to
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.

Clause 3

Insert new subclauses:

3.82 CCNR possible indicator

The format of the CCNR possible indicator parameter fields is shown in table 7.

Table 7

8	7	6	5	4	3	2	1
Н	G	F	Е	D	С	В	A

Figure 76A/Q.763: CCNR possible indicator parameter field

The following codes are used in the CCNR possible indicator parameter field:

bit A CCNR Possible indicator;

0 CCNR not possible;

1 CCNR possible;

bits H-B: Spare.

3.83 Application Transport Parameter (APP)

The format of the Application transport parameter fields is shown in figure 76B/Q.763.

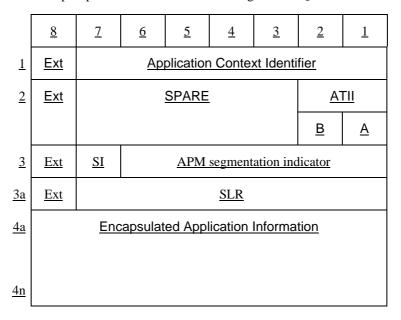


Figure 76B/Q.763: Application transport parameter field

a) Extension indicators: 0 further octet exists; 1 last octet; NOTE 1: Extensions to Octet 1 are for the expansion of the Application Context Identifier value range. b) Application Context Identifier (ACI) (Octet 1): Unidentified Context and Error Handling (UCEH) ASE; PSS1 ASE (VPN); 2-63 Spare; 64-126 Reserved for non-standardized applications; 127 Reserved for future expansion of Application Context Identifier field. NOTE 2: The compatibility mechanism as defined in Q.764 is not applicable to this field. c) Application Transport Instruction Indicators (ATII) (Octet 2): bit A: Release call indicator; 0 do not release call; 1 release call; bit B: Send notification indicator; 0 do not send notification;

1 send notification.

d) APM segmentation indicator (Octet 3):

- 0 final segment;
- 1-9 indicates the number of following segments;
- 10-255 spare.

NOTE 3: The compatibility mechanism as defined in Q.764 is not applicable to this field.

- e) Sequence indicator (SI) (Octet 3):
 - O Subsequent segment to first segment;
 - New sequence.
- f) Segmentation Local Reference (SLR) (Octet 3a).
- g) Encapsulated Application Information:
 - Contains the application specific information.

The format and coding of this field is dependant 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 (eg. 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 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.

Table 21/Q.763

Modify table 21/Q.763 as shown in table 8.

Table 8

Message type: Address complete

Parameter	Reference (subclause)	Type	Length (octets)
: Application transport :	3.83 ::	<u>O</u>	<u>5-?</u>
CCNR possible indicator	<u>3.82</u> :	<u>O</u> :	<u>3</u> :

NOTE 3: The message may contain one or more Application Transport parameters (APP) referring to different Application Context Identifiers.

Table 22/Q.763

Modify table 22/Q.763 as shown in table 9.

Table 9

Message type: Answer

Parameter	Reference (subclause)	Type	Length (octets)
		<u>:</u>	
Application transport :	3.83 :	<u>O</u> :	<u>5-?</u> :

NOTE 3: The message may contain one or more Application Transport parameters (APP) referring to different Application Context Identifiers.

Clause 4

Add a new table called table 22 A as shown in table 10.

Table 10

Message type: Application transport

Parameter	Reference (subclause)	Туре	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	0	3-?
Parameter compatibility information	3.41	0	4-?
Application transport	3.83	0	5-?
End of optional parameters	3.20	0	1

Table 23/Q.763

Modify table 23/Q.763 as shown in table 11.

Table 11

Message type: Call progress

Parameter	Reference (subclause)	Туре	Length (octets)	
:	:	:	:	
Application transport	<u>3.83</u>	<u>O</u>	<u>5-?</u>	
i	i i	:	;	
CCNR possible indicator	<u>3.82</u>	<u>O</u>	<u>3</u>	
		:	:	

NOTE 3: The message may contain one or more APP referring to different application context identifiers.

Table 27/Q.763

Modify table 27/Q.763 as shown in table 12.

Table 12

Message type: Connect

Parameter	Reference (subclause)	Туре	Length (octets)
: Application transport	: <u>3.83</u>	O	: <u>5-?</u>
	:	:	:

NOTE 3: The message may contain one or more Application Transport parameters (APP) referring to different Application Context Identifiers.

Table 32/Q.763

Modify table 32/Q.763 as shown in table 13.

Table 13

Message type: Initial address

Parameter	Reference (subclause)	Туре	Length (octets)	
:	:	:	:	
Application transport	<u>3.83</u>	<u>O</u>	<u>5-?</u>	
	:	:	:	
Circuit assignment map	3.69	0	6-7	
:		:	:	
Connection request (not required)	3.17	0	7-9	
:		:	:	
CCSS	3.63	0	3 -?	
	<u> </u>	:	:	
MLPP precedence (not required)	3.34	0	8	
:		:	:	

NOTE 3: The message may contain one or more Application Transport parameters (APP) referring to different Application Context Identifiers.

Clause 4

Add new table called table 32A as shown in table 14.

Table 14

Message type: Pre-release information

Parameter	Reference (subclause)	Туре	Length (octets)
Message type	2.1	F	1
Optional backward call indicators (note 1)	3.37	0	3
Optional forward call indicators (note 1)	3.38	0	3
Parameter compatibility information	3.41	0	4-?
Message compatibility information	3.33	0	3-?
Application transport	3.83	0	5-?
End of optional parameters	3.20	0	1

NOTE 1: These parameters are required to allow the message to be segmented using ISUP Simple Segmentation mechanism. They should be mutually exclusive.

NOTE 2: The message may contain one or more Application Transport parameters (APP) referring to different Application Context Identifiers.

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; <u>multirate connection types</u>
- 1 920 kbit/s unrestricted; <u>multirate connection types</u>
- 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; <u>multirate connection types</u>
- 384 kbit/s unrestricted; <u>multirate connection types</u>
- 1 536 kbit/s unrestricted; <u>multirate connection types</u>
- 1 920 kbit/s unrestricted; <u>multirate connection types</u>

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 2.3

Add new subclause 2.3.5:

2.3.5 Pre-release information transport

This capability allows information to be transported at Release in a manner which is compatible with ISUP version 2.

Since additional parameters can not be carried in the Release (REL) message due to the possibility of their loss at an intermediate exchange, an exchange wishing to send such parameters at release time shall include them instead within a 'Pre-release Information' (PRI) message which shall be sent immediately prior to the Release message. In the case that segmentation of the pre-release information is necessary, the subsequent segments will be sent between the PRI and REL messages.

An exchange receiving a PRI message shall determine whether to store the received information and process it upon release of the call or pass-on the PRI without awaiting REL, depending on the parameters received and the application present for the call at that exchange.

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 <u>and</u> 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 2.16

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.

Annex A

Annex A has the status of a normative annex.

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 ETS 300 485 [21].

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

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) Nth 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) Nth 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.2 Transportation of user teleservice information

ZA.2.1 New parameters

ZA.2.1.1 User teleservice information

a) Nth 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) Nth 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) Nth 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) Nth 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) Nth 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;
 - on pass on.

ZA.5 Propagation delay determination

ZA.5.1 New parameters

ZA.5.1.1 Call history information

- a) Nth 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) Nth 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) Nth 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.

History

Document history				
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