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INDUSTRY SPECIFICATION

**PART C FORMATS AND CODES OF THE
INTERCONNECTION ISDN USER PART
SIGNALLING SYSTEM No.7**

ACIF G500:2000 PART C

Industry Specification

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FORMATS AND CODES¹⁾ OF THE INTERCONNECTION ISDN USER PART OF SIGNALLING SYSTEM No. 7

(Malaga-Torremolinos, 1984; modified at Helsinki, 1993)

General

This document forms part of the Australian Communications Industry Forum (ACIF) G.500 signalling protocol specification for interconnection services to be used in the Australian domestic network.

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¹⁾ The symbol @ in this Recommendation means for national use only.

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Introduction

This document specifies the requirements for the implementation of the ACIF G.500 ISUP specification based on the ITU-T recommendation Q.763.

References

ITU-T Recommendation Q.763 (1993).

1 General

ISDN User Part messages are carried on the signalling link by means of signal units, the format of which is described in 2.2/Q.703 Part E.7.

The format of and the codes used in the service information octet are described in 4.2/Q.704 Part E.7. The service indicator for the ISDN User Part is coded 0101.

The signalling information field of each message signal unit containing an ISDN User Part message consists of an integral number of octets and encompasses the following parts (see Figure 1):

- a) routing label;
- b) circuit identification code;
- c) message type code;
- d) the mandatory fixed part;
- e) the mandatory variable part;
- f) the optional part, which may contain fixed length and variable length parameter fields.

~~NOTE The service information octet, the routing label and circuit identification code are not included in the SCCP user data parameter transferred between the ISDN User Part and signalling connection control part.~~

A description of the various message parts is given in the following subclauses.

Routing label
Circuit identification code
Message type code
Mandatory fixed part
Mandatory variable part
Optional part

FIGURE 1/Q.763 Part C
ISDN User Part message parts

1.1 Routing label

The format and codes used for the routing label are described in 2.2/Q.704 Part F. For each individual circuit connection, the same routing label must be used for each message that is transmitted for that connection.

NOTE – The SLS bits are set to the four least significant bits of the CIC.

1.2 Circuit identification code

The format of the circuit identification code (CIC) is shown in Figure 2.

8	7	6	5	4	3	2	1
Circuit identification code (least significant bits)							
Spare				CIC most significant bits			

FIGURE 2/Q.763 Part C
Circuit identification field

The allocation of circuit identification codes to individual circuits is determined by bilateral agreement and/or in accordance with applicable predetermined rules.

~~For international applications, the four spare bits of the circuit identification field are reserved for CIC extension, provided that bilateral agreement is obtained before any increase in size is performed. For national applications, the four spare bits can be used as required.~~

Allocations for certain applications are defined below:

a) *2048 kbit/s digital path*

~~For circuits which are derived from a 2048 kbit/s digital path (Recommendations G.732 and G.734), the circuit identification code contains in the 5 least significant bits a binary representation of the actual number of the time slot which is assigned to the communication path.~~

~~The remaining bits in the circuit identification code are used, where necessary, to identify these circuits uniquely among all other circuits of other systems interconnecting an originating and destination point.~~

[illegible]

FIGURE 2a/Part C
Allocation of CIC codes

b) ~~8448 kbit/s digital path~~

~~For circuits which are derived from a 8448 kbit/s digital path (Recommendations G.744 and G.747), the circuit identification code contains in the 7 least significant bits an identification of the circuit which is assigned to the communication path. The codes in Table 1 are used.~~

~~The remaining bits in the circuit identification code are used, where necessary, to identify these circuits uniquely among all other circuits of other systems interconnecting an originating and destination point.~~

c) ~~Frequency division multiplex (FDM) systems in networks using the 2048 kbit/s pulse code modulation standard~~

~~For frequency division multiplex systems existing in networks that also use the 2048 kbit/s pulse code modulation standard, the circuit identification code contains in the 6 least significant bits the identification of a circuit within a group of 60 circuits carried by 5 basic frequency division multiplex groups which may or may not be part of the same supergroup. The codes in Table 2 are used.~~

~~The remaining bits in the circuit identification code are used, where necessary, to identify these circuits uniquely among all other circuits of other systems interconnecting an originating and destination point.~~

d) ~~For multiple 64 kbit/s connection type call the CIC used in call connection messages shall be that of the lowest numbered CIC of the multiple 64 kbit/s circuits used. Where the circuits used are derived from a 2048 kbit/s digital path they shall be fixed groups of contiguous time slots (excluding time slot 0 and 16), in accordance with Table 3.~~

1.3 Message type code

The message type code consists of a one octet field and is mandatory for all messages. The message type code uniquely defines the function and format of each ISDN User Part message.

The allocation with reference to the appropriate descriptive subclause of this Recommendation specification is summarized in Table 4.

TABLE 1/Q.763

00000000	Circuit 1
00000001 ↓ 00111111	Circuit 2 ↓ Circuit 32
01000000 ↓ 11111110	Circuit 33 ↓ Circuit 127
11111111	Circuit 128

TABLE 2/Q.763

000000	Unallocated	
000001 ↓ 001100	Circuit 1 ↓ Circuit 12	1st basic (FDM) group
001101 001110 001111 010000 010001 ↓ 011001	Circuit 1 Circuit 2 Circuit 3 Unallocated Circuit 4 ↓ Circuit 12	2nd basic (FDM) group
011010 ↓ 011111 100000 100001 ↓ 100110	Circuit 1 ↓ Circuit 6 Unallocated Circuit 7 ↓ Circuit 12	3rd basic (FDM) group
100111 ↓ 101111 110000 110001 110010 110011	Circuit 1 ↓ Circuit 9 Unallocated Circuit 10 Circuit 11 Circuit 12	4th basic (FDM) group
110100 ↓ 111111	Circuit 1 ↓ Circuit 12	5th basic (FDM) group

TABLE 3/Q.763

Time slot	Multirate connection type					
	2 × 64 kbit/s	384 kbit/s	1536 kbit/s	1920 kbit/s		
1	Call 1	Call 1	Call 1	Call 1		
2						
3	Call 2					
4						
5	Call 3					
6						
7	Call 4	Call 2				
8						
9	Call 5					
10						
11	Call 6					
12						
13	Call 7	Call 3				
14						
15	Call 8					
16	Unallocated (for Q.33 use)					
17	Call 8	Call 3	Call 1	Call 1		
18	Call 9					
19						
20	Call 10	Call 4				
21						
22						
23	Call 11					
24						
25	Call 12					
26	Call 13	Call 5	Not allocated to 1536 kbit/s calls			
27						
28	Call 14					
29						
30	Call 15					
31						

1.4 Formatting principles

Each message consists of a number of PARAMETERS listed and described in 2. Each parameter has a NAME which is coded as a single octet (see Table 5). The length of a parameter may be fixed or variable, and a LENGTH INDICATOR of one octet for each parameter may be included as described below.

The detailed format is uniquely defined for each message type as described in 3.

Between parameters there should be no unused (i.e. dummy) octets.

A general format diagram is shown in Figure 3.

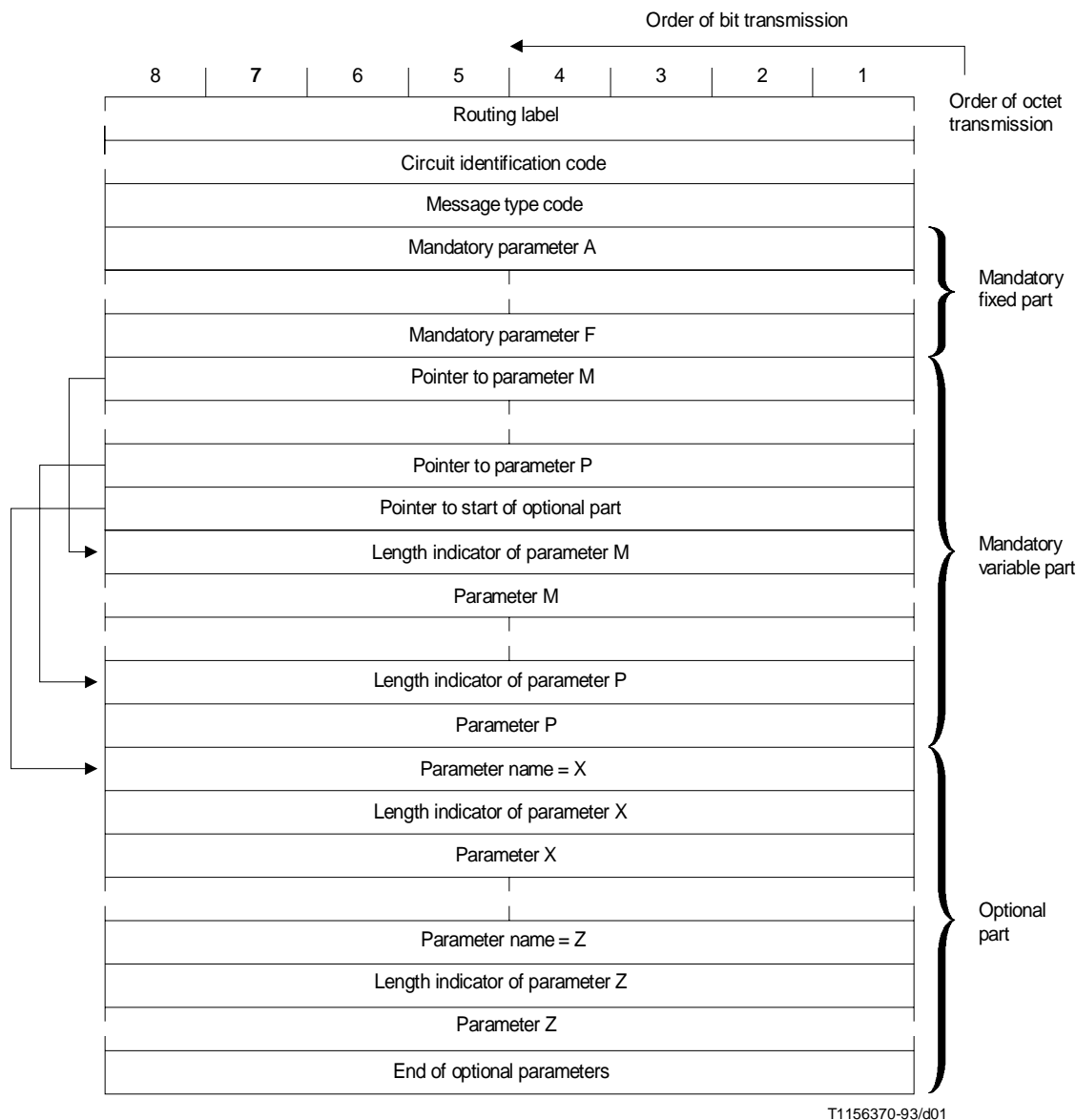


FIGURE 3/Q.763
General format overview

1.5 Mandatory fixed part

Those parameters that are mandatory and of fixed length for a particular message type will be contained in the mandatory fixed part. The position, length and order of the parameters is uniquely defined by the message type, thus the names of the parameters and the length indicators are not included in the message.

1.6 Mandatory variable part

Mandatory parameters of variable length will be included in the mandatory variable part. Pointers are used to indicate the beginning of each parameter. Each pointer is encoded as a single octet. The name of each parameter and the order in which the pointers are sent is implicit in the message type. Parameter names are, therefore, not included in the message. The details of how pointers are encoded is found in 2.3. The number of parameters, and thus the number of pointers is uniquely defined by the message type.

A pointer is also included to indicate the beginning of the optional part. If the message type indicates that no optional part is allowed, then this pointer will not be present. If the message type indicates that an optional part is possible (reflected by the presence of an “end of optional parameter” octet in Tables 4 through 42), but there is no optional part included in this particular message, then a pointer field containing all zeros will may be used. If no optional parameter is present, then the start of optional parameters pointer can be coded as all “0”s (as defined above) or can point to the end of optional parameters pointer if the end of optional parameters pointer is present. It is recommended that all future message types with a mandatory variable part indicate that an optional part is allowed.

All the pointers are sent consecutively at the beginning of the mandatory variable part. Each parameter contains the parameter length indicator followed by the contents of the parameters. If there are no mandatory variable parameters, but optional parameters are possible, the start of optional parameters pointer (coded all “0”s if no optional parameter is present and coded “00000001” if any optional parameter is present) will be included.

1.7 Optional part

The optional part consists of parameters that may or may not occur in any particular message type. Both fixed length and variable length parameters may be included. Unless it is explicitly stated to the contrary within the ISUP 1992 Recommendations, an optional parameter cannot occur multiple times within one message. Optional parameters may be transmitted in any order. Each optional parameter will include the parameter name (one octet) and the length indicator (one octet) followed by the parameter contents.

1.8 End of optional parameters octet

If optional parameters are present and after all optional parameters have been sent, an “end of optional parameters” octet containing all zeros will be transmitted. If no optional parameter is present an “end of optional parameter” octet is not transmitted.

1.9 Order of transmission

Since all the fields consist of an integral number of octets, the formats are presented as a stack of octets. The first octet transmitted is the one shown at the top of the stack and the last is the one at the bottom (see Figure 3).

Unless otherwise indicated, within each octet and subfield the bits are transmitted with the least significant bit first.

1.10 Coding of spare bits

Spare bits are coded 0 unless indicated otherwise.

Reserved bits shall also be set to zero and where parameters are defined as not to be provided but must be included to maintain bit pattern structure, they shall be set to zero.

1.11 National message types and parameters

~~If message type codes and parameter name codes are required for national uses not included in this Recommendation, the codes chosen should be from the highest code downwards, that is, starting at code 11111111. Codes in the range 11111111 to 11100000 are reserved exclusively for this purpose.~~

This section is not applicable to this specification.

2 Parameter formats and codes

2.1 Message type codes

The encoding of the message type is shown in Table 4.

2.2 Coding of the length indicator

The length indicator field is binary coded to indicate the number of octets in the parameter content field. The length indicated does not include the parameter name octet or the length indicator octet.

TABLE 4/Q.763 Part C

Message type	Reference (Table)	Code
Address complete	21	00000110
Answer	22	00001001
Blocking	39	00010011
Blocking acknowledgement	39	00010101
Call progress	23	00101100
Circuit group blocking	40	00011000
Circuit group blocking acknowledgement	40	00011010
Circuit group query @	41	00101010
Circuit group query response @	24	00101011
Circuit group reset	41	00010111
Circuit group reset acknowledgement	25	00101001
Circuit group unblocking	40	00011001
Circuit group unblocking acknowledgement	40	00011011
Charge information @	(Note)	00110001
Confusion	26	00101111
Connect	27	00000111
Continuity	28	00000101
Continuity check request	39	00010001
Facility @	45	00110011
Facility accepted	42	00100000
Facility reject	29	00100001
Facility request	42	00011111
Forward transfer	37	00001000
Identification request	47	00110110
Identification response	48	00110111
Information @	30	00000100
Information request @	31	00000011
Initial address	32	00000001
Loop back acknowledgement @	39	00100100
Network resource management	46	00110010
Overload @	39	00110000
Pass along @	43	00101000
Release	33	00001100
Release complete	34	00010000
Reset circuit	39	00010010
Resume	38	00001110
Segmentation	49	00111000
Subsequent address	35	00000010
Suspend	38	00001101
Unblocking	39	00010100
Unblocking acknowledgement	39	00010110
Unequipped CIC @	39	00101110
User Part available	44	00110101
User Part test	44	00110100
User to user information	36	00101101
Reserved (used in 1984 version)		00001010 00001011 00001111 00100010 00100011 00100101 00100110
Reserved (used in 1988 version)		00011101 00011100 00011110 00100111
NOTE — The format of this message is a national matter.		

2.3 Coding of the pointers

The pointer value (in binary) gives the number of octets between the pointer itself (included) and the first octet (not included) of the parameter associated with that pointer.

The pointer value all zeros is used to indicate that, in the case of optional parameters, no optional parameter is present.

3 ISDN User Part parameters

3.1 Parameter names

The parameter name codes are given in Table 5 together with references to the subclauses in which they are described.

TABLE 5/Q.763 Part C

Parameter name	Reference (subclause)	Code
Access delivery information	3.2	00101110
Access transport	3.3	00000011
Automatic congestion level	3.4	00100111
Backward call indicators	3.5	00010001
Call diversion information	3.6	00110110
Call history information	3.7	00101101
Call reference @	3.8	00000001
Called party number	3.9	00000100
Calling party number	3.10	00001010
Calling party's category	3.11	00001001
Circuit state indicator @	3.14	00100110
Cause indicators	3.12	00010010
Circuit group supervision message type indicator	3.13	00010101
Closed user group interlock code	3.15	00011010
Connected number	3.16	00100001
Connection request	3.17	00001101
Continuity indicators	3.18	00010000
Echo control information	3.19	00110111
End of optional parameters	3.20	00000000
Event information	3.21	00100100
Facility indicator	3.22	00011000
Forward call indicators	3.23	00000111
Freephone indicators (reserved)	(Note)	01000001
Generic digits @	3.24	11000001
Generic notification	3.25	00101100
Generic number	3.26	11000000
Generic reference (reserved)	3.27	01000010
Hop counter (reserved)	(Note)	00111101
Information indicators @	3.28	00001111
Information request indicators	3.29	00001110
Location number	3.30	00111111
MCID request indicator	3.31	00111011
MCID response indicator	3.32	00111100
Message compatibility information	3.33	00111000
MLPP precedence	3.34	00111010
Nature of connection indicators	3.35	00000110
Network specific facilities @	3.36	00101111
Optional backward call indicators	3.37	00101001
Optional forward call indicators	3.38	00001000
Original called number	3.39	00101000
Origination ISC point code	3.40	00101011
Parameter compatibility information	3.41	00111001
Propagation delay counter	3.42	00110001
Range and status	3.43	00010110
Redirecting number	3.44	00001011
Redirection information	3.45	00010011
Redirection number	3.46	00001100
Redirection number restriction	3.47	01000000
Remote operations @	3.48	00110010
Service activation @	3.49	00110011
Signalling point code @	3.50	00011110
Subsequent number	3.51	00000101
Suspend/Resume indicators	3.52	00100010
Transit network selection @	3.53	00100011
Transmission medium requirement	3.54	00000010
Transmission medium requirement prime	3.55	00111110

TABLE 5/Q.763 Part C (cont.)

Parameter name	Refence (subclause)	Code
Transmission medium used	3.56	00110101
User service information	3.57	00011101
User service information prime	3.58	00110000
User teleservice information	3.59	00110100
User-to-user indicators	3.60	00101010
User-to-user information	3.61	00100000
Reserved (used in 1984 version, Red Book)		00010100 00011001 00011011 00011100 00011111
Reserved for multi-slot identifier		00100101
Reserved (used in 1988 version, Blue Book)		00010111
NOTE—The format is not provided for the time being.		

3.2 Access delivery information

This section is not applicable to this specification.

The format of the access delivery information parameter field is shown in Figure 4.

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

FIGURE 4/Q.763

Access delivery information parameter field

bit A — Access delivery indicator
 1 — No set-up message generated
 0 — Set-up message generated
 bits H-B — not used

NOTE—Not used bits in the access delivery information parameter field can be used in the future for additional information concerning access delivery aspects.

3.3 Access transport

The format of the access transport parameter field is shown in Figure 5.

	8	7	6	5	4	3	2	1
1	Information element(s)							
:								
:								
n								

FIGURE 5/Q.763 Part C

Access transport parameter field

The information element is coded as described in 4.5/Q.931. Multiple Q.931 information elements can be included within the access transport parameter. The information elements applicable to a particular usage of the access transport parameter are dependent on, and will be determined by, the relevant procedures. The maximum length of the access transport parameter should only be limited by the message length as the content of the ATP will probably evolve in the future.

3.4 Automatic congestion level

The format of the automatic congestion level parameter field is shown in Figure 6.

8	7	6	5	4	3	2	1
Automatic congestion level							

FIGURE 6/Q.763 Part C
Automatic congestion level parameter field

The following codes are used in the automatic congestion level parameter field:

00000000	Spare
00000001	Congestion level 1 exceeded
00000010	Congestion level 2 exceeded
00000011	
to	Spare
11111111	

3.5 Backward call indicators

The format of the backward call indicators parameter field is shown in Figure 7.

	8	7	6	5	4	3	2	1
1	H	G	F	E	D	C	B	A
2	P	O	N	M	L	K	J	I

FIGURE 7/Q.763 Part C
Backward call indicators parameter field

The following codes are used in the backward call indicators parameter field:

bits B	A:	Charge indicator
0	0	no indication
0	1	no charge
1	0	charge
1	1	spare

NOTE 1 – The interpretation of these bits depends only on the charging exchange.

bits D	C:	Called party's status indicator
0	0	no indication
0	1	subscriber free

	1	0	connect when free @ not used
	1	1	spare
bits F	E:		Called party's category indicator
	0	0	no indication
	0	1	ordinary subscriber
	1	0	payphone
	1	1	spare
bits H	G:		End-to-end method indicator (Note 2)
	0	0	no end-to-end method available (only link-by-link method available)
	0	1	pass-along method available @ not used
	1	0	SCCP method available not used
	1	1	pass-along and SCCP methods available @ not used
bit I:			Interworking indicator (Note 2)
	0		no interworking encountered
	1		interworking encountered
bit J:			End-to-end information indicator (Note 2) @
	0		no end-to-end information available
	1		end-to-end information available not used
bit K:			ISDN User Part indicator (Note 2)
	0		ISDN User Part not used all the way
	1		ISDN User Part used all the way
bit L:			Holding indicator (national use) @
	0		holding not requested
	1		holding requested not used
bit M:			ISDN access indicator
	0		terminating access non-ISDN
	1		terminating access ISDN
bit N:			Echo control device indicator
	0		incoming half echo control device not included
	1		incoming half echo control device included
bits P	O:		SCCP method indicator (Note 2)
	0	0	no indication
	0	1	connectionless method available @ not used
	1	0	connection-oriented method available not used
	1	1	connectionless and connection-oriented methods available @ not used

NOTE 2 – Bits G-K and O-P constitute the protocol control indicator.

3.6 Call diversion information

This section is not applicable to this specification.

The format of the call diversion information parameter field is shown in Figure 8.

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

FIGURE 8/Q.763

Call diversion information parameter field

The following codes are used in the call diversion information parameter field:

a) Notification subscription options

bits CBA:	000	Unknown
	001	presentation not allowed
	010	presentation allowed with redirection number
	011	presentation allowed without redirection number
	100	
	to	spare
	111	

b) Redirection reason

bits GFED:	0000	Unknown
	0001	User busy
	0010	no reply
	0011	unconditional
	0100	deflection during alerting
	0101	deflection immediate response
	0110	mobile subscriber not reachable
	0111	
	to	spare
	1111	
bit H:		Spare

3.7 Call history information

This section is not applicable to this specification.

The format of the call history information parameter field is shown in Figure 42.

The call history information parameter expresses in pure binary representation the propagation delay value of a call in ms.

3.8 Call reference @

This section is not applicable to this specification.

The format of the call reference parameter is shown in Figure 9.

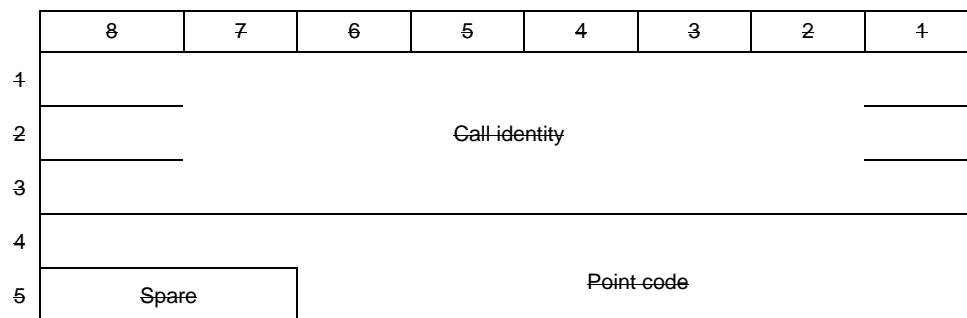


FIGURE 9/Q.763

Call reference parameter field

The following codes are used in the subfields of the call reference parameter field:

- a) *Call identity*
A code expressing in pure binary representation the identification number allocated to the call.
- b) *Point code*
The code of the signalling point in which the call identity is relevant.





3.9 Called party number

The format of the called party number parameter field is shown in Figure 10.

	8	7	6	5	4	3	2	1
1	Odd/ even	Nature of address indicator						
2	INN Ind.	Numbering plan Ind.			Spare			
3	2nd address signal				1st address signal			
⋮								
⋮								
⋮								
n	Filler (if necessary)				nth address signal			

FIGURE 10/Q-763 Part C
Called party number parameter field

The following codes are used in the subfields of the called party number parameter field:

- a) *Odd/even indicator*
0 even number of address signals
1 odd number of address signals
- b) *Nature of address indicator*
0000000 spare
0000001 ~~subscriber number @ not used~~
0000010 unknown @
0000011 ~~national (significant) number not used~~
0000100 ~~international number not used~~
0000101  spare
to
1101111 
1110000 
to reserved for national use not used
1111110 
1111111 spare
- c) *Internal network number indicator (INN ind.)*
0 routing to internal network number allowed
1 routing to internal network number not allowed

d) *Numbering plan indicator*

000	spare
001	ISDN (Telephony) numbering plan (Recommendation E.164)
010	spare
011	Data numbering plan (Recommendation X.121) @ not used
100	Telex numbering plan (Recommendation F.69) @ not used
101	reserved for national use not used
110	reserved for national use not used
111	spare

e) *Address signal*

0000	digit 0
0001	digit 1
0010	digit 2
0011	digit 3
0100	digit 4
0101	digit 5
0110	digit 6
0111	digit 7
1000	digit 8
1001	digit 9
1010	<u>spare code 10</u>
1011	code 11
1100	code 12
1101	<u>spare code 13</u>
1110	<u>spare code 14</u>
1111	<u>ST, or code 15 depending on bilateral agreements between carriers</u>

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

f) *Filler*

In case of an odd number of address signals, the filler code 0000 is inserted after the last address signal.

3.10 Calling party number

The format of the calling party number parameter field is shown in Figure 11.

	8	7	6	5	4	3	2	1
1	Odd/ even	Nature of address indicator						
2	NI	Numbering plan Ind.			Present. Ind.		Screening	
3	2nd address signal				1st address signal			
:								
:								
n	Filler (if necessary)				nth address signal			

NOTE – When the address presentation restricted indicator indicates address not available, octets 3 to n are omitted.

FIGURE 11/Q-763 Part C
Calling party number parameter field

The following codes are used in the calling party number parameter field:

a) *Odd/even indicator*

See 3.9 a)

b) *Nature of address indicator*

0000000	spare
0000001	subscriber number not used
0000010	unknown-@ not used
0000011	national (significant) number (NSN) or public mobile telephone service number (PMTS) @ (NOTE: Refer to ACIF G549 for definitions of NSN and PMTS.)
0000100	international number not used
0000101	spare
to	
1101111	
1110000	reserved for national use not used
to	
1111110	
1111111	spare

NOTE 1 — Other types of nature of address indications (e.g. transit exchange identity) are for further study.

c) *Calling party number incomplete indicator (NI) @*

0	complete
1	incomplete

d) *Numbering plan indicator*

See 3.9 d)

e) *Address presentation restricted (Pres. Restric.) indicator*

00	presentation allowed
01	presentation restricted
10	address not available (Note 2) @
11	spare

NOTE 2 – When the address is unavailable, the subfields in items a), b), c) and d) are coded with 0's. The address not available codepoint shall only be used when a forwarded call has been routed over a signalling system incapable of carrying both redirecting and calling party number information. The mapping between the signalling system and ISUP will result in the codepoint "address not available" with the CPC value set to 239. This codepoint will be used until all signalling systems are capable of carrying both the redirecting and calling party number information.

In the case where the Address Presentation restricted (Pres. Restrict.) indicator is set to 10 “address not available” the intermediate/destination exchange may take one of the following actions:-

- i) transit the Calling Party Number Parameter unaltered or;
- ii) map the information contained in the Redirecting Number to the Calling Party Number with the Address presentation restricted indicator set to restrict.




In both these cases CPC 239 will be passed unchanged.

f) *Screening indicator*

- 00 ~~reserved (Note 3) not used~~
- 01 user provided, verified and passed
- 10 ~~reserved (Note 3) not used~~
- 11 network provided

~~NOTE 3 — Code 00 and 10 are reserved for “user provided, not verified” and “user provided, verified and failed” respectively. Codes 00 and 10 are for national use.~~

g) *Address signal*

- 0000 digit 0
- 0001 digit 1
- 0010 digit 2
- 0011 digit 3
- 0100 digit 4
- 0101 digit 5
- 0110 digit 6
- 0111 digit 7
- 1000 digit 8
- 1001 digit 9
- 1010 spare code 10
- 1111 code 11
- 1100 code 12
- 1101 code 13
- 1110 code 14
- 1111 code 15
- 1101 
- to  spare
- 1111 

h) *Filler*

See 3.9 f).

3.11 Calling party’s category

The format of the calling party’s category parameter field is shown in Figure 12.

8	7	6	5	4	3	2	1
Calling party's category							

FIGURE 12/Q.763 Part C
Calling party’s category parameter field

The following codes are used in the calling party's category parameter field:

00000000	calling party's category unknown at this time @-reserved (Note 1)
00000001	operator, language French reserved (Note 1)
00000010	operator, language English not used (Note 2)
00000011	operator, language German reserved (Note 1)
00000100	operator, language Russian reserved (Note 1)
00000101	operator, language Spanish reserved (Note 1)
00000110	available to Administrations for
00000111	selecting a particular language—
00001000	by mutual agreement -reserved (Note 1)
00001001	reserved (see Recommendation Q.104) (Note) @ reserved (Note 1)
00001010	ordinary calling subscriber International customer or payphone
00001011	calling subscriber with priority not used (Note 2)
00001100	data call (voice band data) reserved (Note 1)
00001101	test call not used (Note 2)
00001110	spare reserved (Note 1)
00001111	payphone not used (Note 2)
00010000	
to	spare reserved (Note 1)
11011111	
11100000	
a	reserved for national use reserved (Note 1)
11111110	
11101111	inhibit call diversion
11110000	not used (Note 2)
11110001	International operator
11110010	National operator
11110011	Ordinary Customer
11110100	Dummy Calling Party Number
11110101	Customer with CLI, MM required (Note 3)
11110110	not used (Note 2)
11110111	Mobile
11111000	not used (Note 2)
11111001	CCR customer (Note 3)
11111010	CCR customer, MM required (Note 3)
11111011	Test Call
11111100	not used (Note 2)
11111101	Payphone
11111110	Payphone non-public, CLI, MM required (Note 3)
11111111	spare reserved (Note 1)

Notes :

1. These CPC are reserved for future allocation and must not be used. Should these CPC values be received by a national network, then the national network should release the call.
2. These CPC values are not recognised in this specification. Should these CPC values be received by a national network, then the national network may :
 - i) accept the received CPC parameter and map the parameter to a valid CPC parameter,
 - ii) accept the received CPC parameter and pass the parameter on unchanged, or
 - iii) release the call.
3. These CPCs are valid in the previous version of G.500 ISUP but not in this version. If received they shall be mapped to a valid CPC parameter or passed on unchanged.

NOTE—In national networks code 00001001 may be used to indicate that the calling party is a national operator.

3.12 Cause indicators

The format of the cause indicators parameter field is shown in Figure 13.

	8	7	6	5	4	3	2	1
1	Ext.	Coding standard		Spare	Location			
1a	1	Recommendation						
2	Ext.	Cause value						
3								
.								
.								
.	Diagnostic(s) (if any)							
3n								

NOTE – Octet 3 to 3n may be omitted or repeated, 3' to 3'n.

FIGURE 13/Q-763 Part C
Cause indicators parameter field

The codes to be used in the subfields of the cause indicators parameter fields are defined in the Q.6XX-Series Recommendations.

The following codes are used in the subfields of the cause indicators parameter field:

- a) *Extension indicator (ext)*
 - 0 octet continues through the next octet (e.g. octet 1 to 1a),
 - 1 last octet
- b) *Coding standard*
 - 00 CCITT standard, as described below
 - 01 ~~reserved for other international standards (Note), not used~~
 - 10 ~~national standard (Note), not used~~
 - 11 ~~standard specific to identified location (Note), not used~~

Note — These other coding standards should be used only when the desired cause cannot be represented with the CCITT standard.

- c) *Location*
 - 0000 user
 - 0001 private network serving the local user
 - 0010 public network serving the local user
 - 0011 ~~transit network, not used~~
 - 0100 public network serving the remote user
 - 0101 private network serving the remote user
 - 0111 international network
 - 1010 beyond an interworking point, all other values are reserved.

Note — Depending on the location of the users, the public network serving the local user may be the same network serving the remote user. Rules for coding the location field are defined in Recommendation Q.931 Annex J.

d) *Recommendation*

0000000 CCITT Q.931

Note : If the octet including this field is omitted, the above value is assumed. This octet may be received in some implementations but is not used by ISUP.

e) *Cause value*

The cause value is divided into two fields, a class (bits 5 through 7) and a value within a class (bits 1 through 4). The decimal equivalent of the cause value is shown in brackets beside the cause value.

Class 000 and 001 — normal event:

0000001 (1) unallocated (unassigned) number
 0000010 (2) ~~no route to specified transit network (national use), not used~~
 0000011 (3) no route to destination
 0000100 (4) ~~send special information tone, not used~~
 0000101 (5) misdialled trunk prefix, (national use),
 0010000 (16) normal call clearing
 0010001 (17) user busy
 0010010 (18) no user responding
 0010011 (19) no answer from user (user alerted)
 0010101 (21) call rejected
 0010110 (22) number changed
 0011011 (27) destination out of order
 0011100 (28) address incomplete
 0011101 (29) facility rejected
 0011111 (31) normal unspecified

Class 010 — resource unavailable:

0100010 (34) no circuit available
 0100110 (38) network out of order
 0101001 (41) temporary failure
 0101010 (42) switching equipment congestion
 0101011 (43) access information discarded
 0101100 (44) requested channel not available
 0101111 (47) resource unavailable — unspecified

Class 011 — service or option not available:

0110010 (50) ~~requested facility not subscribed, not used~~
 0110111 (55) ~~incoming calls barred within CUG, not used~~
 0111001 (57) bearer capability not authorized
 0111010 (58) bearer capability not presently available
 0111111 (63) service/option not available — unspecified

Class 100 — service or option not implemented:

1000001 (65) bearer capability not implemented
 1000101 (69) ~~requested facility not implemented, not used~~
 1000110 (70) ~~only restricted digital information bearer capability is available, (national use) not used~~
 1001111 (79) service or option not implemented — unspecified

Class 101 — invalid message (e.g. parameter out of range):

1010111 (87) ~~called user not member of CUG, not used~~
 1011000 (88) incompatible destination
 1011011 (91) ~~invalid transit network selection (national use), not used~~
 1011111 (95) invalid message — unspecified

Class 110 — Protocol error (e.g. unknown message):

1100001 (97) message type non existent or not implemented
 1100011 (99) parameter nonexistent or not implemented - discarded
 1100110 (102) recovery on timer expiry

- 1100111 (103) parameter nonexistent or not implemented - passed on
- 1101110 (110) message with unrecognised parameter discarded
- 1101111 (111) protocol error — unspecified

Class 111 — interworking:

- 1111111 (127) interworking unspecified

f) *Diagnostic*

The format and existence of the diagnostic field is dependant on the cause value and the location of generation. For causes generated by a public national network, the following diagnostics may be included :

Cause	Diagnostic	Format
1	Condition	See below
2	Transit Network Identity	See C.3.34 (Note)
3	Condition	See below
16	Condition	See below
21	Condition	See below
22	Called party number (new)	See C.3.7 (Note)
29	Rejected parameter (Note)	
50	Rejected parameter (Note)	
57	Attribute identity	See below
58	Attribute identity	See below
65	Attribute identity	See below
69	Rejected parameter (Note)	
97	Message type	See Table C-3/Q.763
99	Parameter name(s)	See Table C-4/Q.763
103	Parameter name(s)	See Table C-4/Q.763
110	Parameter name(s)	See Table C-4/Q.763

Note These diagnostics shall also include the parameter name and length octets.

- 1) Diagnostic with attribute identity

This section is not applicable to this specification

- 2) Condition diagnostic

A condition diagnostic is a 1 octet field containing an extension bit (bit 8) and one of the following codes in bits 2-1 :

- 00 unknown
- 01 permanent
- 10 transient
- 11 spare

Bits 3 to 7 of a condition diagnostic are spare.

3.13 Circuit group supervision message type indicator

The format of the circuit group supervision message type indicator parameter field is shown in Figure 14.

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

FIGURE 14/Q.763 Part C

Circuit group supervision message type indicator parameter field

The following codes are used in the circuit group supervision message type indicator parameter field:

bits B A: Type indicator
0 0 maintenance oriented
0 1 hardware failure oriented
1 0 reserved for national use (used in 1984 version) not used
1 1 spare
bits C H: Spare

3.14 Circuit state indicator @

This section is not applicable to this specification.

3.15 Closed user group interlock code

This section is not applicable to this specification.

3.16 Connected number

This section is not applicable to this specification.

3.17 Connection request (open)

This section is not applicable to this specification.

3.18 Continuity indicators

This section is not applicable to this specification.

3.19 Echo control information

This section is not applicable to this specification.

The format of the echo control information parameter field is shown in Figure 20.

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

FIGURE 20/Q.763

Echo control information parameter field

- a) — Outgoing half echo control device response indicator
 - bits BA 00 — No information
 - 01 — Outgoing half echo control device not included
 - 10 — Outgoing half echo control device included
 - 11 — Spare
- b) — Incoming half echo control device response indicator
 - bits DC 00 — No information
 - 01 — Incoming half echo control device not included
 - 10 — Incoming half echo control device included
 - 11 — Spare
- c) — Outgoing half echo control device request indicator
 - bits FE 00 — No information
 - 01 — Outgoing half echo control device activation request
 - 10 — Outgoing half echo control device deactivation request
 - 11 — Spare
- d) — Incoming half echo control device request indicator
 - bits HG 00 — No information
 - 01 — Incoming half echo control device activation request
 - 10 — Incoming half echo control device deactivation request
 - 11 — Spare

3.20 End of optional parameters indicator

The last optional parameter field of a message is followed by the end of optional parameters indicator, which occupies a one octet field containing all zeros.


3.21 Event information

The format of the event information parameter field is shown in Figure 21.

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

FIGURE 21/Q.763 Part C
Event information parameter field

The following codes are used in the event indicator parameter field:

bits	GFEDCBA:	Event indicator
	0000000	spare
	0000001	ALERTING
	0000010	PROGRESS
	0000011	in-band information or an appropriate pattern is now available
	0000100	call forwarded on busy <u>not used</u>
	0000101	call forwarded on no reply <u>not used</u>
	0000110	call forwarded unconditional <u>not used</u>
	0000111	
	to	
	1111111	
bit	H:	Event presentation restricted indicator @
	0	no indication
	1	presentation restricted <u>not used</u>

3.22 Facility indicator

This section is not applicable to this specification.

3.23 Forward call indicators

The format of the forward call indicators parameter field is shown in Figure 23.

	8	7	6	5	4	3	2	1
1	H	G	F	E	D	C	B	A
2	P	O	N	M	L	K	J	I

FIGURE 23/Q-763 Part C
Forward call indicators parameter field

The following codes are used in the forward call indicators parameter field:

- bit A: National/international call indicator
0 call to be treated as a national call
1 call to be treated as an international call

This bit can be set to any value in the country of origin. In the international network this bit is not checked. In the destination country, calls from the international network will have this bit set to 1.

- bits C B: End-to-end method indicator (Note)
0 0 no end-to-end method available (only link-by-link method available)
0 1 ~~pass along method available @ not used~~
1 0 ~~SCCP method available not used~~
1 1 ~~pass along and SCCP methods available @ not used~~

- bit D: Interworking indicator (Note)
0 no interworking encountered (No. 7 signalling all the way)
1 interworking encountered

- bit E: End-to-end information indicator (Note) @
0 no end-to-end information available
1 ~~end-to-end information available not used~~

- bit F: ISDN user part indicator (Note)
0 ISDN user part not used all the way
1 ISDN user part used all the way

- bits H G: ISDN user part preference indicator
0 0 ISDN user part preferred all the way
0 1 ISDN user part not required all the way
1 0 ISDN user part required all the way
1 1 spare

- bit I: ISDN access indicator
0 originating access non-ISDN
1 originating access ISDN

- bits K J: SCCP method indicator
0 0 no indication
0 1 ~~connectionless method available @ not used~~
1 0 ~~connection-oriented method available not used~~
1 1 ~~connectionless and connection-oriented methods available @ not used~~

- bit L: Spare

- bits P-M: Reserved for national use

NOTE – Bits B-F and J-K constitute the protocol control indicator.

3.24 Generic digits @

This section is not applicable to this specification.

The format of the generic digits parameter field is shown in Figure 24.

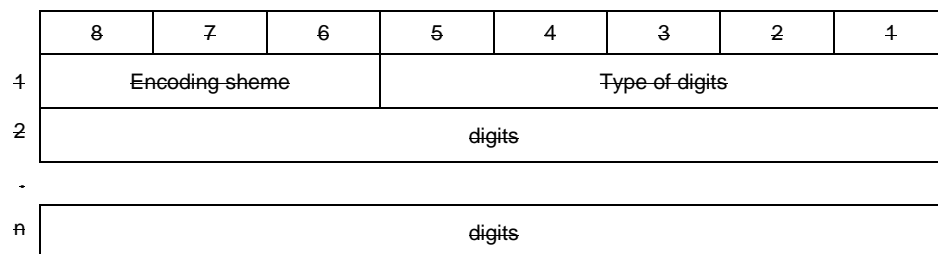


FIGURE 24/Q.763
Generic digits parameter

The following codes are used in the subfields of the generic digits parameter:

a) Encoding scheme

000	BCD even: (even number of digits)
001	BCD odd: (odd number of digits)
010	IA5 character
011	binary coded
110	⋮
to	
111	
	spare

b) Type of digits

00000	reserved for account code
00001	reserved for authorisation code
00010	reserved for private networking travelling class mark
00011	reserved for business communication group identity
00100	⋮
to	
01111	
	spare for international use
10000	⋮
to	
11110	
	spare for national use
11111	reserved for extension

c) Digit

Coding in accordance to the coding scheme and type of digits.

3.25 Generic notification indicator

This section is not applicable to this specification.

The format of the generic notification indicator parameter field is shown in Figure 25.

8	7	6	5	4	3	2	1
Ext.	Notification indicator						

FIGURE 25/Q.763
Generic notification indicator parameter field

The following codes are used in the generic notification indicator parameter field:

- a) — Extension indicator

0 — information continues in the next octet

1 — last octet
- b) — Notification indicator

0000000 user suspended

0000001 user resumed

0000010 bearer service change

0000011 discriminator for extension to ASN.1 encoded component

0000100 call completion delay

1000010 conference established

1000011 conference disconnected

1000100 other party added

1000101 isolated

1000110 reattached

1000111 other party isolated

1001000 other party reattached

1001001 other party split

1001010 other party disconnected

1001011 conference floating

1100000 call is a waiting call

1101000 diversion activated (used in DSS 1)

1101001 call transfer, alerting

1101010 call transfer, active

1111001 remote hold

1111010 remote retrieval

1111011 call is diverting
- (used in DSS 1)

All other values are currently not used and are reserved for further extensions.

3.26 Generic number

This section is not applicable to this specification.

The format of the generic number parameter field is shown in Figure 26.

8	7	6	5	4	3	2	1
Number-qualifier indicator							
Odd/ even	Nature-of address indicator						
NI Ind.	Numbering plan Ind.			Present. Ind.		Screening	
2nd address signal				1st address signal			
Filler (if necessary)				nth address signal			

~~FIGURE 26/Q.763~~

~~Generic number parameter field~~

The following codes are used in the generic number parameter field:

~~a) Number qualifier indicator~~

00000000	reserved (dialled digits) @
00000001	additional called number @
00000010	reserved (supplemental user provided calling number — failed network screening) @
00000011	reserved (supplemental user provided calling number — not screened) @
00000100	reserved (redirecting terminating number) @
00000101	additional connected number
00000110	additional calling party number
00000111	additional original called number
00001000	additional redirecting number
00001001	additional redirection number
00001010	to reserved (called freephone numbers) (spare)
01111111	
10000000	to reserved for national use
11111110	
11111111	reserved for expansion

~~b) Odd/even indicator: see 3.9 a)~~

~~e) Nature of address indicator~~

0000000	spare
0000001	subscriber number
0000010	unknown
0000011	national (significant) number
0000100	international number

0000101		spare
1101111		
1110000		reserved for national use
1111110		
1111111		spare

NOTE 1 — For each supplementary service the relevant codes and possible default settings are described in the service description (see the Q.73xy-Series Recommendations).

d) — Number incomplete indicator

- 0 — number complete
- 1 — number incomplete

e) — Numbering plan indicator

- 000 — spare
- 001 — ISDN (telephony) numbering plan (Recommendation E.164)
- 010 — spare
- 011 — data numbering plan (Recommendation X.121) @
- 100 — telex numbering plan (Recommendation F.69) @
- 101 — private numbering plan
- 110 — reserved for national use
- 111 — spare

NOTE 2 — For each supplementary service the relevant codes and possible default settings are described in the service description (see the Q.73xy-Series Recommendations).

f) — Address presentation restricted indicator

- 00 — presentation allowed
- 01 — presentation restricted
- 10 — address not available
- 11 — spare

NOTE 3 — For each supplementary service the relevant codes and possible default settings are described in the service description (see the Q.73xy-Series Recommendations).

g) — Screening indicator

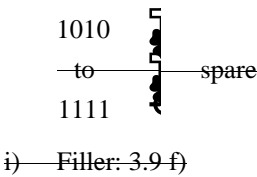
Only used if the number qualifier indicator is coded 0000 0001 or 0000 0010 this indicator is coded as follows:

- 00 — user provided, not verified
- 01 — user provided, verified and passed
- 10 — user provided, verified and failed
- 11 — network provided

NOTE 4 — For each supplementary service the relevant codes and possible default settings are described in the service description (see the Q.73xy-Series Recommendations).

h) — Address signal

- 0000 — digit 0
- 0001 — digit 1
- 0010 — digit 2
- 0011 — digit 3
- 0100 — digit 4
- 0101 — digit 5
- 0110 — digit 6
- 0111 — digit 7
- 1000 — digit 8
- 1001 — digit 9



3.27 Generic reference (reserved)

This section is not applicable to this specification.

The format of the generic reference parameter field is shown in Figure 27.

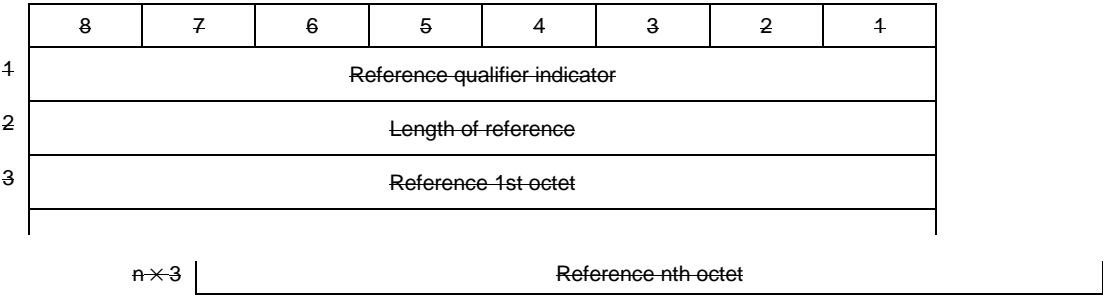
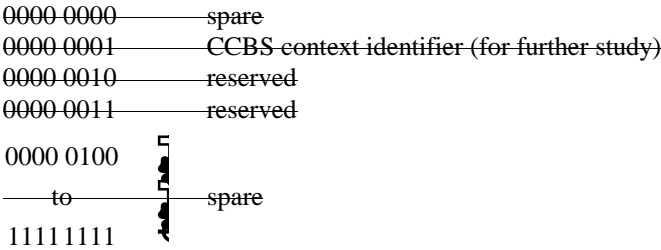
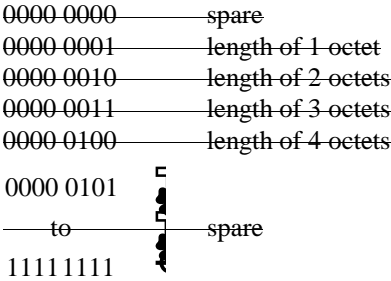


FIGURE 27/Q.763
Generic reference parameter field

a) Reference-qualifier indicator



b) Length of reference



c) Reference-nth octet

A code expressing in pure binary representation the reference number of the context given by the entity which handles and provides the service.

3.28 Information indicators @

This section is not applicable to this specification.

3.29 Information request indicators @

This section is not applicable to this specification.

3.30 Location number

This section is not applicable to this specification.

The format of the location number field is shown in Figure 30.

8	7	6	5	4	3	2	1
Odd/ even	Nature of address indicator						
INN/ NI Ind.	Numbering plan Ind.			Present. Ind.		Screening	
2nd address signal				1st address signal			
Filler (if necessary)				nth address signal			

FIGURE 30/Q.763

Location number parameter field

The following codes are used in the subfields of the location number parameter field:

- a) — Odd/even indicator: see 3.9 a).
- b) — Nature of address indicator
 - 0000000 — spare
 - 0000001 — reserved for subscriber number @
 - 0000010 — reserved for unknown @
 - 0000011 — national (significant) number @
 - 0000100 — international number
 - 0000101 — spare
 - to — spare
 - 1101111 — spare
 - 1110000 — spare
 - to — reserved for national use
 - 1111110 — spare
 - 1111111 — spare
- c) — Internal network number indicator (INN)
 - 0 — routing to internal number allowed
 - 1 — routing to internal number not allowed

NOTE 1 — Default set to 1.
- d) — Numbering plan indicator

- 000— spare
- 001— ISDN (telephony) numbering plan (Recommendation E.164)
- 010— spare
- 011— Data numbering plan (Recommendation X.121) @
- 100— Telex numbering plan (Recommendation F.69) @
- 101— private numbering plan
- 110— reserved for national use
- 111— spare
- NOTE 2 — Default set to 001.

- e) — Address presentation restricted (Pres. restric.) indicator
 - 00— presentation allowed
 - 01— presentation restricted
 - 10— address not available (Note 3) @
 - 11— spare
 - NOTE 3 — Default set to 01.

- f) — Screening indicator
 - 00— reserved
 - 01— user provided, verified and passed
 - 10— reserved
 - 11— network provided
 - NOTE 4 — Default set to 11.

- g) — Address signals: see 3.26 h)
- h) — Filler: see 3.9 f)

3.31 MCID request indicators

This section is not applicable to this specification.
The format of the MCID request indicators parameter field is shown in Figure 31.

H	G	F	E	D	C	B	A
MCID request indicators							

FIGURE 31/Q.763
MCID request indicators parameter field

The following codes are used in the MCID request indicators parameter field:

- bit A: — MCID request indicator
 - 0 — MCID not requested
 - 1 — MCID requested
- bit B: — Holding indicator @
 - 0 — Holding not requested
 - 1 — Holding requested
- bits H-C: — Spare

3.32 MCID response indicators

This section is not applicable to this specification.
The format of the MCID response indicators parameter field is shown in Figure 32.

H	G	F	E	D	C	B	A
MCID response indicators							

FIGURE 32/Q.763

MCID response indicators parameter field

The following codes are used in the MCID response indicators parameter field:

- bit A:

MCID response indicator

0

MCID not included

1

MCID included
- bit B:

Hold provided indicator @

0

Holding not provided

1

Holding provided
- bits H-C:

Spare

3.33 Message compatibility information

The format of the message compatibility information parameter field is shown in Figure 33.

2

8	7	6	5	4	3	2	1
Instruction indicator							

FIGURE 33/Q.763 Part C

Message compatibility information parameter field

The following codes are used in the subfields of the parameter compatibility information parameter field:

- a) *Instruction indicators*

The format of the instruction indicators subfield is shown in Figure 34.

2

2a

2n

Ext/1	G	F	E	D	C	B	A
Ext/1	More instruction indicators if required						
⋮							
1	More instruction indicators if required						

FIGURE 34/Q.763 Part C

Instruction indicators subfield

The following codes are used in the instructions indicators subfield:

bit A: Transit at intermediate exchange indicator
 0 transit interpretation
 1 end node interpretation

bit B: Release call indicator
 0 do not release call
 1 release call

bit C: Send notification indicator (Note 1)
 0 do not send notification
 1 send notification

NOTE 1 – Notification by confusion message.

bit D: Discard message indicator
 0 do not discard message (pass on) (Note 2)
 1 discard message

bits G-F: Spare

NOTE 2 – If pass on is set (bit D = 0) but not possible then bits C and E are checked.

bit E: Pass on not possible indicator
 0 release call
 1 discard information

b) *Extension indicator*

0 next octet exists
 1 last octet

c) *More instruction indicators*

The bits will be defined when required.

3.34 MLPP precedence

This section is not applicable to this specification.

The format of the MLPP precedence parameter field is shown in Figure 35.

	8	7	6	5	4	3	2	1
4	Spare	LFB		Spare	Precedence level			
2	1st NI digit				2nd NI digit			
3	3rd NI digit				4th digit			
4	MLPP-service domain							
5								
6								

FIGURE 35/Q.763
MLPP precedence parameter field

The following codes are used in the subfields of the MLPP precedence parameter field:

a) — LFB

- 00 — LFB allowed
- 01 — Path reserved @
- 10 — LFB not allowed
- 11 — spare

b) — Precedence level

- 0000 — flash override
- 0001 — flash
- 0010 — immediate
- 0011 — priority
- 0100 — routine
- 0101 —
- to — spare
- 1111 —

c) — Network identity NI octet 2 and 3

Each digit is coded in binary coded decimal representation from 0 to 9.

The first digit of this field is coded 0. The TCC (Telephony Country Code) follows in the second to fourth NI digits (the most significant TCC digit is in the 2nd NI digit). If the TCC is one or two digits long, the excess digit(s) is inserted with the code for ROA or network identification, if necessary. If octet 2 is not required, it is coded all zeros.

d) — MLPP service domain (octets 4, 5 and 6)

A code pure binary coded allocated to a MLPP service domain administered by a particular ISDN. Bit 8 of octet 4 is the most significant, and bit 1 of octet 6 is the least significant, respectively.

3.35 Nature of connection indicators

The format of the nature of connection indicators parameter field is shown in Figure 36.

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

FIGURE 36/Q-763 Part C
Nature of connection indicators parameter field

The following codes are used in the nature of connection indicators parameter field:

- bits B A: Satellite indicator
 - 0 0 no satellite circuit in the connection
 - 0 1 one satellite circuit in the connection
 - 1 0 two satellite circuits in the connection
 - 1 1 spare
- bits D C: Continuity check indicator
 - 0 0 continuity check not required
 - 0 1 ~~continuity check required on this circuit~~ not used
 - 1 0 ~~continuity check performed on a previous circuit~~ not used
 - 1 1 spare
- bit E: Echo control device indicator
 - 0 outgoing half echo control device not included
 - 1 outgoing half echo control device included
- bits F-H: Spare

3.36 Network specific facility @

This section is not applicable to this specification.

The format of the network specific facility parameter field is shown in Figure 37.

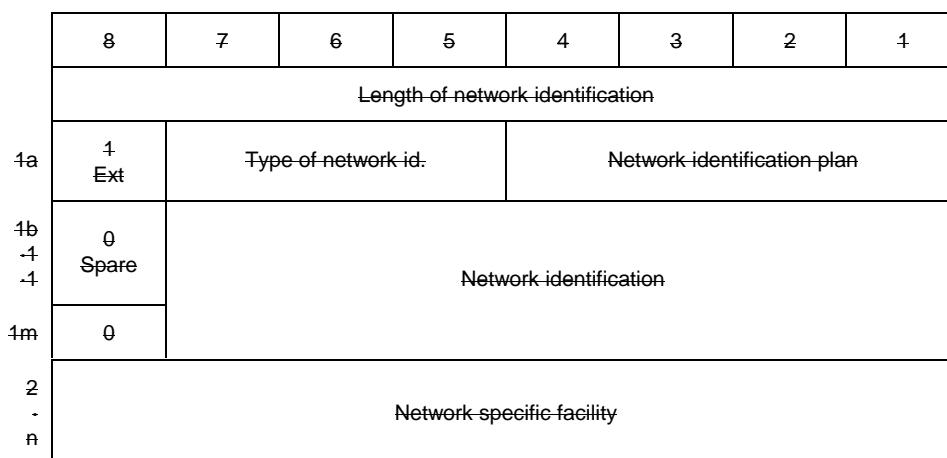


FIGURE 37/Q.763
Network specific facility parameter field

The following codes are used in the subfield of the network specific facility parameter field:

a) — Length of network identification

This field contains the length, in octets, of the network identification found in octets 1a, 1b-1m. If the value is 0000-0000 then octets 1a-1m are omitted.

b) — Type of network identification

The following codes are used in the type of network identification subfield

Bits 7-6-5

0-1-0 — national network identification

0-1-1 — reserved for international network identification

others — spare

When the type of network identification is coded 010 “national network identification”, the network identification plan and network identification are coded nationally.

c) — Network identification plan

d) — Network identification

e) — Network specific facility

This field is encoded according to the rules specified by the identified network. The network may specify the same coding rule as stimulus type of information elements in Recommendation Q.932. In this case multiple information elements may be included in this field.

3.37 Optional backward call indicators

The format and codes of the optional backward call indicators field are shown in Figure 38.

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

FIGURE 38/Q.763 Part C
Optional backward call indicators parameter field

The following codes are used in the optional backward call indicators parameter field:

- bit A: In-band information indicator
 - 0 no indication
 - 1 in-band information or an appropriate pattern is now available
- bit B: Call diversion may occur indicator
 - 0 no indication
 - 1 call diversion may occur
- bit C: Simple segmentation indicator
 - 0 no additional information will be sent
 - 1 ~~additional information will be sent in a segmentation message not used~~
- bit D: MLPP user indicator
 - 0 no indication
 - 1 ~~MLPP user not used~~
- bits E-H: Reserved for national use

3.38 Optional forward call indicators

This section is not applicable to this specification.

3.39 Original called number

The format of the original called number parameter field corresponds to the format shown in Figure 40.

	8	7	6	5	4	3	2	1
1	Odd/ even	Nature of address indicator						
2	Spare	Numbering plan Ind.			Present. Ind.		Spare	
3	2nd address signal				1st address signal			
:								
:								
n	Filler (if necessary)				nth address signal			

FIGURE 40/Q.763 Part C
Original called number parameter field

The following codes are used in the subfields of the original called number parameter field:

- a)

Odd/even indicator: see 3.9 a)
- b)

Nature of address indicator: see 3.9 b)

0000000

spare

0000001

~~subscriber number @~~ not used

0000010

unknown @

0000011

national (significant) number (NSN) or public mobile telephone service number (PMTS) @ (Note: Refer to ACIF G549 for definitions of NSN and PMTS.)

0000100

~~international number~~ not used

0000101

to

1101111

spare

1110000

to

1111110

~~reserved for national use~~ not used

1111111

spare
- Note that national networks shall be able to receive the original called number parameter in either of the valid nature of address formats.
- c)

Numbering plan indicator: see 3.9 d)
- d)

Address presentation restricted indicator: see 3.10 e)

00

presentation allowed

01

presentation restricted

10

~~address not available (Note 2) @~~ not used

11

~~spare~~ not used

NOTE 2 – When the address is unavailable, the subfields in items a), b), c) and d) are coded with 0's.

- e) *Address signal*: see 3.10 g)
- f) *Filler*: see 3.9 f).

3.40 **Origination ISC point code**

This section is not applicable to this specification.

The format of the origination ISC point code parameter field is shown in Figure 50.

3.41 **Parameter compatibility information**

The format of the parameter compatibility information parameter field is shown in Figure 41.

	8	7	6	5	4	3	2	1
1	1st upgraded parameter							
2	Instruction indicators							
	.							
	.							
n	nth upgraded parameter							
n+1	Instruction indicators							

FIGURE 41/Q-763 Part C
Parameter compatibility information parameter field

The following codes are used in the subfields of the parameter compatibility information parameter field.

- a) *Nth upgraded parameter name*
This field contains the parameter name of the nth upgraded parameter in accordance with Table 5.

- b) *Instruction indicators*
The format of the instruction indicators subfield is shown in Figure 34.
The following codes are used in the instructions indicators subfield:

- bit A: Transit at intermediate exchange indicator
 0 transit interpretation
 1 end node interpretation
- bit B: Release call indicator
 0 do not release call
 1 release call
- bit C: Send notification indicator (Note 1)
 0 do not send notification
 1 send notification

NOTE 1 – Notification by confusion or a release complete message.

- bit D: Discard message indicator
 0 do not discard message (pass on) (Note 2)
 1 discard message

NOTE 2 – If pass on is set (bit D = 0) but not possible then bits C, F and G are checked.

- bit

E:

Discard parameter indicator

0

do not discard parameter (pass on) (Note 3)

1

discard parameter
- NOTE 3 – If pass on is set (bit E = 0) but not possible then bits C, F and G are checked.
- bits G-F:

Spare
- c)

Extension indicator

0

next octet exists

1

last octet
- d)

More instruction indicators

The bits will be defined when required.

3.42 Propagation delay counter

This section is not applicable to this specification.

The format of the propagation delay counter parameter field is shown in Figure 42.

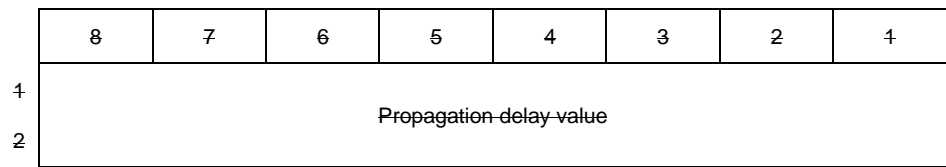


FIGURE 42/Q.763

Propagation delay counter parameter field

The propagation delay counter parameter expresses in pure binary representation the propagation delay value of a call in ms to be accumulated during call set-up.

3.43 Range and status

The format of the range and status parameter field is shown in Figure 43.

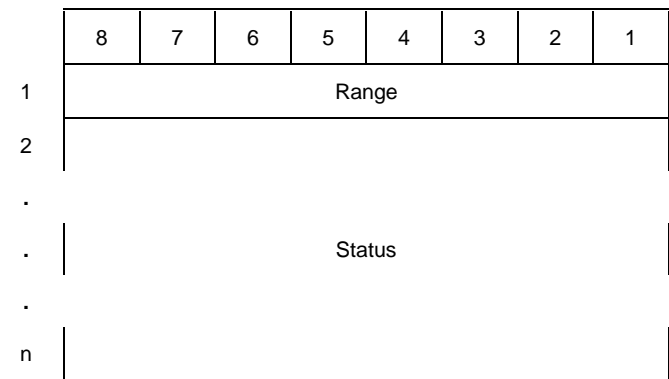


FIGURE 43/Q.763 Part C

Range and status parameter field

The following codes are used in the subfields of the range and status parameter field:

a) *Range*

A number in pure binary representation ranging from 1 to 255. The number represented by the range code +1 indicates the range of circuits affected by the message.

b) *Status*

The status subfield contains from 2 to 256 status bits numbered from 0 to 255. Status bit 0 is located in bit position 1 of the first status subfield octet. Other status bits follow in numerical order. The number of relevant status bits in a given status subfield is equal to range +1.

Each status bit is associated with a circuit identification code such that status bit n is associated with circuit identification code $m + n$, where m is the circuit identification code contained in the message.

The status bits are coded as follows:

- in circuit group blocking messages
 - 0 no indication
 - 1 blocking
- in circuit group blocking acknowledgement messages
 - 0 no indication
 - 1 blocking acknowledgement
- in circuit group unblocking messages
 - 0 no indication
 - 1 unblocking
- in circuit group unblocking acknowledgement messages
 - 0 no indication
 - 1 unblocking acknowledgement
- in circuit group reset acknowledgement messages
 - 0 not blocked for maintenance reasons
 - 1 blocked for maintenance reasons

The number of circuits affected by a group supervision message is limited to 32 or less. For the group reset messages this requires that the range value be 31 or less. For the group blocking and unblocking messages the range value may be up to 255, but the number of status bits set to 1 must be 32 or less.

~~For the group blocking, unblocking and reset messages, range code 0 is reserved.~~

3.44 Redirecting number

The format of the redirecting number parameter field corresponds to the format shown in Figure 40.

The following codes are used in the subfields of the redirecting number parameter field:

- a) Odd/even indicator: see 3.910 a)
- b) Nature of address indicator: see 3.910 b)
- c) Numbering plan indicator: see 3.910 d)
- d) Address presentation restricted indicator: ~~see 3.10 e)~~
 - 00 presentation allowed
 - 01 presentation restricted
 - ~~10 address not available (Note 2) @ not used~~
 - ~~11 spare not used~~

~~NOTE 2 When the address is unavailable, the subfields in items a), b), c) and d) are coded with 0's.~~

- e) Address signal: see 3.10 g)
- f) Filler: see 3.910 f).

3.45 Redirection information

The format of the redirection information parameter field is shown in Figure 44.

	8	7	6	5	4	3	2	1
1	H	G	F	E	D	C	B	A
2	P	O	N	M	L	K	J	I

NOTE – Octet 2 is omitted if the redirection counter is coded 001.

FIGURE 44/Q.763 Part C

Redirection information parameter field

The following codes are used in the redirection information parameter field:

bits	C	B	A:	Redirecting indicator	
	0	0	0	no redirection @	
	0	0	1	call rerouted @	
	0	1	0	call rerouted, all redirection information presentation restricted @	
	0	1	1	call diversion	
	1	0	0	call diversion, all redirection information presentation restricted	
	1	0	1	call rerouted, redirection number presentation restricted @	
	1	1	0	call diversion, redirection number presentation restricted	
	1	1	1	spare	
bit	D:			Spare	
bits	H	G	F	E:	Original redirection reasons
	0	0	0	0	unknown/not available
	0	0	0	1	user busy @
	0	0	1	0	no reply @
	0	0	1	1	unconditional @
	0	1	0	0	} spare
		a	0		
	1	1	1	1	
bits	K	J	I:		Redirection counter. Number of redirections the call has undergone expressed as a binary number between 1 and 5.
bit	L:				Spare
bits	P	O	N	M:	Redirecting reason
	0	0	0	0	unknown/not available
	0	0	0	1	user busy
	0	0	1	0	no reply
	0	0	1	1	unconditional
	0	1	0	0	deflection during alerting not used
	0	1	0	1	deflection immediate response not used
	0	1	1	0	mobile subscriber not reachable
	0	1	1	1	} spare
		a	0		
	1	1	1	1	

3.46 **Redirection number**

This section is not applicable to this specification.

3.47 **Redirection number restriction parameter**

This section is not applicable to this specification.

The format of the redirection number presentation parameter field is shown in Figure 45.

4

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

FIGURE 45/Q.763
Redirection number restriction parameter field

The following codes are used in the redirection number restriction number parameter field:

- bits B—A: Presentation restricted indicator
- 0—0 Presentation allowed
- 0—1 Presentation restricted
- 1—0 spare
- 1—1 spare
- bits H-C: Spare

3.48 **Remote operations @**

This section is not applicable to this specification.

The format of the remote operations parameter field is shown in Figure 46. The format and coding of the elements in the components are described in this subclause.

8	7	6	5	4	3	2	1
Ext.	Spare		Protocol profile				
Component(s)							

NOTE—The component may be repeated any number of times within the remote operations parameter. In case of multiple service requests, the receiving entity shall treat the repetition of Invoke components identical to the case where multiple Remote Operations parameters are received in a single message.

FIGURE 46/Q.763
Remote operations parameter field

The following codes are used in the Remote Operations parameter field:

a) — Extension indicator (ext):

0 ——— octet continues through the next octet
1 ——— last octet

b) — Protocol profile field

00000 — }
00to — } spare
10000 — }

10001 ——— Remote operations protocol

10010 — }
00to — } spare
11111 — }

c) — Components

This item provides the format and encoding of Component(s). The description is divided in two parts.

Sub-item i) uses the description method of other Q.700-Series Recommendations. The content is based on the encoding rules provided in Recommendation X.209 and is consistent with that Recommendation.

Sub-item ii) uses Recommendation X.209 formal description language (ASN.1).

The general component structure and encoding rules are described in Annex B.

i) — Specification of components in table form

1) — Component type

—— The Components are based on the Remote Operations Service Element (ROSE) of Recommendation X.229. The four component types defined for the Remote Operation parameter are as follows:

- Invoke,
- Return Result,
- Return Error,
- Reject.

2) — Component type tag

—— Each Component is a sequence of information elements. The Component types have the structure indicated in the Tables 6 to 9.

—— The information element for the various components shown in Tables 6 to 9 are all mandatory except the Linked ID and the parameters.

—— The Parameter Tag shall be any valid ASN.1 tag, depending on the type of the parameter supplied. It can indicate either a primitive or a constructor element and refer to any of the defined tag classes.

—— When the parameter element is a collection of several information elements, the associated data type shall be derived from the Sequence, SequenceOf, Set or SetOf types.

—— Subclause 3.48 item c) i) 6) and Table 14 define the Sequence and Set tags.

TABLE 6/Q.763

Invoke component

Invoke component	Mandatory indication
Component Type Tag Component Length (Note 1)	Mandatory
Invoke ID Tag Invoke ID length Invoke ID	Mandatory
Linked ID Tag Linked ID Linked ID	Optional
Operation Code Tag Operation Code length Operation Code	Mandatory
Parameters (Notes 2 and 3)	Optional
<p>NOTES</p> <p>1——The component length is coded to indicate the number of octets contained in the component (excluding the component type tag and the component length octets).</p> <p>2——The coding is supplementary service specific and the subject of other Recommendations.</p> <p>3——It is a parameter within ROSE, but in the ISUP it is a subfield within a field.</p>	

TABLE 7/Q.763

Return Result Component

Return Result Component	Mandatory indication
Component Type Tag Component length (Note 1)	Mandatory
Invoke ID Tag Invoke ID length Invoke ID	Mandatory
Sequence Tag Sequence length (Note 2)	Optional ^{a)}
Operation Code Tag Operation Code length Operation Code (Note 3)	Optional ^{a)} (Note 4)
Parameters (Note 5)	Optional ^{a)}
<p>^{a)}——Omitted when no information elements are included in the parameters.</p> <p>NOTES</p> <p>1——The component length is coded to indicate the number of octets contained in the component (excluding the component type tag and the component length octets).</p> <p>2——The sequence length is coded to indicate the number of octets contained in the sequence (excluding the sequence type tag and the sequence length octets).</p> <p>3——The coding is supplementary service specific and the subject of other Recommendations.</p> <p>4——If a result is included, then the operation value is mandatory and is the first element in the sequence.</p> <p>5——It is a parameter within ROSE, but in the ISUP it is a subfield within a field.</p>	

TABLE 8/Q.763

Return Error Component

Return Error Component	Mandatory indication
Component Type Tag Component length (Note 1)	Mandatory
Invoke ID Tag Invoke ID length Invoke ID	Mandatory
Error Code Tag Error Code length Error Code	Mandatory
Parameters (Note 2)	Optional
<p>NOTES</p> <p>1 — The component length is coded to indicate the number of octets contained in the component (excluding the component type tag and the component length octets).</p> <p>2 — The coding is supplementary service specific and the subject of other Recommendations.</p>	

TABLE 9/Q.763

Reject Component

Reject Component	Mandatory indication
Component Type Tag Component length (Note)	Mandatory
Invoke ID Tag ^{a)} Invoke ID length Invoke ID	Mandatory
Problem Code Tag Problem Code length Problem Code	Mandatory
<p>^{a)} — If the invoke ID is not available, Universal Null (Table 12) with Length = 0 should be used.</p> <p>NOTE — The component length is coded to indicate the number of octets contained in the component (excluding the component type tag and the component length octets).</p>	

— The Component Type Tag is coded context-specific, constructor as indicated in Table 10.

TABLE 10/Q.763
Component Type Tag

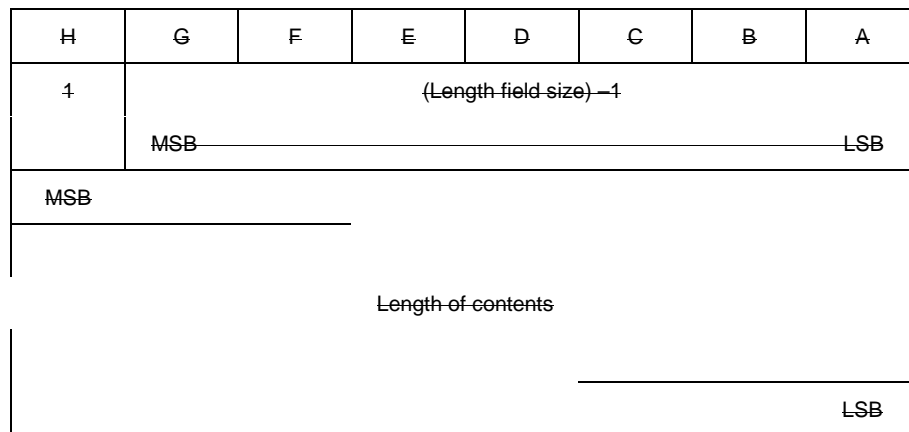
Component Type Tag	H	G	F	E	D	C	B	A
Invoke	1	0	1	0	0	0	0	1
Return Result	1	0	1	0	0	0	1	0
Return Error	1	0	1	0	0	0	1	1
Reject	1	0	1	0	0	1	0	0

- 3) Length of each Component or of their Information Elements
- The length of the contents is coded to indicate the number of octets in the contents. The length does not include the Tag nor the Length of the Contents octet.
 - The length of the contents uses the short, long or indefinite form. If the length is less than 128 octets, the short form is used. In the short form, bit H is coded 0, and the length is encoded as a binary number using bits A to G. The format of this length field is shown in Figure 47.

H	G	F	E	D	C	B	A
0	Length of contents						
	MSB LSB						

FIGURE 47/Q.763
Format of the length subfield (short form)

- If the length is greater than 127 octets, then the long form of the length of the contents is used. The long form length is from 2 to 127 octets long. Bit H of the first octet is coded 1, and bits A to G of the first octet encode a number, one less, than the size of the length in octets as an unsigned binary number whose MSB and LSB are bits G and A, respectively. The length itself is encoded as an unsigned binary number whose MSB and LSB are bit H of the second octet and bit A of the last octet, respectively. This binary number should be encoded in the fewest possible octets, with no leading octets having the value 0.
- The format of this length field is shown in Figure 48.



NOTE The application of the indefinite form of the length is not precluded depending on future application (see Annex B).

FIGURE 48/Q.763

Format of the length subfield (long form)

4) Component ID Tag

— The term Component ID refers to the Invoke ID or the Linked ID.

— The Component ID Tag is coded as shown in Table 11.

TABLE 11/Q.763

Coding of Component ID Tag

	H	G	F	E	D	C	B	A
Invoke ID	0	0	0	0	0	0	1	0
Linked ID ^{a)}	1	0	0	0	0	0	0	0
^{a)} — This tag differs from the Invoke ID, which is coded as a Universal INTEGER, in order to distinguish it from the following tag (Operation Code) which is also coded as a Universal INTEGER.								

— The length of a Component ID is 1 octet.

— An Invoke Component has one or two Component IDs: an Invoke ID and if it is desired to associate the Invoke with a previous Invoke, then the second or Linked ID is provided in addition to the Invoke ID.

— Return Result and Return Error Components have one Component ID, called an Invoke ID which is the reflection of the Invoke ID of the Invoke Component to which they are responding.

— The Reject Component uses as its Invoke ID, the Invoke ID in the component being rejected. If this ID is unavailable (e.g. due to mutilation of the message undetected by lower layers), then the Invoke ID Tag is replaced with a universal Null Tag (which always has length = 0) as shown in Table 12.

TABLE 12/Q.763

Coding of Null Tag

	H	G	F	E	D	C	B	A
Null Tag	0	0	0	0	0	1	0	1

— If an Invoke containing both Invoke and Linked IDs is being rejected, only the Invoke ID is used in the Reject Component.

5) ~~Operation Code Tag~~

— Each operation is assigned a value to identify it. Operations can be classified as local or global operations.

— A local operation code follows an Operation Code Tag and Operation Code Length. The Operation Code Tag is coded as shown in Table 13.

TABLE 13/Q.763

Coding of Operation Code Tag

	H	G	F	E	D	C	B	A
Local Operation Code Tag	0	0	0	0	0	0	1	0
Global Operation Code Tag	0	0	0	0	0	1	1	0

— The Global Operation Code is coded as an Object Identifier, which is described in Recommendation X.209.

	H	G	F	E	D	C	B	A
Sequence Tag	0	0	1	1	0	0	0	0
Set Tag	0	0	1	1	0	0	0	1

6) ~~Parameter Tag~~

— The Parameter Tag shall be any valid ASN.1 Tag, depending on the type of the parameter supplied. It can indicate either a primitive or a constructor element and refer to any of the defined tag classes.

— When the parameter element is a collection of several information elements, the associated data types shall be derived from the Sequence, SequenceOf, Set or SetOf types.

— The Sequence and Set Tags are coded as shown in Table 14.

TABLE 14/Q.763

Coding of Sequence and Set Tag7) ~~Error Code Tag~~

— Each error is assigned a value to identify it. Errors can be classified as local or global errors. A local error code follows the Error Code Tag and Error Code Length. The Error Code Tag is coded as shown in Table 15.

TABLE 15/Q.763

Coding of Error Code Tag

— The Global Error Code is coded as an Object Identifier, which is described in Recommendation X.209.

8) Problem Code

	H	G	F	E	D	C	B	A
Local Error Code Tag	0	0	0	0	0	0	1	0
Global Error Code Tag	0	0	0	0	0	1	1	0

— The Problem Code consists of one of the four elements – General Problem, Invoke Problem, Return Result Problem or Return Error Problem. The tags for these elements are coded as shown in Table 16. Their values are shown in Tables 17 to 20.

TABLE 16/Q.763

Coding of Problem Type Tags

Problem type	H	G	F	E	D	C	B	A
General Problem	1	0	0	0	0	0	0	0
Invoke	1	0	0	0	0	0	0	1
Return Result	1	0	0	0	0	0	1	0
Return Error	1	0	0	0	0	0	1	1

TABLE 17/Q.763

Coding of General Problem

	H	G	F	E	D	C	B	A
Unrecognized Component ^(a)	0	0	0	0	0	0	0	0
Mistyped Component ^(a)	0	0	0	0	0	0	0	1
Badly Structured Component ^(a)	0	0	0	0	0	0	1	0

^(a)— Components are equivalent to ROSE Application Protocol Data Units (APDU).

TABLE 18/Q.763

Coding of Invoke Problem

	H	G	F	E	D	C	B	A
Duplicate Invoke ID	0	0	0	0	0	0	0	0
Unrecognized Operation	0	0	0	0	0	0	0	1
Mistyped parameter ^{a)}	0	0	0	0	0	0	1	0
Resource Limitation	0	0	0	0	0	0	1	1
Initiating Release ^{b)}	0	0	0	0	0	1	0	0
Unrecognized Linked ID	0	0	0	0	0	1	0	1
Linked Response Unexpected	0	0	0	0	0	1	1	0
Unexpected Linked Operation ^{c)}	0	0	0	0	0	1	1	1
^{a)} ——Invoke parameter is equivalent to ROSE Invoke argument. ^{b)} ——ROSE uses “Initiator releasing” as only the initiator of the underlying association may release it. In ISUP, either entity may release the association. ^{c)} ——ROSE refers to a linked operation as a child operation.								

TABLE 19/Q.763

Coding of Return Result Problem

	H	G	F	E	D	C	B	A
Unrecognized Invoke ID	0	0	0	0	0	0	0	0
Return Result Unexpected	0	0	0	0	0	0	0	1
Mistyped Parameter	0	0	0	0	0	0	1	0

TABLE 20/Q.763

Coding of Return Error Problem

	H	G	F	E	D	C	B	A
Unrecognized Invoke ID	0	0	0	0	0	0	0	0
Return Error Unexpected	0	0	0	0	0	0	0	1
Unrecognized Error	0	0	0	0	0	0	1	0
Unexpected Error	0	0	0	0	0	0	1	1
Mistyped Parameter	0	0	0	0	0	1	0	0

ii)——Specification of components in ASN.1

The tables take precedence over the ASN.1 coding.

ISUPRemoteOperations {CCITT Recommendation Q.763 moduleA(0)}

DEFINITIONS ::=

BEGIN

EXPORTS OPERATION, ERROR

Component ::= CHOICE { invoke [1] IMPLICIT Invoke,
returnResult [2] IMPLICIT ReturnResult,
returnError [3] IMPLICIT ReturnError,
reject [4] IMPLICIT Reject }

--The Components are sequences of data elements.

Invoke ::= SEQUENCE { invokeId InvokeId Type,
linkedId [0] IMPLICIT InvokeId Type OPTIONAL,
operationCode OPERATION,
parameter ANY DEFINED BY operationCode OPTIONAL }
-- ANY is filled by the single ASN.1 data type
-- following the key word PARAMETER in the type definition
-- of a particular operation.

ReturnResult ::= SEQUENCE { invokeId InvokeId Type,
SEQUENCE { operationCode OPERATION,
parameters ANY DEFINED BY operationCode } OPTIONAL }
-- ANY is filled by the single ASN.1 data type
-- following the key word RESULT in the type definition
-- of a particular operation.

ReturnError ::= SEQUENCE { invokeId InvokeId Type
errorCode ERROR,
parameter ANY DEFINED BY errorCode
OPTIONAL }
-- ANY is filled by the single ASN.1 data type
-- following the key word PARAMETER in the type definition
-- of a particular error.

Reject ::= SEQUENCE { invokeId CHOICE, InvokeId Type, NULL },
problem CHOICE {
generalProblem [0] IMPLICIT GeneralProblem,
invokeProblem [1] IMPLICIT InvokeProblem,
returnResultProblem [2] IMPLICIT ReturnResultProblem,
returnErrorProblem [3] IMPLICIT ReturnErrorProblem }

InvokeIdType ::= INTEGER (-128 ... 127).

--OPERATIONS

--Operations are specified with the OPERATION MACRO. When an operation is specified, the
--valid parameter set, results and errors for that operation are indicated. Default values and
--optional parameters are permitted.

OPERATION MACRO

BEGIN ::=

TYPE NOTATION ::= Parameter Result Errors LinkedOperations

VALUE NOTATION ::= value (VALUE CHOICE {
localValue INTEGER,
globalValue OBJECT IDENTIFIER })

Parameter ::= "PARAMETER" NamedType | empty

Result ::= "RESULT" ResultType | empty

Errors ::= "ERRORS" "{"ErrorNames"}" | empty

LinkedOperations ::= "LINKED" "{"LinkedOperationNames"}" | empty

ResultType ::= NamedType | empty

```

ErrorNames _____ ::= ErrorList | empty
ErrorList _____ ::= Error | ErrorList, "Error"
LinkedOperationNames _____ ::= operationList | empty
operationList _____ ::= operation | OperationList, "operation"
NamedType _____ ::= identifierType | type

END ----- end of Operation Macro

Error _____ ::= value (ERROR)
_____ -- shall reference an error value
_____ | type
_____ -- shall reference an error type if no error value is specified

Operation _____ ::= value (OPERATION)
_____ -- shall reference an Operation Value
_____ | type
_____ -- shall reference an Operation type if no Operation value is specified

-- ERRORS

-- Errors are specified with the ERROR MACRO. When an error is specified, the valid parameters
-- for that error are indicated. Default values and optional parameters are permitted.

ERROR MACRO _____ ::=
BEGIN

TYPE NOTATION _____ ::= PARAMETER
VALUE NOTATION _____ ::= value (VALUE CHOICE {
_____ localValue INTEGER,
_____ globalValue OBJECT IDENTIFIER })

Parameter _____ ::= "PARAMETER" NamedType | empty
NamedType _____ ::= identifier type | type

END ----- end of Error Macro

-- PROBLEMS

GeneralProblem _____ ::= INTEGER { unrecognizedComponent (0)
_____ mistypedComponent (1)
_____ badlyStructuredComponent (2) }

InvokeProblem _____ ::= INTEGER { duplicateInvokeID (0)
_____ unrecognizedOperation (1)
_____ mistypedParameter (2)
_____ resourceLimitation (3)
_____ initiatingRelease (4)
_____ unrecognizedLinkedID (5)
_____ linkedResponseUnexpected (6)
_____ unexpectedLinkedOperation (7) }

ReturnResultProblem _____ ::= INTEGER { unrecognizedInvokeID (0)
_____ returnResultUnexpected (1)
_____ mistypedParameter (2) }

ReturnErrorProblem _____ ::= INTEGER { unrecognizedInvokeID (0)
_____ returnErrorUnexpected (1)
_____ unrecognizedError (2)
_____ unexpectedError (3)
_____ mistypedParameter (4) }

END ----- end of ISUPRemoteOperation Module.

```

3.49 Service activation @

This section is not applicable to this specification.

The format of the service activation parameter field is shown in Figure 49.

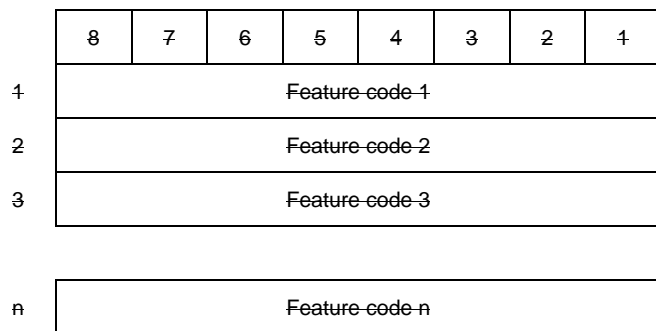
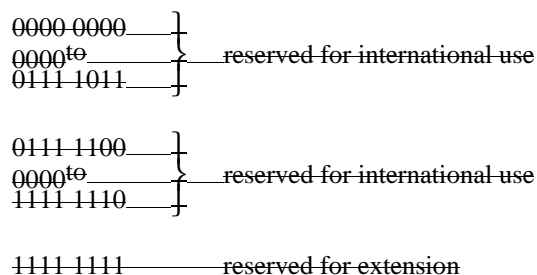


FIGURE 49/Q.763

Service activation parameter field

The following feature codes are used in the service activation parameter field:



3.50 Signalling point code @

This section is not applicable to this specification.

3.51 Subsequent number

The format of the subsequent number parameter field is shown in Figure 51.

	8	7	6	5	4	3	2	1
1	Odd/ even	Spare						
2	2nd address signal				1st address signal			
.								
.								
.								
n	Filler (if necessary)				nth address signal			

FIGURE 51/Q-763 Part C
Subsequent number parameter field

The following codes are used in the subfields of the subsequent number parameter field:

- a) Odd/even indicator: see 3.9 a)
- b) Address signal: see 3.9 e)
- c) Filler: see 3.9 f).

3.52 Suspend/resume indicators

The format of the suspend/resume indicators parameter field is shown in Figure 52.

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

FIGURE 52/Q-763 Part C
Suspend/resume indicators parameter field

The following codes are used in the suspend/resume indicators parameter field:

- bit A: Suspend/resume indicator
 - 0 ISDN subscriber initiated
 - 1 network initiated
- bits B-H: Spare

3.53 Transit network selection @

This section is not applicable to this specification.

3.54 Transmission medium requirement

The format of the transmission medium requirement parameter field is shown in Figure 54.

8	7	6	5	4	3	2	1
Transmission medium requirement (TMR)							

FIGURE 54/Q-763 Part C

Transmission medium requirement parameter field

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) not used
00000101	reserved for alternate 64 kbit/s unrestricted (service 1)/speech (service 2) not used
00000110	64 kbit/s preferred not used
00000111	2 × 64 kbit/s unrestricted not used
00001000	384 kbit/s unrestricted not used
00001001	1536 kbit/s unrestricted not used
00001010	1920 kbit/s unrestricted not used
00001011	} spare
to	
11111111	

3.55 Transmission medium requirement prime

This section is not applicable to this specification.

The format of the transmission medium requirement prime parameter field corresponds to the format shown in Figure 54, except that the coding rules for optional parameter are applied.

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

00000000	speech
00000001	spare
00000010	reserved for 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	reserved for 64 kbit/s preferred
00000111	reserved for 2 × 64 kbit/s unrestricted
00001000	reserved for 384 kbit/s unrestricted
00001001	reserved for 1536 kbit/s unrestricted
00001010	reserved for 1920 kbit/s unrestricted
00001011	} spare
to	
11111111	

3.56 Transmission medium used

This section is not applicable to this specification.

The format of the transmission medium used parameter field corresponds to the format shown in Figure 54, except that the coding rules for optional parameter are applied.

The codings are identical to codings in section 3.55.

3.57 User service information

The format of the user service information parameter field is shown in Figure 55. This format is the same as the bearer capability information element from Recommendation Q.931 and not all capabilities coded here are supported at this time.

The codes to be used in the subfields of the user service information parameter field are defined in the bearer capability information element in Recommendation Q.931.

	8	7	6	5	4	3	2	1
1	Ext.	Coding standard		Information transfer capability				
2	Ext.	Transfer mode		Information transfer rate				
2a	Ext.	Structure			Configuration		Establishment	
2b	Ext.	Symmetry		information transfer rate (destination to origination)				
3	Ext.	Layer ident.		User information layer 1 protocol				
4	Ext.	Layer ident.		User information layer 2 protocol				
5	Ext.	Layer ident.		User information layer 3 protocol				

NOTES

- 1 Octet 2a is omitted if default values apply to all fields of octets 2a and 2b.
- 2 Octet 2b is omitted if default values apply to all fields of octet 2b.
- 3 Octets 3, 4, 5 or any combination of these octets may be omitted. Octet 3 may be extended as described in Table 4-6/Q.931.

FIGURE 55/Q.763 Part C
User service information parameter field

3.58 User service information prime

This section is not applicable to this specification.

The format of the user service information prime parameter field is shown in Figure 55.

The codes used for the user service information prime parameter field correspond to the codes shown in clause 4/Q.931.

3.59 User teleservice information

This section is not applicable to this specification.

The format of the user teleservice information parameter field is shown in Figure 56. This format is the same as the high layer compatibility information element from Recommendation Q.931 and not all capabilities coded here are supported at this time.

The codes to be used in the user teleservice information parameter field are defined in the high layer compatibility information element in Recommendation Q.931.

	8	7	6	5	4	3	2	1
1		Coding standard		Interpretation			Presentation	
2	0/1 ext.	High-layer characteristics identification						
	4 ext.	Extended high-layer characteristics identification						

FIGURE 56/Q.763

User teleservice information parameter field

3.60 User-to-user indicators

The format of the user-to-user indicators parameter field is shown in Figure 57.

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

FIGURE 57/Q.763 Part C

User-to-user indicators parameter field

The following codes are used in the user-to-user indicators parameter field:

bit A: Type
 0 request not used
 1 response

If bit A equals 0 (request):

bits C — B: Service 1
 0 — 0 — no information
 0 — 1 — spare
 1 — 0 — request, not essential
 1 — 1 — request, essential

bits E — D: Service 2
 0 — 0 — no information
 0 — 1 — spare
 1 — 0 — request, not essential
 1 — 1 — request, essential

bits G — F: Service 3
 0 — 0 — no information
 0 — 1 — spare
 1 — 0 — request, not essential
 1 — 1 — request, essential

bit H: Spare

If bit A equals 1 (response):

bits C B: Service 1
 0 0 no information
 0 1 not provided not used

	1	0	provided <u>not used</u>
	1	1	spare <u>not used</u>
bits E	D:	Service 2	
	0	0	no information
	0	1	not provided <u>not used</u>
	1	0	provided <u>not used</u>
	1	1	spare <u>not used</u>
bits G	F:	Service 3	
	0	0	no information
	0	1	not provided <u>not used</u>
	1	0	provided <u>not used</u>
	1	1	spare <u>not used</u>
bit H:	Network discard indicator		
	0	no information <u>not used</u>	
	1	user-to-user information discarded by the network	

3.61 User-to-user information

The format of the user-to-user information parameter is shown in Figure 58.

The format of the user-to-user information parameter field is coded identically to the protocol discriminator plus user information field described in 4.5.29/Q.931.

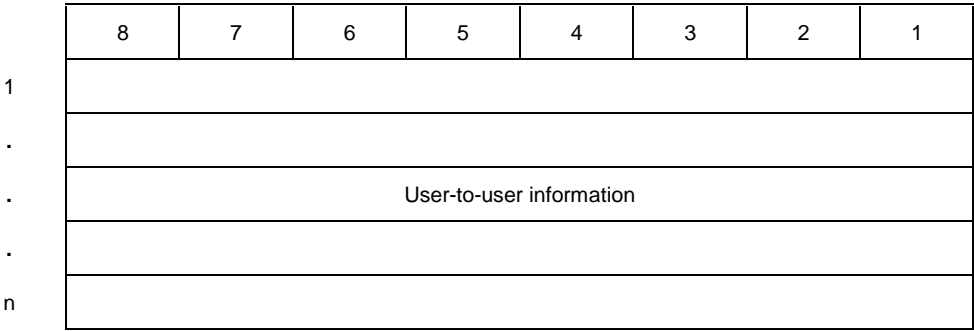


FIGURE 58/Q.763 Part C
User-to-user information parameter field

4 ISDN user part messages and codes

In Tables 21 to 49, the format and coding of ISDN user part messages is specified. For each message, a list of the relevant parameters is given and for each parameter:

- a reference to the subclause where the formatting and coding of the parameter content is specified;
- the type of the parameter. The following types are used in the tables:
 - F = mandatory fixed length parameter;
 - V = mandatory variable length parameter;
 - O = optional parameter of fixed or variable length;
- the length of the parameter.

The value in the table includes:

 - for type F parameters the length, in octets, of the parameter content;
 - for type V parameters the length, in octets, of the length indicator and of the parameter content. The minimum and the maximum length are indicated;
 - for type O parameters the length, in octets, of the parameter name, length indicator and parameter content. For variable length parameters the minimum and maximum length is indicated.

For each message type, type F parameters and the pointers for the type V parameters must be sent in the order specified in Tables 21 to 49.

The routing label and circuit identification code fields, which are transmitted ahead of the message type field if required are not shown. Parameter names, pointers to mandatory variable fields and the optional part, and length indicators appear in the message in accordance with Figure 5 and are not shown explicitly in Tables 4 to 42.

TABLE 21/Q.763 Part C

Message Type: Address complete

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Backward call indicators	3.5	F	2
Optional backward call indicators	3.37	O	3
Call reference @	3.8	Θ	7
Cause indicators	3.12	O	4-?
User-to-user indicators	3.60	O	3
User-to-user information	3.61	O	3-131
Access transport	3.3	O	3-?
Generic notification ind. (Note)	3.25	Θ	3
Transmission medium used	3.56	Θ	3
Echo control information	3.19	Θ	3
Access delivery information	3.2	Θ	3
Redirection number	3.46	Θ	5-12
Parameter compatibility information	3.41	O	4-?
Call diversion information	3.6	Θ	3
Network specific facility @	3.36	Θ	4-?
Remote operations @	3.48	Θ	3-?
Service activation @	3.49	Θ	3-?
Redirection number restr.	3.47	Θ	3
End of optional parameters	3.20	O	1
NOTE — This parameter may be repeated.			

TABLE 22/Q.763 Part C

Message Type: Answer

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Backward call indicators	3.5	O	4
Optional backward call indicators	3.37	O	3
Call reference @	3.8	Θ	7
User-to-user indicators	3.60	O	3
User-to-user information	3.61	O	3-131
Connected number	3.16	Θ	4-12
Access transport	3.3	O	3-?
Access delivery information	3.2	Θ	3
Generic notification ind. (Note)	3.25	Θ	3
Parameter compatibility information	3.41	O	4-?
Call history information	3.7	Θ	4
Generic number (Note)	3.26	Θ	4-12
Transmission medium used	3.56	Θ	3
Network specific facility @	3.36	Θ	4-?
Remote operations @	3.48	Θ	?
Redirection number	3.46	Θ	5-12
Service activation @	3.49	Θ	3-?
Echo control information	3.19	Θ	3
Redirection number restr.	3.47	Θ	3
End of optional parameters	3.20	O	1
NOTE — This parameter may be repeated.			

TABLE 23/Q.763 Part C

Message Type: Call progress

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Event information	3.21	F	1
Cause indicators	3.12	O	4-?
Call reference @	3.8	O	7
Backward call indicators	3.5	O	4
Optional backward call indicators	3.37	O	3
Access transport	3.3	O	3-?
User-to-user indicators	3.60	O	3
Redirection number	3.46	O	5-12
User-to-user information	3.61	O	3-131
Generic notification ind. (Note)	3.25	O	3
Network specific facility @	3.36	O	4-?
Remote operations @	3.48	O	?
Transmission medium used	3.56	O	3
Access delivery information	3.2	O	3
Parameter compatibility information	3.41	O	4
Call diversion information	3.6	O	3
Service activation @	3.49	O	3-?
Redirection number restr.	3.47	O	3
End of optional parameters	3.20	O	1
NOTE—This parameter may be repeated.			

TABLE 24/Q.763

Message Type: ~~Circuit group query response @~~ not used

TABLE 25/Q.763 Part C

Message Type: Circuit group reset acknowledgement

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Range and status	3.43	V	3-34

TABLE 26/Q.763 Part C

Message Type: Confusion

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Cause indicators	3.12	V	4-20
End of optional parameters	3.20	O	1

TABLE 27/Q.763 Part C

Message Type: Connect

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Backward call indicators	3.5	F	2
Optional backward call indicators	3.37	O	3
Connected number	3.16	Θ	4-12
Call reference @	3.8	Θ	7
User-to-user indicators	3.60	O	3
User-to-user information	3.61	O	3-131
Access transport	3.3	O	3-?
Network specific facility @	3.36	Θ	4-?
Generic notification ind. (Note)	3.25	Θ	3
Remote operations @	3.48	Θ	?
Transmission medium used	3.56	Θ	3
Echo control information	3.19	Θ	3
Access delivery information	3.2	Θ	3
Call history information	3.7	Θ	3
Parameter compatibility information	3.41	O	4-?
Redirection number	3.46	Θ	5-12
Service activation @	3.49	Θ	3-?
Generic number (Note)	3.26	Θ	4-12
Redirection number restr.	3.47	Θ	3
End of optional parameters	3.20	O	1
NOTE—This parameter may be repeated.			

TABLE 28/Q.763

Message type: Continuity not used

TABLE 29/Q.763 Part C

Message Type: ~~Facility-reject~~ not used

~~TABLE 30/Q.763~~

Message Type: ~~Information-@~~ not used

~~TABLE 31/Q.763~~

Message Type: ~~Information-request-@~~ not used

TABLE 32/Q.763 Part C

Message Type: Initial address

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Nature of connection indicators	3.35	F	1
Forward call indicators	3.23	F	2
Calling party's category	3.11	F	1
Transmission medium requirement	3.54	F	1
Called party number	3.9	V	4-11
Transit network selection -@	3.53	Θ	4-?
Call reference -@	3.8	Θ	7
Calling party number	3.10	O	4-12
Optional forward call indicators	3.38	Θ	3
Redirecting number	3.44	O	4-12
Redirection information	3.45	O	3-4
Closed user group interlock code	3.15	Θ	6
Connection request	3.17	Θ	7-9
Original called number	3.39	O	4-12
User-to-user information	3.61	O	3-131
Access transport	3.3	O	3-?
User service information	3.57	O	4-13
User-to-user indicators	3.60	Θ	3
Generic number (Note 2)	3.26	Θ	5-13
Propagation delay counter	3.42	Θ	4
User service information prime	3.58	Θ	4-13
Network specific facility -@	3.36	Θ	4-?
Generic digit -@ (Note 1)	3.24	Θ	?
Originating ISC point code	3.40	Θ	4
User service information prime	3.58	Θ	7
Remote operations -@	3.48	Θ	?
Parameter compatibility information	3.41	O	4-?
Generic notification (Note 1)	3.25	Θ	3
Service activation -@	3.49	Θ	3-?
Generic reference (Note 2)	3.27	Θ	5-?
MLPP precedence	3.34	Θ	8
Transmission medium requirement prime	3.55	Θ	3
Location number	3.30	Θ	5-12
End of optional parameters	3.20	O	1
NOTES			
1—— This parameter may be repeated.			
2—— For further study.			

TABLE 33/Q.763 Part C

Message Type: Release

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Cause indicators	3.12	V	3-?
Redirection information @	3.45	Θ	3-4
Redirection number @	3.46	Θ	5-12
Access transport	3.3	O	3-?
Signalling point code @	3.50	Θ	4
User-to-user information	3.61	O	3-131
Automatic congestion level	3.4	O	4
Network specific facility @	3.36	Θ	4-?
Access delivery information	3.2	Θ	3
Parameter compatibility information	3.41	O	4-?
Redirection number restric.	3.47	Θ	3
User-to-user indicators	3.60	O	3
End of optional parameters	3.20	O	1

TABLE 34/Q.763 Part C

Message Type: Release complete

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.13	F	1
Cause indicators	3.12	O	5-6
End of optional parameters	3.20	O	1

TABLE 35/Q.763 Part C

Message Type: Subsequent address

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Subsequent number	3.51	V	3-10
End of optional parameters	3.20	O	1
NOTE – No new optional parameters are allowed in the subsequent message.			

TABLE ~~36/Q.763~~**Message Type: User-to-user information not used**TABLE ~~37/Q.763~~**Message Type: Forward transfer not used**TABLE 38/Q.763 Part C**Message Type: Resume, Suspend**

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Suspend/resume indicators	3.52	F	1
Call reference @	3.8	Θ	7
End of optional parameters	3.20	O	1

TABLE 39/Q.763 Part C**Message Type: Blocking****Message Type: Blocking acknowledgement****Message Type: ~~Continuity check request~~ not used****Message Type: ~~Loop back acknowledgement @~~ not used****Message Type: ~~Overload @~~ not used****Message Type: Reset circuit****Message Type: Unblocking****Message Type: Unblocking acknowledgement****Message Type: Unequipped circuit identification code @ not used**

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1

TABLE 40/Q.763 Part C

Message Type: Circuit group blocking

Message Type: Circuit group blocking acknowledgement

Message Type: Circuit group unblocking

Message Type: Circuit group unblocking acknowledgement

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.13	F	1
Circuit group supervision message type indicator	3.13	F	1
Range and status	3.43	V	3-34

TABLE 41/Q.763 Part C

Message Type: Circuit group reset

Message Type: ~~Circuit group query~~ @ not used

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.13	F	1
Range and status ^{a)}	3.43	V	2
a) The status subfield is not present.			

TABLE 42/Q.763 Part C

Message Type: ~~Facility accepted~~ not used

Message Type: ~~Facility request~~ not used

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.13	F	1
Facility indicator	3.22	F	1
User-to-user indicators	3.60	O	3
Call reference @	3.83	O	7
Connection request	3.17	O	9
Parameter compatibility information	3.41	O	4-7
End of optional parameters	3.20	O	1

~~TABLE 43/Q.763~~

Message Type: ~~Pass-along @~~ not used

~~TABLE 44/Q.763~~

Message Type: ~~User part test~~ not used

Message Type: ~~User part available~~ not used

~~TABLE 45/Q.763~~

Message Type: ~~Facility @~~ not used

~~TABLE 46/Q.763~~

Message Type: ~~Network resource management~~ not used

~~TABLE 47/Q.763~~

Message Type: ~~Identification request~~ not used

~~TABLE 48/Q.763~~

Message Type: ~~Identification response~~ not used

~~TABLE 49/Q.763~~

Message Type: ~~Segmentation~~ not used

Annex A

Interpretation of spare codes

(This annex forms an integral part of this Recommendation Specification)

This annex describes interpretations which can be applied when a recognized parameter is received containing codes currently indicated as being either spare or not used in this Recommendation Specification. This situation can occur when an implementation in accordance to this Recommendation specification interworks with a future version of this Recommendation Specification. The default interpretations for some of these cases are listed in Table A.1 A.2.

For the remaining cases, listed in Table A.2, In some cases there is no default which is considered appropriate. It is recommended that the entire parameter in these cases should be considered uninterpretable except as noted.

Actions taken after applying the default interpretation of unrecognized fields or after determining that an entire parameter should be considered uninterpretable are described in 2.940.5.3/Q.764 Part D. Application of default interpretations is of particular interest when an unrecognized parameter value is passed on at an intermediate exchange or is used at a connection endpoint. However, other applications are not precluded.

TABLE A.1/Q.763

Fields and their default interpretations

Field name with unrecognized code	Default interpretation
Charge indicator	Charge
Called party's status indicator	No indication
Called party's category indicator	No indication
Calling party category	Handle as an ordinary call
Address presentation restricted indicator	Presentation restricted
Cause indicator location	(Note)
Cause value (unextended)	Unspecified: within class xxx
Cause value (extended)	Unspecified: interworking class
Calling party number response indicator	Calling party number included
Connected number response indicator	Connected number included
Redirecting number response indicator	Redirecting number included
Satellite indicator	Two satellites
Continuity check indicator	Continuity check not required
Redirecting reason indicator	Unknown/unavailable
Redirection counter	Maximum redirections
Original redirection reason indicator	Unknown/unavailable
Redirecting indicator	Call forwarded, all redirection information presentation restricted
Closed user group indicator	Non-CUG call
User to user (service 1)	No information
User to user (service 2)	No information
User to user (service 3)	No information
NOTE—If a network receives an unrecognized location field from other networks, the default interpretation of this field will be the location of the network which sends the unrecognized location, otherwise the default interpretation is “beyond an interworking point”.	

Tables for handling of unrecognized parameter values

Reference see 2.910.5.3/Q.764 Part D.

Type A exchanges

Unrecognized parameter values should be handled as indicated below in Type A exchanges (Type A exchanges as described in 2.910.5.2/Q.764 Part D). See also 2.910.5.3 iii)/Q.764 Part D.

Required actions:

Default – Handle as if the default value was received.

Ignore – The value is “don’t care”; the received value may be passed on unchanged or reset to zero.

No default – Pass to call control.

Table A.2 shows the reaction of a Type A exchange.

The tables show the normal actions unless specific procedural text in ~~Recommendations Q.764 and Q.73x-Series~~ Parts D and E states otherwise.

TABLE A.2/Q.763 Part C (sheet 1 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.4	Automatic congestion level	Discard parameter
3.5	Backward call indicators Charge ind. Bits BA: Called party status ind. Bits DC: Called party category ind. Bits FE: End to end method ind. Bits HG: End to end information ind. (national use) Bit J: Holding ind. (national use) Bit L: SCCP method ind. Bits PO:	Default: 10 “charge” Default: 00 “no indication” Default: 00 “no indication” Default: 00 “no end to end method available” Default: 0 “no end to end info available” Default: 0 “holding not requested” Default: 00 “no indication”
3.9	Called party number Nature of address ind. Numbering plan ind. Spare Address signals Filler	Send release with cause 28 Send release with cause 28 Ignore Send release with cause 28 (Note) Default: 0000

TABLE A.2/Q.763 Part C (sheet 2 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.10	<p>Calling party number</p> <p>Nature of address ind.</p> <p>Number incomplete ind.</p> <p>Numbering plan ind.</p> <p>Presentation restricted ind.</p> <p>Screening ind.</p> <p>Address signals</p> <p>Filler</p>	<p>Discard parameter</p> <p>Discard parameter</p> <p>Discard parameter</p> <p>Default: 01 "presentation restricted"</p> <p>Discard parameter</p> <p>No Default</p> <p>Default: 000</p>
3.11	Calling party's category	<p>Default: 0000 1010 "ordinary subscriber"</p> <p><u>The national network may :</u></p> <p>i) <u>accept the received CPC parameter and map the parameter to a valid CPC parameter,</u></p> <p>ii) <u>accept the received CPC parameter and pass the parameter on unchanged, or</u></p> <p>iii) <u>release the call.</u></p>
3.12	<p>Cause indicators</p> <p>Coding standard</p> <p>Spare</p> <p>Location</p> <p>Cause value</p>	<p>Default: 00 "CCITT"</p> <p>Ignore</p> <p>International: Default "international network". National: default "beyond an interwork point"</p> <p>Default: "unspecified within class xxx"</p>
3.13	<p>Circuit group supervision message type indicator</p> <p>Type ind. Bits BA:</p> <p>Reserved Bits H-C:</p>	<p>Discard message</p> <p>Send confusion with cause 110</p>

TABLE A.2/Q.763 Part C (sheet 3 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.16	Connected number Nature of address ind. Spare Numbering plan ind. Presentation restricted ind. Screening ind. Address signals Filler	Discard parameter Ignore Discard parameter Default: 01 "presentation restricted" Discard parameter No Default Default: 0000
3.18	Continuity indicators Reserved Bits H-B:	Ignore
3.21	Event information Event ind. Bits G-A:	Discard message
3.22	Facility indicators	Discard message
3.23	Forward call indicators End to end method ind. Bits CB: End to end inform ind. (national use) Bit E: ISUP preference ind. Bits HG: SCCP method indicator Bits KJ: Spare Bit L: Reserved (national use) Bits P-M:	Default: 00 "no end to end method available" Default: 0 "no end to end info available" Send release with cause 111 Default: 00 "no indication" Ignore Ignore

TABLE A.2/Q.763 Part C (sheet 4 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.28	<p>Information indicators</p> <p>CgPA response ind. (national use) Bits BA:</p> <p>Holding ind. (national use) Bit C:</p> <p>MCID response ind. (national use) Bit D:</p> <p>Spare Bit E:</p> <p>CgPC response ind. (national use) Bit F:</p> <p>Charge inform. resp. ind. (national use) Bit G:</p> <p>Solicited inf. ind. Bit H:</p> <p>Reserved Bits P-I:</p>	<p>Default: "CgPA not included"</p> <p>Default: "Hold not provided"</p> <p>Default: "MCID not provided"</p> <p>Ignore</p> <p>Default: "CgPC not included"</p> <p>Default: "Charge inform. not included"</p> <p>Default: "Unsolicited"</p> <p>Ignore</p>
3.29	<p>Information request ind.</p> <p>Spare/Reserved Bits P-M, L-I, G, F, C:</p>	<p>Ignore</p>
3.35	<p>Nature of connection ind.</p> <p>Satellite ind. Bits BA:</p> <p>Continuity ind. Bits DC:</p> <p>Reserved Bits H-F:</p>	<p>Default: 10 "two satellites in the connection"</p> <p>See Type B exchange</p> <p>Default: 00 "continuity check not required"</p> <p>Ignore</p>
3.37	<p>Optional backward call indicators</p> <p>Bits C,D</p> <p>Reserved for national use Bits E-H:</p>	<p>Default 00</p> <p>Ignore</p>

TABLE A.2/Q.763 Part C (sheet 5 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.38	Optional forward call indicators Closed user group call ind. Bits BA: Spare Bits G-D: E-H:	Default: 00 “non-CUG call” Ignore
3.39	Original Called Number Nature of address ind. Numbering plan ind. Address present. Restr. ind. Address signals Filler	Discard parameter Discard parameter Default: “Presentation restricted” No default Default: 0000
3.43	Range and Status	See 2.89.2/Q.764 Part D and 2.940.3/Q.764 Part D
3.44	Redirecting Number	As indicated in 3.10 in this table
3.45	Redirection information Redirection ind. Bits C-A: Original redirection reason, Bits H-E: Redirection counter, Bits K-I: Redirection reason, Bits P-N: Spare/Reserved Bits L, D:	Default: “Call diversion, all redirection information presentation restricted” Default: “unknown (not available)” Default: “101” Default: “unknown/not available” Ignore
3.46	Redirection number	As indicated in 3.10 in this table
3.51	Subsequent Number Spare Bits 1-7 Address signal Filler	Ignore Send release with cause 28 (Note) Default: 0000
NOTE – Evaluated as far as needed for routing.		

TABLE A.2/Q.763 Part C (sheet 6 of 56)

Type A exchanges

Reference (subclause)	Title	Action
3.52	Suspend/Resume indicators Reserved Bits H-B:	Ignore
3.54	Transmission medium requirement	Send release with cause 65
3.57	User Service Information	No Default
3.60	User to User Indicators Service 1 Bits CB: Service 2 Bits ED: Service 3 Bits GF:	Default: 00 "no information" Default: 00 "no information" Default: 00 "no information"

Type B exchanges

This section is not applicable to this specification.

Table A.3 shows the reaction of a Type B exchange.

The following definitions are used.

Default — Handle as if the default value was received; the default value is sent.

Ignore — The value is "don't care", the received value may be passed on unchanged or reset to zero.

No default — Value received passed on unchanged.

The tables show the normal actions unless specific procedural text in Recommendations Q.764 and Q.73x-Series state otherwise.

TABLE A.3/Q.763 (sheet 1 of 4)

Type B exchanges

Reference (subclause)	Title	Action
3.4	Automatic congestion level	Discard parameter
3.5	Backward call indicator Charge ind. Bits BA: Called party status ind. Bits DC: Called party category ind. Bits FE: End to end method ind. Bits HG: End to end information ind. (national use) Bit J: Holding ind. (national use) Bit L: SCCP method ind. Bits PO:	No default No default No default No default No default Ignore (international transit) No Default (national transit) No default
3.9	Called party number Nature of address ind. Numbering plan ind. Spare Address signals Filler	Send release with cause 28 Send release with cause 28 Ignore Send release with cause 28 (Note) Default: 0000
3.10	Calling party number Nature of address ind. Number incomplete ind. Numbering plan ind. Presentation restric. ind. Screening ind. Address signals Filler	No default No default No default No default No default No default Ignore
3.11	Calling party's category	No default
3.12	Cause indicators Coding standard Spare Location Cause value	No default Ignore No default No default

TABLE A.3/Q.763 (sheet 2 of 4)
Type B exchanges

Reference (subclause)	Title	Action
3.13	Circuit group supervision message type indicator Type ind. Bits BA: Reserved Bits H-C:	Discard message and send confusion with cause 110 Ignore
3.16	Connected number Nature of address ind. Spare Numbering plan ind. Presentation restric. ind. Screening indicator Address signals Filler	No default Ignore No default No default No default No default Ignore
3.18	Continuity indicators Bits H-B: spare	Ignore
3.21	Event information Event ind. Bits G-A:	No default
3.22	Facility indicators	Discard message
3.23	Forward call indicator End to end method ind. Bits CB: End to end information ind. (national use) Bit E: ISUP preference ind. Bits HG: SCCP method ind. Bits KJ: Spare Bit L: Spare (national use) Bits P-M:	No default No default Send release with cause 111 No default Ignore Ignore

TABLE A.3/Q.763 (sheet 3 of 4)

Type B exchanges

Reference (subclause)	Title	Action
3.28	<p>Information indicators</p> <p>Calling party address resp. ind. (national use) Bits BA:</p> <p>Hold provided ind. (national use) Bit C:</p> <p>Calling party's category resp. ind. (national use) Bit F:</p> <p>Charge inform. resp. ind. (national use) Bit G:</p> <p>Solicited inform. ind. Bit H:</p> <p>Spare Bits L-I, E, D:</p>	<p>No default</p> <p>No default</p> <p>No default</p> <p>No default</p> <p>Default: 0 "solicited"</p> <p>Ignore</p>
3.29	<p>Inform. request indicators</p> <p>Spare/reserved (national use) Bits P-A:</p>	Ignore
3.35	<p>Nature of connection indicators</p> <p>Satellite ind. Bits BA:</p> <p>Continuity ind. Bits DC:</p> <p>Spare Bits H-F:</p>	<p>Default: 10 "two satellites in the connection"</p> <p>Default: 00 "continuity check not required" unless required on the outgoing circuit and send confusion with cause 110 + diagnostics</p> <p>Ignore</p>
3.37	<p>Optional backward call indicators</p> <p>Reserved (national use) Bits H-E:</p>	Ignore
3.38	<p>Optional forward call indicators</p> <p>Closed user group call ind. Bits BA:</p> <p>Spare Bits O-G:</p>	<p>No default</p> <p>Ignore</p>
3.39	<p>Original Called number</p> <p>Nature of address indicator</p> <p>Number incomplete indicator</p> <p>Numbering plan indicator</p> <p>Presentation restric. indicator</p> <p>Screening indicator</p> <p>Address signals</p> <p>Filler</p>	<p>No default</p> <p>No default</p> <p>No default</p> <p>No default</p> <p>No default</p> <p>No default</p> <p>Ignore</p>

TABLE A.3/Q.763 (sheet 4 of 4)

Type B exchanges

Reference (subclause)	Title	Action
3.43	Range and status	See 2.9.2/Q.764 and 2.10.3/Q.764
3.45	Redirection information Redirection indicator Bits C-A: Original redirection reason Bits H-E: Redirection counter Bits K-I: Redirection reason Bits P-N: Spare Bits L, D:	No default No default No default No default Ignore
3.51	Subsequent Number Spare Bits 1-7 Address signal Filler	Ignore Send release with cause 28 (Note) Default: 0000
3.52	Suspend/Resume indicators Spare Bits H-B:	Ignore
3.54	Transmission medium requirement	Send release with cause 65
3.57	User service information	No default
3.60	User to user indicators Type Bit A Service 1 Bits CB: Service 2 Bits ED: Service 3 Bits GF:	No default No default No default
NOTE—Evaluated as far as needed for routing.		

Annex B

General description of component encoding rules

(This annex forms an integral part of this Recommendation)

This section is not applicable to this specification.

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