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ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.763

(12/1999)

SERIES Q: SWITCHING AND SIGNALLING

Specifications of Signalling System No. 7 – ISDN user part

Signalling System No. 7 – ISDN user part formats and codes

ITU-T Recommendation Q.763

(Formerly CCITT Recommendation)

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For further details, please refer to the list of ITU-T Recommendations.

ITU-T Recommendation Q.763

Signalling System No. 7 – ISDN user part formats and codes

Summary

This Recommendation specifies the formats and codes of the ISDN user part messages and parameters required to support basic bearer services and supplementary services.

Source

ITU-T Recommendation Q.763 was revised by ITU-T Study Group 11 (1997-2000) and approved under the WTSC Resolution 1 procedure on 3 December 1999.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSC Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

CONTENTS

ITU-T Recommendation Q.763

Signalling System No. 7 – ISDN user part formats and codes

0 Scope, references, definitions, abbreviations

0.1 Scope

This ITU-T Recommendation specifies the formats and codes of the ISDN user part messages and parameters required to support basic bearer services and supplementary services.

0.2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

[1] ITU-T Recommendation X.680 (1997) | ISO/IEC 8824-1:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation.*

[2] ITU-T Recommendation X.690 (1997) | ISO/IEC 8825-1:1998, *Information technology – ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER).*

[3] ITU-T Recommendation X.219 (1988), *Remote operations: Model, notation, and service definition.*

[4] ITU-T Recommendation X.229 (1988), *Remote operations: Protocol specification.*

[5] ITU-T Recommendation G.704 (1998), *Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44 736 kbit/s hierarchical levels.*

[6] ITU-T Recommendation Q.931 (1998), *ISDN user-network interface layer 3 specification for basic call control.*

[7] ITU-T Recommendation Q.850 (1998), *Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part.*

[8] ITU-T Recommendation Q.703 (1996), *Signalling link.*

[9] ITU-T Recommendation Q.704 (1996), *Signalling network functions and messages.*

[10] ITU-T Recommendation Q.2763 (1999), *Signalling System No. 7 B-ISDN User Part (B-ISUP) – Formats and codes.*

[11] ITU-T Recommendation Q.1218 (1995), *Interface Recommendation for intelligent network CS-1.*

[12] ITU-T Recommendation Q.1228 (1997), *Interface Recommendation for intelligent network Capability Set 2.*

0.3 Terms and definitions

See ITU-T Recommendation Q.762.

0.4 Abbreviations

This Recommendation uses the following abbreviations:

ASE	Application Service Element
ASN.1	Abstract Syntax Notation One
ATP	Access Transport Parameter
BCD	Binary Coded Decimal
CCBS	Completion of Calls to Busy Subscriber
CCNR	Completion of Calls on no Reply
CCSS	Call Completion Service Set-up
CIC	Circuit Identification Code
CUG	Closed User Group
DNIC	Data Network Identification Code
DPC	Destination Point Code
DSS1	Digital Subscriber Signalling System No. 1
ext.	Extension bit
FDM	Frequency Division Multiplex
GAT	Generic Addressing and Transport
GUG	GVNS User Group
GVNS	Global Virtual Network Service
HTR	Hard-To-Reach
IA5	International Alphabet No. 5
INAP	Intelligent Network Application Protocol
INN	Internal Network Number
ISC	International Switching Centre
ISDN	Integrated Services Digital Network
LFB	Look-ahead for Busy (from MLPP Supplementary Service)
LSB	Least Significant Bit
MCID	Malicious Call IDentification
MLPP	Multi-Level Precedence and Preemption
MNIC	Mobile Network Identification Code
MSB	Most Significant Bit
NI	Network Identity
NI	Number Incomplete
NRN	Network Routing Number
O/E	Odd/Even
OPC	Originating Point Code
OPSP	Origination Participation Service Provider

PISN	Private Integrated Services Network
QoR	Query on Release
ROA	Recognized Operating Agency
ROSE	Remote Operations Service Element
SCCP	Signalling Connection Control Part
SCF	Service Control Function
SLS	Signalling Link Selection
ST	End of pulsing signal (Stop Sending)
TAR	Temporary Alternative Routing
TCC	Telephony Country Code
TNRN	Terminating Network Routing Number
UID	User Interactive Dialogue
VPN	Virtual Private Network

For further abbreviations, see ITU-T Recommendation Q.761.

1 General coding principles

ISDN user part messages are carried on the signalling link by means of message signal units the format of which is described in 2.2/Q.703.

The format of and the codes used in the service information octet are described in 14.2/Q.704. 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.

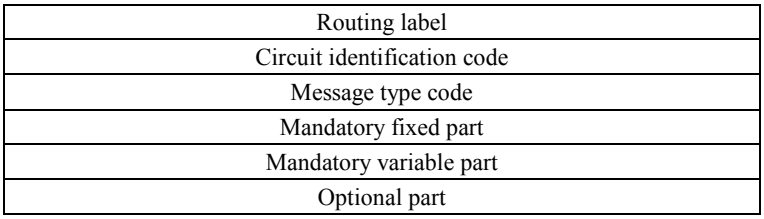


Figure 1/Q.763 – ISDN user part message parts

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

1.1 Routing label

The format and codes used for the routing label are described in 2.2/Q.704. 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.

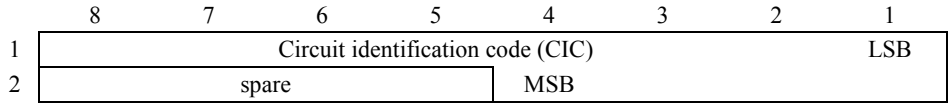


Figure 2/Q.763 – Circuit identification field

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 (ITU-T 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.

b) *8448 kbit/s digital path*

For circuits which are derived from a 8448 kbit/s digital path (ITU-T 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 a multirate connection type call, the CIC used in call connection messages shall be that of the lowest numbered CIC of the circuits used in the multirate connection types. Where the circuits used are derived from a 2048 kbit/s digital path, they shall be in fixed groups of contiguous time slots (excluding time slot 0 and 16), in accordance with Table 3 (Part 1).

e) For the N × 64 kbit/s connection types, circuits used may be either contiguous or non-contiguous. In a 2048 kbit/s digital path, the N can be a value from 2 to 30. In a 1544 kbit/s digital path, the N can be a value from 2 to 24.

NOTE – At an international interface with inflexible mapping between the 2048 kbit/s and 1544 kbit/s digital paths, the circuits used shall be in a fixed group of contiguous time slots in accordance with Table 3 (Part 2) per bilateral agreement.

Table 1/Q.763

0 0 0 0 0 0 0	Circuit 1
0 0 0 0 0 0 1 ⋮ 0 0 1 1 1 1 1	Circuit 2 ⋮ Circuit 32
0 1 0 0 0 0 0 ⋮ 1 1 1 1 1 1 0	Circuit 33 ⋮ Circuit 127
1 1 1 1 1 1 1	Circuit 128

Table 2/Q.763

0 0 0 0 0 0	Unallocated	
0 0 0 0 0 1 ⋮ 0 0 1 1 0 0	Circuit 1 ⋮ Circuit 12	1st basic (FDM) group
0 0 1 1 0 1 0 0 1 1 1 0 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0 0 0 1 ⋮ 0 1 1 0 0 1	Circuit 1 Circuit 2 Circuit 3 Unallocated Circuit 4 ⋮ Circuit 12	2nd basic (FDM) group
0 1 1 0 1 0 ⋮ 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 ⋮ 1 0 0 1 1 0	Circuit 1 ⋮ Circuit 6 Unallocated Circuit 7 ⋮ Circuit 12	3rd basic (FDM) group
1 0 0 1 1 1 ⋮ 1 0 1 1 1 1 1 1 0 0 0 0 1 1 0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 1	Circuit 1 ⋮ Circuit 9 Unallocated Circuit 10 Circuit 11 Circuit 12	4th basic (FDM) group
1 1 0 1 0 0 ⋮ 1 1 1 1 1 1	Circuit 1 ⋮ Circuit 12	5th basic (FDM) group

Table 3/Q.763 (part 1)

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

Table 3/Q.763 (part 2)

<table>
<tr><th rowspan="2">Time slot</th><th rowspan="2">1544 kbit/s circuit</th><th colspan="10">Fixed contiguous N × 64 multirate connection type at 2048 kbit/s and 1544 kbit/s interface</th></tr>
<tr><th>N = 2</th><th>N = 3</th><th>N = 4</th><th>N = 5</th><th>N = 6</th><th>N = 7</th><th>N = 8</th><th>N = 9</th><th>N = 10</th><th>N = 11</th></tr>
<tr><td>0</td><td></td><td colspan="10">Unallocated</td></tr>
<tr><td>1</td><td>1</td><td rowspan="2">Call 1</td><td rowspan="3">Call 1</td><td rowspan="3">Call 1</td><td rowspan="5">Call 1</td><td rowspan="5">Call 1</td><td rowspan="7">Call 1</td><td rowspan="7">Call 1</td><td rowspan="7">Call 1</td><td rowspan="7">Call 1</td><td rowspan="7">Call 1</td></tr>
<tr><td>2</td><td>2</td></tr>
<tr><td>3</td><td>3</td><td rowspan="2">Call 2</td></tr>
<tr><td>4</td><td>4</td><td rowspan="3">Call 2</td></tr>
<tr><td>5</td><td>5</td><td rowspan="2">Call 3</td></tr>
<tr><td>6</td><td>6</td><td rowspan="4">Call 2</td><td rowspan="6">Call 2</td></tr>
<tr><td>7</td><td>7</td><td rowspan="2">Call 4</td><td rowspan="3">Call 3</td><td rowspan="6">Call 2</td></tr>
<tr><td>8</td><td>8</td><td rowspan="6">Call 2</td></tr>
<tr><td>9</td><td>9</td><td rowspan="2">Call 5</td><td rowspan="4">Call 3</td><td rowspan="6">Call 2</td><td rowspan="6">Call 2</td></tr>
<tr><td>10</td><td>10</td><td rowspan="3">Call 4</td></tr>
<tr><td>11</td><td>11</td><td rowspan="2">Call 6</td><td rowspan="5">Call 3</td><td rowspan="5">Call 2</td></tr>
<tr><td>12</td><td>12</td><td rowspan="5">Call 2</td></tr>
<tr><td>13</td><td>13</td><td rowspan="2">Call 7</td><td rowspan="4">Call 5</td><td rowspan="4">Call 4</td><td rowspan="4">Call 3</td><td rowspan="5">Call 2</td><td rowspan="5">Call 2</td></tr>
<tr><td>14</td><td>14</td></tr>
<tr><td>15</td><td>15</td><td>Call 8</td><td>Call 3</td></tr>
<tr><td>16</td><td></td><td colspan="10">Unallocated (for Q.33, Q.50 use)</td></tr>
<tr><td>17</td><td>16</td><td>Call 8</td><td rowspan="3">Call 6</td><td>Call 4</td><td rowspan="4">Call 4</td><td rowspan="3">Call 3</td><td rowspan="3">Call 3</td><td>Call 2</td><td rowspan="3">Call 2</td><td rowspan="4">Call 2</td><td rowspan="4">Call 2</td></tr>
<tr><td>18</td><td>17</td><td rowspan="2">Call 9</td><td rowspan="3">Call 5</td><td rowspan="4">Call 3</td><td rowspan="4">Call 2</td></tr>
<tr><td>19</td><td>18</td></tr>
<tr><td>20</td><td>19</td><td rowspan="2">Call 10</td><td rowspan="3">Call 7</td><td rowspan="5">Call 4</td><td rowspan="5">Call 3</td></tr>
<tr><td>21</td><td>20</td></tr>
<tr><td>22</td><td>21</td><td rowspan="2">Call 11</td><td rowspan="4">Call 6</td><td rowspan="4">Call 5
(Note 1)</td><td rowspan="5">Call 3
(Note 1)</td><td rowspan="4">Call 3
(Note 1)</td></tr>
<tr><td>23</td><td>22</td><td rowspan="3">Call 8</td><td rowspan="4">Call 4
(Note 1)</td><td rowspan="4">NA</td></tr>
<tr><td>24</td><td>23</td><td rowspan="2">Call 12</td></tr>
<tr><td>25</td><td>24</td></tr>
<tr><td>26</td><td></td><td>Call 13</td><td rowspan="3">Call 9</td><td rowspan="3">Call 7</td><td rowspan="5">Call 5
(Note 1)</td><td rowspan="4">Call 6
(Note 1)</td></tr>
<tr><td>27</td><td></td><td>(Note 1)</td></tr>
<tr><td>28</td><td></td><td rowspan="2">Call 14
(Note 1)</td><td rowspan="2">(Note 1)</td><td rowspan="2">(Note 1)</td></tr>
<tr><td>29</td><td></td><td rowspan="3">Call 10
(Note 1)</td><td rowspan="3">NA</td></tr>
<tr><td>30</td><td></td><td>Call 15</td><td rowspan="2">NA</td><td rowspan="2">NA</td></tr>
<tr><td>31</td><td></td><td>(Note 1)</td></tr>
</table>

Table 3/Q.763 (part 2) *(continued)*

<table>
<tr><th rowspan="2">Time slot</th><th rowspan="2">1544 kbit/s circuit</th><th colspan="10">Fixed contiguous N × 64 multirate connection type at 2048 kbit/s and 1544 kbit/s interface</th></tr>
<tr><th>N = 12</th><th>N = 13</th><th>N = 14</th><th>N = 15</th><th>N = 16</th><th>N = 17</th><th>N = 18</th><th>N = 19</th><th>N = 20</th><th>N = 21</th></tr>
<tr><td>0</td><td></td><td colspan="10">Unallocated</td></tr>
<tr><td>1</td><td>1</td><td rowspan="12">Call 1</td><td rowspan="13">Call 1</td><td rowspan="14">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td></tr>
<tr><td>2</td><td>2</td></tr>
<tr><td>3</td><td>3</td></tr>
<tr><td>4</td><td>4</td></tr>
<tr><td>5</td><td>5</td></tr>
<tr><td>6</td><td>6</td></tr>
<tr><td>7</td><td>7</td></tr>
<tr><td>8</td><td>8</td></tr>
<tr><td>9</td><td>9</td></tr>
<tr><td>10</td><td>10</td></tr>
<tr><td>11</td><td>11</td></tr>
<tr><td>12</td><td>12</td></tr>
<tr><td>13</td><td>13</td><td rowspan="3">Call 2</td></tr>
<tr><td>14</td><td>14</td><td rowspan="2">Call 2</td></tr>
<tr><td>15</td><td>15</td><td>Call 2</td></tr>
<tr><td>16</td><td></td><td colspan="10">Unallocated (for Q.33, Q.50 use)</td></tr>
<tr><td>17</td><td>16</td><td rowspan="8">Call 2</td><td rowspan="15">Call 2
(Note 1)</td><td rowspan="15">Call 2
(Note 1)</td><td rowspan="15">Call 2
(Note 1)</td><td>Call 1</td><td>Call 1</td><td rowspan="2">Call 1</td><td rowspan="3">Call 1</td><td rowspan="4">Call 1</td><td rowspan="8">Call 1</td></tr>
<tr><td>18</td><td>17</td><td rowspan="14">NA</td></tr>
<tr><td>19</td><td>18</td><td rowspan="14">NA</td><td rowspan="3">Call 1</td></tr>
<tr><td>20</td><td>19</td><td rowspan="13">NA</td></tr>
<tr><td>21</td><td>20</td><td rowspan="7">Call 2
(Note 1)</td><td rowspan="12">NA</td></tr>
<tr><td>22</td><td>21</td><td rowspan="12">NA</td><td rowspan="12">NA</td></tr>
<tr><td>23</td><td>22</td><td rowspan="12">Call 1</td></tr>
<tr><td>24</td><td>23</td></tr>
<tr><td>25</td><td>24</td><td rowspan="7">NA</td></tr>
<tr><td>26</td><td></td></tr>
<tr><td>27</td><td></td><td rowspan="6">NA</td></tr>
<tr><td>28</td><td></td></tr>
<tr><td>29</td><td></td><td rowspan="3">NA</td></tr>
<tr><td>30</td><td></td></tr>
<tr><td>31</td><td></td></tr>
</table>

Table 3/Q.763 (part 2) *(concluded)*

<table>
<tr><th rowspan="2">Time slot</th><th rowspan="2">1544 kbit/s circuit</th><th colspan="9">Fixed contiguous N × 64 multirate connection type at 2048 kbit/s and 1544 kbit/s interface</th></tr>
<tr><th>N = 22</th><th>N = 23</th><th>N = 24</th><th>N = 25</th><th>N = 26</th><th>N = 27</th><th>N = 28</th><th>N = 29</th><th>N = 30</th></tr>
<tr><td>0</td><td></td><td colspan="9">Unallocated</td></tr>
<tr><td>1</td><td>1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">Call 1</td><td rowspan="15">NA (Note 2)</td><td rowspan="15">NA (Note 2)</td><td rowspan="15">NA (Note 2)</td><td rowspan="15">NA (Note 2)</td><td rowspan="15">NA (Note 2)</td><td rowspan="15">NA (Note 2)</td></tr>
<tr><td>2</td><td>2</td></tr>
<tr><td>3</td><td>3</td></tr>
<tr><td>4</td><td>4</td></tr>
<tr><td>5</td><td>5</td></tr>
<tr><td>6</td><td>6</td></tr>
<tr><td>7</td><td>7</td></tr>
<tr><td>8</td><td>8</td></tr>
<tr><td>9</td><td>9</td></tr>
<tr><td>10</td><td>10</td></tr>
<tr><td>11</td><td>11</td></tr>
<tr><td>12</td><td>12</td></tr>
<tr><td>13</td><td>13</td></tr>
<tr><td>14</td><td>14</td></tr>
<tr><td>15</td><td>15</td></tr>
<tr><td>16</td><td></td><td colspan="9">Unallocated (for Q.33, Q.50 use)</td></tr>
<tr><td>17</td><td>16</td><td rowspan="7">Call 1</td><td rowspan="8">Call 1</td><td rowspan="9">Call 1</td><td rowspan="10">NA</td><td rowspan="11">NA</td><td rowspan="8">NA</td><td rowspan="9">NA</td><td rowspan="12">NA</td><td rowspan="12">NA</td></tr>
<tr><td>18</td><td>17</td></tr>
<tr><td>19</td><td>18</td></tr>
<tr><td>20</td><td>19</td></tr>
<tr><td>21</td><td>20</td></tr>
<tr><td>22</td><td>21</td></tr>
<tr><td>23</td><td>22</td></tr>
<tr><td>24</td><td>23</td><td rowspan="8">NA</td></tr>
<tr><td>25</td><td>24</td><td rowspan="7">NA</td></tr>
<tr><td>26</td><td></td><td rowspan="6">NA</td></tr>
<tr><td>27</td><td></td><td rowspan="5">NA</td></tr>
<tr><td>28</td><td></td><td rowspan="4">NA</td></tr>
<tr><td>29</td><td></td><td rowspan="3">NA</td></tr>
<tr><td>30</td><td></td><td rowspan="2">NA</td></tr>
<tr><td>31</td><td></td><td>NA</td></tr>
<tr><td colspan="11">NA Not allocated
NOTE 1 – Use another 1544 kbit/s digital path.
NOTE 2 – Not allocated for 2048 kbit/s and 1544 kbit/s interworking; but, can be allocated in the 2048 kbit/s digital path.</td></tr>
</table>

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 tables in this Recommendation is summarized in Table 4.

Table 4/Q.763

Message type	Reference (Table)	Code
Address complete	21	0 0 0 0 0 1 1 0
Answer	22	0 0 0 0 1 0 0 1
Application transport	51	0 1 0 0 0 0 0 1
Blocking	39	0 0 0 1 0 0 1 1
Blocking acknowledgement	39	0 0 0 1 0 1 0 1
Call progress	23	0 0 1 0 1 1 0 0
Circuit group blocking	40	0 0 0 1 1 0 0 0
Circuit group blocking acknowledgement	40	0 0 0 1 1 0 1 0
Circuit group query (national use)	41	0 0 1 0 1 0 1 0
Circuit group query response (national use)	24	0 0 1 0 1 0 1 1
Circuit group reset	41	0 0 0 1 0 1 1 1
Circuit group reset acknowledgement	25	0 0 1 0 1 0 0 1
Circuit group unblocking	40	0 0 0 1 1 0 0 1
Circuit group unblocking acknowledgement	40	0 0 0 1 1 0 1 1
Charge information (national use)	(Note)	0 0 1 1 0 0 0 1
Confusion	26	0 0 1 0 1 1 1 1
Connect	27	0 0 0 0 0 1 1 1
Continuity	28	0 0 0 0 0 1 0 1
Continuity check request	39	0 0 0 1 0 0 0 1
Facility	45	0 0 1 1 0 0 1 1
Facility accepted	42	0 0 1 0 0 0 0 0
Facility reject	29	0 0 1 0 0 0 0 1
Facility request	42	0 0 0 1 1 1 1 1
Forward transfer	37	0 0 0 0 1 0 0 0
Identification request	47	0 0 1 1 0 1 1 0
Identification response	48	0 0 1 1 0 1 1 1
Information (national use)	30	0 0 0 0 0 1 0 0
Information request (national use)	31	0 0 0 0 0 0 1 1
Initial address	32	0 0 0 0 0 0 0 1
Loop back acknowledgement (national use)	39	0 0 1 0 0 1 0 0
Loop prevention	50	0 1 0 0 0 0 0 0
Network resource management	46	0 0 1 1 0 0 1 0
Overload (national use)	39	0 0 1 1 0 0 0 0
Pass-along (national use)	43	0 0 1 0 1 0 0 0
Pre-release information	52	0 1 0 0 0 0 1 0
Release	33	0 0 0 0 1 1 0 0
Release complete	34	0 0 0 1 0 0 0 0
Reset circuit	39	0 0 0 1 0 0 1 0
Resume	38	0 0 0 0 1 1 1 0

Table 4/Q.763 *(concluded)*

Message type	Reference (Table)	Code
Segmentation	49	0 0 1 1 1 0 0 0
Subsequent address	35	0 0 0 0 0 0 1 0
Subsequent Directory Number (national use)	53	0 1 0 0 0 0 1 1
Suspend	38	0 0 0 0 1 1 0 1
Unblocking	39	0 0 0 1 0 1 0 0
Unblocking acknowledgement	39	0 0 0 1 0 1 1 0
Unequipped CIC (national use)	39	0 0 1 0 1 1 1 0
User Part available	44	0 0 1 1 0 1 0 1
User Part test	44	0 0 1 1 0 1 0 0
User-to-user information	36	0 0 1 0 1 1 0 1
Reserved (used in 1984 version)		0 0 0 0 1 0 1 0 0 0 0 0 1 0 1 1 0 0 0 0 1 1 1 1 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 1 0 0 1 0 1 0 0 1 0 0 1 1 0
Reserved (used in 1988 version)		0 0 0 1 1 1 0 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 0 0 0 1 0 0 1 1 1
Reserved (used in B-ISUP)		0 0 1 1 1 0 0 1 to 0 0 1 1 1 1 0 1
Reserved for future extension		1 0 0 0 0 0 0 0
NOTE – The format of this message is a national matter.		

1.4 Formatting principles

Each message consists of a number of PARAMETERS listed and described in clause 3. 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 clause 4.

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

A general format diagram is shown in Figure 3.

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 21 through 50), but there is no optional part included in this particular message, then a pointer field containing all zeros will be used. 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 "0000 0001" 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 this Recommendation, 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 parameters" 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.

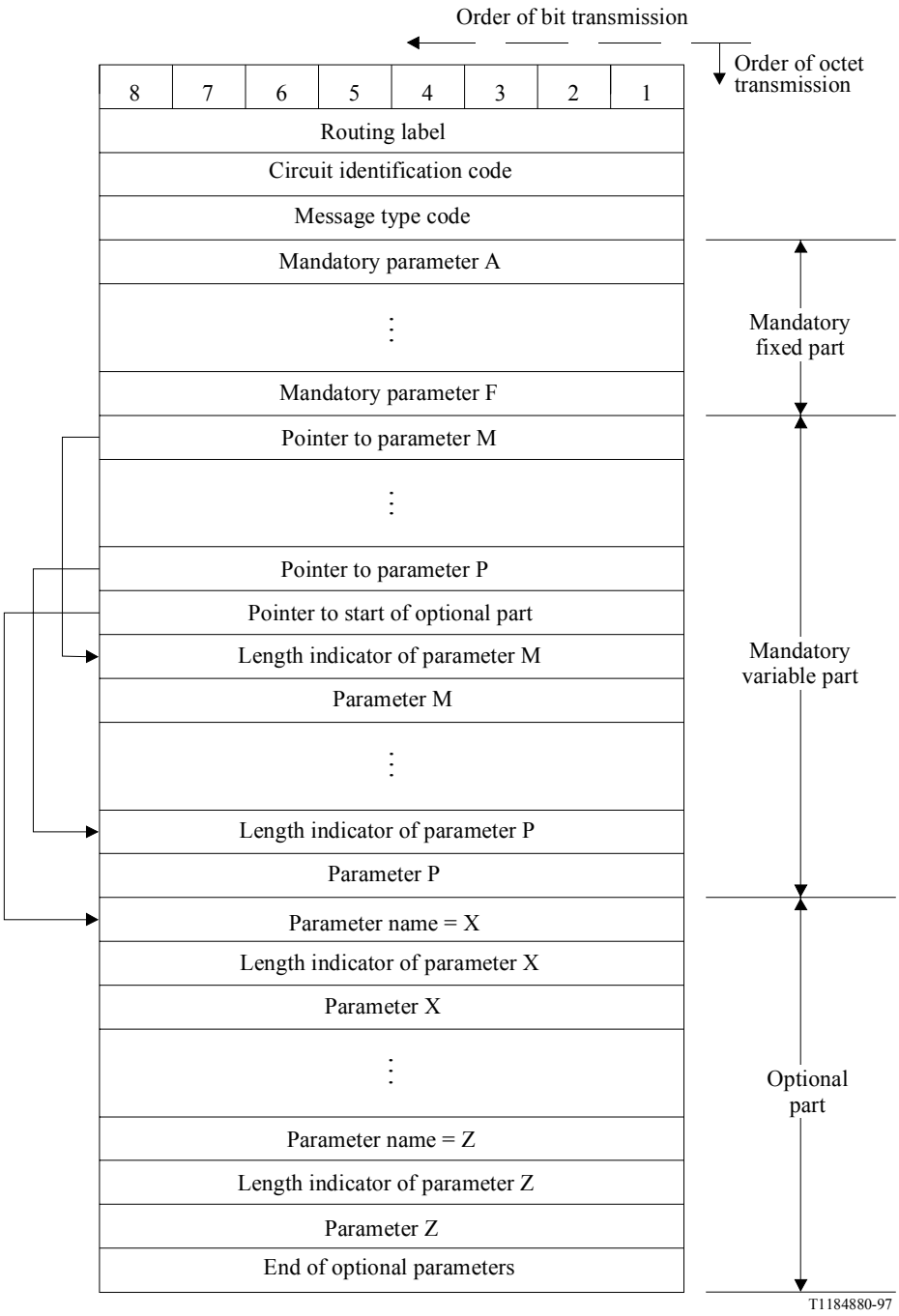


Figure 3/Q.763 – General format overview

1.10 Coding of spare bits

Spare bits are coded 0 unless indicated otherwise.

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 1111_1111. Message type codes in the range 1111_1111 to 1110_0000 and parameter name codes in the range 1111_1111 to 1100_0001 are reserved exclusively for national use.

1.12 Rules for the allocation of message types codes and parameter name codes

B-ISUP message and parameter codes not used in ISUP should be marked reserved.

1.13 Meaning of "spare" codes and "reserved" codes

a) Spare code: A code is indicated in this Recommendation as:

- spare;
- spare for international use; or
- spare for national use.

A code indicated as "spare" or "spare for international use" is a code available for future ITU-T use.

A code indicated as "spare for national use" is not available for ITU-T use.

b) Reserved code: A code may have been reserved in this Recommendation because of:

- a previous ITU-T Recommendation;
- an intended usage (however, procedures have not been developed); or
- national use.

A code reserved for a previous ITU-T Recommendation (e.g. *Blue Book*) is not available for future use.

A code reserved for an intended use (e.g. for future extension) will be specified when the intended procedures are developed.

A code reserved for national use is not available for ITU-T use.

2 Parameter 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.

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[1]

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

Parameter name	Reference (subclause)	Code
Access delivery information	3.2	0 0 1 0 1 1 1 0
Access transport	3.3	0 0 0 0 0 0 1 1
Application transport	3.82	0 1 1 1 1 0 0 0
Automatic congestion level	3.4	0 0 1 0 0 1 1 1
Backward call indicators	3.5	0 0 0 1 0 0 0 1
Backward GVNS	3.62	0 1 0 0 1 1 0 1
Call diversion information	3.6	0 0 1 1 0 1 1 0
Call diversion treatment indicators	3.72	0 1 1 0 1 1 1 0
Call history information	3.7	0 0 1 0 1 1 0 1
Call offering treatment indicators	3.74	0 1 1 1 0 0 0 0
Call reference (national use)	3.8	0 0 0 0 0 0 0 1
Call transfer number	3.64	0 1 0 0 0 1 0 1
Call transfer reference	3.65	0 1 0 0 0 0 1 1
Called IN number	3.73	0 1 1 0 1 1 1 1
Called directory number (national use)	3.86	0 1 1 1 1 1 0 1
Called party number	3.9	0 0 0 0 0 1 0 0
Calling geodetic location	3.88	1 0 0 0 0 0 0 1
Calling party number	3.10	0 0 0 0 1 0 1 0
Calling party's category	3.11	0 0 0 0 1 0 0 1
Cause indicators	3.12	0 0 0 1 0 0 1 0
CCNR possible indicator	3.83	0 1 1 1 1 0 1 0
CCSS	3.63	0 1 0 0 1 0 1 1
Charged party identification (national use)	3.75	0 1 1 1 0 0 0 1
Circuit assignment map	3.69	0 0 1 0 0 1 0 1
Circuit group supervision message type	3.13	0 0 0 1 0 1 0 1
Circuit state indicator (national use)	3.14	0 0 1 0 0 1 1 0
Closed user group interlock code	3.15	0 0 0 1 1 0 1 0
Collect call request	3.81	0 1 1 1 1 0 0 1
Conference treatment indicators	3.76	0 1 1 1 0 0 1 0
Connected number	3.16	0 0 1 0 0 0 0 1
Connection request	3.17	0 0 0 0 1 1 0 1
Continuity indicators	3.18	0 0 0 1 0 0 0 0
Correlation id	3.70	0 1 1 0 0 1 0 1
Display information	3.77	0 1 1 1 0 0 1 1
Echo control information	3.19	0 0 1 1 0 1 1 1
End of optional parameters	3.20	0 0 0 0 0 0 0 0

[1] The clause numbering of the parameters in the previous version (1993) of this Recommendation is retained; new parameters are added to the end of clause 3.

Table 5/Q.763 *(continued)*

Parameter name	Reference (subclause)	Code
Event information	3.21	0 0 1 0 0 1 0 0
Facility indicator	3.22	0 0 0 1 1 0 0 0
Forward call indicators	3.23	0 0 0 0 0 1 1 1
Forward GVNS	3.66	0 1 0 0 1 1 0 0
Generic digits (national use)	3.24	1 1 0 0 0 0 0 1
Generic notification indicator	3.25	0 0 1 0 1 1 0 0
Generic number	3.26	1 1 0 0 0 0 0 0
HTR information	3.89	1 0 0 0 0 0 1 0
Hop counter	3.80	0 0 1 1 1 1 0 1
Information indicators (national use)	3.28	0 0 0 0 1 1 1 1
Information request indicators (national use)	3.29	0 0 0 0 1 1 1 0
Location number	3.30	0 0 1 1 1 1 1 1
Loop prevention indicators	3.67	0 1 0 0 0 1 0 0
MCID request indicators	3.31	0 0 1 1 1 0 1 1
MCID response indicators	3.32	0 0 1 1 1 1 0 0
Message compatibility information	3.33	0 0 1 1 1 0 0 0
MLPP precedence	3.34	0 0 1 1 1 0 1 0
Nature of connection indicators	3.35	0 0 0 0 0 1 1 0
Network management controls	3.68	0 1 0 1 1 0 1 1
Network routing number (national use)	3.90	1 0 0 0 0 1 0 0
Network specific facility (national use)	3.36	0 0 1 0 1 1 1 1
Number portability forward information (network option)	3.101	1 0 0 0 1 1 0 1
Optional backward call indicators	3.37	0 0 1 0 1 0 0 1
Optional forward call indicators	3.38	0 0 0 0 1 0 0 0
Original called number	3.39	0 0 1 0 1 0 0 0
Original called IN number	3.87	0 1 1 1 1 1 1 1
Origination ISC point code	3.40	0 0 1 0 1 0 1 1
Parameter compatibility information	3.41	0 0 1 1 1 0 0 1
Pivot capability	3.84	0 1 1 1 1 0 1 1
Pivot counter	3.93	1 0 0 0 0 1 1 1
Pivot routing backward information	3.95	1 0 0 0 1 0 0 1
Pivot routing forward information	3.94	1 0 0 0 1 0 0 0
Pivot routing indicators	3.85	0 1 1 1 1 1 0 0
Pivot status (national use)	3.92	1 0 0 0 0 1 1 0
Propagation delay counter	3.42	0 0 1 1 0 0 0 1
Query on release capability (network option)	3.91	1 0 0 0 0 1 0 1
Range and status	3.43	0 0 0 1 0 1 1 0
Redirect backward information (national use)	3.100	1 0 0 0 1 1 0 0
Redirect capability (national use)	3.96	0 1 0 0 1 1 1 0
Redirect counter (national use)	3.97	0 1 1 1 0 1 1 1
Redirect forward information (national use)	3.99	1 0 0 0 1 0 1 1
Redirect status (national use)	3.98	1 0 0 0 1 0 1 0
Redirecting number	3.44	0 0 0 0 1 0 1 1
Redirection information	3.45	0 0 0 1 0 0 1 1
Redirection number	3.46	0 0 0 0 1 1 0 0

Table 5/Q.763 *(concluded)*

Parameter name	Reference (subclause)	Code
Redirection number restriction	3.47	0 1 0 0 0 0 0 0
Remote operations (national use)	3.48	0 0 1 1 0 0 1 0
SCF id	3.71	0 1 1 0 0 1 1 0
Service activation	3.49	0 0 1 1 0 0 1 1
Signalling point code (national use)	3.50	0 0 0 1 1 1 1 0
Subsequent number	3.51	0 0 0 0 0 1 0 1
Suspend/Resume indicators	3.52	0 0 1 0 0 0 1 0
Transit network selection (national use)	3.53	0 0 1 0 0 0 1 1
Transmission medium requirement	3.54	0 0 0 0 0 0 1 0
Transmission medium requirement prime	3.55	0 0 1 1 1 1 1 0
Transmission medium used	3.56	0 0 1 1 0 1 0 1
UID action indicators	3.78	0 1 1 1 0 1 0 0
UID capability indicators	3.79	0 1 1 1 0 1 0 1
User service information	3.57	0 0 0 1 1 1 0 1
User service information prime	3.58	0 0 1 1 0 0 0 0
User teleservice information	3.59	0 0 1 1 0 1 0 0
User-to-user indicators	3.60	0 0 1 0 1 0 1 0
User-to-user information	3.61	0 0 1 0 0 0 0 0
Reserved (used in 1984 version, *Red Book*)		0 0 0 1 0 1 0 0 0 0 0 1 1 0 0 1 0 0 0 1 1 0 1 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 1
Reserved (used in 1988 version, *Blue Book*)		0 0 0 1 0 1 1 1
Reserved (used in 1992 version)		0 1 0 0 0 0 0 1 0 1 0 0 0 0 1 0
Reserved for future extension		1 0 0 0 0 0 0 0

The following codes are reserved for use in B-ISUP:

0100 0110 to 0100 1010, 0100 1111 to 0101 1010, 0101 1100 to 0110 0100, 0110 0111 to 0110 1101, 0111 0110, 0111 1110, 1000 1111 to 1001 1000.

3.2 Access delivery information

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

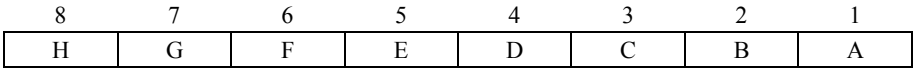


Figure 4/Q.763 – Access delivery information parameter field

bit A: *Access delivery indicator*
0 set-up message generated
1 no set-up message generated
bits H-B: *spare*

3.3 Access transport

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

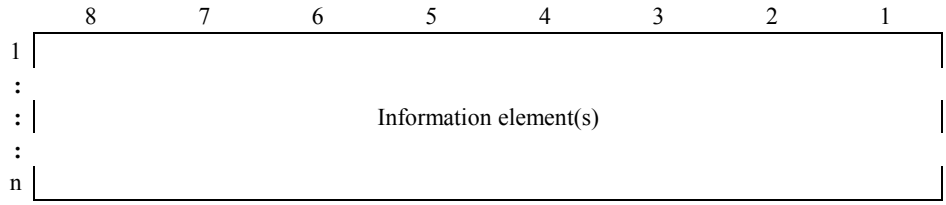


Figure 5/Q.763 – Access transport parameter field

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.

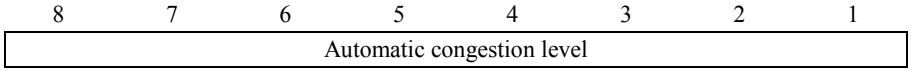


Figure 6/Q.763 – Automatic congestion level parameter field

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

0 0 0 0 0 0 0 0	spare
0 0 0 0 0 0 0 1	congestion level 1 exceeded
0 0 0 0 0 0 1 0	congestion level 2 exceeded
0 0 0 0 0 0 1 1 to 1 1 1 1 1 1 1 1	spare

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 – Backward call indicators parameter field

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

bits BA: *Charge indicator* (Note 1)
- 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 DC: *Called party's status indicator*
- 0 0 no indication
- 0 1 subscriber free
- 1 0 connect when free (national use)
- 1 1 spare

bits FE: *Called party's category indicator*
- 0 0 no indication
- 0 1 ordinary subscriber
- 1 0 payphone
- 1 1 spare

bits HG: *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 (national use)
- 1 0 SCCP method available
- 1 0 pass-along and SCCP methods available (national use)

bit I: *Interworking indicator* (Note 2)
- 0 no interworking encountered (Signalling System No. 7 all the way)
- 1 interworking encountered

bit J: *End-to-end information indicator* (national use) (Note 2)
- 0 no end-to-end information available
- 1 end-to-end information available

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

bit M: *ISDN access indicator*
- 0 terminating access non-ISDN
- 1 terminating access ISDN

bit N: *Echo control device indicator*
- 0 incoming echo control device not included
- 1 incoming echo control device included

bits PO: *SCCP method indicator* (Note 2)
- 0 0 no indication
- 0 1 connectionless method available (national use)
- 1 0 connection oriented method available
- 1 1 connectionless and connection oriented methods available (national use)

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

3.6 Call diversion information

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

8	7	6	5	4	3	2	1
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:
- 0 0 0 Unknown
- 0 0 1 presentation not allowed
- 0 1 0 presentation allowed with redirection number
- 0 1 1 presentation allowed without redirection number
- 1 0 0 to 1 1 1 spare

b) *Redirecting reason*

bits GFED:
- 0 0 0 0 Unknown
- 0 0 0 1 User busy
- 0 0 1 0 no reply
- 0 0 1 1 unconditional
- 0 1 0 0 deflection during alerting
- 0 1 0 1 deflection immediate response
- 0 1 1 0 mobile subscriber not reachable
- 0 1 1 1 to 1 1 1 1 spare

bit H: *spare*

3.7 Call history information

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 (national use)

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

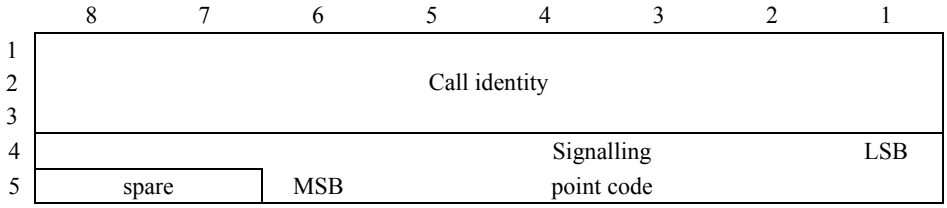


Figure 9/Q.763 – Call reference parameter field

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) *Signalling 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	O/E	Nature of address indicator						
2	INN	Numbering plan indicator			spare			
3	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th address signal			

Figure 10/Q.763 – Called party number parameter field

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

a) *Odd/even indicator (O/E)*

0 even number of address signals
1 odd number of address signals

b) *Nature of address indicator*

0 0 0 0 0 0 0 spare
0 0 0 0 0 0 1 subscriber number (national use)
0 0 0 0 0 1 0 unknown (national use)
0 0 0 0 0 1 1 national (significant) number
0 0 0 0 1 0 0 international number
0 0 0 0 1 0 1 network-specific number (national use)

0 0 0 0 1 1 0	network routing number in national (significant) number format (national use)
0 0 0 0 1 1 1	network routing number in network-specific number format (national use)
0 0 0 1 0 0 0	network routing number concatenated with Called Directory Number (national use)
0 0 0 1 0 0 1 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

c) *Internal Network Number indicator (INN)*

0	routing to internal network number allowed
1	routing to internal network number not allowed

d) *Numbering plan indicator*

0 0 0	spare
0 0 1	ISDN (Telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0	spare
0 1 1	Data numbering plan (ITU-T Recommendation X.121) (national use)
1 0 0	Telex numbering plan (ITU-T Recommendation F.69) (national use)
1 0 1	reserved for national use
1 1 0	reserved for national use
1 1 1	spare

e) *Address signal*

0 0 0 0	digit 0
0 0 0 1	digit 1
0 0 1 0	digit 2
0 0 1 1	digit 3
0 1 0 0	digit 4
0 1 0 1	digit 5
0 1 1 0	digit 6
0 1 1 1	digit 7
1 0 0 0	digit 8
1 0 0 1	digit 9
1 0 1 0	spare
1 0 1 1	code 11
1 1 0 0	code 12
1 1 0 1	spare
1 1 1 0	spare
1 1 1 1	ST

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	O/E	Nature of address indicator						
2	NI	Numbering plan indicator			Address presentation restricted indicator		Screening indicator	
3	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th address signal			

Figure 11/Q.763 – Calling party number parameter field

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

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Nature of address indicator*

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	subscriber number (national use)
0 0 0 0 0 1 0	unknown (national use)
0 0 0 0 0 1 1	national (significant) number (national use)
0 0 0 0 1 0 0	international number
0 0 0 0 1 1 0 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

c) *Number Incomplete indicator (NI)*

0	complete
1	incomplete

d) *Numbering plan indicator:* as for 3.9 d).

e) *Address presentation restricted indicator*

0 0	presentation allowed
0 1	presentation restricted
1 0	address not available (Note 1) (national use)
1 1	reserved for restriction by the network

NOTE 1 – If the parameter is included and the address presentation restricted indicator indicates address not available, octets 3 to n are omitted, the subfields in items a), b), c) and d) are coded with 0's, and the subfield f) is coded with 11.

f) *Screening indicator*

0 0	reserved (Note 2)
0 1	user provided, verified and passed
1 0	reserved (Note 2)
1 1	network provided

NOTE 2 – 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*

0 0 0 0	digit 0
0 0 0 1	digit 1
0 0 1 0	digit 2
0 0 1 1	digit 3
0 1 0 0	digit 4
0 1 0 1	digit 5
0 1 1 0	digit 6
0 1 1 1	digit 7
1 0 0 0	digit 8
1 0 0 1	digit 9
1 0 1 0	spare
1 0 1 1	code 11
1 1 0 0	code 12
1 1 0 1 to 1 1 1 1	spare

h) *Filler:* as for 3.9 f).

3.11 Calling party's category

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

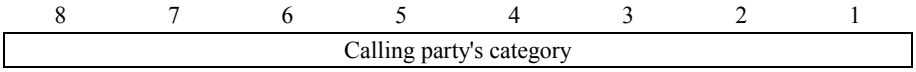


Figure 12/Q.763 – Calling party's category parameter field

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

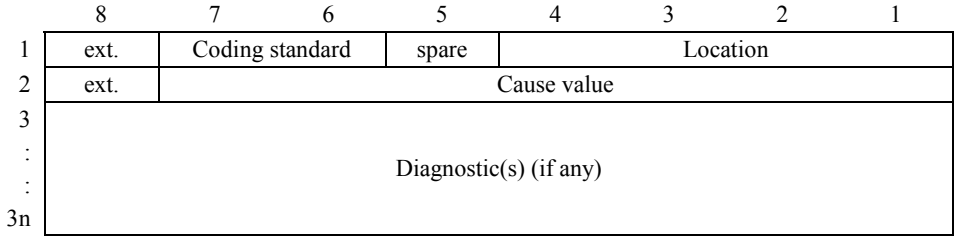
0 0 0 0 0 0 0 0	calling party's category unknown at this time (national use)
0 0 0 0 0 0 0 1	operator, language French
0 0 0 0 0 0 1 0	operator, language English
0 0 0 0 0 0 1 1	operator, language German
0 0 0 0 0 1 0 0	operator, language Russian
0 0 0 0 0 1 0 1	operator, language Spanish
0 0 0 0 0 1 1 0 to 0 0 0 0 1 0 0 0	(available to Administrations for selection a particular language by mutual agreement)
0 0 0 0 1 0 0 1	reserved (see ITU-T Recommendation Q.104) (Note) (national use)
0 0 0 0 1 0 1 0	ordinary calling subscriber
0 0 0 0 1 0 1 1	calling subscriber with priority

0 0 0 0 1 1 0 0 data call (voice band data)
0 0 0 0 1 1 0 1 test call
0 0 0 0 1 1 1 0 spare
0 0 0 0 1 1 1 1 payphone
0 0 0 1 0 0 0 0 to 1 1 0 1 1 1 1 1 spare
1 1 1 0 0 0 0 0 to 1 1 1 1 1 1 1 0 reserved for national use
1 1 1 1 1 1 1 1 spare

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.



NOTE – Octets 3 to 3n may be omitted or repeated, e.g. 3' to 3n'.

Figure 13/Q.763 – Cause indicators parameter field

The codes to be used in the subfields of the cause indicators parameter fields are defined in ITU-T Recommendation Q.850.

3.13 Circuit group supervision message type

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

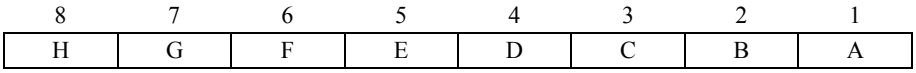


Figure 14/Q.763 – Circuit group supervision message type parameter field

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

bits BA: *Circuit group supervision message type indicator*
- 0 0 maintenance oriented
- 0 1 hardware failure oriented
- 1 0 reserved for national use (used in 1984 version)
- 1 1 spare

bits H-C: *spare*

3.14 Circuit state indicator (national use)

The format of the circuit state indicator parameter field is shown in Figure 15.

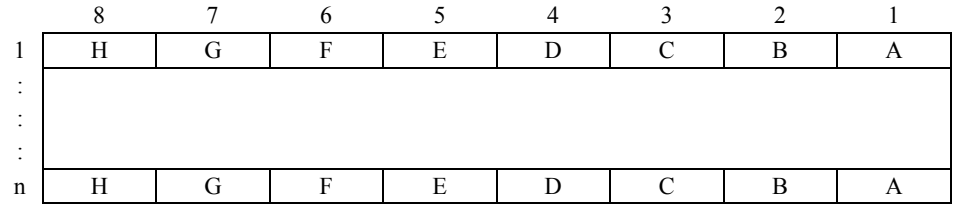


Figure 15/Q.763 – Circuit state indicator parameter field

The number of octets in the circuit state indicator parameter field is equal to the specified range + 1. Each circuit state indicator octet is associated with a circuit identification code such that octet n is associated with circuit identification code m + n – 1, where m is the circuit identification code contained in the message.

The following codes are used in each circuit state indicator octet:

a) ***for bits D C = 00***

bits BA: *Maintenance blocking state*
- 0 0 transient
- 0 1 spare
- 1 0 spare
- 1 1 unequipped

bits H-E: *spare*

b) ***for bits D C not equal to 00***

bits BA: *Maintenance blocking state*
- 0 0 no blocking (active)
- 0 1 locally blocked
- 1 0 remotely blocked
- 1 1 locally and remotely blocked

bits DC: *Call processing state*
- 0 1 circuit incoming busy
- 1 0 circuit outgoing busy
- 1 1 idle

bits F E: *Hardware blocking state* (Note)
- 0 0 no blocking (active)
- 0 1 locally blocked
- 1 0 remotely blocked
- 1 1 locally and remotely blocked

bits H-G: *spare*

NOTE – If bits F E are not coded 0 0, bits D C must be coded 1 1.

3.15 Closed user group interlock code

The format of the closed user group interlock code parameter field is shown in Figure 16.

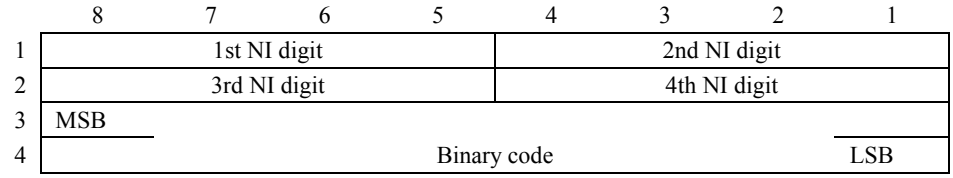


Figure 16/Q.763 – Closed user group interlock code parameter field

The following codes are used in the subfields of the closed user group interlock code parameter field:

a) *Network Identity (NI) (octets 1 and 2)*

Each digit is coded in the binary coded decimal representation from 0 to 9. If the first digit of this field is coded 0 or 9, 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.

Coding of the first digit as 1 or 8 is excluded.

If the first digit is not 0, 9, 1 or 8, this field contains a DNIC (Data Network Identification Code) as defined in ITU-T Recommendation X.121.

b) *Binary code (octets 3 and 4)*

A code allocated to a closed user group administered by a particular ISDN or data network. Bit 8 of octet 3 is the most significant and bit 1 of octet 4 is the least significant.

3.16 Connected number

The format of the connected number parameter field is shown in Figure 17.

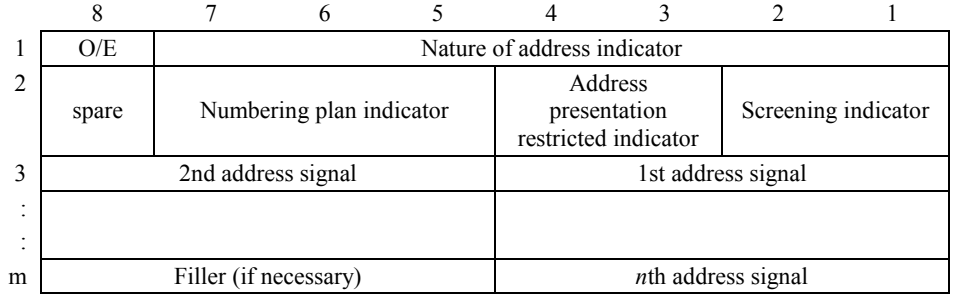


Figure 17/Q.763 – Connected number parameter field

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

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Nature of address indicator:* as for 3.10 b).

c) *Numbering plan indicator:* as for 3.9 d).

d) *Address presentation restricted indicator*:

0 0 presentation allowed
0 1 presentation restricted
1 0 address not available
1 1 spare

NOTE – If the parameter is included and the address presentation restricted indicator indicates address not available, octets 3 to n are omitted, the subfields in items a), b), and c) are coded with 0's, and the screening indicator is set to 11 network provided.

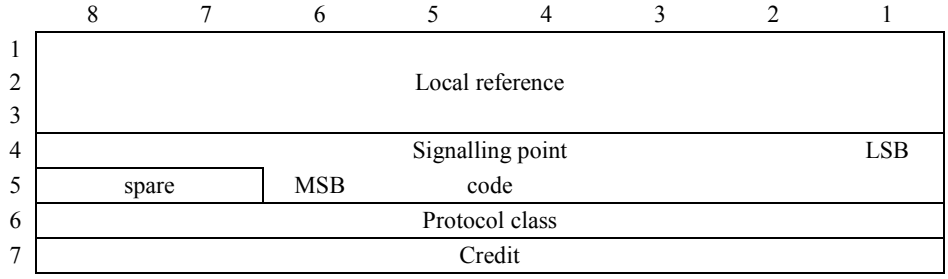
e) *Screening indicator:* as for 3.10 f).

f) *Address signal:* as for 3.10 g).

g) *Filler:* as for 3.9 f).

3.17 Connection request

The format of the connection request parameter field is shown in Figure 18.



NOTE – Octets 6 and 7 may be omitted if protocol class requested is 2.

Figure 18/Q.763 – Connection request parameter field

The following codes are used in the subfields of the connection request parameter field:

a) *Local reference*

A code indicating the local reference allocated by the signalling connection control part to the end-to-end connection.

b) *Signalling point code*

A code identifying the signalling point at which the connection request originated.

c) *Protocol class*

A code identifying in pure binary representation, the protocol class requested for the end-to-end connection.

d) *Credit*

A code identifying in pure binary representation the window size requested for the end-to-end connection.

3.18 Continuity indicators

The format of the continuity indicators parameter field is shown in Figure 19.

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

Figure 19/Q.763 – Continuity indicators parameter field

The following codes are used in the continuity indicators parameter field:

bit A: *Continuity indicator*
0 continuity check failed
1 continuity check successful

bits H-B *spare*

3.19 Echo control information

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) bits BA: *Outgoing echo control device information indicator*
0 0 no information
0 1 outgoing echo control device not included and not available
1 0 outgoing echo control device included
1 1 outgoing echo control device not included but available

b) bits DC: *Incoming echo control device information indicator*
0 0 no information
0 1 incoming echo control device not included and not available
1 0 incoming echo control device included
1 1 incoming echo control device not included but available

c) bits FE: *Outgoing echo control device request indicator*
0 0 no information
0 1 outgoing echo control device activation request
1 0 outgoing echo control device deactivation request (Note 1)
1 1 spare

NOTE 1 – This value will not be generated by the Echo Control Logic defined in ITU-T Recommendation Q.115.

d) bits HG: *Incoming echo control device request indicator*
0 0 no information
0 1 incoming echo control device activation request
1 0 incoming echo control device deactivation request (Note 2)
1 1 spare

NOTE 2 – This value will not be generated by the Echo Control Logic defined in ITU-T Recommendation Q.115.

3.20 End of optional parameters

The last optional parameter field of a message is followed by the end of optional parameters octet (see 1.8).

3.21 Event information

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

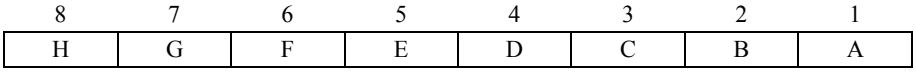


Figure 21/Q.763 – Event information parameter field

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

bits GFEDCBA: *Event indicator*

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	ALERTING
0 0 0 0 0 1 0	PROGRESS
0 0 0 0 0 1 1	in-band information or an appropriate pattern is now available
0 0 0 0 1 0 0	call forwarded on busy (national use)
0 0 0 0 1 0 1	call forwarded on no reply (national use)
0 0 0 0 1 1 0	call forwarded unconditional (national use)
0 0 0 0 1 1 1 to 1 1 1 1 1 1 1	spare (Note)

NOTE – Coding of this indicator is frozen; no additional codes can be defined for compatibility.

bit H: *Event presentation restricted indicator (national use)*

0	no indication
1	presentation restricted

3.22 Facility indicator

The format of the facility indicator parameter field is shown in Figure 22.

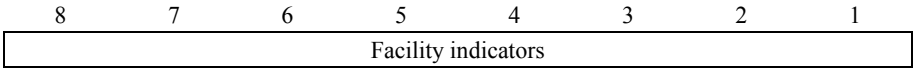


Figure 22/Q.763 – Facility indicator parameter field

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

0 0 0 0 0 0 0 0	spare
0 0 0 0 0 0 0 1	spare
0 0 0 0 0 0 1 0	user-to-user service
0 0 0 0 0 0 1 1 to 1 1 1 1 1 1 1 1	spare

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 – Forward call indicators parameter field

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

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

bits CB: *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 (national use)
- 1 0 SCCP method available
- 1 1 pass-along and SCCP methods available (national use)

bit D: *Interworking indicator* (Note 2)
- 0 no interworking encountered (No. 7 signalling all the way)
- 1 interworking encountered

bit E: *End-to-end information indicator (national use)* (Note 2)
- 0 no end-to-end information available
- 1 end-to-end information available

bit F: *ISDN user part indicator* (Note 2)
- 0 ISDN user part not used all the way
- 1 ISDN user part used all the way

bits HG: *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 ISD

bits KJ: *SCCP method indicator* (Note 2)
- 0 0 no indication
- 0 1 connectionless method available (national use)
- 1 0 connection oriented method available
- 1 1 connectionless and connection oriented methods available (national use)

bit L: *spare*

bits P-M: *reserved for national use*

NOTE 1 – Bit A 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.

NOTE 2 – Bits B-F and J-K constitute the protocol control indicator.

3.24 Generic digits (national use)

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

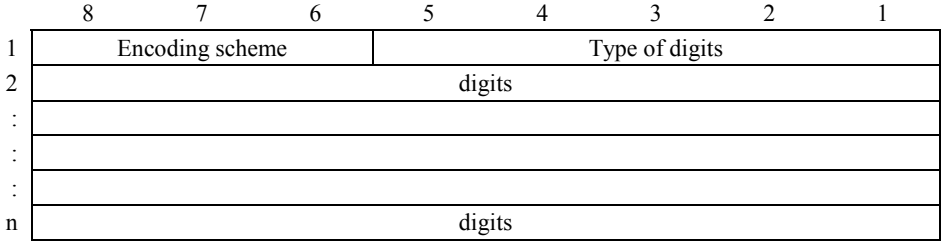


Figure 24/Q.763 – Generic digits parameter

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

a) *Encoding scheme*

0 0 0	BCD even: (even number of digits)
0 0 1	BCD odd: (odd number of digits)
0 1 0	IA5 character
0 1 1	binary coded
1 0 0 to 1 1 1	spare

b) *Type of digits*

0 0 0 0 0	reserved for account code
0 0 0 0 1	reserved for authorisation code
0 0 0 1 0	reserved for private networking travelling class mark
0 0 0 1 1	reserved for business communication group identity
0 0 1 0 0 to 1 1 1 1 0	reserved for national use
1 1 1 1 1	reserved for extension

c) *Digit*

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

3.25 Generic notification indicator

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

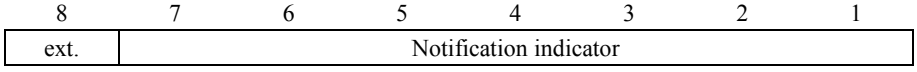


Figure 25/Q.763 – Generic notification indicator parameter field

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

a) *Extension indicator (ext.)*

0 information continues in the next octet
1 last octet

b) *Notification indicator*

0 0 0 0 0 0 0	user suspended	
0 0 0 0 0 0 1	user resumed	
0 0 0 0 0 1 0	bearer service change	
0 0 0 0 0 1 1	discriminator for extension to ASN.1	(used in DSS1)
	encoded component	
0 0 0 0 1 0 0	call completion delay	
0 0 0 0 1 0 1 to 1 0 0 0 0 0 1	reserved	
1 0 0 0 0 1 0	conference established	
1 0 0 0 0 1 1	conference disconnected	
1 0 0 0 1 0 0	other party added	
1 0 0 0 1 0 1	isolated	
1 0 0 0 1 1 0	reattached	
1 0 0 0 1 1 1	other party isolated	
1 0 0 1 0 0 0	other party reattached	
1 0 0 1 0 0 1	other party split	
1 0 0 1 0 1 0	other party disconnected	
1 0 0 1 0 1 1	conference floating	
1 0 0 1 1 0 0 to 1 0 1 1 1 1 1	reserved	
1 1 0 0 0 0 0	call is a waiting call	
1 1 0 0 0 0 1 to 1 1 0 0 1 1 1	reserved	
1 1 0 1 0 0 0	diversion activated (used in DSS1)	
1 1 0 1 0 0 1	call transfer, alerting	
1 1 0 1 0 1 0	call transfer, active	
1 1 0 1 0 1 1 to 1 1 1 1 0 0 0	reserved	
1 1 1 1 0 0 1	remote hold	
1 1 1 1 0 1 0	remote retrieval	
1 1 1 1 0 1 1	call is diverting	
1 1 1 1 1 0 0 to 1 1 1 1 1 1 1	reserved	

3.26 Generic number

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

	8	7	6	5	4	3	2	1
1	Number qualifier indicator							
2	O/E	Nature of address indicator						
3	NI	Numbering plan indicator			Address presentation restricted indicator		Screening indicator	
4	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th 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*

0 0 0 0 0 0 0 0 reserved (dialled digits) (national use)
0 0 0 0 0 0 0 1 additional called number (national use)
0 0 0 0 0 0 1 0 reserved (supplemental user provided calling number – failed network screening) (national use)
0 0 0 0 0 0 1 1 reserved (supplemental user provided calling number – not screened) (national use)
0 0 0 0 0 1 0 0 reserved (redirecting terminating number) (national use)
0 0 0 0 0 1 0 1 additional connected number
0 0 0 0 0 1 1 0 additional calling party number
0 0 0 0 0 1 1 1 reserved for additional original called number
0 0 0 0 1 0 0 0 reserved for additional redirecting number
0 0 0 0 1 0 0 1 reserved for additional redirection number
0 0 0 0 1 0 1 0 reserved (used in 1992 version)
0 0 0 0 1 0 1 1 to 0 1 1 1 1 1 1 1 spare
1 0 0 0 0 0 0 0 to 1 1 1 1 1 1 1 0 reserved for national use
1 1 1 1 1 1 1 1 reserved for expansion

b) *Odd/even indicator (O/E):* as for 3.9 a)

c) *Nature of address indicator*

0 0 0 0 0 0 0 spare
0 0 0 0 0 0 1 subscriber number (national use)
0 0 0 0 0 1 0 unknown (national use)
0 0 0 0 0 1 1 national (significant) number
0 0 0 0 1 0 0 international number
0 0 0 0 1 0 1 to 1 1 0 1 1 1 1 spare

1 1 1 0 0 0 0
to
1 1 1 1 1 1 0 — reserved for national use

1 1 1 1 1 1 1 — spare

NOTE 1 – For each supplementary service the relevant codes and possible default settings are described in the supplementary service ITU-T Recommendations (ITU-T Recommendations Q.73x series).

d) *Number incomplete indicator (NI)*

0 number complete
1 number incomplete

e) *Numbering plan indicator*

0 0 0 spare
0 0 1 ISDN (telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0 spare
0 1 1 data numbering plan (ITU-T Recommendation X.121) (national use)
1 0 0 telex numbering plan (ITU-T Recommendation F.69) (national use)
1 0 1 private numbering plan (national use)
1 1 0 reserved for national use
1 1 1 spare

NOTE 2 – For each supplementary service the relevant codes and possible default settings are described in the supplementary service ITU-T Recommendations (ITU-T Recommendations Q.73x series).

f) *Address presentation restricted indicator*

0 0 presentation allowed
0 1 presentation restricted
1 0 address not available
1 1 spare

NOTE 3 – For each supplementary service the relevant codes and possible default settings are described in the supplementary service ITU-T Recommendations (ITU-T Recommendations Q.73x series). When the address presentation restricted indicator indicates address not available, the subfields in items b), c), d) and e) are coded with 0's, and the screening indicator is set to 11 (network provided).

g) *Screening indicator*

Only used if the number qualifier indicator is coded 0000 0101 (additional connected number) or 0000 0110 (additional calling party number). This indicator is coded as follows:

0 0 user provided, not verified
0 1 user provided, verified and passed
1 0 user provided, verified and failed
1 1 network provided

NOTE 4 – For each supplementary service the relevant codes and possible default settings are described in the supplementary service ITU-T Recommendations (ITU-T Recommendations Q.73x series).

h) *Address signal*:

0 0 0 0	digit 0
0 0 0 1	digit 1
0 0 1 0	digit 2
0 0 1 1	digit 3
0 1 0 0	digit 4
0 1 0 1	digit 5
0 1 1 0	digit 6
0 1 1 1	digit 7
1 0 0 0	digit 8
1 0 0 1	digit 9
1 0 1 0 to 1 1 1 1	spare

i) *Filler:* as for 3.9 f)

3.27 Reserved (used in 1992 version)

3.28 Information indicators (national use)

The format of the information indicators parameter field is shown in Figure 28.

	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 28/Q.763 – Information indicators parameter field

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

bits BA: *Calling party address response indicator*
- 0 0 calling party address not included
- 0 1 calling party address not available
- 1 0 spare
- 1 1 calling party address included

bit C: *Hold provided indicator*
- 0 hold not provided
- 1 hold provided

bits ED: *spare*

bit F: *Calling party's category response indicator*
- 0 calling party's category not included
- 1 calling party's category included

bit G: *Charge information response indicator*
- 0 charge information not included
- 1 charge information included

bit H: *Solicited information indicator*
- 0 solicited
- 1 unsolicited

bits L-I: *spare*

bits P-M: *reserved*

3.29 Information request indicators (national use)

The format of the information request indicators parameter field is shown in Figure 29.

	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 29/Q.763 – Information request indicators parameter field

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

bit A: *Calling party address request indicator*
0 calling party address not requested
1 calling party address requested

bit B: *Holding indicator*
0 holding not requested
1 holding requested

bit C: *spare*

bit D: *Calling party's category request indicator*
0 calling party's category not requested
1 calling party's category requested

bit E: *Charge information request indicator*
0 charge information not requested
1 charge information requested

bits GF: *spare*

bit H: *Malicious call identification request indicator (reserved, used in ISUP'88 Blue Book)*
0 malicious call identification not requested
1 malicious call identification requested

bits L-I: *spare*

bits P-M: *reserved*

3.30 Location number

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

	8	7	6	5	4	3	2	1
1	O/E	Nature of address indicator						
2	INN	Numbering plan indicator			Address presentation restricted indicator		Screening indicator	
3	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th 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 (O/E)*: as for 3.9 a).

b) *Nature of address indicator*

0 0 0 0 0 0 0 spare
0 0 0 0 0 0 1 reserved for subscriber number (national use)
0 0 0 0 0 1 0 reserved for unknown (national use)
0 0 0 0 0 1 1 national (significant) number (national use)
0 0 0 0 1 0 0 international number
0 0 0 0 1 0 1 to 1 1 0 1 1 1 1 spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0 reserved for national use
1 1 1 1 1 1 1 spare

c) *Internal Network Number indicator (INN)*

0 routing to internal number allowed
1 routing to internal number not allowed

d) *Numbering plan indicator*

0 0 0 spare
0 0 1 ISDN (telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0 spare
0 1 1 Data numbering plan (ITU-T Recommendation X.121) (national use)
1 0 0 Telex numbering plan (ITU-T Recommendation F.69) (national use)
1 0 1 private numbering plan
1 1 0 reserved for national use
1 1 1 spare

e) *Address presentation restricted indicator*

0 0 presentation allowed
0 1 presentation restricted
1 0 address not available (national use)
1 1 spare

NOTE – When the address presentation restricted indicator indicates address not available, the subfields in items a), b), c) and d) are coded with 0's, and the screening indicator is set to 11 (network provided).

f) *Screening indicator*

0 0 reserved
0 1 user provided, verified and passed
1 0 reserved
1 1 network provided

g) *Address signals*: as for 3.26 h).

h) *Filler:* as for 3.9 f).

3.31 MCID request indicators

The format of the MCID request indicators parameter field is shown in Figure 31.

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

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 (national use)*
0 holding not requested
1 holding requested

bits H-C: *spare*

3.32 MCID response indicators

The format of the MCID response indicators parameter field is shown in Figure 32.

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

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 (national use)*
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.

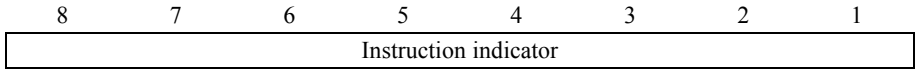


Figure 33/Q.763 – Message compatibility information parameter field

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

a) *Instruction indicators*

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

	8	7	6	5	4	3	2	1
1	ext.	G	F	E	D	C	B	A
1a	ext.	More instruction indicators if required						
:		:						
:		:						
1n	1	More instruction indicators if required						

Figure 34/Q.763 – 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*
- 0 do not send notification
- 1 send notification

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

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

bits G F: *Broadband/narrowband interworking indicator*
- 0 0 pass on
- 0 1 discard message
- 1 0 release call
- 1 1 reserved, assume 00

b) *Extension indicator (ext.):* as for 3.25 a).

c) *More instruction indicators*

The bits will be defined when required.

3.34 MLPP precedence

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

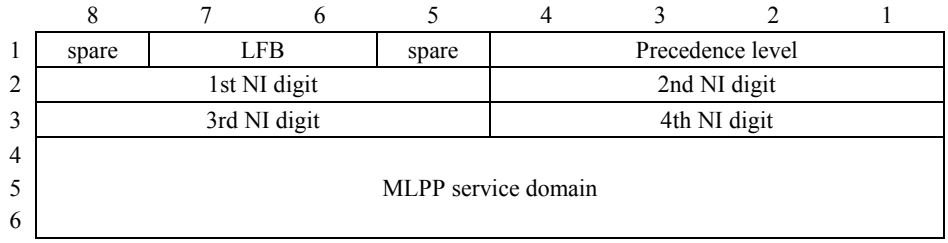


Figure 35/Q.763 – MLPP precedence parameter field

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

a) *LFB (Look ahead for busy)*

0 0	LFB allowed
0 1	path reserved (national use)
1 0	LFB not allowed
1 1	spare

b) *Precedence level*

0 0 0 0	flash override
0 0 0 1	flash
0 0 1 0	immediate
0 0 1 1	priority
0 1 0 0	routine
0 1 0 1 to 1 1 1 1	spare

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 3 is not required, it is coded all zeros.

d) *MLPP service domain (octet 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 – Nature of connection indicators parameter field

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

bits BA: *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 DC: *Continuity check indicator*
- 0 0 continuity check not required
- 0 1 continuity check required on this circuit
- 1 0 continuity check performed on a previous circuit
- 1 1 spare

bit E: *Echo control device indicator*
- 0 outgoing echo control device not included
- 1 outgoing echo control device included

bits H-F: *spare*

3.36 Network specific facility (national use)

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

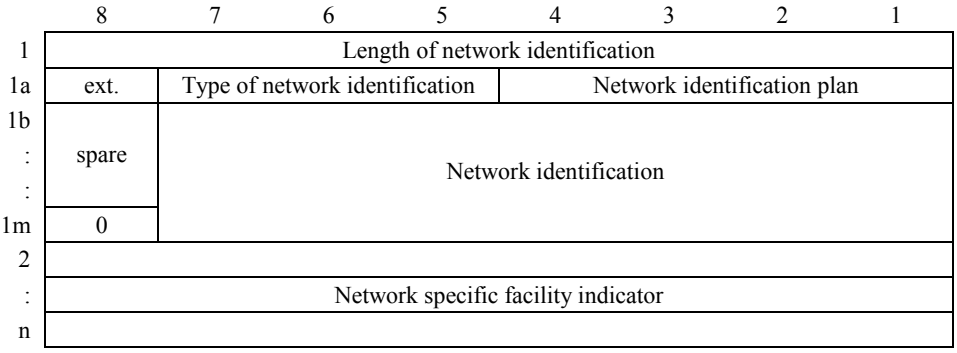


Figure 37/Q.763 – Network specific facility parameter field

The following codes are used in the subfields 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) *Extension (ext.)*: as for 3.25 a).

c) *Type of network identification*

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

0 1 0 national network identification
0 1 1 reserved for international network identification (Note)
1 0 0 to 1 1 1 spare

When the type of network identification is coded 010 "national network identification", the network identification plan, and network identification is coded nationally.

NOTE – The value 011 is reserved for international use, in case the parameter will be accepted for international use in the future.

d) *Network identification plan*

e) *Network identification*

f) *Network-specific facility indicator*

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 ITU-T 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 is shown in Figure 38.

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

Figure 38/Q.763 – 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

bit D: *MLPP user indicator*
0 no indication
1 MLPP user

bits H-E: *reserved for national use*

3.38 Optional forward call indicators

The format of the optional forward call indicators parameter field is shown in Figure 39.

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

Figure 39/Q.763 – Optional forward call indicators parameter field

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

bits BA: *Closed user group call indicator*
- 0 0 non-CUG call
- 0 1 spare
- 1 0 closed user group call, outgoing access allowed
- 1 1 closed user group call, outgoing access not allowed

bit C: *Simple segmentation indicator*
- 0 no additional information will be sent
- 1 additional information will be sent in a segmentation message

bits G-D: *spare*

bit H: *Connected line identity request indicator*
- 0 not requested
- 1 requested

3.39 Original called number

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

	8	7	6	5	4	3	2	1
1	O/E	Nature of address indicator						
2	spare	Numbering plan indicator			Address presentation restricted indicator		spare	
3	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th address signal			

Figure 40/Q.763 – Original called number parameter field

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

a) *Odd/even indicator (O/E)*: as for 3.9 a).

b) *Nature of address indicator:*
- 0 0 0 0 0 0 0 spare
- 0 0 0 0 0 0 1 subscriber number (national use)
- 0 0 0 0 0 1 0 unknown (national use)
- 0 0 0 0 0 1 1 national (significant) number (national use)
- 0 0 0 0 1 0 0 international number

0 0 0 0 1 0 1 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

c) *Numbering plan indicator*: as for 3.9 d).

d) *Address presentation restricted indicator*: as for 3.10 e).

e) *Address signal*: as for 3.10 g).

f) *Filler*: as for 3.9 f).

3.40 Origination ISC point code

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							
:								
:								
2n-1	*n*th upgraded parameter							
2n	Instruction indicators							

Figure 41/Q.763 – 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 *n*th upgraded parameter in accordance with Table 5.

b) *Instruction indicators*

The format of the instruction indicators subfield is shown in Figure 41.1.

	8	7	6	5	4	3	2	1
1	ext.	G	F	E	D	C	B	A
1a	ext.	O	N	M	L	K	J	I
:	:							
:	:							
1n		More instruction indicators if required						

Figure 41.1/Q.763 – 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*
- 0 do not send notification
- 1 send notification

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

bit E: *Discard parameter indicator*
- 0 do not discard parameter (pass on)
- 1 discard parameter

bits G F: *Pass on not possible indicator*
- 0 0 release call
- 0 1 discard message
- 1 0 discard parameter
- 1 1 reserved (interpreted as 00)

c) *Extension indicator (ext.):* as for 3.25 a).

d) bits J I: *Broadband/narrowband interworking indicator*
- 0 0 pass on
- 0 1 discard message
- 1 0 release call
- 1 1 discard parameter

e) bits O-K: *spare*

f) *More instruction indicators*

The bits will be defined when required.

3.42 Propagation delay counter

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

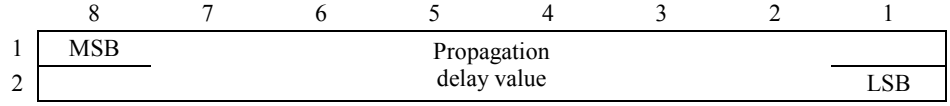


Figure 42/Q.763 – Propagation delay counter parameter field

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.

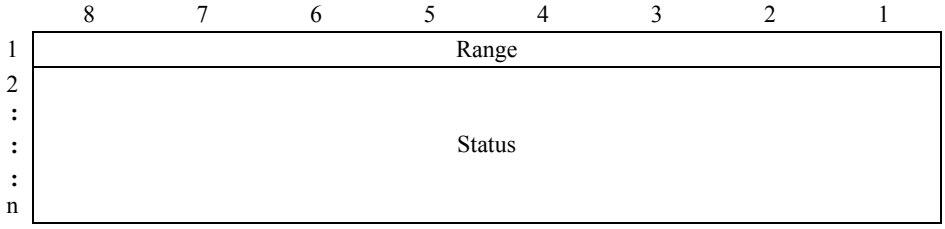


Figure 43/Q.763 – Range and status parameter field

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 0 to 255. The number represented by the range code + 1 indicates the range of circuits affected by the message.

The number of circuits affected by a group supervision message is limited to 32 or less. For the group reset messages, a circuit group query message, or a circuit query response message, 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. Range code 0 is exclusively used by the circuit query and circuit query response messages.

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.

3.44 Redirecting number

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

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

a) *Odd/even indicator*: as for 3.9 a).

b) *Nature of address indicator*: as for 3.10 b).

c) *Numbering plan indicator*: as for 3.9 d).

d) *Address presentation restricted indicator*: as for 3.10 e).

e) *Address signal*: as for 3.10 g).

f) *Filler*: as for 3.9 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 – The parameter may be received without the second octet from an ISUP'88 (*Blue Book*).

Figure 44/Q.763 – Redirection information parameter field

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

bits CBA: *Redirecting indicator*
- 0 0 0 no redirection (national use)
- 0 0 1 call rerouted (national use)
- 0 1 0 call rerouted, all redirection information presentation restricted (national use)
- 0 1 1 call diverted
- 1 0 0 call diverted, all redirection information presentation restricted
- 1 0 1 call rerouted, redirection number presentation restricted (national use)
- 1 1 0 call diversion, redirection number presentation restricted (national use)
- 1 1 1 spare

Bit D: *spare*

bits HGFE: *Original redirection reason*
- 0 0 0 0 unknown/not available
- 0 0 0 1 user busy (national use)
- 0 0 1 0 no reply (national use)
- 0 0 1 1 unconditional (national use)
- 0 1 0 0 to 1 1 1 1 spare

bits KJI: *Redirection counter*
Number of redirections the call has undergone expressed as a binary number between 1 and 5.

bit L: *reserved for national use*

bits PONM:	*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
0 1 0 1	deflection immediate response
0 1 1 0	mobile subscriber not reachable
0 1 1 1 to 1 1 1 1	spare

3.46 Redirection number

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

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

a) *Odd/even indicator (O/E)*: as for 3.9 a).

b) *Nature of address indicator*:

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	subscriber number (national use)
0 0 0 0 0 1 0	unknown (national use)
0 0 0 0 0 1 1	national (significant) number
0 0 0 0 1 0 0	international number
0 0 0 0 1 0 1	spare
0 0 0 0 1 1 0	network routing number in national (significant) number format (national use)
0 0 0 0 1 1 1	network routing number in network-specific number format (national use)
0 0 0 1 0 0 0	reserved for network routing number concatenated with Called Directory Number (national use)
0 0 0 1 0 0 1 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

c) *Internal network number indicator (INN)*: as for 3.9 c).

d) *Numbering plan indicator*: as for 3.9 d).

e) *Address signal*: as for 3.10 g).

f) *Filler*: as for 3.9 f).

3.47 Redirection number restriction

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

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 parameter field:

bits BA: *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 (national use)

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.):* as for 3.25 a).

b) *Protocol profile field*

0 0 0 0 0 to 1 0 0 0 0 } spare

1 0 0 0 1 remote operations protocol

1 0 0 1 0 to 1 1 1 1 1 } spare

c) *Components*

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

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

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

The general component structure and encoding rules are described in Annex B/Q.763.

i) *Specification of components in table form*

1) *Component type*

The Components are based on the Remote Operations Service Element (ROSE) of ITU-T 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 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 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 length Linked ID	Optional
Operation Code Tag Operation Code length Operation Code	Mandatory
Parameters (Notes 2 and 3)	Optional
NOTE 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). NOTE 2 – The coding is supplementary service specific and the subject of other ITU-T Recommendations. NOTE 3 – It is a parameter within ROSE, but in the ISUP it is a subfield within a field.	

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)]

[a)] Omitted when no information elements are included the parameters.

NOTE 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).

NOTE 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).

NOTE 3 – The coding is supplementary service specific and the subject of other ITU-T Recommendations.

NOTE 4 – If a result is included, then the operation value is mandatory and is the first element in the sequence.

NOTE 5 – It is a parameter within ROSE, but in the ISUP it is a subfield within a field.

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	Optional
Parameters (Notes 2 and 3)	Optional

NOTE 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).

NOTE 2 – The coding is supplementary service specific and the subject of other ITU-T Recommendations.

NOTE 3 – It is a parameter within ROSE, but in the ISUP it is a subfield within a field.

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
[a)] If the invoke ID is not available, Universal Null (see Table 12) with Length = 0 should be used. 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).	

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.

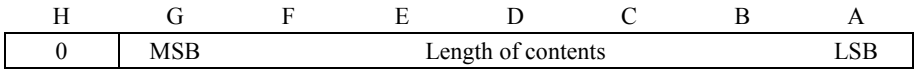
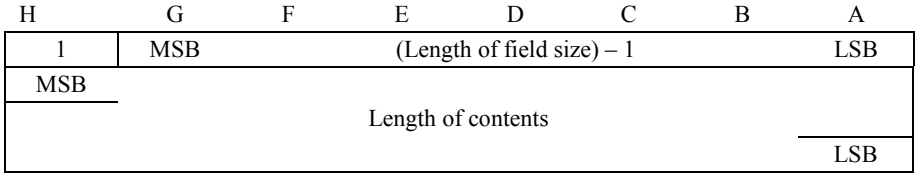


Figure 47/Q.763 – Format of the length subfield (short form)

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 ITU-T Recommendation X.209.

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 Tag

	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

7) *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

	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 Global Error Code is coded as an Object Identifier, which is described in ITU-T Recommendation X.209.

8) *Problem Code*

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 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           ::=  NamedTyped | empty

Error Names          ::=  ErrorList | empty

Error List           ::=  Error | ErrorList", "Error

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

LinkedOperationNames ::=  OperationList | empty

OperationList        ::=  Operation | OperationList", "Operation

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

NamedType            ::=  identifiertype | type

END          -- end of Operation Macro


--  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

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

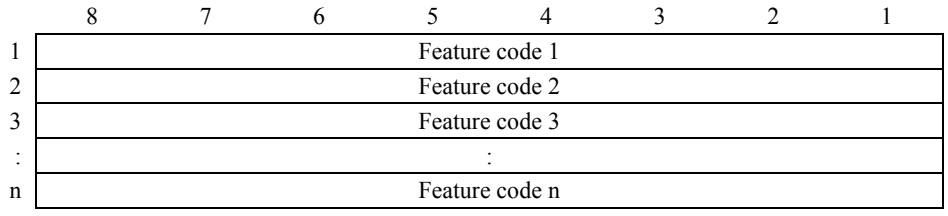


Figure 49/Q.763 – Service activation parameter field

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

0 0 0 0 0 0 0 0	spare
0 0 0 0 0 0 0 1	call transfer
0 0 0 0 0 0 1 0 to 0 1 1 1 1 0 1 1	reserved for international use
0 1 1 1 1 1 0 0 to 1 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1 1	reserved for extension

3.50 Signalling point code (national use)

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

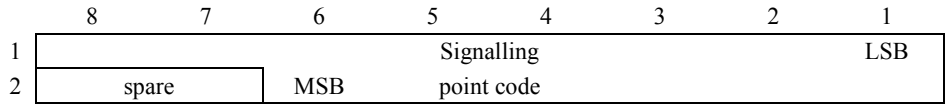


Figure 50/Q.763 – Signalling point code parameter field

3.51 Subsequent number

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

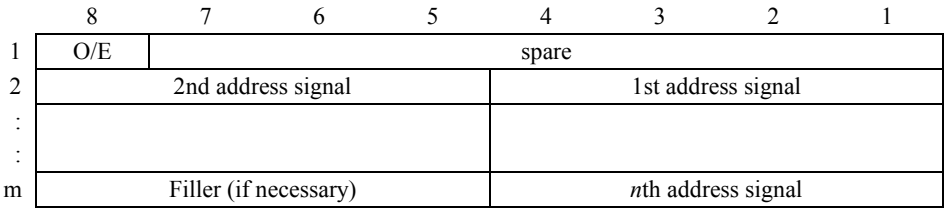


Figure 51/Q.763 – Subsequent number parameter field

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

a) *Odd/even indicator (O/E)*: as for 3.9 a).

b) *Address signal*: as for 3.9 e).

c) *Filler*: as for 3.9 f).

3.52 Suspend/resume indicators

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

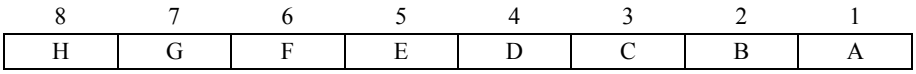


Figure 52/Q.763 – Suspend/resume indicators parameter field

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 H-B: *spare*

3.53 Transit network selection (national use)

The format of the transit network selection parameter field is shown in Figure 53.

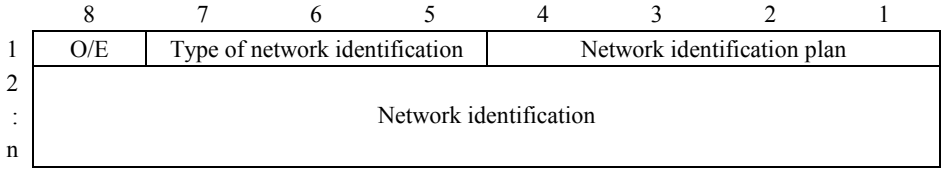


Figure 53/Q.763 – Transit network selection parameter field

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

a) *Odd/even indicator(O/E)*: as for 3.9 a).

b) *Type of network identification*

0 0 0 CCITT/ITU-T-standardized identification
0 0 1 spare
0 1 0 national network identification
0 1 1 to 1 1 1 spare

c) *Network identification plan*

i) For CCITT/ITU-T-standardized identification

0 0 0 0 unknown
0 0 0 1 spare
0 0 1 0 spare
0 0 1 1 public data network identification code (DNIC), ITU-T Recommendation X.121
0 1 0 0 spare
0 1 0 1 spare
0 1 1 0 public land Mobile Network Identification Code (MNIC), ITU-T Recommendation E.212
0 1 1 1 to 1 1 1 1 spare

ii) For national network identification

This information is coded according to national specifications.

d) *Network identification*

This information is organized according to the network identification plan and the coding principle given in 3.9 e) and, if applicable, in 3.9 f).

3.54 Transmission medium requirement

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

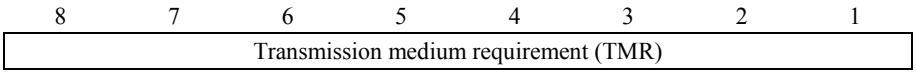


Figure 54/Q.763 – Transmission medium requirement parameter field

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

0 0 0 0 0 0 0 0	speech
0 0 0 0 0 0 0 1	spare
0 0 0 0 0 0 1 0	64 kbit/s unrestricted
0 0 0 0 0 0 1 1	3.1 kHz audio
0 0 0 0 0 1 0 0	reserved for alternate speech (service 2)/64 kbit/s unrestricted (service 1)
0 0 0 0 0 1 0 1	reserved for alternate 64 kbit/s unrestricted (service 1)/speech (service 2)
0 0 0 0 0 1 1 0	64 kbit/s preferred
0 0 0 0 0 1 1 1	2 × 64 kbit/s unrestricted
0 0 0 0 1 0 0 0	384 kbit/s unrestricted
0 0 0 0 1 0 0 1	1536 kbit/s unrestricted
0 0 0 0 1 0 1 0	1920 kbit/s unrestricted
0 0 0 0 1 0 1 1 to 0 0 0 0 1 1 1 1	spare
0 0 0 1 0 0 0 0	3 × 64 kbit/s unrestricted
0 0 0 1 0 0 0 1	4 × 64 kbit/s unrestricted
0 0 0 1 0 0 1 0	5 × 64 kbit/s unrestricted
0 0 0 1 0 0 1 1	spare
0 0 0 1 0 1 0 0	7 × 64 kbit/s unrestricted
0 0 0 1 0 1 0 1	8 × 64 kbit/s unrestricted
0 0 0 1 0 1 1 0	9 × 64 kbit/s unrestricted
0 0 0 1 0 1 1 1	10 × 64 kbit/s unrestricted
0 0 0 1 1 0 0 0	11 × 64 kbit/s unrestricted
0 0 0 1 1 0 0 1	12 × 64 kbit/s unrestricted
0 0 0 1 1 0 1 0	13 × 64 kbit/s unrestricted
0 0 0 1 1 0 1 1	14 × 64 kbit/s unrestricted
0 0 0 1 1 1 0 0	15 × 64 kbit/s unrestricted
0 0 0 1 1 1 0 1	16 × 64 kbit/s unrestricted
0 0 0 1 1 1 1 0	17 × 64 kbit/s unrestricted
0 0 0 1 1 1 1 1	18 × 64 kbit/s unrestricted
0 0 1 0 0 0 0 0	19 × 64 kbit/s unrestricted
0 0 1 0 0 0 0 1	20 × 64 kbit/s unrestricted
0 0 1 0 0 0 1 0	21 × 64 kbit/s unrestricted
0 0 1 0 0 0 1 1	22 × 64 kbit/s unrestricted
0 0 1 0 0 1 0 0	23 × 64 kbit/s unrestricted
0 0 1 0 0 1 0 1	spare
0 0 1 0 0 1 1 0	25 × 64 kbit/s unrestricted
0 0 1 0 0 1 1 1	26 × 64 kbit/s unrestricted
0 0 1 0 1 0 0 0	27 × 64 kbit/s unrestricted
0 0 1 0 1 0 0 1	28 × 64 kbit/s unrestricted
0 0 1 0 1 0 1 0	29 × 64 kbit/s unrestricted

0 0 1 0 1 0 1 1 to 1 1 1 1 1 1 1 1 — spare

3.55 Transmission medium requirement prime

The format of the transmission medium requirement prime parameter field is 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:

0 0 0 0 0 0 0 0 — speech
0 0 0 0 0 0 0 1 — spare
0 0 0 0 0 0 1 0 — reserved for 64 kbit/s unrestricted
0 0 0 0 0 0 1 1 — 3.1 kHz audio
0 0 0 0 0 1 0 0 — reserved for alternate speech (service 2)/64 kbit/s unrestricted (service 1)
0 0 0 0 0 1 0 1 — reserved for alternate 64 kbit/s unrestricted (service 1)/speech (service 2)
0 0 0 0 0 1 1 0 — reserved for 64 kbit/s preferred
0 0 0 0 0 1 1 1 — reserved for 2 × 64 kbit/s unrestricted
0 0 0 0 1 0 0 0 — reserved for 384 kbit/s unrestricted
0 0 0 0 1 0 0 1 — reserved for 1536 kbit/s unrestricted
0 0 0 0 1 0 1 0 — reserved for 1920 kbit/s unrestricted
0 0 0 0 1 0 1 1 to 0 0 0 0 1 1 1 1 — spare
0 0 0 1 0 0 0 0 to 0 0 0 1 0 0 1 0 — reserved
0 0 0 1 0 0 1 1 — spare
0 0 0 1 0 1 0 0 to 0 0 1 0 0 1 0 0 — reserved
0 0 1 0 0 1 0 1 — spare
0 0 1 0 0 1 1 0 to 0 0 1 0 1 0 1 0 — reserved
0 0 1 0 1 0 1 1 to 1 1 1 1 1 1 1 1 — spare

3.56 Transmission medium used

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

The codings are identical to codings in 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 ITU-T Recommendation Q.931 and not all capabilities coded here are supported at this time.

	8	7	6	5	4	3	2	1
1	ext.	Coding standard		Information transfer capability				
2	ext.	Transfer mode		Information transfer rate				
2a	Rate multiplier							
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				

NOTE 1 – Octet 2a is required if octet 2 indicates multirate (64 kbit/s base rate); otherwise, it shall not be present.

NOTE 2 – Octets 3, 4, 5 or any combination of these octets may be omitted. Octet 3 may be extended as described in ITU-T Recommendation Q.931.

Figure 55/Q.763 – User service information parameter field

The codes to be used in the subfields of the user service information parameter field is defined in the Bearer capability information element in ITU-T Recommendation Q.931.

3.58 User service information prime

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

The codes to be used in the subfield of the user service information prime parameter field are defined in the Bearer capability information element in ITU-T Recommendation Q.931.

3.59 User teleservice information

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 ITU-T Recommendation Q.931 and not all capabilities coded here are supported at this time.

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

Figure 56/Q.763 – User teleservice information parameter field

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

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 – User-to-user indicators parameter field

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

bit A: *Type*
- 0 request
- 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
- 1 0 provided
- 1 1 spare

bits E D: *Service 2*
- 0 0 no information
- 0 1 not provided
- 1 0 provided
- 1 1 spare

bits G F: *Service 3*
- 0 0 no information
- 0 1 not provided
- 1 0 provided
- 1 1 spare

bit H: *Network discard indicator*
- 0 no information
- 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.

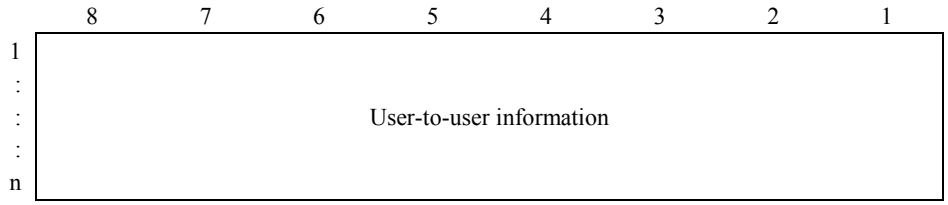


Figure 58/Q.763 – User-to-user information parameter field

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

3.62 Backward GVNS

The format of the backward GVNS parameter field is shown in Figure 59.

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

Figure 59/Q.763 – Backward GVNS parameter field

The following codes are used in the backward GVNS parameter field:

bits B A: *Terminating access indicator*
- 0 0 no information
- 0 1 dedicated terminating access
- 1 0 switched terminating access
- 1 1 spare

bits G-C: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.63 CCSS

The format of the CCSS parameter field is shown in Figure 60.

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

Figure 60/Q.763 – CCSS parameter field

The following codes are used in the CCSS parameter field:

bit A: *CCSS call indicator*
- 0 no indication
- 1 CCSS call

bits H-B: *spare*

3.64 Call transfer number

The format of the call transfer number parameter field is shown in Figure 61.

	8	7	6	5	4	3	2	1
1	O/E	Nature of address indicator						
2	spare	Numbering plan indicator			Address presentation restricted indicator		Screening indicator	
3	2nd address signal				1st address signal			
:								
:								
m	Filler (if necessary)				*n*th address signal			

Figure 61/Q.763 – Call transfer number parameter field

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

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Nature of address indicator*

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	subscriber number (national use)
0 0 0 0 0 1 0	unknown (national use)
0 0 0 0 0 1 1	national (significant) number (national use)
0 0 0 0 1 0 0	international number
0 0 0 0 1 0 1 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

c) *Numbering plan indicator*

0 0 0	spare
0 0 1	ISDN (Telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0	spare
0 1 1	Data numbering plan (ITU-T Recommendation X.121) (national use)
1 0 0	Telex numbering plan (ITU-T Recommendation F.69) (national use)
1 0 1	Private numbering plan (national use)
1 1 0	reserved for national use
1 1 1	spare

d) *Address presentation restricted indicator*

0 0	presentation allowed
0 1	presentation restricted
1 0	spare
1 1	spare

e) *Screening indicator*

0 0	user provided, not verified
0 1	user provided, verified and passed
1 0	user provided, verified and failed
1 1	network provided

f) *Address signal*

0 0 0 0	digit 0
0 0 0 1	digit 1
0 0 1 0	digit 2
0 0 1 1	digit 3
0 1 0 0	digit 4
0 1 0 1	digit 5
0 1 1 0	digit 6
0 1 1 1	digit 7
1 0 0 0	digit 8
1 0 0 1	digit 9
1 0 1 0	spare
1 0 1 1	code 11
1 1 0 0	code 12
1 1 0 1 to 1 1 1 1	spare

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

g) *Filler:* as for 3.9 f).

3.65 Call transfer reference

The format of the call transfer reference parameter is shown in Figure 62.

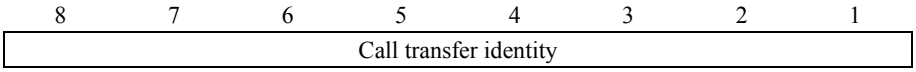


Figure 62/Q.763 – Call transfer reference parameter field

The call transfer identity is a pure binary representation of the integer (0 to 255) assigned unambiguously to the particular ECT supplementary service invocation (see clause 7/Q.732).

3.66 Forward GVNS

The format of the forward GVNS parameter field is shown in Figure 63.1.

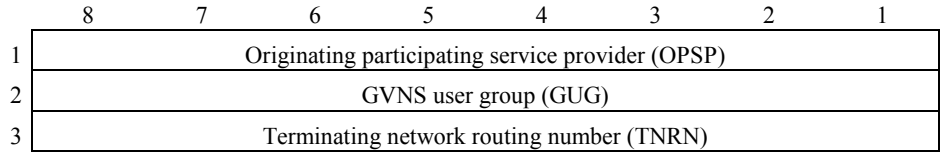


Figure 63.1/Q.735 – Forward GVNS parameter field

The following codes are used in the subfields of the forward GVNS parameter:

a) ***Originating participating service provider***

	8	7	6	5	4	3	2	1
1	O/E	spare			OPSP length indicator			
1a	2nd digit				1st digit			
:	:				:			
1m	Filler (if necessary)				*n*th digit			

Figure 63.2/Q.735 – Originating participating service provider subfield

1) *Odd/even indicator (O/E):* as for 3.9 a).

2) *OPSP length indicator*

   Number of octets to follow. The maximum number of octets is 4, allowing for a maximum number of digits to 7.

3) *Digit*

   Digit string in BCD encoding of flexible length representing the Originating Participating Service Provider (OPSP) identification.

4) *Filler*

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

b) ***GVNS user group***

	8	7	6	5	4	3	2	1
2	O/E	spare			GUG length indicator			
2a	2nd digit				1st digit			
:	:				:			
2m	Filler (if necessary)				*n*th digit			

Figure 63.3/Q.735 – GVNS user group subfield

1) *Odd/even indicator (O/E):* as for 3.9 a).

2) *GUG length indicator*

   Number of octets to follow. The maximum number of octets is 8, allowing for a maximum number of digits to 16.

3) *Digit*

   Digit string in BCD encoding of flexible length representing the GVNS user group identification (GUG).

4) *Filler*

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

c) ***Terminating network routing number***

	8	7	6	5	4	3	2	1
3	O/E	Numbering plan indicator			TNRN length indicator			
3a	spare	Nature of address indicator						
3b	2nd digit				1st digit			
:	:				:			
3m	Filler (if necessary)				*n*th digit			

Figure 63.4/Q.763 – Terminating network routing number subfield

1) *Odd/even indicator (O/E):* as for 3.9 a).
2) *Numbering plan indicator:* as for 3.9 d).
3) *TNRN length indicator*

   Number of octets to follow. The maximum number of octets is 9 allowing for a maximum number of digits to 15.
4) *Nature of address indicator*

0 0 0 0 0 0 0	spare
0 0 0 0 0 0 1	subscriber number (national use)
0 0 0 0 0 1 0	unknown (national use)
0 0 0 0 0 1 1	national (significant) number
0 0 0 0 1 0 0	international number
0 0 0 0 1 0 1	network specific number
0 0 0 0 1 1 0 to 1 1 0 1 1 1 1	spare
1 1 1 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	spare

5) *Digit:* as for 3.9 e).
6) *Filler:* as for 3.9 f).

3.67 Loop prevention indicators

The format of the loop prevention indicators parameter field is shown in Figure 64.

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

Figure 64/Q.763 – Loop prevention indicators parameter field

The following codes are used in the loop prevention indicators parameter field:

bit A: *Type*
0 request
1 response

If bit A equals to 0 (request):

bits H-B: *spare*

If bit A equals to 1 (response):

bits C B: *Response indicator*

0 0	insufficient information (note)
0 1	no loop exists
1 0	simultaneous transfer
1 1	spare

bits H-D: *spare*

NOTE – The value "insufficient information" may be received due to interworking.

3.68 Network management controls

The format of the network management controls parameter field is shown in Figure 65.

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

Figure 65/Q.763 – Network management controls parameter field

The following codes are used in the network management controls parameter field:

bit A: *Temporary Alternative Routing (TAR) indicator*

0	no indication
1	TAR controlled call

bits G-B: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.69 Circuit assignment map

The format of the circuit assignment map parameter field is shown in Figure 66.

	8	7	6	5	4	3	2	1
1	spare		Map type					
2	8	7	6	5	4	3	2	1
3	16	15	14	13	12	11	10	9
4	24	23	22	21	20	19	18	17
5	spare	31	30	29	28	27	26	25

Figure 66/Q.763 – Circuit assignment map parameter field

The following codes are used in the circuit assignment map parameter field:

a-1) *Map type*:

0 0 0 0 0 0	spare
0 0 0 0 0 1	1544 kbit/s digital path map format (64 kbit/s base rate)
0 0 0 0 1 0	2048 kbit/s digital path map format (64 kbit/s base rate)

0 0 0 0 1 1
to
1 1 1 1 1 1 } spare

a-2) bits 8,7, octet 1: *spare*

b-1) *Map format (octets 2 to 5)*:

Each bit position on the map (octets 2 to 5) indicates whether the corresponding 64 kbit/s circuit is used in the N × 64 connection. The bits are coded as follows:

0 64 kbit/s circuit is not used
1 64 kbit/s circuit is used

Octet 5 is not used for 1544 kbit/s digital path map.

b-2) bit 8, octet 5: *spare*

3.70 Correlation id

The format of the correlation id parameter field is shown in Figure 67.

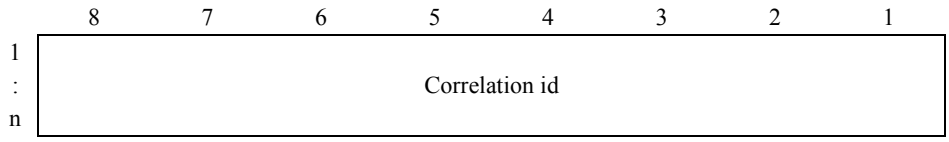


Figure 67/Q.763 – Correlation id parameter field

The correlation id is coded as described in ITU-T Recommendation Q.1218 [11].

3.71 SCF id

The format of the SCF id parameter field is shown in Figure 68.

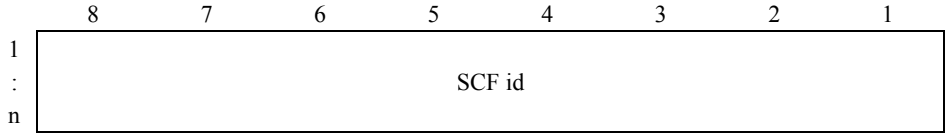


Figure 68/Q.763 – SCF id parameter field

The SCF id is coded as described in ITU-T Recommendation Q.1218 [11].

3.72 Call diversion treatment indicators

The format of the call diversion treatment indicators parameter field is shown in Figure 69.

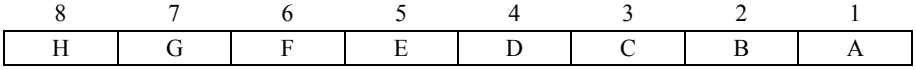


Figure 69/Q.763 – Call diversion treatment indicators parameter field

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

bits BA: *Call to be diverted indicator*
- 0 0 no indication
- 0 1 call diversion allowed
- 1 0 call diversion not allowed
- 1 1 spare

bits G-C: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.73 Called IN number

The format of the called IN number parameter corresponds to the original called number parameter (see 3.39).

3.74 Call offering treatment indicators

The format of the call offering treatment indicators parameter field is shown in Figure 70.

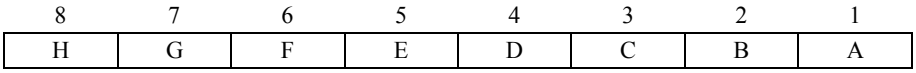


Figure 70/Q.763 – Call offering treatment indicators parameter field

The following codes are used in the call offering treatment parameter field:

bits BA: *Call to be offered indicator*
- 0 0 no indication
- 0 1 call offering not allowed
- 1 0 call offering allowed
- 1 1 spare

bits G-C: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.75 Charged party identification (national use)

The format of the charged party identification parameter is national network specific. The format is similar to the format of the corresponding INAP parameter in the "FurnishChargingInformation" operation (see ITU-T Recommendations Q.1218 [11] and Q.1228 [12]).

3.76 Conference treatment indicators

The format of the conference treatment indicators parameter field is shown in Figure 71.

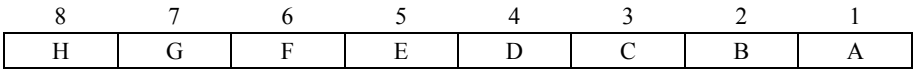


Figure 71/Q.763 – Conference treatment indicators parameter field

The following codes are used in the conference treatment parameter field:

bits BA: *Conference acceptance indicator* (Note)
- 0 0 no indication
- 0 1 accept conference request
- 1 0 reject conference request
- 1 1 spare

NOTE – Applicable to the conference and three-party supplementary services.

bits G-C: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.77 Display information

The format of the display information parameter field is shown in Figure 72.

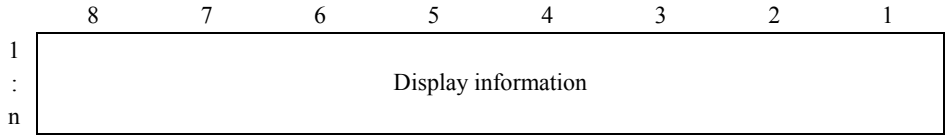


Figure 72/Q.763 – Display information parameter field

The display information is coded as described in ITU-T Recommendation Q.931.

3.78 UID action indicators

The format of the UID action indicators parameter field is shown in Figure 73.

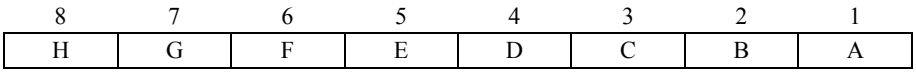


Figure 73/Q.763 – UID action indicators parameter field

The following codes are used in the UID action indicators parameter field:

bit A: *Through-connection instruction indicator*
- 0 no indication
- 1 through-connect in both directions

bit B: *T9 timer instruction indicator*
- 0 no indication
- 1 stop or do not start T9 timer

bits G-C: *spare*

bit H: *Extension indicator*: as Subclause 3.25 a).

3.79 UID capability indicators

The format of the UID capability indicators parameter field is shown in Figure 74:

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

Figure 74/Q.763 – UID capability indicators parameter field

The following codes are used in the UID capability indicators parameter field:

bit A: *Through-connection indicator*
0 no indication
1 through-connection modification possible

bit B: *T9 timer indicator*
0 no indication
1 stopping of T9 timer possible

bits G-C: *spare*

bit H: *Extension indicator*: as for 3.25 a).

3.80 Hop counter

The format of the hop counter parameter field is shown in Figure 75.

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

Figure 75/Q.763 – Hop counter parameter field

The following codes are used in the hop counter parameter field:

bits EDCBA: *Hop counter*

The hop counter contains the binary value of the number of contiguous SS7 interexchange circuits that are allowed to complete the call.

bits HGF: *spare*

3.81 Collect call request

The format of the collect call request parameter field is shown in Figure 76.

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

Figure 76/Q.763 – Collect call request parameter field

The following codes are used in the collect call request parameter field:

bit A: *Collect call request indicator*
0 no indication
1 collect call requested

bits H-B: *spare*

3.82 Application transport parameter (ATP)

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

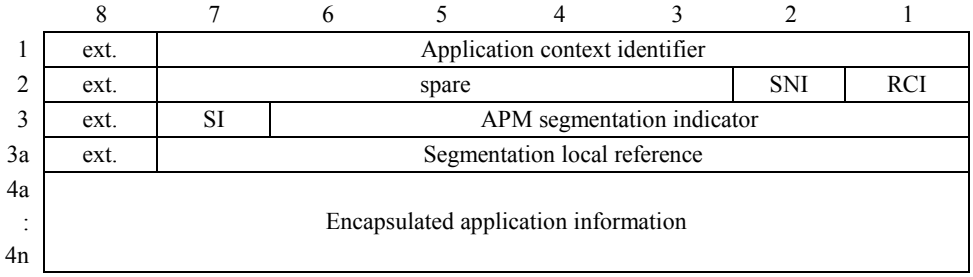


Figure 77/Q.763 – Application transport parameter field

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

a) *Extension indicator (ext.):* as for 3.25 a).

b) *Application context identifier (ACI)*

0 0 0 0 0 0 0 Unidentified Context and Error Handling (UCEH) ASE
0 0 0 0 0 0 1 PSS1 ASE (VPN)
0 0 0 0 0 1 0 spare
0 0 0 0 0 1 1 Charging ASE
0 0 0 0 1 0 0 GAT
0 0 0 0 1 0 1 to 0 1 1 1 1 1 1 spare
1 0 0 0 0 0 0 to 1 1 1 1 1 1 1 reserved for non-standardized applications

NOTE 1 – The compatibility mechanism as defined in Q.764 is not applicable to this field.

c) *Application transport instruction indicators*

bit 1 *Release call indicator (RCI)*
0 do not release call
1 release call

bit 2 *Send notification indicator (SNI)*
0 do not send notification
1 send notification

d) *APM segmentation indicator*

0 0 0 0 0 0	final segment
0 0 0 0 0 1 to 0 0 1 0 0 1	indicates the number of following segments
0 0 1 0 1 0 to 1 1 1 1 1 1	spare

NOTE 2 – The compatibility mechanism as defined in Q.764 is not applicable to this field.

e) *Sequence indicator (SI)*

0	subsequent segment to first segment
1	new sequence

f) *Segmentation local reference (SLR)*

g) *Encapsulated application information:*

Contains the application specific information.

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

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

3.83 CCNR possible indicator

The format of the CCNR possible indicator parameter field is shown in Figure 78.

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

Figure 78/Q.763 – CCNR possible indicator parameter field

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

bit A: *CCNR possible indicator*

0	CCNR not possible
1	CCNR possible

bits H-B: *spare*

3.84 Pivot capability

The format of the pivot capability parameter field is shown in Figure 79.

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

Figure 79/Q.763 – Pivot capability parameter field

The following codes are used in the pivot capability parameter field:

bits CBA: *Pivot possible indicator*

- 0 0 0 no indication
- 0 0 1 pivot routing possible before ACM
- 0 1 0 pivot routing possible before ANM
- 0 1 1 pivot routing possible any time during the call
- 1 0 0 to 1 1 1 spare

bits FED: *spare*

bit G: *Interworking to redirection indicator (national use)*

- 0 allowed (forward)
- 1 not allowed (forward)

bit H: *Extension indicator:* as for 3.25 a).

3.85 Pivot routing indicators

The format of the pivot routing indicators parameter field is shown in Figure 80.

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

Figure 80/Q.763 – Pivot routing indicators parameter field

The following codes are used in the pivot routing indicators parameter field:

bits GFEDCBA: *Pivot routing indicators*

- 0 0 0 0 0 0 0 no indication
- 0 0 0 0 0 0 1 pivot request
- 0 0 0 0 0 1 0 cancel pivot request
- 0 0 0 0 0 1 1 pivot request failure
- 0 0 0 0 1 0 0 interworking to redirection prohibited (backward) (national use)
- 0 0 0 0 1 0 1 to 1 1 1 1 1 1 1 spare

bit H: *Extension indicator*: as for 3.25 a).

3.86 Called directory number (national use)

The format of the called directory number parameter field is shown in Figure 81.

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

Figure 81/Q.763 – Called directory number parameter field

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

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Nature of address indicator*

0 0 0 0 0 0 0 spare
0 0 0 0 0 0 1 subscriber number (national use)
0 0 0 0 0 1 0 unknown (national use)
0 0 0 0 0 1 1 national (significant) number (national use)
0 0 0 0 1 0 0 reserved
0 0 0 0 1 0 1 network-specific number (national use)
0 0 0 0 1 1 0 reserved
0 0 0 0 1 1 1 reserved
0 0 0 1 0 0 0 reserved
0 0 0 1 0 0 1 to 1 1 0 1 1 1 1 spare
1 1 1 0 0 0 0 a 1 1 1 1 1 1 0 reserved for national use
1 1 1 1 1 1 1 spare

c) *Numbering plan indicator*

0 0 0 reserved
0 0 1 ISDN (Telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0 spare
0 1 1 reserved (national use)
1 0 0 reserved (national use)
1 0 1 reserved for national use
1 1 0 reserved for national use
1 1 1 reserved

d) *Internal network number indicator (INN)*

0 reserved
1 routing to internal network number not allowed

e) *Address signal*

0 0 0 0 digit 0
0 0 0 1 digit 1
0 0 1 0 digit 2
0 0 1 1 digit 3
0 1 0 0 digit 4
0 1 0 1 digit 5
0 1 1 0 digit 6
0 1 1 1 digit 7
1 0 0 0 digit 8
1 0 0 1 digit 9
1 0 1 0 spare
1 0 1 1 reserved
1 1 0 0 reserved
1 1 0 1 spare
1 1 1 0 spare
1 1 1 1 ST

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

f) *Filler:* as for 3.9 f).

3.87 Original Called IN number

The format of the original called IN number parameter corresponds to the original called number parameter (see for 3.39).

3.88 Calling geodetic location

The format of the calling geodetic location parameter field is shown in Figure 82.1. The format and coding of the elements in the shape description are described in the following subclauses.

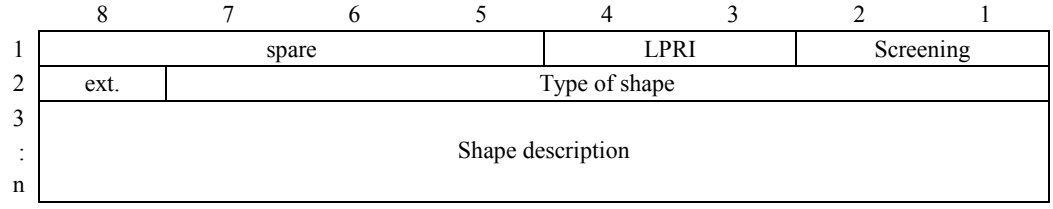


Figure 82.1/Q.763 – Geodetic location parameter

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

a) *Location presentation restricted indicator*

0 0 presentation allowed
0 1 presentation restricted
1 0 location not available (Note)
1 1 spare

NOTE – If the Geodetic Location parameter is included and the LPRI indicates location not available, octets 3 to n are omitted, the subfield (c) is coded with 0000000 and the subfield (b) is coded 11.

b) *Screening indicator*

0 0 user provided, not verified
0 1 user provided, verified and passed
1 0 user provided, verified and failed
1 1 network provided

c) *Type of shape*

0 0 0 0 0 0 0	ellipsoid point
0 0 0 0 0 0 1	ellipsoid point with uncertainty
0 0 0 0 0 1 0	point with altitude and uncertainty
0 0 0 0 0 1 1	ellipse on the ellipsoid
0 0 0 0 1 0 0	ellipsoid circle sector
0 0 0 0 1 0 1	polygon
0 0 0 0 1 1 0 to 0 1 1 1 1 1 1	spare
1 0 0 0 0 0 0 to 1 1 1 1 1 1 0	reserved for national use
1 1 1 1 1 1 1	reserved for future expansion

d) *Extension indicator (ext.)*: as for 3.25 a).

e) *Shape description*

The coding of the shape description consists of different elements dependent on the type of shape as detailed in the following subclauses:

3.88.1 Ellipsoid point shape description

The format of the ellipsoid point shape description is shown in Figure 82.2.

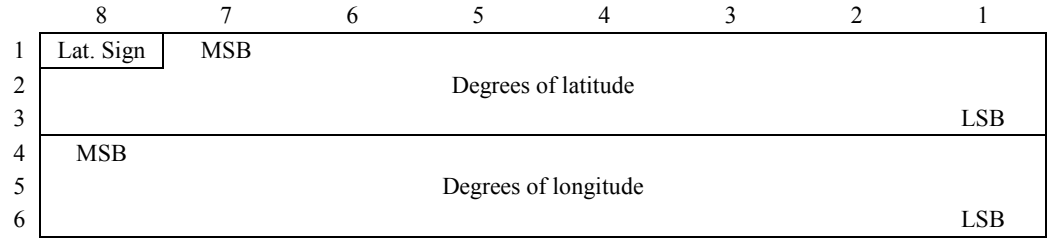


Figure 82.2/Q.763 – Ellipsoid point shape description

a) *Latitude Sign*

0 North
1 South

b) *Degrees of latitude*

The relation between the binary coded number N and the range of latitudes X ($0 \leq X \leq 90$, where X is in degrees but not necessarily an integral number of degrees) it encodes is described by the following equation;

$$N \leq \frac{2^{23}}{90} X < N + 1$$

except for $N = 2^{23}-1$, for which the range is extended to include $N+1$

c) *Degrees of longitude*

The longitude, expressed in the range −180°, +180°, is coded coded as a number between -2^{23} and $2^{23}-1$, coded in 2s complement binary. The relation between the binary coded number N and the range of longitudes X ($-180 \leq X \leq +180$, where X is in degrees but not necessarily an integral number of degrees) it encodes is described by the following equation:

$$N \leq \frac{2^{24}}{360} X < N+1$$

3.88.2 Ellipsoid point with uncertainty shape description

The format of the ellipsoid point with uncertainty shape description is shown in Figure 82.3.

	8	7	6	5	4	3	2	1
1	Lat. Sign							MSB
2				Degrees of latitude				
3	LSB							
	MSB							
5				Degrees of longitude				
6	LSB							
7	spare	Uncertainty code						
8	spare	Confidence						

Figure 82.3/Q.763 – Shape description of an ellipsoid point with uncertainty

a) *Latitude Sign*

As for 3.88.1a).

b) *Degrees of latitude*

As for 3.88.1b).

c) *Degrees of longitude*

As for 3.88.1c).

d) *Uncertainty code*

The uncertainty r, expressed in metres (in the range 1 m to 1800 km), is mapped from the binary number K, with the following formula:

$$r = C\left((1+x)^k - 1\right)$$

with $C = 10$ and $x = 0.1$.

e) *Confidence*

The confidence by which the location is known to be within the shape description, C (expressed as a percentage) is directly mapped from the binary number K, except for $K = 0$ which is used to indicate "no information", and $100 < K = 128$ which are not used.

3.88.3 Point with altitude and uncertainty shape description

The format of the point with altitude and uncertainty circle shape description is shown in Figure 82.4.

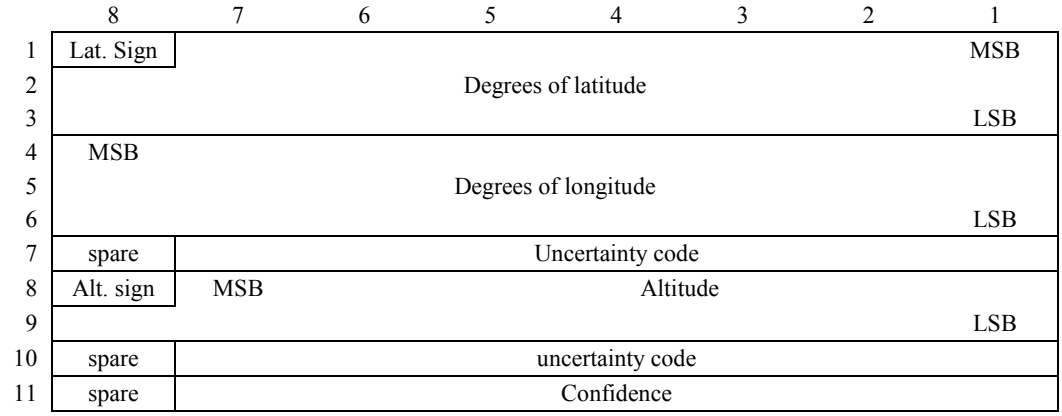


Figure 82.4/Q.763 – Shape description of a point with altitude and uncertainty

a) *Latitude sign*

As for 3.88.1 a).

b) *Degrees of latitude*

As for 3.88.1 b).

c) *Degrees of longitude*

As for 3.88.1 c).

d) *Uncertainty code*

As for 3.88.2 d).

e) *Altitude Sign*

0 above the ellipsoid

1 below the ellipsoid

f) *Altitude*

The relation between the binary coded number N and the range of altitudes *a* (in metres) it encodes is described by the following equation;

$$N \le a < N + 1$$

except for $N = 2^{15} - 1$ for which the range is extended to include all greater values of *a.*

g) *Altitude uncertainty code*

The altitude uncertainty *h*, expressed in metres (in the range 0 m to ≅1 000 m), is mapped from the binary number *K*, with the following formula:

$$h = C\left((1+x)^k - 1\right)$$

with $C = 45$ and $x = 0.025$.

h) *Confidence*

As for 3.88.2 e).

3.88.4 Ellipse on the ellipsoid shape description

The format of the ellipse on the ellipsoid shape description is shown in Figure 82.5.

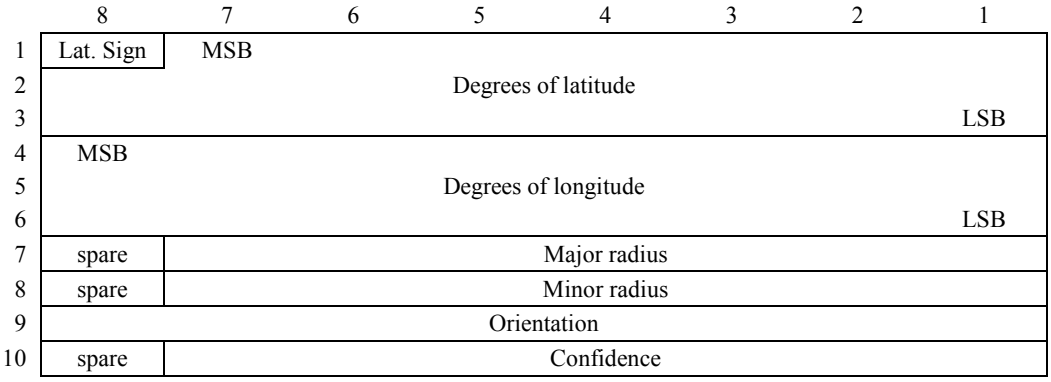


Figure 82.5/Q.763 – Shape description of an ellipsoid on the ellipsoid

a) *Latitude sign*

As for 3.88.1 a).

b) *Degrees of latitude*

As for 3.88.1 b).

c) *Degrees of longitude*

As for 3.88.1 c).

d) *Major radius*

The major axis of the ellipsoid r_{major}, expressed in metres (in the range 1 m to 1800 km), is mapped from the binary number K, with the following formula:

$$r = C\left((1+x)^k - 1\right)$$

with $C = 10$ and $x = 0.1$.

e) *Minor radius*

The minor axis of the ellipsoid r_{minor}, expressed in metres (in the range 1 m to 1800 km), is mapped from the binary number K, with the following formula:

$$r = C\left((1+x)^k - 1\right)$$

with $C = 10$ and $x = 0.1$.

f) *Orientation*

The orientation of the major axis of the ellipsoid, θ, expressed in degrees (0° being North, 90° being East, etc. with 1° granularity), is mapped from the binary number K, with the following formula:

$$\theta = k$$

except for $180 < K < 255$ which are not used.

g) *Confidence*

As for 3.88.2 e).

3.88.5 Ellipsoid circle sector shape description

The format of the ellipsoid circle sector shape description is shown in Figure 82.6.

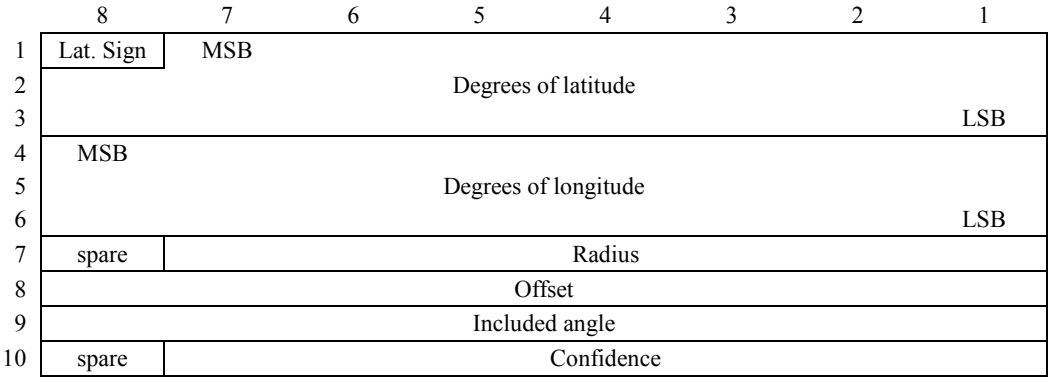


Figure 82.6/Q.763 – Shape description of an ellipsoid on the ellipsoid

a) *Latitude sign*

As for 3.88.1 a).

b) *Degrees of latitude*

As for 3.88.1 b).

c) *Degrees of longitude*

As for 3.88.1 c).

d) *Radius*

The radius of the circle sector r, expressed in metres (in the range 1 m to 1800 km), is mapped from the binary number K, with the following formula:

$$r = C\left((1+x)^k - 1\right)$$

with $C = 10$ and $x = 0.1$.

e) *Offset*

The orientation of the offset of the circle sector, θ, expressed in degrees (0° being North, 90° being East, etc. with 2° granularity), is mapped from the binary number K, with the following formula:

$$\theta = 2K$$

except for $180 < K < 255$ which are not used.

f) *Included angle*

The included angle of the circle sector, β expressed in degrees (0° being North, 90° being East, etc. with 2° granularity), is mapped from the binary number K, with the following formula:

$$\beta = 2K$$

except for $180 < K < 255$ which are not used.

g) *Confidence*

As for 3.88.2 e).

3.88.6 Polygon shape description

The format of the polygon shape description is shown in 82.7.

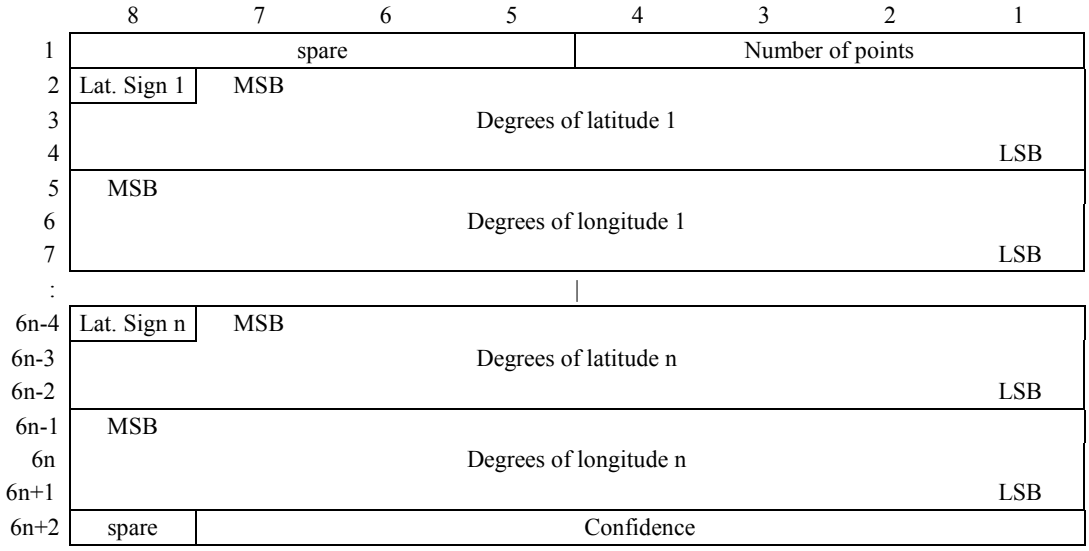


Figure 82.7/Q.763 – Shape description of a polygon

a) *Number of points*

0 0 0 0 not used
0 0 0 1 not used
0 0 1 0 not used
0 0 1 1 to 1 1 1 1 binary value of the number of points (3-15)

b) *Latitude Sign 1*

As for 3.88.1 a).

c) *Degrees of latitude 1*

As for 3.88.1 b).

d) *Degrees of longitude 1*

As for 3.88.1 c).

e) *Latitude Sign n*

As for 3.88.1 a).

f) *Degrees of latitude n*

As for 3.88.1 b).

g) *Degrees of longitude n*

As for 3.88.1 c).

h) *Confidence*

As for 3.88.2 e).

3.89 HTR information

The format of the HTR information parameter field corresponds to the format is shown in Figure 83.

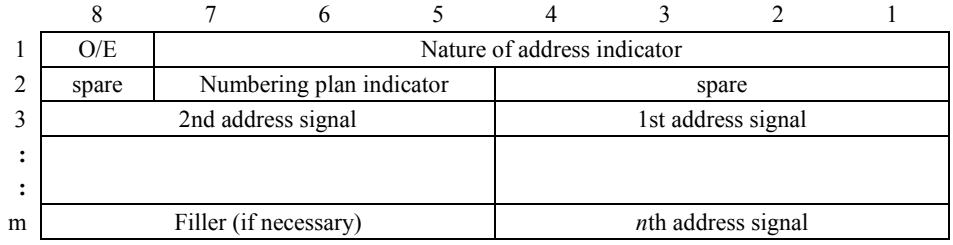


Figure 83/Q.763 – HTR information parameter field

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

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Nature of address indicator:* as for 3.9 b).

c) *Numbering plan indicator:* as for 3.9 d).

d) *Address signal:* as for 3.9 e).

e) *Filler:* as for 3.9 f).

3.90 Network routing number (national use)

The format of the network routing number parameter field is shown in Figure 84.

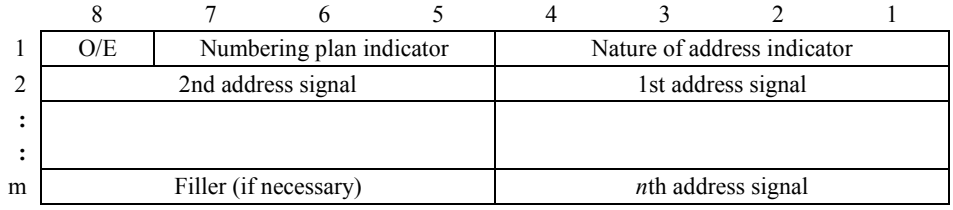


Figure 84/Q.763 – Network routing number parameter field

The following codes are used in the subfields of the network routing number parameter:

a) *Odd/even indicator (O/E):* as for 3.9 a).

b) *Numbering plan indicator*

0 0 0 spare
0 0 1 ISDN (Telephony) numbering plan (ITU-T Recommendation E.164)
0 1 0 spare
0 1 1 spare
1 0 0 spare
1 0 1 spare
1 1 0 reserved for national use
1 1 1 reserved for national use

c) *Nature of address indicator*

0 0 0 0 spare
0 0 0 1 network routing number in national (significant) number format (national use)
0 0 1 0 network routing number in network specific number format (national use)

0 0 1 1 to 1 0 1 0 — spare

1 0 1 1 to 1 1 1 1 — reserved for national use

d) *Address signal*

0 0 0 0	digit 0
0 0 0 1	digit 1
0 0 1 0	digit 2
0 0 1 1	digit 3
0 1 0 0	digit 4
0 1 0 1	digit 5
0 1 1 0	digit 6
0 1 1 1	digit 7
1 0 0 0	digit 8
1 0 0 1	digit 9
1 0 1 0	spare
1 0 1 1	spare
1 1 0 0	spare
1 1 0 1	spare
1 1 1 0	spare
1 1 1 1	spare

e) *Filler:* as for 3.9 f).

3.91 Query on release capability (network option)

The format of the query on release capability parameter field is shown in Figure 85.

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

Figure 85/Q.763 – QoR capability parameter field

The following codes are used in the QoR capability parameter field:

bit A: *QoR capability indicator*
0 no indication
1 QoR support

bits G-B: *spare*

bit H: *Extension indicator:* as for 3.25 a).

3.92 Pivot status (national use)

The format of the pivot status parameter field is shown in Figure 86.

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

Figure 86/Q.763 – Pivot status indicator parameter field

bits BA: *Pivot status indicator*
- 0 0 not used
- 0 1 acknowledgment of pivot routing
- 1 0 pivot routing will not be invoked
- 1 1 spare

bits GFEDC: *spare*

bit H: *Extension indicator:* as for 3.25 a).

3.93 Pivot Counter

The format of the pivot counter parameter field is shown in Figure 87.

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

Figure 87/Q.763 – Pivot counter parameter field

The following codes are used in the pivot counter parameter field:

bits EDCBA: *Pivot counter*
binary value of the number of redirections

bits HGF: *spare*

3.94 Pivot routing forward information

The pivot routing forward information parameter is a constructor with format as shown in Figure 88.1.

	8	7	6	5	4	3	2	1
1	information type tag							
2	information type length							
3	information type value							
:								
:								
n+1	information type tag							
n+2	information type length							
n+3	information type value							

Figure 88.1/Q.763 – Pivot routing forward information parameter field

The values of the information type tag are:

0000 0000	not used
0000 0001	return to invoking exchange possible (national use)
0000 0010	return to invoking exchange call identifier (national use)
0000 0011	performing pivot indicator
0000 0100	invoking pivot reason
0000 0011 to 1111 1111	spare

3.94.1 Return to invoking exchange possible (national use)

Return to invoking exchange possible has length zero and has no information type value.

3.94.2 Return to invoking exchange call identifier (national use)

The format of the return to invoking exchange call identifier is shown in Figure 9, and the encoding is identical with that of the Call Reference parameter as shown in 3.8.

3.94.3 Performing pivot indicator

The format of the performing pivot indicator is shown in Figure 88.2.

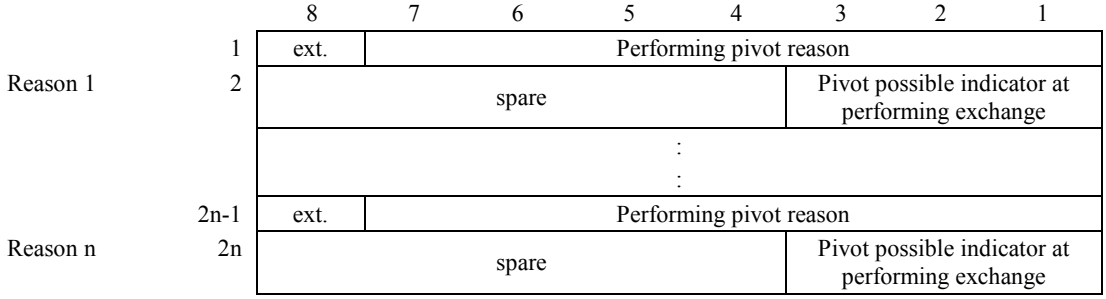


Figure 88.2/Q.763 – Performing pivot indicator

The following codes are used in the performing pivot indicator:

a) *Extension indicator (ext.):* as for 3.25 a).

b) *Performing Pivot Reason (octet 2n-1)*

0 0 0 0 0 0 0	unknown/ not available
0 0 0 0 0 0 1	service provider portability (national use)
0 0 0 0 0 1 0	reserved for location portability
0 0 0 0 0 1 1	reserved for service portability
0 0 0 0 1 0 0 to 0 1 1 1 1 1 1	spare
1 0 0 0 0 0 0 to 1 1 1 1 1 1 1	reserved for national use

c) *Pivot Possible Indicator at Performing Exchange (octet 2n)*

0 0 0	no indication
0 0 1	pivot routing possible before ACM
0 1 0	pivot routing possible before ANM
0 1 1	pivot routing possible any time during the call
1 0 0 to 1 1 1	spare

3.94.4 Invoking pivot reason

The format of the invoking pivot reason is shown in Figure 88.3.

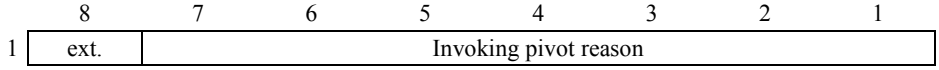


Figure 88.3/Q.763 – Invoking pivot reason

The coding of the invoking pivot reason is identical to that of the performing pivot indicator as shown in 3.94.3 a) and b).

3.95 Pivot routing backward information

The pivot routing backward information parameter is a constructor with format as shown in Figure 88.1.

The values of the information type tag are:

0000 0000	not used
0000 0001	return to invoking exchange duration
0000 0010	return to invoking exchange call identifier
0000 0011	invoking pivot reason
0000 0100 to 11111111	spare

3.95.1 Return to invoking exchange duration (national use)

Return to invoking exchange duration is encoded in units of seconds as a variable length (of length 1-2 octets) integer with the least significant bit in the first octet.

3.95.2 Return to invoking exchange call identifier (national use)

The format of the return to invoking exchange call identifier is shown in Figure 9, and the encoding is identical to that of the call reference parameter as shown in 3.8.

3.95.3 Invoking pivot reason

The format and coding of the invoking pivot reason are given in 3.94.4.

3.96 Redirect capability (national use)

The format of the redirect capability parameter field is shown in Figure 89.

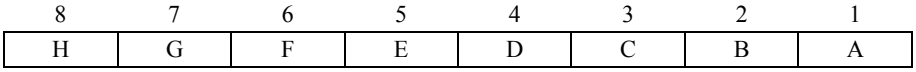


Figure 89/Q.763 – Redirect capability parameter field

The following codes are used in the redirect capability parameter field:

bits CBA: *Redirect possible indicator*

0 0 0	not used
0 0 1	redirect possible before ACM
0 1 0	redirect possible before ANM
0 1 1	redirect possible at any time during the call
1 0 0 to 1 1 1	spare

bits GFED: *spare*

bit H: *Extension indicator:* as for 3.25 a).

3.97 Redirect counter (national use)

The format of the redirect counter parameter field is shown in Figure 90.

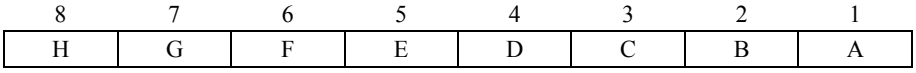


Figure 90/Q.763 – Redirect counter parameter field

The following codes are used in the redirect counter parameter field:

bits EDCBA: *Redirect counter*
binary value of the number of redirections

bits HGF: *spare*

3.98 Redirect status (national use)

The format of the redirect status parameter field is shown in Figure 91.

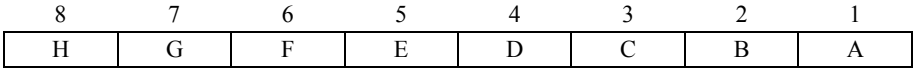


Figure 91/Q.763 – Redirect status parameter field

bits BA: *Redirect status indicator*
0 0 not used
0 1 acknowledgment of redirection
1 0 redirection will not be invoked
1 1 spare

bits GFEDC: *spare*

bit H: *Extension indicator:* as for 3.25 a).

3.99 Redirect forward information (national use)

The redirect forward information parameter is a constructor with format as shown in Figure 88.1.

The values of the information type tag are:

0000 0000 not used
0000 0001 return to invoking exchange possible
0000 0010 return to invoking exchange call identifier
0000 0011 performing redirect indicator
0000 0100 invoking redirect reason
0000 0101 to 11111111 spare

3.99.1 Return to invoking exchange possible

Return to invoking exchange possible has length zero and has no information type value.

3.99.2 Return to invoking exchange call identifier

The format of the return to invoking exchange call identifier is shown in Figure 9, and the encoding is identical with that of the Call Reference parameter as shown in 3.8.

3.99.3 Performing redirect indicator

The format of the performing redirect indicator is shown in Figure 92.

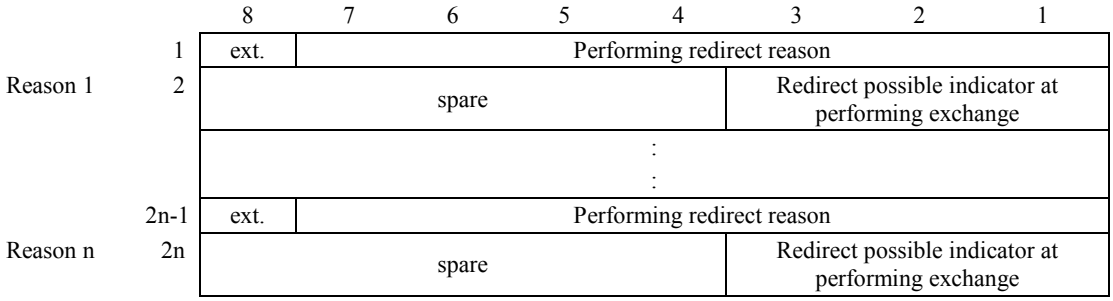


Figure 92/Q.763 – Performing redirect indicator

The following codes are used in the performing redirect indicator:

a) *Extension indicator (ext.):* as for 3.25 a).

b) *Performing redirect reason (octet 2n-1)*

0 0 0 0 0 0 0	unknown/ not available
0 0 0 0 0 0 1	service provider portability (national use)
0 0 0 0 0 1 0	reserved for location portability
0 0 0 0 0 1 1	reserved for service portability
0 0 0 0 1 0 0 to 0 1 1 1 1 1 1	spare
1 0 0 0 0 0 0 to 1 1 1 1 1 1 1	reserved for national use

c) *Redirect possible indicator at performing exchange (octet 2n)*

0 0 0	no indication
0 0 1	redirect possible before ACM
0 1 0	redirect possible before ANM
0 1 1	redirect possible any time during the call
1 0 0 to 1 1 1	spare

3.99.4 Invoking redirect reason

The format of the invoking redirect reason is shown in Figure 93.

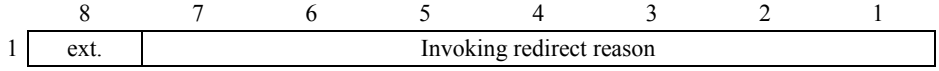


Figure 93/Q.763 – Invoking redirect reason

The coding of the invoking redirect reason is identical to that of the performing redirect indicator as shown in 3.99.3 a) and b).

3.100 Redirect backward information (national use)

The redirect backward information parameter is a constructor with format as shown in Figure 88.1.

The values of the information type tag are:

0000 0000	not used
0000 0001	return to invoking exchange duration
0000 0010	return to invoking exchange call identifier
0000 0011	invoking redirect reason
0000 0100 to 11111111	spare

3.100.1 Return to invoking exchange duration

Return to invoking exchange duration is encoded in units of seconds as a variable length (of length 1-2 octets) integer with the least significant bit in the first octet.

3.100.2 Return to invoking exchange call identifier

The format of the return to invoking exchange call identifier is shown in Figure 9, and the encoding is identical with that of the Call Reference parameter as shown in 3.8.

3.100.3 Invoking redirect reason

The format and coding of the invoking redirect reason are given in 3.99.4.

3.101 Number portability forward information (network option)

The format of the number portability forward information parameter field is shown in Figure 94.

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

Figure 94/Q.763 – Number portability forward information parameter field

The following codes are used in the number portability forward information parameter field:

a) bits DCBA: *Number portability status indicator*

0 0 0 0	no indication
0 0 0 1	number portability query not done for called number
0 0 1 0	number portability query done for called number, non-ported called subscriber
0 0 1 1	number portability query done for called number, ported called subscriber
0 1 0 0 to 1 1 1 1	spare

b) bits GFE: *spare*

c) bit H: *Extension indicator:* as for 3.25 a).

4 ISDN user part messages

In Tables 21 to 53, the format and coding of ISDN user part messages are 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 these tables.

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 3 and are not shown explicitly in Tables 21 to 53.

Table 21/Q.763

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 (national use)	3.8	O	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 indicator (Note 1)	3.25	O	3
Transmission medium used	3.56	O	3
Echo control information	3.19	O	3
Access delivery information	3.2	O	3
Redirection number (Note 2)	3.46	O	5-?
Parameter compatibility information	3.41	O	4-?
Call diversion information	3.6	O	3
Network specific facility (national use)	3.36	O	4-?
Remote operations (national use)	3.48	O	8-?
Service activation	3.49	O	3-?
Redirection number restriction	3.47	O	3
Conference treatment indicators	3.76	O	3-?
UID action indicators	3.78	O	3-?
Application transport parameter (Note 3)	3.82	O	5-?
CCNR possible indicator	3.83	O	3
HTR information	3.89	O	4-?
Pivot routing backward information	3.95	O	3-?
Redirect status (national use)	3.98	O	3
End of optional parameters	3.20	O	1

NOTE 1 – This parameter may be repeated.
NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.
NOTE 3 – The message may contain one or more application transport parameters referring to different application context identifiers.

Table 22/Q.763

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 (national use)	3.8	O	7
User-to-user indicators	3.60	O	3
User-to-user information	3.61	O	3-131
Connected number (Note 2)	3.16	O	4-?
Access transport	3.3	O	3-?
Access delivery information	3.2	O	3
Generic notification indicator (Note 1)	3.25	O	3
Parameter compatibility information	3.41	O	4-?
Backward GVNS	3.62	O	3-?
Call history information	3.7	O	4
Generic number (Notes 1 and 2)	3.26	O	5-?
Transmission medium used	3.56	O	3
Network specific facility (national use)	3.36	O	4-?
Remote operations (national use)	3.48	O	8-?
Redirection number (Note 2)	3.46	O	5-?
Service activation	3.49	O	3-?
Echo control information	3.19	O	3
Redirection number restriction	3.47	O	3
Display information	3.77	O	3-?
Conference treatment indicators	3.76	O	1-?
Application transport parameter (Note 3)	3.82	O	3-?
Pivot routing backward information	3.95	O	3-?
Redirect status (national use)	3.98	O	3
End of optional parameters	3.20	O	1

NOTE 1 – This parameter may be repeated.

NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.

NOTE 3 – The message may contain one or more application transport parameters referring to different application context identifiers.

Table 23/Q.763

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 (national use)	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 (Note 2)	3.46	O	5-?
User-to-user information	3.61	O	3-131
Generic notification indicator (Note 1)	3.25	O	3
Network specific facility (national use)	3.36	O	4-?
Remote operations (national use)	3.48	O	8-?
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 restriction	3.47	O	3
Call transfer number (Note 2)	3.64	O	4-?
Echo control information	3.19	O	3
Connected number (Note 2)	3.16	O	4-?
Backward GVNS	3.62	O	3-?
Generic number (Notes 1 and 2)	3.26	O	5-?
Call history information	3.7	O	4
Conference treatment indicators	3.76	O	3-?
UID action indicators	3.78	O	3-?
Application transport parameter (Note 3)	3.82	O	5-?
CCNR possible indicator	3.83	O	3
Pivot routing backward information	3.95	O	3-?
Redirect status (national use)	3.98	O	3
End of optional parameters	3.20	O	1

NOTE 1 – This parameter may be repeated.

NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.

NOTE 3 – The message may contain one or more application transport parameters referring to different application context identifiers.

Table 24/Q.763

Message Type: Circuit group query response (national use)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Range and status (Note)	3.43	V	2
Circuit state indicator (national use)	3.14	V	2-33
NOTE – The status subfield is not present.			

Table 25/Q.763

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

Message Type: Confusion

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Cause indicators	3.12	V	3-?
End of optional parameters	3.20	O	1

Table 27/Q.763

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
Backward GVNS	3.62	O	3-?
Connected number (Note 2)	3.16	O	4-?
Call reference (national use)	3.8	O	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 (national use)	3.36	O	4-?
Generic notification indicator (Note 1)	3.25	O	3
Remote operations (national use)	3.48	O	8-?
Transmission medium used	3.56	O	3
Echo control information	3.19	O	3
Access delivery information	3.2	O	3
Call history information	3.7	O	4
Parameter compatibility information	3.41	O	4-?
Service activation	3.49	O	3-?
Generic number (Notes 1 and 2)	3.26	O	5-?
Redirection number restriction	3.47	O	3
Conference treatment indicators	3.76	O	3-?
Application transport parameter (Note 3)	3.82	O	5-?
HTR information	3.89	O	4-?
Pivot routing backward information	3.95	O	3-?
Redirect status (national use)	3.98	O	3
End of optional parameters	3.20	O	1

NOTE 1 – This parameter may be repeated.

NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.

NOTE 3 – The message may contain one or more application transport parameters referring to different application context identifiers.

Table 28/Q.763

Message Type: Continuity

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Continuity indicators	3.18	F	1

Table 29/Q.763

Message Type: Facility reject

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Facility indicator	3.22	F	1
Cause indicators	3.12	V	3-?
User-to-user indicators	3.60	O	3
End of optional parameters	3.20	O	1

Table 30/Q.763

Message Type: Information (national use)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Information indicators (national use)	3.28	F	2
Calling party's category	3.11	O	3
Calling party number (Note)	3.10	O	4-?
Call reference (national use)	3.8	O	7
Connection request	3.17	O	7-9
Parameter compatibility information	3.41	O	4-?
Network specific facility	3.36	O	4-?
End of optional parameters	3.20	O	1
NOTE – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 31/Q.763

Message Type: Information request (national use)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Information request indicators (national use)	3.29	F	2
Call reference (national use)	3.8	O	7
Network specific facility	3.36	O	4-?
Parameter compatibility information	3.41	O	4-?
End of optional parameters	3.20	O	1

Table 32/Q.763

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 (Note 2)	3.9	V	4-?
Transit network selection (national use)	3.53	O	4-?
Call reference (national use)	3.8	O	7
Calling party number (Note 2)	3.10	O	4-?
Optional forward call indicators	3.38	O	3
Redirecting number (Note 2)	3.44	O	4-?
Redirection information	3.45	O	3-4
Closed user group interlock code	3.15	O	6
Connection request	3.17	O	7-9
Original called number (Note 2)	3.39	O	4-?
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	O	3
Generic number (Notes 1 and 2)	3.26	O	5-?
Propagation delay counter	3.42	O	4
User service information prime	3.58	O	4-13
Network specific facility (national use)	3.36	O	4-?
Generic digits (national use) (Note 1)	3.24	O	4-?
Origination ISC point code	3.40	O	4
User teleservice information	3.59	O	4-5
Remote operations (national use)	3.48	O	8-?
Parameter compatibility information	3.41	O	4-?
Generic notification indicator (Note 1)	3.25	O	3
Service activation	3.49	O	3-?
Generic reference (reserved)	3.27	O	5-?
MLPP precedence	3.34	O	8
Transmission medium requirement prime	3.55	O	3
Location number (Note 2)	3.30	O	4-?
Forward GVNS	3.66	O	5-26
CCSS	3.63	O	3-?
Network management controls	3.68	O	3-?

Table 32/Q.763 *(concluded)*

Message Type: Initial address

Parameter	Reference (subclause)	Type	Length (octets)
Circuit assignment map	3.69	O	6-7
Correlation id	3.70	O	3-?
Call diversion treatment indicators	3.72	O	3-?
Called IN number (Note 2)	3.73	O	4-?
Call offering treatment indicators	3.74	O	3-?
Conference treatment indicators	3.76	O	3-?
SCF id	3.71	O	3-?
UID capability indicators	3.79	O	3-?
Echo control information	3.19	O	3
Hop counter	3.80	O	3
Collect call request	3.81	O	3
Application transport parameter (Note 3)	3.82	O	5-?
Pivot capability	3.84	O	3
Called directory number (national use)	3.86	O	5-?
Original called IN number	3.87	O	4-?
Calling geodetic location	3.88	O	3-?
Network routing number (national use)	3.90	O	4-?
QoR capability (network option)	3.91	O	3
Pivot counter	3.93	O	3
Pivot routing forward information	3.94	O	3-?
Redirect capability (national use)	3.96	O	3
Redirect counter (national use)	3.97	O	3
Redirect status	3.98	O	3
Redirect forward information (national use)	3.99	O	3-?
Number portability forward information (network option)	3.101	O	1-?
End of optional parameters	3.20	O	1

NOTE 1 – This parameter may be repeated.

NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.

NOTE 3 – The message may contain one or more application transport parameters referring to different application context identifiers.

Table 33/Q.763

Message Type: Release

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Cause indicators	3.12	V	3-?
Redirection information (national use)	3.45	O	3-4
Redirection number (national use) (Note)	3.46	O	5-?
Access transport	3.3	O	3-?
Signalling point code (national use)	3.50	O	4
User-to-user information	3.61	O	3-131
Automatic congestion level	3.4	O	3
Network specific facility (national use)	3.36	O	4-?
Access delivery information	3.2	O	3
Parameter compatibility information	3.41	O	4-?
User-to-user indicators	3.60	O	3
Display information	3.77	O	3-?
Remote operations (national use)	3.48	O	8-?
HTR information	3.89	O	4-?
Redirect counter (national use)	3.97	O	3
Redirect backward information (national use)	3.100	O	3-?
End of optional parameters	3.20	O	1
NOTE – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 34/Q.763

Message Type: Release complete

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Cause indicators	3.12	O	5-6
End of optional parameters	3.20	O	1

Table 35/Q.763

Message Type: Subsequent address (Note 1)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Subsequent number (Note 2)	3.51	V	3-?
End of optional parameters	3.20	O	1
NOTE 1 – No new optional parameters are allowed in the subsequent address message. NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 36/Q.763

Message Type: User-to-user information

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
User-to-user information	3.61	V	2-130
Access transport	3.3	O	3-?
End of optional parameters	3.20	O	1
NOTE – Parameter compatibility information parameter may be received in the future version.			

Table 37/Q.763

Message Type: Forward transfer

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Call reference (national use)	3.8	O	7
End of optional parameters	3.20	O	1
NOTE – Parameter compatibility information parameter may be received in the future version.			

Table 38/Q.763

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 (national use)	3.8	O	7
End of optional parameters	3.20	O	1
NOTE – Parameter compatibility information parameter may be received in the future version.			

Table 39/Q.763

Message Type: Blocking
Blocking acknowledgement
Continuity check request
Loop back acknowledgement, (national use)
Overload, (national use)
Reset circuit
Unblocking
Unblocking acknowledgement
Unequipped circuit identification code, (national use)

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

Table 40/Q.763

Message Type: Circuit group blocking
Circuit group blocking acknowledgement
Circuit group unblocking
Circuit group unblocking acknowledgement

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Circuit group supervision message type	3.13	F	1
Range and status	3.43	V	3-34

Table 41/Q.763

Message Type: Circuit group reset
Circuit group query (national use)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Range and status (Note)	3.43	V	2
NOTE – The status subfield is not present.			

Table 42/Q.763

Message Type: Facility accepted
Facility request

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Facility indicator	3.22	F	1
User-to-user indicators	3.60	O	3
Call reference (national use)	3.8	O	7
Connection request	3.17	O	7-9
Parameter compatibility information	3.41	O	4-?
End of optional parameters	3.20	O	1

Table 43/Q.763

Message Type: Pass-along (national use)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message type Mandatory fixed part Mandatory variable part Optional part	Any message in Tables 21 to 50 which is relevant only at the "endpoint" of a connection as defined in clause 3/Q.764.		

Table 44/Q.763

Message Type: User part test
User part available

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Parameter compatibility information	3.41	O	4-?
End of optional parameters	3.20	O	1

Table 45/Q.763

Message Type: Facility

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Remote operations (national use)	3.48	O	8-?
Service activation	3.49	O	3-?
Call transfer number (Note)	3.64	O	4-?
Access transport	3.3	O	3-?
Generic notification indicator	3.25	O	3
Redirection number	3.46	O	4-?
Pivot routing indicators	3.85	O	3
Pivot status (national use)	3.92	O	3
Pivot counter	3.93	O	3
Pivot routing backward information	3.95	O	3-?
Redirect status (national use)	3.98	O	3-?
End of optional parameters	3.20	O	1
NOTE – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 46/Q.763

Message Type: Network resource management

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Echo control information	3.19	O	3
End of optional parameters	3.20	O	1

Table 47/Q.763

Message Type: Identification request

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
MCID request indicators	3.31	O	3
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
End of optional parameters	3.20	O	1

Table 48/Q.763

Message Type: Identification response

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
MCID response indicators	3.32	O	3
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Calling party number (Note 2)	3.10	O	4-?
Access transport	3.3	O	3-?
Generic number (Notes 1 and 2)	3.26	O	5-?
Charged party identification (national use)	3.75	O	3-?
End of optional parameters	3.20	O	1
NOTE 1 – This parameter may be repeated. NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 49/Q.763

Message Type: Segmentation

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Access transport	3.3	O	3-?
User-to-user information	3.61	O	3-131
Message compatibility information	3.33	O	3-?
Generic digits (national use) (Note 1)	3.24	O	4-?
Generic notification indicator (Note 1)	3.25	O	3
Generic number (Notes 1 and 2)	3.26	O	5-?
End of optional parameters	3.20	O	1
NOTE 1 – This parameter may be repeated. NOTE 2 – Peer-to-peer interworking with a pre-1997 version of ISUP may result in format errors and lead to the release of the call.			

Table 50/Q.763

Message Type: Loop prevention

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Call transfer reference	3.65	O	3
Loop prevention indicators	3.67	O	3
End of optional parameters	3.20	O	1

Table 51/Q.763

Message Type: Application transport

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Application transport parameter (Note)	3.82	O	5-?
End of optional parameters	3.20	O	1
NOTE – The message may contain one or more Application transport parameters (APP) referring to different Application Context Identifiers.			

Table 52/Q.763

Message Type: Pre-Release information

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Message compatibility information	3.33	O	3-?
Parameter compatibility information	3.41	O	4-?
Optional forward call indicators (Note 1)	3.38	O	3
Optional backward call indicators (Note 1)	3.37	O	3
Application transport parameter (Note 2)	3.82	O	5-?
End of optional parameters	3.20	O	1
NOTE 1 – These parameters are required to allow the message to be segmented using the ISUP simple segmentation procedure. They should be mutually exclusive. NOTE 2 – The message may contain one or more Application transport parameters (APP) referring to different Application Context Identifiers.			

Table 53/Q.763

Message Type: Subsequent directory number (national use) (Note)

Parameter	Reference (subclause)	Type	Length (octets)
Message type	2.1	F	1
Subsequent number	3.51	O	4-?
Message compatibility information	3.33	O	4-?
End of optional parameters	3.20	O	1
NOTE – No new optional parameters are allowed in the Subsequent Directory Number message.			

ANNEX A

Tables for handling of unrecognized parameter values

Reference: see 2.9.5.3/Q.764.

Type A exchanges

Unrecognized parameter values should be handled as indicated below in Type A exchanges (Type A exchanges as described in 2.9.5.2/Q.764). See also item iii) of 2.9.5.3/Q.764.

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.1 shows the reaction of a Type A exchange.

Table A.1 shows the normal actions unless specific procedural text in ITU-T Recommendations Q.764 and Q.73x-series states otherwise.

Table A.1/Q.763 – Type A exchanges

Reference (subclause)	Title	Action
3.4	*Automatic congestion level*	Discard parameter
3.5	*Backward call indicators*	
	Bits BA: Charge ind.	Default: 10 "charge"
	Bits DC: Called party status ind.	Default: 00 "no indication"
	Bits FE: Called party category ind.	Default: 00 "no indication"
	Bits HG: End-to-end method ind.	Default: 00 "no end-to-end method available"
	Bit J: End-to-end information ind. (national use)	Default: 0 "no end-to-end info available"
	Bit L: Holding ind. (national use)	Default: 0 "holding not requested"
	Bits PO: SCCP method ind.	Default: 00 "no indication"

Table A.1/Q.763 – Type A exchanges *(continued)*

Reference (subclause)	Title	Action
3.9	*Called party number*	
	Nature of address ind.	Send release with cause 28
	Numbering plan ind.	Send release with cause 28
	Spare	Ignore
	Address signals	Send release with cause 28 (Note)
	Filler	Default: 0000
3.10	*Calling party number*	
	Nature of address ind.	Discard parameter
	Number incomplete ind.	Discard parameter
	Numbering plan ind.	Discard parameter
	Presentation restricted ind.	Default: 01 "presentation restricted"
	Screening ind.	Discard parameter
	Address signals	No default
	Filler	Default: 0000
3.11	*Calling party's category*	Default: 0000 1010 "ordinary subscriber"
3.12	*Cause indicators*	
	Coding standard	Default: 00 "CCITT"
	Spare	Ignore
	Location	International: Default "international network." National: Default Beyond an Interwork. Point"
	Cause value	Default: "Unspecified within class xxx"
3.13	*Circuit group supervision message type indicator*	
	Bits BA: Type ind.	Discard message and send confusion with cause 110
	Bits H-C: Reserved	Ignore
3.14	*Circuit state indicator*	
	Maintenance blocking state	Discard message
	Spare	Ignore
3.16	*Connected number*	
	Nature of address ind.	Discard parameter
	Spare	Ignore
	Numbering plan ind.	Discard parameter
	Presentation restricted ind.	Default: 01 "presentation restricted"
	Screening ind.	Discard parameter
	Address signals	No Default
	Filler	Default: 0000
3.18	*Continuity indicators*	
	Bits H-B: Reserved	Ignore

Table A.1/Q.763 – Type A exchanges *(continued)*

Reference (subclause)	Title	Action
3.21	*Event information*	
	Bits G-A: Event ind.	Discard message
3.22	*Facility indicators*	Discard message
3.23	*Forward call indicators*	
	Bits CB: End-to-end method ind.	Default: 00 "no end-to-end method available"
	Bit E: End-to-end inform ind. (national use)	Default: 0 "no end-to-end info available"
	Bits HG: ISUP preference ind.	Send release with cause 111
	Bits KJ: SCCP method indicator	Default: 00 "no indication"
	Bit L: Spare	Ignore
	Bits P-M: Reserved (national use)	Ignore
3.28	*Information indicators (national use)*	
	Bits BA: CgPA response ind.	Default: "CgPA not included"
	Bit C: Holding ind.	Default: "Hold not provided"
	Bit D: MCID response ind.	Default: "MCID not provided"
	Bit E: Spare	Ignore
	Bit F: CgPC response ind.	Default: "CgPC not included"
	Bit G: Charge inform. resp. ind.	Default: "Charge inform. not included"
	Bit H: Solicited inf. ind.	Default: "Solicited"
	Bits P-I: Reserved	Ignore
3.29	*Information request ind. (national use)*	
	Bits P-M, L-F, C: Spare/Reserved	Ignore
3.35	*Nature of connection ind.*	
	Bits BA: Satellite ind.	Default: 10 "two satellites in the connection"
	Bits DC: Continuity ind.	See Type B exchange
	Bits H-F: Reserved	Ignore
3.37	*Optional backward call indicators*	
	Bits E-H: Reserved for national use	Ignore
3.38	*Optional forward call indicators*	
	Bits BA: Closed user group call ind.	Default: 00 "non-CUG call"
	Bits G-D: Spare	Ignore
3.39	*Original called number*	
	Nature of address ind.	Discard parameter
	Numbering plan ind.	Discard parameter
	Address present. restr. ind.	Default: "Presentation restricted"
	Address signals	No default
	Filler spare	Default: 0000 Ignore
3.43	*Range and status*	See 2.9.3/Q.764, 2.8.2/Q.764 and 2.8.3/Q.764

Table A.1/Q.763 – Type A exchanges *(concluded)*

Reference (subclause)	Title	Action
3.44	*Redirecting number*	
	Nature of address ind.	Discard parameter
	Numbering plan ind.	Discard parameter
	Presentation restricted ind.	Default: 01 "presentation restricted"
	Address signals	No Default
	Filler	Default: 0000
3.45	*Redirection information*	
	Bits C-A: Redirecting ind.	Default: "Call diversion, all redirection information presentation restricted"
	Bits H-E: Original redirection reason	Default: "unknown (not available)"
	Bits K-I: Redirection counter	Default: "101"
	Bits P-N: Redirecting reason	Default: "unknown/not available"
	Bits L, D: Spare/Reserved	Ignore
3.46	*Redirection number*	
	Nature of address indicator	discard parameter
	Numbering plan indicator	discard parameter
	Address signals	no default
	Filler	default: 0000
3.51	*Subsequent number*	
	Bits 1-7: Spare	Ignore
	Address signal	Send release with cause 28 (Note)
	Filler	Default: 0000
3.52	*Suspend/resume indicators*	
	Bits H-B: Reserved	Ignore
3.53	*Transit network selection*	
	Type of network identification	Release with cause 91
	Network identification plan	Release with cause 91
	Network Identification	Release with cause 91
3.54	*Transmission medium requirement*	Send release with cause 65
3.57	*User service information*	No default
3.60	User-to-user indicators	
	Bits CB: Service 1	Default: 00 "no information"
	Bits ED: Service 2	Default: 00 "no information"
	Bits GF: Service 3	Default: 00 "no information"
NOTE – Evaluated as far as needed for routing.		

Type B exchanges

Table A.2 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.

Table A.2 shows the normal actions unless specific procedural text in ITU-T Recommendations Q.764 and Q.73x-series state otherwise.

Table A.2/Q.763 – Type B exchanges

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

Table A.2/Q.763 – Type B exchanges *(continued)*

Reference (subclause)	Title	Action
3.13	*Circuit group supervision message type indicator*	
	Bits BA: Type ind.	Discard message and send confusion with cause 110
	Bits H-C: Reserved	Ignore
3.14	*Circuit state indicator (national use)*	
	Maintenance blocking state	Discard message
	Spare	Ignore
3.16	*Connected number*	
	Nature of address ind.	No default
	Spare	Ignore
	Numbering plan ind.	No default
	Presentation restric. ind.	No default
	Screening indicator	No default
	Address signals	No default
	Filler	Ignore
3.18	*Continuity indicators*	
	Bits H-B: Spare	Ignore
3.21	*Event information*	
	Bits G-A: Event ind.	No default
3.22	*Facility indicator*	Discard message
3.23	*Forward call indicators*	
	Bits CB: End-to-end method ind.	No default
	Bit E: End-to-end information ind. (national use)	No default
	Bits HG: ISUP preference ind.	Send release with cause 111
	Bits KJ: SCCP method ind.	No default
	Bit L: Spare	Ignore
	Bits P-M: Spare (national use)	Ignore
3.28	*Information indicators (national use)*	
	Bits BA: Calling party address resp. ind.	No default
	Bit C: Hold provided ind.	No default
	Bit F: Calling party's category resp. ind.	No default
	Bit G: Charge inform. resp. ind.	No default
	Bit H: Solicited inform. ind.	Default: 0 "solicited"
	Bits L-I, E, D: Spare	Ignore
3.29	*Inform. request indicators (national use)*	
	Bits P-M, L-F, C: Spare/reserved	Ignore

Table A.2/Q.763 – Type B exchanges *(continued)*

Reference (subclause)	Title	Action
3.35	*Nature of connection indicators*	
	Bits BA: Satellite ind.	Default: 10 "two satellites in the connection"
	Bits DC: Continuity ind.	Default: 00 "continuity check not required" unless required on the outgoing circuit
	Bits H-F: Spare	Ignore
3.37	*Optional backward call indicators*	
	Bits H-E: Reserved (national use)	Ignore
3.38	*Optional forward call indicators*	
	Bits BA: Closed user group call ind.	No default
	Bits O-G: Spare	Ignore
3.39	*Original called number*	
	Nature of address indicator	No default
	Numbering plan indicator	No default
	Presentation restric. indicator	No default
	Address signals	No default
	Filler	Ignore
	Spare	Ignore
3.43	*Range and status*	See 2.9.3/Q.764 and 2.8.2/Q.764
3.44	*Redirecting number*	
	Nature of address ind.	No default
	Numbering plan ind.	No default
	Presentation restricted ind.	No default
	Address signals	No default
	Filler	Ignore
3.45	*Redirection information*	
	Bits C-A: Redirecting indicator	No default
	Bits H-E: Original redirection reason	No default
	Bits K-I: Redirection counter	No default
	Bits P-N: Redirecting reason	No default
	Bits L, D: Spare	Ignore
3.46	*Redirection number*	
	Nature of address indicator	No default
	Numbering plan indicator	No default
	Address signals	No default
	Filler	Ignore
3.51	*Subsequent number*	
	Bits 1-7: Spare	Ignore
	Address signal	Send release with cause 28 (Note)
	Filler	Default: 0000

Table A.2/Q.763 – Type B exchanges *(concluded)*

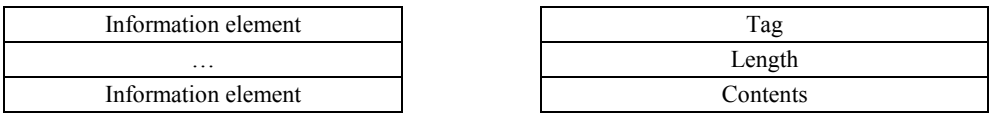
Reference (subclause)	Title	Action
3.52	*Suspend/resume indicators (national use)* Bits H-B: Spare	 Ignore
3.53	*Transit network selection* Type of network identification Network identification plan Network identification	 Release with cause 91 Release with cause 91 Release with cause 91
3.54	*Transmission medium requirement*	Send release with cause 65
3.57	*User service information*	No default
3.60	*User-to-user indicators* Bit A: Type Bits CB: Service 1 Bits ED: Service 2 Bits GF: Service 3	 Default: 00 "no information" Default: 00 "no information" Default: 00 "no information"
NOTE – Evaluated as far as needed for routing.		

ANNEX B

General description of component encoding rules

B.1 General components structure

Each information element within a component has the same structure. An information element consists of three fields, which always appear in the following order. The Tag distinguishes one type from another and governs the interpretation of the Contents. The Length specifies the length of the Contents. The Contents is the substance of the element, containing the primary information the element is intended to convey. Figure B.1 shows an overview of a component and an information element.



a) Component **b) Information element**

Figure B.1/Q.763 – Structure of component and information element

Each field is coded using one or more octets. Octets are labelled as shown in Figure B.2. The first octet is the first transmitted. Bits in an octet are labelled as shown in Figure B.3, with bit A the least significant and the first transmitted.

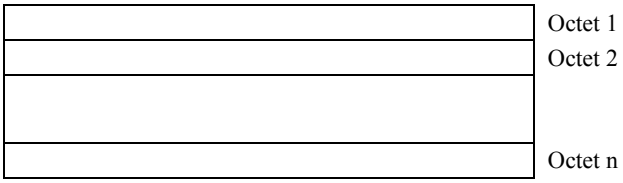


Figure B.2/Q.763 – Octet labelling scheme

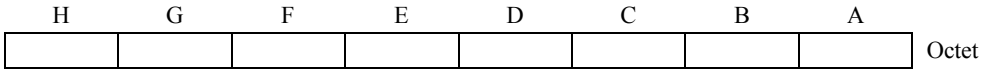
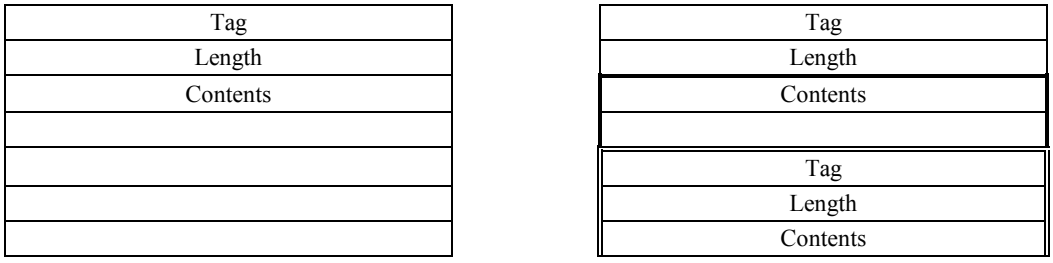


Figure B.3/Q.763 – Bit labelling scheme

The contents of each element is either one value (Primitive) or one or more information element (Constructor), as shown in Figure B.4.

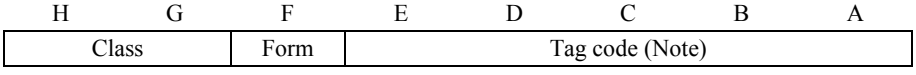


a) Primitive **b) Constructor**

Figure B.4/Q.763 – Types of contents

B.2 Tags

An information element is first interpreted according to its position within the syntax of the message. The Tag distinguishes one information element from another and governs the interpretation of the Contents. It is one or more octets in length. The Tag is composed of "Class", "Form" and "Tag code", as shown in Figure B.5.



NOTE – The tag code may be extended to the following octet(s) as discussed in B.2.3.

Figure B.5/Q.763 – Format of Tag

B.2.1 Tag class

All Tags use the two most significant bits (H and G) to indicate the Tag Class. These bits are coded as shown in Table B.1.

Table B.1/Q.763 – Coding of tag class

Class	Coding (HG)
Universal	00
Application-wide	01
Context-specific	10
Private use	11

The universal class is used for Tags that are exclusively standardized in Recommendation X.690 and are application independent types. Universal Tags may be used anywhere a universal information element type is used. The universal class applies across all ITU-T Recommendations, i.e. across Signalling System No. 7 ASEs, X.400 MHS, etc.

The Application-wide class is used for information elements that are standardized across all applications (ASEs) using Signalling System No. 7.

The Context-specific class is used for information elements that are specified within the context of the next higher construction and take into account the sequence of other information elements within the same construction. This class may be used for tags in a construction, and the tags may be re-used in any other construction.

The Private Use class is reserved for information elements specific to a nation, a network or a private user. Such information elements are beyond the scope of this Recommendation.

B.2.2 Form of the information element

Bit F is used to indicate whether the element is "Primitive" or "Constructor", as is shown in Table B.2. A primitive element is one whose structure is atomic (i.e. one value only). A constructor element is one whose content is one or more information elements which may themselves be constructor elements.

Both forms of elements are shown in Table B.2.

Table B.2/Q.763 – Coding of element form

Element Form	Coding (F)
Primitive	0
Constructor	1

B.2.3 Tag code

Bits A to E of the first octet of the Tag plus any extension octets represent a Tag code that distinguishes one element type from another of the same class. Tag codes in the range 00000 to 11110 (0 to 30 decimal) are provided in one octet.

The extension mechanism is to code bits A to E of the first octet as 11111. Bit H of the following octet serves as an extension indicator. If bit H of the extension octet is set to 0, then no further octets for this tag are used. If bit H is set to 1, the following octet is also used for extension of the Tag code. The resultant Tag consists of bits A to G of each extension octet, with bit G of the first extension octet being most significant and bit A of the last extension octet being least significant. Tag code 31 is encoded as 0011111 in bits G to A of a single extension octet. Higher tag codes continue from this point using the minimum possible number of extension octets.

Figure B.6 shows the detailed format of the Tag code.

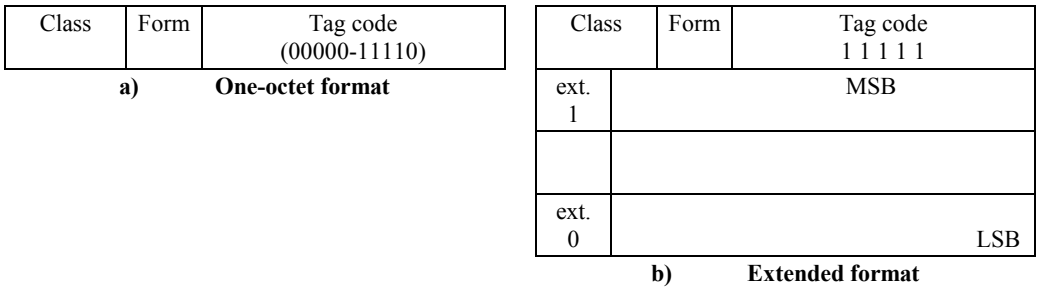


Figure B.6/Q.763 – Format of the Tag Code

B.3 Length of the contents

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 octets.

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.

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.

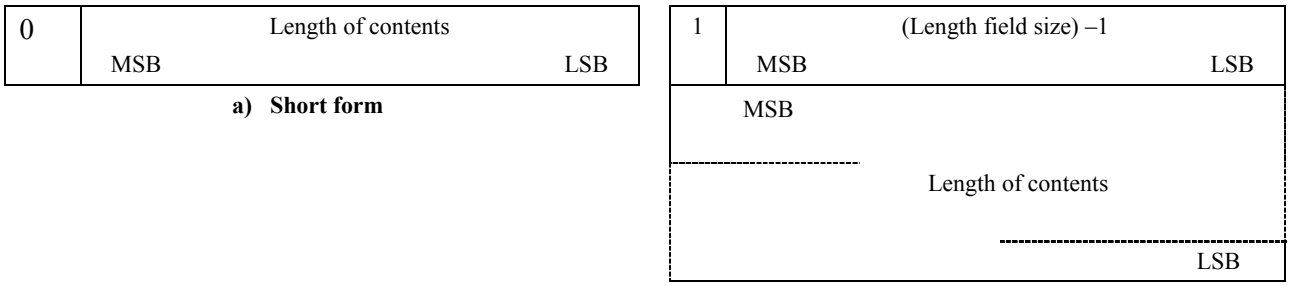
The indefinite form is one octet long and may (but need not) be used in place of the short or long form, whenever the element is a constructor. It has the value 1000 0000. When this form is employed, a special End-of-Contents (EOC) indicator terminates the contents.

There is no notation for the end-of-contents indicator. Although considered part of the contents syntactically, the end-of-contents indicator has no semantic significance.

The representation for the end-of-contents indicator is an element whose class is universal, whose form is primitive, whose ID code has the value 0, and whose contents is unused and absent:

EOC	Length	Contents
00 (hex)	00 (hex)	Absent

Figure B.7 shows the formats of the length field described above. The maximum value that may be encoded is constrained by the network message size limitations in the connectionless case.



a) Short form

b) Long form

Constructor Element tag
L = 1000 0000
Tag Length (Note) Contents
: : :
Tag Length (Note) Contents
EOC Tag (0000 0000)
EOC Length (0000 0000)

c) Indefinite form

NOTE – The length may take any of three forms: short, long and indefinite.

Figure B.7/Q.763 – Format of length field

B.4 Contents

The contents are the substance of the element and contains the information the element is intended to convey. Its length is variable, but always an integral number of octets. The contents are interpreted in a type-dependent manner, i.e. according to the tag value.

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