

ISUP ITU CHINESE 1996

STATEMENT OF COMPLIANCE

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Contents

1	General	1
1.1	Introduction	1
1.2	Concept	1
2	Compliance Lists	3
2.1	Integrated Services Digital Network (ISDN) User Part, ITU - 1993	3
2.1.1	Q.761, Functional Description of the Integrated Services Digital Network (ISDN) User Part	3
2.1.2	Q.762, General Function of Messages and Signals	7
2.1.3	Q.763, Formats and Codes	21
2.1.4	Q.764, Signalling Procedures	27
2.1.5	Q.730 ISDN Supplementary Services	41
2.2	Monitoring and Measurements for SS7 Networks, ITU Q.752 - 1993	44
3	Notes and Comments	53
	Reference List	57





1 General

1.1 Introduction

This document describes how Ericsson SS7 ISUP ITU complies with the Chinese 1996 recommendations specified in Reference [7]. For reasons of clarity, compliance with the ITU-T (03/93) recommendations detailed in references Reference [1] - Reference [6] (upon which specification Reference [7] is based) is also described.

1.2 Concept

The terms that will be used are:

C	EIN module complies with the specified paragraph in the standard.
N	EIN module does not comply with the specified paragraph in the standard.
P	EIN module complies partly with the specified paragraph in the standard. Specify in a note what in the module that does comply and what that does not.
-	There is nothing to implement in the referred paragraph (used in column "C").





2 Compliance Lists

2.1 Integrated Services Digital Network (ISDN) User Part, ITU - 1993

2.1.1 Q.761, Functional Description of the Integrated Services Digital Network (ISDN) User Part

Table 1

References	C	N	P	Comments
1 General			X	Note 1 Page 53
2 Introduction to ISUP signalling procedures				Title
2.1 Address signalling			X	Note 2 Page 53
2.2 Basic procedures	X			
2.3 Signalling methods			X	Note 3 Page 53
2.4 Interworking				Title
2.4.1 ISUP interworking	X			
2.4.2 Interworking with other signalling systems or user parts	-			
3 Capabilities supported by the ISUP (Table 1)				Title
Basic call				Title
Speech/3.1 kHz audio	X			
64 kbits/s unrestricted	X			

Table 1

References	C	N	P	Comments
Multirate connection types (\> 64 kbits/s)		X		
Signalling procedures for connection type allowing fallback capability	X			Note 4 Page 53
Compatibility procedure	X			Note 5 Page 53
Confusion procedure	X			
Simple segment ation	X			
User part availability control	X			
Propagation delay determination procedure	X			Note 4 Page 53
Dynamic echo control procedure	X			Note 4 Page 53
Tones and announcements	X			Note 4 Page 53
MTP pause and resume	X			
Access delivery information	-			Note 4 Page 53
Transportation of User teleservice information	X			Note 4 Page 53
Generic signalling procedures for supplementary services				Title
End-to-end signalling - Pass along method	-			



Table 1

References	C	N	P	Comments
End-to-end signalling - SCCP Connection Oriented	-			
End-to-end signalling - SCCP Connectionless	-			
Generic number transfer	X			Note 4 Page 53
Generic digit transfer	X			Note 4 Page 53
Generic notification procedure	X			Note 4 Page 53
Simple service activation procedure	-			Note 4 Page 53
Remote operations procedure	-			Note 4 Page 53
Network specific procedures	X			Note 4 Page 53
Supplementary services				Title
DDI	X			Note 4 Page 53
MSN	X			Note 4 Page 53
CLIP/CLIR	X			Note 4 Page 53
COLP/COLR	X			Note 4 Page 53
MCID	X			Note 4 Page 53
Sub-addressing	X			Note 4 Page 53
Terminal portability	X			Note 4 Page 53
Call forwarding	X			Note 4 Page 53
Call deflection	X			Note 4 Page 53
Call waiting	X			Note 4 Page 53
Call hold	X			Note 4 Page 53
Conference calling	X			Note 4 Page 53

Table 1

References	C	N	P	Comments
Three party service	X			Note 4 Page 53
CUG	X			Note 4 Page 53
MLPP	-			Note 4 Page 53
UUS, Service 1 (implicit)	X			Note 4 Page 53
UUS, Service 1 (explicit)	X			Note 4 Page 53
UUS, Service 2	X			Note 4 Page 53
UUS, Service 3	X			Note 4 Page 53 Note 6 Page 53
3.1 Internation ally applicable class	X			
3.2 National use class	X			
4 Services assumed from the MTP				Title
4.1 General	X			
4.2 Description of primitives	X			
4.2.1 Transfer	X			
4.2.2 Pause	X			
4.2.3 Resume	X			
4.2.4 Status	X			
5 End-to-end signalling	-			Title
5.1 General	-			
5.2 SCCP method of end-to-en signalling	-			



Table 1

References	C	N	P	Comments
5.3 Pass-along method of end-to-end signalling	-			
6 Future enhancements and Compatibility procedure	X			
6.1 Version compatibility	X			Note 3 Page 53
6.2 Additional coding guidelines for compatibility of ISDN User Parts				Title
6.2.1 Messages	X			
6.2.2 Parameters	X			Note 5 Page 53

2.1.2 Q.762, General Function of Messages and Signals

Table 2

Reference	C	N	P	Comments
General	-			
1 Signalling messages			X	
1.1 Address complete message (ACM)	X			
1.2 Answer message (ANM)	X			
1.3 Blocking message (BLO)	X			
1.4 Blocking acknowledgment message (BLA)	X			

Table 2

Reference	C	N	P	Comments
1.5 Call modification completed message (CMC)	-			Note 7 Page 53
1.6 Call modification reject message (CMRJ)	-			Note 7 Page 53
1.7 Call modification request message (CMR)	-			Note 7 Page 53
1.8 Call progress message (CPG)	X			
1.9 Charge information message (CRG)	-			Note 4 Page 53
1.10 Circuit group blocking message (CGB)	X			
1.11 Circuit group blocking acknowledgement message (CGBA)	X			
1.12 Circuit group reset message (GRS)	X			
1.13 Circuit group reset acknowledgement message (GRA)	X			
1.14 Circuit group unblocking message (CGU)	X			
1.15 Circuit group unblocking acknowledgement message (CGUA)	X			
1.16 Circuit group query message (CQM) (national use)			X	Note 8 Page 53



Table 2

Reference	C	N	P	Comments
1.17 Circuit group query response message (CQR) (national use)			X	Note 8 Page 53
1.18 Confusion message (CFN)	X			
1.19 Connect message (CON)	X			
1.20 Continuity message (COT)	X			
1.21 Continuity check request message (CCR)	X			
1.22 Delayed release message (DRS) (national use)	-			Note 9 Page 53
1.23 Facility accepted message (FAA)	X			Note 4 Page 53 Note 41 Page 55
1.24 Facility message (FAC) (national use)	X			Note 4 Page 53 Note 11 Page 53
1.25 Facility reject message (FRJ)	X			Note 4 Page 53 Note 41 Page 55
1.26 Facility request message (FAR)	X			Note 4 Page 53 Note 12 Page 53
1.27 Forward transfer message (FOT)	-			Note 10 Page 53
1.28 Identification request message (IDR)	X			Note 4 Page 53 Note 11 Page 53
1.29 Identification response message (IRS)	X			Note 4 Page 53 Note 11 Page 53

Table 2

Reference	C	N	P	Comments
1.30 Information message (INF) (national use)	X			Note 13 Page 53
1.31 Information request message (INR) (national use)	X			Note 13 Page 53
1.32 Initial address message (IAM)	-			
1.33 Loop back acknowledgment message (LPA) (national use)	-			
1.34 Network resource management message (NRM)	X			Note 4 Page 53 Note 11 Page 53
1.35 Overload message (OLM) (national use)	-			Note 14 Page 53
1.36 Pass-along message (PAM)	-			
1.37 Release message (REL)	X			
1.38 Release complete message (RLC)	X			
1.39 Reset circuit message (RSC)	X			
1.40 Resume message (RES)	X			
1.41 Segmentation message (SGM)	X			
1.42 Subsequent address message (SAM)			X	Note 14 Page 53
1.43 Suspend message (SUS)	X			



Table 2

Reference	C	N	P	Comments
1.44 Unblocking message (UBL)	X			
1.45 Unblocking acknowledgement message (UBA)	X			
1.46 Unequipped circuit identification code message (UCIC) (national use)	-			
1.47 User part available message (UPA)	X			
1.48 User part test message (UPT)	X			
1.49 User-to-user information message (USR)	X			Note 4 Page 53 Note 6 Page 53
1.50 Additional message				Title
1.50.1 Operator Message	X			As GF0001-9001 4.4.1.18
1.50.2 Meter Pulse Message	X			As GF001-9001 4.4.1.17
1.50.3 Calling Party Clear	X			As GF001-9001 4.3.9
2 Signalling information			X	Note 15 Page 54
2.1 Access transport	X			
2.2 Access delivery indicator	X			
2.3 Address presentation restricted indicator	X			
2.4 Address signal	X			

Table 2

Reference	C	N	P	Comments
2.5 Automatic congestion level	X			
2.6 Binary code	X			
2.7 Call diversion information	X			
2.8 Call diversion may occur indicator	X			
2.9 Call history information	X			
2.10 Call identity	X			
2.11 Call reference	X			
2.12 Called party number	X			
2.13 Called party\qs category indicator	X			
2.14 Called party\qs status indicator	X			
2.15 Calling party number	X			
2.16 Calling party address request indicator	X			
2.17 Calling party address response indicator	X			
2.18 Calling party number incomplete indicator	X			
2.19 Calling party\qs category	X			



Table 2

Reference	C	N	P	Comments
2.20 Calling party\qs category request indicator	X			
2.21 Calling party\qs category response indicator	X			
2.22 Cause value	X			
2.23 Charge indicator	X			
2.24 Charge information request indicator (national use)		X		Note 13 Page 53
2.25 Charge information response indicator (national use)			X	Note 13 Page 53
2.26 Circuit group supervision message type indicator	X			
2.27 Circuit identification code	X			
2.28 Circuit state indicator	X			Note 8 Page 53
2.29 Closed user group call indicator	X			
2.30 Closed user group interlock code	X			
2.31 Coding standard	X			
2.32 Component type	X			

Table 2

Reference	C	N	P	Comments
2.33 Connected line identity request indicator	X			
2.34 Connected number	X			
2.35 Connection request	X			
2.36 Continuity check indicator	X			
2.37 Continuity indicator	X			
2.38 Credit	X			
2.39 Diagnostic	X			
2.40 Discard message indicator	X			
2.41 Discard parameter indicator	X			
2.42 Echo control device indicator	X			
2.43 Encoding scheme	X			
2.44 End of optional parameters	X			
2.45 End-to-end information indicator	X			
2.46 End-to-end method indicator	X			
2.47 Error code	X			
2.48 Event indicator	X			
2.49 Event presentation restricted indicator	X			



Table 2

Reference	C	N	P	Comments
2.50 Extension indicator	X			
2.51 Facility indicator	X			
2.52 Generic digits (national use)	X			
2.53 Generic notification	X			
2.54 Generic number	X			
2.55 Generic reference (reserved)	X			
2.56 Feature code	X			
2.57 Filler	X			
2.58 Holding indicator (national use)		X		Note 13 Page 53
2.59 Hold provided indicator (national use)			X	Note 13 Page 53
2.60 Hop counter	X			
2.61 In-band information indicator	X			
2.62 Incoming half echo control device request indicator	X			
2.63 Incoming half echo control device response indicator	X			
2.64 Instruction indicator	X			
2.65 Internal network number	X			

Table 2

Reference	C	N	P	Comments
2.66 Interworking indicator	X			
2.67 Invoke ID (national use)	X			
2.68 ISDN access indicator	X			
2.69 ISDN user part indicator	X			
2.70 ISDN user part preference indicator	X			
2.71 Length of network identification (national use)	X			
2.72 Length of reference indicator (reserved)	X			
2.73 Linked ID (national use)	X			
2.74 Local reference	X			
2.75 Location	X			
2.76 Location number	X			
2.77 Look for busy (LFB)	X			
2.78 Malicious call identification response indicator (national use)	X			
2.79 Message compatibility information parameter	X			
2.80 MCID request indicator	X			



Table 2

Reference	C	N	P	Comments
2.81 MCID response indicator	X			
2.82 MLPP service domain	X			
2.83 MLPP user indicator	X			
2.84 Modification indicator				
2.85 More instructions indicator	X			
2.86 National/international call indicator	X			
2.87 Nature of address indicator	X			
2.88 Network discard indicator	X			
2.89 Network identification plan (national use)	X			
2.90 Network identification (national use)	X			
2.91 Network identity (national use)	X			
2.92 Network specific facilities (national use)	X			
2.93 Notification indicator	X			
2.94 Notification subscription option	X			
2.95 Number incomplete indicator	X			

Table 2

Reference	C	N	P	Comments
2.96 Numbering plan indicator	X			
2.97 Number qualifier indicator	X			
2.98 Odd/even indicator	X			
2.99 Operation code	X			
2.100 Original called number	X			
2.101 Original redirection reason	X			
2.102 Origination ISC point code	X			
2.103 Outgoing half echo control device request indicator	X			
2.104 Outgoing half echo control device response indicator	X			
2.105 Parameter compatibility information parameter	X			
2.106 Pass on not possible indicator	X			
2.107 Point code	X			
2.108 Precedence level	X			
2.109 Problem code	X			
2.110 Propagation delay counter	X			
2.111 Protocol class	X			



Table 2

Reference	C	N	P	Comments
2.112 Protocol profile	X			
2.113 Protocol control indicator	X			
2.114 Range	X			
2.115 Recommendation indicator	X			
2.116 Redirecting indicator	X			
2.117 Redirecting number	X			
2.118 Redirecting reason	X			
2.119 Redirection counter	X			
2.120 Redirection indicator	X			
2.121 Redirection information	X			
2.122 Redirection number	X			
2.123 Redirection number restriction indicator	X			
2.124 Redirection reason	X			
2.125 Reference number octet (reserved)	X			
2.126 Reference qualifier indicator (reserved)	X			
2.127 Release call indicator	X			
2.128 Remote operations (national use)	X			

Table 2

Reference	C	N	P	Comments
2.129 Routing label	X			As GF0001-9001 3.4.1
2.130 Satellite indicator	X			
2.131 SCCP method indicator	X			
2.132 Screening indicator	X			
2.133 Send notification indicator	X			
2.134 Sequence (national use)	X			
2.135 Service activation parameter (national use)	X			
2.136 Set (national use)	X			
2.137 Signalling point code (national use)	X			
2.138 Simple segmentation indicator	X			
2.139 Solicited information indicator	X			
2.140 Status	X			
2.141 Susp end/Resume indicator	X			
2.142 Temporary trunk blocking after release (national use)		X		
2.143 Transit at intermediate exchange indicator	X			



Table 2

Reference	C	N	P	Comments
2.144 Transit network selection (national use)	X			
2.145 Transmission medium requirement	X			
2.146 Transmission medium requirement prime	X			
2.147 Transmission medium used	X			
2.148 Type indicator	X			
2.149 Type of digits (national use)	X			
2.150 Type of network identification (national use)	X			
2.151 User service information	X			
2.152 User service information prime	X			
2.153 User teleservice information	X			
2.154 User-to-user indicators	X			
2.155 User-to-user information	X			

2.1.3 Q.763, Formats and Codes

Table 3

References	C	N	P	Comments
1 General	X			

Table 3

References	C	N	P	Comments
1.1 Routing label	X			PC code is 24 bits
1.2 Circuit identification code	X			
1.3 Message type code	X			
1.4 Formatting principles	X			
1.5 Mandatory fixed part	X			
1.6 Mandatory variable part	X			
1.7 Optional part	X			
1.8 End of optional parameters octet	X			
1.9 Order of transmission	X			
1.10 Coding of spare bits	X			
1.11 National message types and parameters			X	Note 16 Page 54
2 Parameter formats and codes				Title
2.1 Message type codes			X	Note 7 Page 53 Note 8 Page 53 Note 11 Page 53 Note 36 Page 55
2.2 Coding of the length indicator	X			
2.3 Coding of the pointers	X			
3 ISDN User Part parameters				Title



Table 3

References	C	N	P	Comments
3.1 Parameter names			X	Note 15 Page 54
3.2 Access delivery information (open)	-			
3.3 Access transport	X			
3.4 Automatic congestion level	X			
3.5 Backward call indicators	X			
3.6 Call diversion information	X			
3.7 Call history information	X			
3.8 Call reference	-			
3.9 Called party number	X			1111 spare
3.10 Calling party number	X			1111 ST
3.11 Calling party\qs category	X			
3.12 Cause indicators	X			
3.13 Circuit group supervision message type indicator	X			
3.14 Circuit state indicator	X			
3.15 Closed user group interlock code	X			
3.16 Connected number	X			
3.17 Connection request (open)	-			

Table 3

References	C	N	P	Comments
3.18 Continuity indicators	X			
3.19 Echo control information	X			
3.20 End of optional parameters indicator	X			
3.21 Event information	X			
3.22 Facility indicator	X			
3.23 Forward call indicator	X			
3.24 Generic digits	X			
3.25 Generic notification indicator	X			
3.26 Generic number	X			
3.27 Generic reference (reserved)	-			
3.28 Information indicators	X			
3.29 Information request indicators	X			
3.30 Location number	X			
3.31 MCID request indicators	X			
3.32 MCID response indicators	X			
3.33 Message compatibility information	X			



Table 3

References	C	N	P	Comments
3.34 MLPP precedence	-			
3.35 Nature of connection indicators	X			
3.36 Network specific facility	X			
3.37 Optional backward call indicators	X			
3.38 Optional forward call indicators	X			
3.39 Original called number	X			
3.40 Origination ISC point code	X			Only used in international gateway exchange
3.41 Parameter compatibility information	X			
3.42 Propagation delay counter	X			
3.43 Range and status	X			
3.44 Redirecting number	X			
3.45 Redirection information	X			
3.46 Redirection number	X			
3.47 Redirection number restriction parameter	X			
3.48 Remote operations	-			
3.49 Service activation	-			

Table 3

References	C	N	P	Comments
3.50 Signalling point code	X			PC is 24 bits
3.51 Subsequent number	X			
3.52 Suspend/re sume indicators	X			
3.53 Transit network selection	X			
3.54 Transmission medium requirement	X			
3.55 Transmission medium requirement prime	X			
3.56 Transmission medium used	X			
3.57 User service information	X			
3.58 User service information prime	X			
3.59 User teleservice information	X			
3.60 User-to-user indicators	X			
3.61 User-to-user information	X			
3.62 Charge information	X			As GF001-9001 4.3.13.1 coding= 11111110
4 ISDN user part messages and codes			X	Note 7 Page 53 Note 8 Page 53 Note 11 Page 53
Annex A				Title
Interpretation of spare codes	X			Note 15 Page 54



Table 3

References	C	N	P	Comments
Tables for handling of unrecognized parameter values			X	Note 15 Page 54
Type A exchanges	X			
Type B exchanges		X		
Annex B				Title
General description of component encoding rules	X			Note 4 Page 53

2.1.4 Q.764, Signalling Procedures

Table 4

References	C	N	P	N relev	Comments
1 General	X				
2 Basic call control and signalling procedures			X		Note 2 Page 53 Note 17 Page 54 Note 18 Page 54 Note 37 Page 55 Note 38 Page 55 Note 39 Page 55 Note 40 Page 55
2.1 Successful call set-up	X				

Table 4

References	C	N	P	N relev	Comments
2.1.1 Forward address signalling - En bloc operation	X				
2.1.1.1 Actions required at the originating exchange	X				
2.1.1.2 Actions required at an intermediate national exchange		X			
2.1.1.3 Actions required at an outgoing international exchange		X			
2.1.1.4 Actions required at an intermediate international exchange		X			
2.1.1.5 Actions required at an incoming international exchange		X			
2.1.1.6 Actions required at the destination exchange	X				
2.1.1.7 Called party number for operator calls		X			



Table 4

References	C	N	P	N relev	Comments
2.1.1.7.1 International transit operat or call		X			
2.1.1.7.2 International terminal operator call		X			
2.1.1.8 Called party number for calls to testing and measuring devices	X				
2.1.2 Forward address signalling - Overlap operation			X		Note 2 Page 53 Note 18 Page 54
2.1.2.1 Actions requ ired at the originating exchange		X			
2.1.2.2 Actions required at an intermediate national exchange		X			
2.1.2.3 Action s required at an outgoing international exchange		X			
2.1.2.4 Actions required at an intermediate international exchange		X			

Table 4

References	C	N	P	N relev	Comments
2.1.2.5 Actions required at an incoming international exchange		X			
2.1.2.6 Actions required at the destination exchange	X				
2.1.2.7 Called party number for operator calls		X			
2.1.2.8 Called party number for calls to testing and measuring devices	X				
2.1.3 Calling party number	X				
2.1.4 Address complete message or connect message			X		Note 18 Page 54
2.1.4.1 Actions required at the destination exchange	X				
2.1.4.2 Actions required at an intermediate national exchange		X			
2.1.4.3 Actions required at an outgoing international exchange		X			



Table 4

References	C	N	P	N relev	Comments
2.1.4.4 Actions required at an intermediate international exchange		X			
2.1.4.5 Actions required at an incoming international exchange		X			
2.1.4.6 Actions required at the originating exchange	X				
2.1.4.7 Through-connection and awaiting answer indication at the destination exchange	X				Note 19 Page 54
2.1.4.8 Address complete message with other information	X				
2.1.4.9 Return of address complete message in interworking situations		X			
2.1.4.10 Access delivery indication	X				Note 19 Page 54
2.1.5 Call progress (basic call)			X		Note 18 Page 54

Table 4

References	C	N	P	N relev	Comments
2.1.5.1 Actions required at the destination exchange	X				
2.1.5.2 Actions required at an intermediate national, outgoing international, intermediate international and incoming international exchange		X			
2.1.5.3 Actions required at the originating exchange	X				
2.1.6 Information messages			X		Note 13 Page 53 Note 20 Page 54
2.1.6.1 Requesting information	X				
2.1.6.2 Sending solicited information	X				
2.1.6.4 Receiving solicited information message	X				
2.1.7 Answer message			X		Note 18 Page 54



Table 4

References	C	N	P	N relev	Comments
2.1.7.1 Actions required at the destination exchange	X				
2.1.7.2 Actions required at an intermediate national exchange		X			
2.1.7.3 Actions required at an outgoing international exchange		X			
2.1.7.4 Actions required at an intermediate international exchange		X			
2.1.7.5 Actions required at an incoming international exchange		X			
2.1.7.6 Actions required at the originating exchange	X				
2.1.7.7 Return of answer from automatic terminals	X				
2.1.7.5 Answer with charging information	X				
2.1.8 Continuity-check	X				

Table 4

References	C	N	P	N relev	Comments
2.1.9 Charging			X		Note 4 Page 53
2.1.10 Forward transfer message		X			
2.1.11 Transit network selection (national use)			X		Note 4 Page 53
2.1.12 Simple segmentation	X				
2.1.12.1 Interworking with Q.767 and Blue Book (1988 version) ISDN-User Parts	X				
2.2 Unsuccessful call set-up			X		Note 18 Page 54
2.2.1 Actions at exchange initiating a release message	X				
2.2.2 Actions at intermediate exchange		X			
2.2.3 Actions at the controlling exchange (i.e. the exchange controlling the call)	X				
2.2.4 Tones and announcements	X				Note 4 Page 53
2.2.5 Address incomplete	X				



Table 4

References	C	N	P	N relev	Comments
2.3 Normal call release			X		Note 18 Page 54
2.3.1 Release initiated by a calling party	X				
2.3.2 Release initiated by a called party	X				
2.3.3 Release initiated by the network	X				
2.3.4 Storage and release of IAM information	X				
2.4 Suspend, resume			X		Note 18 Page 54
2.4.1 Suspend	X				
2.4.2 Resume	X				
2.4.3 Expiration of timer (T6) or timer (T38)	X				
2.5 Signalling procedures for connection type allowing fallback			X		Note 4 Page 53
2.5.1 - 2.5.4 (omitted)			X		
2.6 Propagation delay determination procedure			X		Note 4 Page 53
2.6.1 (omitted)			X		
2.7 Echo control procedure			X		Note 4 Page 53

Table 4

References	C	N	P	N relev	Comments
2.7.1 - 2.7.3 (omitted)			X		
2.8 Network features	X				
2.8.1 Automatic repeat attempt	X				
2.8.2 Blocking and unblocking of circuits and circuit groups	X				
2.8.2.1 Other actions on receipt of a blocking message	X				
2.8.2.2 Circuit group blocking and unblocking messages	X				
2.8.2.3 Abnormal blocking and circuit group blocking procedures	X				
2.8.3 Circuit group query (national use)					Title
2.8.3.1 General			X		Note 8 Page 53
2.8.3.2 Interpretation of circuit states			X		Note 8 Page 53
2.9 Abnormal conditions			X		
2.9.1 Dual seizure	X				



Table 4

References	C	N	P	N relev	Comments
2.9.1.1 Unguarded interval	X				
2.9.1.2 Detection of dual seizure	X				
2.9.1.3 Preventive action			X		Note 21 Page 54
2.9.1.4 Action to be taken on detection of dual seizures	X				
2.9.2 Transm ission alarm handling for digital inter-exchange circuits		X			
2.9.3 Reset of circuits and circuit groups	X				
2.9.3.1 Reset circuit message	X				
2.9.3.2 Circuit group reset message	X				
2.9.3.3 Abno rmal circuit group reset message procedures	X				
2.9.4 Failure in the blockin g/unblocking sequence	X				
2.9.5 Receipt of unreasona ble signalling information messages	X				

Table 4

References	C	N	P	N relev	Comments
2.9.5.1 Handling of unexpected messages	X				
2.9.5.2 General requirements on receipt of unrecognized signalling information messages and param eters	X				Note 22 Page 54
2.9.5.3 Procedures for the hand ling of the unrecognized messages or parameters	X				Note 22 Page 54
2.9.5.3.1 Unrecogniz ed messages	X				
2.9.5.3.2 Unrecognize d parameters	X				Note 5 Page 53 Note 15 Page 54
2.9.5.3.3 Unrecogniz ed parameter values	X				Note 5 Page 53 Note 15 Page 54
2.9.5.4 Proce dures for the handling of responses indicating unrecognized information has been sent					Title
2.9.5.4.1 Type A exchanges	X				Note 4 Page 53



Table 4

References	C	N	P	N relev	Comments
2.9.5.4.2 Type B exchanges		X			
2.9.5.5 Procedures for handling unreasonable information	X				Note 4 Page 53
2.9.6 Failure to receive a "release complete" message - Timer T1 and T5	X				
2.9.7 Failure to receive a response to an informat ion request message	X				
2.9.8 Other failure conditi ons					Title
2.9.8.1 Inability to release in response to a release message	X				
2.9.8.2 Call-failure	X				
2.9.8.3 Abno rmal release conditions	X				
2.9.9 Tempor ary trunk bloc king (TTB) (national use)			X		Note 14 Page 53
2.9.9.1 Procedures	X				

Table 4

References	C	N	P	N relev	Comments
2.10 ISDN User Part signalling congestion control	X				
2.10.1 General	X				
2.10.2 Procedures	X				
2.11 Automatic congestion control	X				Note 23 Page 54
2.11.1 Receipt of a release message containing an automatic congestion level parameter	X				
2.11.2 Actions taken during overload	X				
2.12 Unequipped circuit identification code message (national use)	X				
2.13 ISDN User Part availability control	X				
2.13.1 General	X				
2.13.2 Procedures	X				
2.14 MTP Pause/Resume	X				
2.15 Overlength messages	X				



Table 4

References	C	N	P	N relev	Comments
Annex A			X		Note 24 Page 54
Annex B	X				
Annex C			X		Note 4 Page 53
Annex D			X		Note 4 Page 53
Annex E			X		Note 4 Page 53
Annex F	X				
Annex G	X				

2.1.5 Q.730 ISDN Supplementary Services

Table 5

References	C	N	P	Comments
1 General	-			
1.1 Exceeding the maximum message length	X			
1.2 Network specific facilities (national option)	X			Note 4 Page 53
1.2.1 Sending unsolicited information (national use)	X			Note 25 Page 54
1.3 Generic procedures				Title
1.3.1 Service activation (national use)				Title
1.3.1.1 General description	X			Note 4 Page 53
1.3.1.2 Service activation procedure			X	Note 4 Page 53 Note 11 Page 53

Table 5

References	C	N	P	Comments
1.3.1.3 Error procedures	X			
1.3.2 General digit transfer (national use)	X			
1.3.3 Remote operations service (ROSE) (national use)				Title
1.3.3.1 General description	X			Note 4 Page 53 Note 11 Page 53
1.3.3.2 Remote operations procedure in ISDN user part	X			Note 4 Page 53 Note 11 Page 53
1.3.3.3 Error performance	X			Note 4 Page 53 Note 11 Page 53
1.3.3.4 Library of operation and error values	-			Note 4 Page 53
1.3.4 Generic notification procedure	X			Note 4 Page 53
1.3.5 Generic number transfer	X			Note 4 Page 53
1.4 End-to-end signalling			X	Title
1.4.1 Introduction			X	Note 3 Page 53
1.4.2 Pass-along method (national use)	X			
1.4.3 SCCP method		X		
1.4.4 Chaining of ISDN user part end-to-end signalling connections		X		



Table 5

References	C	N	P	Comments
1.4.5 Use of the protocol control indicator (PCI)	X			Note 4 Page 53
1.4.6 Operation of the pass-along method (national use)	X			
1.4.7 Operation of the SCCP method - Connectionless services (national use)		X		
1.4.8 Operation of the SCCP method - Connection-oriented service		X		
1.4.9 Interface elements between ISDN user part and SCCP (embedded transfer)		X		
1.5 Layout of service Recommendations	-			Note 4 Page 53 Note 26 Page 54
1.6 List of supplementary services	-			Note 4 Page 53 Note 26 Page 54
1.7 Association of supplementary services to bearer services and teleservices	-			Note 4 Page 53 Note 26 Page 54
1.8 Definition of supplementary services	-			Note 4 Page 53 Note 26 Page 54
Appendix I	-			Note 4 Page 53 Note 26 Page 54

2.2 Monitoring and Measurements for SS7 Networks, ITU Q.752 - 1993

Table 6

References	C	N	P	Comments
1 Introduction	-			
1.1 General	-			
1.1.1 <no heading\>	X			
1.1.2 <no heading\>		X		
1.2 Network view	-			
1.2.1 <no heading\>	-			
1.3 Guidelines for uses of measurements	-			
1.3.1 <no heading\>	-			
1.4 Grouping of measurements	-			
1.4.1 <no heading\>			X	Note 27 Page 54
1.4.2 <no heading\>			X	Note 27 Page 54
1.5 Collection of measurements	-			
1.6 Definition of terms	-			
1.6.1 fault (F)			X	Note 28 Page 54
1.6.2 configuration (C)	X			
1.6.3 performance (P)	X			
1.6.4 accounting (A)	-			
1.6.5 network planning and administration (N)	X			



Table 6

References	C	N	P	Comments
1.6.6 near real time measurements (R)	X			
1.7 Listing of measurements	-			
1.7.1 General	-			
1.7.1.1 <no heading>	-			
1.7.1.2 <no heading>	X			
1.7.1.3 <no heading>			X	Note 29 Page 54
1.7.1.4 <no heading>	X			
1.7.1.5 <no heading>	X			
1.7.1.6 <no heading>		X		Note 29 Page 54
1.7.1.7 <no heading>		X		Note 29 Page 54
1.7.2 Intervals for measurements		X		Note 29 Page 54
2 MTP monitoring and measurements	-			
3 SCCP monitoring and measurements	-			
4 ISDN-UP monitoring and measurements	-			
4.1 General	X			
4.2 Table 10				
4.2.1 <no heading>	-			
4.2.2 <no heading>	-			

Table 6

References	C	N	P	Comments
4.2.3 <no heading\>	-			
4.2.4 <no heading\>	-			
4.2.5 <no heading\>	-			
4.3 Table 11				
4.3.1 <no heading\>	-			
4.4 Table 12				
4.4.1 <no heading\>	-			
4.4.2 <no heading\>	-			
4.4.3 <no heading\>	-			
4.4.4 <no heading\>	-			
4.4.5 <no heading\>	-			
4.4.6 <no heading\>	-			
5 TC monitoring and measurements	-			
6 Uses of measurements	-			
6.1 Introduction	-			
6.2 Message transfer part (MTP)	-			
6.3 Signalling connection control part (SCCP)	-			
6.3.1 SCCP fault management	-			
6.3.1.1 Routing failures	X			



Table 6

References	C	N	P	Comments
6.3.1.2 SCCP unavailability		X		
6.3.2 SCCP configuration management		X		Note 7 Page 53
6.3.3 SCCP performance	-			
6.3.3.1 Utilization			X	Note 1 Page 53
6.3.3.2 SCCP Quality of Service			X	Note 1 Page 53
6.4 Integrated services digital network user part (ISDN-UP)	-			
6.5 Transaction Capabilities (TC)	-			
6.6 Preparation of traffic forecasts	-			
6.7 Network planning	-			
6.8 Evaluation of maintenance force effectiveness	-			
Table 1 MTP Signalling Link Faults and Performance	-			
Table 2 MTP Signalling Link Availability	-			
Table 3 MTP Signalling Link Utilization	-			
Table 4 MTP Signalling Link Set and Route Set Availability	-			

Table 6

References	C	N	P	Comments
Table 5 MTP Signalling Point Status	-			
Table 6 MTP Signalling Traffic Distribution (Signalling Route Utilization)	-			
Table 7 SCCP Error Performance	-			
Table 8 SCCP Subsystem Availability	-			
Table 9 SCCP Utilization	-			
Table 10 ISDN User Part Availability	-			
Table 10.1 Start of local ISDN UP unavailable - failure			X	Note 30 Page 55
Table 10.2 Start of local ISDN User Part unavailable - busy			X	Note 30 Page 55
Table 10.3 ISDN User Part available			X	Note 30 Page 55
Table 10.4 Total duration of ISDN UP unavailable			X	Note 30 Page 55
Table 10.5 Start of local ISDN User Part congestion			X	Note 30 Page 55



Table 6

References	C	N	P	Comments
Table 10.6 Stop of local ISDN User Part congestion		X		
Table 10.7 Duration of local ISDN User Part congestion		X		
Table 10.8 Start of remote ISDN User Part unavailable		X		Note 31 Page 55
Table 10.9 Stop of remote ISDN User Part unavailable		X		Note 31 Page 55
Table 10.10 Duration remote of ISDN UP unavailable		X		Note 31 Page 55
Table 10.11 Start of remote ISDN User Part congestion		X		Note 31 Page 55
Table 10.12 Stop of remote ISDN User Part congestion		X		Note 31 Page 55
Table 10.13 Duration of remote ISDN User Part congestion		X		Note 31 Page 55
Table 11 ISDN User Part Utilization	-			
Table 11.1 Total ISDN UP messages sent			X	Note 32 Page 55

Table 6

References	C	N	P	Comments
Table 11.2 Total ISDN UP messages received			X	Note 32 Page 55
Table 12 ISDN User Part errors	-			
Table 12.1 No ack for cct reset within T17			X	Note 33Page 55
Table 12.2 No GRA received for GRS within T23			X	Note 33Page 55
Table 12.3 -	-			
Table 12.4 -	-			
Table 12.5 RLC not received within T5	X			
Table 12.6 Release initiated due to abnormal conditions		X		
Table 12.7 Circuit BLO (excessive errors detected by CRC)		X		
Table 12.8 Missing blocking ack in CGBA for previous CGB	X			
Table 12.9 Miss ing unblocking ack in CGUA for previous CGU	X			
Table 12.10 Abnormal blocking ack in CGBA for previous CGB	X			



Table 6

References	C	N	P	Comments
Table 12.11 Abnormal unblocking ack in CGUA for previous CGU	X			
Table 12.12 Unexpected CGBA with abnormal blocking ack	X			
Table 12.13 Unexpected CGUA with abnormal unblocking ack	X			
Table 12.14 Unexpected BLA with abnormal blocking ack	X			
Table 12.15 Unexpected UBA with abnormal unblocking ack	X			
Table 12.16 No BLA received for BLO within T13			X	Note 34 Page 55
Table 12.17 No UBA received for UBL within T15			X	Note 34 Page 55
Table 12.18 No CGBA received for CGB within T19			X	Note 34 Page 55
Table 12.19 No CGUA received for CGU within T21			X	Note 34 Page 55
Table 12.20 Message format error			X	Note 35 Page 55

Table 6

References	C	N	P	Comments
Table 12.21 Unexpected message rxcvd.			X	Note 35 Page 55
Table 12.22 Release due to unrecognised info.		X		
Table 12.23 Inability to release a circuit		X		
Table 13 Local TC Utilization	-			
Table 14 TC Fault Measurements	-			



3 Notes and Comments

- Note 1:** Using Signalling Connection Control Part (SCCP) as a service provider is not supported.
- Note 2:** Overlap signalling is not supported for originating call setup.
- Note 3:** The Pass-along end-to-end signalling method is supported, but not the SCCP method.
- Note 4:** Procedures necessary to fully support this function/service is the responsibility of the Call Control application.
- Messages and parameters involved are transparently handled by this ISUP.
- Note 5:** Compatibility information regarding parameters is handled by Call Control.
- Note 6:** The USR message is allowed during all states of a call, even though the Facility request message will always be answered with Facility reject.
- Note 7:** CMC, CMRJ and CMR are not supported, and will cause a Confusion message(CFN) to be sent.
- Note 8:** A received CQR is correctly answered with a CQM. This ISUP never sends CQR.
- Note 9:** A received DRS will be either be treated like a normal REL, or answered with a CFN message. This ISUP never sends DRS.
- Note 10:** Never sent by this ISUP, discarded if received.
- Note 11:** FAC, IDR, IRS and NRM are either passed transparently to Call Control, or handled according to supplied compatibility information.
- Note 12:** Never sent by this ISUP, answered with FRJ if received.
- Note 13:** INR can be used only to request the Calling party number. Other indicators are always ignored. The Call control application is not engaged.
- Note 14:** Never sent by this ISUP.

- Note 15:** All parameters and indicators are handled by this ISUP module or passed transparently to/from the Call Control application, except those contained in unsupported messages.
- Note 16:** National messages are, if defined in the ISUP module configuration file, passed transparently to/from the Call control application. National parameters are always passed transparently.
- Note 17:** Multirate connection types are not supported.
- Note 18:** Only action at the national originating and destination exchange is supported.
- Note 19:** Depends on the functionality of the Call control application above ISUP.
- Note 20:** This ISUP can be configured to send an INR when 'Calling party number' is missing in the received IAM. The call will be held until an INF is received or timer T33 expires.
- Note 21:** Additional methods are available.
- Note 22:** Type B exchange is not supported.
- Note 23:** Load control may be applied by the Call control application and/or the Management function, in which case the ACC parameter will be included in outgoing Release messages.
- An incoming ACC parameter is handled by this ISUP.
- Note 24:** The time-out values are defined in the configuration file
- Note 25:** An unsolicited INF will be passed transparently to the Call control application.
- Note 26:** Recommendations Q.731-Q.737 are not addressed in this document, since they describe functionality only applicable to a Call control application.
- Note 27:** ISUP support most of the definition rules of the groups, but has not grouped them together.
- Note 28:** Every fault or measurement is reported on occurrence instead of the first occurrence and then the number of occurrences in some interval.
- Note 29:** Timestamps on events reported on occurrence are not supported by the ISUP module.



- Note 30:** Unavailability measurements are architecturally dependent and are optional in the ITU standard. An indication of the module availability is reported.
- Note 31:** Remote measurements are only necessary at gateway signalling points.
- Note 32:** Measurements are not provided periodically but can be retrieved on-demand by an external management application.
- Note 33:** Timeout of individual and group circuit reset (T17 and T23) is a combined measurement - no individual measure is available.
- Note 34:** No distinction is made between individual and group circuit blocking therefore a combined measurement is used. i.e. T19 and T21 are used instead of T13 and T15.
- Note 35:** A number of individual alarms are raised on unexpected and incorrectly formatted errors. These can be combined by an external management agent to obtain a single alarm where required.
- Note 36:** In table 4 add: OPR 11111110, MPM 11111101, CCL 11111100
- Note 37:** Calling number is always included in IAM sent by originating exchange
- Note 38:** All MSG and parameters used in the procedures see Q.763
- Note 39:** Some procedures special used in Chian refer to Fig.4-1 to Fig.4-4, Q.764
- Note 40:** For calling party number: LS and Tm send subscriber number, TS send national number.
- Note 41:** Can be sent or received by ISUP if configured as National message only. Otherwise will be discarded.





Reference List

ITU Standards:

- [1] *ITU Standard rec. Functional Description of the Integrated Services Digital Network (ISDN) User Part of Signalling System No. 7 (SS7), Q.761.*
- [2] *Integrated Services Digital Network (ISDN) User Part of Signalling System No. 7 (SS7). General Function of Messages and Signals, Q.762.*
- [3] *Integrated Services Digital Network (ISDN) User Part of Signalling System No. 7 (SS7). Formats and Codes, Q.763.*
- [4] *Integrated Services Digital Network (ISDN) User Part of Signalling System No. 7 (SS7). Signalling Procedures, Q.764.*
- [5] *ISDN Supplementary Services, Q.730.*
- [6] *Monitoring and Measurements for Signalling System No 7 Networks, ITU Q.752 - 1993.*

Chinese Standard Recommendations:

- [7] *Technical Specification of ISUP, Directorate General of Telecommunication of Ministry of Posts and Telecommunication P.R.C., 1996.1*