

# ISUP ANSI

## ANSI 1995

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### STATEMENT OF COMPLIANCE

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# Contents

<b>1</b>	<b>General</b>	<b>1</b>
1.1	Introduction	1
1.2	Concept	1
<b>2</b>	<b>Compliance lists</b>	<b>3</b>
2.1	Integrated Services Digital Network (ISDN) User Part, ANSI T1.113 - 1995	3
2.1.1	T1.113.1, Functional Description of the Integrated Services Digital Network (ISDN) User Part	3
2.1.2	T1.113.2, General Function of Messages and Signals	4
2.1.3	T1.113.3, Formats and Codes	20
2.1.4	T1.113.4, Signalling Procedures	27
2.2	Monitoring and Measurements for Networks, ANSI T1.115 - 1990	36
<b>3</b>	<b>Notes and Comments</b>	<b>43</b>
	<b>Reference List</b>	<b>45</b>





# 1 General

## 1.1 Introduction

This document describes how the Ericsson SS7 ISUP ANSI module complies with Reference [1] and Reference [2].

## 1.2 Concept

The terms that will be used are:

<b>C</b>	EIN module complies with the specified paragraph in the standard.
<b>N</b>	EIN module does not comply with the specified paragraph in the standard.
<b>P</b>	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.
<b>-</b>	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, ANSI T1.113 - 1995

#### 2.1.1 T1.113.1, Functional Description of the Integrated Services Digital Network (ISDN) User Part

Table 1

References	C	N	P	Comments
1. Scope, Purpose and Application	-			
1.1 General			X	Note 1Page 43
1.2 Applicability of Other Standards	-			
2. Services Supported by the ISDN User Part	-			
2.1 Basic Service	X			
2.2 Supplementary Services	X			
3. Services Assumed from the MTP	-			
3.1 General	X			
3.2 Description of Primitives	X			
4. End-to-End Signalling	-			
4.1 General	-			
4.2 SCCP Method of End-to-End Signalling		X		

Table 1

References	C	N	P	Comments
4.3 Pass-along Method of End-to-End Signalling	X			
5. Future Enhancements	-			

## 2.1.2 T1.113.2, General Function of Messages and Signals

Table 2

References	C	N	P	Comments
0. Scope, Purpose and Application	-			
1. Signalling Messages	-			
1.1 Address Complete Message (ACM)	X			
1.2 Answer Message (ANM)	X			
1.3 Blocking Message (BLO)	X			
1.4 Blocking Acknowledgement Message (BLA)	X			
1.5 Call Modification Complete Message (CMC)	-			Note 2 Page 43
1.5A Call Modification Reject Message (CMRJ)	-			Note 2 Page 43
1.6 Call Modification Request Message (CMR)	-			Note 2 Page 43
1.7 Call Progress Message (CPG)	X			





Table 2

References	C	N	P	Comments
1.8 Circuit Group Blocking Message (CGB)	X			
1.9 Circuit Group Blocking Acknowledgment Message (CGBA)	X			
1.9A Circuit Group Reset Message (GRS)	X			
1.9B Circuit Group Reset Acknowledgment Message (GRA)	X			
1.10 Circuit Group Unblocking Message (CGU)	X			
1.11 Circuit Group Unblocking Acknowledgment Message (CGUA)	X			
1.11A Circuit Query Message (CQM)			X	Note 3 Page 43
1.11B Circuit Query Response Message (CQR)	X			
1.11C Circuit Reservation Message (CRM)		X		
1.11D Circuit Reservation Acknowledgment Message (CRA)		X		
1.11E Circuit Validation Response Message (CVR)	X			



Table 2

References	C	N	P	Comments
1.11F Circuit Validation Test Message (CVT)	X			
1.12 Closed User Group Selection and Validation Request Message (CSVr)	-			Note 4 Page 43
1.13 Closed User Group Selection and Validation Response Message (CSVs)	-			Note 4 Page 43
1.13A Confusion Message (CFN)	X			
1.13B Connect Message (CON)	-			Note 2 Page 43
1.14 Continuity Message (COT)	X			
1.15 Continuity Check Request Message (CCR)	X			
1.16 Delayed Release Message (DRS)	-			Note 2 Page 43
1.16A Exit Message (EXM)		X		
1.17 Facility Accepted Message (FAA)	-			Note 2 Page 43
1.18 Facility Deactivated Message (FAD)	-			Note 4 Page 43
1.19 Facility Information Message (FAI)	-			Note 4 Page 43
1.19A Facility Message (FAC)	X			



Table 2

References	C	N	P	Comments
1.20 Facility Reject Message (FRJ)	-			Note 2 Page 43
1.21 Facility Request Message (FAR)	-			Note 2 Page 43
1.22 Forward Transfer Message (FOT)	X			
1.23 Information Message (INF)	X			
1.24 Information Request Message (INR)	X			
1.25 Initial Address Message (IAM)	X			
1.25A Loop Back Acknowledgment Message (LPA)	X			
1.25B Overload Message	-			Note 2 Page 43
1.26 Pass Along Message (PAM)	X			
1.27 Pause Message	-			Note 7 Page 43
1.28 Reject Connect Modify Message	-			Note 8 Page 43
1.29 Release Message (REL)	X			
1.30 Release Complete Message (RLC)	X			
1.31 Released Message	-			Note 9 Page 43
1.32 Reset Circuit Message (RSC)	X			

Table 2

References	C	N	P	Comments
1.33 Reset Circuit Group Message	-			Note 10 Page 43
1.34 Reset Circuit Group Acknowledgement Message	-			Note 11 Page 43
1.35 Resume Message (RES)	X			
1.36 Subsequent Address Message (SAM)	-			Note 2 Page 43
1.36A Suspend Message (SUS)	X			
1.37 Unblocking Message (UBL)	X			
1.38 Unblocking Acknowledgement Message (UBA)	X			
1.38A Unequipped Circuit Identification Code Message (UCIC)	X			
1.39 Unsuccessful Backward Set-up Information Message	-			Note 9 Page 43
1.40 User-to-User Information Message (USR)	-			Note 2 Page 43
2. Signalling Information	-			
2.1 Access Barred	-			Note 4 Page 43
2.1A Access Transport	X			
2.2 Address Incomplete	-			Note 12 Page 43



Table 2

References	C	N	P	Comments
2.3 Address Presentation Restricted Indicator	X			
2.4 Address Signal	X			
2.4A Alarm Carrier Indicator	X			Note 16 Page 43
2.4B Attendant Status	X			Note 16 Page 43
2.4C Automatic Congestion Level	X			
2.4D Backward Call Indicators	X			
2.4E Business Group	X			Note 16 Page 43
2.4F Business Group Identifier	X			Note 16 Page 43
2.4G Business Group Identifier Type	X			Note 16 Page 43
2.5 Call Failure Indicator	-			Note 12 Page 43
2.6 Call Forwarding Indicator	-			Note 13 Page 43
2.6A Call Forwarding May Occur Indicator	-			Note 2 Page 43
2.7 Call Identity	X			Note 16 Page 43
2.7A Call Modification Indicators	-			Note 2 Page 43
2.8 Call Reference	X			Note 16 Page 43
2.9 Call Rerouting Indicator	-			Note 4 Page 43



Table 2

References	C	N	P	Comments
2.10 Called Party Number	X			
2.11 Called Party Address Request Indicator	-			Note 4 Page 43
2.12 Called Party Address Response Indicator	-			Note 4 Page 43
2.13 Called Party Free Indicator	-			Note 4 Page 43
2.14 Called Party' s Category Indicator	X			
2.15 Called Party' s Status Indicator	X			
2.16 Calling Party Number	X			
2.17 Calling Party Address Request Indicator	-			Note 2 Page 43
2.18 Calling Party Address Response Indicator	-			Note 2 Page 43
2.19 Calling Party Answer Indicator	-			Note 4 Page 43
2.19A Calling Party Number Incomplete Indicator	-			Note 2 Page 43
2.20 Calling Party' s Category	X			
2.21 Calling Party' s Category Request Indicator	-			Note 2 Page 43



Table 2

References	C	N	P	Comments
2.22 Calling Party's Category Response Indicator	-			Note 2 Page 43
2.22A Carrier Identification	X			Note 16 Page 43
2.22B Carrier Selection Information	X			Note 16 Page 43
2.23 Cause Indicators	X			
2.23A Cause Value	X			
2.24 CCBS Call Indicator	-			Note 4 Page 43
2.25 Charge Indicator	X			Note 16 Page 43
2.25A Charge Number	X			Note 16 Page 43
2.26 Charge Information Request Indicator	-			Note 2 Page 43
2.27 Charge Information Response Indicator	-			Note 2 Page 43
2.27A Circuit Group Blocking Type Indicator	X			
2.27B Circuit Group Carrier Indicator	X			Note 16 Page 43
2.27C Circuit Group Characteristics Indicator	X			
2.27D Circuit Assignment Map	X			



Table 2

References	C	N	P	Comments
2.28 Circuit Group Congestion	-			Note 12 Page 43
2.29 Circuit Group Supervision Message Type Indicator	X			
2.30 Circuit Identification Code	X			
2.30A Circuit Identification Name			X	Note 6 Page 43
2.30B Circuit State Indicator	X			
2.30C Circuit Validation Response Indicator	X			
2.31 Closed User Group Call Indicator	-			Note 4 Page 43
2.32 Closed User Group Check Successful Indicator	-			Note 4 Page 43
2.33 Closed User Group Interlock Code	-			Note 2 Page 43
2.33A Coding Standard	X			
2.33B COMMON LANGUAGE Identification (CLLI) Code			X	Note 6 Page 43
2.33C Connected Address Request Indicator	-			Note 4 Page 43





Table 2

References	C	N	P	Comments
2.33D Connected Address Response Indicator	-			Note 4 Page 43
2.33E Connected Number	-			Note 2 Page 43
2.34 Connection Request		X		Note 1 Page 43
2.35 Continuity Check Indicator	X			
2.35A Continuity Check Requirement Indicator	X			
2.36 Continuity Indicator	X			
2.36A Continuity Indicators	X			
2.37 Credit		X		Note 1 Page 43
2.37B Diagnostic	X			Note 16 Page 43
2.38 Divergence Indicator	-			Note 4 Page 43
2.38A Double Seizing Control Indicator	X			
2.39 Echo Control Device Indicator	X			Note 16 Page 43
2.39A Egress Service	X			Note 16 Page 43
2.40 End-to-End Information Indicator	X			Note 16 Page 43
2.41 End-to-End Method Indicator	X			Note 16 Page 43
2.41A Event Indicator	X			
2.41B Event Information	X			

Table 2

References	C	N	P	Comments
2.41C Event Presentation Restricted Indicator	X			
2.41D Extension Indicator	X			
2.42 Facility Indicator	-			Note 2 Page 43
2.42A Facility Information Indicator	-			Note 4 Page 43
2.42B Facility Information Indicators	-			Note 4 Page 43
2.42C Facility Request Active Indicator	-			Note 4 Page 43
2.42D Facility Request Enquiry Indicator	-			Note 4 Page 43
2.42E Feature Code Indicator	X			Note 16 Page 43
2.42F Forward Call Indicators	X			
2.43 In Call Modification Indicator	-			Note 4 Page 43
2.43A Generic Address	X			Note 16 Page 43
2.43B Generic Digits	X			Note 16 Page 43
2.43C Generic Name	X			
2.43D Holding Indicator	-			Note 2 Page 43
2.43E Hop Counter	X			
2.43F Inband Information Indicator	X			



Table 2

References	C	N	P	Comments
2.43G Incoming International Call Indicator	X			
2.44 Index	-			Note 4 Page 43
2.45 Index Request Indicator	-			Note 4 Page 43
2.45A Index Response Indicator	-			Note 4 Page 43
2.45B Information Indicators	X			
2.45C Information Request Indicators	X			
2.45D Information Transfer Capability	X			Note 16 Page 43
2.45E Information Transfer Rate	X			Note 16 Page 43
2.46 Interworking Indicator	X			
2.46A ISDN Access Indicator	X			
2.47 ISDN User Part Indicator	X			
2.47A ISDN User Part Preference Indicator	X			
2.47B Jurisdiction Information	X			Note 16 Page 43
2.48 Line Out of Service	-			Note 12 Page 43
2.48A Line Privileges Information Indicator	X			Note 16 Page 43
2.48B Line Privileges	X			Note 16 Page 43



Table 2

References	C	N	P	Comments
2.49 Local Reference		X		Note 1 Page 43
2.49A Look ahead for busy	X			
2.50 Malicious Call Identification Request Indicator	-			Note 2 Page 43
2.51 Misdialed Trunk Prefix	-			Note 12 Page 43
2.51A Modification Indicator	-			Note 2 Page 43
2.51B MLPP Service Domain	X			
2.52 National Network Congestion	-			Note 12 Page 43
2.53 National/International Call Indicator	-			Note 14 Page 43
2.54 Nature of Address Indicator	X			
2.54A Nature of Connection Indicators	X			
2.54B Network Identification	X			
2.54C Network Identification Plan	X			
2.54D Network Transport	X			
2.55 Normal Call Indicator	-			Note 4 Page 43
2.55A Notification Indicator	X			
2.55B Numbering Plan Indicator	X			



Table 2

References	C	N	P	Comments
2.56 Odd/even Indicator	X			
2.56A Optional Backward Call Indicator	X			
2.56B Optional Forward Call Indicator	-			Note 2 Page 43
2.56C Operator Services Information	X			
2.57 Original Called Number	X			Note 16 Page 43
2.58 Original Address Request Indicator	-			Note 4 Page 43
2.58A Original Redirecting Reason	X			Note 16 Page 43
2.58B Originating Line Information	X			Note 16 Page 43
2.58C Outgoing Trunk Group Number				Note 23 Page 44
2.58D Party Selector	X			Note 16 Page 43
2.59 Point Code	X			Note 16 Page 43
2.59A Precedence	X			
2.59B Precedence level	X			
2.60 Protocol Class		X		Note 1 Page 43
2.61 Protocol Control Indicator	X			
2.62 Range	X			
2.62A Range and Status	X			

Table 2

References	C	N	P	Comments
2.62B Redire cting Address Request Indicator	-			Note 4 Page 43
2.62C Redire cting Address Response Indicator	-			Note 4 Page 43
2.62D Redirectin g Indicator	-			Note 2 Page 43
2.62E Redirectin g Number	X			Note 16 Page 43
2.62F Redirectin g Reason	X			Note 16 Page 43
2.62G Redirectio n Counter	X			Note 16 Page 43
2.63 Redirection Information	X			Note 16 Page 43
2.63A Redirectio n Number	-			Note 2 Page 43
2.64 Redirection Indicator	-			Note 34 Page 44
2.64A Redirectio n Reason	-			Note 4 Page 43
2.64B Remote Operations	X			
2.65 Reverse Holding Indicator	-			Note 15 Page 43
2.66 Routing Label	X			
2.67 Satellite Indicator	X			Note 16 Page 43
2.67A SCCP Method Indicator		X		Note 1 Page 43
2.68 Send Spec ial Information Tone	-			Note 12 Page 43
2.68A Screening Indicator	X			Note 16 Page 43



Table 2

References	C	N	P	Comments
2.68B Service Activation	X			Note 16 Page 43
2.68C Service Code	X			Note 16 Page 43
2.69 Signalling Point Code	-			Note 2 Page 43
2.69A Solicited Information Indicator	X			
2.69B Special Processing Request	X			Note 16 Page 43
2.70 Status	X			
2.70A Sub-Group Identifier	X			Note 16 Page 43
2.70B Subsequent Number	-			Note 2 Page 43
2.71 Subscriber Busy	-			Note 12 Page 43
2.71A Suspend/Resume Indicator	X			
2.71B Suspend/Resume Indicators	X			
2.72 Switching Equipment Congestion	-			Note 12 Page 43
2.72A Transaction Request				Note 24 Page 44
2.72B Transfer Mode	X			
2.72C Transit Network Selection	X			Note 16 Page 43
2.72D Transmission Medium Used	X			

Table 2

References	C	N	P	Comments
2.73 Transmission Medium Requirements	-			Note 2 Page 43
2.73A Trunk Number				Note 6 Page 43
2.73B Type of Address	X			
2.73C Type of Digits	X			
2.73D Type of Network Identification	X			Note 16 Page 43
2.74 Unallocated Number	-			Note 12 Page 43
2.75 User Class Indicator	-			Note 4 Page 43
2.75A User-Net work Interaction Indicator	X			Note 16 Page 43
2.75B User Service Information	X			
2.75C User Service Information Prime	X			
2.76 User-to-User Indicators	X			
2.76A User-to-User Information	X			
2.77 Voice/Data Indicator	-			Note 4 Page 43

### 2.1.3 T1.113.3, Formats and Codes

Table 3

References	C	N	P	Comments
1. Scope, Purpose and Application	X			





Table 3

References	C	N	P	Comments
1.1 Routing Label	X			
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			
1.7A Number of Pointers in a Message	X			
1.8 End of Optional Parameters Octet	X			
1.9 Order of Transmission	X			
1.10 Coding of Spare Bits	X			
1.10A Interpretation of Unassigned Point Code	X			
1.11 National Message Types and Parameters	-			
2. Parameter Formats and Codes	-			
2.1 Message Type Codes	X			
2.2 Coding of the Length Indicator	X			

Table 3

References	C	N	P	Comments
2.3 Coding of the Pointers	X			
3. ISDN User Part Parameters	-			
3.1 Parameter Names	X			
3.1A Access Transport	X			
3.2 Address Presentation Restriction Indicator	-			Note 4 Page 43
3.2A Automatic Congestion Level	X			
3.3 Backward Call Indicators	X			
3.3A Business Group	X			
3.4 Call Modification Indicators	-			Note 2 Page 43
3.5 Call Reference	X			
3.6 Called Party Number	X			
3.7 Calling Party Number	X			
3.8 Calling Party's Category	X			
3.8A Carrier Identification	X			
3.8B Carrier Selection Information	X			
3.9 Cause Indicators	X			
3.10 Charge Number	X			



Table 3

References	C	N	P	Comments
3.10A Circuit Group Characteristic Indicators	X			
3.10B Circuit Assignment Map	X			
3.11 Circuit Group Supervision Message Type Indicator	X			
3.11A Circuit Identification Name			X	Note 6 Page 43
3.11B Circuit State Indicator	X			
3.11C Circuit Validation Response Indicator	X			
3.12 Closed User Group Check Response Indicators	-			Note 4 Page 43
3.13 Closed User Group Interlock Code	-			Note 2 Page 43
3.13A COMMON LANGUAGE Location Identification (CLLI) Code			X	Note 6 Page 43
3.14 Compatibility Information	-			Note 4 Page 43
3.14A Connected Number	-			Note 2 Page 43
3.15 Connection Request		X		Note 1 Page 43
3.16 Continuity Indicators			X	Note 6 Page 43
3.16A Egress Service	X			

Table 3

References	C	N	P	Comments
3.17 End of Optional Parameter Fields Indicator	X			
3.17A Event Information	X			
3.18 Facility Indicator	-			Note 2 Page 43
3.19 Facility Information Indicators	-			Note 4 Page 43
3.20 Forward Call Indicators	X			
3.20A Generic Address Parameter	X			
3.20B Generic Digits Parameter	X			
3.20C Generic Name	X			
3.20D Hop Counter	X			
3.21 Index	-			Note 4 Page 43
3.22 Information Indicators	X			
3.23 Information Request Indicators	X			
3.23A Jurisdiction Information	X			
3.24 Nature of Connection Indicators	X			
3.24A Network Transport	X			
3.24B Notification Indicator	X			



Table 3

References	C	N	P	Comments
3.24C Optional Backward Call Indicators	X			
3.24D Operator Services Information	X			
3.25 Optional Forward Call Indicators	-			Note 2 Page 43
3.26 Original Called Number	X			
3.26A Originating Line Information	X			
3.26B Outgoing Trunk Group Number		X		Note 23 Page 44
3.26C Precedence	X			
3.27 Range and Status	X			
3.27A Redirecting Number	X			
3.28 Redirection Indicators	-			Note 17 Page 43
3.29 Redirection Information	X			
3.29A Redirection Number	-			Note 2 Page 43
3.29B Remote Operations	X			
3.29C Service Activation	X			
3.29D Service Code	X			
3.30 Signalling Point Code	-			Note 2 Page 43

Table 3

References	C	N	P	Comments
3.30A Special Processing Request	X			
3.31 Subsequent Number	-			Note 2 Page 43
3.31A Susp end/Resume Indicators	X			
3.31B Transaction Request		X		Note 24 Page 44
3.31C Transit Network Selection	X			
3.32 Transmission Medium Requirements	-			Note 2 Page 43
3.32A Transmission Medium Used	X			
3.33 User Service Information	X			
3.33A User Service Information Prime	X			
3.34 User-to-User Indicators	X			
3.35 User to User Information	X			
4. ISDN User Part Messages and Codes	-			
4.1 General	X			



## 2.1.4 T1.113.4, Signalling Procedures

Table 4

References	C	N	P	Comments
1. Scope, purpose and application	-			
1.1 Relationship with other Signalling System No. 7 specifications	X			
1.2 Numbering	X			
1.3 Address signalling	X			
1.4 Basic procedures	X			
1.4A Signalling methods	X			
1.5 Layout of chapter T1.113.4	-			
1.6 Interworking with other signalling systems or user parts	-			
2. Basic call control and signalling procedures	-			
2.1 Successful call set-up	-			
2.1.1 Forward address signalling - En bloc operation			X	Note 5 Page 43
2.1.2 Forward address signalling - Overlap operation	-			Note 2 Page 43
2.1.3 Calling party number	X			

Table 4

References	C	N	P	Comments
2.1.3A Exit Message		X		
2.1.3B Circuit reservation		X		
2.1.4 Address Complete Message	X			
2.1.4A Call Progress Message	X			
2.1.4B Information messages	X			
2.1.5 Answer Message	X			
2.1.6 Continuity-check	X			
2.1.7 Special procedures at an interworking point		X		
2.1.8 Cross office check		X		
2.1.9 Charging procedures			X	Note 16 Page 43
2.1.10 Forward Transfer Message		X		
2.1.10A Transit network selection			X	Note 16 Page 43
2.1.10B Carrier identification			X	Note 16 Page 43
2.1.10C Jurisdiction information			X	Note 16 Page 43
2.1.10D Egress service			X	Note 16 Page 43
2.1.11 Storage and release of IAM information	X			





Table 4

References	C	N	P	Comments
2.2 Unsuccessful call set-up	X			
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	X			
2.2.4 Tones and announcements	X			
2.3 Normal call release	X			
2.3.1 Release initiated by a calling party			X	Note 18 Page 43
2.3.2 Release initiated by a called party	X			
2.3.3 Release initiated by the network	X			
2.3.4 Release of address and routing information	X			
2.4 Transfer of user-to-user information	-			Note 19 Page 43
2.4A Transfer of access signalling information	X			
2.4B Transfer of network signalling information	X			

Table 4

References	C	N	P	Comments
2.4B.1 Actions at the exchange which initiates message with network transport parameter	X			
2.4B.2 Actions at an intermediate exchange		X		
2.4B.3 Actions at the exchange which terminates message with network transport parameter			X	Note 16 Page 43
2.5 Suspend, resume	-			
2.5.1 Suspend	X			
2.5.2 Resume	X			
2.5.3 Expiration of timer T6	X			
2.6 Delayed release	-			Note 4 Page 43
2.7 In call modification	-			Note 4 Page 43
2.7A Echo control procedure			X	Note 20 Page 44
2.7A.1 General			X	Note 20 Page 44
2.7A.2 Forward direction			X	Note 20 Page 44
2.7A.3 Backward direction			X	Note 20 Page 44
2.8 Network features	-			
2.8.1 Automatic repeat attempt	X			



Table 4

References	C	N	P	Comments
2.8.2 Blocking and unblocking of circuits and circuits groups	X			
2.8.2A Circuit query			X	Note 3 Page 43
2.9 Abnormal conditions	-			
2.9.1 Dual seizure	X			
2.9.2 Transm ission alarm handling on digital interexchange circuits		X		
2.9.3 Reset of circuits and circuit groups	X			
2.9.4 Failure in the blocking/unbl ocking sequence	X			
2.9.5 Receipt of unreasonable signalling information			X	Note 25 Page 44
2.9.5A Receipt of unrecognized signalling information			X	
2.9.6 Failure to receive a Release Complete Message - Time T1 and T5	X			
2.9.7 Failure to receive a response to a Information Request Message	X			

Table 4

References	C	N	P	Comments
2.9.8 Other failure conditions	X			
2.9.9 Temporary trunk blocking (TTB)	-			Note 2 Page 43
2.9A Multilevel precedence and preemption	-			Note 4 Page 43
2.9B NxDS0 multi-rate connection type		X		
2.9C Connection type allowing fallback		X		
2.10 ISDN User Part signalling congestion control	-			Note 2 Page 43
2.10A ISDN User Part flow control	X			
2.11 Automatic congestion control	X			
2.11.1 Receipt of a Release Message containing an Automatic Congestion Level parameter	X			
2.11.2 Action taken during overload	X			
2.11A Examples of call set-up sequences	-			
2.11B State transition diagrams	-			
3 End-to-end signalling	-			



Table 4

References	C	N	P	Comments
3.1 Introduction			X	Note 22 Page 44
3.2 Pass-along method	X			
3.3 SCCP method		X		
3.3A Chaining of ISDN User Part end-to-end signalling connections		X		
3.4 Use of the protocol control indicator	X			Note 1 Page 43
3.5 Operation of the pass-along method	X			
3.6 Operation of the SCCP method - Connectionless service		X		
3.7 Operation of the SCCP method - Connection-oriented service		X		
3.8 Interface elements between the ISDN User Part and SCCP (embedded transfer)		X		
3.8A Examples of an SCCP connection set-up by the ISDN User Part	-			
4 User facilities	-			Note 19 Page 43

Table 4

References	C	N	P	Comments
4A Generic supplementary services procedures	-			Note 26 Page 44
4A.1 Solicited information	-			
4A.1.1 Requesting information	X			
4A.1.2 Sending solicited information			X	Note 21 Page 44
4A.1.3 Receiving a solicited Information Message	X			
4A.2 Special processing request		X		
4A.2.1 Actions required at the initiating exchange		X		
4A.2.2 Actions required at an intermediate exchange		X		
4A.2.3 Actions required at the special processing exchange		X		
4A.2.4 Abnormal conditions		X		
4A.3 Transfer of supplementary services notification information	-			



Table 4

References	C	N	P	Comments
4A.3.1 Actions at the exchange which initiates message with notification information			X	Note 16 Page 43
4A.3.2 Actions at an intermediate exchange		X		
4A.3.3 Actions at the exchange which terminates message with notification information	X			
4A.4 Address Complete Message to Call Progress Message mapping		X		
4A.5 Generic digit transfer		X		
4A.6 User network interaction		X		
4A.7 Network excessive delay		X		
4A.8 Service activation		X		
4A.9 Remote operations capability		X		
4A.10 Facility Message	X			

## 2.2 Monitoring and Measurements for Networks, ANSI T1.115 - 1990

Table 5

References	C	N	P	Comments
1 Scope, Purpose and Application	-			
1.1 Introduction	X			
1.2 Local and Global View	-			
1.3 Grouping of Measurements	-			
1.4 Guidelines for Uses of Measurements	-			
2 Definition of Terms	-			
2.1 Operation	-			
2.1.1 <No heading\>	X			
2.1.2 <No heading\>	-			Note 27 Page 44
2.1.3 <No heading\>	-			Note 27 Page 44
2.2 Maintenance	X			
2.3 Administration	-			
2.3.1 <No heading\>	X			
2.3.2 <No heading\>	X			
3 Listing of Measurements	-			
3.1 General			X	Note 28 Page 44
3.2 Table 1/T1.115 MTP Signalling Link Performance	-			





Table 5

References	C	N	P	Comments
3.3 Table 2/T1.115 MTP Signalling Link  Availability	-			
3.4 Table 3/T1.115 MTP Signalling Link  Utilization	-			
3.5 Table 4/T1.115 MTP Signalling Link  Set and Route Set Availability	-			
3.6 Table 5/T1.115 MTP Signalling Point Status	-			
3.7 Table 6/T1.115 MTP Signalling Traffic  Distribution (Signalling Route Utilization)	-			
3.8 Table 7/T1.115 SCCP Performance	-			
3.9 Table 8/T1.115 SCCP Subsystem  Availability	-			
3.10 Table 9/T1.115 SCCP Utilization	-			
3.11 Table 10/T1.115 ISDN User Part  Availability	-			Note 29 Page 44



Table 5

References	C	N	P	Comments
3.12 Table 11/T1.115 ISDN User Part  Utilization			X	Note 30 Page 44
3.13 Table 12/T1.115 ISDN User Part  Performance / Stability			X	Note 30 Page 44
3.14 Table 13/T1.115 ISDN User Part  Circuit Availabilit y			X	Note 30 Page 44
3.15 Table 14/T1.115 ISDN User Part  Connection Performance			X	Note 30 Page 44
3.15.1 <No heading\>	-			
3.15.2 <No heading\>	-			
3.15.3 <No heading\>	-			
3.15.4 <No heading\>	-			
3.16 Table 15/T1.115 TCAP Availability	-			
3.17 Table 16/T1.115 TCAP Utilization	-			
3.18 Table 17/T1.115 TCAP Performance	-			
4 Operations and Maintenance Part Support	-			



Table 5

References	C	N	P	Comments
5 Uses of Measurements	-			
5.1 Introduction	X			
5.2 Operational Uses	-			
5.2.1 Message Transfer Part (MTP)	-			
5.2.1.1 Surveillance of Network Status	-			
5.2.1.2 Monitoring of Link and Network Traffic Performance	-			
5.2.2 Signalling Connection Control Part (SCCP)	-			
5.2.2.1 SCCP Routing Performance	-			
5.2.2.2 SCCP Availability	-			
5.2.3 Integrated Services Digital Network User Part - (ISDN-UP)	-			
5.2.3.1 ISDN-UP Performance			X	Note 31 Page 44
5.2.3.2 ISDN-UP Availability	-			Note 29 Page 44
5.2.4 Transaction Capabilities Application Part (TCAP)	-			
5.2.4.1 TCAP Availability	-			
5.2.4.2 TCAP Utilization	-			

Table 5

References	C	N	P	Comments
5.3 Maintenance Uses	-			
5.3.1 Introduction	-			
5.3.2 Message Transfer Part (MTP)	-			
5.3.2.1 Detection of Increases in Link SU Error Rates	-			
5.3.2.2 Detection of Marginal Links Performance	-			
5.3.2.3 Detection of Link Failure Events in Either Direction	-			
5.3.2.4 Detection of Routing and Distribution Table Errors	-			
5.3.2.5 Component Reliability and Maintainability Studies	-			
5.3.3 Signalling Connection Control Part (SCCP)	-			
5.3.3.1 SCCP Routing Performance	-			
5.3.3.2 SCCP Availability	-			
5.3.4 Integrated Services Digital Network User Part - (ISDN-UP)	-			



Table 5

References	C	N	P	Comments
5.3.4.1 ISDN-UP Stability			X	Note 29 Page 44, Note 32 Page 44
5.3.4.2 ISDN-UP Connection Performance			X	Note 32 Page 44
5.3.4.3 ISDN-UP Circuit Performance			X	Note 32 Page 44
5.3.5 Transaction Capabilities Application Part (TCAP)	-			
5.3.5.1 TCAP Availability	-			
5.3.5.2 TCAP Protocol Errors	-			
5.4 Administrative Uses	-			
5.4.1 Message Transfer Part (MTP)	-			
5.4.1.1 Monitoring of Link and Signalling Point Utilization	-			
5.4.2 Signalling Connection Control Part (SCCP)	-			
5.4.2.1 SCCP Utilization	-			
5.4.2.2 SCCP Routing Performance	-			
5.4.3 Integrated Services Digital Network User Part - (ISDN-UP)	-			



Table 5

References	C	N	P	Comments
5.4.3.1 ISDN-UP Performance			X	Note 29 Page 44, Note 33 Page 44
5.4.3.2 ISDN-UP Stability			X	Note 33 Page 44
5.4.3.3 ISDN-UP Circuit Performance			X	Note 33 Page 44
5.4.4 Transaction Capabilities Application Part (TCAP)	-			
5.4.4.1 TCAP Availability	-			
5.4.4.2 TCAP Utilization	-			
5.4.4.3 TCAP Protocol Errors	-			
5.5 Preparation of Traffic Forecasts	-			
5.6 Network Planning	-			
5.7 Evaluation of Maintenance Force Effectiveness	-			
6 Referenced Standards	-			
6.1 Referenced American National Standards	X			
6.2 Other Referenced Standards	X			



### 3 Notes and Comments

- Note 1:** Using Signalling Connection Control Part (SCCP) as a service provider is not supported.
- Note 2:** No procedures specified for U.S. networks.
- Note 3:** Initial sending CQM is supported. Incoming CQM is supported, not only initial.
- Note 4:** Deleted from the ANSI specification, not supported by T1.113-1988.
- Note 5:** Only action at the originating and destination exchange is supported.
- Note 6:** Only incoming supported.
- Note 7:** Replaced by 1.36A, Suspend Message.
- Note 8:** Replaced by 1.5A, Call Modification Reject Message.
- Note 9:** Message no longer required by ANSI. Refer to 1.29, Release Message.
- Note 10:** Replaced by 1.9A, Circuit Group Reset Message.
- Note 11:** Replaced by 1.9B, Circuit Group Reset Acknowledgement Message.
- Note 12:** Replaced by 2.23, Cause Value.
- Note 13:** Replaced by 2.63, Redirection Information.
- Note 14:** Replaced by 2.43E, Incoming International Call Indicator.
- Note 15:** Replaced by 2.43C, Holding Indicator.
- Note 16:** Passed transparently to/from the Application.
- Note 17:** Replaced by 3.29, Redirection Information.
- Note 18:** Only action at the originating and destination exchange is supported. Charging is handled by the Application.
- Note 19:** Deleted. Refer to 1.2 of chapter T1.113.1.



- Note 20:** Passed transparently to/from the Application. No support for Intermediate exchange.
- Note 21:** Only local information.
- Note 22:** Only pass-along method supported.
- Note 23:** Present in the EXM message which is not supported.
- Note 24:** No support for using TC and SCCP.
- Note 25:** Parameters are not checked but passed transparently to/from the application.
- Note 26:** Only soliciting information is supported. Other supplementary services may be handled by the Application.
- Note 27:** Requires further study in the ANSI standard.
- Note 28:** ISUP ANSI R3 does not support timestamps for events that are reported on occurrence.
- Note 29:** Unavailability measurements are architecturally dependent and are optional in the ANSI standard. An indication of the module availability is reported.
- Note 30:** ISUP ANSI R3 provides the necessary alarms/statistics to generate these measures but does not generate them directly.
- Note 31:** This module provides the basic alarms/statistics to facilitate monitoring by an external manager but does not in itself provide network management.
- Note 32:** This module provides the basic alarms/statistics required for maintenance but does not in itself provide network maintenance.
- Note 33:** This module provides the basic alarms/statistics required for administrative purposes but does not actively participate in system administration.
- Note 34:** Not Used by ANSI





## Reference List

### **ANSI Standard rec.**

- [1] *American National Standard for Telecommunications - Signalling System No. 7 (SS7) - Integrated Services Digital Network (ISDN) User Part, ANSI T1.113 - 1995*
- [2] *American National Standard for Telecommunications -Signalling System No. 7 (SS7) - Monitoring and Measurements for Networks, ANSI T1.115 - 1990.*