

# Subscriber Data Management

---

## Statement of Compliance

Release 9.1

910-6702-001 Revision B

July 2013



**Copyright 2013 Tekelec  
All Rights Reserved**

**Notice**

Information in this documentation is subject to change without notice. Unauthorized use, copying, or translation of this documentation can result in civil or criminal penalties.

Any export of Tekelec products is subject to the export controls of the United States and the other countries where Tekelec has operations.

No part of this documentation may be reproduced, translated, or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, for any purpose without the express written permission of an authorized representative of Tekelec.

Other product names used herein are for identification purposes only, and may be trademarks of their respective companies.

RoHS 5/6 - As of July 1, 2006, all products that comprise new installations shipped to European Union member countries will comply with the EU Directive 2002/95/EC "RoHS" (Restriction of Hazardous Substances). The exemption for lead-based solder described in the Annex will be exercised. RoHS 5/6 compliant components will have unique part numbers as reflected in the associated hardware and installation manuals.

WEEE - All products shipped to European Union member countries comply with the EU Directive 2002/96/EC, Waste Electronic and Electrical Equipment. All components that are WEEE compliant will be appropriately marked. For more information regarding Tekelec's WEEE program, contact your sales representative.

**Trademarks**

TEKELEC, the Tekelec Logo, EAGLE, G-Flex, G-Port, TEKSERVER, and CAMIANT are registered trademarks of Tekelec. EAGLE 5, EAGLE 5 ISS, TEKELEC LTE DIAMETER SIGNALING INDEX, THINKWORKS, and Subscriber Data Server (SDS) are trademarks of Tekelec. All other trademarks are the property of their respective owners.

**Ordering Information**

Your Tekelec Sales Representative can provide you with information about how to order additional discs.  
<http://www.tekelec.com>

---

<b>1. STANDARDS COMPLIANCE SUMMARY .....</b>	<b>5</b>
<b>2. ACRONYMS .....</b>	<b>8</b>
<b>3. ITU-T STATEMENT OF COMPLIANCE .....</b>	<b>11</b>
3.1 MTP Compliance (Q.704) .....	11
3.2 SCCP compliance .....	13
3.2.1 Functional Description (Q.711).....	13
3.2.2 Definition and Function (Q.712) .....	14
3.2.3 Formats and Codes (Q.713).....	18
3.2.4 Procedures (Q.714).....	21
3.2.5 Performance (Q.716).....	26
3.2.6 Monitoring and measurements (Q.752) .....	27
3.3 TCAP compliance (Q.771- Q.775) .....	27
<b>4. ANSI STATEMENT OF COMPLIANCE.....</b>	<b>29</b>
4.1 MTP Compliance (T1.111.4).....	29
4.2 SCCP compliance.....	33
4.2.1 Functional Description (T1.112.1) .....	33
4.2.2 Definition and Function (T1.112.2).....	36
4.2.3 Formats and Codes (T1.112.3) .....	40
4.2.4 Procedures (T1.112.4) .....	43
4.3 TCAP compliance (T1.114).....	48
<b>5. 3GPP STATEMENT OF COMPLIANCE.....</b>	<b>49</b>
5.1 MAP compliance (TS 29.002) .....	49
5.2 CAMEL Compliance (TS 22.078).....	52
5.3 Gi Interworking Compliance (TS 29.061) .....	55
5.4 LTE-HSS Compliance.....	56
5.5 SLH Interface for Location Services (LCS) compliance .....	57
5.6 User Data Repository (UDR) .....	59

## List of Tables

Table 1 Q.704 Compliance .....	11
Table 2 Q.711 Compliance .....	13
Table 3 Q.712 Compliance .....	14
Table 4 Q.713 Compliance .....	18
Table 5 Q.714 Compliance .....	21
Table 6 Q.716 Compliance .....	26
Table 7 Q.752 Compliance .....	27
Table 8 Q.771 - Q.775 Compliance .....	27
Table 9 T1.111.4 Compliance .....	29
Table 10 T1.112.1 Compliance .....	33
Table 11 T1.112.2 Compliance .....	36
Table 12 T1.112.3 Compliance .....	40
Table 13 T1.112.4 Compliance .....	43
Table 14 T1.114.(1-5) Compliance .....	48
Table 15 TS 29.002 Compliance .....	49
Table 16 GSM 09.02 Compliance .....	51
Table 17 Camel Provisioning Compliance .....	52
Table 18 General Procedure Compliance .....	52
Table 19 Procedure for MO & Forwarded Calls .....	52
Table 20 Procedure for MT Calls Compliance .....	53
Table 21 Procedure for serving network dialed service .....	53
Table 22 Procedure for SMS Compliance .....	53
Table 23 Procedure for GPRS Compliance .....	53
Table 24 Notification of non-traffic events to the CSE Compliance .....	54
Table 25 CSE Interrogation and Control Compliance .....	54
Table 26 Subscriber interaction with CSE Compliance .....	54
Table 27 Charging Activities Compliance .....	54
Table 29 TS 29.061 compliance .....	55
Table 30 LTE-HSS compliance .....	56
Table 31 SLH Interface for Location Services (LCS) compliance .....	57
Table 32 User Data Repository (UDR) compliance .....	59

## 1. STANDARDS COMPLIANCE SUMMARY

The Tekelec SDM can be deployed to support one or all of the following applications:

- Home Location Register (HLR)
- Authentication Center (AuC)
- Home Subscriber Server (HSS)
- Subscription Locator Function (SLF)
- SIP Registrar (SREG)
- SIP Redirection Server (SRES)
- SIP User Agent Gateway (SUAG)
- RADIUS AAA Server (AAA)

The statements of compliance provided in this document apply to the above applications based on the following matrix. When available and relevant, the specification version is indicated. The indicated version represent the version used as a reference for the product design, but does not imply full compliance of all requirements of a given specification.

Standard Specification		HLR / AUC	HSS / SLF	AAA	SREG / SRES / SUAG
<b>ITU-T standards</b>					
ITU-T Q.704	MTP	1996			
ITU-T Q.711	SCCP	07/1996			
ITU-T Q.712	SCCP	07/1996			
ITU-T Q.713	SCCP	07/1996			
ITU-T Q.714	SCCP	07/1996			
ITU-T Q.716	SCCP	03/1993			
ITU-T Q.752	SCCP	06/1997			
ITU-T Q.771-Q775	TCAP	1996			
<b>ANSI standards</b>					
ANSI T1.111.4	MTP	1996			
ANSI T1.112.1	SCCP	1996			
ANSI T1.112.2	SCCP	1996			
ANSI T1.112.3	SCCP	1996			
ANSI T1.112.4	SCCP	1996			
ANSI T1.114.(1-5)	TCAP	1996			
<b>3GPP standards</b>					
22.004	General on Supp services	5.1.0			
22.041	Operator Determined Call Barring	5.0.0			
22.060	GPRS Service description; Stage 1	5.0.0			
22.078	CAMEL Service description; Stage 1	5.9.0			
22.081	Line Identification supp services; Stage 1	5.0.0			
22.082	Call Forwarding (CF) Supp Services; Stage 1	5.0.0			
22.083	Call Waiting (CW) and Call Hold (HOLD) Supp services; Stage 1	5.0.0			
22.084	MultiParty (MPTY) Supp service; Stage 1	5.0.0			
22.085	Closed User Group (CUG) Supp services; Stage 1	5.0.0			

Standard Specification		HLR / AUC	HSS / SLF	AAA	SREG / SRES / SUAG
22.086	Advice of Charge (AoC) Supp services; Stage 1	5.0.0			
22.088	Call Barring (CB) Supp services; Stage 1	5.0.0			
22.090	USSD – Stage 1	5.0.0			
22.091	Explicit Call Transfer (ECT) Supp service; Stage 1	5.0.0			
23.002	Network Architecture	6.10.0	7.10.0		
23.003	Numbering addressing	5.0.0	7.10.0 Note 1		
23.007	Restoration procedures	5.0.0			
23.008	Organization of subscriber data	5.13.0	7.10.0		
23.011	Technical realization of Supp Services	5.0.0			
23.012	Location management procedures	5.2.0			
23.015	Technical realization of Operator Determined Barring (ODB)	5.0.0			
23.016	Subscriber data management; Stage 2	5.3.0			
23.018	Basic Call Handling	5.10.0			
23.040	Technical realization of Short Message Service (SMS)	5.5.0			
23.060	GPRS Service description; Stage 2	5.13.0			
23.067	Enhanced Multi Level Precedence and Preemption (eMLPP) Stage 2	5.0.0			
23.078	CAMEL Stage 2	5.9.0			
23.081	Line Identification Supp services; Stage 2	5.2.0			
23.082	Call Forwarding (CF) Supp Services; Stage 2	5.0.0			
23.083	Call Waiting (CW) and Call Hold (HOLD) Supp Service; Stage 2	5.0.0			
23.084	MultiParty (MPTY) Supp Service; Stage 2	5.0.0			
23.085	Closed User Group (CUG) Supp Service; Stage 2	5.0.0			
23.086	Advice of Charge (AoC) Supp Service; Stage 2	5.0.0			
23.090	USSD – Stage 2	5.0.0			
23.091	Explicit Call Transfer (ECT) Supp Service; Stage 2	5.0.0			
23.116	Supercharger technical realization, Stage 2	5.0.0			
23.146	Technial realization of facsimile group 3 service – non-transparent	5.0.0			
23.218	IP Multimedia (IM) session handling; IM call model		7.10.0		
23.228	IP Multimedia Subsystem (IMS) Stage 2		7.10.0		
23.278	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 4; Stage 2; IM CN Interworking		7.10.0		
29.002	MAP specification	5.10.0			
29.011	Signaling interworking for Supp Services	5.0.0			
29.061	Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data			6.14.0	

	Networks (PDN)				
29.228	IMS Cx and Dx Interfaces; Signaling flows and message contents		7.10.0		
29.229	Cx and Dx interfaces based on the Diameter protocol; Protocol details		7.10.0		
29.328	IMS Sh Interface; Signaling flows and message contents		7.10.0		
29.329	Sh Interface based on the Diameter protocol; Protocol details		7.10.0		
29.433	TISPAN: Diameter protocol for the interface between the CSCF and the UPSF and SLF (ETSI TS 183 033)		1.1.1 (ETSI)		
33.102	3G Security, Security architecture	6.5.0	7.10.0		
33.203	3G security; Access security for IP-based services		7.10.0		
35.205	3G Security; Specification of the MILENAGE algorithm set - General	5.0.0	7.10.0		
35.206	3G Security; Specification of the MILENAGE algorithm set – Algorithm specification	5.1.0	7.10.0		
<b>IETF standards</b>					
RFC 3332 & 4666	M3UA	Yes			
RFC 2960 & 3309	SCTP	Yes	Yes		
RFC 3261	SIP		Yes Note 2		Yes
RFC 3588 & 3539	Diameter		Yes		
RFC 768	UDP	Yes	Yes	Yes	Yes
RFC 761	TCP	Yes	Yes		Yes
RFC 2246 & 3546	TLS				Yes
RFC 2401	IPsec		Yes		
RFC 2617	HTTP Authentication				Yes
RFC 2865	RADIUS			Yes	
RFC 2866	RADIUS Accounting			Yes	
RFC 3455	Private Header (P-Header) Extensions to SIP for 3GPP				Yes (SUAG)
RFC 3486	Compressing SIP				Yes
RFC 3581	An Extension SIP for Symmetric Response Routing				Yes
RFC 3840	Indicating User Agent Capabilities in SIP				Yes
RFC 3986	Uniform Resource Identifier (URI): Generic Syntax		Yes		Yes
RFC 3966	The tel URI for Telephone Numbers		Yes		Yes
RFC 4458	Session Initiation Protocol (SIP) URIs for Applications such as Voicemail and Interactive Voice Response (IVR)				Yes

Note 1: Except for wildcarded PSI

Note 2: Only for HTTP Digest specifications

## 2. ACRONYMS

<b>Acronym</b>	<b>Description</b>
3G	3rd generation mobile telecommunications
3GPP	Third Generation Partnership Project
AAA	RADIUS Authentication, Authorization, and Accounting Server
AK	Data acknowledgement
ANSI	American National Standards Institute
AoC	Advice of Charge
AuC	Authentication Center
BCST	Broadcast
CAMEL	Customized Applications for Mobile network Enhanced Logic
CB	Call Barring
CB SS	Call Barring Support Service
CC	Connection Confirm
CF	Call Forwarding
CF SS	Control Frame Subsystem
CR	Connection Request
CREF	Connection Refused
CSCC	Coordinated State Change Control
CSCF	Call Session Control Function
CUG	Closed User Group
CW	Call Waiting
DLC	Data Link Control
DPC	Destination Point Code
DT1	Data Form 1
DT2	Data Form 2
EA	Expedited Data Acknowledgement
ECT	Explicit Call Transfer
ED	Expedited Data
eMLPP	-Level Precedence and Pre-emption Service
ERR	Protocol data unit error
ETSI	European Telecommunications Standards Institute
EU	European Union
GGSN	Gateway GPRS Support Node
GPRS	General packet radio service
GTT	Global Title Translation
HLR	Home Location Register
HOLD	Call Hold
HPLMN	Home Public Land Mobile Network
HSS	Home Subscriber Server
HTTP	Hypertext Transfer Protocol
IETF	Internet Engineering Task Force
IM	IP Multimedia
IMS	IP Multimedia Subsystem
INSI	Intermediate Signaling Network Identification
IPsec	Internet Protocol Security
IT	Inactivity test
ITU-T	International Telecommunication Union-Telecommunication
IVR	Interactive Voice Response
LBCS	Local Broadcast



<b>Acronym</b>	<b>Description</b>
LUDT	Long Unitdata
LUDTS	Long Unitdata Service
M3UA	MTP3 Adaptation Layer
MPTY	MultiParty
MTP	Module Test Plan
NNI	Network-Network Interface
ODB	Operator Determined Barring
OPC	Origination Point Code
PDN	Packet Data Networks
P-Header	Private Header
PLMN	Public Land Mobile Network
QOS	Quality of Service
RADIUS	Remote Authentication Dial In User Service
RLC	Release Complete
RLSD	Released
RoHS	Restriction of Hazardous Substances
RSC	Reset Confirm
RSR	Reset Request
SAAL	Signaling ATM Adaptation Layer
SBR	Subsystem-Backup-Routing
SBRC	Subsystem Backup Routing Control
SCCP	Signaling Connection Control Part
SCMG	SCCP Management
SCOC	SCCP Connection-Oriented Control
SCOC	SCCP Connection-Oriented Control
SCTP	Stream Control Transmission Protocol
SDM	Subscriber Data Management
SDS	Subscriber Data Server
SLF	Subscription Locator Function
SLF	Subscription Locator Function
SMS	Short Message Service
SNRC	Subsystem Normal Routing Control
SOG	Subsystem Out-Of-Service Grant
SOR	Subsystem-out-of-service-request
SPAC	Signalling Point Allowed Control
SPPC	Signalling Point Prohibited Control
SREG	SIP Registrar
SRES	SIP Redirection Server
SRT	Subsystem Routing Status Test
SRTC	Subsystem Routing Status Test Control
SSA	Subsystem Allowed
SSAC	Subsystem Allowed Control
SSCF	Service Specific Coordination Function
SSP	Subsystem-Prohibited
SSPC	Subsystem Prohibited Control
SST	Subsystem-Status-Test
SSTC	Subsystem Status Test Control
STD	State Transition Diagrams
SUAG	SIP User Agent Gateway
TCAP	Transaction Capabilities Application Part

---

<b>Acronym</b>	<b>Description</b>
TCP	Test Communications Processor
TFMI	Traffic Mix Information
TIF	
TR	Technical Reference
TS	Technical Support
UDP	User Datagram Protocol
UDT	Unitdata
UDTS	Unitdata service
UG	User Guide
UPSF	User Profile Server Function
USSD	Unstructured Supplementary Service Data
WEEE	Waste Electronic and Electrical Equipment
XML	Extensible Markup Language
XUDT	Extended Unitdata
XUDTS	Extended Unitdata Service

### 3. ITU-T STATEMENT OF COMPLIANCE

#### 3.1 MTP Compliance (Q.704)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.704 (1996): "Specifications of Signaling System No. 7 - Message Transfer Part, Signaling System No. 7 - Signaling Network Functions and Messages".

**Table 1 Q.704 Compliance**

ITU Q.704 Section	Description	Compliance
1.1	General characteristics of the signaling network functions.	Fully Compliant
1.2	Signaling message handling	Fully Compliant
1.3	Signaling network management	Fully Compliant
2	Signaling message handling	Fully Compliant
2.1	General	Fully Compliant
2.2	Routing label	Fully Compliant
2.3	Message routing function	Fully Compliant
2.4	Message discrimination and distribution function	Fully Compliant
3.	Signaling network management	Fully Compliant
3.1	General	Fully Compliant
3.2	Status of signaling links	Fully Compliant
3.3	Procedures used in connection with link status changes	Fully Compliant
3.4	Status of signaling routes	Fully Compliant
3.5	Procedures used in connection with route status changes	Fully Compliant
3.6	Status of signaling points	Fully Compliant
3.7	Procedures used in connection with point status changes	Fully Compliant
3.8	Signaling network congestion	Fully Compliant
4.	Signaling traffic management	Fully Compliant
4.1	General	Fully Compliant
4.2	Normal routing situation	Fully Compliant
4.3	Signaling link unavailability	Fully Compliant
4.4	Signaling link availability	Fully Compliant
4.5	Signaling route unavailability	Fully Compliant
4.6	Signaling route availability	Fully Compliant
4.7	Signaling route restriction	Fully Compliant
4.8	Signaling point availability	Fully Compliant
5	Changeover	Fully Compliant
5.1	General	Fully Compliant
5.2	Network configurations for changeover	Fully Compliant
5.3	Changeover initiation and actions	Fully Compliant
5.4	Buffer updating procedures	Fully Compliant
5.5	Retrieval and diversion of traffic	Fully Compliant
5.6	Emergency and changeover procedures	Fully Compliant
5.7	Procedures in abnormal conditions	Fully Compliant
6	Changeback	Fully Compliant
6.1	General	Fully Compliant
6.2	Changeback initiation and actions	Fully Compliant
6.3	Sequence control procedures	Fully Compliant
6.4	Time-controlled diversion procedure	Fully Compliant

<b>ITU Q.704 Section</b>	<b>Description</b>	<b>Compliance</b>
6.5	Procedures in abnormal conditions	Fully Compliant
7	Forced rerouting	Fully Compliant
7.1	General	Fully Compliant
7.2	Forced rerouting initiation and actions	Fully Compliant
8	Controlled rerouting	Fully Compliant
8.1	General	Fully Compliant
8.2	Controlled rerouting initiation and actions	Fully Compliant
9	MTP restart	Fully Compliant
9.1	General	Fully Compliant
9.2	Actions in signaling point whose MTP is restarting	Fully Compliant
9.3	Actions in signaling point X, adjacent to a signaling point Y whose MTP restarts	Fully Compliant
9.4	Short term isolations	Fully Compliant
9.5	TRA message and timer T19	Fully Compliant
9.6	General rules	Fully Compliant
9.7	Sequence diagrams	Fully Compliant
10	Management inhibiting	Fully Compliant
10.1	General	Fully Compliant
10.2	Inhibiting initiation and actions	Fully Compliant
10.3	Uninhibiting initiation and actions	Fully Compliant
10.4	Receipt of unexpected management inhibition messages	Fully Compliant
10.5	Management inhibited link status and processor recovery	Fully Compliant
10.6	Inhibit test procedure	Fully Compliant
11	Signaling traffic flow control	Fully Compliant
11.1	General	Fully Compliant
11.2	Flow control indications	Fully Compliant
12	Signaling link management	Fully Compliant
12.1	General	Fully Compliant
12.2	Basic signaling link management procedures	Fully Compliant
12.3	Signaling link management procedures based on automatic allocation of signaling terminals	Not Compliant-NOTE 1
12.4	Signaling link management procedures based on automatic allocation of signaling data links and signaling terminals.	Partial Compliant - NOTE 2
12.5	Automatic allocation of signaling terminals	Not Compliant - NOTE 1
12.6	Automatic allocation of signaling data links	Fully Compliant
12.7	Different signaling link management procedures at two ends of a link set	Not Compliant - NOTE 1
13	Signaling route management	Fully Compliant
13.1	General	Fully Compliant
13.2	Transfer prohibited	Fully Compliant
13.3	Transfer allowed	Fully Compliant
13.4	Transfer restricted (National option)	Fully Compliant
13.5	Signaling-route-set-test	Fully Compliant
13.6	Transfer-controlled (International network)	Fully Compliant
13.7	Transfer-controlled(National option with congestion priorities)	Fully Compliant
13.8	Transfer-controlled (National option without congestion priorities)	Fully Compliant
13.9	Signaling-route-set-congestion-test (National options)	Fully Compliant

NOTE 1: Procedures for automatic allocation of signaling terminals are very much dependent upon the system on which MTP3/MTP2 operate. These are best taken care of by the layer management and fault management functions in the system.

NOTE 2: Support of messages for connecting the data links (DLC/CNP/CNS/CSS) is provided. But support for automatic allocation of terminals not provided due to reasons mentioned in NOTE 1.

## 3.2 SCCP compliance

### 3.2.1 Functional Description (Q.711)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.711 (07/1996): "Functional description of the signaling connection control part".

**Table 2 Q.711 Compliance**

ITU Q.711 Section	Description	Compliance
1	Scope and field of application	Information only
2	References	Information only
2.1	Normative references	Information only
2.2	Informative references	Information only
3	Definitions	Information only
4	Abbreviations and acronyms	Information only
5	General characteristics	Information only
5.1	Technique of description	Information only
5.2	Primitives	Information only
5.3	Peer-to-peer communication	Information only
5.4	Model of the connection-oriented network service	Information only
5.5	Model of the connectionless network service	Information only
5.6	Contents of the Q.71X-Series of Recommendations	Information only
6	Services provided by the SCCP	Information only
6.1	Connection-oriented services	Information only
6.1.1	Temporary signaling connections	Information only
6.1.2	Permanent signaling connections	Information only
6.2	Connectionless services	Information only
6.2.1	Description	Information only
6.2.2	Primitives and parameters of the connectionless service	Information only
6.2.3	State transition diagram	Information only
6.3	SCCP management	Information only
6.3.1	Description	Information only
6.3.2	Primitives and parameters of the SCCP management	Information only
7	Definition of the lower boundary of the SCCP	Information only
7.1	MTP-SAP	Information only
7.2	MTP-primitives and parameters	Information only
7.2.1	TRANSFER	Information only
7.2.2	PAUSE	Information only
7.2.3	RESUME	Information only
7.2.4	STATUS	Information only
7.2.5	Notification of completion of MTP restart procedure	Information only
7.3	State transition diagram	Information only

### 3.2.2 Definition and Function (Q.712)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.712 (07/1996): "Definition and function of Signaling connection control part messages".

**Table 3 Q.712 Compliance**

ITU Q.712 Section	Description	Compliance
1	Signaling connection control part messages	Information only
1.1	Connection Confirm (CC)	Fully Compliant
1.2	Connection Request (CR)	Fully Compliant
1.3	Connection Refused (CREF)	Fully Compliant
1.4	Data Acknowledgement (AK)	Fully Compliant
1.5	Data Form 1 (DT1)	Fully Compliant
1.6	Data form 2 (DT2)	Fully Compliant
1.7	Expedited Data (ED)	Fully Compliant
1.8	Expedited Data Acknowledgement (EA)	Fully Compliant
1.9	Inactivity test (IT)	Fully Compliant
1.10	Protocol data unit error (ERR)	Fully Compliant
1.11	Released (RLSD)	Fully Compliant
1.12	Release complete (RLC)	Fully Compliant
1.13	Reset Confirm (RSC)	Fully Compliant
1.14	Reset Request (RSR)	Fully Compliant
1.15	Subsystem Allowed (SSA)	Fully Compliant
1.16	Subsystem-out-of-Service-Grant (SOG)	Fully Compliant
1.17	Subsystem-out-of-service-request (SOR)	Fully Compliant
1.18	Subsystem-Prohibited (SSP)	Fully Compliant
1.19	Subsystem-Status-Test (SST)	Fully Compliant
1.20	Unitdata (UDT)	Fully Compliant
1.21	Unitdata service (UDTS)	Fully Compliant
1.22	Extended Unitdata (XUDT)	Fully Compliant
1.23	Extended Unitdata Service (XUDTS)	Fully Compliant
1.24	Subsystem Congested (SSC)	Fully Compliant
1.25	Long Unitdata (LUDT)	Fully Compliant
1.26	Long Unitdata Service (LUDTS)	Fully Compliant
2	SCCP message parameters	Fully Compliant
2.1	Affected Point Code	Fully Compliant
2.2	Affected Subsystem Number	Fully Compliant
2.3	Calling/Called Party Address	Fully Compliant
2.4	Credit	Fully Compliant
2.5	Data	Fully Compliant
2.6	Diagnostic	Fully Compliant
2.7	Error Cause	Fully Compliant
2.8	End of optional parameters	Fully Compliant
2.9	Local Reference Number (source/destination)	Fully Compliant
2.10	Protocol Class	Fully Compliant
2.11	Receive Sequence Number	Fully Compliant
2.12	Refusal Cause	Fully Compliant
2.13	Release Cause	Fully Compliant
2.14	Reset Cause	Fully Compliant
2.16	Segmenting/Reassembling	Fully Compliant

ITU Q.712 Section	Description	Compliance
2.17	Sequencing/Segmenting	Fully Compliant
2.18	Subsystem Multiplicity Indicator	Fully Compliant
2.19	Hop Counter	Fully Compliant
2.20	Segmentation	Fully Compliant
2.21	Importance	Fully Compliant
2.22	Congestion Level	Fully Compliant
2.23	Long Data	Fully Compliant
3	Inclusion of Fields in the Messages	Information only
Table 1/ Q.712	Inclusion of Parameters in Messages (Parameter Fields– Messages)	Information only
	Destination local reference number -- CC	Fully Compliant
	Destination local reference number -- CREF	Fully Compliant
	Destination local reference number -- RLSD	Fully Compliant
	Destination local reference number -- RLC	Fully Compliant
	Destination local reference number – DT1	Fully Compliant
	Destination local reference number – DT2	Fully Compliant
	Destination local reference number -- AK	Fully Compliant
	Destination local reference number -- ED	Fully Compliant
	Destination local reference number -- EA	Fully Compliant
	Destination local reference number -- RSR	Fully Compliant
	Destination local reference number -- RSC	Fully Compliant
	Destination local reference number -- ERR	Fully Compliant
	Destination local reference number -- IT	Fully Compliant
	Source local reference number – CR	Fully Compliant
	Source local reference number – CC	Fully Compliant
	Source local reference number -- RLSD	Fully Compliant
	Source local reference number -- RLC	Fully Compliant
	Source local reference number -- RSR	Fully Compliant
	Source local reference number -- RSC	Fully Compliant
	Source local reference number – IT	Fully Compliant
	Called party address -- CR (Mandatory)	Fully Compliant
	Called party address – CC (Optional)	Fully Compliant
	Called party address – CREF (Optional)	Fully Compliant
	Called party address – UDT (Mandatory)	Fully Compliant
	Called party address – UDTS (Mandatory)	Fully Compliant
	Called party address – XUDT (Mandatory)	Fully Compliant
	Called party address – XUDTS (Mandatory)	Fully Compliant
	Called party address – LUDT (Mandatory)	Fully Compliant
	Called party address – LUDTS (Mandatory)	Fully Compliant
	Calling Party Address -- CR (Optional)	Fully Compliant
	Calling Party Address -- UDT (Mandatory)	Fully Compliant
	Calling Party Address -- UDTS (Mandatory)	Fully Compliant
	Calling Party Address -- XUDT (Mandatory)	Fully Compliant
	Calling Party Address -- XUDTS (Mandatory)	Fully Compliant
	Calling Party Address -- LUDT (Mandatory)	Fully Compliant
	Calling Party Address -- LUDTS (Mandatory)	Fully Compliant
	Protocol Class -- CR (Mandatory)	Fully Compliant
	Protocol Class -- CC (Mandatory)	Fully Compliant
	Protocol Class -- IT (Mandatory)	Fully Compliant
	Protocol Class -- UDT (Mandatory)	Fully Compliant
	Protocol Class -- XUDT (Mandatory)	Fully Compliant
	Protocol Class -- LUDT (Mandatory)	Fully Compliant



ITU Q.712 Section	Description	Compliance
	Segmenting/reassembling -- DT1 (Mandatory)	Fully Compliant
	Receive sequence number – AK (Mandatory)	Fully Compliant
	Sequencing/segmenting – DT2 (Mandatory)	Fully Compliant
	Sequencing/segmenting – IT (Mandatory)	Fully Compliant
	Credit -- CR (Optional)	Fully Compliant
	Credit-- CC (Optional)	Fully Compliant
	Credit -- AK (Mandatory)	Fully Compliant
	Credit-- IT (Mandatory)	Fully Compliant
	Release Cause – RLSD (Mandatory)	Fully Compliant
	Return Cause – UDTS (Mandatory)	Fully Compliant
	Return Cause – XUDTS (Mandatory)	Fully Compliant
	Return Cause – LUDTS (Mandatory)	Fully Compliant
	Reset Cause – RSR (Mandatory)	Fully Compliant
	Error Cause – ERR (Mandatory)	Fully Compliant
	User Data -- CR (Optional)	Fully Compliant
	User Data – CC (Optional)	Fully Compliant
	User Data – CREF (Optional)	Fully Compliant
	User Data -- – RLSD (Optional)	Fully Compliant
	User Data – DT1 (Mandatory)	Fully Compliant
	User Data – DT2 (Mandatory)	Fully Compliant
	User Data -- ED (Mandatory)	Fully Compliant
	User Data – UDT (Mandatory)	Fully Compliant
	User Data – UDTS (Mandatory)	Fully Compliant
	User Data – XUDT (Mandatory)	Fully Compliant
	User Data – XUDTS (Mandatory)	Fully Compliant
	Refusal Cause – CREF (Mandatory)	Fully Compliant
	End of Optional Parameters -- CR (Optional)	Fully Compliant
	End of Optional Parameters – CC (Optional)	Fully Compliant
	End of Optional Parameters – CREF (Optional)	Fully Compliant
	End of Optional Parameters -- – RLSD (Optional)	Fully Compliant
	End of Optional Parameters – XUDT (Optional)	Fully Compliant
	End of Optional Parameters – XUDTS (Optional)	Fully Compliant
	End of Optional Parameters – LUDT (Optional)	Fully Compliant
	End of Optional Parameters – LUDTS (Optional)	Fully Compliant
	Hop Counter -- CR (Optional)	Fully Compliant
	Hop Counter – XUDT (Mandatory)	Fully Compliant
	Hop Counter – XUDTS (Mandatory)	Fully Compliant
	Hop Counter – LUDT (Mandatory)	Fully Compliant
	Hop Counter – LUDTS (Mandatory)	Fully Compliant
	Segmentation – XUDT (Optional)	Fully Compliant
	Segmentation – XUDTS (Optional)	Fully Compliant
	Segmentation – LUDT (Optional)	Fully Compliant
	Segmentation – LUDTS (Optional)	Fully Compliant
	Importance -- CR (Optional)	Fully Compliant
	Importance – CC (Optional)	Fully Compliant
	Importance – CREF (Optional)	Fully Compliant
	Importance -- – RLSD (Optional)	Fully Compliant
	Importance – XUDT (Optional)	Fully Compliant
	Importance – XUDTS (Optional)	Fully Compliant
	Importance – LUDT (Optional)	Fully Compliant
	Importance – LUDTS (Optional)	Fully Compliant



ITU Q.712 Section	Description	Compliance
	Long Data – LU DT (Mandatory)	Fully Compliant
	Long Data – LU DTS (Mandatory)	Fully Compliant
Table 2/ Q.712	B SCCP Management Messages	Information only
	SCMG format ID – SSA (Mandatory)	Fully Compliant
	SCMG format ID – SSP (Mandatory)	Fully Compliant
	SCMG format ID – SST (Mandatory)	Fully Compliant
	SCMG format ID – SOR (Mandatory)	Fully Compliant
	SCMG format ID – SOG (Mandatory)	Fully Compliant
	SCMG format ID – SSC (Mandatory)	Fully Compliant
	Affected SSN – SSA (Mandatory)	Fully Compliant
	Affected SSN – SSP (Mandatory)	Fully Compliant
	Affected SSN – SST (Mandatory)	Fully Compliant
	Affected SSN – SOR (Mandatory)	Fully Compliant
	Affected SSN – SOG (Mandatory)	Fully Compliant
	Affected SSN – SSC (Mandatory)	Fully Compliant
	Affected PC – SSA (Mandatory)	Fully Compliant
	Affected PC – SSP (Mandatory)	Fully Compliant
	Affected PC – SST (Mandatory)	Fully Compliant
	Affected PC – SOR (Mandatory)	Fully Compliant
	Affected PC – SOG (Mandatory)	Fully Compliant
	Affected PC – SSC (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SSA (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SSP (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SST (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SOR (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SOG (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SSC (Mandatory)	Fully Compliant
	Congestion Level – SSA (Mandatory)	Fully Compliant
	Congestion Level – SSP (Mandatory)	Fully Compliant
	Congestion Level – SST (Mandatory)	Fully Compliant
	Congestion Level – SOR (Mandatory)	Fully Compliant
	Congestion Level – SOG (Mandatory)	Fully Compliant
	Congestion Level – SSC (Mandatory)	Fully Compliant
4	References	Fully Compliant
4.1	Normative References	Information only
4.2	Informative References	Information only

### 3.2.3 Formats and Codes (Q.713)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.713 (07/1996): "Signaling connection control part formats and codes".

**Table 4 Q.713 Compliance**

ITU Q.713 Section	Description	Compliance
1	General	Information only
1.1	Message type code	Information only
1.2	Formatting principles	Information only
1.3	Mandatory fixed part	Information only
1.4	Mandatory variable part	Information only
1.5	Optional part	Information only
1.6	End of optional parameters octet	Information only
1.7	Order of transmission	Information only
1.8	Coding of spare bits	Information only
1.9	National message types and parameters	Information only
1.10	International message types and parameters	Information only
2	Coding of the general parts	Information only
2.1	Coding of the message type	Information only
Table 1/Q.713	SCCP message types	Information only
2.2	Coding of the length indicator	Information only
2.3	Coding of the pointers	Information only
3	SCCP Parameters	Information only
Table 2/Q.713	SCCP parameter name codes	Fully Compliant
3.1	End of optional parameters	Fully Compliant
3.2	Destination local reference	Fully Compliant
3.3	Source local reference	Fully Compliant
3.4	Called party address	Fully Compliant
3.4.1	Address indicator	Fully Compliant
3.4.2	Address	Fully Compliant
3.4.2.1	Signaling point code	Fully Compliant
3.4.2.2	Subsystem number	Fully Compliant
3.4.2.3	Global title	Partial Compliant – NOTE 1
3.4.2.3.1	Global title indicator = 0001	Fully Compliant
3.4.2.3.2	Global title indicator = 0010	Fully Compliant
3.4.2.3.3	Global title indicator = 0011	Fully Compliant
3.4.2.3.4	Global title indicator = 0100	Fully Compliant
3.5	Calling party address	Fully Compliant
3.6	Protocol class	Fully Compliant
3.7	Segmenting/reassembling	Fully Compliant
3.8	Receive sequence number	Fully Compliant
3.9	Sequencing/segmenting	Fully Compliant
3.10	Credit	Fully Compliant
3.11	Release cause	Fully Compliant
3.12	Return cause	Fully Compliant
3.13	Reset cause	Fully Compliant
3.14	Error cause	Fully Compliant
3.15	Refusal cause	Fully Compliant

ITU Q.713 Section	Description	Compliance
3.16	Data	Fully Compliant
3.17	Segmentation	Fully Compliant
3.18	Hop counter	Fully Compliant - NOTE 2
3.19	Importance	Fully Compliant
3.20	Long data	Fully Compliant
4	SCCP messages and codes	Information only
4.1	General	Information only
4.2	Connection request (CR)	Information only
Table 3/Q.713	Message type: Connection request	Fully Compliant
4.3	Connection confirm (CC)	Information only
Table 4/Q.713	Message type: Connection confirm	Fully Compliant
4.4	Connection refused (CREF)	Information only
Table 5/Q.713	Message type: Connection refused	Fully Compliant
4.5	Released (RLSD)	Information only
Table 6/Q.713	Message type: Released	Fully Compliant
4.6	Release complete (RLC)	Information only
Table 7/Q.713	Message type: Release complete	Fully Compliant
4.7	Data form 1 (DT1)	Information only
Table 8/Q.713	Message type: Data form 1	Fully Compliant
4.8	Data form 2 (DT2)	Information only
Table 9/Q.713	Message type: Data form 2	Fully Compliant
4.9	Data acknowledgement (AK)	Information only
Table 10/Q.	Message type: Data acknowledgement	Fully Compliant
4.10	Unitdata (UDT)	Information only
Table 11/Q.713	Message type: Unitdata	Fully Compliant
4.11	Unitdata service (UDTS)	Information only
Table 12/Q.713	Message type: Unitdata service	Fully Compliant
4.12	Expedited data (ED)	Information only
Table 13/Q.713	Message type: Expedited data	Fully Compliant
4.13	Expedited data acknowledgement (EA)	Information only
Table 14/Q.713	Message type: Expedited data acknowledgement	Fully Compliant
4.14	Reset request (RSR)	Information only
Table 15/Q.713	Message type: Reset request	Fully Compliant
4.15	Reset confirmation (RSC)	Information only
Table 16/Q.713	Message type: Reset confirmation	Fully Compliant
4.16	Protocol data unit error (ERR)	Information only
Table 17/Q.713	Message type: Protocol data unit error	Fully Compliant
4.17	Inactivity test (IT)	Information only
Table 18/Q.713	Message type: Inactivity test	Fully Compliant
4.18	Extended unitdata (XUDT)	Information only
Table 19/Q.713	Message type: Extended unitdata	Fully Compliant
4.19	Extended unitdata service (XUDTS)	Information only
Table 20/Q.713	Message type: Extended unitdata service	Fully Compliant
4.20	Long unitdata (LUDT)	Information only
Table 21/Q.713	Message type: Long unitdata	Fully Compliant
4.21	Long unitdata service (LUDTS)	Information only
Table 22/Q.713	Message type: Long unitdata service	Fully Compliant
5 SCCP	Management messages and codes	Information only
5.1	General	Information only
5.1.1	SCMG format identifier	Information only
5.1.2	Formatting principles	Information only

ITU Q.713 Section	Description	Compliance
5.2	SCMG message parameters	Fully Compliant
5.2.1	Affected SSN	Fully Compliant
5.2.2	Affected PC	Fully Compliant
5.2.3	Subsystem multiplicity indicator	Fully Compliant
5.2.4	SCCP Congestion Level	Fully Compliant
5.3	SCMG Messages	Fully Compliant
Table 24/Q.713	SCMG Messages (SSA, SSP, SST, SOR, SOG)	Fully Compliant
Table 25/Q.713	SCCP/Subsystem Congested (SSC)	Fully Compliant
6	References	Information only
6.1	Normative References	Information only
6.2	Informative References	Information only
Annex A	Mapping for Cause Parameter Values	Information only
A.1	Introduction	Information only
A.2	Connection refusal	Information only
A.3	Connection release	Information only
A.4	Connection reset	Information only
A.5	Return cause	Information only
Table A.1/ Q.713	Mapping during connection refusal	Fully Compliant
Table A.2/ Q.713	Mapping during connection release	Fully Compliant
Table A.3/ Q.713	Mapping during connection reset	Fully Compliant
Annex B	International SCCP addressing and format specification	Information only
B.1	Introduction	Information only
B.2	Guidelines on using SCCP addressing information elements in the international network	Fully Compliant
B.3	GT routing specification of international services	Fully Compliant
Table B.1/ Q.713	Called/calling party address formats for international services requiring GT-based routing	Fully Compliant
B.4	International GT routing specification	Information only
B.4.1	Translation selector: TT = 17, NP = 1, NAI = 4	Information only
B.4.1.1	Format of address indicator and address	Fully Compliant
B.4.1.2	Translation rules	Fully Compliant
B.4.2	Translation selector: TT = 1, NP = 0, NAI = 4	Information only
B.4.2.1	Format of address indicator and address	Fully Compliant
B.4.2.2	Translation rules	Fully Compliant
B.4.3	Translation selector: TT = 2, NP = 2, NAI = 4	Information only
B.4.3.1	Format of address indicator and address	Fully Compliant
B.4.3.2	Translation rules	Fully Compliant
B.4.4	Translation selector: TT = 0, NP = 1, NAI = 4	Information only
B.4.4.1	Format of address indicator and address	Fully Compliant
B.4.4.2	Translation rules	Fully Compliant
B.4.5	Translation selector: TT = 3, NP = 1, NAI = 4	Information only
B.4.5.1	Format of address indicator and address	Fully Compliant
B.4.5.2	Translation rules	Fully Compliant

NOTE 1: A run-time selectable dummy function is provided to allow customers to implement the national specific encoding scheme GTT.

NOTE 2: At the originating node the hop counter shall be filled in with the default hop counter value configured in network configuration.

### 3.2.4 Procedures (Q.714)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.714 (07/1996): "Signaling connection control part procedures".

**Table 5 Q.714 Compliance**

ITU Q.714 Section	Description	Compliance
1	Introduction	Fully Compliant
1.1	General characteristics of signaling connection control procedures	Fully Compliant
1.1.1	Purpose	Fully Compliant
1.1.2	Protocol classes	Fully Compliant
1.1.2.1	Protocol class 0	Fully Compliant
1.1.2.2	Protocol class 1	Fully Compliant
1.1.2.3	Protocol class 2	Fully Compliant
1.1.2.4	Protocol class 3	Fully Compliant
1.1.3	Signaling connections	Fully Compliant
1.1.4	Compatibility and handling of unrecognized information	Fully Compliant
1.1.4.1	Rules for compatibility	Fully Compliant
1.1.4.2	Handling of unrecognized messages or parameters	Fully Compliant
1.1.4.3	Handling of non-mandatory, unsupported parameter values	Fully Compliant
1.1.4.4	Treatment of spare fields	Fully Compliant
1.1.4.5	Handling of gaps	Fully Compliant
1.2	Overview of procedures for connection-oriented services	Fully Compliant
1.2.1	Connection establishment	Fully Compliant
1.2.2	Data transfer	Fully Compliant
1.2.3	Connection release	Fully Compliant
1.3	Overview of procedures for connectionless services	Fully Compliant
1.3.1	General	Fully Compliant
1.3.2	Segmentation/reassembly	Fully Compliant
1.4	Structure of the SCCP and contents of recommendations	Fully Compliant
2	Addressing and routing	Fully Compliant
2.1	SCCP addressing principles	Fully Compliant
2.2	SCCP routing principles	Fully Compliant
2.2.1	Receipt of SCCP message transferred by the MTP	Fully Compliant
2.2.2	Messages passed from connection-oriented or connectionless control to SCCP routing control	Fully Compliant
2.2.2.1	DPC present	Fully Compliant
2.2.2.2	DPC not present	Fully Compliant
2.3	SCCP routing procedures	Fully Compliant
2.3.1	Receipt of SCCP message transferred by the MTP	Fully Compliant
2.3.2	Messages from connectionless or connection oriented control to SCCP routing control	Fully Compliant
Table 1/Q.714	Action upon receipt of a message from connectionless control or a CR from connection-oriented control	Fully Compliant
2.4	Global title translation	Fully Compliant
2.4.1	General characteristics of GTT	Information only
2.4.2	Terminology definitions	Information only
2.4.2.1	GT information	Information only

<b>ITU Q.714 Section</b>	<b>Description</b>	<b>Compliance</b>
2.4.2.2	Other definitions used in the GTT function	Information only
2.4.3	Input of GTT function	Fully Compliant
2.4.3.1	Local information (mandatory input)	Fully Compliant
2.4.3.2	GT information (mandatory input)	Fully Compliant
2.4.3.4	Loadsharing information	Fully Compliant
2.4.4	Output of GTT function	Fully Compliant
2.4.5	Global title translation function	Fully Compliant
2.5	Compatibility test	Fully Compliant
2.6	Traffic limitation mechanism	Fully Compliant
2.6.1	General	Fully Compliant
2.6.2	Importance of message	Fully Compliant
2.6.3	Handling of messages to a congested node	Fully Compliant
2.7	Calling party address treatment	Fully Compliant
2.7.1	Address indicator	Fully Compliant
2.7.2	Calling party address in the international network	Fully Compliant
2.7.3	Routing indicator	Fully Compliant
2.7.4	Screening	Partial Compliant - NOTE 1
2.7.5	Inclusion of OPC in calling party address	Fully Compliant
2.7.5.1	LUDT or XUDT or UDT message	Fully Compliant
2.7.5.2	CR message	Fully Compliant
2.8	Routing failures	Fully Compliant
2.8.1	No translation of address of such nature	Fully Compliant
2.8.2	No translation for an address of such nature	Fully Compliant
2.8.3	MTP/SCCP subsystem failure	Fully Compliant
2.8.4	MTP/SCCP subsystem congestion	Fully Compliant
2.8.5	Unequipped user	Fully Compliant
2.8.6	Hop counter violation	Fully Compliant
3	Connection-oriented procedures	Fully Compliant
3.1	Connection establishment	Fully Compliant
3.1.1	General	Fully Compliant
3.1.2	Local reference number	Fully Compliant
3.1.3	Negotiation procedures	Fully Compliant
3.1.3.1	Protocol class negotiation	Fully Compliant
3.1.3.2	Flow control credit negotiation	Fully Compliant
3.1.4	Action at originating node	Fully Compliant
3.1.4.1	Initial action	Fully Compliant
3.1.4.2	Subsequent action	Fully Compliant
3.1.5	Actions at relay node with coupling	Fully Compliant
3.1.5.1	Initial actions	Fully Compliant
3.1.5.2	Subsequent actions	Fully Compliant
3.1.6	Actions at destination node	Fully Compliant
3.1.6.1	Initial actions	Fully Compliant
3.1.6.2	Subsequent actions	Fully Compliant
3.2	Connection refusal	Fully Compliant
3.2.1	Actions at node initiating connection refusal	Fully Compliant
3.2.1.1	Initiating connection refusal at the destination node	Fully Compliant
3.2.1.2	Initiating connection refusal at a relay node	Fully Compliant
3.2.1.3	Initiating connection refusal at the originating node	Fully Compliant
3.2.2	Actions at a relay node initiating connection refusal	Fully Compliant
3.2.3	Actions at the originating node not initiating connection refusal	Fully Compliant

ITU Q.714 Section	Description	Compliance
3.3	Connection release	Fully Compliant
3.3.1	General	Fully Compliant
3.3.2	Frozen reference	Fully Compliant
3.3.3	Actions at an end node initiating connection release	Fully Compliant
3.3.3.1	Initial actions	Fully Compliant
3.3.3.2	Subsequent actions	Fully Compliant
3.3.4	Actions at a relay node	Fully Compliant
3.3.4.1	Initial actions	Fully Compliant
3.3.4.2	Subsequent actions	Fully Compliant
3.3.5	Actions at an end node not initiating connection release	Fully Compliant
3.4	Inactivity control	Fully Compliant
3.5	Data transfer	Fully Compliant
3.5.1	General	Fully Compliant
3.5.1.1	Actions at the originating node	Fully Compliant
3.5.1.2	Actions at a relay node	Fully Compliant
3.5.1.3	Actions at the destination node	Fully Compliant
3.5.2	Flow control	Fully Compliant
3.5.2.1	General	Fully Compliant
3.5.2.2	Sequence numbering	Fully Compliant
3.5.2.3	Flow control window	Fully Compliant
3.5.2.4	Flow control procedures	Fully Compliant
3.5.2.4.1	Transfer of DT2 messages	Fully Compliant
3.5.2.4.2	Transfer of AK messages	Fully Compliant
3.5.2.4.3	Reception of a Data or AK message	Fully Compliant
3.5.3	Segmenting and reassembly	Fully Compliant
3.6	Expedited data transfer	Fully Compliant
3.6.1	General	Fully Compliant
3.6.2	Actions at the originating node	Fully Compliant
3.6.3	Actions at a relay node	Fully Compliant
3.6.4	Actions at the destination node	Fully Compliant
3.7	Reset	Fully Compliant
3.7.1	General	Fully Compliant
3.7.2	Action at an end node initiating the reset procedure	Fully Compliant
3.7.2.1	Initial actions	Fully Compliant
3.7.2.2	Subsequent actions	Fully Compliant
3.7.3	Actions at a relay node	Fully Compliant
3.7.3.1	Initial actions	Fully Compliant
3.7.3.2	Subsequent actions	Fully Compliant
3.7.4	Actions at an end node initiating the reset procedure	Fully Compliant
3.7.5	Handling of messages during the reset procedure	Fully Compliant
3.8	Restart	Fully Compliant
3.8.1	General	Fully Compliant
3.8.2	Actions at the recovered node	Fully Compliant
3.8.2.1	Initial actions	Fully Compliant
3.8.2.2	Subsequent actions	Fully Compliant
3.8.3	Actions at the non-failed far end node	Fully Compliant
3.8.3.1	Permanent signaling connections	Not Compliant - NOTE 2
3.8.3.2	Abnormalities	Fully Compliant
3.8.3.3	General	Fully Compliant
3.8.4	Syntax error	Fully Compliant



<b>ITU Q.714 Section</b>	<b>Description</b>	<b>Compliance</b>
3.8.5	Action tables	Fully Compliant
3.8.6	Actions upon the reception of an ERR message	Fully Compliant
4	Connectionless procedures	Fully Compliant
4.1	Data transfer	Fully Compliant
4.1.1	Segmentation/reassembly	Fully Compliant
4.1.1.1	Segmentation	Fully Compliant
4.1.1.1.1	General	Fully Compliant
4.1.1.1.2	Normal procedures	Fully Compliant
4.1.1.1.3	Message return procedure	Fully Compliant
4.1.1.3.1	Segmentation not supported	Fully Compliant
4.1.1.3.2	Segmentation failed	Fully Compliant
4.1.1.2	Reassembly	Fully Compliant
4.1.1.2.1	General	Fully Compliant
4.1.1.2.2	Normal procedures	Fully Compliant
4.1.1.2.3	Message return procedures	Fully Compliant
4.1.1.2.3.1	Destination cannot perform reassembly	Fully Compliant
4.1.1.2.3.2	Error in message transport	Fully Compliant
4.1.1.2.3.3	Error in local processing	Fully Compliant
4.1.1.2.3.4	No buffer space to perform reassembly	Fully Compliant
4.1.2	Message change	Partial Compliant (optional part not implemented)
4.2	Message return procedure	Fully Compliant
4.3	Syntax error	Fully Compliant
5	SCCP management procedure	Fully Compliant
5.1	General	Fully Compliant
5.2	Signaling point status management	Fully Compliant
5.2.1	General	Fully Compliant
5.2.2	Signaling point prohibited	Fully Compliant
5.2.3	Signaling point allowed	Fully Compliant
5.2.4	Signaling point congested	Fully Compliant
5.2.5	Local MTP network availability	Fully Compliant
5.2.6	Local MTP network unavailability	Fully Compliant
5.2.7	SCCP reports of SCCP and nodal congestion	Fully Compliant
5.2.7.1	Actions in the congested SCCP node	Fully Compliant
5.2.7.2	Action in a relay or originating node	Fully Compliant
5.2.8	Inter- and Intra- SCMG congestion reports procedure	Fully Compliant
5.3	Subsystem status management	Fully Compliant
5.3.1	General	Fully Compliant
5.3.2	Subsystem prohibited	Fully Compliant
5.3.2.1	Receipt of messages for a prohibited subsystem (response method)	Fully Compliant
5.3.2.2	Receipt of Subsyetem-Prohoibited message or NSTATE request primitive or local user failed	Fully Compliant
5.3.3	Subsystem allowed	Fully Compliant
5.3.4	Subsystem status test	Fully Compliant
5.3.4.1	General	Fully Compliant
5.3.4.2	Actions at the initiating node	Fully Compliant
5.3.4.3	Actions at the receiving node	Fully Compliant
5.3.5	Coordinated state change	Fully Compliant
5.3.5.1	General	Fully Compliant
5.3.5.2	Actions at the requesting node	Fully Compliant



<b>ITU Q.714 Section</b>	<b>Description</b>	<b>Compliance</b>
5.3.5.3	Actions at the requested node	Fully Compliant
5.3.6	Local broadcast	Fully Compliant
5.3.6.1	General	Fully Compliant
5.3.6.2	User-out-of-service	Fully Compliant
5.3.6.3	User-in-service	Fully Compliant
5.3.6.4	Signaling point inaccessible	Fully Compliant
5.3.6.5	Signaling point or remote SCCP accessible	Fully Compliant
5.3.6.6	Restricted importance level reporting	Fully Compliant
5.3.7	Broadcast	Fully Compliant
5.3.7.1	General	Fully Compliant
5.3.7.2	Subsystem prohibited	Fully Compliant
5.3.7.3	Subsystem allowed	Fully Compliant
5.4	MTP/SCMG restart	Fully Compliant
6	References	Information only
6.1	Normative references	Information only
6.2	Informative references	Information only
Annex A	State diagrams for the signaling connection control part of Signaling System No. 7	Fully Compliant
A.1	Introduction	Fully Compliant
A.2	Symbol definition of the state diagrams at the message interface	Fully Compliant
A.3	Symbol definition of the state diagrams	Fully Compliant
Annex B	Action table for the SCOC	Fully Compliant
B.1	Introduction	Fully Compliant
B.2	Symbol definition of the action tables	Fully Compliant
B.3	Table of contents	Fully Compliant
Annex C	State Transition Diagrams (STD) for the signaling connection control part of Signaling System No. 7	Fully Compliant
C.1	General	Fully Compliant
C.2	Drafting conventions	Information only
C.3	Figures	Fully Compliant
C.4	Abbreviations and timers	Fully Compliant NOTE 3
Annex D	State transition diagrams (STD) for SCCP management control	Fully Compliant
D.1	General	Fully Compliant
D.2	Drafting conventions	Fully Compliant
D.3	Figures	Fully Compliant
D.4	Abbreviations and timers	Fully Compliant
		NOTE 3

NOTE 1: Specified for further study and no standard rules are specified.

NOTE 2: No well defined procedure specified.

NOTE 3: Timers are configurable parameters.

### 3.2.5 Performance (Q.716)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.716 (03/1993): "Signaling connection control part (SCCP) performance".

**Table 6 Q.716 Compliance**

ITU Q.716 Section	Description	Compliance
1	General	Information only
1.1	Overview	Information only
1.2	Definitions	Information only
2	Definition of Performance Parameters	Fully Compliant
2.1	Performance Parameter Definitions for the Connectionless Classes	Fully Compliant
2.1.1	Quality of Service Parameters	Fully Compliant
2.1.2	Internal Parameters	Fully Compliant
2.2	Performance Parameter Definitions for the Connection Oriented Classes	Fully Compliant
2.2.1	Quality of Service Parameters	Fully Compliant
2.2.2	Internal Parameters	Fully Compliant
2.3	Correspondence Between the QoS Parameters and the Class	Fully Compliant
Table 1/Q.716	Applicability of QoS Parameters to SCCP Classes	Fully Compliant
3	Specified values for internal parameters	Fully Compliant
3.1	Internal Parameters for Classes 0 and 1	Fully Compliant
3.1.1	Transit time of a UDT message in a relay point	Information only
Table 2/Q.716	Transit time of a UDT message in a relay point	Fully Compliant
3.1.2	Unavailability of a Relay Point	Fully Compliant
3.2	Internal Parameters for Classes 2 and 3	Fully Compliant
3.2.1	Transit Time of a CR Message at a Relay Point without Coupling	Information only
Table 3/Q.716	Transit Time of a CR Message at a Relay Point without Coupling	Fully Compliant
3.2.2	Transit Time of a CR Message at a Relay Point with Coupling	Fully Compliant
3.2.3	Transit Time of a CC Message at a Relay Point with Coupling	Fully Compliant
3.2.4	Transit Time of a DT Message at a Relay Point with Coupling	Fully Compliant
Table 4/Q.716	Transit Time of a CR Message at a Relay Point with Coupling	Fully Compliant
Table 5/Q.716	Transit Time of a CC Message at a Relay Point with Coupling	Fully Compliant
3.2.5	Unavailability of a Relay Point without Coupling	Fully Compliant
3.2.6	Unavailability of a Relay Point without Coupling	Information only
4	Influence of new SS No. 7 Applications	Information only
Table 6/Q.716	Transit time of a DT message in a relay point with coupling	Fully Compliant

### 3.2.6 Monitoring and measurements (Q.752)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.752 (06/1997): "Monitoring and measurements for Signaling System No. 7 networks".

**Table 7 Q.752 Compliance**

ITU Q.752 Section	Description	Compliance
Table 7/Q.752	SCCP error performance	Fully Compliant
Table 8/Q.752	SCCP subsystem availability	Fully Compliant
Table 9/Q.752	SCCP – Utilization	Fully Compliant
Table 9 bis/	SCCP – Quality of Service	Fully Compliant

### 3.3 TCAP compliance (Q.771- Q.775)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ITU-T Recommendation Q.771-Q775 (1996): "Signaling System Number 7 - Transaction capabilities application part".

**Table 8 Q.771 - Q.775 Compliance**

ITU Section	Description	Compliance
Q.771	Functional description of transaction capabilities	Fully Compliant
Q.772	Transaction capabilities information element definitions	Fully Compliant
Q.772 Section 2	Transaction portion	Fully Compliant
Q.772 Section 2.1	Message type	Fully Compliant
Q.772 Section 2.2	Transaction Ids	Fully Compliant
Q.772 Section 3	Component Portion	Fully Compliant
Q.772 Section 3.1	Component type	Fully Compliant
Q.772 Section 4	Dialogue portion	Fully Compliant
Q.772 Section 4.1	Dialogue control APDUs	Fully Compliant
Q.772 Section 4.2	Dialogue portion information elements	Fully Compliant
Q.773	Transaction capabilities formats and encoding	Fully Compliant
Q.773 Section 2	Description conventions	Fully Compliant
Q.773 Section 3	Abstract syntax description	Fully Compliant
Q.773 Section 3.1	TC-Messages	Fully Compliant
Q.773 Section 3.2	Dialogue portion	Fully Compliant
Q.773 Section 3.2.1	Structured dialogue	Fully Compliant
Q.773 Section 3.2.2	Unstructured dialogue	Fully Compliant
Q.773 Section 4	Message representation	Fully Compliant
Q.773 Section 4.1	Encoding rules	Fully Compliant
Q.773 Section 4.1.1	Specification of encoding rules	Fully Compliant
Q.773 Section 4.1.2	Overview of encoding rules	Fully Compliant
Q.773 Section 4.1.3	Transmission order	Fully Compliant
Q.773 Section 4.2	Message encoding	Fully Compliant
Q.773 Section 4.2.1	Transaction Portion	Fully Compliant
Q.773 Section 4.2.2	Component Portion	Fully Compliant

ITU Section	Description	Compliance
Q.773 Section 4.2.3	Dialogue Portion	Fully Compliant
Q.774	Transaction capabilities procedures	Fully Compliant
Q.774 Section 2	Addressing	Fully Compliant
Q.774 Section 3	Transaction capabilities based on a connectionless network service	Fully Compliant
Q.774 Section 3.1	Sub-layering in TCAP	Fully Compliant - NOTE 1
Q.774 Section 3.2	Component sub-layer procedures	Fully Compliant
Q.774 Section 3.2.1	Normal procedure	Fully Compliant
Q.774 Section 3.2.2	Abnormal procedures	Fully Compliant
Q.774 Section 3.2.3	Compatibility issues	Fully Compliant
Q.774 Section 3.3	Transaction sub-layer procedures	Fully Compliant
Q.774 Section 3.3.1	General	Fully Compliant
Q.774 Section 3.3.2	Mapping of TR service primitives to message types	Fully Compliant
Q.774 Section 3.3.3	Normal procedures	Fully Compliant
Q.774 Section 3.3.4	Abnormal procedures relating to transaction control	Fully Compliant
Q.775	Guidelines for using transaction capabilities	Fully Compliant - NOTE 2

NOTE 1: The split between the component and transaction layers is implicitly supported in terms of functionality; however, this separation is not explicit. In other words, these layers are actually within the same layer. The code imparts a separation between them, through naming convention and architecture, to denote the type of interaction the functions have with one another.

NOTE 2: The purpose of this Recommendation is to provide guidelines to potential users of Transaction Capabilities (TC-users). The examples given are illustrations only; they indicate how an application may use TCAP, not how TC must be used in all cases. The technical basis of this Recommendation are Recommendations Q.771 to Q.774; in case of misalignment, these should be considered as the primary reference.

## 4. ANSI STATEMENT OF COMPLIANCE

### 4.1 MTP Compliance (T1.111.4)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.111.4 (1996): Signaling network Functions and Messages. This is the fourth in the series of specifications titled ANSI T1.111, Signaling System No. 7 (SS7) – Message Transfer Part (MTP)

**Table 9 T1.111.4 Compliance**

<b>T1.111.4 Section</b>	<b>Description</b>	<b>Compliance</b>
1	Scope, Purpose and Applications	Fully Compliant
1.1	General characteristics of the signaling network functions	Fully Compliant
1.2	Signaling message handling	Fully Compliant
1.3	Signaling network management	Fully Compliant
2	Signaling message handling	Fully Compliant
2.1	General	Fully Compliant
2.2	Routing label	Fully Compliant
2.3	Message routing function	Fully Compliant
2.4	Message discrimination and distribution function	Partial Compliant
2.4.1	Description	Fully Compliant
2.4.2	Description	Fully Compliant
2.4.3	Description	Fully Compliant
2.4.4	Description	Not Compliant – Note 1
3	Signaling network management	Fully Compliant
3.1	General	Fully Compliant
3.2	Status of signaling links	Fully Compliant
3.3	Procedures used in connection with link status changes	Fully Compliant
3.4	Status of signaling routes	Fully Compliant
3.5	Procedures used in connection with route status changes	Fully Compliant
3.6	Status of signaling points	Fully Compliant
3.7	Procedures used in connection with point status changes	Fully Compliant
3.8	Signaling network congestion	Fully Compliant – Note 2
3.A	Status of local SCCP for alias point code routing	Not Compliant – Note 1
3.B	Procedures used in connection with local SCCP status changes	Not Compliant – Note 1
4	Signaling traffic management	Fully Compliant
4.1	General	Fully Compliant
4.2	Normal routing situation	Fully Compliant
4.3	Signaling link unavailability	Fully Compliant
4.4	Signaling link availability	Fully Compliant
4.5	Signaling route unavailability	Fully Compliant
4.6	Signaling route availability	Fully Compliant
4.7	Signaling route restriction	Fully Compliant
4.8	Signaling point availability	Fully Compliant
5	Changeover	Fully Compliant

<b>T1.111.4 Section</b>	<b>Description</b>	<b>Compliance</b>
5.1	General	Fully Compliant
5.2	Network configurations for changeover	Fully Compliant
5.3	Changeover initiation and actions	Fully Compliant
5.4	Buffer updating procedures	Fully Compliant
5.5	Retrieval and diversion of traffic	Fully Compliant
5.6	Emergency and changeover procedures	Fully Compliant
5.7	Procedures in abnormal conditions	Fully Compliant
6	Change back	Fully Compliant
6.1	General	Fully Compliant
6.2	Change back initiation and actions	Fully Compliant
6.3	Sequence control procedures	Fully Compliant
6.4	Time-controlled diversion procedure	Fully Compliant
6.5	Procedures in abnormal conditions	Fully Compliant
7	Forced rerouting	Fully Compliant
7.1	General	Fully Compliant
7.2	Forced rerouting initiation and actions	Fully Compliant
8	Controlled rerouting	Fully Compliant
8.1	General	Fully Compliant
8.2	Controlled rerouting initiation and actions	Fully Compliant
9	MTP restart	Fully Compliant
9.1	Actions in a signaling point having the transfer function which restarts	Fully Compliant – Note 3
9.2	Actions in a restarting signaling point having no transfer function	Fully Compliant
9.3	Actions in a signaling point X adjacent to a restarting signaling point Y	Fully Compliant
9.4	Actions in signaling point X on receipt of an unexpected TRA or TRW message	Fully Compliant – Note 4
9.5	General rules	Fully Compliant
10	Management inhibiting	Fully Compliant
10.1	General	Fully Compliant
10.2	Inhibiting initiation and actions	Fully Compliant
10.3	Uninhibiting initiation and actions	Fully Compliant
10.3A	Inhibit test procedure actions	Fully Compliant
10.3B	Procedures for abnormal conditions	Fully Compliant
11	Signaling traffic flow control	Fully Compliant
11.1	General	Fully Compliant
11.2	Flow control indications	Fully Compliant
12	Signaling link management	Fully Compliant
12.1	General	Fully Compliant
12.2	Basic signaling link management procedures	Fully Compliant
12.2.1	Description	Fully Compliant
12.2.2	Description	Fully Compliant – Note 5
12.2.3	Description	Fully Compliant
12.2.4	Description	Fully Compliant
12.3	Signaling link management procedures based on automatic allocation of signaling terminals	Not Compliant - Note 6
12.4	Signaling link management procedures based on automatic allocation of signaling data links and signaling terminals.	Partial Compliant - Note 7
12.5	Automatic allocation of signaling terminals	Not Compliant - Note 6

<b>T1.111.4 Section</b>	<b>Description</b>	<b>Compliance</b>
12.6	Automatic allocation of signaling data links	Fully Compliant
12.7	Different signaling link management procedures at two ends of a link set	Not Compliant - Note 6
13	Signaling route management	Fully Compliant
13.1	General	Fully Compliant
13.2	Transfer prohibited	Fully Compliant – Note 1
13.3	Transfer allowed	Fully Compliant – Note 1
13.4	Transfer restricted	Fully Compliant – Note 1, Note 8
13.5	Signaling-route-set-test	Fully Compliant
13.6	Transfer-controlled (International network)	Fully Compliant
13.7	Transfer-controlled (US Networks)	Fully Compliant
13.8	Transfer-controlled (National option without congestion priorities)	Fully Compliant
13.9	Signaling-route-set-congestion-test	Fully Compliant
14	Common characteristics of MTP3 Level 3 message formats	Fully Compliant
14.1	General	Fully Compliant
14.2	Service information octet	Fully Compliant
14.3	Label	Fully Compliant
15	Format and codes of signaling network management messages	Fully Compliant
15.1	General	Fully Compliant
15.2	Label	Fully Compliant
15.3	Heading Code (H0)	Fully Compliant
15.4	Changeover message	Fully Compliant
15.5	Changeback message	Fully Compliant
15.6	Emergency changeover message	Fully Compliant
15.7	Transfer prohibited message	Fully Compliant
15.8	Transfer allowed message	Fully Compliant
15.9	Transfer restricted message	Fully Compliant
15.10	Signaling route set test message	Fully Compliant
15.11	Management inhibit message	Fully Compliant
15.12	Signaling data link connection order message	Fully Compliant – Note 9
15.13	Signaling data link connection acknowledgment message	Fully Compliant – Note 9
15.14	Transfer controlled message	Fully Compliant
15.15	Signaling route set congestion test message	Fully Compliant
15.16	Traffic restart message	Fully Compliant
15.17	User part unavailable message	Fully Compliant
15.18	Abbreviations used in Table 1/T1.111.4	Information only
16	State transition diagrams	Fully Compliant
16.1	General	Fully Compliant
16.2	Drafting conventions	Information only
16.3	Signaling message handling	Fully Compliant
16.4	Signaling traffic management	Fully Compliant
16.5	Signaling link management	Fully Compliant
16.6	Signaling route management	Fully Compliant
16.7	Abbreviations and timers used in Figures 23 to 46C/T1.111.5	Information only

<b>1.111.4 Action</b>		
Annex A	Summary of modifications to MTP Level 3 for use of the services offered by SSCF at NNI (SAAL Links)	Fully Compliant

NOTE 1: Alias point codes/Cluster are not supported fully. Incoming cluster messages are processed normally but no cluster-based routing is supported and no outgoing cluster messages are sent.

NOTE 2: Congestion abatement and discard thresholds coincide with the onset thresholds.

NOTE 3: No timer T27 is provided. `Sufficient` number of links is treated as `all` links for stopping T22. No timer T24 is provided since all broadcast is done in a single scheduling.

NOTE 4: No timer T30 is provided since all broadcast is done in a single scheduling.

NOTE 5: Link oscillation procedure B is used.

NOTE 6: Procedures for automatic allocation of signaling terminals are very much dependent upon the system on which MTP3/MTP2 operate. These are best taken care of by the layer management and fault management functions in the system. No customer requirement has been observed till now for these procedures.

NOTE 7: Support of messages for connecting the data links (DLC/CNP/CNS/CSS) is provided. But support for automatic allocation of terminals not provided due to reasons mentioned in Note 1.

NOTE 8: In 13.4.2, (2) to determine restriction in case of congestion, one congested link is treated as `sufficient` links.

NOTE 9: Support for message formats is provided. However, no customer requirement has been observed till now for corresponding procedures.



## 4.2 SCCP compliance

### 4.2.1 Functional Description (T1.112.1)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.112.1 (1996): "Functional Description for the Signaling Connection Control Part (SCCP)".

**Table 10 T1.112.1 Compliance**

<b>T1.112.1 Section</b>	<b>Description</b>	<b>Compliance</b>
1	Scope, Purpose and Application	Information only
1.1	General	Information only
1.2	Objectives	Information only
1.3	General Characteristics	Information only
1.3.1	Technique of Description	Information only
1.3.2	Primitives	Information only
1.3.3	Peer-to-Peer Communication	Information only
1.3.4	Contents of ANSI T1.112	Information only
2	Services Provided by the SCCP	Information only
2.1	Connection-Oriented Services	Information only
2.1.1	Temporary Signaling Connections	Information only
2.1.1.1	Description	Information only
2.1.1.1.1	Connection Establishment Phase	Information only
2.1.1.1.2	Data Transfer Phase	Information only
2.1.1.1.3	Connection Release Phase	Information only
2.1.1.2	Network Service Primitives and Parameters	Information only
2.1.1.2.1	Overview	Information only
2.1.1.2.2	Connection Establishment Phase	Information only
2.1.1.2.3	Data Transfer Phase	Information only
2.1.1.2.4	Release Phase	Information only
2.1.1.2.5	Notice Service	Information only
2.1.2	Permanent Signaling Connection	Information only
2.1.2.1	Description	Information only
2.1.2.2	Primitives and Parameters	Information only
2.2	Connectionless Service	Information only
2.2.1	Description	Information only
2.2.2	Primitives and Parameters of the Connectionless Services	Information only
2.2.2.1	Overview	Information only
2.2.2.2	Parameters	Information only
2.2.2.2.1	Address	Information only
2.2.2.2.2	Quality of Service Parameter Set	Information only
2.2.2.2.3	Reason for Return	Information only
2.2.2.2.4	User Data	Information only
2.2.2.3	Primitives	Information only
2.2.2.3.1	N-UNITDATA	Information only
2.2.2.3.2	N-NOTICE	Information only
2.3	SCCP Management	Information only
2.3.1	Description	Information only
2.3.2	Primitives and Parameters of the SCCP Management	Information only
2.3.2.1	Overview	Information only

<b>T1.112.1 Section</b>	<b>Description</b>	<b>Compliance</b>
2.3.2.2	Parameters	Information only
2.3.2.2.1	Address	Information only
2.3.2.2.2	Affected User	Information only
2.3.2.2.3	User status	Information only
2.3.2.2.3A	Traffic Mix	Information only
2.3.2.2.4	Subsystem Multiplicity Indicator	Information only
2.3.2.2.5	Affected DPC	Information only
2.3.2.2.6	Signaling Point Status	Information only
2.3.2.2.7	Confirm Status	Information only
2.3.2.3	Primitives	Information only
2.3.2.3.1	N-COORD	Information only
2.3.2.3.2	N-STATE	Information only
2.3.2.3.3	N-TRAFFIC	Information only
2.3.2.3.4	N-PCSTATE	Information only
3	Services Assumed from the MTP	Information only
3.1	Description	Information only
3.2	Primitives and Parameters	Information only
3.2.1	MTP-TRANSFER	Information only
3.2.2	MTP-PAUSE	Information only
3.2.3	MTP-RESUME	Information only
3.2.4	MTP-STATUS	Information only
4	Functions Provided by the SCCP	Information only
4.1	Connection-Oriented Functions	Information only
4.1.1	Functional for Temporary Signaling Connections	Information only
4.1.1.1	Connection Establishment Functions	Information only
4.1.1.2	Data Transfer Phase Functions	Information only
4.1.1.3	Release Phase Functions	Information only
4.1.2	Functions for Permanent Signaling Connections	Information only
4.1.2.1	Connection Establishment Phase and Connection Release Phase	Information only
4.1.2.2	Data Transfer Phase Functions	Information only
4.2	Connectionless Service Functions	Information only
Table 1 T1.112.1	Network Service Primitives for Connection-Oriented Services	Information only
Table 2/ T1.112.1	Parameters of the Primitive N-CONNECT	Information only
Table 3/ T1.112.1	Parameters of the Primitive N-DATA	Information only
Table 4/ T1.112.1	Parameters of the Primitive N-EXPEDITED DATA	Information only
Table 5/ T1.112.1	Parameters of the Primitive N-RESET	Information only
Table 6/ T1.112.1	Parameters of the Primitive N-DISCONNECT	Information only
Table 6A/ T1.112.1	Parameters of the Primitive N-INFORM	Information only
Table 7/ T1.112.1	Primitives of the Data Transfer on Permanent Connection	Information only
Table 8/ T1.112.1	Primitives and Parameter of the Connectionless Service	Information only
Table 8A/ T1.112.1	Parameters of the Primitive N-UNITDATA	Information only

<b>T1.112.1 Section</b>	<b>Description</b>	<b>Compliance</b>
Table 8B/ T1.112.1	Parameters of the Primitive N-NOTICE	Information only
Table 8C/ T1.112.1	Primitives and Parameters of the SCCP Management	Information only
Table 8D/ T1.112.1	Parameters of the Primitive N-COORD	Information only
Table 8E/ T1.112.1	Parameters of the Primitive N-STATE	Information only
Table 8F/ T1.112.1	Parameters of the Primitive N-TRAFFIC	Information only
Table 8G/ T1.112.1	Parameters of the Primitive N-PCSTATE	Information only
Table 9/ T1.112.1	Message Transfer Part Service Primitives	Information only
Figure 1/ T1.112.1	Functional Diagram for the Common Channel Signaling System	Information only
Figure 2/ T1.112.1	Relationship between the SCCP Protocol and Adjacent Services	Information only
Figure 3/ T1.112.1	Service Primitives	Information only
Figure 4/ T1.112.1	Specific Names of Service Primitives and Peer to Peer Communication	Information only
Figure 5/ T1.112.1	Model for the Internode Communication within the SCCP (Connection-Oriented Service)	Information only
Figure 6/ T1.112.1	State Transition Diagram for the Sequence of Primitives at a Connection Endpoint (Basic Transitions)	Information only
Annex A	Network Layer Service	Information only

## 4.2.2 Definition and Function (T1.112.2)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.112.2 (1996): "Definitions and Functions of Signaling Connection Control Part Messages".

**Table 11 T1.112.2 Compliance**

<b>T1.112.2 Section</b>	<b>Description</b>	<b>Compliance</b>
1	Scope, Purpose and Application	Information only
2	Signaling Connection Control Part Messages	Information only
2.1	Connection Confirm (CC)	Fully Compliant
2.2	Connection Request (CR)	Fully Compliant
2.3	Connection Refused (CREF)	Fully Compliant
2.4	Data Acknowledgement (AK):	Fully Compliant
2.5	Data Form 1 (DT1):	Fully Compliant
2.6	Data form 2 (DT2):	Fully Compliant
2.7	Expedited Data (ED):	Fully Compliant
2.8	Expedited Data Acknowledgement (EA):	Fully Compliant
2.9	Inactivity test (IT):	Fully Compliant
2.10	Protocol data unit error (ERR)	Fully Compliant
2.11	Released (RLSD):	Fully Compliant
2.12	Release complete (RLC):	Fully Compliant
2.13	Reset Confirm (RSC):	Fully Compliant
2.14	Reset Request (RSR):	Fully Compliant
2.15	Unitdata (UDT)	Fully Compliant
2.15A	Extended Unitdata (XUDT)	Fully Compliant
2.16	Unitdata Service (UDTS)	Fully Compliant
2.16A	Extended Unitdata Service (XUDTS):	Fully Compliant
3	Messages for SCCP Subsystem Management	Fully Compliant
3.1	Subsystem-Allowed (SSA)	Fully Compliant
3.2	Subsystem-Prohibited (SSP)	Fully Compliant
3.3	Subsystem-Status-Test (SST)	Fully Compliant
3.4	Subsystem-Out-of-Service-Request (SOR)	Fully Compliant
3.5	Subsystem-Out-of-Service-Grant (SOG)	Fully Compliant
3.6	Subsystem-Backup-Routing (SBR) (Optional)	Fully Compliant
3.7	Subsystem-Normal-Routing (SNR) (Optional)	Fully Compliant
3.8	Subsystem-Routing-Status-Test (SRT) (Optional)	Fully Compliant
4	SCCP Parameters	Information only
4.1	Calling/called party address	Fully Compliant
4.2	Credit	Fully Compliant
4.3	Data	Fully Compliant
4.4	Diagnostic	Fully Compliant
4.5	End of optional parameters	Fully Compliant
4.6	Error cause	Fully Compliant
4.7	Local Reference Number (source/destination)	Fully Compliant
4.8	Message type code	Fully Compliant
4.9	Protocol Class	Fully Compliant
4.10	Receive Sequence Number	Fully Compliant
4.11	Refusal Cause	Fully Compliant
4.12	Release Cause	Fully Compliant
4.13	Reset Cause	Fully Compliant

<b>T1.112.2 Section</b>	<b>Description</b>	<b>Compliance</b>
4.14	Return Cause	Fully Compliant
4.15	Segmenting/Reassembling	Fully Compliant
4.16	Sequencing/Segmenting	Fully Compliant
4.17	SCCP hop counter	Fully Compliant
4.18	Segmentation	Fully Compliant
4.19	Intermediate Signaling Network Identification (ISNI)	Fully Compliant
5	Parameters for SCCP Subsystem Management	Information only
5.1	Affected subsystem number	Fully Compliant
5.2	Affected point code	Fully Compliant
5.3	Subsystem multiplicity indicator	Fully Compliant
6	Inclusion of Fields in the Messages	Information only
Table1/ T1.112.2	Message Type Code	Fully Compliant
	Destination local reference number – CC	Fully Compliant
	Destination local reference number -- CREF	Fully Compliant
	Destination local reference number – RLSD	Fully Compliant
	Destination local reference number – RLC	Fully Compliant
	Destination local reference number -- DT1	Fully Compliant
	Destination local reference number -- DT2	Fully Compliant
	Destination local reference number – AK	Fully Compliant
	Destination local reference number – ED	Fully Compliant
	Destination local reference number – EA	Fully Compliant
	Destination local reference number – RSR	Fully Compliant
	Destination local reference number – RSC	Fully Compliant
	Destination local reference number – ERR	Fully Compliant
	Destination local reference number – IT	Fully Compliant
	Source local reference number – CR	Fully Compliant
	Source local reference number – CC	Fully Compliant
	Source local reference number – RLSD	Fully Compliant
	Source local reference number – RLC	Fully Compliant
	Source local reference number – RSR	Fully Compliant
	Source local reference number -- RSC	Fully Compliant
	Source local reference number – IT	Fully Compliant
	Called party address -- CR (Mandatory)	Fully Compliant
	Called party address – CC (Optional)	Fully Compliant
	Called party address – CREF (Optional)	Fully Compliant
	Called party address – UDT (Mandatory)	Fully Compliant
	Called party address – UDTs (Mandatory)	Fully Compliant
	Called party address – XUDT (Mandatory)	Fully Compliant
	Called party address – XUUDTs (Mandatory)	Fully Compliant
	Calling Party Address -- CR (Optional)	Fully Compliant
	Calling Party Address -- UDT (Mandatory)	Fully Compliant
	Calling Party Address -- UDTs (Mandatory)	Fully Compliant
	Calling Party Address -- XUUDT (Mandatory)	Fully Compliant
	Calling Party Address -- XUUDTs (Mandatory)	Fully Compliant
	Protocol Class -- CR (Mandatory)	Fully Compliant
	Protocol Class -- CC (Mandatory)	Fully Compliant
	Protocol Class -- IT (Mandatory)	Fully Compliant
	Protocol Class -- UDT (Mandatory)	Fully Compliant
	Protocol Class -- XUUDT (Mandatory)	Fully Compliant
	Segmenting/reassembling -- DT1 (Mandatory)	Fully Compliant

<b>T1.112.2 Section</b>	<b>Description</b>	<b>Compliance</b>
	Receive sequence number – AK (Mandatory)	Fully Compliant
	Sequencing/segmenting – DT2 (Mandatory)	Fully Compliant
	Sequencing/segmenting – IT (Mandatory)	Fully Compliant
	Credit -- CR (Optional)	Fully Compliant
	Credit-- CC (Optional)	Fully Compliant
	Credit -- AK (Mandatory)	Fully Compliant
	Credit-- IT (Mandatory)	Fully Compliant
	Release Cause – RLSD (Mandatory)	Fully Compliant
	Return Cause – UDTS (Mandatory)	Fully Compliant
	Return Cause – XUDTS (Mandatory)	Fully Compliant
	Reset Cause – RSR (Mandatory)	Fully Compliant
	Error Cause – ERR (Mandatory)	Fully Compliant
	User Data -- CR (Optional)	Fully Compliant
	User Data – CC (Optional)	Fully Compliant
	User Data – CREF (Optional)	Fully Compliant
	User Data -- – RLSD (Optional)	Fully Compliant
	User Data – DT1 (Mandatory)	Fully Compliant
	User Data – DT2 (Mandatory)	Fully Compliant
	User Data -- – ED (Mandatory)	Fully Compliant
	User Data – UDT (Mandatory)	Fully Compliant
	User Data – UDTS (Mandatory)	Fully Compliant
	User Data – XUDT (Mandatory)	Fully Compliant
	User Data – XUDTS (Mandatory)	Fully Compliant
	Refusal Cause – CREF (Mandatory)	Fully Compliant
	End of Optional Parameters -- CR (Optional)	Fully Compliant
	End of Optional Parameters – CC (Optional)	Fully Compliant
	End of Optional Parameters – CREF (Optional)	Fully Compliant
	End of Optional Parameters -- – RLSD (Optional)	Fully Compliant
	End of Optional Parameters – XUDT (Optional)	Fully Compliant
	End of Optional Parameters – XUDTS (Optional)	Fully Compliant
	Hop Counter -- CR (Optional)	Fully Compliant
	Hop Counter – XUDT (Mandatory)	Fully Compliant
	Hop Counter – XUDTS (Mandatory)	Fully Compliant
	Segmentation – XUDT (Optional)	Fully Compliant
	Segmentation – XUDTS (Optional)	Fully Compliant
	ISNI – XUDT (Optional)	Fully Compliant
	ISNI – XUDTS (Optional)	Fully Compliant
	Hop Counter -- CR (Optional)	Fully Compliant
	Hop Counter – XUDT (Mandatory)	Fully Compliant
	Hop Counter – XUDTS (Mandatory)	Fully Compliant
	Segmentation – XUDT (Optional)	Fully Compliant
	Segmentation – XUDTS (Optional)	Fully Compliant
	ISNI – XUDT (Optional)	Fully Compliant
	ISNI – XUDTS (Optional)	Fully Compliant
Table 2/ T1.112.2	SCCP Management Messages	Information only
	SCMG format ID – SSP (Mandatory)	Fully Compliant
	SCMG format ID – SSA (Mandatory)	Fully Compliant
	SCMG format ID – SST (Mandatory)	Fully Compliant
	SCMG format ID – SOR (Mandatory)	Fully Compliant
	SCMG format ID – SOG (Mandatory)	Fully Compliant
	SCMG format ID – SBR (Mandatory)	Fully Compliant

T1.112.2 Section	Description	Compliance
	SCMG format ID – SNR (Mandatory)	Fully Compliant
	SCMG format ID – SRT (Mandatory)	Fully Compliant
	Affected SSN – SSP (Mandatory)	Fully Compliant
	Affected SSN – SSA (Mandatory)	Fully Compliant
	Affected SSN – SST (Mandatory)	Fully Compliant
	Affected SSN – SOR (Mandatory)	Fully Compliant
	Affected SSN – SOG (Mandatory)	Fully Compliant
	Affected SSN – SBR (Mandatory)	Fully Compliant
	Affected SSN – SNR (Mandatory)	Fully Compliant
	Affected SSN – SRT (Mandatory)	Fully Compliant
	Affected PC – SSP (Mandatory)	Fully Compliant
	Affected PC – SSA (Mandatory)	Fully Compliant
	Affected PC – SST (Mandatory)	Fully Compliant
	Affected PC – SOR (Mandatory)	Fully Compliant
	Affected PC – SOG (Mandatory)	Fully Compliant
	Affected PC – SBR (Mandatory)	Fully Compliant
	Affected PC – SNR (Mandatory)	Fully Compliant
	Affected PC – SRT (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SSP (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SSA (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SST (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SOR (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SOG (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SBR (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SNR (Mandatory)	Fully Compliant
	Subsystem Multiplicity Indicator – SRT (Mandatory)	Fully Compliant



### 4.2.3 Formats and Codes (T1.112.3)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.112.3 (1996): "Signaling Connection Control Part Formats and Codes".

**Table 12 T1.112.3 Compliance**

<b>T1.112.3 Section</b>	<b>Description</b>	<b>Compliance</b>
1	Scope, Purpose And Applications	Information only
1.1	Routing label	Information only
1.2	Message type code	Information only
1.3	Formatting principles	Information only
1.4	Mandatory fixed part	Information only
1.5	Mandatory variable part	Information only
1.6	Optional part	Information only
1.7	End of optional parameters octet	Information only
1.8	Order of transmission	Information only
1.9	Coding of spare bits	Information only
1.10	National message types and parameters	Information only
2	Coding of the general parts	Information only
2.1	Coding of the message type	Information only
2.2	Coding of the length indicator	Information only
2.3	Coding of the pointers	Information only
3	SCCP Parameters	Information only
3.1	End of optional parameters	Fully Compliant
3.2	Destination local reference	Fully Compliant
3.3	Source local reference	Fully Compliant
3.4	Called party address	Fully Compliant
3.4.1	Address indicator	Fully Compliant
3.4.2	Address	Fully Compliant
3.4.2.1	Subsystem number	Fully Compliant
3.4.2.2	Signaling point code	Fully Compliant
3.4.2.3	Global title	Partial Compliant - NOTE 1
3.4.2.3.1	Global title indicator = 0001	Fully Compliant
3.4.2.3.2	Global title indicator = 0010	Fully Compliant
3.5	Calling party address	Fully Compliant
3.6	Protocol class	Fully Compliant
3.7	Segmenting/reassembling	Fully Compliant
3.8	Receive sequence number	Fully Compliant
3.9	Sequencing/segmenting	Fully Compliant
3.10	Credit	Fully Compliant
3.11	Release cause	Fully Compliant
3.12	Return cause (formerly Diagnostic)	Fully Compliant
3.13	Reset cause	Fully Compliant
3.14	Error cause	Fully Compliant
3.15	Refusal cause	Fully Compliant
3.16	Data	Fully Compliant
3.17	SCCP Hop Counter	Fully Compliant – NOTE 2
3.18	Segmentation	Fully Compliant



<b>T1.112.3 Section</b>	<b>Description</b>	<b>Compliance</b>
3.19	Intermediate Signaling Network Identification (ISNI)	Fully Compliant
4	SCCP messages and codes	Information only
4.1	General	Information only
4.2	Connection request (CR)	Information only
4.3	Connection confirm (CC)	Information only
4.4	Connection refused (CREF)	Information only
4.5	Released (RLSD)	Information only
4.6	Release complete (RLC)	Information only
4.7	Data form 1 (DT1)	Information only
4.8	Data form 2 (DT2)	Information only
4.9	Data acknowledgement (AK)	Information only
4.10	Unitdata (UDT)	Information only
4.10A	Extended Unitdata (XUDT)	Information only
4.11	Unitdata service (UDTS)	Information only
4.11A	Extended Unitdata service (XUDTS)	Information only
4.12	Expedited data (ED)	Information only
4.13	Expedited data acknowledgement (EA)	Information only
4.14	Reset request (RSR)	Information only
4.15	Reset confirmation (RSC)	Information only
4.16	Protocol data unit error (ERR)	Information only
4.17	Inactivity test (IT)	Information only
5	SCCP Management messages and codes	Information only
5.1	General	Information only
5.1.1	SCMG Format Identifier	Information only
5.2	SCMG message parameters	Fully Compliant
5.2.1	End of Optional Parameters (deleted, not used)	Fully Compliant
5.2.2	Affected SSN	Fully Compliant
5.2.3	Affected PC	Fully Compliant
5.2.4	Subsystem multiplicity indicator	Fully Compliant
5.3	SCMG Messages	Fully Compliant
Table 1/ T1.112.3	SCCP Message types	Fully Compliant
Table 2/ T1.112.3	SCCP Parameter name codes	Fully Compliant
Table 3/ T1.112.3	Connection request message	Fully Compliant
Table 4/ T1.112.3	Connection confirm message	Fully Compliant
Table 5/ T1.112.3	Connection refused message	Fully Compliant
Table 6/ T1.112.3	Released message	Fully Compliant
Table 7/ T1.112.3	Release complete message	Fully Compliant
Table 8/ T1.112.3	Data form 1 message	Fully Compliant
Table 9/ T1.112.3	Data form 2 message	Fully Compliant
Table 10/ T1.112.3	Data acknowledgement message	Fully Compliant
Table 11/ T1.112.3	Unitdata message	Fully Compliant

<b>T1.112.3 Section</b>	<b>Description</b>	<b>Compliance</b>
Table 11/ T1.112.3	Extended Unitdata message	Fully Compliant
Table 12/ T1.112.3	Unitdata service message	Fully Compliant
Table 12A/ T1.112.3	Extended Unitdata service message	Fully Compliant
Table 13/ T1.112.3	Expedited data message	Fully Compliant
Table 14/ T1.112.3	Expedited data acknowledgement message	Fully Compliant
Table 15/ T1.112.3	Reset request message	Fully Compliant
Table 16/ T1.112.3	Reset confirmation message	Fully Compliant
Table 17/ T1.112.3	Error message	Fully Compliant
Table 18/ T1.112.3	Inactivity test message	Fully Compliant
Table 19/ T1.112.3	SCMG Management Message Format	Fully Compliant
Table 20/ T1.112.3	SCMG format identifiers	Fully Compliant
Table 21/ T1.112.3	SCMG parameter name codes	Fully Compliant
Table 22/ T1.112.3	SCMG Message	Fully Compliant
Annex A	Guidelines and Procedures for Assigning Internetwork Translation Type Code Values	Information only
Annex B	Descriptions of Application/Translation Groups	Information only
Annex C	Mapping for cause Parameter Values	Information only
C.1	Introduction	Information only
C.2	Connection Refusal	Information only
Table C-1/ T1.112.3	Mapping During Connection Refusal	Fully Compliant
C.3	Connection Release	Information only
Table C-2/ T1.112.3	Mapping During Connection Release	Fully Compliant
C.4	Connection Reset	Information only
Table C-3/ T1.112.3	Mapping During Connection Reset	Fully Compliant

NOTE 1: A run-time selectable dummy function is provided to allow customers to implement the national specific encoding scheme GTT.

NOTE 2: At the originating node the hop counter shall be filled in with the default hop counter value configured in network configuration.

## 4.2.4 Procedures (T1.112.4)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.112.4 (1996): "Signaling Connection Control Part Procedures".

**Table 13 T1.112.4 Compliance**

<b>T1.112.4 Section</b>	<b>Description</b>	<b>Compliance</b>
1	Scope, Purpose and Application	Fully Compliant
1.1	General characteristics of signaling connection control procedures	Fully Compliant
1.1.1	Purpose	Fully Compliant
1.1.2	Protocol classes	Fully Compliant
1.1.2.1	Protocol class 0	Fully Compliant
1.1.2.2	Protocol class 1	Fully Compliant
1.1.2.3	Protocol class 2	Fully Compliant
1.1.2.4	Protocol class 3	Fully Compliant
1.1.3	Signaling connections	Fully Compliant
1.1.4	Compatibility and handling of unrecognized information	Fully Compliant
1.1.4.1	Rules for compatibility	Fully Compliant
1.1.4.2	Handling of unrecognized messages or parameters	Fully Compliant
1.1.4.3	Handling of non-mandatory, unsupported parameter values	Fully Compliant
1.1.4.4	Treatment of spare fields	Fully Compliant
1.1.4.5	Handling of gaps	Fully Compliant
1.2	Overview of procedures for connection-oriented services	Fully Compliant
1.2.1	Connection establishment	Fully Compliant
1.2.2	Data transfer	Fully Compliant
1.2.3	Connection release	Fully Compliant
1.3	Overview of procedures for connectionless services	Fully Compliant
1.3.1	General	Fully Compliant
1.4	Structure of the SCCP and contents of Specification	Fully Compliant
2	Addressing and routing	Fully Compliant
2.1	SCCP addressing	Fully Compliant
2.2	SCCP routing principles	Fully Compliant
2.2.1	Receipt of SCCP message transferred by the MTP	Fully Compliant
2.2.2	Messages passed from connection-oriented or connectionless control to SCCP routing control	Fully Compliant
2.2.2.1	DPC present	Fully Compliant
2.2.2.2	Translation Required	Fully Compliant
2.3	SCCP routing	Fully Compliant
2.3.1	Receipt of SCCP message transferred by the MTP	Fully Compliant
2.3.2	Messages from connectionless or connection oriented control to SCCP routing control	Fully Compliant
2.4	Routing failures	Fully Compliant
3	Connection-oriented procedures	Fully Compliant
3.1	Connection establishment	Fully Compliant
3.1.1	General	Fully Compliant
3.1.2	Local reference number	Fully Compliant
3.1.3	Negotiation procedures	Fully Compliant
3.1.3.1	Protocol class negotiation	Fully Compliant
3.1.3.2	Flow control credit negotiation	Fully Compliant

<b>T1.112.4 Section</b>	<b>Description</b>	<b>Compliance</b>
3.1.4	Action at originating node	Fully Compliant
3.1.4.1	Initial action	Fully Compliant
3.1.4.2	Subsequent action	Fully Compliant
3.1.5	Actions at relay node with coupling	Fully Compliant
3.1.5.1	Initial actions	Fully Compliant
3.1.5.2	Subsequent actions	Fully Compliant
3.1.6	Actions at destination node	Fully Compliant
3.1.6.1	Initial actions	Fully Compliant
3.1.6.2	Subsequent actions	Fully Compliant
3.2	Connection refusal	Fully Compliant
3.2.1	Actions at node initiating connection refusal	Fully Compliant
3.2.1.1	Initiating connection refusal at the destination node	Fully Compliant
3.2.1.2	Initiating connection refusal at a relay node	Fully Compliant
3.2.1.3	Initiating connection refusal at the originating node	Fully Compliant
3.2.2	Actions at a relay node initiating connection refusal	Fully Compliant
3.2.3	Actions at the originating node not initiating connection refusal	Fully Compliant
3.3	Connection release	Fully Compliant
3.3.1	General	Fully Compliant
3.3.2	Frozen reference	Fully Compliant
3.3.3	Actions at an end node initiating connection release	Fully Compliant
3.3.3.1	Initial actions	Fully Compliant
3.3.3.2	Subsequent actions	Fully Compliant
3.3.4	Actions at a relay node	Fully Compliant
3.3.4.1	Initial actions	Fully Compliant
3.3.4.2	Subsequent actions	Fully Compliant
3.3.5	Actions at an end node not initiating connection release	Fully Compliant
3.4	Inactivity control	Fully Compliant
3.5	Data transfer	Fully Compliant
3.5.1	General	Fully Compliant
3.5.1.1	Actions at the originating node	Fully Compliant
3.5.1.2	Actions at a relay node	Fully Compliant
3.5.1.3	Actions at the destination node	Fully Compliant
3.5.2	Flow control	Fully Compliant
3.5.2.1	General	Fully Compliant
3.5.2.2	Sequence numbering	Fully Compliant
3.5.2.3	Flow control window	Fully Compliant
3.5.2.4	Flow control procedures	Fully Compliant
3.5.2.4.1	Transfer of Data Form 2 messages	Fully Compliant
3.5.2.4.2	Transfer of Data Acknowledgement messages	Fully Compliant
3.5.2.4.3	Reception of a Data or Data Acknowledgement message	Fully Compliant
3.5.3	Segmenting and reassembly	Fully Compliant
3.6	Expedited data transfer	Fully Compliant
3.6.1	General	Fully Compliant
3.6.2	Actions at the originating node	Fully Compliant
3.6.3	Actions at a relay node	Fully Compliant
3.6.4	Actions at the destination node	Fully Compliant
3.7	Reset	Fully Compliant
3.7.1	General	Fully Compliant
3.7.2	Action at an end node initiating the reset procedure	Fully Compliant
3.7.2.1	Initial actions	Fully Compliant
3.7.2.2	Subsequent actions	Fully Compliant
3.7.3	Actions at a relay node	Fully Compliant

<b>T1.112.4 Section</b>	<b>Description</b>	<b>Compliance</b>
3.7.3.1	Initial actions	Fully Compliant
3.7.3.2	Subsequent actions	Fully Compliant
3.7.4	Actions at an end node initiating the reset procedure	Fully Compliant
3.7.5	Handling of messages during the reset procedure	Fully Compliant
3.8	Restart	Fully Compliant
3.8.1	General	Fully Compliant
3.8.2	Actions at the recovered node	Fully Compliant
3.8.2.1	Initial actions	Fully Compliant
3.8.2.2	Subsequent actions	Fully Compliant
3.8.3	Actions at the non-failed far end node	Fully Compliant
3.9	Permanent signaling connections	Not Compliant – NOTE 1
3.10	Abnormalities	Fully Compliant
3.10.1	General	Fully Compliant
3.10.2	Syntax error	Fully Compliant
3.10.3	Action tables	Fully Compliant
3.10.4	Actions upon the reception of an Protocol Data Unit Error (ERR) message	Fully Compliant
4	Connectionless procedures	Fully Compliant
4.1	Data transfer	Fully Compliant
4.1.1	Segmentation/reassembly	Fully Compliant
4.1.1.1	Segmentation	Fully Compliant
4.1.1.1.1	General	Fully Compliant
4.1.1.1.2	Normal procedures	Fully Compliant
4.1.1.1.3	Return on Error Procedure	Fully Compliant
4.1.1.2	Reassembly	Fully Compliant
4.1.1.2.1	General	Fully Compliant
4.1.1.2.2	Normal procedures	Fully Compliant
4.1.1.2.3	Return on Error Procedures	Fully Compliant
4.2	Message return	Fully Compliant
4.3	Syntax error	Fully Compliant
5	SCCP management procedure	Fully Compliant
5.1	General	Fully Compliant
5.2	Signaling point status management	Fully Compliant
5.2.1	General	Fully Compliant
5.2.2	Signaling point prohibited	Fully Compliant
5.2.3	Signaling point allowed	Fully Compliant
5.2.4	Signaling point congested	Fully Compliant
5.2.5	SCCP reaction to local MTP restart	Fully Compliant
5.3	Subsystem status management	Fully Compliant
5.3.1	General	Fully Compliant
5.3.2	Subsystem prohibited	Fully Compliant
5.3.2.1	Receipt of messages for a prohibited subsystem	Fully Compliant
5.3.2.2	Receipt of Subsystem-Prohibited message or NSTATE request primitive or local user failed	Fully Compliant
5.3.3	Subsystem allowed	Fully Compliant
5.3.4	Subsystem status test	Fully Compliant
5.3.4.1	General	Fully Compliant
5.3.4.2	Actions at the initiating node	Fully Compliant
5.3.4.3	Actions at the receiving node	Fully Compliant
5.3.5	Coordinated state change	Fully Compliant

<b>T1.112.4 Section</b>	<b>Description</b>	<b>Compliance</b>
5.3.5.1	General	Fully Compliant
5.3.5.2	Actions at the requesting node	Fully Compliant
5.3.5.3	Actions at the requested node	Fully Compliant
5.3.6	Local broadcast	Fully Compliant
5.3.6.1	General	Fully Compliant
5.3.6.2	User-out-of-service	Fully Compliant
5.3.6.3	User-in-service	Fully Compliant
5.3.6.4	Signaling point inaccessible	Fully Compliant
5.3.6.5	Signaling point accessible	Fully Compliant
5.3.6.6	Signaling point congested	Fully Compliant
5.3.6.7	SCCP inaccessible	Fully Compliant
5.3.6.8	SCCP accessible	Fully Compliant
5.3.7	Broadcast	Fully Compliant
5.3.7.1	General	Fully Compliant
5.3.7.2	Subsystem prohibited	Fully Compliant
5.3.7.3	Subsystem allowed	Fully Compliant
5.4	Traffic Information Management (Optional)	Partial Compliant – NOTE 2
5.4.1	General	Information only
5.4.2	Traffic mix procedure	Information only
5.4.2.1	End-Node/Database	Information only
5.4.2.1.1	Traffic-Mix Information	Partial Compliant
5.4.2.1.2	Subsystem Backup Routing	Partial Compliant
5.4.2.1.3	Subsystem Normal Routing	Partial Compliant
5.4.3	Calculation of Traffic-Mix	Information only
5.4.3.1	General	Information only
5.4.3.2	End-Node/Database	Information only
5.4.4	Subsystem Routing Status Test	Information only
5.4.4.1	General	Information only
5.4.4.2	Actions at the initiating node	Partial Compliant
5.4.4.3	Actions at the receiving node	Partial Compliant
5.5	SCCP Flow Control (Optional)	Fully Compliant
5.5.1	General	Fully Compliant
5.5.2	SCCP prohibited control	Fully Compliant
5.5.3	SCCP allowed control	Fully Compliant
5.5.4	SCCP status test	Fully Compliant
5.6	SCCP restart	Fully Compliant
6	State Transition Diagrams	Information only
6.1	General	Information only
6.2	Drafting conventions	Information only
6.3	SCCP Routing	Fully Compliant
6.4	SCCP connection-oriented control	Fully Compliant
6.5	SCCP connectionless control	Fully Compliant
6.6	SCCP Management	Fully Compliant
6.7	Architecture dependent functions	Information only
6.8	Abbreviations and Timers	Fully Compliant - NOTE 3
Figure 1/ T1.112.4	SCCP Overview	Information only
Figure 2/ T1.112.4 (2 sheets)	SCCP routing control procedure	Fully Compliant

<b>T1.112.4 Section</b>	<b>Description</b>	<b>Compliance</b>
Figure 2A/ T1.112.4 to Figure 2J/ T1.112.4	State Transition Diagrams for SCCP Connection-Oriented Control	Fully Compliant
Figure 3/ T1.112.4	SCCP Connectionless control	Fully Compliant
Figure 4/ T1.112.4	SCCP Management Overview (SCMG)	Fully Compliant
Figure 5/ T1.112.5	SCCP Management: Signaling Point Prohibited Control (SPPC)	Fully Compliant
Figure 6/ T1.112.4	SCCP Management: Signaling Point Allowed Control (SPAC)	Fully Compliant
Figure 7/ T1.112.4	SCCP Management: Signaling Point Congested Control	Fully Compliant
Figure 8/ T1.112.4	SCCP Management: Subsystem Prohibited Control (SSPC)	Fully Compliant
Figure 9/ T1.112.4	SCCP Management: Subsystem Allowed Control (SSAC)	Fully Compliant
Figure 10/ T1.112.4	SCCP Management: Subsystem Status Test Control (SSTC)	Fully Compliant
Figure 11/ T1.112.4	SCCP Management: Coordinated State Change Control (CSCC)	Fully Compliant
Figure 12/ T1.112.4	SCCP Management: Local Broadcast (LBCS)	Fully Compliant
Figure 13/ T1.112.4	SCCP Management: Broadcast (BCST)	Fully Compliant
Figure 14/ T1.112.4	SCCP Management: Traffic Mix Information (TFMI)	Partial Compliant
Figure 15/ T1.112.4	SCCP Management: Subsystem Backup Routing Control (SBRC)	Partial Compliant
Figure 16/ T1.112.4	SCCP Management: Subsystem Normal Routing Control (SNRC)	Partial Compliant
Figure 17 /T1.112.4	SCCP Management: Subsystem Routing Status Test Control (SRTC)	Partial Compliant
Figure 18/ T1.112.4	Architecture Dependent Traffic Mix Calculation	Information only
Figure 19/ T1.112.4	Link Failure Summary	Information only
Annex A	State diagrams for the signaling connection control part of Signaling System No. 7	Fully Compliant
Annex B	Action table for the signaling connection control part (SCOC) of signaling system no. 7	Fully Compliant
Annex C	Examples of SCCP routing	Fully Compliant
Annex D	Intermediate signaling network identification procedure	Fully Compliant
Annex E	Intermediate signaling network identification SDL	Fully Compliant
Annex F	Examples of ISNI message content	Information only

NOTE 1: No well defined procedure specified.

NOTE 2: Traffic Information only management procedures are architecture dependent. NOTE 3: Timers are configurable parameters.



### 4.3 TCAP compliance (T1.114)

The following section provides details on the compliance of the Tekelec SDM to the requirements set forth in the ANSI Recommendation T1.114.(1-5) (1996): "Signaling System Number 7 – Transaction capabilities application part".

**Table 14 T1.114.(1-5) Compliance**

T1.114 Section	Description	Compliance
T1.114.1	Functional description of transaction capabilities	Fully Compliant
T1.114.2	Definitions and Functions of Transaction capabilities	Fully Compliant
T1.114.2 Section 2	Messages	Fully Compliant
T1.114.2 Section 3	Protocol Message Requirements	Fully Compliant
T1.114.2 Section 3	Transaction portion	Fully Compliant
T1.114.2 Section 4	Component Portion	Fully Compliant
T1.114.2 Section 5	Dialogue portion	Fully Compliant
T1.114.2 Section 6	Parameters	Fully Compliant
T1.114.3	TC Formats and Codes	Fully Compliant
T1.114.3 Section 2	Data Element Encoding	Fully Compliant
T1.114.3 Section 3	Transaction portion	Fully Compliant
T1.114.3 Section 4	Component Portion	Fully Compliant
T1.114.3 Section 5	Dialogue portion	Fully Compliant
T1.114.3 Section 6	Parameters	Fully Compliant
T1.114.3 Section 7	Summary of Identifiers	Fully Compliant
T1.114.3	Transaction capabilities procedures	Fully Compliant
T1.114.3 Section 2	Addressing	Fully Compliant
T1.114.3 Section 3	Normal Procedures	Fully Compliant
T1.114.3 Section 3.1	Functional Grouping	Fully Compliant - NOTE 1
T1.114.3 Section 3.2	Transaction portion	Fully Compliant
T1.114.3 Section 3.3	Component Portion	Fully Compliant
T1.114.3 Section 3.4	Dialogue portion	Fully Compliant
T1.114.3 Section 4	Abnormal procedures	Fully Compliant
T1.114.3 Section 4.1	Connectionless Network Service	Fully Compliant
T1.114.3 Section 4.2	Connection-Oriented	Fully Compliant - NOTE 2
T1.114.5	Definitions and Functions of Transaction Capabilities Operations, Parameters, and Error Code	Fully Compliant - NOTE 3

NOTE 1: The split between the component and transaction layers is implicitly supported in terms of functionality; however, this separation is not explicit. In other words, these layers are actually within the same layer. The code imparts a separation between them, through naming convention and architecture, to denote the type of interaction the functions have with one another.

NOTE 2: Connection-Oriented networks services are not specified by TCAP ANSI standard. This area is for further study.

NOTE 3: The Operation code, Parameters, and Error codes defined in the recommendation are application specific information, which is carried unexamined by TCAP.



## 5. 3GPP STATEMENT OF COMPLIANCE

### 5.1 MAP compliance (TS 29.002)

The Tekelec SDM is compatible with the following MAP releases:

- Phase 2
- Release 96
- Release 98
- Release 99
- Release 4 version 4.15.0
- Release 5 version 5.10.0

The following table provides more details about the compliance of the Tekelec SDM with the different messages specified in 3GPP TS 29.002, Mobile Application Part (MAP) specification.

**Table 15 TS 29.002 Compliance**

29.002 section	Description	Compliance	Application Context version
8.1.2	MAP_UPDATE_LOCATION	Fully Compliant	V1 or higher
8.1.3	MAP_CANCEL_LOCATION	Fully Compliant	V1 or higher
8.1.4	MAP_SEND_IDENTIFICATION	Not Applicable	-
8.1.6	MAP_PURGE_MS	Fully Compliant	V2 or higher
8.1.7	MAP_UPDATE_GPRS_LOCATION	Fully Compliant	V2 or higher
8.1.8	MAP_NOTE-MM-EVENT	Not Applicable	-
8.2.1	MAP_PAGE	Not Applicable	-
8.2.2	MAP_SEARCH_FOR_MS	Not Applicable	-
8.3.1	MAP_PROCESS_ACCESS_REQUEST	Not Applicable	-
8.4.1	MAP_PREPARE_HANDOVER	Not Applicable	-
8.4.2	MAP_SEND_END_SIGNAL	Not Applicable	-
8.4.3	MAP_PROCESS_ACCESS_SIGNALLING	Not Applicable	-
8.4.4	MAP_FORWARD_ACCESS_SIGNALLING	Not Applicable	-
8.4.5	MAP_PREPARE_SUBSEQUENT_HANDOVER	Not Applicable	-
8.4.6	MAP_ALLOCATE_HANDOVER_NUMBER	Not Applicable	-
8.4.7	MAP_SEND_HANDOVER_REPORT	Not Applicable	-
8.5.1	MAP_AUTHENTICATE	Not Applicable	-
8.5.2	MAP_SEND_AUTHENTICATION_INFO	Fully Compliant	V2 or higher
8.5.3	MAP_AUTHENTICATION_FAILURE_REPORT	Fully Compliant	V2 or higher
8.6.1	MAP_SET_CIPHERING_MODE	Not Applicable	-
8.7.1	MAP_CHECK_IMEI	Not Applicable	-
8.7.2	MAP_OBTAIN_IMEI	Not Applicable	-
8.8.1	MAP_INSERT-SUBSCRIBER-DATA	Fully Compliant	V1 or higher
8.8.2	MAP_DELETE-SUBSCRIBER-DATA	Fully Compliant	V1 or higher
8.9.1	MAP_PROVIDE-IMSI	Not Applicable	-
8.9.2	MAP_FORWARD-NEW-TMSI	Not Applicable	-
8.10.1	MAP_RESET	Fully Compliant	V1 or higher
8.10.2	MAP_FORWARD_CHECK_SS_INDICATION	Fully Compliant	V1 or higher
8.10.3	MAP_RESTORE_DATA	Fully Compliant	V2 or higher
8.11.1	MAP_ANY-TIME-INTERROGATION	Fully Compliant	V2 or higher
8.11.2	MAP_PROVIDE-SUBSCRIBER-Info	Fully Compliant	V2 or higher
8.11.3	MAP_ANY-TIME-SUBSCRIPTION-INTERROGATION	Planned	-
8.11.4	MAP_ANY-TIME-MODIFICATION	Planned	-
8.11.5	MAP_NOTE-SUBSCRIBER-DATA-MODIFIED	Planned	-

29.002 section	Description	Compliance	Application Context version
9.1.1	MAP_ACTIVATE-TRACE-MODE	Planned	-
9.1.2	MAP_DEACTIVATE-TRACE-MODE	Planned	-
9.1.3	MAP_TRACE-SUBSCRIBER-ACTIVITY	Not Applicable	-
9.2.1	MAP_SEND-IMSI	Fully Compliant	V2 or higher
10.1	MAP_SEND_ROUTING_INFORMATION	Fully Compliant	V2 or higher
10.2	MAP_PROVIDE_ROAMING_NUMBER	Fully Compliant	V1 or higher
10.3	MAP_RESUME_CALL_HANDLING	Not Applicable	-
10.4	MAP_PREPARE_GROUP_CALL	Not Applicable	-
10.5	MAP_PROCESS_GROUP_CALL_SIGNALLING	Not Applicable	-
10.6	MAP_FORWARD_GROUP_CALL_SIGNALLING	Not Applicable	-
10.7	MAP_SEND_GROUP_CALL_END_SIGNAL	Not Applicable	-
10.8	MAP_Provide_SIWFS_Number	Not Applicable	-
10.9	MAP_SIWFS_Signalling_Modify	Not Applicable	-
10.10	MAP_SET_REPORTING_STATE	Planned	-
10.11	MAP_STATUS_REPORT	Planned	-
10.12	MAP_REMOTE_USER_FREE	Planned	-
10.13	MAP_IST_ALERT	Planned	-
10.14	MAP_IST_COMMAND	Planned	-
11.1	MAP_REGISTER_SS	Fully Compliant	V2 or higher
11.2	MAP_ERASE_SS	Fully Compliant	V2 or higher
11.3	MAP_ACTIVATE_SS	Fully Compliant	V2 or higher
11.4	MAP_DEACTIVATE_SS	Fully Compliant	V2 or higher
11.5	MAP_INTERROGATE_SS	Fully Compliant	V2 or higher
11.6	MAP_INVOKE_SS	Not Applicable	-
11.7	MAP_REGISTER_PASSWORD	Fully Compliant	V2 or higher
11.8	MAP_GET_PASSWORD	Fully Compliant	V2 or higher
11.9	MAP_PROCESS_UNSTRUCTURED_SS_REQUEST	Fully Compliant	V2 or higher
11.10	MAP_UNSTRUCTURED_SS_REQUEST	Fully Compliant	V2 or higher
11.11	MAP_UNSTRUCTURED_SS_NOTIFY	Fully Compliant	V2 or higher
11.12	MAP_SS_INVOCATION_NOTIFY	Planned	-
11.13	MAP_REGISTER_CC_ENTRY	Planned	-
11.14	MAP_ERASE_CC_ENTRY	Planned	-
12.1	MAP_SEND-ROUTING-INFO-FOR-SM	Fully Compliant	V1 or higher
12.2	MAP_MO-FORWARD-SHORT-MESSAGE	Not Applicable	-
12.3	MAP_REPORT-SM-DELIVERY-STATUS	Fully Compliant	V2 or higher
12.4	MAP_READY-FOR-SM	Fully Compliant	V2 or higher
12.5	MAP_ALERT-SERVICE-CENTRE	Fully Compliant	V2 or higher
12.6	MAP_INFORM-SERVICE-CENTRE	Fully Compliant	V2 or higher
12.7	MAP_SEND-INFO-FOR-MT-SMS	Not Applicable	-
12.8	MAP_SEND-INFO-FOR-MO-SMS	Not Applicable	-
12.9	MAP_MT-FORWARD-SHORT-MESSAGE	Not Applicable	-
13.1	MAP_SEND_ROUTING_INFO_FOR_GPRS	Fully Compliant	V2 or higher
13.2	MAP_FAILURE_REPORT	Fully Compliant	V2 or higher
13.3	MAP_NOTE_MS_PRESENT_FOR_GPRS	Fully Compliant	V2 or higher
13A.1	MAP_SEND-ROUTING-INFO-FOR-LCS	Planned	-
13A.2	MAP_PROVIDE-SUBSCRIBER-LOCATION	Not Applicable	-
13A.3	MAP_SUBSCRIBER-LOCATION-REPORT	Not Applicable	-

The following table provides more details about the compliance of the Tekelec SDM with the additional messages specified in GSM 09.02 (Phase 1) – Mobile Application Part Specification version 3.11.0.

**Table 16 GSM 09.02 Compliance**

<b>09.02 section</b>	<b>Description</b>	<b>Compliance</b>
6.2.1	MAP_BEGIN-SUBSCRIBER-ACTIVITY	Fully Compliant
6.2.1	MAP_SEND-PARAMETERS	Fully Compliant
6.2.1	MAP_PROCESS-UNSTRUCTURED-SS-DATA	Fully Compliant
6.2.1	MAP_NOTE-MS-PRESENT	Planned
6.2.1	MAP_SET-MESSAGE-WAITING-DATA	Planned
6.2.1	MAP_DEREGISTER-MOBILE-SUBSCRIBER	Not applicable
6.2.1	MAP_REGISTER-CHARGING-INFORMATION	Not applicable
6.2.1	MAP_FORWARD-SS-NOTIFICATION	Not applicable

## 5.2 CAMEL Compliance (TS 22.078)

The following tables provides more details about the compliance of the Tekelec SDM with the different messages specified in 3GPP TS 22.078 V5.9.0, Customized Applications for Mobile network Enhanced Logic (CAMEL); Service description; Stage 1 (Release 5)

**Table 17 Camel Provisioning Compliance**

CSI Type	Compliance	Camel Phase
D-CSI	Compliant	3
GPRS-CSI	Compliant	3
M-CSI	Compliant	3
O-CSI	Compliant	1, 2, 3
SMS-CSI	Compliant	3
SS-CSI	Compliant	2, 3
T-CSI	Compliant	1, 2, 3
TIF-CSI	Compliant	2, 3
U-CSI	Compliant	2, 3
UG-CSI	Compliant	2, 3
VT-CSI	Compliant	3

**Table 18 General Procedure Compliance**

General Procedure	Compliance	Camel Phase
Mobile Originated Call	Compliant	1, 2, 3
Mobile Terminated call in GMSC	Compliant	1, 2, 3
Mobile Terminated call in VMSC	Compliant	3
Mobile Forwarded call-early call forwarding(MO)	Compliant	2, 3
Mobile Forwarded call-late call forwarding(MO)	Compliant	2, 3
Supp service invocation	Compliant	2, 3
USSD user interaction	Compliant	2, 3
Mobile Originated Short Message	Compliant	3
General Packet Radio Service	Compliant	3
Mobility Management event	Compliant	3
Interrogation and control of Subscription Data	Compliant	3

**Table 19 Procedure for MO & Forwarded Calls**

		ase
Collection of dialed digits	Compliant	1, 2, 3
Analysis of dialed digits	Compliant	3
Detection of unsuccessful call establishment caused by Route select failure	Compliant	3
CSI Criteria applicable at call setup	Compliant	2, 3
When dialed digits have been collected	Compliant	2, 3
CSI criteria define for the case where collection of dialed digits has been defined	Compliant	3
Criteria on dialed number	Compliant	3
Criteria on dialed number "enabling" or "inhibiting" triggering criteria	Compliant	3

Procedure for MO & Forwarded calls		Compliance	Camel Phase
	Criteria on basic service		
	Criterion of the type of call	Compliant	2, 3
The criteria on the call setup event procedure are satisfied if:			
	1. The criteria on the dialed number are satisfied and,	Compliant	2, 3
	2. The criteria on the basic service is satisfied and,	Compliant	2, 3
	3. The criterion on the type of call is satisfied	Compliant	2, 3
CSI criterion applicable at call setup for sub. Dialed service		Compliant	3
	Up to 10 dialed number can be defined		
CSI criterion applicable on detection of unsuccessful call establishment		Compliant	3
	List up to 5 release cause value		
Call setup request procedure			
	Procedure where dialed digits have been collected	Not Applicable	-
	Procedure for subscriber dialed services	Compliant	3
Calling party abandon		Not Applicable	-
Unsuccessful call establishment		Compliant	2, 3
Called party connection procedure		Compliant	1, 2, 3
Call disconnection procedure		Compliant	1, 2, 3
CSE initiated call release procedure		Compliant	1, 2, 3

**Table 20 Procedure for MT Calls Compliance**

Procedures for MT Calls		Compliance	Camel Phase
Initial Service Event			
	Terminating Attempt Authorized	Compliant	1, 2, 3
	Detection of unsuccessful call	Compliant	3
Criteria for contact CSE		Compliant	2, 3
	on terminating attempt authorization	Compliant	1, 2, 3
	on detection of unsuccessful call	Compliant	3
Incoming Call request procedure		Not Applicable	-
Calling party abandon		Not Applicable	-
Unsuccessful call establishment		Compliant	2, 3

**Table 21 Procedure for serving network dialed service**

Compliance	Camel Phase
Compliant	3

**Table 22 Procedure for SMS Compliance**

Compliance	Camel Phase
Compliant	3

**Table 23 Procedure for GPRS Compliance**

Compliance	Camel Phase
Compliant	3

**Table 24 Notification of non-traffic events to the CSE Compliance**

Notification of non-traffic events to the CSE	Compliance	Camel Phase
<b>Mobility Management</b>	<b>Compliant</b>	<b>3</b>
To CSE of change of sub. Data	Compliant	3
CF SS data	Compliant	3
CB SS data	Compliant	3
ODB Data	Compliant	3
Camel subscription info	Compliant	3
SS invocation notification	Compliant	2, 3

**Table 25 CSE Interrogation and Control Compliance**

CSE Interrogation and Control	Compliance	Camel Phase
Any time interrogation	Compliant	1, 2, 3
Subscriber Status	Compliant	1, 2, 3
Location Information	Compliant	1, 2, 3
Call Forwarding SS data	Compliant	3
Call Barring SS data	Compliant	3
ODB data	Compliant	3
CAMEL subscription info	Compliant	3
CAMEL phase supported at VPLMN	Compliant	3
HPLMN reject any interrogation from CSE		
Any time modification	Planned	-
CF SS data		
<b>CB SS data</b>		
<b>Activate/Deactivate CAMEL subscription</b>		
<b>HPLMN reject any interrogation from CSE</b>		

**Table 26 Subscriber interaction with CSE Compliance**

N/A
-----

**Table 27 Charging Activities Compliance**

N/A
-----

### 5.3 Gi Interworking Compliance (TS 29.061)

Table 28 TS 29.061 compliance

TS 29.061 Section	Description	Compliance
16	Usage of RADIUS on Gi interface	Information Only
16.1	RADIUS Authentication	Partially Compliant Note 1
16.2	RADIUS Accounting	Partially Compliant Note 1
16.3	Authentication and accounting message flows	Information Only
16.3.1	IP PDP type	Fully Compliant
16.3.2	PPP PDP type	Fully Compliant
16.3.3	Accounting Update	Fully Compliant
16.3.4	AAA-Initiated PDP context termination	Fully Compliant
16.4	List of RADIUS attributes	Information Only
16.4.1	Access-Request message (sent from the GGSN to AAA server)	Fully Compliant
16.4.2	Access-Request message (sent from the GGSN to AAA server)	Fully Compliant
16.4.3	Accounting-Request START (sent from GGSN to AAA server)	Fully Compliant
16.4.4	Accounting Request STOP (sent from GGSN to AAA server)	Fully Compliant
16.4.5	Accounting Request ON (optionally sent from GGSN to AAA server)	Fully Compliant
16.4.6	Accounting Request OFF (optionally sent from GGSN to AAA server)	Fully Compliant
16.4.7	Sub-attributes of the 3GPP Vendor-Specific attribute	Fully Compliant
16.4.8	Accounting Request Interim-Update (sent from GGSN to AAA server)	Fully Compliant
16.4.9	Disconnect Request (optionally sent from AAA server to GGSN)	Fully Compliant

Note 1: IPv6 (RFC 3162) is not supported

Tekelec AAA Server core functionality is designed as per the following RFCs:

- RFC 2865
- RFC 2866
- RFC 3576

We do comply with RFC 3575 in that we do not assign any Packet Type Codes, Attribute Types or Attribute values which are inconsistent with RFC 2865.

## 5.4 LTE-HSS Compliance

In addition to standards compliance, the solution supports the unique HLR-Proxy-mode features that allows interworking with existing HLRs:

- Converting an incoming S6-AIR into a MAP-SAI towards the currently-deployed HLR/AuC
- Computes the KASME when required for E-UTRAN authentication
- Triggers MAP Update Location to Old HLR when receiving an LTE ULR
- Enables 3G-LTE mobility without forklifting the Old HLR
- Supports both 3G to LTE and LTE to 3G

**Table 29 LTE-HSS compliance**

Standard	Standard	Description	Compliance
TS 29.272	V9.0.0	MME and SGSN related interfaces based on Diameter protocol	Fully Compliant
TS 23.401	V9.2.0	GPRS enhancements for E-UTRAN access	Fully Compliant
TS 23.401	V9.2.0	Intra-E-UTRAN handover, Inter RAT handover	Fully Compliant
TS 23.008	V9.0.0	Organization of subscriber data	Partly Compliant
TS 23.003	V9.0.0	Numbering, addressing and identification	Partly Compliant
TS 24.301	V9.0.0	Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS)	Information only
TS 33.401	V9.1.0	3GPP System Architecture Evolution: Security Architecture	Fully Compliant
TS 33.102	V9.0.0	3G Security; Security Architecture	Fully Compliant
TS 33.210	V8.3.0	3G Security; Network Domain Security, IP Networks Layer Security	Information only
TS 23.402	V 9.0.0	Access supported functions	Future compliant
TS 23.401	V9.2.0	EPC – CallIP Procedures Attach Procedures Tracking Area Update Detach procedures HSS User Profile management function procedure	Partly compliant Partly compliant Partly compliant Fully compliant
TS 29.230		Diameter applications, 3GPP specific codes and identifier	Fully compliant
RFC 792		ICMP	Fully compliant
RFC 3588		DIAMETER Base Protocol	Fully compliant
TS 29.173	V11.1.0	SLH Interface for Location Services	Partially Compliant



## 5.5 SLH Interface for Location Services (LCS) compliance

Table 30 SLH Interface for Location Services (LCS) compliance

TS29.173 Section	Description	Compliance
1	Scope	Information Only
2	References	Information Only
3	Definitions, symbols and abbreviations	Information Only
3.1	Definitions	Information Only
4	General Description	Information Only
4.1	Introduction	Information Only
4.2	Architecture Overview	Information Only
4.3	Functional Requirements of SLh Interface	Partially Compliant
5	Diameter-based SLh Interface	Information Only
5.1	Introduction	Information Only
5.2	Procedure Descriptions	Partially Compliant
5.2.1	Send Routing Information for LCS	Partially Compliant
5.2.1.1	General	Fully Compliant
5.2.1.2	Detailed Behaviour of the HSS	Partially Compliant
5.2.1.3	Detailed Behaviour of the GLMC	Not Applicable
6	Protocol Specification and Implementations	Information Only
6.1	Introduction	Information Only
6.1.1	Use of Diameter Base Protocol	Fully Compliant
6.1.2	Securing Diameter Messages	Information Only
6.1.3	Accounting Functionality	Fully Compliant
6.1.4	Use of Sessions	Fully Compliant
6.1.5	Transport Protocol	Fully Compliant
6.1.6	Routing Considerations	Fully Compliant
6.1.7	Advertising Application Support	Fully Compliant
6.1.8	Diameter Application Identifier	Fully Compliant
6.1.9	Information Only	Information Only
6.2	Commands	Information Only
6.2.1	Introduction	Information Only
6.2.2	Command-Code values	Fully Compliant
6.2.3	LCS-Routing-Info-Request (RIR) Command	Partially Compliant
6.2.4	LCS-Routing-Info-Answer (RIA) Command	Partially Compliant
6.3	Result-Code AVP and Experimental-Result AVP Values	Fully Compliant
6.3.1	General	Information Only
6.3.2	Success	Fully Compliant
6.3.3	Permanent Failures	Fully Compliant
6.3.3.1	DIAMETER_ERROR_USER_UNKNOWN (5001)	Fully Compliant
6.3.3.2	DIAMETER_ERROR_UNAUTHORIZED_REQUESTING_NETWORK (5490)	Fully Compliant
6.3.4	Transient Failures	Fully Compliant
6.3.4.1	DIAMETER_ERROR_ABSENT_USER (4201)	Fully Compliant
6.4	AVPs	Information Only
6.4.1	General	Information Only
6.4.2	LMSI	Fully Compliant
6.4.3	Serving-Node	Partially Compliant
6.4.4	MME-Name	Fully Compliant

<b>TS29.173 Section</b>	<b>Description</b>	<b>Compliance</b>
6.4.5	MSC-Number	Fully Compliant
6.4.6	LCS-Capabilities-Sets	Fully Compliant
6.4.7	GMLC-Address	Fully Compliant
6.4.8	Additional-Serving-Node	Partially Compliant
6.4.9	PPR-Address	Fully Compliant
6.4.10	Feature-List-ID AVP	Partially Compliant
6.4.11	Feature-List AVP	Partially Compliant
6.4.12	MME-Realm	Fully Compliant

## 5.6 User Data Repository (UDR)

**Table 31 User Data Repository (UDR) compliance**

Standard	Standard	Description	Compliance
29.335	v10.1.0 (June 2011)	section 3 (General)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 4.1 and 4.2 (TCP/IP protocol stack)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 5.1, 5.2 and 5.3 (Ud Binding/Unbing)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.2 (Ud Query)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.3 (Ud Create)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.4 (Ud Delete)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.5 (Ud Update)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.6 (Ud Subscribe)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 6.7 (Ud Notify)	Fully Compliant
29.335	v10.1.0 (June 2011)	section 7.2 (Information elements for Subscriptions and Notifications)	Fully Compliant
29.335	v10.1.0 (June 2011)	annex A.1 (XML schema for Subscribe Request)	Fully Compliant
29.335	v10.1.0 (June 2011)	annex A.2 (XML schema for Subscribe Response)	Fully Compliant
29.335	v10.1.0 (June 2011)	annex A.3 (XML schema for Notify Request)	Fully Compliant
29.335	v10.1.0 (June 2011)	annex A.4 (XML schema for Notify Response)	Fully Compliant



## **Subscriber Data Management**

**Statement of Compliance**  
**Release 9.1**  
**910-6702-001**  
**Revision: B**