OCSS7 Compliance Matrix

TAS-074-Issue 1.1.0-Release 1

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metaswitch

Notices

Contents

1 OCSS7 Compliance Matrix

This document describes OCSS7's compliance to the relevent International Telecommunications Union (ITU) standards. The standards are available on the ITU website .

Other documentation for OCSS7 can be found on the OCSS7 product page .

2 M3UA RFC.4666 - SS7 MTP3 User Adaptation Layer

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	Description	Compliar	Notes
1	Introduction		
1.1	Scope		
1.2	Terminology		
1.3	M3UA Overview		
1.3.1	Protocol Architecture		
1.3.2	Services Provided by the M3UA Layer		
1.3.2.1	Support for the Transport of MTP3-User Messages	Full	
1.3.2.2	Native Management Functions	Full	
1.3.2.3	Interworking with MTP3 Network Management Functions	Partial	SGP role is not supported.
1.3.2.4	Support for the Management of SCTP Associations between SG and ASPs	Full	
1.3.2.5	Support for the Management of Connections to Multiple SGs	Full	
1.4	Functional Areas		
1.4.1	Signaling Point Code Representation		
1.4.2	Routing Contexts and Routing Keys		
1.4.2.1	Overview	Full	
1.4.2.2	Routing Key Limitations	Full	
1.4.2.3	Managing Routing Contexts and Routing Keys	Partial	Dynamic key registration is not supported.

1.4.2.4	Message Distribution at the SGP	None	SGP role is not supported.
1.4.2.5	Message Distribution at the ASP	Full	
1.4.3	SS7 and M3UA Interworking		
1.4.3.1	Signaling Gateway SS7 Layers		
1.4.3.2	SS7 and M3UA Interworking at the SGC	Partial	Complied in areas regarding ASP.
1.4.3.3	Application Server	Full	
1.4.3.4	IPSP Considerations		
1.4.4	Redundancy Models		
1.4.4.1	Application Server Redundancy	Partial	n+0 model is supported.
1.4.5	Flow Control	Full	
1.4.6	Congestion Management	None	Congestion indication mechanism in M3UA layer is not supported.
1.4.7	SCTP Stream Mapping	Full	
1.4.8	SCTP Client/Server Model	Full	
1.5	Sample Configurations		
1.5.1	Example 1: ISUP Message Transport	None	No M3UA user other than SCCP is supported.
1.5.2	Example 2: SCCP Transport between IPSPs	Full	
1.5.3	Example 3: SGC Resident SCCP Layer	Partial	Compliant in areas regarding ASP.
1.6	Definition of M3UA Boundaries		
1.6.2	Definition of the Boundary between M3UA and SCTP		
1.6.3	Definition of the Boundary between M3UA and Layer Management		

2	Conventions		
3	M3UA Protocol Elements	Full	
3.1	Common Message Header	Full	
3.1.1	M3UA Protocol Versions: 8 bit (unsigned integer)	Full	
3.1.2	Message Classes and Types	Full	
3.1.3	Reserved: 8 bit	Full	
3.1.4	Message Length: 32 bit (unsigned integer)	Full	
3.2	Variable-Length Parameter Format	Full	
3.3	Transfer Messages		
3.3.1	Payload Data Message (DATA)	Full	
3.4	SS7 Signaling Network Management (SSNM) Messages		
3.4.1	Destination Unavailable (DUNA)	Full	
3.4.2	Destination Available (DAVA)	Full	
3.4.3	Destination State Audit (DAUD)	Full	
3.4.4	Signaling Congestion (SCON)	Full	
3.4.5	Destination User Part Unavailable (DUPU)	Full	
3.4.6	Destination Restricted (DRST)	Full	
3.5	ASP State Maintenance (ASPSM) Messages		
3.5.1	ASP Up	Full	
3.5.2	ASP Up Acknowledgement (ASP Up Ack)	Full	

3.5.3	ASP Down	Full	
3.5.4	ASP Down Acknowledgement (ASP Down Ack)	Full	
3.5.5	Heartbeat (BEAT)	Partial	BEAT message is only acknowledged, not sent.
3.5.6	Heartbeat Acknowledgement (BEAT Ack)	Full	
3.6	Routing Key Management (RKM) Messages (Optional)	None	Routing Key Management is not supported.
3.6.1	Registration Request (REG REQ)	None	Routing Key Management is not supported.
3.6.2	Registration Response (REG RSP)	None	Routing Key Management is not supported.
3.6.3	Deregistration Request (DEREG REQ)	None	Routing Key Management is not supported.
3.6.4	Deregistration Response (DEREG RSP)	None	Routing Key Management is not supported.
3.7	ASP Traffic Maintenance (SPTM) Messages		
3.7.1	ASP Active	Full	
3.7.2	ASP Active Acknowledgement (ASP Active Ack)	Full	
3.7.3	ASP Inactive	Full	
3.7.4	ASP Inactive Acknowledgement (ASP Inactive Ack)	Full	
3.8	Management (MGMT) Messages		
3.8.1	Error	Full	
3.8.2	Notify	Full	
4	Procedures		
4.1	Procedures to Support the M3UA-User		

4.1.1	Receipt of Primitives from the M3UA-User	Full	
4.2	Receipt of Primitives from Layer Management	Full	
4.2.1	Receipt of M3UA Peer Management Messages	Full	
4.3	AS and ASP/IPSP State Maintenance	Partial	IPSP DE model is not supported.
4.3.1	ASP/IPSP States	Full	
4.3.2	AS States	Full	
4.3.3	M3UA Management Procedures for Primitives	Full	
4.3.4	ASP Procedures for Peer-to-Peer Messages		
4.3.4.1	ASP Up Procedures	Full	
4.3.4.1.1	M3UA Version Control and ASP Up	Full	
4.3.4.1.2	IPSP Considerations (ASP Up)	Full	
4.3.4.2	ASP Down Procedures	Partial	After reaching limit of unacknowledged ASP-DOWN requests, SCTP association is shut down.
4.3.4.3	ASP Active Procedures	Partial	Only Loadshare traffic mode is supported.
4.3.4.3.1	IPSP Consideration (ASP Active)	Full	
4.3.4.4	ASP Inactive Procedures	Full	
4.3.4.4	IPSP Considerations (ASP Inactive)	Full	
4.3.4.5	Notify Procedures	Full	
4.3.4.5.1	IPSP Considerations (NTFY)	Full	
4.3.4.6	Heartbeat Procedures	Partial	Only reception of BEAT message is supported.

4.4	Routing Key Management Procedures (Optional)		
4.4.1	Registration	None	Routing Key Management is not supported.
4.4.2	Deregistration	None	Routing Key Management is not supported.
4.4.3	IPSP Consideration (REG/DEREG)	None	Routing Key Management is not supported.
4.5	Procedures to Support the Availability or Congestion Status of SS7 Destination		
4.5.1	At an SGP	Partial	Only ASP related procedures are supported.
4.5.2	At an ASP		
4.5.2.1	Single SG Configurations	Partial	Congestion status is not supported.
4.5.2.2	Multiple SG Configurations	Partial	Congestion status is not supported.
4.6	MTP3 Restart	Full	
4.7	NIF Not Available	None	SGP role is not supported
4.8	M3UA Version Control	Full	
4.9	M3UA Termination	Full	
5	Examples of M3UA Procedures		
5.1	Establishment of Associations and Traffic between SGs and ASPs	Full	
5.1.1	Single ASP in an Application Server (1+0 sparing)	Full	
5.1.1.1	Single ASP/IPSP in an Application Server (1+0 sparing) No Registration	Full	
5.1.1.2	Single ASP in an Application Server (1+0 sparing) Dynamic Registration	None	Routing Key Management is not supported.
5.1.1.3	Single ASP in Multiple Application Servers (each with 1+0 sparing),	None	Routing Key Management is not supported.

	Dynamic Registration (Case 1 - Multiple Registration Requests)		
5.1.1.4	Multiple Servers (each with 1+0 sparing), Dynamic Registration (Case 1 - Multiple Registration Requests)	None	Routing Key Management is not supported.
5.1.2	Two ASPs in Application Server (1+1 sparing)	None	1+1 sparing is not supported.
5.1.3	Two ASPs in Application Server (1+1 sparing, loadsharing case)	Full	
5.1.4	Three ASPs in Application Server (n+k sparing, loadsharing case)	None	n+k sparing is not supported.
5.2	ASP/IPSP Traffic Failover Examples		
5.2.1	1+1 sparing", Withdrawal of ASP/IPSP, Backup Override	None	1+1 sparing is not supported.
5.2.2	1+1 sparing", Backup Override	None	1+1 sparing is not supported.
5.2.3	n+k" sparing, Loadsharing case, Withdrawal of ASP	None	n+k sparing is not supported.
5.3	Normal Withdrawal of an ASP from an Application Server and Teardown of an Association Will Not be Sent/Received	None	Routing Key Management is not supported.
5.4	Auditing Examples		
5.4.1	SG State: Uncongested/Available	Full	
5.4.2	SG State: Congested (Congestion Level=2)/Available	Full	
5.4.3	SG State: Unknown/Available	Full	
5.5	M3UA/MTP3-User Boundary Examples		
5.5.1	At an ASP		
5.5.1.1	Support for MTP Transfer on the ASP		

5.5.1.1.1	Support for MTP Transfer Request Primitive	Full	
5.5.1.1.2	Support for MTP Transfer Indication Primitive	Full	
5.5.1.1.3	Support for ASP Querying of SS7 Destination States	Full	
5.5.2	At an SGP	Full	
5.5.2.1	Support for MTP Transfer Request Primitive	Full	
5.5.2.2	Support for MTP Transfer Indication Primitive	Full	
5.5.2.3	Resume MTP Status Indication Primitive		
5.5.2.3.1	Destination Unavailable	Full	
5.5.2.3.2	Destination Available	Full	
5.5.2.3.3	SS7 Network Congestion	None	Congestion levels are not interpreted at ASP.
5.5.2.3.4	Destination User Part Available	Full	
5.6	Examples of IPSP communication		
5.6.1	Single Exchange	Full	
5.6.2	Double Exchange	None	Double Exchnage mode is not supported.
6	Security Considerations	None	SIGTRAN over TLS is not supported.
7	IANA Considerations		
7.1	SCTP Payload Protocol Identifier	Full	
7.2	M3UA Port Number	Full	
7.3	M3UA Protocol Extentions	Full	
7.3.1	IETF Defined Message Classes		

7.3.2	IETF Defined Message Types		

3 SCCP Q.711 - Functional Description

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	Description	Compliar	Notes
1	Scope and field of application		
2	References		
2.1	Normative references		
2.2	Informative references		
3	Definitions		
3.1	MTP-SAP instance		
3.2	SCCP-SAP instance		
4	Abbreviations and acronyms		
5	General characteristics		
5.1	Technique of description	Full	
5.2	Primitives	Full	
5.3	Peer-to-peer communication	Full	
5.4	Model of the connection-oriented network service	None	Connection-oriented services are not supported.
5.5	Model of the connectionless network service	Full	
5.6	Contents of the Q.71X-Series of Recommendations		
6	Services provided by the SCCP	Partial	Class 2 and class 3 services are not implemented.
6.1	Connection-oriented services	None	Connection-oriented services are not supported.

6.1.1	Temporary signalling connections		
6.1.1.1	Description	None	See 6.1
6.1.1.1.1	Connection establishment phase	None	See 6.1
6.1.1.1.2	Data transfer phase	None	See 6.1
6.1.1.1.3	Connection release phase	None	See 6.1
6.1.1.2	Network service primitives and parameters		
6.1.1.2.1	Overview	None	See 6.1
6.1.1.2.2	Connection establishment phase	None	See 6.1
6.1.1.2.3	Data transfer phase	None	See 6.1
6.1.1.2.4	Release phase	None	See 6.1
6.1.1.3	Additional SCCP primitive and interface elements	None	See 6.1
6.1.1.3.1	Notice service	None	See 6.1
6.1.1.3.2	Connection establishment interface elements	None	See 6.1
6.1.2	Permanent signalling connections		
6.1.2.1	Description	None	See 6.1
6.1.2.2	Primitives and parameters	None	See 6.1
6.2	Connectionless services	Full	
6.2.1	Description	Full	
6.2.2	Primitives and parameters of the connectionless service		
6.2.2.1	Overview	Full	
6.2.2.2	Parameters		
6.2.2.2.1	Address	Full	

6.2.2.2.2	Sequence control	Full	
6.2.2.2.3	Return option	Full	
6.2.2.2.4	Reason for return	Full	
6.2.2.2.5	User data	Full	
6.2.2.2.6	Importance	None	Parameter not supported
6.2.2.3	Primitives		
6.2.2.3.1	UNITDATA	Full	
6.2.2.3.2	NOTICE	Full	
6.2.3	State transition diagram	Full	
6.3	SCCP management		
6.3.1	Description	Full	
6.3.2	Primitives and parameters of the SCCP management		
6.3.2.1	Overview	None	N-COORD not supported
6.3.2.2	Parameters		
6.3.2.2.1	Affected subsystem	Full	
6.3.2.2.2	User status	None	Parameter ignored
6.3.2.2.3	Subsystem multiplicity indicator	None	Parameter ignored
6.3.2.2.4	Affected signalling point	Full	
6.3.2.2.5	Signalling point status	Full	
6.3.2.2.6	Remote SCCP status	Full	
6.3.2.2.7	Restricted importance level	None	Parameter ignored
6.3.2.3	Primitives		
6.3.2.3.1	COORD	None	Not supported - see also 6.3.2.1

6.3.2.3.2	STATE	Full	
6.3.2.3.3	PCSTATE	Partial	Restrictyed importance level not supported - see also 6.3.2.2.7
7	Definition of the lower boundary of the SCCP		
7.1	MTP-SAP	Full	
7.2	MTP-primitives and parameters	Full	
7.2.1	TRANSFER	Full	
7.2.2	PAUSE	Full	
7.2.3	RESUME	Full	
7.2.4	STATUS	Full	
7.2.5	Notification of completion of MTP restart procedure	Full	
7.3	State transition diagram	Full	
8	Functions provided by the SCCP		
8.1	Connection-oriented functions	None	Connection-oriented functions are not implemented. See also 6.1
8.1.1	Functions for temporary signalling connections	None	Not compliant - see 8.1
8.1.1.1	Connection establishment functions	None	Not compliant - see 8.1
8.1.1.2	Data transfer phase function	None	Not compliant - see 8.1
8.1.1.3	Release phase functions	None	Not compliant - see 8.1
8.1.2	Functions for permanent signalling connections	None	Not compliant - see 8.1
8.1.2.1	Connection establishment phase and connection release phase functions	None	Not compliant - see 8.1
8.1.2.2	Data transfer phase functions	None	Not compliant - see 8.1

8.2	Connectionless service functions	Full	
8.3	Management functions	Partial	Local broadcast is not supported.
8.4	Routing and translation functions	Full	

4 SCCP Q.712 - Defintion and Function

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	Description	Compliar	Notes
1	Signalling connection control part messages	Partial	Connection-oriented service messages are not supported.
1.1	connection confirm (CC)	None	Not compliant - see 1
1.2	connection request (CR)	None	Not compliant - see 1
1.3	connection refused (CREF)	None	Not compliant - see 1
1.4	data acknowledgement (AK)	None	Not compliant - see 1
1.5	data form 1 (DT1)	None	Not compliant - see 1
1.6	data form 2 (DT2)	None	Not compliant - see 1
1.7	expedited data (ED)	None	Not compliant - see 1
1.8	expedited data acknowledgement (EA)	None	Not compliant - see 1
1.9	inactivity test (IT)	None	Not compliant - see 1
1.10	protocol data unit error (ERR)	None	Not compliant - see 1
1.11	released (RLSD)	None	Not compliant - see 1
1.12	release complete (RLC)	None	Not compliant - see 1
1.13	reset confirm (RSC)	None	Not compliant - see 1
1.14	reset request (RSR)	None	Not compliant - see 1
1.15	subsystem-allowed (SSA)	Full	
1.16	subsystem-out-of-service-grant (SOG)	None	Message not supported
1.17	subsystem-out-of-service-request (SOR)	None	Message not supported
1.18	subsystem-prohibited (SSP)	Full	

1.19	subsystem-status-test (SST)	Full	
1.20	unitdata (UDT)	Full	
1.21	unitdata service (UDTS)	Full	
1.22	extended unitdata (XUDT)	Full	
1.23	extended unitdata service (XUDTS)	Full	
1.24	subsystem congested (SSC)	Partial	Sending SSC is not implemented.
1.25	long unitdata (LUDT)	Partial	Sending LUDT is not implemented.
1.26	long unitdata service (LUDTS)	Partial	Sending LUDTS is not implemented.
2	SCCP message parameters		
2.1	affected point code	Full	
2.2	affected subsystem number	Full	
2.3	calling/called party address	Full	
2.4	credit	None	Parameter not supported.
2.5	data	Full	
2.6	diagnostic	None	Parameter not supported.
2.7	error cause	None	Not compliant - see 1
2.8	end of optional parameters	Partial	Only XUDT supports encoding this parameter.
2.9	local reference number (source/ destination)	None	Parameter not supported.
2.10	protocol class	Full	
2.11	receive sequence number	None	Not compliant - see 1
2.12	refusal cause	None	Not compliant - see 1
2.13	release cause	None	Not compliant - see 1
2.14	reset cause	None	Not compliant - see 1

2.15	return cause	Full	
2.16	segmenting/reassembling	None	Not compliant - see 1
2.17	sequencing/segmenting	None	Not compliant - see 1
2.18	subsystem multiplicity indicator	Full	
2.19	hop counter	Partial	Parameter value is ignored.
2.20	segmentation	Full	
2.21	importance	Partial	Parameter value is ignored.
2.22	congestion level	Partial	Encoding is not implemented.
2.23	long data	Partial	Encoding is not implemented.
3	Inclusion of fields in the messages		
4	References		
4.1	Normative references		
4.2	Informative references		

5 SCCP Q.713 - Formats and Codes

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	Description	Compliar	Notes
1	General		
1.1	Message type code	Full	
1.2	Formatting principles	Full	
1.3	Mandatory fixed part	Full	
1.4	Mandatory variable part	Full	
1.5	Optional part	Full	
1.6	End of optional parameters octet	Full	
1.7	Order of transmission	Full	
1.8	Coding of spare bits	Full	
1.9	National message types and parameters	Full	
1.1	International message types and parameters	Full	
2	Coding of the general parts		
2.1	Coding of the message type	Partial	Class 3 and class 4 messages are not supported.
2.2	Coding of the length indicator	Full	
2.3	Coding of the pointers	Full	
3	SCCP parameters	Partial	Only the parameters related to messages of class 0 and class 1 are supported.
3.1	End of optional parameters	Partial	Encoding is not implemented.
3.2	Destination local reference	None	Not compliant - see 3

3.3	Source local reference	None	Not compliant - see 3
3.4	Called party address	Full	
3.4.1	Address indicator	Full	
3.4.2	Address	Full	
3.4.2.1	Signalling point code	Full	
3.4.2.2	Subsystem number	Full	
3.4.2.3	Global title	Full	
3.4.2.3.1	Global title indicator = 0001	Full	
3.4.2.3.2	Global title indicator = 0010	Full	
3.4.2.3.3	Global title indicator = 0011	Full	
3.4.2.3.4	Global title indicator = 0100	Full	
3.5	Calling party address	Full	
3.6	Protocol class	Full	
3.7	Segmenting/reassembling	Partial	Encoding is not implemented.
3.8	Receive sequence number	None	Not compliant - see 3
3.9	Sequencing/segmenting	None	Not compliant - see 3
3.1	Credit	None	Not compliant - see 3
3.11	Release cause	None	Not compliant - see 3
3.12	Return cause	Full	
3.13	Reset cause	None	Not compliant - see 3
3.14	Error cause	None	Not compliant - see 3
3.15	Refusal cause	None	Not compliant - see 3
3.16	Data	Full	
3.17	Segmentation	Full	

3.18	Hop counter	Full	
3.19	Importance	Full	
3.20	Long data	Partial	Encoding is not implemented.
4	SCCP messages and codes		
4.1	General		
4.1.1			
4.1.2			
4.1.3			
4.1.4			
4.2	Connection request (CR)	None	Not compliant - see 3
4.3	Connection confirm (CC)	None	Not compliant - see 3
4.4	Connection refused (CREF)	None	Not compliant - see 3
4.5	Released (RLSD)	None	Not compliant - see 3
4.6	Release complete (RLC)	None	Not compliant - see 3
4.7	Data form 1 (DT1)	None	Not compliant - see 3
4.8	Data form 2 (DT2)	None	Not compliant - see 3
4.9	Data acknowledgement (AK)	None	Not compliant - see 3
4.1	Unitdata (UDT)	Full	
4.11	Unitdata service (UDTS)	Full	
4.12	Expedited data (ED)	None	Not compliant - see 2.1
4.13	Expedited data acknowledgement (EA)	None	Not compliant - see 2.1
4.14	Reset request (RSR)	None	Not compliant - see 2.1
4.15	Reset confirmation (RSC)	None	Not compliant - see 2.1
4.16	Protocol data unit error (ERR)	None	Not compliant - see 2.1

4.17	Inactivity test (IT)	None	Not compliant - see 2.1
4.18	Extended unitdata (XUDT)	Full	
4.19	Extended unitdata service (XUDTS)	Full	
4.20	Long unitdata (LUDT)	Partial	Encoding is not implemented.
4.21	Long unitdata service (LUDTS)	Partial	Encoding is not implemented.
5	SCCP Management messages and codes		
5.1	General	Full	
5.1.1	SCMG format identifier	Full	
5.1.2	Formatting principles	Full	
5.2	SCMG message parameters		
5.2.1	Affected SSN	Full	
5.2.2	Affected PC	Full	
5.2.3	Subsystem multiplicity indicator	Full	Encoding is not implemented.
5.2.4	SCCP congestion level	Full	Encoding is not implemented.
5.3	SCMG Messages	Partial	SOR and SOG are not supported.
6	References		
6.1	Normative references		
6.2	Informative references		
A.1	Introduction	None	Not compliant - see 3
A.2	Connection refusal	None	Not compliant - see 3
A.3	Connection release	None	Not compliant - see 3
A.4	Connection reset	None	Not compliant - see 3
A.5	Return cause	Full	

6 SCCP Q.714 - Procedures

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	Description	Compliar	Notes
1	Introduction		
1.1	General characteristics of signalling connection control procedures		
1.1.1	Purpose		
1.1.2	Protocol classes	Partial	Connection-oriented services are not implemented.
1.1.2.1	Protocol class 0	Full	
1.1.2.2	Protocol class 1	Full	
1.1.2.3	Protocol class 2	None	Connection-oriented services are not implemented.
1.1.2.4	Protocol class 3	None	Connection-oriented services are not implemented.
1.1.3	Signalling connections	Full	
1.1.4	Compatibility and handling of unrecognized information		
1.1.4.1	Rules for compatibility	Full	
1.1.4.2	Handling of unrecognized messages or parameters	Full	
1.1.4.3	Handling of non-mandatory unsupported parameter values	Full	
1.1.4.4	Treatment of spare fields	Full	
1.1.4.5	Handling of gaps	Full	
1.2	Overview of procedures for connection-oriented services		

1.2.1	Connection establishment	None	Connection-oriented services are not implemented.
1.2.2	Data transfer	None	Connection-oriented services are not implemented.
1.2.3	Connection release	None	Connection-oriented services are not implemented.
1.3	Overview of procedures for connectionless services		
1.3.1	General	Partial	Acting as a relay node is not supported.
1.3.2	Segmentation/reassembly	Full	
1.4	Structure of the SCCP and contents of this Recommendation	Partial	Connection-oriented control is not implemented.
2	Addressing and routing		
2.1	SCCP addressing principles	Full	
2.2	SCCP routing principles	Full	
2.2.1	Receipt of SCCP message transferred by the MTP	Full	
2.2.2	Messages passed from connection-oriented or connectionless control to SCCP routing control	Full	
2.2.2.1	DPC present	Full	
2.2.2.2	DPC not present	Full	
2.3	SCCP routing procedures		
2.3.1	Receipt of SCCP messages transferred by the MTP	Partial	Connection-oriented services are not implemented.
2.3.2	Messages from connectionless or connection-oriented control to SCCP routing control	Partial	Connection-oriented control is not implemented.

2.4	Global title translation		
2.4.1	General characteristics of the GTT	Full	
2.4.2	Terminology definitions		
2.4.2.1	GT information	Full	
2.4.2.2	Other definitions used in the GTT function	Full	
2.4.3	Input of the GTT function	Full	
2.4.3.1	Local information (mandatory input)	Full	
2.4.3.2	GT information (mandatory input)	Full	
2.4.3.3	SSN (mandatory input if present)	Full	
2.4.3.4	Loadsharing information	Full	
2.4.4	Output of the GTT function	Full	
2.4.5	Global title translation function	Full	
2.5	Compatibility test	Partial	Sending of LUDT/LUDTS messages is not supported.
2.6	Traffic limitation mechanism	Full	
2.6.1	General	Full	
2.6.2	Importance of a message	Partial	Acting as a relay node is not supported.
2.6.3	Handling of messages to a congested node	Full	
2.7	Calling party address treatment		
2.7.1	Address indicator	Full	
2.7.2	Calling party address in the internation al network	None	For further study.
2.7.3	Routing indicator	Full	
2.7.4	Screening	None	Screening is not supported

2.7.5	Inclusion of OPC in the calling party address	Full	
2.7.5.1	LUDT or FullUDT or UDT message	Full	
2.7.5.2	CR message	None	Connection-oriented services are not implemented.
2.8	Routing failures	Partial	Connection-oriented services are not implemented.
2.8.1	No translation for an address of such nature	Full	
2.8.2	No translation for this specific address	Full	
2.8.3	MTP/SCCP/subsystem failure	Full	
2.8.4	MTP/SCCP/subsystem congestion	Partial	Only as N-NOTICE.
2.8.5	Unequipped user	Full	
2.8.6	Hop counter violation	None	Hop counting is not supported
3	Connection-oriented procedures		Connection-oriented procedures are not supported
3.1	Connection establishment		
3.1.1	General	None	Not supported - see 3
3.1.2	Local reference numbers	None	Not supported - see 3
3.1.3	Negotiation procedures		
3.1.3.1	Protocol class negotiation	None	Not supported - see 3
3.1.3.2	Flow control credit negotiation	None	Not supported - see 3
3.1.4	Actions at the originating node		
3.1.4.1	Initial actions	None	Not supported - see 3
3.1.4.2	Subsequent actions	None	Not supported - see 3
3.1.5	Actions at a relay node with coupling		

3.1.5.1	Initial actions	None	Not supported - see 3
3.1.5.2	Subsequent actions	None	Not supported - see 3
3.1.6	Actions at the destination node		
3.1.6.1	Initial actions	None	Not supported - see 3
3.1.6.2	Subsequent actions	None	Not supported - see 3
3.2	Connection refusal	None	Not supported - see 3
3.2.1	Actions at node initiating connection refusal	None	Not supported - see 3
3.2.1.1	Initiating connection refusal at the destination node	None	Not supported - see 3
3.2.1.2	Initiating connection refusal at a relay node	None	Not supported - see 3
3.2.1.3	Initiating connection refusal at the originating node	None	Not supported - see 3
3.2.2	Actions at a relay node not initiating connection refusal	None	Not supported - see 3
3.2.3	Actions at the originating node not initiating connection refusal	None	Not supported - see 3
3.3	Connection release		
3.3.1	General	None	Not supported - see 3
3.3.2	Frozen reference	None	Not supported - see 3
3.3.3	Actions at an end node initiating connection release		
3.3.3.1	Initial actions	None	Not supported - see 3
3.3.3.2	Subsequent actions	None	Not supported - see 3
3.3.4	Actions at a relay node	None	Not supported - see 3
3.3.4.1	Initial actions	None	Not supported - see 3

3.3.4.2	Subsequent actions	None	Not supported - see 3
3.3.5	Actions at an end node not initiating connection release	None	Not supported - see 3
3.4	Inactivity control	None	Not supported - see 3
3.5	Data transfer		
3.5.1	General	None	Not supported - see 3
3.5.1.1	Actions at the originating node	None	Not supported - see 3
3.5.1.2	Actions at a relay node	None	Not supported - see 3
3.5.1.3	Actions at the destination node	None	Not supported - see 3
3.5.2	Flow control		
3.5.2.1	General	None	Not supported - see 3
3.5.2.2	Sequence numbering	None	Not supported - see 3
3.5.2.3	Flow control window	None	Not supported - see 3
3.5.2.4	Flow control procedures		
3.5.2.4.1	Transfer of DT2 messages	None	Not supported - see 3
3.5.2.4.2	Transfer of AK messages	None	Not supported - see 3
3.5.2.4.3	Reception of a Data or AK message	None	Not supported - see 3
3.5.3	Segmenting and reassembly	None	Not supported - see 3
3.6	Expedited data transfer		
3.6.1	General	None	Not supported - see 3
3.6.2	Actions at the originating node	None	Not supported - see 3
3.6.3	Actions at a relay node	None	Not supported - see 3
3.6.4	Actions at the destination node	None	Not supported - see 3
3.7	Reset		

3.7.1	General	None	Not supported - see 3
3.7.2	Action at an end node initiating the reset procedure		
3.7.2.1	Initial actions	None	Not supported - see 3
3.7.2.2	Subsequent actions	None	Not supported - see 3
3.7.3	Actions at a relay node		
3.7.3.1	Initial actions	None	Not supported - see 3
3.7.3.2	Subsequent actions	None	Not supported - see 3
3.7.4	Actions at an end node not initiating the reset procedure	None	Not supported - see 3
3.7.5	Handling of messages during the reset procedures	None	Not supported - see 3
3.8	Restart		
3.8.1	General	None	Not supported - see 3
3.8.2	Actions at the recovered node		
3.8.2.1	Initial actions	None	Not supported - see 3
3.8.2.2	Subsequent actions	None	Not supported - see 3
3.8.3	Actions at the non-failed far end node	None	Not supported - see 3
3.8.3.1	Permanent signalling connections	None	Not supported - see 3
3.8.3.2	Abnormalities		
3.8.3.3	General	None	Not supported - see 3
3.8.4	Syntax error	None	Not supported - see 3
3.8.5	Action tables	None	Not supported - see 3
3.8.6	Actions upon the reception of an ERR message	None	Not supported - see 3
4	Connectionless procedures	Full	Relax usage of LUDT/LUDTS messages.

4.1	Data transfer	Partial	Only UDT, UDTS, XUDT and XUDTS messages are sent.
4.1.1	Segmentation/reassembly		
4.1.1.1	Segmentation		
4.1.1.1.1	General	Full	
4.1.1.1.2	Normal procedures	Partial	LUDT is not supported.
4.1.1.1.3	Message return procedure	Partial	LUDT and LUDTS are not supported.
4.1.1.1.3.1	Segmentation not supported.	Full	
4.1.1.1.3.2	Segmentation failed	None	LUDT is not supported.
4.1.1.2	Reassembly		
4.1.1.2.1	General	Partial	LUDT is not supported.
4.1.1.2.2	Normal procedures	Partial	LUDT is not supported.
4.1.1.2.3	Message return procedure	Partial	LUDT is not supported.
4.1.1.2.3.1	Destination cannot perform reassembly	Full	
4.1.1.2.3.2	Error in message transport	Full	
4.1.1.2.3.3	Error in local processing	Full	
4.1.1.2.3.4	No buffer space to perform reassembly	Full	
4.1.2	Message change	Partial	Only LUDTS in UDTS.
4.2	Message return procedure	Full	
4.3	Syntax error	Full	
5	SCCP management procedures		
5.1	General	Full	
5.2	Signalling point status management		
5.2.1	General	Full	

5.2.2	Signalling point prohibited	Full	
5.2.3	Signalling point allowed	Full	
5.2.4	Signalling point congested	Full	
5.2.5	Local MTP network availability	Full	
5.2.6	Local MTP network unavailability	None	MTP restart procedure not supported
5.2.7	SCCP reports of SCCP and nodal congestion	Full	
5.2.7.1	Actions in the congested SCCP node	None	SSC message sending is not supported
5.2.7.2	Action in a relay or originating node	Full	
5.2.8	Inter- and Intra- SCMG congestion reports procedure	Full	
5.3	Subsystem status management		
5.3.1	General	Full	
5.3.2	Subsystem prohibited	Full	
5.3.2.1	Receipt of messages for a prohibited subsystem (response method)	Full	
5.3.2.2	Receipt of Subsystem-Prohibited message or N-STATE request primitive or local user failed	Partial	N-STATE not supported.
5.3.3	Subsystem allowed	Partial	N-STATE not supported.
5.3.4	Subsystem status test		
5.3.4.1	General		
5.3.4.2	Actions at the initiating node	Full	
5.3.4.3	Actions at the receiving node	Full	
5.3.5	Coordinated state change		Not supported.
5.3.5.1	General	None	Not compliant. Procedure is not supported

5.3.5.2	Actions at the requesting node	None	Not compliant - see 5.3.5.1
5.3.5.3	Actions at the requested node	None	Not compliant - see 5.3.5.1
5.3.6	Local broadcast		
5.3.6.1	General	None	Not compliant. Procedure is not supported
5.3.6.2	User-out-of-service	None	Not compliant - see 5.3.6.1
5.3.6.3	User-in-service	None	Not compliant - see 5.3.6.1
5.3.6.4	Signalling point inaccessible	None	Not compliant - see 5.3.6.1
5.3.6.5	Signalling point or remote SCCP accessible	None	Not compliant - see 5.3.6.1
5.3.6.6	Restricted importance level reporting	None	Not compliant - see 5.3.6.1
5.3.7	Broadcast		
5.3.7.1	General	Full	
5.3.7.2	Subsystem prohibited	Partial	Only for local subsystem.
5.3.7.3	Subsystem allowed	Partial	Only for local subsystem.
5.4	MTP/SCMG restart	Full	

7 TCAP Q.771 - Functional Description

Empty cells are descriptive text only

	Description	Compliar	Notes
1	Introduction		
1.1	General		
1.2	Contents of the Q.771/Q.775-Series Recommendations		
1.3	Objectives		
1.3.1	Definition of Transaction Capabilities		
1.3.2	Scope of Transaction Capabilities		
2	Overview		
2.1	Terminology		
2.2	Structure of TC		
2.2.1	Architectural concept		
2.2.2	Addressing issues	Full	
2.2.3	Management aspects	Full	
2.2.4	Alignment of TCAP with Recommendations X.219 and X.229 (ROSE)		
2.2.5	Alignment of TCAP with Recommendations X.217 and X.227 (ACSE)		
2.3	TC based on a connectionless network service		
2.3.1	Service provided by the Component sublayer		

2.3.1.1	Component	Full	
2.3.1.2	Dialogue	Full	
2.3.1.2.1	Unstructured dialogue	Full	
2.3.1.2.2	Structured dialogue	Full	
2.3.1.3	Component correlation	Full	
2.3.1.4	Error Handling	Full	
2.3.2	Service provided by the Transaction sublayer	Full	
2.3.2.1	Unstructured dialogue	Full	
2.3.2.2	Structured dialogue	Full	
3	Service provided by TC based on a connectionless network service		
3.1	Component sublayer		
3.1.1	Overview of Component sublayer primitives	Partial	TC-TIMER-RESET is not supported.
3.1.2	Dialogue handling	Full	
3.1.2.1	Definition of parameters	Full	
3.1.2.2	Dialogue facilities	Full	
3.1.2.2.1	Unstructured dialogue	Full	
3.1.2.2.2	Structured dialogue	Full	
3.1.2.2.2.1	Beginning of a dialogue	Full	
3.1.2.2.2.2	Confirmation of the dialogue	Full	
3.1.2.2.2.3	Continuation of the dialogue	Full	
3.1.2.2.2.4	End of the dialogue	Full	
3.1.3	Component handling		

3.1.3.1	Definitions of parameters		
3.1.3.2	Operation invocation	Full	
3.1.3.3	Report of success	Full	
3.1.3.4	Report of failure	Full	
3.1.3.5	Reject by the TC-user	Full	
3.1.3.6	Cancel of an operations	Full	
3.1.3.7	Reset of an operation invocation	None	Not compliant - see 3.1.1
3.1.3.8	Grouping of components inside a Message	Full	
3.1.4	Abnormal situations		
3.1.4.1	Reject of a component by the component sub-layer	Partial	Total length of the components to be sent cannot exceed the message size limitation imposed by the underlying layer (SCCP).
3.1.4.2	Dialogue abort	Full	
3.1.5	Component states and state transition diagrams	Full	
3.1.6	Mapping of Component sublayer onto Transaction sublayer	Full	
3.2	Transaction sublayer		
3.2.1	Overview of the Transaction sublayer primitives	Full	
3.2.2	Information transfer in unstructured dialogue	Full	
3.2.3	Transaction begin	Full	
3.2.4	Transaction continuation	Full	
3.2.5	Transaction end	Full	
3.2.6	Abnormal situations		

3.2.6.1	Abort by the Transaction sublayer	Full	
3.2.7	Exception reporting and message return	Full	
3.3	Services assumed from the connectionless network layer	Full	

8 TCAP Q.772 - Transactions Capabilities Information Element Definitions

Empty cells are descriptive text only

	Description	Compliar	Notes
1	General		
2	Transaction portion		
2.1	Message type		
2.1.1	unidirectional	Full	
2.1.2	begin	Full	
2.1.3	end	Full	
2.1.4	continue	Full	
2.1.5	abort	Full	
2.2	Transaction IDs		
2.2.1	originating transaction ID	Full	
2.2.2	destination transaction ID	Full	
2.3	P-abort cause	Full	
2.3.1	unrecognized message type	Full	
2.3.2	unrecognized transaction ID	Full	
2.3.3	badly formatted transaction portion	Full	
2.3.4	incorrect transaction portion	Full	
2.3.5	resource limitation	Full	
2.4	dialogue portion	Full	
2.5	component portion	Full	
3	Component Portion		

3.1	Component type	Full	
3.1.1	invoke	Full	
3.1.2	return result (not last)	Full	
3.1.3	return result (last)	Full	
3.1.4	return error	Full	
3.1.5	reject	Full	
3.2	invoke ID	Full	
3.3	linked ID	Full	
3.4	operation code	Full	
3.5	parameter	Full	
3.6	error code	Full	
3.7	problem code	Full	
3.7.1	general problem	Full	
3.7.2	invoke problem	Full	
3.7.3	return result problem	Full	
3.7.4	return error problem	Full	
4.1	Dialogue Control APDUs		
4.1.1	Dialogue Request (AARQ) APDU	Full	
4.1.2	Dialogue Response (AARE) APDU	Full	
4.1.3	Dialogue Abort (ABRT) APDU	Full	
4.1.4	Dialogue Uni (AUDT) APDU		
4.2.1	application context name	Full	
4.2.2	protocol version	Full	
4.2.3	user information	Full	

4.2.4	result	Full	
4.2.5	result resource diagnostic	Full	
4.2.6	abort source	Full	

9 TCAP Q.773 - Transactions Capabilities Formats and Encoding

Empty cells are descriptive text only

	Description	Compliar	Notes
1	Introduction		
2	Description conventions		
3	Abstract syntax description		
3.1	TC-Messages	Full	
3.2	Dialogue portion		
3.2.1	Structured dialogue	Full	
3.2.2	Unstructured dialogue	Full	
4	Message representation	Full	
4.1	Encoding rules		
4.1.1	Specification of encoding rules	Full	
4.1.2	Overview of encoding rules	Full	
4.1.3	Transmission order	Full	
4.2	Message encoding	Full	
4.2.1	Transaction Portion	Full	
4.2.2	Component Portion	Full	
4.2.3	Dialogue Portion	Full	

10 TCAP Q.774 - Transactions Capabilities and Procedures

Empty cells are descriptive text only

	Description	Compliar	Notes
1	Introduction		
1.1	Basic guideline	Full	
1.2	Overview		
2	Addressing	Full	
3	Transaction capabilities based on a connectionless network service		
3.1	Sub-layering in TCAP	Full	
3.2	Component sub-layer procedures	Full	
3.2.1	Normal procedure		
3.2.1.1	Component handling procedure		
3.2.1.1.1	Mapping of TC component handling service primitives to component types	Full	
3.2.1.1.2	Management of invoke IDs	Full	
3.2.1.1.3	Operation classes	Full	
3.2.1.1.4	Sample component flows		
3.2.1.2	Dialogue control via TC primitives	Full	
3.2.2	Abnormal procedures		
3.2.2.1	Dialogue control	Full	
3.2.2.2	Abnormal procedures relating to operations	Full	
3.2.3	Compatibility issues	Full	

3.3	Transaction sub-layer procedures		
3.3.1	General	Full	
3.3.2	Mapping of TR service primitives to message types	Full	
3.3.3	Normal procedures	Full	
3.3.3.1.1	Actions of the sending end	Full	
3.3.3.1.2	Actions of the receiving end	Full	
3.3.3.2	Message transfer within a transaction		
3.3.3.2.1	Transaction begin		
3.3.3.2.1.1	Actions of the initiating end	Full	
3.3.3.2.1.2	Actions of the receiving end	Full	
3.3.3.2.2	Transaction continuation	Full	
3.3.3.2.3	Transaction termination	Full	
3.3.3.2.4	Abort by the TR-user	Full	
3.3.3.2.5	Example of message exchange		
3.3.3.2.6	Transaction state transition diagrams	Full	
3.3.4	Abnormal procedures relating to transaction control	Full	