

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU

Q.782 (04/2002)

SERIES Q: SWITCHING AND SIGNALLING Specifications of Signalling System No. 7 – Test specification

MTP level 3 test specification

ITU-T Recommendation Q.782

ITU-T Q-SERIES RECOMMENDATIONS SWITCHING AND SIGNALLING

SIGNALLING IN THE INTERNATIONAL MANUAL SERVICE	Q.1-Q.3
INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING	Q.4–Q.59
FUNCTIONS AND INFORMATION FLOWS FOR SERVICES IN THE ISDN	Q.60–Q.99
CLAUSES APPLICABLE TO ITU-T STANDARD SYSTEMS	Q.100–Q.119
SPECIFICATIONS OF SIGNALLING SYSTEM No. 4	Q.120–Q.119 Q.120–Q.139
SPECIFICATIONS OF SIGNALLING SYSTEM No. 5	Q.140–Q.199
SPECIFICATIONS OF SIGNALLING SYSTEM No. 6	Q.250–Q.309
SPECIFICATIONS OF SIGNALLING SYSTEM NO. 0	Q.310–Q.399
SPECIFICATIONS OF SIGNALLING SYSTEM R2	Q.400–Q.499
DIGITAL EXCHANGES	Q.500–Q.599
INTERWORKING OF SIGNALLING SYSTEMS	Q.600–Q.699
SPECIFICATIONS OF SIGNALLING SYSTEM No. 7	Q.700–Q.799
General	Q.700–Q.799 Q.700
Message transfer part (MTP)	Q.700 Q.701–Q.709
Signalling connection control part (SCCP)	Q.701–Q.709 Q.711–Q.719
Telephone user part (TUP)	Q.711–Q.719 Q.720–Q.729
ISDN supplementary services	Q.720=Q.729 Q.730=Q.739
Data user part	Q.740–Q.749
•	• •
Signalling System No. 7 management ISDN user part	Q.750–Q.759 Q.760–Q.769
<u> </u>	Q.770–Q.769 Q.770–Q.779
Transaction capabilities application part	
Test specification Q3 INTERFACE	Q.780–Q.799 Q.800–Q.849
DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 1	Q.850–Q.849 Q.850–Q.999
PUBLIC LAND MOBILE NETWORK	Q.1000–Q.1099
INTERWORKING WITH SATELLITE MOBILE SYSTEMS	
INTELLIGENT NETWORK	Q.1100–Q.1199
	Q.1200–Q.1699
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR IMT-2000 SPECIFICATIONS OF SIGNALLING RELATED TO BEARER INDEPENDENT CALL	Q.1700–Q.1799 Q.1900–Q.1999
CONTROL (BICC)	Q.1900–Q.1999
BROADBAND ISDN	Q.2000-Q.2999

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

ITU-T Recommendation Q.782

MTP level 3 test specification

Summary

This Recommendation contains a set of detailed tests of Signalling System No. 7, MTP level 3 protocol. These tests intend to validate the protocol specified in ITU-T Recs. Q.704 and Q.707. The level 3 performance aspects specified in ITU-T Rec. Q.706 are also partly checked whenever possible. This Recommendation conforms to ITU-T Rec. Q.780. However, in addition to the objectives and guidelines of the latter Recommendation, other general principles specific to level 3 tests are presented.

Source

ITU-T Recommendation Q.782 was prepared by ITU-T Study Group 11 (2001-2004) and approved under the WTSA Resolution 1 procedure on 13 April 2002.

FOREWORD

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

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

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

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

NOTE

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

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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

© ITU 2002

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

1	Introdu	action
2	Genera	al principles of level 3 tests
	2.1	Presentation of test descriptions
	2.2	Presentation of the test list
	2.3	Test traffic
3	Test co	onfigurations
	3.1	Definition
	3.2	Presentation of test configurations
	3.2.1	General
	3.2.2	Configuration A
	3.2.3	Configuration B
	3.2.4	Configuration C
	3.2.5	Configuration D.
4	Test lis	st
5	Test de	escriptions

ITU-T Recommendation Q.782

MTP level 3 test specification

1 Introduction

This Recommendation contains a set of detailed tests of Signalling System No. 7 MTP level 3 protocol. These tests intend to validate the protocol specified in ITU-T Recs. Q.704 and Q.707. The level 3 performance aspects specified in ITU-T Rec. Q.706 are also partly checked whenever possible. This Recommendation conforms to ITU-T Rec. Q.780. However, in addition to the objectives and guidelines of the latter Recommendation, other general principles specific to level 3 tests are presented below.

2 General principles of level 3 tests

2.1 Presentation of test descriptions

Each test description mentions the type of SP involved in the test. Three cases are possible:

test applicable to an SP having no STP function: SP

test applicable to an SP having STP function:

test applicable to all types of SPs: ALL

Each test description includes the environment in which the point under test must be inserted in order to pass the test. Four test configurations are necessary (named A, B, C and D); they are presented in clause 3.

Each test is precisely described. Nevertheless, some events not directly concerning the point under test, or without direct link with the test nature, are not explicitly described. This is, for example, the case of TFPs propagation when a point becomes isolated, or of the changeover procedure in a test concerning transfer allowed procedure.

In order to preserve the test description implementation independence, a certain flexibility has been left in the test descriptions. This is particularly the case when it is necessary to deactivate a link (where it is only mentioned "Deactivate" with no more precision). The operator will choose, if possible, according to the implementation particularities and the events expected in the test description, the appropriate deactivation means (MML, provoked failure, etc.).

In the test descriptions, the signalling links are identified as follows: "number of linkset"—"number of link in the linkset" (e.g. 1–1 means link 1 of the linkset 1). This identification is independent of SLC attributed to these links. When the number of the link is X, that means that the concerned message can use any link of the linkset. When the field "number of link in the linkset" is, for example, "1, 2, . . .", that means that the traffic uses all indicated links. Finally, when the links are identified by the mention ALL, that means that the traffic will use all available links of the point.

The orders "Start traffic", "Wait" and "Stop traffic" apply to the test configuration. They are placed at the beginning of the line.

2.2 Presentation of the test list

These tests, as a whole, aim at a complete validation of the level 3 protocol without redundancies.

The test list is presented in clause 4. The national options and the various signalling link management "policies" are not included in this Recommendation.

The first set of tests in the list checks that, before some more precise tests, the point under test can perform the basic functions, i.e. can connect itself to the external environment and exchange signalling messages.

The second set basically validates the signalling message handling function of the point under test. A main point of this part concerns the validation of load sharing procedures. If an implementation does not use the load sharing between linksets, some tests would not be applicable, and others should be adapted.

The third and fourth sets check changeover and changeback procedures. They include tests like changeover and changeback to/from two linksets which will be performed only if the point under tests allows this possibility.

Rerouting procedures are checked using the tests in sets 5 and 6.

Set 7 concerns tests to check inhibition and uninhibition procedures. To limit the test numbers, it was not considered that the messages used in these procedures can be transferred via STPs.

Set 8 concerns tests to check transfer controlled procedure and MTP user flow control for the international signalling network.

Set 9 concerns tests to check signalling route management functions in a point having an STP function. To limit the test numbers and to avoid complicating the test configuration, it was not considered that TFPs and TFAs can be transferred via STPs.

Set 10 concerns tests for the point restart procedure.

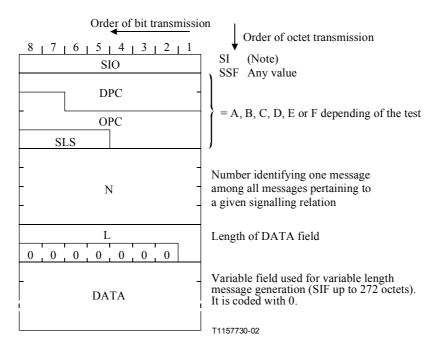
Set 11 deals with STP traffic test.

Set 12 checks the signalling link test procedure.

Finally, set 13 contains solely validation tests and aims at checking the actions of the tested system on reception of invalid level 3 messages.

2.3 Test traffic

Running the tests described in this Recommendation requires the exchange of traffic between the point under test and its environment. The traffic used is a test traffic especially generated for the test of the system. It uses variable length messages, structured as described below:



NOTE – For compatibility testing (CPT), use SI value for MTP testing user part, for validation testing (VAT) value is to be chosen as required.

The mechanisms of generation and reception of this test traffic may be internal to the point under test or external (using a simulator for example). The tests presented here do not impose the choice of one of these mechanisms except for the tests of the STP function itself (tests 2.7, 8.2, 10 and 11) where the test traffic is necessarily generated outside the STP. The test traffic should be recorded and analysed subsequently for each described test.

3 Test configurations

3.1 Definition

The set of tests described in this Recommendation assumes that the point under test is inserted in a test environment called "test configuration". A **test configuration** is defined as being:

- a) the set of points, real or simulated, linked between them by signalling linksets, real or simulated, and of which some are connected to the point under test by one or several signalling linksets;
- b) the set of routing rules applied in different points and also in point under test;
- c) the flows of test traffic generated and received by
- d) a set of generation and reception means (see 2.3);
- e) the means (program, operator interface, etc.) to run the described tests; notably the possibilities of storage and analysis of test traffic and level 3 messages and, in the case of validation tests, the possibility to send at any stage of a test, any messages (level 3 or test) valid or not.

3.2 Presentation of test configurations

3.2.1 General

The set of tests described in this Recommendation requires 4 different configurations named A, B, C and D. For each test, only the three first aspects of the above definition are precisely defined (set of points, set of routing rules and test traffic flows, see 3.1).

3.2.2 Configuration A

This simple configuration is adapted to the validation of all procedures concerning only one or more signalling links belonging to one linkset. It is used for the tests:

- of activation and deactivation of links;
- of changeover and changeback procedures;
- of inhibition and uninhibition of links;
- invalid messages.

Configuration A is shown in Figure 1.

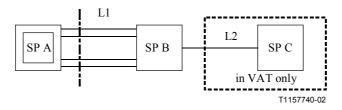


Figure 1/Q.782 – Configuration A

Configuration A, Table 1, makes use of a point C in all validation tests in order to check the impact of the procedures on various traffic flows. Point C is not used in configuration A in the case of compatibility tests.

Linkset 1 has four signalling links in order to check, for example, changeover procedure to several links within a linkset (test 3.15).

In real networks, the procedures checked with this configuration act on the traffic carried in both directions of a link. Consequently, the flows of test traffic used are, regarding the routing label of messages:

- $\qquad \text{OPC} = A, \text{ DPC} = B \text{ and OPC} = B, \text{ DPC} = A$
- OPC = A, DPC = C and OPC = C, DPC = A (in validation test only).

	A	В	C
A	-	L1	L1
В	L1	_	L2
С	L2	L2	_

Table 1/Q.782 – Routing rules in configuration A

3.2.3 Configuration B

Configuration B is adapted to the validation of all procedures concerning several signalling linksets. It is used for the tests:

- of signalling message handling;
- of changeover and changeback;
- of forced and controlled rerouting.

Configuration B is shown in Figure 2.

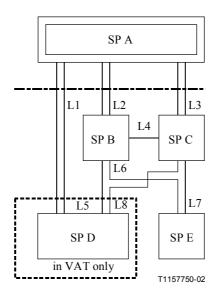


Figure 2/Q.782 – Configuration B

In configuration B, Table 2, the point under test A is linked to the external world with 3 signalling linksets. This is the minimum required number of linksets in order to check:

- load sharing between three linksets;
- changeover and changeback from/to two linksets (see 5.3.1/Q.704).

	A	В	C	D	E
A	_	L2, L3	L3, L2	L1-L2-L3	L2-L3
В	L2, L4	_	L4	L5, L4	L6, L4
C	L3, L4	L4	_	L8, L4	L7, L4
D	L1, L5, L8	L5, L8	L8, L5	_	Any
E	L7, L6	L6, L7	L7, L6	Any	_

Table 2/Q.782 – Routing rules in configuration B

Li, Lj Li normal linkset and Lj alternative linkset

Li-Lj Load sharing between Li and Lj

When the SP A is an SP having no STP function, this configuration is also the minimum to run the tests in a network situation where associated mode and quasi-associated mode are used (see 3.1.2/Q.701).

This configuration comprises point D in all validation tests in order to check the impact of the procedures on various traffic flows (relations A-D and A-E). The point D is not used in configuration B in case of compatibility tests.

In a real network, some procedures (changeover, changeback) checked with this configuration act on the traffic in both directions on the concerned linksets. Consequently, the test traffic flows used are, regarding the routing label of messages:

- OPC = A, DPC = E and OPC = E, DPC = A
- OPC = A, DPC = D and OPC = D, DPC = A (in validation test only).

3.2.4 Configuration C

This configuration is adapted to the validation of some functions specific to an STP like:

- message transfer function;
- sending of TFC;
- traffic test.

Configuration C is shown in Figure 3.

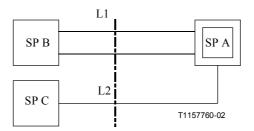


Figure 3/Q.782 – Configuration C

In configuration C, Table 3, the point under test A carries the test traffic from B to C and from C to B. The linkset 1 has two links, this a minimum to create an overload situation to trigger the sending of TFC independently of the implementation of the flow control procedure.

Table 3/Q.782 – Routing rules in configuration C

	A	В	C
A	_	L1	L2
В	L1	-	L1
C	L2	L2	_

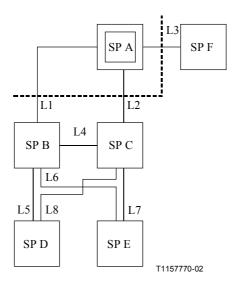
The tests performed with this configuration require that the traffic crosses the STP under test in both directions. Consequently the test traffic flows are, regarding the routing label of messages:

$$-$$
 OPC = B, DPC = C and OPC = C, DPC = B.

3.2.5 Configuration D

This configuration is adapted to the validation of all procedures concerning exclusively the points having an STP function. It is used to check the signalling route management procedures.

Configuration D is shown in Figure 4.



NOTE – The SPs E, D and F do not have an STP function.

Figure 4/Q.782 – Configuration D

Configuration D, Table 4, is used only to check the signalling route management: transfer prohibited and transfer allowed procedures. Consequently, all linksets of this configuration have only one signalling link.

г 	A	В	C	D	E	F
A	-	L1, L2	L2, L1	L1, L2	L1, L2	L3
В	L1, L4	Ι	L4	L5, L4	L6, L4	L1
C	L2, L4	L4	_	L8, L4	L7, L4	L2
D		Any			A	ny
E		A	ny		_	Any
F	L3	L3	L3	L3	L3	_

Table 4/Q.782 – Routing rules in configuration D

The STP under test is linked to the external world with three linksets: one terminal linkset (to an SP without STP function) and two inter STP linksets. This structure is minimal to check the various aspects of the broadcasting of TFPs and TFAs:

- TFPs or TFAs concerning several destinations;
- TFPs or TFAs to several destinations.

This configuration includes points D and E. This is necessary in order to check the sending of TFP on an alternative linkset: in A, the routing rules are such that the linksets 1 and 2 are used to reach D using normal/alternative routing and to reach E using load sharing routing (sending of TFP in the first case and not in the second).

The tests performed with this configuration, which check the signalling route procedures, require that the test traffic uses the concerned signalling routes. The test traffic flows used in this Recommendation are, regarding the routing label messages:

- OPC = F, DPC = D OPC = D, DPC = F
- OPC = F, DPC = E OPC = E, DPC = F
- OPC = A, DPC = D OPC = A, DPC = E OPC = A, DPC = F

4 Test list

All tests with the indication "*" are validation and compatibility tests. The tests without asterisk are validation tests only.

- 1 Signalling link management
- * 1.1 First signalling link activation
- * 1.2 Signalling linkset deactivation
- * 1.3 Signalling linkset activation
 - 2 Signalling message handling
 - 2.1 Message received with an invalid SSF (discrimination function)
 - 2.2 Message received with an invalid DPC (discrimination function)
 - 2.3 Message received with an invalid SI (distribution function)
 - 2.4 Load sharing within a linkset
 - 2.4.1 All links available
 - 2.4.2 With one link unavailable
 - 2.5 Load sharing between linksets
 - 2.5.1 Between two linksets
 - 2.5.2 Between three linksets
 - 2.5.3 Between three linksets and one route unavailable
 - 2.5.4 Between three linksets and one linkset unavailable
 - 2.6 Inaccessible destination
 - 2.6.1 Due to a linkset failure
 - 2.6.2 Due to a route failure
 - 2.6.3 Due to a linkset and a route failure
- * 2.7 Message transfer function
 - 3 Changeover
 - 3.1 Changeover initiated at one side of a linkset (COO \leftrightarrow COA)
 - 3.2 Changeover initiated at the both ends at the same time (COO \leftrightarrow COO)
 - 3.3 Changeover on expiration of timer T2 (COO or ECO \rightarrow -)
 - 3.4 Unreasonable FSN in COO/COA
 - 3.5 Reception of a changeover acknowledgement without sending a changeover order (− ← COA or ECA)

- 3.6 Reception of an additional changeover order ($-\leftarrow$ COO or ECO)
- 3.7 Emergency changeover at one side of a linkset (COO \leftrightarrow ECA)
- 3.8 Emergency changeover at one side of a linkset (COO \leftrightarrow ECO)
- 3.9 Emergency changeover at one side of a linkset (ECO \leftrightarrow COA)
- 3.10 Emergency changeover at both sides of a linkset (ECO \leftrightarrow ECA)
- 3.11 Emergency changeover at one side of a linkset (ECO \leftrightarrow COO)
- 3.12 Emergency changeover initiated at the both ends at the same time (ECO \leftrightarrow ECO)
- 3.13 Reactivation of a link during a changeover procedure
- 3.14 Simultaneous changeover
- 3.15 Changeover to several alternative links within a linkset
- * 3.16 Changeover to another linkset with the adjacent SP accessible
- * 3.17 Changeover to another linkset with the adjacent SP inaccessible
 - 3.18 Changeover to two linksets
 - 3.19 Changeover due to various reasons
 - 3.20 Changeover as compatibility test
 - 3.21 Reception of a changeover order on an available link
 - 4 Changeback
- * 4.1 Changeback within a linkset
 - 4.2 Additional CBA
 - 4.3 Additional CBD
 - 4.4 No acknowledgement to first CBD
 - 4.5 No acknowledgement of repeat changeback declaration
 - 4.6 Simultaneous changeback
 - 4.7 Changeback from several alternative links within a linkset
- * 4.8 Changeback from another linkset
 - 4.9 Changeback from two linksets
 - 4.10 Changeback due to various reasons
- * 4.11 Time controlled diversion procedure
- * 5 Forced rerouting
- * 6 Controlled rerouting
 - 7 Management inhibiting
 - 7.1 Inhibition of a link
- * 7.1.1 Available link
- * 7.1.2 Unavailable link

- 7.2 Inhibition not permitted
- * 7.2.1 Local reject on an available link
- 7.2.2 Local reject on an unavailable link
 - 7.2.3 Sending of LID
 - 7.2.4 Reception of LID
 - 7.3 Expiration of T14
 - 7.3.1 On an available link
 - 7.3.2 On an unavailable link
 - 7.4 Additional inhibition messages (LIA, LID, LIN)
 - 7.5 Inhibition asked by the both ends of a link
 - 7.6 Manual uninhibition of a link
- 7.6.1 With changeback
- 7.6.2 Without changeback
 - 7.7 Expiration of T12
- 7.8 Not possible uninhibition
 - 7.9 Automatic uninhibition of a link
 - 7.10 Forced uninhibition of a link
 - 7.10.1 Sending of LFU
 - 7.10.2 Reception of LFU
 - 7.11 Expiration of T13
 - 7.12 Additional uninhibition messages (LUA, LUN, LFU)
 - 7.13 Uninhibition at one side after test 7.5
 - 7.14 Automatic uninhibition after test 7.5
 - 7.15 Automatic uninhibition with two links inhibited
 - 7.16 Reception of traffic on an inhibited link
 - 7.17 Management inhibiting test
 - 7.17.1 Normal procedure
 - 7.17.2 Reception of an LLT or LRT on an uninhibited link
 - 7.17.3 Reception of an LLT on a link locally inhibited
 - 7.17.4 Reception of an LRT on a link remotely inhibited
 - 8 Signalling traffic flow control
 - 8.1 Reception of a TFC
 - 8.2 Sending of TFCs
 - 8.3 Reception of an UPU
 - 8.4 Sending of an UPU

9 Signalling route management 9.1 Sending of a TFP on an alternative route Failure of normal linkset 9.1.2 On reception of a TFP 9.2 **Broadcast of TFPs** 9.2.1 On one linkset failure 922 On multiple failures 9.3 Reception of a message for an inaccessible destination 9.4 Sending of a TFA on an alternative route 9.4.1 Recovery of normal linkset 9.4.2 On reception of a TFA 9.5 **Broadcast of TFAs** 9.5.1 On one linkset recovery 9.5.2 Various reasons 9.6 Periodic sending of Signalling-Route-Set-Test (SRST) messages 9.7 Reception of a signalling-route-set-test message 10 Signalling point restart Recovery of a linkset (SP A does not have the STP function) 10.1 With use of point restart procedure Not resulting in the signalling point restart procedure 10.1.2 10.2 Recovery of a linkset (SP A has the STP function) 10.2.1 Not resulting in the signalling point restart procedure Not resulting in the signalling point restart procedure

An adjacent signalling point becomes accessible via another signalling point

10.4 An adjacent signalling point becomes accessible via another signalling point (SP A

- has STP function)

 * 10.5 Restart of an SP having no STP function
 - 10.6 Restart of an SP having STP function
 - 10.7 Reception of an unexpected TRA
 - 10.7.1 In an SP having no STP function

(SP A does not have an STP function)

- 10.7.2 In an SP having the STP function
- 11 Traffic test

10.3

- 12 Signalling link test
- 12.1 After activation of a link
 - 12.2 No acknowledgement to first SLTM
 - 12.3 No acknowledgement to second SLTM

- 12.4 Unreasonable field in an SLTA
- 12.5 Reception of an SLTM in an attempt state
- * 12.6 Additional SLTA, SLTM
 - 13 Invalid messages
 - 13.1 Invalid H0-H1 in a signalling network management message
 - 13.2 Invalid changeover messages
 - 13.3 Invalid changeback messages
 - 13.4 Invalid changeback code
 - 13.5 Invalid inhibition messages
 - 13.6 Invalid transfer control messages
 - 13.7 Invalid signalling route management messages
 - 13.8 Invalid signalling-route-set-test messages
 - 13.9 Invalid traffic restart allowed message
 - 13.10 Invalid H0-H1 in a signalling network testing and maintenance message
 - 13.11 Invalid signalling link test messages
 - 13.12 Invalid user part unavailable messages

5 Test descriptions

TEST	TEST NUMBER: 1.1 PAGE: 1 of 1				
REFERENCE: clause 3/Q.704 Fig. 7, Fig. 36, Fig. 37, Fig. 38					
TITLE: Signalling link management					
SUBT	TLE: First signalling link a	ectivation			
		signalling linkset with 1 signalling link			
PRE-T	EST CONDITIONS: Signa	lling links deactivated			
C	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE C	OF SP: ALL	
	AGE SEQUENCE:				
SP	A		SP B		
T · 1			T 1 1		
Link			Link	. A .4:4.	
1–1	:Activate		1–1	:Activate	
1-1	.Activate		. 1–1	SLTM	
1–1	SLTA -		1-1	SLTM	
1-1	SLTA -				
1-1	SLTWI -	·	. 1–1	SLTA	
:Start t	raffic		1-1	SLIA	
1–1	TRAFFIC -				
1 1	TRAITIC -		1–1	TRAFFIC	
:Wait	`			nanne	
:Stop t	raffic				
.otop t					
NOTE	– The MTP restart procedu	re is not described in this test and is che	ecked in others	tests.	
TEST DESCRIPTION					
1.	Check that the signalling l	ink becomes available.			
2.	*	ending of variable length messages on t			
	SP at the other end of this other end of this linkset).	linkset (and, in case of VAT, from/to o	ther SP crossing	g the SP at the	
3.	<i>'</i>	ment, the level 2 does not send any mes	sage received b	pefore or during	
٥.	the deactivation.	, the rever 2 does not send thy mes	2250 100011001	cross of during	
4.	_	re correctly received (no loss of messag	es, no duplicati	on and no	
_	missequencing).				
5. 6	Stop traffic. Report the test with differ	ont SLC values			
6.	Repeat the test with different	em SLC values.			

TEST NUMBER: 1.2	PAGE: 1 of 1					
REFERENCE: clause 3/Q.704 Fig. 7, Fig. 36, Fig. 37, Fig. 38						
TITLE: Signalling link management						
SUBTITLE: Signalling linkset deactivation						
PURPOSE: To remove from service a signalling linkset with 1 signal	ılling link					
PRE-TEST CONDITIONS: One signalling link (1–1) activated						
CONFIGURATION: A TYPE OF TEST: VAT, CPT TYPE OF SP: ALL						
MESSAGE SEQUENCE:						
SP A SP B						
Link	Link					
1–1 :Deactivate						
TEST DESCRIPTION						
1. Check that the signalling linkset becomes unavailable.						

TEST NI	JMBER: 1.3		I	PAGE: 1 of 1	
REFERENCE: clause 3 and 12.2.4.1/Q.704 Fig. 7, Fig. 36, Fig. 37, Fig. 38					
	TITLE: Signalling link management				
	LE: Signalling linkset ac				
PURPOS	E: To put into service a	signalling linkset with 4 signalling	links		
PRE-TES	ST CONDITIONS: Sign	alling links deactivated			
CON	IFIGURATION: A	TYPE OF TEST: VAT, CPT		TYPE (OF SP: ALL
MESSAC	GE SEQUENCE:				
SP A				SP B	
Link				Link	
1-1	:Activate			1–1	:Activate
1–2	:Activate			1–2	:Activate
1–3	:Activate			1–3	:Activate
1–4	:Activate			1–4	:Activate
:Start traf	fic				
1–1	TRAFFIC				
				1–1	TRAFFIC
1–2	TRAFFIC			1 1	11011110
1 2	TIGHT I C		/	1–2	TRAFFIC
1 2	TD A EELC			1-2	TRAFFIC
1–3	TRAFFIC		\longrightarrow	1 2	TD A FFIG
				1–3	TRAFFIC
1–4	TRAFFIC		\longrightarrow		
		(1–4	TRAFFIC
:Wait					
:Stop traf	fic				
NOTE – This test describes the activation of a linkset. The signalling link activation order is given					
simultaneously to all signalling links of the signalling linkset (see 12.2.4.1/Q.704). However, depending					
	on which order the links are aligned, changeback procedures will be performed. This test does not describe the transitory states (signalling link test, changeback and restart procedures are checked in other tests).				
TEST DESCRIPTION					

- Check that the signalling links become available and start traffic between A and B (and A and C in 1. VAT).
- 2. Check the reception and sending of variable length messages on the activated linkset from/to the SP at the other end of this linkset (and, in case of VAT, from/to other SP crossing the SP at the other end of this linkset).
- Check that, after the alignment, the level 2 does not send any message received before or during 3. the deactivation.
- 4. Check that all messages are correctly received (no loss of messages, no duplication and no missequencing).
- Stop traffic. 5.

TEST NUMBER: 2.1		PAGE: 1 of 1				
REFERENCE: clause 3 and 2.4/Q.704 Fig. 24						
TITLE: Signalling message handling						
SUBTITLE: Message received with an invalid SSF (discrimination function)						
PURPOSE: To check the respons	se to a message with an invalid SSF					
PRE-TEST CONDITIONS: Sign	PRE-TEST CONDITIONS: Signalling linkset activated					
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESSAGE SEQUENCE:						
SP A		SP B				
Link		Link				
		− 1−1 :Invalid SLTM				
		(invalid SSF)				
TEST DESCRIPTION						
1. Send an SLTM with an e	erroneous SSF.					
2. Check that no response i	s received.					
Î						

TEST	NUMBER: 2.2					PAGE: 1 of 1
REFERENCE: clause 2/Q.704 Fig. 24, Fig. 26						
TITLE	: Signalling me	essage handling				
SUBT	ITLE: Message	received with an	invalid DPC			
PURP	OSE: To check	the response to a	message with a	n invalid DF	PC	
PRE-T	EST CONDITI	ONS: Signalling	linkset activate	d		
C	ONFIGURATIO	ON: A	TYPE OF T	EST: VAT		TYPE OF SP: ALL
MESS.	AGE SEQUEN	CE:				
SP.	A			SP B		
Link				Link		
				1-1		valid ECO
	TED			(1 :0.	•	roneous DPC)
1–1	TFP			(only if t	the tes	ted point A has an STP function)
TEGT	DECORIDATION	т				
	DESCRIPTION		DDC			
1.		nessage with an e		1 1	. 1	
2. Check that no response is received if the tested point does not have an STP function. If the tested point has the STP function, check that a TFP is received.						

TEST NUMBER: 2.3		PAGE: 1 of 1						
REFERENCE: 2.4/Q.704 Fig.	REFERENCE: 2.4/Q.704 Fig. 24, Fig. 25							
TITLE: Signalling message hand								
	ith an invalid SI (distribution function)							
PURPOSE: To check the respons	e to a message received with an invalid	SI						
PRE-TEST CONDITIONS: Sign	alling linkset activated							
CONFIGURATION: A								
MESSAGE SEQUENCE:								
SP A		SP B						
Link		Link						
	←	- 1–1	:Invalid SLTM					
			:(invalid SI)					
TEST DESCRIPTION								
Send an SLTM message	with an invalid SI.							
2. Check that no response is used does not exist.	2. Check that no response is received except perhaps a UPU (cause unequipped) when the SI							

TEST 1	NUMBER: 2.4.1		PAGE: 1 of 1			
REFE	RENCE: 2.3/Q.704 Fig	. 26 4.4/Q.705				
TITLE	: Signalling message hand	dling				
SUBTI	TLE: Load sharing within	n a linkset – All links available				
PURPO	OSE: To check the load sh	naring within a linkset with all the links a	vailable			
PRE-T	EST CONDITIONS: Sign	nalling linkset activated				
C	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL			
	AGE SEQUENCE:					
SP A SP B						

Link			Link			
:Start t	TRAFFIC					
1-1	IKAFFIC		- 1–1 TRAFFIC			
1–2	TRAFFIC		- I-I IKAITIC			
1-2	TRAFFIC	,	- 1–2 TRAFFIC			
1–3	TRAFFIC					
1 3	TICH TIC		- 1–3 TRAFFIC			
1–4	TRAFFIC					
1.	110.11.10		- 1–4 TRAFFIC			
:Wait		`				
:Stop to	raffic					
•						
TEST	DESCRIPTION					
1.	Start traffic to B (and C	in VAT) for all SLS				
2.	,	he messages have been transmitted on the	e correct link in accordance with			
	the SLS field.					
3.	3. Check that there was no loss of messages, no duplication and no missequencing.					

TEST NUMBER: 2.4.2	PAGE: 1 of 1						
REFERENCE: 2.3/Q.704 Fig. 26 4.4/Q.705							
TITLE: Signalling message handling							
SUBTITLE: Load sharing within a linkset – With one link unavailable							
PURPOSE: To check the load sharing within a linkset w	hen one link is unavailable						
PRE-TEST CONDITIONS: Signalling link 1–3 deactive	ated						
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL							
MESSAGE SEQUENCE:	MESSAGE SEQUENCE:						
SP A	SP B						
Link	Link						
:Start traffic							
1–1 TRAFFIC —————	,						
	——————————————————————————————————————						
1–2 TRAFFIC —————	7						
	1–2 TRAFFIC						
1–4 TRAFFIC —————	,						
	1–4 TRAFFIC						
:Wait							
:Stop traffic							
TEST DESCRIPTION							
Start the traffic to B and C for all SLS, wait and	ston						
2. Check that the messages have been transmitted of	-						
field on the remaining links.	and the second s						

TEST N	NUMBER: 2.5.1						PAGE:	1 of 1		
REFER	ENCE: 2.3/Q.70	4 Fig. 2	26 4	.4/Q.705						
TITLE:	TITLE: Signalling message handling									
SUBTI	SUBTITLE: Load sharing between linksets – Between two linksets									
PURPOSE: To check the load sharing between two linksets under normal conditions										
PRE-TI	EST CONDITION	NS: All lii	nksets an	d routes a	vailable					
CC	ONFIGURATION	V: B	TYI	PE OF TE	ST: VAT	, CPT		ГҮРЕ О	F SP: ALL	
MESSA	GE SEQUENCI	Ξ:								
SP A	Α			SP B	SP C			SP E	Ξ	
Link				Link	Link			Link		
:Start tr	affic									
3–1	TRAFFIC				7–1		\longrightarrow			
					3–1			7–1	TRAFFIC	
3–2	TRAFFIC			\longrightarrow	7–1		$\!$			
					3–2			7–1	TRAFFIC	
2-1	TRAFFIC			6–1						
2-1	TRAFFIC		\longrightarrow	6–1			$\!$			
:Wait										
:Stop tra	affic									

TEST DESCRIPTION

- 1. Start the traffic to E for all SLS.
- 2. Stop the traffic and check that the messages have been transmitted on the correct linkset in accordance with the SLS and DPC.
- 3. Check that there was no loss of messages, no duplication and no missequencing.

TEST	NUMBER: 2.5.2			PAGE: 1 of 1			
REFERENCE: 2.3/Q.704 Fig. 26 4.4/Q.705							
TITLE: Signalling message handling							
SUBTI	SUBTITLE: Load sharing between linksets – Between three linksets						
PURPO	OSE: To check the load sh	aring between three	linksets under no	ormal conditions			
PRE-T	EST CONDITIONS: All I	inksets and routes a	vailable				
CONFIGURATION: B TYPE OF TEST: VAT TYPE OF SP: ALL							
	AGE SEQUENCE:						
SP.	A	SP B	SP C	SP	E		
Link	ce	Link	Link	Link			
:Start t							
1–1	THE HITTE			,			
					TRAFFIC		
1–2	_			•			
2 1	`				TRAFFIC		
3–1			8–1 ——				
3–2							
2–1		———→ 5–1		•			
2–2	TRAFFIC ——	——— 5−1		\longrightarrow			
:Wait	om.						
:Stop to	raffic						
TEST	DESCRIPTION						
1.	Start the traffic to D for a	all SLS					
2.			have been transm	nitted on the correct	t linkset and on		
	2. Stop the traffic and check that the messages have been transmitted on the correct linkset and on the correct link in accordance with the SLS.						

Check that there was no loss of messages, no duplication and no missequencing.

3.

TEST NUMBER: 2.5.3	PAGE: 1 of 1					
REFERENCE: 2.3/Q.704 Fig. 26 4.4/Q.705						
TITLE: Signalling message handling						
SUBTITLE: Load sharing between linksets – Between three linksets and	one route unavailable					
PURPOSE: To check the load sharing between three linksets when one	oute is unavailable					
PRE-TEST CONDITIONS: Linksets 4 and 8 unavailable (TFP, PC = D	from C to A)					
CONFIGURATION: B TYPE OF TEST: VAT	TYPE OF SP: ALL					
MESSAGE SEQUENCE:						
SP A SP B SP C	SP E					
Link Link Link	Link					
:Start traffic						
1–1 TRAFFIC ———————————————————————————————————	,					
(i i iidiiiic					
1–2 TRAFFIC	•					
`	1 2 114 11 116					
·	·					
2–2 TRAFFIC						
:Stop traffic						
.Stop traffic						
TECT DESCRIPTION						
TEST DESCRIPTION 1. Start the traffic for all SLS, wait and stop.						
, , ,	na linkaeta					
2. Check that the traffic to D via C has been shared on the remaining linksets.						

TEST NUMBER: 2.5.4		PAGE: 1 of 1					
REFERENCE: 2.3/Q.704 Fig. 26 4.4/Q.705							
TITLE: Signalling message handli							
SUBTITLE: Load sharing between	n linksets – Between three linksets an	id one linkset unavailable					
PURPOSE: To check the load sha	ring between two linksets after the ur	navailability of the third linkset					
PRE-TEST CONDITIONS: Links	et 1 deactivated						
CONFIGURATION: B TYPE OF TEST: VAT TYPE OF SP: ALL							
MESSAGE SEQUENCE:							
SP A	SP B SP C	SP D					
Link	Link Link	Link					
:Start traffic	0.1						
	8-1						
3–2 TRAFFIC ——	→ 5-1 ———————————————————————————————————	,					
2–1 TRAFFIC ——	, , ,	,					
→ TD A FFIC	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
2–2 TRAFFIC ——	,	,					
	2–2 ←	——— 5–1 TRAFFIC					
:Wait							
:Stop traffic							
TEST DESCRIPTION							
Start the traffic for all SLS to D, wait and stop.							

TEST	NUMBER: 2.6.1		PAGE: 1 of 1				
REFE	RENCE: Q.704 Fig. 26						
TITLE	: Signalling message handli	ing					
SUBTITLE: Inaccessible destination – Due to a linkset failure							
PURPOSE: To check the signalling message handling when a destination becomes inaccessible due to a linkset failure							
PRE-T	EST CONDITIONS: Signa	lling linkset with one link available					
C	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESS	AGE SEQUENCE:						
SP .	A		SP B				
Link			Link				
:Start t	raffic						
1–1	TRAFFIC -						
	(- 1–1 TRAFFIC				
1–1	:Deactivate						
TEST	DESCRIPTION			\dashv			
1.	Start the traffic for all SLS	S to B and C.		\exists			
2.	Deactivate the last link 1–	1 and check that the linkset becomes ur	navailable.				
3.	Check that the SPs B and	C become inaccessible.					
4.	4. Check that all messages stored or received after the unavailability of the linkset are discarded.						

TEST	NUMBER: 2.6.2		PAGE: 1 of 1				
REFE	RENCE: Q.704 Fig. 26						
TITLE	: Signalling message handli	ng					
SUBTITLE: Inaccessible destination – Due to a route failure							
	PURPOSE: To check the signalling message handling when a destination becomes inaccessible on reception of a TFP						
PRE-T	EST CONDITIONS: All lin	nks and routes available					
C	ONFIGURATION: A	TYPE OF TEST: VAT	ТҮРЕ С	OF SP: ALL			
MESS	AGE SEQUENCE:						
SP A SP B							
Link	Link						
:Start t	raffic						
1-1	TRAFFIC -						
	(1–1	TRAFFIC			
1–2	TRAFFIC -						
	(1–2	TRAFFIC			
1–3	TRAFFIC -	······					
	(. 1–3	TRAFFIC			
1–4	TRAFFIC -						
	(. 1–4	TRAFFIC			
	(1– X	TFP, $PC = C$			
TEST	DESCRIPTION						
1.	Start the traffic to B and C	for all SLS.					
2.	Provoke the sending of a 7	TFP (PC = C) from SP B to SP A.					
3.	Check that the SP C becor	nes inaccessible.					
4.	Stop traffic.						
5.	_	ored or received after the inaccessibility	y have been dis	carded.			
6.	6. Check that traffic to B has not been disturbed.						

TEST	NUMBER: 2.6.3]	PAGE: 1 of 1						
REFER	RENCE: Q.704	Fig. 26											
TITLE	: Signalling messa	age handli	ng										
SUBTI	TLE: Inaccessible	e destinati	on – Du	ie to a lii	nkset and a route	failure							
	OSE: To check the and a route failure		g messa	ige hand	ling when a dest	ination l	becomes inaccessible due	e to a					
PRE-T	EST CONDITION	NS: Links	et 4 una	vailable									
C	ONFIGURATION	V: B	ı	ТҮРЕ О	F TEST: VAT		TYPE OF SP: AL	L					
MESS	AGE SEQUENCE	Ξ:											
SP .	A			SP B	3	SP	C	SP •					
Link				Link		Link							
:Start t													
1–1, 2			-			-		SP D					
3–1	TRAFFIC				,		To D and E						
						3–1	TRAFFIC (from E)						
3–2	TRAFFIC				$\xrightarrow{\hspace*{1cm}}$		To D and E						
	TD 4 DD16					3–2	TRAFFIC (from E)						
2–1	TRAFFIC		\longrightarrow		To D and E								
2–2	TRAFFIC		\longrightarrow		To D and E	7 1	D (1)						
						7–1	:Deactivate						
2–1	TRAFFIC				To D and E	3–X	TFP, $PC = E$						
2-1	IKAFFIC			2–1	TRAFFIC								
				2-1	(from E)								
2–2	TRAFFIC		\longrightarrow		To D and E								
				2–2	TRAFFIC (from E)								
2-1	:Deactivate				()								
2-2	:Deactivate												
1-1, 2	TRAFFIC							SP D					
:Wait													
:Stop to	raffic												
NOTE – The transitory states (signalling network management procedures) are not described in this test, which checks only the signalling message handling.													
TEST	DESCRIPTION												
1.	Start the traffic to	o the SPs	D and E	E for all S	SLS.								
2.	2. Initiate the sending of a TFP (DPC = E) from SP C to SP A, check that the traffic to E is routed via B and check that the traffic to D is not disturbed.							uted					
3.	Deactivate the lin	nkset 2 an	d check	that the	destination E be	ecomes i	naccessible. Stop traffic.						
4.	Check that all me	essages st	ored or	received	during the inacc	cessibili	ty have been discarded.						

	NUMBER: 2.7	PAGE: 1 of 1							
	RENCE: clause 2/Q.704 Fig. 26								
	: Signalling message handling								
SUBTI	TLE: Message transfer function								
PURPO	OSE: To test the transfer function in an STP								
PRE-T	EST CONDITIONS: All links available								
C	CONFIGURATION: C TYPE OF TEST: VAT, CPT TYPE OF SP: ALL								
MESS	AGE SEQUENCE:								
SP	B SP A	SP C							
Link	Link	Link							
:Start t	raffic								
1–1, 2	TRAFFIC \longrightarrow 2–1 \longrightarrow								
	← 1–1, 2 ←	TRAFFIC							
:Wait									
:Stop to	raffic								
NOTE – The traffic used in this test is in conformance with the traffic model presented in ITU-T									
Rec. Q.706.									
TEST	DESCRIPTION								
1.	Start traffic between B and C in both directions via A.								
2.	Check that transfer function is correctly performed.								
3.	Stop traffic and check that there was no loss of messages, no do Check that the information field of these messages has not been								
1		!							

TEST	TEST NUMBER: 3.1 PAGE: 1 of 1							
REFERENCE: clause 5/Q.704 Fig. 28, Fig. 29, Fig. 30								
TITLE	TITLE: Changeover							
SUBTITLE: Changeover initiated at one side of a linkset (COO \leftrightarrow COA)								
PURPO	OSE: To check the normal c	changeover procedure						
PRE-T	EST CONDITIONS: Links	et with two available links						
C	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL							
MESS	MESSAGE SEQUENCE:							
SP A SP B								
Link			Link					
:Start t								
1–1	TRAFFIC	\longrightarrow						
			1–1	TRAFFIC				
1–2	TRAFFIC	\longrightarrow						
			1–2	TRAFFIC				
1–1	:Deactivate (MML comm	nand or failure)						
1–2	COO, SLC 1–1	$\xrightarrow{\hspace*{1cm}}$						
			1–2	COO, SLC 1–1				
1–2	TRAFFIC (from 1–1)	$\xrightarrow{\hspace*{1cm}}$						
		(1–2	TRAFFIC (from 1–1)				
:Wait								
:Stop to	raffic							
	DESCRIPTION							
1.	Start traffic to B and C on							
2.	Deactivate link 1–1, check within T2.	that a COO is sent (from A) for 1–1 or	n 1–2 and	respond with a COA				
3.	3. Check that the time between the deactivation and the sending of the COO is inside the specified value (see ITU-T Rec. Q.706).							
4.	Check that the traffic from carried by 1–2 is passed or	n link 1–1 is changed over to 1–2 and clever to 1–2.	neck that th	he traffic normally				
5.	Stop traffic and check it has missequencing).	as been received correctly (no lost mess	sages, no d	luplication and no				
6.		the COO from B (instead of A). In add the COO and the sending of the COA is						

NOTE – In this case, A might also send a COO/ECO to B as well as the COA. As a consequence, B would then return a COA/ECA to A.

TEST NUMBER: 3.2			PAGE: 1 of 1	
REFERENCE: clause 5/Q.704 Fig. 28, Fig. 29, Fig. 30				
TITLE: Changeover				
SUBTITLE: Changeover initiated at both ends at the same time (COO \leftrightarrow COO)				
PURPOSE: To check the changeover procedure when the changeover is initiated at the both ends simultaneously				
PRE-TEST CONDITIONS: Linkset with two available links				
CONFIGURATION: A		TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A SP B				}
Link			Link	
:Start traffic				
1–1	TRAFFIC		1 1	TD A FEIG
1 2	TDAFFIC		1–1	TRAFFIC
1–2	TRAFFIC		1–2	TRAFFIC
1–1	·Danativata (MML aamr		1–2	IKAFFIC
1–1	:Deactivate (MML comm COO (SLC 1–1)	,		
1-2	COO (SLC 1-1)		1–2	COO (SLC 1-1)
1–2	COA (SLC 1-1)		1-2	COO (SLC 1-1)
1-2	COA (SLC 1-1)		1–2	COA (SLC 1–1)
1–2	TRAFFIC (from 1–1)		1–2	COA (SLC 1-1)
1-2	TRAFFIC (Holli 1–1)		1–2	TRAFFIC (from 1–1)
:Wait			1 2	TRATTE (Holli 1-1)
:Stop traffic				
TEST DESCRIPTION				
1.	Start the traffic to B and C on all the links.			
2.	Deactivate the link 1–1, check that the COOs and COAs for 1–1 are received on link 1–2.			
3.	Check that the traffic from link 1–1 changed over to 1–2 and stop traffic.			
4.	Repeat the test without sending of COA from SP B to SP A.			

TEST 1	NUMBER: 3.3		PAGE: 1	of 1
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30		
TITLE	: Changeover			
SUBTI	TLE: Changeover on expir	ation of timer T2 (COO or ECO \rightarrow –)		
	OSE: To check the changeously sent	ver procedure when no COA is received	ed in respo	onse of a COO
PRE-T	EST CONDITIONS: Links	et with two available links		
C	ONFIGURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL
MESS	AGE SEQUENCE:			
SP.	A		SP I	3
Link			Link	
:Start t				
1–1	TRAFFIC			
			1–1	TRAFFIC
1–2	TRAFFIC		1 0	TD A FELC
1 1	D : : : ((1–2	TRAFFIC
1-1	:Deactivate (MML com	·		
1–2	COO (SLC 1-1)			
	T2			
	12			
1–2	TRAFFIC (from 1–1)			
1 2	Train Tre (nom 1 1)	,	1–2	TRAFFIC (from 1–1)
:Wait		`		111111111111111111111111111111111111111
:Stop to	raffic			
•				
TEST	DESCRIPTION			
1.	Start traffic to B and C on			
2.		that a COO is received for 1–1 on lin		
3.	•	, check that the changeover procedure	is perform	ed.
4.		T2 is inside the specified range.		
5.	lost as the system should i	•	equencing,	, some messages may be
6.	Repeat the test but replaci	ng COO by ECO.		

TEST	NUMBER: 3.4		PAGE: 1	of 1	
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30			
TITLE	: Changeover				
SUBTI	TLE: Unreasonable FSN in	COO/COA			
PURPO FSN	PURPOSE: To check the changeover procedure on reception of a COO/COA containing an unreasonable FSN				
PRE-T	EST CONDITIONS: Links	et with two available links			
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESS	AGE SEQUENCE:				
SP.	A		SP B	3	
Link			Link		
:Start t	raffic				
1-1	TRAFFIC				
		←	1-1	TRAFFIC	
1–2	TRAFFIC				
			1–2	TRAFFIC	
1-1	:Deactivate (MML comm	nand or failure)			
1–2	COO, SLC 1–1				
		←	1–2	COA, SLC 1–1 (unreasonable FSN)	
1–2	TRAFFIC (from 1–1)			(unicasonable 1 514)	
· -	Trum Tre (mom 1 1)	<u></u>	1–2	TRAFFIC (from 1–1)	
:Wait		`		- (- ,	
:Stop to	raffic				
TEST	DESCRIPTION				
1.	Start traffic to B and C on	all the links.			
2.		that a COO is received for 1-1 on link	1–2 and 1	respond within T2 with	
3.		changeover procedure has been perfor	med.		
4.	*	uplication and no missequencing. Some		s may be lost as the	
5.	Check that an indication is				
6.	Repeat the test with a COO	O sent from B (instead COA) containing	g an unrea	sonable FSN.	

TEST NUMBER: 3.5		PAGE: 1	of 1		
REFERENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30				
TITLE: Changeover					
SUBTITLE: Reception of a changeover acknowledgement without sending a changeover order ($-\leftarrow$ COA or ECA)					
PURPOSE: To check the changeover procedure on reception of an unexpected changeover acknowledgement					
PRE-TEST CONDITIONS: Link	sset with two available links				
CONFIGURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A		SP I	3		
Link		Link			
:Start traffic		2			
1–1 TRAFFIC					
	·	1-1	TRAFFIC		
1–2 TRAFFIC					
	\	1–2	TRAFFIC		
	\	1–2	COA, SLC 1-1		
1–1 TRAFFIC					
		1-1	TRAFFIC		
1–2 TRAFFIC					
		1–2	TRAFFIC		
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. Start traffic to B and C o	n all the links.				
2. Send a COA for 1–1 on 1	ink 1-2, check that this message is igno	red.			
3. Stop traffic and check that	at it has been received correctly.				
4. Repeat the test with an E	CA instead of a COA.				

TEST 1	NUMBER: 3.6		PAGE: 1	of 1		
REFER	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30				
TITLE	Changeover					
SUBTI	TLE: Reception of an addi-	tional changeover order ($-\leftarrow$ COO or	ECO)			
	PURPOSE: To check the action of the system when a changeover order relating to a particular link is received after completion of changeover					
PRE-T	EST CONDITIONS: Links	et with only the link 1–2 available				
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESSA	AGE SEQUENCE:					
SP A	A		SP E	3		
Link			Link			
:Start tr	raffic					
1–2	TRAFFIC					
		←	1–2	TRAFFIC		
		←	1–2	COO, SLC 1–1		
1–2	ECA, SLC 1–1					
1–2	TRAFFIC					
		←	1–2	TRAFFIC		
:Wait						
:Stop tr	raffic					
TEST I	DESCRIPTION					
1.	Start traffic to B and C on	link 1–2.				
2.	Send a COO for 1-1 on lin	nk 1-2 and check that an ECA is received	ved in T2.			
3.	Stop traffic and check that	t it has been received correctly.				
4.	Repeat the test with an EC	CO instead of a COO.				

TEST 1	NUMBER: 3.7		PAGE: 1	of 1		
REFERENCE: clause 5/Q.704 Fig. 28, Fig. 29, Fig. 30						
TITLE: Changeover						
SUBTI	SUBTITLE: Emergency changeover at one side of a linkset (COO \leftrightarrow ECA)					
PURPO	OSE: To check the emergen	cy changeover procedure when a COO	is acknov	vledged by an ECA		
PRE-T	EST CONDITIONS: Links	et with two available links				
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESS	MESSAGE SEQUENCE:					
SP A SP B						
Link	or		Link			
:Start t						
1–1	TRAFFIC		1 1	TD A FELC		
1 2	TDAFFIC		1–1	TRAFFIC		
1–2	TRAFFIC		1 2	TRAFFIC		
1–1	Descripto (MMI some		1–2	IKAFFIC		
1-1	:Deactivate (MML comr COO, SLC 1–1					
1-2	COO, SLC 1-1		1–2	ECA, SLC 1–1		
		<u> </u>	1-2	TRAFFIC (from 1–1)		
1–2	TRAFFIC (from 1–1)		1–2	TRAFFIC (HOIII 1-1)		
:Wait	TRAFFIC (Holli 1–1)					
:Stop to	raffic					
.Stop ti	idilic					
TEST	DESCRIPTION					
1.	Start traffic to B and C on	all links.				
2.	Check the sending of a CO	OO (from A) for 1-1 on 1-2 and check	that an EC	CA is sent inside T2.		
3.		anged over from 1–1 to 1–2.				
4.		t it has been received correctly; no duplest as the system should not perform ret		d no missequencing.		
5.	Repeat the test by sending	COO from B (instead of A).				

NOTE – In this case, A might also send a COO/ECO to B as well as the COA. As a consequence, B would then return a COA/ECA to A.

TEST	NUMBER: 3.8		PAGE: 1	of 1	
REFEI	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30			
TITLE	: Changeover				
SUBT	SUBTITLE: Emergency changeover at one side of a linkset (COO ↔ ECO)				
PURPO	OSE: To check the emergen	cy changeover procedure when a COO	is acknov	vledged by an ECO	
PRE-T	EST CONDITIONS: Links	et with two available links			
C	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESS.	AGE SEQUENCE:				
SP A SP B					
			.		
Link			Link		
:Start t	TRAFFIC				
1-1	IKAFFIC		1–1	TRAFFIC	
1–2	TRAFFIC		1-1	TRAFFIC	
1-2	TRAFFIC		1–2	TRAFFIC	
1–1	:Deactivate (MML comm		1 2	TRATTE	
1–2	COO, SLC 1–1				
1 2	coo, size i i	<u></u>	1–2	ECO, SLC 1–1	
1–2	COA, SLC 1–1		1 2	Leo, see 1 1	
1–2	TRAFFIC (from 1–1)	,			
	114 11110 (110111 11)	, ·	1–2	TRAFFIC (from 1–1)	
:Wait		`		(
:Stop t	raffic				
•					
	DESCRIPTION				
1.	Start traffic to B and C on		d (E6	CO: 4.4 5 T2	
2.	expires) and a COA is rece	OO (from A) for 1–1 on 1–2 and check to eived.	tnat an EC	O is sent (before 12	
3.	* ′	anged over from 1–1 to 1–2.			
4.	Stop traffic and check that	it has been received correctly; no duplest as the system should not perform reti		d no missequencing.	
5.	Repeat the test but send Co	*			
	*	ight also send a COO/ECO to B as well	as the CO	OA. As a consequence,	

TEST	NUMBER: 3.9		PAGE: 1	of 1	
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30			
TITLE	: Changeover				
SUBTI	TLE: Emergency changeov	ver at one side of a linkset (ECO \leftrightarrow CO	A)		
PURPO	OSE: To check the emergen	cy changeover procedure when an ECC	is ackno	wledged by a COA	
PRE-T	EST CONDITIONS: Links	et with two available links			
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESS	MESSAGE SEQUENCE:				
SP A SP B					
Link	or		Link		
:Start t					
1–1	TRAFFIC	─		TD A FEIG	
1 0	TD A FELC		1–1	TRAFFIC	
1–2	TRAFFIC		1–2	TDAFFIC	
1–1	:Deactivate (failure)		1-2	TRAFFIC	
1-1	ECO, SLC 1–1				
1-2	ECO, SLC 1-1	<u></u>	1–2	COA, SLC 1–1	
			1–2	TRAFFIC (from 1–1)	
1–2	TRAFFIC (from 1–1)		1–2	TRAFFIC (Holli 1–1)	
:Wait	TRUTTE (Holli 1-1)	7			
:Stop to	raffic				
	DESCRIPTION				
1.	Start traffic to B and C on				
2.		ived for 1–1 on 1–2 and that a COA is	sent befor	e T2 expires.	
3.	Check that traffic is chang		: 	d	
4.		it has been received correctly; no duplest as the system should not perform retr		u no missequencing,	
5.	Repeat the test but send E	•			
	*	ight also send a COO/ECO to B as well	as the CC	OA. As a consequence,	

TEST 1	NUMBER: 3.10		PAGE: 1	of 1	
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30			
TITLE	: Changeover				
SUBTI	SUBTITLE: Emergency changeover at both sides of a linkset (ECO \leftrightarrow ECA)				
PURPO	OSE: To check the emerger	ncy changeover procedure when an ECC) is acknown	wledged by an ECA	
PRE-T	EST CONDITIONS: Links	et with two available links			
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESS	AGE SEQUENCE:				
SP .	SP A SP B				
Link	or		Link		
:Start t					
1–1	TRAFFIC			TID A FIELG	
1 0	TD A FELC		1–1	TRAFFIC	
1–2	TRAFFIC	$\xrightarrow{\hspace*{1cm}}$	1 0	TD A FFIG	
1 1	D 4: 4 (C.1)		1–2	TRAFFIC	
1-1	:Deactivate (failure)				
1–2	ECO, SLC 1–1		1.2	ECA SLC 1 1	
		<u></u>	1–2	ECA, SLC 1–1	
1–2	TRAFFIC (from 1–1)		1–2	TRAFFIC (from 1–1)	
:Wait	TRAFFIC (Holli 1–1)				
:Stop ti	raffic				
.Stop ti	tarric				
TEST	DESCRIPTION				
1.	Start traffic to B and C on	all links.			
2.	Check that an ECO is rece	eived for 1–1 on 1–2 and that an ECA is	s sent befo	re T2 expires.	
3.	Check that traffic is change		_		
4.		t it has been received correctly; no dupl est as the system should not perform reta		d no missequencing.	
5.	Repeat the test but send E	CO from B (instead of A).			

TEST	NUMBER: 3.11		PAGE: 1	of 1
REFER	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30		
TITLE	: Changeover			
SUBTITLE: Emergency changeover at one side of a linkset (ECO \leftrightarrow COO)				
PURPO to an E		cy changeover procedure when an CO	O is receiv	red in response
PRE-T	EST CONDITIONS: Links	et with two available links		
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESS	AGE SEQUENCE:			
SP A SP B				
Link			Link	
:Start t	raffic			
1-1	TRAFFIC	$-\!$		
		(1-1	TRAFFIC
1–2	TRAFFIC	<u> </u>		
			1–2	TRAFFIC
1–1	:Deactivate (failure)			
1–2	ECO, SLC 1–1	$\xrightarrow{\hspace*{1cm}}$		
			1–2	COO, SLC 1–1
1–2	ECA, SLC 1–1			
1–2	TRAFFIC (from 1–1)		1 0	TD A FERIC (C. 1.1)
.337-:4			1–2	TRAFFIC (from 1–1)
:Wait	roffio			
:Stop to	Tarric			
	DESCRIPTION			
1.	Start traffic to B and C on		. 1 0	
2.	acknowledged with an EC		sent befor	e 12 expires and
3.	Check that traffic is change	ged over from 1–1 to 1–2.		
4.		tit has been received correctly; no duplest as the system should not perform ret		d no missequencing.
5.	Repeat the test but sent EO	CO from B (instead of A).		

TEST	NUMBER: 3.12		PAGE: 1	of 1
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30		
TITLE	: Changeover			
SUBTI	TLE: Emergency changeov	ver initiated at both ends at the same time	ne (ECO ←	→ ECO)
	OSE: To check the emergen aneously	cy changeover procedure when it is init	tiated at th	ne both ends
PRE-T	EST CONDITIONS: Links	et with two available links		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL
MESS	AGE SEQUENCE:			
SP .	A		SP B	
Link			Link	
:Start t	raffic			
1–1	TRAFFIC			
			1–1	TRAFFIC
1–2	TRAFFIC	\longrightarrow		
			1–2	TRAFFIC
1–1	:Deactivate (failure)			
1–2	ECO, SLC 1–1			
		←	1–2	ECO, SLC 1–1
1–2	ECA, SLC 1–1			
1 2			1–2	ECA, SLC 1–1
1–2	TRAFFIC (from 1–1)		1–2	TRAFFIC (from 1–1)
:Wait			1-2	TRAFFIC (Holli I-1)
:Stop ti	raffic			
.evep u				
	DESCRIPTION			
1.	Start traffic to B and C on			
2.	Check that an ECO is recearch acknowledged with ECA.	ived for 1–1 on 1–2 and that an ECO i	s sent befo	ore T2 expires and
3.	Check that traffic is chang	ed over from 1–1 to 1–2.		
4.	*	it has been received correctly; no duplest as the system should not perform retu		d no missequencing.
5.	-	nding ECA from SP B to SP A.		

TEST I	NUMBER: 3.13		PAGE: 1 of 1	
REFERENCE: clause 5/Q.704 Fig. 28, Fig. 29, Fig. 30				
TITLE	: Changeover			
SUBTI	TLE: Reactivation of a link	during a changeover procedure		
		ver procedure when the link failure cau	ising the changeover is removed	
	the procedure			
	EST CONDITIONS: Links			
	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A	A		SP B	
Link			Link	
:Start ti	raffic		LIIIK	
1–1	TRAFFIC			
1 1		,	1–1 TRAFFIC	
1–2	TRAFFIC		1 1 11411110	
· -		,	1–2 TRAFFIC	
1–1	:Deactivate (failure)	`	1 2 114.1110	
1–1	: Activate (end of failure	9)		
:Wait	(,		
:Stop tı	raffic			
NOTE	_ This test will be performe	ed if applicable (some systems may terr	minate the changeover procedure	
	erform the changeback).	ter if applicable (some systems may ten	illiate the changeover procedure,	
TEST I	DESCRIPTION			
1.	Start traffic to B and C on	all links.		
2.	Deactivate the link 1–1 an	d reactivate this link immediately.		
3.		the changeover procedure has not been tion and the reactivation, a COO may b		
4.		the links 1–1 and 1–2 normally.		

TEST 1	NUMBER: 3.14		PAGE: 1	of 1	
REFER	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30			
TITLE	: Changeover				
SUBTI	TLE: Simultaneous change	over			
PURPO	OSE: To check that the systematical experience of the check that the check that the check that the check that the systematical experience of the check that the check tha	em can correctly handle simultaneous f	ailures of	several links	
PRE-T	EST CONDITIONS: Links	et with three available links			
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESSA	AGE SEQUENCE:				
SP A	SP A SP B				
Link			Link		
:Start tı	raffic				
1–1	TRAFFIC				
			1–1	TRAFFIC	
1–2	TRAFFIC				
			1–2	TRAFFIC	
1–3	TRAFFIC				
			1–3	TRAFFIC	
1–1, 1–	-2 :Deactivate (MML con	nmand or failure)			
1–3	COO, SLC 1-1				
1–3	COO, SLC 1-1				
			1–3	COA, SLC 1–1	
			1–3	COA, SLC 1–2	
1–3	TRAFFIC				
	(from 1–1 and 1–2)				
			1–3	TRAFFIC (from 1–1 and 1–2)	
:Wait				(110111 1–1 and 1–2)	
:Stop tr	affic				
.otop ti	unic				
TEST I	DESCRIPTION				
1.	Start traffic to B and C on	all links.			
2.	Deactivate the links 1–1 ar	nd 1–2 simultaneously.			
3.	Check that COOs are rece that traffic is changed over	ived on 1–3 for 1–1 and 1–2, and resport from 1–1 and 1–2 to 1–3.	nd with C	OAs inside T2. Check	
4.	Stop traffic and check that missequencing).	it has been received correctly (no lost	messages,	no duplication and no	

TEST 1	NUMBER: 3.15		PAGE: 1	of 1				
REFER	RENCE: clause 5/Q.704 F	Fig. 28, Fig. 29, Fig. 30						
TITLE	: Changeover							
SUBTI	TLE: Changeover to several a	alternative links within a linkset						
PURPO	OSE: To check the changeove	r procedure when there are several al	Iternative li	inks				
PRE-T	EST CONDITIONS: Linkset	with all links available						
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL							
MESSA	AGE SEQUENCE:							
SP A	A		SP B	,				
Linl			Link					
:Start ti								
1–1	TRAFFIC		1 1	TD A FFIG				
1 0			1–1	TRAFFIC				
1–2	TRAFFIC		1 2	TD A FFIG				
1 2			1–2	TRAFFIC				
1–3	TRAFFIC	,	1 2	TD A FFIG				
1 4		\	1–3	TRAFFIC				
1–4	TRAFFIC		1 4	TD A FFIG				
1 1	D 1: 1 000	•	1–4	TRAFFIC				
1-1		, and the second						
1–2, 3	or 4 COO, SLC 1–1		2 2 ~ 4	COA SI C 1 1				
1 2	TDAFFIC (form 1 1)	<u> </u>	-2, 3 Of 4	COA, SLC 1–1				
1–2	TRAFFIC (from 1–1)	,	1 2	TD A FFIC (from 1 1)				
1 2	TD A EEIC (from 1 1)		1–2	TRAFFIC (from 1–1)				
1–3	TRAFFIC (from 1–1)		1–3	TD A EELC (from 1 1)				
1–4	TD A EEIC (from 1 1)		1-3	TRAFFIC (from 1–1)				
1-4	TRAFFIC (from 1–1)		1–4	TRAFFIC (from 1–1)				
:Wait			1—4	TRAFFIC (Holli 1–1)				
:Stop ti	raffic							
.stop ti	anne							
TEST DESCRIPTION								
1.	Start traffic to B and C on al	l links.						
2.	Deactivate the link 1–1 and o	check that the changeover is perform	ed to links	1–2, 1–3 and 1–4.				
3.								
4.	• •	ion and for each SLS, there were no	lost messa	ges, no duplication and				

no missequencing.

	<u></u>				
TEST	NUMBER: 3.16		PAGE:	1 of 1	
REFEI	RENCE: clause 5/Q.70)4 Fig. 28, Fig. 29, Fig. 30)		
TITLE	: Changeover				
SUBT	ITLE: Changeover to	another linkset with the adjace	ent SP accessible		
	OSE: To check that the becomes unavailable	e system performs changeover	to an alternative route	when the last link of a	
PRE-T	EST CONDITIONS:	Linkset 1 and link 3–1 unavai	lable		
C	ONFIGURATION: B	TYPE OF TEST	: VAT	TYPE OF SP: ALL	
MESS.	AGE SEQUENCE:	<u> </u>			
SP	A	SP B	SP C	SP •	
Link		Link	Link	Link	
:Start t					
3–2	TRAFFIC		<i>→</i> 7–1 <i>——</i>	\longrightarrow SP E	
			8–1 ←	SP D	
			3−2 ←	7–1 SP E	
2–1, 2	TRAFFIC —	———— 6−1 ———		→ SP E	
	TRAFFIC —	, , ,		, 21 2	
		2–1, 2		5–1 SP D	
3–2	:Deactivate (MML	command or failure)			
2-X	COO, SLC	———— 4−1 ———	\rightarrow 3-2		
	\leftarrow	2−X ←	4–1 COA, S	SLC 3–2	
2–1, 2	TRAFFIC —	———— 6−1 ———		\longrightarrow SP E	
	(from 3–2)	5–1		\longrightarrow SP D	
	\leftarrow	2-1, 2		5–1 SP D	
		2–1, 2		——— 6–1 SP D	
:Wait					
:Stop t	raffic				
TEST	DESCRIPTION				
1.	Start traffic to E (and	I D in VAT).			
2.	Deactivate link 3–2 and check that a COO (for 3–2) is sent from A to C via B and that a COA (from 3–2) is sent from C to A via B within T2.				
	· ´	o send a COO/ECO to A as w	ell as the COA. As a co	onsequence, A would	
3.		k that it has been shared on th	e alternative links 2–1 a	and 2–2 according to the	
4.		SLS, there were no lost messa	ges, no duplication and	I no missequencing.	
5.	Repeat the test but re	eplace COO with ECO (some	messages may have bee	en lost).	

TEST 1	TEST NUMBER: 3.17 PAGE: 1 of 1						
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig	. 30				
TITLE	: Changeover						
SUBTI	TLE: Changeover to anot	her linkset with the adj	acent SP inacco	essible			
	OSE: To check that the systable link.	stem responds correctly	y when there is	no path between	en the en	nds of an	
PRE-T	EST CONDITIONS: Link	set 4 unavailable					
C	ONFIGURATION: B	TYPE OF TEST	: VAT, CPT	TYP	E OF SI	P: ALL	
MESS	AGE SEQUENCE:	1					
SP		SP B	SP C		SP E	3	
Link		Link	Link		Link		
:Start t	raffic						
2–1	TRAFFIC	→ 6-1 ———		·			
2–2	TRAFFIC ———	→ 6–1 ———					
2–2	TRAFFIC ———		→ 7–1	$\!$			
			3–1		7–1	TRAFFIC	
3–2	TRAFFIC ———		→ 7–1	$\!$			
			3–2		7–1	TRAFFIC	
2–1 :Deactivate (MML command or failure)							
2-2	:Deactivate (MML con	nmand or failure)					
	Ì						
	T1						
3-1	TRAFFIC ———		→ 7–1	$\!$			
	(from 2–1, 2)						
			3-1		7–1	TRAFFIC	
3–2	TRAFFIC ———		→ 7–1	$\!$			
	(from 2-1, 2)						
			3–2		7–1	TRAFFIC	
:Wait							
:Stop traffic							
TEST	DESCRIPTION						
1.	Start traffic to E on links	et 2 and 3.					
2. Deactivate the linkset 2.							
3.	Check that traffic contin	ues on linkset 3 at the	expiration of T1	1.			
4.	Stop traffic and check that of the linkset 3.	t it has been shared on l	links 3–1 and 3–	2 according to t	the load s	sharing rules	
5.	Check that the traffic has should be missequenced		ly. Some messa	ages may have	been los	t but none	
6.	Check that the duration of	of T1 is inside the spec	ified range.				
	<u> </u>						

TEST 1	NUMBER: 3.18						PAGE	: 1 of 1	
REFER	RENCE: clause 5/Q.7	704	Fig. 28,	Fig. 29, F	ig. 30				
TITLE	: Changeover								
SUBTI	TLE: Changeover to	two li	nksets						
PURPO linksets	OSE: To check the cl	nangeo	ver proce	dure wher	it is perfor	rmed to so	everal l	inks perta	aining to two
PRE-T	EST CONDITIONS	: Link	l−1 unava	ailable, all	other avail	able			
CC	ONFIGURATION: E	3	T	YPE OF T	EST: VAT			ТҮРЕ ОІ	F SP: ALL
MESSA	AGE SEQUENCE:								
SP A	A			SP B	SP C			SP D)
Link				Link	Link			Link	
:Start tr	raffic								
1–2	TRAFFIC						\longrightarrow	1–2	TRAFFIC
								1–2	TRAFFIC
1–2	:Deactivate (MMI	Comn	nand or fa	ilure)					
2–X	COO, SLC 1–2			5–1			\longrightarrow		
or 3–X				\longrightarrow	8–1		\longrightarrow		
		\leftarrow		2-X				5–1	COA, SLC 1–2
2–1	TRAFFIC (from 1–2)			5–1					
				2–X				2–1	TRAFFIC (from 1–2)
2–2	TRAFFIC (from 1–2)			5–1			\longrightarrow		
3–1	TRAFFIC (from 1–2)				8–1		\longrightarrow		
3–2	TRAFFIC (from 1–2)				8–1		\longrightarrow		
:Wait									
:Stop traffic									
TEST I	DESCRIPTION								
1.	Start traffic to D.								
2.	Deactivate the link sent from D to A vi				for 1–2 is	sent to D	via B	or C and t	that a COA is
3.	Stop traffic and che according to the loa				on the alter	native lin	nks 2–1	, 2–2, 3–1	1 and 3-2
4.	Check that, for each SLS, there were no lost messages, no duplication and no missequencing.								

Repeat the test but replace COO with ECO (some messages may have been lost).

TEST 1	NUMBER: 3.19		PAGE:	1 of 1				
REFER	RENCE: clause 5 and 3.2.2/	Q.704						
TITLE	: Changeover							
SUBTI	TLE: Changeover due to va	arious reasons						
PURPO	OSE: To check the interface	e L2-L3						
PRE-T	PRE-TEST CONDITIONS: Linkset with two available links							
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL								
MESSAGE SEQUENCE:								
SP A	A		SP B					
Linl			Link					
:Start ti								
1–1	TRAFFIC							
			1–1	TRAFFIC				
1–2	TRAFFIC							
		(1–2	TRAFFIC				
1–1 :Deactivation due to various reasons (Note)								
1 2	CHANGEOVER	,						
1–2	TRAFFIC (from 1–1		1 2	TD A FFIC (from 1 1)				
.Wai4		\	1–2	TRAFFIC (from 1–1)				
:Wait :Stop ti	roffio							
.Stop ti	anic							
NOTE	– The object of this test is t	to check the interface L2-L3 by involu	cing a chan	ngeover by the different				
means listed in 3.2.2/Q.704. These reasons are: high error rate, expiration of timer T1, T2, T6 and T7 of L2, equipment failure, erroneous BSN or FIB, reception of SIOS, SIN, SIE and SIO of L2, and								
L2, equ	inpment failure, erroneous frement request. The goal of	this test is not to check the changeov	SIE and S. er procedu	re itself, but only that the				
management request. The goal of this test is not to check the changeover procedure itself, but only that the COO is generated for each of these reasons.								
TEST I	DESCRIPTION							
1.	Start traffic to B and C on	all links.						
2.	Invoke the deactivation of	the link 1–1 (see Note above).						
3.	Check that traffic is change	ged over from 1–1 to 1–2.						
4.	Stop traffic and check that	it has been received correctly.						

Repeat the test for each reason.

TEST	NUMBER: 3.20		PAGE: 1 of 1			
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30				
TITLE	: Changeover					
SUBTI	TLE: Changeover as compa	atibility test				
PURPO	OSE: To check the changeo	ver procedure as compatibility test				
PRE-T	EST CONDITIONS: Links	et with two available links	•			
CONFIGURATION: A TYPE OF TEST: CPT TYPE OF SP: ALL						
MESS	AGE SEQUENCE:					
SP.	A		SP B			
Lin	k		Link			
:Start t	raffic					
1–1	TRAFFIC					
		\	1–1 TRAFFIC			
1-2	2 TRAFFIC					
			1–2 TRAFFIC			
1–1	:Deactivate (MML co	ommand or failure)				
	CHANGEOVER					
1-2	TRAFFIC (from 1–1)				
			1–2 TRAFFIC (from 1–1)			
:Wait						
:Stop to	raffic					
		s impossible to describe precisely the				
messages because the description depends on the type of deactivation of the link and of the time necessary to detect the deactivation.						
	DESCRIPTION					
1.	Start traffic to B on links 1					
2.		neck that the changeover is performed	d.			
3.		f changeover messages conforms to				
- *	Stop traffic	<i>5</i>	F			

Repeat the test by invoking the different reasons listed in the Note in test 3.19.

TEST	NUMBER: 3.21		I	PAGE: 1 of 1		
REFE	RENCE: clause 5/Q.704	Fig. 28, Fig. 29, Fig. 30				
TITLE	: Changeover					
SUBT	TLE: Reception of a chang	geover order on an available link				
PURPO	OSE: To check the changed	over procedure on reception of a CC	OO or	ECO for a link in service		
PRE-T	EST CONDITIONS: Links	set with two available links				
C	ONFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL		
MESS.	AGE SEQUENCE:					
SP	A		SP I	В		
Link]	Link			
:Start t	raffic					
1–1	TRAFFIC	$\xrightarrow{\hspace*{1cm}}$				
			1–1	TRAFFIC		
1–2	TRAFFIC	$\xrightarrow{\hspace*{1cm}}$				
			1–2	TRAFFIC		
		\	1–2	COO, SLC 1-1		
				(FSN corresponding to the last received message)		
1–2	COA, SLC 1–1			idst received message)		
1–2	TRAFFIC (from 1–1)	·				
		·	1–2	TRAFFIC (from 1–1)		
:Wait		•				
:Stop t	raffic					
TEST	DESCRIPTION					
1.	Start traffic to B and C or	all the links.				
2.	Send a COO from B to A	for 1-1 on link 1-2 and check that	the C	OA is received.		
3.	Check that the link 1–1 be	ecomes unavailable.				
4.	Stop traffic and check that	t the changeover procedure has been	n perf	formed.		
5.	Check that there was no le	oss of messages, no duplication and	l no m	issequencing.		
6.	Repeat the test but send an ECO (instead of a COO) and check that a COA is received. Some messages may be lost.					

TEST	NUMBER: 4.1		PAGE:	1 of 1				
REFE	RENCE: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31						
TITLE	: Changeback							
SUBTI	TLE: Changeback within a	linkset						
PURPO linkset	OSE: To check that the char	geback procedure is correctly perform	ned on res	storation of a link in a				
PRE-T	EST CONDITIONS: Links	et with one available link (end of test	3.1)					
CO	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	7	TYPE OF SP: ALL				
MESS	MESSAGE SEQUENCE:							
SP .	A		SP B					
Lin			Link					
:Start t								
1–2	2 TRAFFIC							
			1–2	TRAFFIC				
1–1	` -	on the deactivation mean previously	used)					
1–2	CBD, SLC 1–1							
			1–X	CBA, SLC 1–1				
1–1	TRAFFIC (from 1–2) ————						
			1–2	CBD, SLC 1–1				
1–3	CBD, SLC 1–1							
			1–1	TRAFFIC (from 1–2)				
1-2	TRAFFIC							
			1–2	TRAFFIC				
:Wait								
:Stop to	raffic							
TEST	DESCRIPTION							
1.	Start traffic to B (and C in	VAT) on link 1–2						
2.	•	check that it enters the correct in servi	ce state.					
3.		2 1–1 is received and that traffic for li		switched back after a				
4.		it has been received correctly; no los	t message	s, no duplication and no				
5.		ting the link 1–3, then 1–4.						
6.	•	peat the test for several reasons chosen	n among t	hose listed in test 4.10.				

TEST 1	NUMBER: 4.2		PAGE:	1 of 1
REFER	RENCE: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31		
TITLE	: Changeback			
SUBTI	TLE: Additional CBA			
PURPO	OSE: To check the actions of	of the system on reception of an addit	tional CBA	
PRE-T	EST CONDITIONS: Links	set with all links available		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start ti				
ALI	L TRAFFIC			
			ALL	TRAFFIC
4.7.7	TED A FIELD	(1–X	CBA, SLC 1–1
ALI	TRAFFIC		A T T	
***		(ALL	TRAFFIC
:Wait	cc.			
:Stop ti	таппс			
	DESCRIPTION			
1.	Start traffic to B and C on			
2.	Send an unexpected CBA traffic.	to A and check that this message is d	liscarded w	ithout action on the
3.	Stop traffic.			

TEST	NUMBER: 4.3		PAGE: 1	of 1			
REFER	RENCE: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31					
TITLE	: Changeback						
SUBTI	TLE: Additional CBD						
PURPO	OSE: To check the action of	f the system on reception of an addition	nal CBD				
PRE-T	EST CONDITIONS: Links	et with all links available					
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL							
MESSAGE SEQUENCE:							
SP .	A		SP B				
Linl			Link				
:Start t							
ALI	L TRAFFIC		4 7 7	TD A FELC			
			ALL	TRAFFIC			
1.3			1–X	CBD, SLC 1–1			
1–X	ŕ						
ALI	L TRAFFIC		4 7 7	TD A FELC			
.Wai4			ALL	TRAFFIC			
:Wait	roffio						
:Stop ti	tarric						
	DESCRIPTION						
1.	Start traffic to B and C on		1 .	24			
2.	Send an unexpected CBD the traffic.	to A and check that a CBA is send bac	k in respo	nse without impact on			
3.	Stop traffic and check that	it has been received correctly.					

REFERENCE: clause 6/Q.704 Fig. 28, Fig. 29, Fig. 31	TEST NUMBER: 4.4		PAGE:	1 of 1		
SUBTITLE: No acknowledgement to first CBD	REFERENCE: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31				
PURPOSE: To check that a second CBD is sent if the first is not acknowledged PRE-TEST CONDITIONS; Linkset with one available link CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL MESSAGE SEQUENCE: SP A SP B Link Link :Start traffic Link 1-2 TRAFFIC 1-1 :Activate 1-2 CBD, SLC 1-1 T4 TA 1-2 CBD, SLC 1-1 1-1 TRAFFIC (from 1-2) 1-1 TRAFFIC (from 1-2) 1-2 TRAFFIC (from 1-2, Note) 1-2 TRAFFIC	TITLE: Changeback					
PRE-TEST CONDITIONS: Linkset with one available link CONFIGURATION: A	SUBTITLE: No acknowledgemen	nt to first CBD				
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL MESSAGE SEQUENCE: SP B SP A SP B Link Link :Start traffic 1-2 TRAFFIC 1-1 :Activate 1-2 TRAFFIC 1-2 CBD, SLC 1-1 T4 1-2 CBD, SLC 1-1 1-X CBA, SLC 1-1 1-1 TRAFFIC (from 1-2) 1-1 TRAFFIC (from 1-2, Note) 1-2 TRAFFIC 1-2 TRAFFIC :Wait 1-2 TRAFFIC	PURPOSE: To check that a secon	d CBD is sent if the first is not acknow	ledged			
MESSAGE SEQUENCE:	PRE-TEST CONDITIONS: Links	set with one available link				
SP A SP B Link Link :Start traffic	CONFIGURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL		
Link Link :Start traffic 1-2 TRAFFIC 1-1 :Activate 1-2 TRAFFIC 1-2 CBD, SLC 1-1 → 1-X CBA, SLC 1-1 1-1 TRAFFIC (from 1-2) → 1-1 TRAFFIC (from 1-2, Note) 1-2 TRAFFIC → 1-2 TRAFFIC :Wait :Wait 1-2 TRAFFIC						
:Start traffic 1-2 TRAFFIC	SP A		SP B			
:Start traffic 1-2 TRAFFIC						
1-2 TRAFFIC ← 1-2 TRAFFIC 1-1 :Activate 1-2 CBD, SLC 1-1 ← 1-X CBA, SLC 1-1 1-1 TRAFFIC (from 1-2) ← 1-1 TRAFFIC (from 1-2, Note) 1-2 TRAFFIC ← 1-2 TRAFFIC :Wait			Link			
1-2 TRAFFIC 1-1						
1-1 :Activate 1-2 CBD, SLC 1-1	1–2 TRAFFIC		1 2	TD A FELC		
1-2 CBD, SLC 1-1	1.1		1–2	TRAFFIC		
1–2 CBD, SLC 1–1 — — — — — — — — — — — — — — — — — —						
1–2 CBD, SLC 1–1	1–2 CBD, SLC 1–1					
1–2 CBD, SLC 1–1	T4					
1–1 TRAFFIC (from 1–2) — — — — — — — — — — — — — — — — — — —	14					
1–1 TRAFFIC (from 1–2) — — — — — — — — — — — — — — — — — — —	1_2					
1–1 TRAFFIC (from 1–2) — — — — — — — — — — — — — — — — — — —	1 2 CDD, SEC 1 1	,	1_X	CRA SLC 1_1		
$\leftarrow \qquad \qquad 1-1 \qquad \text{TRAFFIC (from 1-2, Note)}$ $1-2 \qquad \text{TRAFFIC} \qquad \qquad \qquad \qquad 1-2 \qquad \text{TRAFFIC}$:Wait	1_1 TRAFFIC (from 1_7	2)	1 7	CDA, SEC 1 1		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 1 TRATTE (Hom 1 2		1_1	TRAFFIC (from 1–2		
÷ TRAFFIC :Wait		`	1 1	*		
:Wait	1–2 TRAFFIC					
			1–2	TRAFFIC		
:Stop traffic	:Wait					
	:Stop traffic					
NOTE – B may perform a changeback or not.		back or not.				
TEST DESCRIPTION						
 Activate link 1–1 and check that a CBD is received (no CBA in response). Check that after T4 a second CBD is received and CBA is sent in response before T5 expires. 		· ·	•			

Stop traffic and check that there were no lost messages, no duplication and no missequencing.

Check that the traffic is changed back on link 1–1.

Check that the duration of T4 is inside the specified range.

4.

5.

TEST 1	NUMBER:	4.5		PAGE:	1 of 1		
REFER	RENCE: cla	ause 6/Q.704	Fig. 28, Fig. 29, Fig. 31				
TITLE	: Changeba	ıck					
SUBTI	TLE: No a	cknowledgement	of repeat changeback declaration				
	OSE: To ch vledged	eck that traffic is	changed back after a repeat changeba	ck decla	ration is not		
PRE-T	EST CONI	DITIONS: Linkset	with one available link				
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL						
MESSA	AGE SEQU	JENCE:					
SP A	A			SP B			
Linl				Link			
:Start ti							
1–2	2 TRA	AFFIC					
				1–2	TRAFFIC		
1–1		ivate					
1–2	e CBI), SLC 1–1					
		T4					
1–2	e CBI	D, SLC 1–1					
		T5					
1 1	TD.						
1–1	TRA	AFFIC (from 1–2)					
1 0	T. T. A.	FFIG	(1–1	TRAFFIC (from 1–2)		
1–2	Z TRA	AFFIC		1 0	TID A FIELD		
***				1–2	TRAFFIC		
:Wait	cc						
:Stop ti	raffic						
NOTE Description of the state o							
NOTE – B may perform a changeback or not. TEST DESCRIPTION							
1.		ic to B and C on li	nlc 1 2				
2.			ed and not acknowledged.				
3.			is repeated and not acknowledged by	a CBA			
4.			fic is changed back on link 1–1.	a CDA.			
5.			here were no lost messages, no duplic	cation ar	nd no missequencing		
6.	-		'5 is inside the specified range.				

TEST	NUMBER: 4.6		PAGE:	1 of 1		
REFERENCE: clause 6/Q.704 Fig. 28, Fig. 29, Fig. 31						
TITLE	: Changeback					
SUBTI	TLE: Simultaneous changebac	ck				
PURPO	OSE: To check simultaneous c	hangebacks of traffic onto two links	S			
PRE-T	EST CONDITIONS: Linkset	with one available link (end of test	3.14)			
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESS	AGE SEQUENCE:					
SP.	A		SP B			
Lin			Link			
:Start t						
1-3	3 TRAFFIC					
			1–3	TRAFFIC		
1–1	:Activate (depending or	n the deactivation mean previously	used)			
1-2						
1–3	CBD, SLC 1–1	\longrightarrow				
1-3	CBD, SLC 1–2					
			1-X	CBA, SLC 1–1		
			1-X	CBA, SLC 1–2		
1–1	TRAFFIC (from 1–3)					
			1-1	TRAFFIC (from 1–3,		
				Notes 1 and 2)		
1-2	2 TRAFFIC (from 1–3)					
			1–2	TRAFFIC (from 1–3,		
1-3	3 TRAFFIC			Notes 1 and 2)		
1-2	TRAFFIC	·	1–3	TRAFFIC		
:Wait			1–3	TRAFFIC		
:Stop to	roffio					
.Stop ti	iame					
NOTE	1 – B may perform changebac	eks or not				
	<i>3</i> 1	hay be performed in sequence. The t	raffic seg	uence presented here		
	e changebacks, is the final situ		rurrio soq	gordo prosoniou noro,		
TEST	DESCRIPTION					
1.	Start traffic to B and C on lin	nk 1–3.				
2.	Simultaneously activate links	s 1–1 and 1–2.				
3.	Check that CBDs are receive is changed back on links 1–1	ed and CBAs are sent (within T4) fo and 1–2.	r 1–1 and	1–2 and that the traffic		
4.		ere were no lost messages, no dupli	cation and	I no missequencing.		

TEST I	NUM	BER: 4.7		PAGE: 1	of 1	
REFER	RENC	E: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31			
TITLE	: Chai	ngeback				
SUBTI	SUBTITLE: Changeback from several alternative links within a linkset					
PURPO	OSE:	Γο check the changeba	ack procedure when it is performed to	several lin	ks in a same linkset	
PRE-T	EST (CONDITIONS: Links	et with one unavailable link (end of tes	st 3.15)		
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESSA	AGE S	SEQUENCE:				
SP A	A			SP B		
	_					
Linl				Link		
:Start ti		TD A FFIG				
1–2, 3	5, 4	TRAFFIC		1 2 2 4	TDAFFIC	
1 1		. A -4:4- (11:		1–2, 3, 4	TRAFFIC	
1-1 1-2		CBD, SLC 1–1	on the deactivation mean previously u	isea)		
1-2		CBD, SLC 1–1				
1-3		CBD, SLC 1–1				
1-4	t	CDD, SLC 1-1		1-X	CBA, SLC 1–1	
				1-X 1-X	CBA, SLC 1–1 CBA, SLC 1–1	
			<u></u>	1-X 1-X	CBA, SLC 1–1 CBA, SLC 1–1	
1–1		TRAFFIC	<u> </u>	1-Λ	CDA, SLC 1-1	
1-1	L	(from 1–2, 3, 4)				
				1–1	TRAFFIC (from 1–2, 3, 4, Note)	
1–2, 3	3, 4	TRAFFIC			,	
			\	1–2, 3, 4	TRAFFIC	
:Wait						
:Stop tı	raffic					
NOTE	ъ	0 1 1				
		nay perform changeba	cks or not.			
		RIPTION	1. 1. 2. 1. 2. 1.1. 4			
1.			links 1–2, 1–3 and 1–4.	and 1 / /	Chaple that analy CDD	
2.		vate link 1–1 and checains a different change	ek that a CBD is sent on links 1–2, 1–3 eback code.	anu 1–4. (CHECK Wat Each CBD	
3.		C	anged back on link 1-1.			
4.	Stop	traffic and check that	there were no lost messages, no dupli-	cation and	no missequencing.	

TEST N	NUMBER: 4.8				PAGE: 1 of 1		
REFER	ENCE: clause 6/Q	.704 Fig. 28, F	Fig. 29, Fig. 31				
TITLE:	Changeback						
SUBTI	ΓLE: Changeback:	from another links	et				
PURPO	SE: To check the	changeback proced	lure when it is per	formed fro	m another linkset		
PRE-TI	EST CONDITIONS	S: Linksets 1 and 3	unavailable (end	of test 3.1	6)		
CC	ONFIGURATION:	B TYPE	E OF TEST: VAT,	CPT	TYPE OF	SP: ALI	⊔
MESSA	GE SEQUENCE:						
SP A	Λ	:	SP B	SP C		SP •	
Link	or	Liı	nk	Link		Link	
:Start tr		_					
2–1, 2	TRAFFIC	<i>──</i> 5 <i>─</i>			\longrightarrow		SP D
		6–			,		SP E
		← 2-1	, .		····	5–1	SP D
		← 2-1	1, 2 ←			6–1	SP E
3–2	:Activate (depend	ling on the deactiv	ation mean previo	usly used)			
2-1	CBD, SLC 3–2	──→ 4−	-1				
2-1	CBD, SLC 3–2	─── 4−	-1				
				3–2	CBA, SLC 3–2		
		←		3–2	CBA, SLC 3–2		
					CHANGEBACK		
2–1, 2	TRAFFIC	── 5−	-1				SP D
		6–	-1 ———				SP E
		← 2–1	1, 2 ←			5–1	SP D
3–2	TRAFFIC		,		─		SP D
	(from 2–X)		ŕ	7–1	<i>.</i>		SP E
:Wait	,				,		
:Stop tra	affic						
P ***	-						
NOTE	1 – It is possible th	at A and/or B prefe	ers to perform a ti	me control	led diversion proce	edure.	
	2 – After activation	-	-		-		These
maggag		to simplify the to				- J	

TEST DESCRIPTION

- 1. Start traffic to E (and D in VAT).
- 2. Activate link 3–2 and check that CBDs are received and that CBAs are sent before T4 expires in A.
- 3. Check that the traffic is changed back on linkset 3 in accordance with the load sharing rules in A.
- 4. Stop traffic and check that there were no lost messages, no duplication and no missequencing.

TEST NU	JMBER: 4.9					PAGE	: 1 of 1	
REFEREN	NCE: clause 6/Q	.704 Fig	g. 28, Fig.	29, Fig. 31				
TITLE: Cl	hangeback							
SUBTITL	SUBTITLE: Changeback from two linksets							
PURPOSE	E: To check the	changeback	procedure	e when it is	performed fro	m two l	inksets	S
PRE-TES	T CONDITIONS	S: Linkset 1	unavailab	ole (end of t	test 3.18)			
CON	FIGURATION:	В	TYPE	E OF TEST:	VAT		TYPE	OF SP: ALL
MESSAG	E SEQUENCE:							
SP A			SP B		SP C		SP	D
Link			Link		Link		Link	
:Start traff								
2–1 TR	RAFFIC	$\!$	-			•		
		\leftarrow	2–1				5–1	TRAFFIC
2–2 TR	RAFFIC	$\!$	_			•		
			2–2				5-1	TRAFFIC
3–1 TR	RAFFIC				8–1	\longrightarrow		
3–2 TR	RAFFIC			\longrightarrow	8–1 ——	\longrightarrow		
1–2 :A	activate (dependi	ng on the de	eactivation	n mean prev	iously used)			
2–1 CE	BD, SLC 1–2	$\!$	5–1 -			\longrightarrow		
2–2 CE	BD, SLC 1–2		5–1 -			\longrightarrow		
3–1 CE	BD, SLC 1–2				8–1	\longrightarrow		
3–2 CE	BD, SLC 1–2				8–1	 →		CBAs
			2–X				5-1	SLC 1–2
			2–X				5-1	SLC 1-2
			2–X	·			5-1	SLC 1-2
		·		· · · · · · · · · · · · · · · · · · ·			5-1	SLC 1-2
1–2 TR	RAFFIC (fron	n linksets 2 a						
	(ŕ				1–2	TRAFFIC
		`						(from linksets 5, Notes 1 and 2)
2-1, 2 TR	RAFFIC	$\!$	5–1 -			\longrightarrow		
3–1, 2 TR	RAFFIC			\longrightarrow	8–1 ——	\longrightarrow		
:Wait :Stop traff	fic							
	- D may perform - It is possible th			to perform	a time control	lled dive	ersion j	procedure.
TEST DES	SCRIPTION							
1. Sta	tart traffic on linl	ksets 2 and 3	3 to D.					
	ctivate the link 1 A. Check that e					CBAs a	re sent	before T4 expires
3. Cł	heck that the traf	ffic is chang	ed back to	o link 1–2 ii	n accordance v	with the	load s	haring rules in A.
4. St	top traffic and ch	neck that the	re were no	o lost messa	ages, no duplic	cation ar	nd no i	nissequencing.

TEST NUM	BER: 4.10		PAGE: 1	of 1		
REFERENC	REFERENCE: clause 6/Q.704 Fig. 28, Fig. 29, Fig. 31					
TITLE: Cha	ngeback					
SUBTITLE:	Changeback due to vari	ious reasons				
PURPOSE:	To check the interface L	.2-L3				
PRE-TEST	CONDITIONS: Linkset	with one available link (end of 3.19)	1			
CONFI	GURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL		
MESSAGE	SEQUENCE:					
SP A			SP B			
Link			Link			
:Start traffic						
1–2	TRAFFIC					
			1–2	TRAFFIC		
1–1	:Activation due to varie	ous reasons (Note)				
1–2	CBD, SLC 1–1					
			1–2	CBA, SLC 1–1		
1–1	TRAFFIC (from 1–2)					
			1–2	CBA, SLC 1-1		
1-X	CBA, SLC 1-1					
			1-1	TRAFFIC (from 1–2)		
1–2	TRAFFIC					
			1–2	TRAFFIC		
:Wait						
:Stop traffic						
•						
NOTE – The	e object of this test is to	check the interface L2-L3 by provok	ing a chan	geback by different		

means listed in clause 3/Q.704. These reasons are: initial alignment procedure completed with success, processor outage condition has ceased at the remote signalling terminal and management request.

TEST DESCRIPTION

- 1. Start traffic to B and C on link 1–2.
- 2. Provoke the activation of the link 1–1 (see Note above).
- 3. Check that the traffic is changed back to 1-1.
- 4. Stop traffic and check that it has been received correctly.
- 5. Repeat the test for each reason.

TEST NUMBER: 4.11		PAGE: 1 of	<u>`</u> 1		
REFERENCE: clause 6/Q.704	Fig. 28, Fig. 29, Fig. 31				
TITLE: Changeback					
SUBTITLE: Time controlled div	SUBTITLE: Time controlled diversion procedure				
PURPOSE: To check the correct	operation of the time controlled diversic	n procedure			
PRE-TEST CONDITIONS: Link	ssets 1, 2 and 4 unavailable				
CONFIGURATION: B	TYPE OF TEST: VAT, CPT	TYP	E OF SP: ALL		
MESSAGE SEQUENCE:					
SP A	SP B	SP C			
Link	Link	Link			
:Start traffic					
3–1 TRAFFIC -		\rightarrow			
(to D and E)		2 1	TD A EELC		
•		_ 3-1	TRAFFIC (from D and E)		
3–2 TRAFFIC -		\rightarrow	,		
(to D and E)					
•	(_ 3–2	TRAFFIC (from D and E)		
2–1 :Activate (depending or	the deactivation mean previously used)				
T21					
TRA	← 2−1 «TRA»				
3–1, 2 TRAFFIC STOPPED					
Т3					
2–1 TRAFFIC					
(from 3–1, 2)	2.1 TD A FFIC (from 1) Note			
	← 2−1 TRAFFIC (from I				
2–1, 2 TRAFFIC -		•			
	(_ 3-1, 2	TRAFFIC (from E)		
:Wait :Stop traffic					
•	start procedure and D, on reception of a	TFA for A r	eroutes its traffic		
	resented to simplify the test description.		ordated to truffic		

TEST DESCRIPTION

- 1. Start traffic to E (and D in VAT) on linkset 3.
- 2. Activate link 2–1.
- 3. Check that T21 is started in A, and is stopped on reception of TRA from SP B (see Note).
- 4. Check that traffic on linkset 3 ceased in A and that after expiration T3 traffic diverts to link 2–1 in accordance with the load sharing rules in A.
- 5. Stop traffic and check that there were no lost messages, no duplication and no missequencing.
- 6. Check that the duration of T3 is inside the specified range.
- 7. Repeat the test (in VAT) without sending TRA from B to A and check that the time controlled diversion is performed when T21 expires.

TEST N	UMBER: 5		PAGE: 1 of 1			
REFERE	ENCE: clause 7/Q.704	Fig. 29, Fig. 32				
TITLE:	TITLE: Forced rerouting					
SUBTIT	LE:					
PURPOS	SE: To check that the syst	em can perform forced rerouting				
PRE-TE	ST CONDITIONS: Links	ets 1 and 4 unavailable				
CO	NFIGURATION: B	TYPE OF TEST: VAT, CP	T TYPE OF SP: ALL			
MESSA	GE SEQUENCE:					
SP A		SP B	SP C			
Link		Link	Link			
:Start tra	-					
2–1, 2	TRAFFIC –	\longrightarrow to D and E				
	(2–1, 2 TRAFFIC (`			
3–1, 2	TRAFFIC –		,			
	-		- ,			
		6–1 :Deactivate				
	<	2–X TFP, PC =	E			
3–1, 2	TRAFFIC -					
(to D and	d from 2–1, 2 to E)					
	\leftarrow		3–1, 2 TRAFFIC (from E)			
2–1, 2	TRAFFIC -	\longrightarrow to D				
	(2–1, 2 TRAFFIC	(from D)			
:Wait						
:Stop tra	affic					
TEGT D	EG CD IDELON					
	ESCRIPTION	12 (E / 1B ' XAB)				
		and 3 to E (and D in VAT).				
		id check the sending of a TFP co	•			
	Stop traffic and check that been lost but not misseque		erformed correctly, messages may have			
	-	•	as not been disturbed (no lost messages,			

no duplication and no missequencing).

5.

Check that an indication was given by the system.

TEST NUMBER: 6		PAGE: 1 of 1		
REFERENCE: clause 8/Q.	704 Fig. 29, Fig. 33			
TITLE: Controlled reroutin	g			
SUBTITLE:				
PURPOSE: To check that to	he system can perform controlled rerouting			
PRE-TEST CONDITIONS	: Linksets 1, 4 and 6 unavailable (end of test 5)		
CONFIGURATION: F	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A	SP B	SP C		
Link	Link	Link		
:Start traffic				
3–1, 2 TRAFFIC		→ to D and E		
		— 3–1, 2 TRAFFIC (from E)		
2–1, 2 TRAFFIC	→ to D			
	← 1−1, 2 TRAFFIC (from I	0)		
	6–1 :Activate			
	\leftarrow 2-X TFA, PC = E			
Т6				
2 1 2 TRAFFIC				
2–1, 2 TRAFFIC				
(to D and from 3–1, 2 to E)	← 3−1, 2 TRAFFIC (from I	3)		
3–1, 2 TRAFFIC	5-1, 2 TRAFTIC (HOIII I)		
3-1, 2 TRAFFIC		→ 3–1, 2 TRAFFIC (from E)		
:Wait		= 3-1, 2 TRAFFIC (HOIII E)		
:Stop traffic				
.Stop traffic				
TEST DESCRIPTION				
1. Start traffic to E (ar	nd D in VAT).			
2. Activate the linkset	6 and check the sending of a TFA concerning	g E from B to A.		
	ck that the controlled rerouting has been perfo	ormed correctly (for all traffic		
	ages, no duplication and no missequencing).			
4. Check that the dura	. Check that the duration of T6 is inside the specified range.			

TEST 1	NUMBER: 7.1.1		PAGE:	1 of 1
REFER	RENCE: clause 10/Q.704	Fig. 28		
TITLE	: Management inhibiting			
SUBTI	TLE: Inhibition of a link-Av	vailable link		
		t response when link inhibition is rec	quested fo	or an available link
	EST CONDITIONS: Linkset		T	
	ONFIGURATION: A	TYPE OF TEST: VAT, CPT]	ΓΥΡΕ OF SP: ALL
	AGE SEQUENCE:		e:-	
SP A	A		SP B	
Linl	l _e		Link	
:Start ti			Link	
.start ti				
1 -1	TRAITIC		1–1	TRAFFIC
1-2	2 TRAFFIC			
. 2		·	1–2	TRAFFIC
1–1	:Request inhibition			
1-X	1			
		\	1-X	LIA, SLC 1–1
	TIME – CONTROLL	ED CHANGEOVER (Note)		
1-2	2 TRAFFIC (from 1–1)			
		\	1–2	TRAFFIC (from 1–1)
:Wait				
:Stop ti	raffic			
NOTE	 A changeover is performed 	d after the inhibition of link 1–1 but i	t is not de	escribed in this test which
	only the inhibition procedure			
TEST 1	DESCRIPTION			
1.	Start traffic to B (and C in V	VAT) on links 1–1 and 1–2.		
2.	Initiate inhibition of link 1–T14.	1 and check that LIN is received and	l an LIA i	s received in A within
3.	Check that the traffic norma	ally carried by link 1-1 is transferred	to link 1-	-2.
4.	Check that the link 1–1 enters in the "Local inhibiting" state.			

5.

Repeat test in the reverse direction.

TEST 1	NUMBER: 7.1.2		PAGE: 1 of 1
REFE	RENCE: clause 10/Q.704 Fi	g. 28	
TITLE	: Management inhibiting		
SUBTI	TLE: Inhibition of a link – Un	available link	
PURPO	OSE: To check for the correct in	response when link inhibition is requ	uested for an unavailable link
PRE-T	EST CONDITIONS: Linkset v	with one available link	
CO	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESS	AGE SEQUENCE:		
SP .	A		SP B
Lin			Link
:Start t			
1–1	TRAFFIC	$\xrightarrow{\hspace*{1cm}}$	
			1–1 TRAFFIC
1–1	1		
1–1	LIN, SLC 1–2	<u> </u>	
			1–1 LIA, SLC 1–2
1-2	` -	the deactivation mean previously u	sed)
1–1	TRAFFIC		1 1 TD A FFIG
.337-:4		\	1–1 TRAFFIC
:Wait	- CC		
:Stop to	lattic		
TEST	DESCRIPTION		
1.	Start traffic to B (and C in V	AT) on link 1–1.	
2.	`	2, check the reception of LIN at B ar	nd send LIA in response within
	T14.		•
3.	Check that the inhibition was	performed.	
4.	Activate link 1–2 and check t	•	
5.	Stop traffic and check that it		
6.	Repeat test in reverse direction	on.	

TEST	NUMBER: 7.2.1		PAGE: 1	of 1
REFE	RENCE: clause 10/Q.704 F	Fig. 28		
TITLE	: Management inhibiting			
SUBTI	TLE: Inhibition not permitted	l – Local reject on available link		
PURPO	OSE: To check the inhibition	procedure in case of local reject on a	n available	link
PRE-T	EST CONDITIONS: Linkset	with one available link		
CO	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	TY	PE OF SP: ALL
	AGE SEQUENCE:			
SP .	A		SP B	
			T ' 1	
Lin			Link	
:Start t				
1–1	TRAFFIC			ED A FILIC
			1–1	TRAFFIC
1-1				
1–1	TRAFFIC			
***			1–1	TRAFFIC
:Wait	ow.			
:Stop ti	raffic			
TEST	DESCRIPTION			
1.	Start traffic to B (and C in V	(AT) on link 1–1		
2.	·	-1 and check that this request is not p	permitted	
3.	Stop traffic and check that it	î î	, Jiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	
4.	•	re-test conditions as follows: link 1–	-1 available	and link 1–2 inhibited
'-	by B.	10 tost conditions as follows. Hilk 1-		and min 1 2 minuted

TEST N	UMBER: 7.2.2		PAGE: 1 of 1
REFERI	ENCE: clause 10/Q.704	Fig. 28	
TITLE:	Management inhibiting		
SUBTIT	TLE: Inhibition not permit	ted – Local reject on an unavailable li	nk
PURPO	SE: To check the inhibition	on procedure in case of local reject on	an unavailable link
PRE-TE	ST CONDITIONS: All li	nks unavailable	
CO	NFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSA	GE SEQUENCE:		
SP A			SP B
Link			Link
1-1	:Request inhibition		
	•		
TEST D	ESCRIPTION		
		1–1 and check that it is rejected.	
	-	·	

TEST N	NUMBER: 7.2.3		PAGE:	1 of 1		
REFER	ENCE: clause 10/Q.704	Fig. 28				
TITLE:	Management inhibiting					
SUBTI	TLE: Inhibition not permit	ted – Sending of LID				
PURPO	OSE: To check the reject of	an inhibition asked on reception of a	ın LIN			
PRE-TI	EST CONDITIONS: Links	set with one available link				
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESSA	MESSAGE SEQUENCE:					
SP A	A		SP B			
Link			Link			
:Start tr						
1-1	TRAFFIC		1 1	TDAEEIC		
			1–1	TRAFFIC		
1–1	IN CLC 1 1		1–1	LIN, SLC 1–1		
	LIN, SLC 1–1 TRAFFIC	<i>──</i>				
1–1	IKAFFIC	•	1–1	TRAFFIC		
:Wait		\	1-1	IKAFFIC		
:Stop tr	affic					
.Stop ti	arric					
	DESCRIPTION State Control Part 10	1.1.1.1				
1. 2.	Start traffic to B and C on		on LID			
3.	Check that the inhibition is	om B to A and check the reception of is not performed	all LID.			
3. 4.		t it has not been disturbed.				
7.	Stop traffic and check tha	the has not occir disturbed.				

TEST 1	NUMBER: 7.2.4		PAGE: 1 of 1		
REFER	ENCE: clause 10/Q.704	Fig. 28			
TITLE	Management inhibiting				
SUBTI	TLE: Inhibition not permitt	ed – Reception of LID			
PURPO	OSE: To check the reject of	an inhibition asked on sending of an	LIN		
PRE-T	EST CONDITIONS: Links	et with two available links			
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESSA	AGE SEQUENCE:				
SP A	A		SP B		
Link			Link		
:Start tr					
1–1,	2 TRAFFIC				
			1–1, 2 TRAFFIC		
1-1	1				
1-X	LIN, SLC 1–1				
			1–X LID, SLC 1–1		
1–1,	2 TRAFFIC				
			1–1, 2 TRAFFIC		
:Wait	or				
:Stop tr	rattic				
TEST I	DESCRIPTION				
1.	Start traffic to B and C on	links 1–1 and 1–2.			
2.	Request the inhibition of li T14 expires in A.	ink 1–1 and check the reception of LD	N and response with an LID before		
3.	Check that the inhibition is	s not performed.			
4.	Stop traffic and check that				

TEST NUM	BER: 7.3.1		PAGE: 1	of 1
REFERENC	E: clause 10/Q.704	Fig. 28		
TITLE: Mar	nagement inhibiting			
SUBTITLE:	Expiration of T14 – Or	n an available link		
PURPOSE: expires	To check that the inhibi	tion procedure asked for an available	link is re	started when T14
PRE-TEST (CONDITIONS: Linkset	with two available links		
CONFI	GURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL
MESSAGE	SEQUENCE:			
SP A			SP B	
Link			Link	
:Start traffic				
1–1	TRAFFIC	─		
			1-1	TRAFFIC
1–2	TRAFFIC			
			1–2	TRAFFIC
1–1	:Request inhibition			
1–X	LIN, SLC 1–1			
		,		
	T14			
	117			
1–X	LIN, SLC 1–1			
1-Λ	LIN, SLC 1-1		1 1	
		`	1–1	LIA, SLC 1–1
		D CHANGEOVER (Note)		
1–2	TRAFFIC (from 1–1)	$\xrightarrow{\hspace*{1cm}}$		
			1–2	TRAFFIC (from 1–1)
:Wait				
:Stop traffic				
NOTE – A changeover is performed after the inhibition of link 1–1 but it is not described in this inhibition				
test.				
TEST DESC	CRIPTION			
1. Start traffic to B and C on links 1–1 and 1–2.				

- 2. Request the inhibition of link 1–1, check that an LIN is received without response. Check that a new LIN is received after T14 expires and that an LIA is sent in response.
- 3. Check that the inhibition is performed. Stop traffic and check that it was not disturbed.
- 4. Repeat the test but without sending of an LIA. Check that after the second expiration of T14 the procedure is stopped.
- 5. Check that the duration of T14 is inside the specified range.

TEST	NUMBER: 7.3.2		PAGE: 1 of 1		
REFER	RENCE: clause 10/Q.704	Fig. 28			
TITLE	: Management inhibiting				
SUBTI	TLE: Expiration of T14 – C	On an unavailable link			
PURPO T14 ex		bition procedure asked for an unavailab	ole link is restarted when		
PRE-T	PRE-TEST CONDITIONS: Linkset with one available link				
CO	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESS	AGE SEQUENCE:				
SP.	A		SP B		
Lin			Link		
:Start t					
1–1	TRAFFIC				
			1–1 TRAFFIC		
1-2	1				
1–1	LIN, SLC 1–2				
	T14				
1–1	LIN, SLC 1–2				
			1–1 LIA, SLC 1–2		
1-2					
1–1	TRAFFIC				
			1–1 TRAFFIC		
:Wait	og.				
:Stop to	rattic				
TEST	DESCRIPTION				
1.	Start traffic to B and C on	link 1–1			
2.		1–2, check that an LIN is received with	out response. Check that a new		
2.		expires and that an LIA is sent in respo			
3.	Check that the inhibition is	s performed.			
4.	Activate link 1–2 and chec	k that it stays unavailable.			
5.	Stop traffic and check that	it was not disturbed.			
6.	Repeat the test but without procedure is stopped.	t sending of an LIA. Check that after th	e second expiration of T14, the		

TEST	NUMBER: 7.4		PAGE:	1 of 1	
REFER	RENCE: clause 10/Q.704	Fig. 28			
TITLE	TITLE: Management inhibiting				
SUBTI	SUBTITLE: Additional inhibition messages (LIA, LID, LIN)				
PURPO	OSE: To check the action o	f the system on reception of an addition	onal LIA, I	LID or LIN	
PRE-T	EST CONDITIONS: End	of test 7.1.1			
CO	ONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL	
MESS	AGE SEQUENCE:				
SP .	A		SP B		
Linl			Link		
:Start t					
1-2	2 TRAFFIC		1 0	TED A DELIC	
			1–2	TRAFFIC	
		\	1–2	LIA, SLC 1–1	
	TD A DEVG		1–2	LID, SLC 1–1	
1-2	2 TRAFFIC				
			1–2	TRAFFIC	
			1–2	LIN, SLC 1–1	
1–1	,				
1-2	2 TRAFFIC				
			1–2	TRAFFIC	
:Wait	or.				
:Stop ti	raffic				
TEST	DESCRIPTION				
1.	Start traffic to B and C on	link 1–2.			
2.	Send an additional LIA ar	nd LID on link 1–2.			
3.	Check that these message	s are ignored without impact on the tr	affic.		
4.	Send an additional LIN or	ı link 1–2.			
5.	Check that an LIA is rece in the "Local and remote in	ived in response without impact on thinhibiting" state.	e traffic an	d that the link 1–1 enters	
6.	Stop traffic.				
• •	orep temester.				

TEST 1	NUMBER: 7.5		PAGE:	1 of 1	
REFER	RENCE: clause 10/Q.704	Fig. 28			
TITLE	TITLE: Management inhibiting				
SUBTI	SUBTITLE: Inhibition asked by the both ends of a link				
PURPO	OSE: To check the action of	the system on reception of an LIN aft	er sending	g of an LIN	
PRE-T	EST CONDITIONS: Links	et with two available links			
CC	ONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL	
MESSA	MESSAGE SEQUENCE:				
SP A	A		SP B		
Linl			Link		
:Start tı					
1–1,	2 TRAFFIC				
			1–1, 2	TRAFFIC	
1–1	1				
1–X	LIN, SLC 1–1				
			1–X	LIN, SLC 1–1	
1–1	LIA, SLC 1–1				
			1-X	LIA, SLC 1–1	
		ED CHANGEOVER (Note)			
1–2	TRAFFIC (from 1–1	,			
			1–2	TRAFFIC (from 1–1)	
:Wait	og.				
:Stop tr	rattic				
NOTE – A changeover procedure is performed but not described in this inhibition test.					
TEST I	DESCRIPTION				
1.	Start traffic to B and C on	link 1–1 and 1–2.			
2.	Request inhibition of link	1–1. Check the reception of LIN and r	esponse w	vith an LIN.	
3.	Check the reception of an	LIA and send an LIA.			
4.	Check that the inhibition i inhibiting" state.	s correctly performed and that the link	enters in	the "Local and remote	
5.	Stop traffic and check that	it was not disturbed.			

TEST I	NUMBER: 7.6.1		PAGE:	1 of 1	
REFER	REFERENCE: clause 10/Q.704 Fig. 28				
TITLE	TITLE: Management inhibiting				
SUBTI	TLE: Manual uninhibition of	a link – With changeback			
PURPO	OSE: To check for correct rest	toration when link uninhibition is rec	quested b	by an operator	
PRE-T	EST CONDITIONS: End of t	test 7.1.1			
CO	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	,	ΓΥΡΕ OF SP: ALL	
MESSA	AGE SEQUENCE:				
SP A	A		SP B		
Linl	k		Link		
:Start ti	raffic				
1–2	2 TRAFFIC				
			1–2	TRAFFIC	
1–1	1				
1–2	LUN, SLC 1–1				
			1–2	LUA, SLC 1–1	
	GEBACK (Note)	CHANGEBACK (Note)			
1–1	TRAFFIC (from 1–2)				
			1–1	TRAFFIC (from 1–2)	
1–2	2 TRAFFIC	$\xrightarrow{\hspace*{1cm}}$			
			1–2	TRAFFIC	
:Wait					
:Stop ti	raffic				
NOTE	A changahack procedure is	performed after uninhibition of link	1 1 but	it is not described in this	
	ich checks only uninhibition		1-1 but	it is not described in this	
TEST 1	DESCRIPTION				
1.	Start traffic to B and C on lin	nk 1–2.			
2.	Request uninhibition of link T12.	1–1, check the reception of an LUN	and resp	oonse with an LUA inside	

Check that the traffic was shared on links 1–1 and 1–2 according to the load sharing rules.

When B has initiated inhibition (point 5, test 7.1.1), repeat test in reverse direction. Check that

Check that the uninhibition is performed and stop traffic.

Check that an uninhibition indication was given by the system.

uninhibition is not possible when it is requested by an operation in A.

3.

4.5.

6.

TEST	NUMBER: 7.6.2		PAGE: 1 of 1		
REFE	RENCE: clause 10/Q.704	Fig. 28			
TITLE	: Management inhibiting				
SUBTI	SUBTITLE: Manual uninhibition of a link – Without changeback				
PURPO	OSE: To check manual unin	hibition procedure when the uninhibit	ed link stays unavailable		
PRE-TEST CONDITIONS: End of test 7.1.2 without activation of link 1–2 (link 1–2 deactivated and inhibited)					
CO	CONFIGURATION: A TYPE OF TEST: VAT, CPT TYPE OF SP: ALL				
MESSAGE SEQUENCE:					
SP.	A		SP B		
Lin			Link		
:Start t					
1–1	TRAFFIC				
		\	1–1 TRAFFIC		
1–2	1	1			
1–1	LUN, SLC 1–2				
			1–1 LUA, SLC 1–2		
1–1	TRAFFIC	$\xrightarrow{\hspace*{1cm}}$			
			1–1 TRAFFIC		
:Wait					
:Stop to	raffic				
TECT	DECOMPTION				
	DESCRIPTION State of P. (10: W	A.T.\ 1' 1 1 1			
1. 2.	Start traffic B (and C in V.		and and that an IIIA is sent in		
	response inside T12.	nk 1–2 and check that an LUN is recei			
3.		performed correctly and that link 1–2	stays unavailable.		
4.	Stop traffic and check that				
5.		oition (point 6, test 7.1.2), repeat test in the when it is requested by an operator is			

тест	NUMBER: 7.7		DACE	: 1 of 1
		E: 20	PAGE	. 1 01 1
		Fig. 28		
	: Management inhibiting			
	SUBTITLE: Expiration of T12 PURPOSE: To check uninhibition procedure on expiration of time T12			
		<u> </u>		
	ONFIGURATION: A	f test 7.1.1 (1–1 inhibited by A) TYPE OF TEST: VAT		TYPE OF SP: ALL
		TIPE OF TEST. VAI		TIPE OF SP. ALL
SP A	AGE SEQUENCE:		SP B	
SP	A		SP B	
Linl	l _z		Link	
:Start t			Lilik	
1-2				
1 2		,	1–2	TRAFFIC
1–2	2 :Request uninhibition		1 2	TRAITIC
1-2	•			
1 2		7		
	T12			
	112			
1-2	2 LUN, SLC 1–2			
	2011, 020 1 2	,	1–2	LUA, SLC 1–1
CHAN	GEBACK (Note)	CHANGEBACK (Note)		2011, 520 1 1
1–1	` ′	, ,		
	ridirite (nom r 2)	,	1-1	TRAFFIC (from 1–2)
1–2	2 TRAFFIC			Transfer (nom 1-2)
1 2		,	1–2	TRAFFIC
:Wait			1 2	TRAITIC
:Stop ti	raffic			
.Stop ti	Turrio			
NOTE	 A changeback procedure i 	is performed but not described in this u	uninhib	ition test
	DESCRIPTION	so periorinou out not ucontrolu in time		
1.	Start traffic B and C on link	k 1–2		
2.		k 1–1 and check that an LUN is received.	ed.	
3.		of T12, a new LUN is received and ac		edged by an LUA.
4.	Check that uninhibition is p			
5.	-	as shared on links 1–1 and 1–2 accordi	ing with	the load sharing rules
	and that it was not disturbe		-	

Repeat the test but without sending of an LUA. Check that after the second expiration of T12, the procedure is stopped and an indication is given to the management.

Check that the duration of T12 is inside the specified range.

6.

7.

TEST NUMBER	R: 7.8	PAGE: 1 of 1				
REFERENCE: c	clause 10/Q.704 Fig. 28					
TITLE: Manager	ment inhibiting					
SUBTITLE: Not	t possible uninhibition					
PURPOSE: To c	check the actions of the system when the uninhibition is no	ot possible				
PRE-TEST CON	NDITIONS: Link 1-2 unavailable and inhibited and link 1	–1 available				
CONFIGUE	RATION: A TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL				
MESSAGE SEQ	QUENCE:					
SP A	SP A SP B					
Link		Link				
1–1 :De	eactivate					
1 W D						
1–X :Re	equest uninhibition					
TEGT DEG CD ID						
TEST DESCRIP						
	ate link 1–1.					
2. Check th	hat uninhibition is not performed.					

TEST NUM	BER: 7.9		PAGE: 1	of 1
REFERENC	CE: clause 10/Q.704	Fig. 28		
TITLE: Mar	nagement inhibiting			
SUBTITLE:	Automatic uninhibition	on of a link		
PURPOSE:	To check that the syste	em performs uninhibition procedure w	hen a poin	t becomes inaccessible
PRE-TEST	CONDITIONS: End o	f test 7.1.1		
CONFI	GURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL
MESSAGE	SEQUENCE:			
SP A			SP B	
Link			Link	
:Start traffic				
1–2	TRAFFIC			
		\	1–2	TRAFFIC
1–2	:Deactivate (failure)			
1–1	LUN, SLC 1–1			
			1–1	LUA, SLC 1-1
1–1	TRAFFIC			
			1–1	TRAFFIC
:Wait				
:Stop traffic				

NOTE – When link 1–1 becomes available, point restart procedure is applied in A and B but it is not described in this inhibition test to simplify the test description.

TEST DESCRIPTION

- 1. Start traffic to B and C on link 1–2.
- 2. Deactivate link 1–2 and check that an LUN is received on link 1–1 and response with an LUA within T12.
- 3. Check that uninhibition is performed and that the traffic is restarted on link 1–1 (see Note).
- 4. Stop traffic, some messages have been lost.
- 5. Repeat the test but without sending of an LUA. Check that after the second expiration of T12 the procedure is stopped, an indication is given to the OMAP and the link 1–1 does not carry traffic.

		MIP Level 3		
TEST NUM	BER: 7.10.1		PAGE: 1	l of 1
REFERENC	E: clause 10/Q.704 F	ig. 28		
TITLE: Management inhibiting				
SUBTITLE:	Forced uninhibition of a	a link – Sending of an LFU		
PURPOSE:	To check forced uninhib	ition procedure when a point become	omes inac	ecessible
PRE-TEST	CONDITIONS: Link 1–	1 available, link 1–2 inhibited by	В	
CONFI	GURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL
MESSAGE SEQUENCE:				
SP A			SP E	3
Link			Link	
:Start traffic	TD A PELC			
1–1	TRAFFIC		1 1	TDAFFIC
1 1	Descriptor (failum)		1–1	TRAFFIC
1–1 1–2	:Deactivate (failure)			
1-2	LFU, SLC 1–2	· · · · · · · · · · · · · · · · · · ·	1 2	LUNI CLC 1 2
1–2	IIIA SIC 1 2		1–2	LUN, SLC 1–2
	LUA, SLC 1–2 TRAFFIC			
1–2	IKAFFIC		1–2	TRAFFIC
:Wait			1-2	IKAFFIC
:Stop traffic				
.Stop traffic				
		ailable, point restart procedure is nplify the test description.	applied ir	n A and B but it is not
TEST DESC	CRIPTION			

- 1. Start traffic to B and C on link 1–1.
- 2. Deactivate link 1–1 and check the reception of an LFU on link 1–2. Response by an LUN. Check that T13 is stopped and that an LUA is received.
- 3. Check that uninhibition is performed and that the traffic is restarted on link 1–2 (see Note).
- 4. Stop traffic, some messages have been lost.

TEST 1	NUMBER: 7.10.2		PAGE	: 1 of 1
REFER	RENCE: clause 10/Q.704	Fig. 28		
TITLE: Management inhibiting				
SUBTITLE: Forced uninhibition of a link – Reception of an LFU				
PURPO	OSE: To check uninhibition	procedure on reception of an LFU		
PRE-T	EST CONDITIONS: Link	1–1 available, link 1–2 inhibited by A		
CO	ONFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start ti				
1–1	TRAFFIC		1 1	TD A FFIG
			1–1	TRAFFIC
1 1	LINICICA 2		1–2	LFU, SLC 1–2
1–1	LUN, SLC 1–2		1 1	LILA CLO 1 2
	CHANCED A CW (M	<u> </u>	1–1	LUA, SLC 1–2
1 1	CHANGEBACK (No TRAFFIC	ote)		
1–1	IKAFFIC	· · · · · · · · · · · · · · · · · · ·	1 1	TD A EEIC
1–1	TD A FEIC		1–1	TRAFFIC
1-1	TRAFFIC		1–2	TRAFFIC
:Wait			1-2	IKAFFIC
:Stop ti	raffic			
.Տաբ ա	anic			
NOTE	 A changeback is perform 	ed but not described in this uninhibition	n test.	
TEST 1	DESCRIPTION			
1.	Start traffic to B and C on			
2.	Send an LFU to A on link by an LUA inside T12.	1–2 and check that an LUN is received	d within	T13 and acknowledged
3.	Check that the uninhibition	n is performed.		
4	Stop traffic and check that	it was carried on 1–1 and 1–2		

TEST	NUMBER: 7.11		PAGE:	1 of 1	
REFERENCE: clause 10/Q.704 Fig. 28					
TITLE: Management inhibiting					
SUBT	SUBTITLE: Expiration of T13				
PURP	OSE: To check uninhibition	procedure when T13 expires			
PRE-T	EST CONDITIONS: Link	1-1 available and link 1-2 inhibited by	В		
C	ONFIGURATION: A	TYPE OF TEST: VAT	7	ΓΥΡΕ OF SP: ALL	
	AGE SEQUENCE:				
SP.	A		SP B		
	_				
Lin			Link		
:Start t					
1–1	TRAFFIC			TD A FING	
			1–1	TRAFFIC	
1-1	,				
1–2	2 LFU, SLC 1–2				
	Т12				
	T13				
1-2	 				
1-2	LFU, SLC 1-2		1–2	LUN, SLC 1–2	
1-2	2 LUA, SLC 1–2		1-2	LUN, SLC 1-2	
1-2	,				
1-2	Z TRAFFIC		1–2	TRAFFIC	
:Wait			1-2	IKAFFIC	
:Stop t	roffic				
.Stop t	iailic				
TEST	DESCRIPTION				
1.	Start traffic to B and C on	link 1–1.			
2.	Deactivate link 1–1 and cl	neck the reception of an LFU. After T1.	3 expires	s, check the reception of	
		LUN. Check the reception of an LUA		•	
3.	Check that uninhibition is	performed correctly.			
4.	Stop traffic and check that	it has been restarted on link 1–2. Some	e messag	ges have been lost.	
5.		t sending an LUN. Check that after the an indication is given to the OMAP and			

Check that the duration of T13 is inside the specified range.

6.

TEST 1	NUMBER: 7.12		PAGE:	1 of 1
REFER	RENCE: clause 10/Q.704	Fig. 28		
TITLE	TITLE: Management inhibiting			
SUBTITLE: Additional uninhibition messages (LUA, LUN, LFU)				
PURPO	OSE: To check the actions of	of the system on reception of an addition	nal LUA,	, LUN or LFU
PRE-T	EST CONDITIONS: Links	et with two available links		
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
	AGE SEQUENCE:			
SP A	A		SP B	
.				
Linl			Link	
:Start ti				
1–1,	2 IRAFFIC		1–1, 2	TRAFFIC
			1–1, 2	LUA, SLC 1–1
1–1,	2 TRAFFIC	<u> </u>	1-2	LUA, SLC 1-1
1-1,	2 TRAFFIC		1–1, 2	TRAFFIC
		\	1–1, 2	LUN, SLC 1–1
1–X	LUA, SLC 1–1	,	1-2	LON, SLC 1-1
1–1,	,			
1-1,	2 TRAITIC		1–1, 2	TRAFFIC
			1-2	LFU, SLC 1–1
1–X	LUN, SLC 1–1		1-2	Li o, sle i-i
:Wait	LON, SEC 1 1			
:Stop ti	affic			
.Stop ti	unic			
TEST I	DESCRIPTION			
1.	Start traffic to B and C on	link 1–1 and 1–2.		
2.	Send an LUA (SLC 1–1) of			
3.	_	as been ignored without impact on the	traffic.	
4.	Send an LUN (SLC 1–1) of			
5.		eived in response without impact on the	traffic.	
6.	Send an LFU (SLC 1–1) o		. Ama CC	
7. 8.		ived in response without impact on the	traffic.	
٥.	Stop traffic.			

TEST 1	NUMBER: 7.13		PAGE:	1 of 1
REFER	RENCE: clause 10/Q.704 F	ig. 28		
TITLE	: Management inhibiting			
SUBTI	TLE: Uninhibition at one side	e after test 7.5		
PURPO	OSE: To check uninhibition pr	rocedure when the inhibition has bee	en asked b	by the two ends of a link
PRE-TEST CONDITIONS: End of test 7.5				
CC	ONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start tı				
1–2	TRAFFIC			
			1–2	TRAFFIC
1-1	1			
1–2	LUN, SLC 1–1			
1 0			1–2	LUA, SLC 1–1
1–2	TRAFFIC		1 0	TID A FIELD
*** *.			1–2	TRAFFIC
:Wait	cr			
:Stop ti	raffic			
TEST I	DESCRIPTION			
1.	Start traffic to B and C on lin	nk 1–2.		
2.	Request uninhibition of link within T12.	1-1. Check that an LUN is received	and respo	onse with an LUA
3.	Check that the link stays inh	ibited (by B).		
4.	Stop traffic and check that it	was not disturbed.		
5.	Repeat test in reverse directi	on.		

TEST 1	NUMBER: 7.14		PAGE:	: 1 of 1
REFER	RENCE: clause 10/Q.704	Fig. 28		
TITLE	TITLE: Management inhibiting			
SUBTI	TLE: Automatic uninhibition	on after test 7.5		
PURPOSE: To check automatic uninhibition of a link when the inhibition has been initiated by the both ends				
PRE-T	EST CONDITIONS: End o	f test 7.5		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	,	TYPE OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start ti				
1–2	TRAFFIC			
			1–2	TRAFFIC
1–2	,			
1–1	,			
1–1	LFU, SLC 1–1			
			1–1	LUN, SLC 1–1
			1–1	LFU, SLC 1–1
			1–1	LUA, SLC 1–1
			1–1	LUN, SLC 1–1
1–1	,			
1–1	,			
1–1	LUA, SLC 1–1			
		\	1–1	LUA, SLC 1–1
1–1	TRAFFIC			
		\	1–1	TRAFFIC
:Wait				
:Stop ti	raffic			
TECT	DECEDIBITION			
	DESCRIPTION Start traffic to B and C on	link 1 2		
1. 2.		neck that uninhibition and forced uninhi	ihition a	are requested by the both
۷.	ends which send LFU.	iook that diffillification and forced diffillifi	10111011 0	are requested by the both
3.	Check that one LUN is ser	nt. Each LUA from B is acknowledgem	ent by a	an LUA from A .
4.	Check that the traffic is re-	started on link 1–1 and stop traffic.		

TEST N	NUM	BER: 7.15		PAGE:	1 of 1
REFER	RENC	E: clause 10/Q.704	Fig. 28		
TITLE:	Man	agement inhibiting			
SUBTI	SUBTITLE: Automatic uninhibition with two links inhibited				
PURPO			of the system when two links are inhibit	ted and w	then the third (and last)
PRE-TI	EST (CONDITIONS: Links	1-1 and 1-2 inhibited (by A) and link	1–3 avail	lable
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESSAGE SEQUENCE:					
SP A	4			SP B	
Link	ζ			Link	
:Start tr	affic				
1–3		TRAFFIC			
				1–3	TRAFFIC
1–3		:Deactivate (failure)			
1–X		LUN, SLC 1–1			
and/c	or	LUN, SLC 1–2			
		(implementation dep	endent: at least one link must be uninh		
				1–X	LUA, SLC 1–1, and/or
				1-X	LUA, SLC 1–2
1–1		TRAFFIC			
and/c	or			1-1	TRAFFIC
1–2		TRAFFIC		and/or	
				1–2	TRAFFIC
:Wait					
:Stop tr	affic				
TEST I	DESC	CRIPTION			
1.		ctivate link 1–3.			
2.			N is received and acknowledged with	an LUA.	
3.			started on linkset 1. Some messages ha		ost.
4.		traffic.	2		

TEST 1	NUMBER: 7.16		PAGE: 1 of 1	
REFER	RENCE: clause 10/Q.704 Fig. 28			
TITLE	: Management inhibiting			
SUBTITLE: Reception of traffic on an inhibited link				
PURPO	OSE: To check the actions of the system on rece	eption of traffic on	an inhibited lir	ık
PRE-T	EST CONDITIONS: Link 1-1 inhibited by A, l	ink 1–2 available		
CO	ONFIGURATION: A TYPE OF TI	EST: VAT	TYPE	OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start ti				
1–2	2 TRAFFIC —————	\longrightarrow		
	(AFFIC
			1–1 TR	AFFIC
:Wait				
:Stop ti	raffic			
TEST I	DESCRIPTION			
1.	Start traffic on link 1–1.			
2.	Send traffic from B to A on the inhibited link I normally treated.	1–2. Check that the	messages rece	eived in A are
3.	Stop traffic.			

TEST NUM	MBER: 7.17.1		PAGE: 1 of 3	
REFERENCE: clause 10/Q.704 Fig. 28				
TITLE: Ma	anagement inhibiting			
SUBTITLI	E: Management inhibiti	ng test – Normal procedure		
PURPOSE	: To check that the syst	em performs correctly the managemen	nt inhibiting test	
PRE-TEST	CONDITIONS: Link	1-1 inhibited by A, other links are ava	ailable	
CONF	FIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL	
MESSAGI	E SEQUENCE:			
SP A			SP B	
Link			Link	
1-X	LLT, SLC 1–1			
	,,,,T22		1–X LRT, SLC 1–1	
			, , , , , T23	
	_		<u> </u>	
1-X	LLT, SLC 1–1			
	,,,,		1–X LRT, SLC 1–1	
			,,,,	

TEST DESCRIPTION

- 1. Check that an LLT is periodically sent by A and check (in VAT) that the duration of timer T22 is inside the specified range.
- 2. Check that on the reception of an LRT, no action is taken in A.
- 3. As compatibility test, check that an LRT is periodically sent from B to A.

TEST NUM	IBER: 7.17.1 (continue	d)	PAGE: 2	of 3
REFERENC	CE: clause 10/Q.704	Fig. 28		
TITLE: Mar	nagement inhibiting			
SUBTITLE: Inhibiting test procedure – Normal procedure				
PURPOSE:	See page 1			
PRE-TEST	CONDITIONS: Link 1	−1 inhibited by B, other links are available.	lable	
CONFI	GURATION: A	TYPE OF TEST: VAT, CPT	TY	PE OF SP: ALL
MESSAGE	SEQUENCE:			
SP A			SP B	
Link			Link	
1-X	LRT, SLC 1–1			
	, , , , , T23		1-X	LLT, SLC 1–1
				, , , , , T22
	_			
1-X	LRT, SLC 1-1			
	,,,,		1-X	LLT, SLC 1–1
				,,,,,

TEST DESCRIPTION

- 1. Check that an LRT is periodically sent by A and, in VAT, check that the duration of the timer T23 is inside the specified range.
- 2. Check that, on the reception of an LLT, no action is taken in A.
- 3. As compatibility test, check that an LLT is periodically sent from B to A.

TEST NUMBER: 7.17.1 (concluded) PAGE: 3 of 3 REFERENCE: clause 10/Q.704 Fig. 28 TITLE: Management inhibiting SUBTITLE: Inhibit test procedure – Normal procedure PURPOSE: See page 1 PRE-TEST CONDITIONS: Link 1–1 inhibited by A and B. The other links are available TYPE OF TEST: VAT, CPT TYPE OF SP: ALL CONFIGURATION: A MESSAGE SEQUENCE: SP A SP B Link Link LLT, SLC 1-1 1-X 1–X LRT, SLC 1–1 , , , , , , T23 1–X LRT 1-XLLT, SLC 1-1 — SLC 1−1,,T22 ← 1-X ,,,,, LRT, T23 LLT, SLC 1–1 ,,,,, 1-X 1-X ,,,,,,T23 ,,T22,SLC 1–1 LRT, 1–X ,,,,, ,SLC 1–1,, T22 ← __ LLT, SLC 1-1 1-X ,,,,,,T22 T23

TEST DESCRIPTION

1. Check that the LLT and LRT messages are periodically sent from A to B and from B to A.

TEST 1	NUMBER: 7.17.2		PAGE:	1 of 1
REFERENCE: clause 10/Q.704 Fig. 28				
TITLE: Management inhibiting				
SUBTI	SUBTITLE: Inhibit test procedure – Reception of an LLT or LRT on an uninhibited link			
PURPO	OSE: To check the actions of	of the system on reception of an LLT	or LRT 01	n an uninhibited link
PRE-T	EST CONDITIONS: Link	1–1 available		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	7	ΓΥΡΕ OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl	k		Link	
			1–1	LLT, SLC 1–1
1–1				
	,,,,,T13			
	_			
			1–1	LUN, SLC 1–1
1–1	LUA, SLC 1–1			
			1-1	LRT, SLC 1–1
1–1				
	,,,,,T12			
	_			
			1-1	LUA, SLC 1–1
	DESCRIPTION			
1.	Send an LLT from B to A an LUA is received.	and check that an LFU is received. The	hen, send	an LUN and check that
2.	2. Send an LRT from B to A and check that an LUN is received. Answer with an LUA.			

TEST NUMBER: 7.17.3		PAGE: 1 of 1
REFERENCE: clause 10/Q.704	Fig. 28	
TITLE: Management inhibiting		
SUBTITLE: Inhibit test procedure	e – Reception of an LLT on a link local	lly inhibited
PURPOSE: To check the actions inhibited	of the system on reception of an LLT o	on a link locally (not remotely)
PRE-TEST CONDITIONS: Link	1-1 inhibited in A, other links are avai	lable
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		
SP A		SP B
Link		Link 1–X LLT, SLC 1–1
1–1 LFU, SLC 1–1 , , , , , T13		
_		1–X LUN, SLC 1–1
1–X LUA, SLC 1–1		I-A LON, SEC I-I
TEST DESCRIPTION		
1. Send an LLT from B to A	and check that an LFU is received as	described above.

TEST NUMBER: 7.17.4		PAGE: 1 of 1	
REFERENCE: clause 10/Q.704 Fig. 28			
TITLE: Management inhibiting			
SUBTITLE: Inhibit test procedure – Reception of an LRT on a link remotely inhibited			
PURPOSE: To check the actions of the system on reception of an LRT on a link remotely inhibited			
PRE-TEST CONDITIONS: Link	1-1 inhibited by B, other links are ava	nilable	
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAGE SEQUENCE:			
SP A		SP B	
Link		Link	
		1–X LRT, SLC 1–1	
1–X LUN, SLC 1–1			
,,,,,T12			
_		1 V 1114 GLG 1 1	
	(1–X LUA, SLC 1–1	
TEST DESCRIPTION			
1. Send an LRT from B to A	and check that an LUN is received as	described above.	

TEST NUMBER: 8.1	TEST NUMBER: 8.1					
REFERENCE: clause 11 and 12.6	/Q.704 Fig. 46A					
TITLE: Signalling traffic flow cor	ntrol					
SUBTITLE: Reception of a TFC						
PURPOSE: To check the actions of	of the system on reception of a TFC					
PRE-TEST CONDITIONS: One of	or more link available					
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESSAGE SEQUENCE:						
SP A		SP B				
Link		Link				
:Start traffic						
1–1 TRAFFIC						
		1–1 TRAFFIC				
		1-1 TFC, DPC = C				
:Wait						
:Stop traffic						
NOTE – This test requires further study.						
TEST DESCRIPTION						
1. Start traffic to B and C.						
2. Send a TFC concerning C	and check that this message is received	ed correctly.				

				WIII L	CVCIS		
TEST 1	NUMBER: 8.2					PAGE: 1 o	of 1
REFER	RENCE: clause	11 and 12.6/Q	.704 F	Fig. 46A			
TITLE	: Signalling tra	ffic flow contr	ol				
SUBTI	ITLE: Sending	of TFCs					
PURPO	OSE: To check	the detection of	of a level 3	3 conges	tion		
PRE-T	EST CONDITI	ONS: All link	s availabl	e			
CO	ONFIGURATIO	ON: C	TYI	PE OF T	EST: VAT	TY	PE OF SP: STP
MESSA	AGE SEQUEN	CE:					
SP A	A	SP B				SP	C
Link		Link				Link	
:Start ti							
1–1	TRAFFIC	` ′			— (n E) ——		
							TRAFFIC (<n e)<="" td=""></n>
1–2	TRAFFIC	· · ·			— (n E) ——		
				1–2		2–1	TRAFFIC (<n e)<="" td=""></n>
:Wait							
				1–X	TFC, DPC = C		
				٠			
					TFC each 8 mess ne TFC each 256		
				1-X	TFC, $DPC = C$		
1–1	TRAFFIC	(>n/2 E)—				,	
		`			\	2–1	TRAFFIC
1–2	TRAFFIC	(>n/2 E)—	\longrightarrow			\rightarrow	
				1–2	\	2–1	TRAFFIC (<n e)<="" td=""></n>
:Wait							
•	:Stop traffic						
NOTE – n is the maximum load capacity of linkset 2. The traffic model used in this test is described in Table 2/Q.706.							
TEST	DESCRIPTION	1					
1.	1. Start traffic to C with a load exceeding n/2 erlang on links 1–1 and 1–2 (n is the maximum load that the link 2 may carry without congestion).						
2.					rocedure is starte or each 256 octets		k that a TFC message B during the
3.	Reduce the loa	ad below n/2 e	rlang on l	inks 1–1	and 1–2.		

Check that the congestion disappears and that no TFC is received.

Check that the traffic from C to B has not been disturbed.

4.

5.

6.

Stop traffic.

TEST N	NUMBER: 8.3		PAGE: 1	of 1				
REFER	REFERENCE: 11.2.7/Q.704							
TITLE	TITLE: Signalling traffic flow control							
SUBTI	SUBTITLE: Reception of a UPU							
PURPO	OSE: To check the actions of	of the system on reception of a UPU						
PRE-T	EST CONDITIONS: One 1	ink available	_					
CC	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE O	F SP: see Note				
MESSA	AGE SEQUENCE:							
SP A	A		SP B					
Link			Link					
:Start tr								
1–1	TRAFFIC $(DPC = B, SI = X)$							
1–1	TRAFFIC $(DPC = C, SI = X)$							
	, , ,		1–1	TRAFFIC				
			1–1	(OPC = C, SI = X) UPU				
			1-1	(OPC = B, SI = X)				
1-1								
	(DPC = C, SI = X)							
		(1–1	TRAFFIC $(OPC = C, SI = X)$				
:Wait				,				
:Stop tr	affic							
NOTE	Th. :		D	Court on the death of The CDs				
	NOTE – The impact of the reception of a UPU on the traffic from A to B requires further study. The SPs having user part(s) are concerned.							
TEST I	DESCRIPTION							
1.	Start traffic to B and C wi	th $SI = X$.						
2.	Send a UPU from B to C with SI = X with the cause "unknown".							

Check that the UPU message is received correctly without impact on the traffic from A to C.

Repeat the test with a UPU with the cause "unequipped", and with the cause "unavailable".

Wait and stop traffic.

3.

4.

5.

TEST N	UMBER: 8.4			PAGE: 1 of 1				
REFERENCE: 11.2.7/Q.704								
TITLE:	TITLE: Signalling traffic flow control							
SUBTIT	LE: Sending of a UPU							
		n of an unavailability of a user part						
PRE-TE	ST CONDITIONS: One 1	ink available	1					
CO	NFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: See Note				
	GE SEQUENCE:							
SP A			SP					
Link		I	Link					
:Start tra								
1–1	TRAFFIC							
	(to B and C, $SI = X$)	.	1–1	TRAFFIC (from B and C, $SI = X$)				
	:Deactivate user part X (Note)						
		(1–1	MESSAGE (from B to A, $SI = X$)				
1–1	UPU $(DPC = B, SI = X)$							
			1–1	MESSAGE (from C to A, $SI = X$)				
1–1	UPU (DPC = C, SI = X)							
		.	1–1	MESSAGE (from B to A, $SI = X$)				
1–1	UPU (DPC = B, SI = X) :Reactivate user part X							
	1	.	1–1	TRAFFIC (from B and C to A, $SI = X$)				
1–1	TRAFFIC (to B and C, $SI = X$)							
:Wait :Stop tra								
		lity of a user part is specific to the ir mplementation dependent. The SPs						
	ESCRIPTION	implementation dependent. The SI's	, 11a v	ing user part(s) are concerned.				
TESTE	LUCIUI IIOI							

- 1. Start traffic to B and C with SI = X.
- 2. Deactivate the user part X.
- 3. Send a message from B to the user part X in A and check that this message is discarded and that a UPU is sent back with the cause "unavailable".
- 4. Send a message from C to the user part X in A and check that this message is discarded and that a UPU is sent back with the cause "unavailable".
- 5. Repeat point 3 and reactivate the user part.
- 6. Check that the messages sent from B and C are received correctly and that no UPU is sent back. Wait and stop traffic.
- 7. Repeat the test for an unequipped user part, and verify that a UPU is sent back with the cause "unequipped".

тест	NILIMDED: 0.1.1		PAGE: 1 of 1				
TEST NUMBER: 9.1.1 PAGE: 1 of 1 REFERENCE: clause 13/Q.704 Fig. 29, Fig. 44							
TITLE: Signalling route management							
	SUBTITLE: Sending of a TFP on an alternative route – Failure of normal linkset						
	PURPOSE: To check the sending of a TFP on the alternative route when the normal linkset becomes unavailable						
	PRE-TEST CONDITIONS: All linksets available						
	ONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP				
	AGE SEQUENCE:	1112 01 1201. 1111, 011	1112 01 011011				
SP		РВ	SP C SP 6	•			
Link	Lin	<u> </u>	Link				
:Start t							
1–1	TRAFFIC → 5–1		\longrightarrow SP 1	D			
	(from A and F) 6–1		\longrightarrow SP 1	Е			
2-1	TRAFFIC						
	(from A and F)		\rightarrow 7-1 \longrightarrow SP 1	Е			
1–1	:Deactivate	(MML command or failure)					
2-1	TFP, PC = B		\rightarrow				
2-1	TFP, PC = D		· →				
2–1	TRAFFIC		\rightarrow 7-1 \longrightarrow SP 1	Е			
	(from 1–1)		8−1 ————————————————————————————————————				
:Wait	(210111 1)		, , ,				
:Stop t	raffic						
.stop t							
		is performed after deactivation of lin	k 1–1 but it is not described in the	nis			
transfe	r prohibited test.						
TEST	DESCRIPTION						
1.	Start traffic to D and E or	linkset 1 and 2.					
2.		heck that TFPs concerning B and D a					
	between linksets 1 and 2	Check that no TFP concerning E is sen in A to reach E).	it from A to C (load snaring				
3.		started for each TFP sent.					
4.	Check that the traffic to I	and E is diverted to C.					
5.	Stop traffic and check that	t it was not disturbed.					

TEST 1	NUMBER: 9.1.2					PAGE: 1 of 1	
REFERENCE: clause 13/Q.704 Fig. 29, Fig. 44							
TITLE	: Signalling route ma	anagement					
SUBTI	TLE: Sending of a T	TFP on an alt	ernative	route – On recept	ion of a	TFP	
	OSE: To check the selable on reception of		FP on the	e alternative route	e when	the normal route	becomes
PRE-T	EST CONDITIONS	: Linkset 4 u	navailabl	le			
CO	ONFIGURATION: I)]	ГҮРЕ ОБ	TEST: VAT, CF	Т	TYPE OF	SP: STP
MESS	AGE SEQUENCE:				•		
SP.	A		SP I	В	SP	C	SP E ●
Link			Link		Link		Link
:Start t	raffic						
1–1	TRAFFIC	$\!$	5-1				SP D
	(from A and F)		6–1				SP E
2–1	TRAFFIC (from A and F)				7–1		SP E
			5-1	:Deactivate			
(Note)			1-1	TFP, $PC = D$			
2-1	TFP, PC=D						
1–1	TRAFFIC (from A and F)	$\xrightarrow{\hspace*{1cm}}$	6–1				SP E
2-1	TRAFFIC				8-1	$\xrightarrow{\hspace*{1cm}}$	SP D
	(from A and F, and	d from 1–1 to	o D)		7-1		SP E
:Wait							
:Stop to	raffic						
NOTE – A forced rerouting is performed after the reception of TFP for D in A but it is not described in this transfer prohibited test.							
TEST	DESCRIPTION						
1.	Start traffic to D an	d E.					
2.	Deactivate link 5–1	and check t	hat a TFF	concerning D is	sent to	A.	
3.	Check that a TFP concerning D is received from A and that traffic to D is diverted via C.						

Stop traffic and check that traffic to E has not been disturbed. Some messages to D may have been

Check that a time out T8 is started.

4.

5.

lost.

TEST NUMBER: 9.2.1		PAGE: 1 of 1				
REFERENCE: clause 13/Q.704	Fig. 29, Fig. 44					
TITLE: Signalling route manage	ment					
SUBTITLE: Broadcast of TFPs	SUBTITLE: Broadcast of TFPs – On one linkset failure					
PURPOSE: To check the broadc	ast of TFPs when one point is inacce	ssible				
PRE-TEST CONDITIONS: All	linksets available					
CONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP				
MESSAGE SEQUENCE:						
SP A	SP B	SP C SP F				
Link	Link	Link Link				
:Start traffic						
3–1 TRAFFIC (from A, D and E)						
3–1 :Deactivate (MML command or failure)					
1-1 TFP, PC = F						
2-1 TFP, PC = F						
:Wait						
:Stop traffic						
	es is not presented to simplify the tes	description.				
TEST DESCRIPTION						
1. Start traffic to F.	1 1 1					
	check that TFPs concerning F are bro	padcasted.				
3. Check that a timer T8 is	started.					
4. Stop traffic.						

TEST	NUMBER: 9.2.2			PAGE: 1 of 2			
REFE	RENCE: clause 13/Q.704	Fig. 29, Fig. 44	4				
TITLE	: Signalling route managem	ent					
SUBTI	TLE: Broadcast of TFPs –	On multiple fail	ures				
PURPO	OSE: To check the broadcas	st of TFPs when	several points are inac	ccessible (various reaso	ns)		
PRE-T	EST CONDITIONS: Links	et 1 unavailable					
CO	CONFIGURATION: D TYPE OF TEST: VAT, CPT TYPE OF SP: STP						
MESSAGE SEQUENCE:							
SP.	A	SP B	SP C	S	P •		
Link		Link	Link	Lin	k		
:Start t							
2–1	TRAFFIC ——		, 1	\longrightarrow	SP E		
	(from A and F)		8–1		SP D		
2–1	:Deactivate (MML comm	· ·			GD F		
3–1	111,10 B			,	SP F		
3–1	111,100			,			
3–1	111,10 B			,			
3–1	TFP, PC = E			· · · · · · · · · · · · · · · · · · ·			
:Wait							
:Stop to	rattic						
TEST 1	DESCRIPTION						
1.	Start traffic to D and E.						
2.	Deactivate linkset 2 and cl	heck that TFPs of	concerning B, C, D and	d E are broadcasted (to	F).		
3	Check that for each TFP s		_		,		

Repeat test but with linkset 2 unavailable as pre-test condition and then deactivate linkset 1.

4.

TEST	NUMBER: 9.2.2 <i>(cor</i>	ncluded)			PAGE: 2 of 2	2	
REFEI	RENCE: clause 13/Q.	.704 Fig. 29, Fig. 4	44				
TITLE	TITLE: Signalling route management						
SUBT	SUBTITLE: Broadcast of TFPs – On multiple failures						
PURP	OSE: See page 1						
PRE-T	EST CONDITIONS:	Linksets 1 and 4 una	available				
CONFIGURATION: D TYPE OF TEST: VAT, CPT TYPE OF SP: STP							
MESS	AGE SEQUENCE:						
SP	A		SP	C	SP D	SP •	
Link			Link		Link	Link	
:Start t	raffic						
2–1	TRAFFIC		8–1	$\xrightarrow{\hspace*{1cm}}$			
	(from A and F)		7–1		 ;	SP E	
			8-1	:Deactivate			
			2-1	TFP, $PC = D$			
3-1	TFP, PC = D					SP F	
2–1	TRAFFIC (from A and F)		7–1		·····;	SP E	
:Wait	,						
:Stop t	raffic						
-							
TEST	DESCRIPTION						
1.	Start traffic to D and	d E.					
2.	Deactivate linkset 8 to F).	and check that a TF	P (PC = D)) is sent. Chec	k that TFPs are	e broadcasted (here	
3	Check that a time out T8 started.						

- 4. Stop traffic and check that traffic to E has not been disturbed.
- Repeat the test with linksets 2 and 4 unavailable as pre-test conditions and then deactivate 5. linkset 5. Repeat the test with linksets 4 and 8 unavailable as pre-test conditions and then deactivate linkset 1.
- Repeat the test with linksets 4 and 5 unavailable as pre-test conditions and then deactivate 6. linkset 2.

TEST NUMBER: 9.3 PAGE: 1 of 2							
REFERENCE: clause 13/Q.704 Fig. 29, Fig. 44							
managem	nent						
of a messa	ge for an inaccessible destination						
at a TFP is	s sent in response to a message receive	d for an in	accessible destination				
NS: Links	ets 1, 4 and 8 unavailable						
I: D	TYPE OF TEST: VAT	T	YPE OF SP: STP				
Ξ:							
		SP F					
		Link					
			:Sent a message to D				
		3–1	MESSAGE TO D				
D	─						
		3–1	MESSAGE TO D				
	managem of a messa at a TFP is	management of a message for an inaccessible destination at a TFP is sent in response to a message receive NS: Linksets 1, 4 and 8 unavailable I: D	management of a message for an inaccessible destination at a TFP is sent in response to a message received for an in NS: Linksets 1, 4 and 8 unavailable I: D TYPE OF TEST: VAT TYPE SP F Link D Link				

TEST DESCRIPTION

- 1. Send from F a message with DPC = D to A.
- 2. Check that a TFP PC = D is sent in response. Check that a time out T8 is started.
- 3. During T8, send a new message with DPC = D to A and check that no TFP is sent.

TEST	NUMBER: 9.3 (concluded)		PAGE: 2 of 2	2			
REFERENCE: clause 13/Q.704 Fig. 29, Fig. 44							
TITLE: Signalling route management							
SUBTITLE: Reception of a message for an inaccessible destination							
PURPOSE: See page 1							
PRE-T	EST CONDITIONS: Links	ets 1 and 8 unavailable					
C	ONFIGURATION: D	TYPE OF TEST: VAT	TYPE	OF SP: STP			
MESS	AGE SEQUENCE:						
SP.	A	SP B	SP C	SP •			
Link		Link	Link	Link			
:Start t	raffic						
3–1	TRAFFIC –			SP F			
3–1	(from A, D and E) :Deactivate (MML comn	and or failura)					
2–1	TFP, $PC = F$	iand of famule)					
<i>2</i> 1							
	T8		4–1				
			1 1				
	\		2–1				
	,		2 1	MESSAGE TO F			
				WESS/IGE 101			
TEST	DESCRIPTION						
1.	Start traffic to F.						
2.		heck that TFPs are broadcasted.					
3.		age with $DPC = F$ from C to A and	check that no TFI	P is sent in			
	response.						

TEST	NUMBER: 9.4.1		PAGE: 1	of 1
REFE	RENCE: clause 13/Q.704	Fig. 29, Fig. 45	-	
TITLE	: Signalling route managen	nent		
SUBTI	TLE: Sending of a TFA on	an alternative route – Recovery of	of normal linkse	t
		of a TFA on an alternative route v	when the norma	l linkset becomes
availab		111 (1 0 + 0 1 1	<u> </u>	
		set 1 unavailable (end of test 9.1.1)		VDE OF GD. GED.
	ONFIGURATION: D	TYPE OF TEST: VAT, CPT	1 1	YPE OF SP: STP
SP .	AGE SEQUENCE:	SP B	SP C	SP ◆
SF	A	Sr D	Sr C	SP •
Link		Link	Link	Link
:Start t	raffic	2mm	Ziiik	Ziiii
2–1	TRAFFIC _	····	8–1	\longrightarrow SP D
	(from A and F)		7–1 ——	\longrightarrow SP E
1-1	: Activate (depending on	the activation mean previously us	sed)	
2-1	TFA, PC = B -	· · · · · · · · · · · · · · · · · · ·		
2-1	TFA, PC = D -	\longrightarrow		
1-1	TFP, $PC = D$ —			
1-1	TFP, $PC = E$			
1-1	TRAFFIC –	——— 5−1 ————		\longrightarrow SP D
	(from A and F and from 2–1)	6–1		\longrightarrow SP E
2–1	TRAFFIC – (from A and F)		7–1 ——	\longrightarrow SP E
:Wait				
:Stop to	raffic			
NOTE	A ahangahaak praaadura	is performed after activation of li	nle 1 1 hut it ia	not described in this
	r allowed test.	is performed after activation of in	iik 1–1 out it is	not described in this
TEST	DESCRIPTION			
1.	Start traffic to D and E.			
2.		eck that traffic to D and E is diverted A to C. Check that no TFA is sen		

Stop traffic and check that it was rerouted correctly without loss of messages, duplication and

3.

missequencing.

TEST 1	NUMBER: 9.4.2					PAGE: 1 of 1		
REFER	RENCE: clause 13/Q.704	Fig. 29,	Fig. 45					
TITLE	: Signalling route manage	ment						
SUBTI	TLE: Sending of a TFA of	n an alterr	native ro	oute – On receptio	n of a	TFA		
	OSE: To check that a TFA	is sent on	the alte	rnative route whe	n the	normal route be	comes avai	lable
	eption of a TFA							
	EST CONDITIONS: Lin			`	t 9.1.2	<u></u>		
	ONFIGURATION: D	TYI	PE OF T	EST: VAT, CPT		TYPE O	F SP: STP	
	AGE SEQUENCE:							
SP A	A		SP 1	В	SF	o C	SP •	
					.			
Link	or.		Link		Link		Link	
:Start ti								
1–1	TRAFFIC — (from A and F)	\longrightarrow	6–1			\longrightarrow		
2–1	TRAFFIC —				7–1	,		SP E
2-1	(from A and F)				8–1	→		SP D
	(Holli A allu I')		5–1	:Activate	0-1			SFD
	(Nata)							
1 1	(Note) ←	-	1–1	TFA, PC = D				
1–1	$TFP, PC = D \qquad -$	\longrightarrow						
2–1	TFA, PC = D —							~~~
1–1	TRAFFIC —	\longrightarrow	5–1			\longrightarrow		SP D
	(from A and F, from 2–1 to D)		6–1					SP E
2–1	TRAFFIC — (from A and F)				7–1			SP E
:Wait								
:Stop tı	raffic							
NOTE	– A controlled rerouting	s nerforme	ed after	the activation of l	inkset	5 and it is not d	lescribed ir	this
	r allowed test.	s periorine	ou arter	the activation of i	IIIKSCI	J and it is not d	escribed in	uiis
TEST I	DESCRIPTION							
1.	Start traffic to D and E.							
2.	Activate link 5–1 and ch	eck that a	TFA co	ncerning D is sen	t to A.			
3.	Check that the traffic to			_			A to C.	
4.	Stop traffic and check that traffic was not disturbed.							

	MTP Leve	13		
TEST NUMBER: 9.5.1			PAGE: 1 of 1	
REFERENCE: clause 13/Q.704	Fig. 29, Fig. 45			
TITLE: Signalling route manager	nent			
SUBTITLE: Broadcast of TFAs -	- On one linkset recovery	,		
PURPOSE: To check the broadca	ast of TFA when a destina	ation becomes	accessible	
PRE-TEST CONDITIONS: Link	sets 3 unavailable (end o	f test 9.2.1)		
CONFIGURATION: D	TYPE OF TEST: V	'AT, CPT	TYPE C	OF SP: STP
MESSAGE SEQUENCE:				
SP A	SP B	SI	PC	SP ●
Link	Link	Lin	ık	Link
3–1 :Activate (Note 1)				
1-1 TFA, PC = F —	$\longrightarrow (Note 2)$			
TFA, PC = F —		\longrightarrow (Note	e 2)	
:Start traffic				
3–1 TRAFFIC — (from A and F)				SP F
:Wait				
:Stop traffic				

NOTE 1 – After activation of the linkset 3, SPs A and F perform a point restart procedure which is not explicitly described in this test.

NOTE 2 – The propagation of TFAs is not presented to simplify the test description.

TEST DESCRIPTION

- 1. Activate linkset 3.
- 2. Check that TFAs concerning F are broadcasted.
- 3. Start traffic to F and check that it is routed correctly; stop traffic.

		WIII Ecvers		
TEST 1	NUMBER: 9.5.2		PAC	E: 1 of 2
REFER	RENCE: clause 13/Q.704	Fig. 29, Fig. 45		
TITLE	: Signalling route managen	nent		
SUBTI	TLE: Broadcast of TFAs -	- Various reasons		
	OSE: To check the broadca k situations	st of TFA when several destina	ations become	accessible in various
PRE-T	EST CONDITIONS: Links	sets 1 and 2 unavailable (end o	f test 9.2.2 pag	ge 1 of 2)
CO	ONFIGURATION: D	TYPE OF TEST: VAT, O	CPT	TYPE OF SP: STP
MESS	AGE SEQUENCE:			
SP A	A	SP B	SP C	SP ●
Link		Link	Link	Link
2–1	:Activate			
2–1	TFA, $PC = B$ —			\longrightarrow SP F
3–1	TFA, $PC = C$			\longrightarrow SP F
3–1	TFA, $PC = D$ —			\longrightarrow SP F
3–1	TFA, $PC = E$			\longrightarrow SP F
2-1	TFP, $PC = B$ —		\rightarrow	
2-1	TFP, $PC = D$ —		\rightarrow	
2-1	TFP, $PC = E$		\rightarrow	
:Start t	raffic			
2-1	TRAFFIC		→ 7–1 ·	→ SP E
	(from A, and F)		8–1	——— SP D
:Wait				
:Stop tı	raffic			
		nkset 2, SPs A and C perform	the point restar	t procedure which is not
	ed in this test.			
	DESCRIPTION			
1.	Activate linkset 2.			
2.		ing B, C, D and E are broadcas		
3.	Start traffic and check that	t it is routed correctly; stop tra	ttic.	

Repeat test but activate linkset 1 instead of linkset 2.

4.

TEST 1	NUMBER: 9.5.2 (conclu	uded)		PAGE: 2 of 2			
REFE	RENCE: clause 13/Q.70	4 Fig. 29, Fig. 45					
TITLE	: Signalling route manag	gement					
SUBTI	TLE: Broadcast of TFA	s – Various reasons					
PURPO	OSE: See page 1 of 2						
PRE-T	EST CONDITIONS: Li	nksets 1, 4 and 8 unavailable	(end of test 9	9.2.2 page 2 of 2)			
CO	ONFIGURATION: D	TYPE OF TEST: VA	T, CPT	TYPE OF SP: STP			
MESSA	AGE SEQUENCE:						
SP A	A	SP B	SP	C	SP •		
Link		Link	Link		Link		
2-1	TRAFFIC —		→ 7-1	$\xrightarrow{\hspace*{1cm}}$	SP E		
	(from A and F)		0 1	. A -4:4-			
			8–1	:Activate			
2 1	← TED_DC = D		2–1	TFA, PC = D			
2–1	TFP, PC = D —		\rightarrow		GD F		
3–1	TFA, PC = D			\longrightarrow	SP F		
2–1	TRAFFIC —		\rightarrow 7-1	$\xrightarrow{\hspace*{1cm}}$	SP E		
	(from A and F)		8–1	$\xrightarrow{\hspace*{1cm}}$	SP D		
:Wait							
:Stop ti	raffic						

TEST DESCRIPTION

- 1. Start traffic to E.
- 2. Activate linkset 8 and check that a TFA concerning D is sent from C to A. Check that A broadcasts TFAs concerning D.
- 3. Check that the traffic to D is restarted.
- 4. Repeat test with linksets 2, 4 and 5 unavailable as pre-test conditions and activate linkset 5. Repeat test with linksets 1, 4 and 8 unavailable as pre-test conditions and activate linkset 1. Repeat test with linksets 2, 4 and 5 as pre-test conditions and activate linkset 2.

TEST N	NUMBER: 9.6		PAGE:	1 of 1
REFER	ENCE: clause 13/Q.70	4 Fig. 29, Fig. 46		
TITLE:	Signalling route manag	gement		
SUBTI	TLE: Periodic sending	of Signalling-Route-Set-Test (SRST) m	essages	
PURPC	SE: To check the perio	dic test of an unavailable signalling rou	te is perfor	med correctly
PRE-TI	EST CONDITIONS: Li	nkset 2 unavailable		
CC	ONFIGURATION: A	TYPE OF TEST: VAT	7	ΓΥΡΕ OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP F	
Link			Link	
:Start tr				
1–1	TRAFFIC			
			1–1	TRAFFIC
1–1	RST, PC = C			
	T10			
1–1	 RST, PC = C			
1-1	K51, PC – C			
	T10		2–1	:Activate
	110		2 1	Netivate
			1–1	TFA, PC = C
1–1	TRAFFIC	· · · · · · · · · · · · · · · · · · ·		1111,110
		, , , , , , , , , , , , , , , , , , ,	1–1	TRAFFIC
:Wait		·		
:Stop tr	affic			
1				
TEST I	DESCRIPTION			
1.	Start traffic to B.			
2.	Check that at each expreceived from A witho	iration of T10, a signalling-Route-Set-T ut response.	est messag	e concerning C is
3.		check that a TFA is received and that T	10 is stoppe	ed.
4.	Check that traffic to C	is restarted and stop traffic.		
5.		nout sending of TFA after activation of nt in response. Check that T10 and sign		

Check that the duration of T10 is inside the specified range.

6.

TEST NUMBER: 9.7		PAGE: 1 of 1
REFERENCE: clause 13/Q.704	Fig. 29, Fig. 46	
TITLE: Signalling route managen	nent	
SUBTITLE: Reception of a signal	lling-route-set-test-message	
PURPOSE: To check the actions	of the system on reception of an SRST	
PRE-TEST CONDITIONS: Links	sets 2 and 3 unavailable	
CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		
SP A	SP B	SP F
Link	Link	Link
		
3–1 :Activate		
		T10
1–1 TFA, PC = F		
	1–1 RST, PC = F	
		,,,,,T10
	·	
		_
1–1 TFA, PC = F —		
3–1 TRAFFIC —		
(from A, D and E)		
:Wait		
:Stop traffic		

TEST DESCRIPTION

- 1. Send to A RST message concerning F and check that no response is received.
- 2. Activate linkset 3 and check that a TFA is received but ignored in B.
- 3. Send a RST message concerning F after activation of linkset 3 and check that a TFA is received in response.
- 4. Repeat the test but with linksets 1 and 3 unavailable as pre-test conditions and RST message sent from C.

TEST NUMBER: 10.1.1 PAGE: 1 of 1 REFERENCE: clause 9/Q.704 TITLE: Signalling point restart SUBTITLE: Recovery of a linkset (SP A does not have an STP function) – With use of point restart procedure PURPOSE: To check that point restart procedure is performed correctly when the recovery of a linkset restores connexity between two adjacent SPs PRE-TEST CONDITIONS: Linksets 1, 2, 4 and 6 unavailable TYPE OF TEST: VAT, CPT TYPE OF SP: SP **CONFIGURATION: B** MESSAGE SEQUENCE: SP A SP B SP C SP? Link Link Link Link 3–1, 2 TRAFFIC 7 - 1SP E 8-1 SP D 3-1, 27–1 SP E 8-1 SP D 2-1:Activate 2-1Activation (link in service at level 2) T21 T21 2-1TRA 2-1 TFP (PC = C) 2-1 TFP (PC = E) 2-1TRA 5-1TFA (PC = A)SP D TIME CONTROLLED DIVERSION IS APPLIED 2-1**TRAFFIC** 5-1SP D (from 3-1, 2)5-1 SP D 2-13–1, 2 TRAFFIC 7–1 SP E 8-1 SP D 3-1, 2SP E 7–1 :Wait :Stop traffic NOTE – The time controlled diversion procedure is applied in A and a controlled rerouting is performed in D. These procedures are not described in this point restart test. TEST DESCRIPTION 1. Start traffic to E (and D in VAT). 2. Activate link 2-1.

- 3. Check that the time controlled diversion procedure is performed after reception of the TRA. Check that the traffic to D is diverted to the link 2–1 in accordance with the load sharing rules in A. Check that the traffic to E is not diverted.
- 4. Stop traffic and check that there were no lost messages, no duplication and no missequencing.
- 5. Repeat the test (in VAT) without sending of TRA and check that the duration of timer T21 is inside the specified range.

TEST	NUMBER: 10.1.2					PAGE: 1 of 1		
REFE	RENCE: clause 9/Q	2.704			I			
TITLE	: Signalling point r	estart						
	TLE: Recovery of estart procedure	a linkset (S	P A does not l	nave an STP fo	unction)	– Not resulting in	1 the sign	nalling
PURPO	OSE: To check the	actions of the	he system in c	ase of restart o	of a link	set		
PRE-T	EST CONDITION	S: Linksets	1, 2 and 6 are	unavailable				
C	ONFIGURATION	В	TYPE OF	F TEST: VAT		ТҮРЕ О	F SP: SP	,
MESS	AGE SEQUENCE				'			
SP.	A		SP B		SP	C	SP	
Link			Link		Link		Link	
:Start t	raffic							
3–1, 2	TRAFFIC				7–1	$\xrightarrow{\hspace*{1cm}}$		SP E
					8-1			SP D
			4–1 ←				5-1	SP D
			-		3–1, 2			
								
					3–1, 2		7–1	SP E
2-1	:Activate							
	CHANGEBACK	KS ARE PE	RFORMED IN	N A AND B (N	Note)			
2-1	TRAFFIC		4–1 —		7–1	$\xrightarrow{\hspace*{1cm}}$		SP E
2-1	TRAFFIC		5–1					SP D
3–1, 2	TRAFFIC			\longrightarrow	7–1			SP E
					8-1			SP D
	•	(2−1 ←				5-1	SP D
					3–1, 2		7–1	SP E
:Wait								
:Stop to	raffic							
•								
	– After activation		changebacks	are performed	in A an	d B but they are r	ot explic	citly
describ	ed in this point res	tart test.						
TEST	DESCRIPTION							
1.	Start traffic to E a	and D.						
2.	Activate link 2–1 performed.	. Check that	the point rest	art procedure	is not ap	plied and that cha	angeback	is are
3.	Check that the tra	ffic from A	is diverted to	the link 2–1 in	n accord	ance with the load	d sharing	g rules

Check that the signalling route set test procedure is not applied after the activation of the link 2–1.

Stop traffic and check that were no lost messages, no duplication and no missequencing.

in A.

4.5.

TEST I	NUMBER: 10.2.1					PAGE: 1 of 2	2	
REFER	RENCE: clause 9/0	Q.704						
TITLE: Signalling point restart								
SUBTI	TLE: Recovery of	a linkset (SP .	A has S	ΓP function) – Wi	th use o	f point restart	procedure	
	OSE: To check that		dure is p	erformed correctly	when '	the recovery o	of a linkset re	stores
	tivity between two	-						
	EST CONDITION		3, 4 and	l 6 are unavailable)			
CO	ONFIGURATION	: D	ГҮРЕ О	F TEST: VAT, C	PT	TYPE	E OF SP: STE)
	AGE SEQUENCE	:						
SP A	A		SP I	В	SP	C	SP?	
Link			Link		Link		Link	
:Start t	raffic							
2–1	TRAFFIC		-	\longrightarrow	7–1		\rightarrow	SP E
					8-1		\rightarrow	SP D
					2-1		— 7–1	SP E
							8–1	SP D
1-1	:Activate							
1-1	Activation (link	in service at le	evel 2)					
	T21		T21					
1-1	TFP (PC = F)							
1-1	TRA	──						
			1-1	TFP $(PC = C)$				
		·	1–1	TFP $(PC = E)$				SP D
		·	1–1	TRA				or D
			5–1	TFA (PC = A)			,	
2–1	TFA (PC = B)	l		$\xrightarrow{\text{ITA} (\text{IC} - A)}$			7	
	` ′			•				
2–1	TFA (PC = D)			\longrightarrow				
1–1	TFP (PC = D)	<u> </u>	a cross s	C A DDI JED				
	TIME CONTRO			S APPLIED				GD D
1–1	TRAFFIC	${\longrightarrow}$	0 1				→	SP D
								SP D
		•					8–1	SP D
2–1	TRAFFIC			\longrightarrow	7–1		\rightarrow	SP E
					2-1		— 7–1	SP E
:Wait								
:Stop tı	raffic							
TEST I	DESCRIPTION							
1.	Start traffic to D	and E.						
2.		. Check that T	FPs are	sent from B to A	for E an	d C, and that	a TFP is sent	from
	A to B for F.							
3.			nd timer	T21 in SP B stop	at abou	it the same tin	ne. Check tha	ıt a
	TFA is sent from							
4.		entrolled time of	diversior	n is applied in A. (Check th	nat the traffic	to D is divert	ed on
_	link 1–1.	المراد بالمراد		a 1aak wa	. J 1'			
5.	•			o lost messages, n	_		-	_
6.	T21 is inside the			ng TRA from B to	A and	check that the	duration of t	imer

TEST	NUMBER: 10.2.1	(concluded)				PA	AGE: 2	of 2		
REFEI	RENCE: clause 9/0	Q.704								
TITLE	: Signalling point	restart								
SUBT	ITLE: Recovery of	f a linkset (SP	A has S	ΓP function)	– With	use of po	oint res	start pi	rocedure	
PURP	OSE: See page 1 o	f 2								
PRE-T	EST CONDITION	NS: Linksets 3	3, 4 and 6	are unavaila	ble (end	d of page	: 1)			
C	ONFIGURATION	[: D	TYPE	E OF TEST:	VAT		T	YPE C	OF SP: ST	P
MESS	AGE SEQUENCE	E:								
SP	A		SP B		SP (\mathbb{C}		SP	?	
Link			Link		Link			Link		
:Start t	raffic									
1-1	TRAFFIC	$\!$	5–1 -				\longrightarrow			SP D
		\leftarrow	1-1	(5-1		SP D
					2-1			8-1		SP D
2-1	TRAFFIC			\longrightarrow	7–1		\rightarrow			SP E
					2-1			7-1		SP E
3–1	:Activate									
	Activation (link s	service at leve	el 2)							
	T21								T21	SP F
3–1							\rightarrow	3-1		
	TRA								TRA	SP F
2–1	TFA (PC = F)			\longrightarrow						
1-1	TFA (PC = F)	$\!$								
1-1	TRAFFIC	$\!$	5–1 -				\longrightarrow			SP D
	(from A and F)									an -
								5–1		SP D
2–1	TRAFFIC (from A and F)				7–1		\rightarrow			SP E
	(Holli A and I)	_			2–1			7–1		SP E
:Wait		`			2 1	`		, 1		SI L
:Stop t	raffic									
.otop t										
TEST	DESCRIPTION									
1.	Start traffic.									
2.	Activate link 3–1	l.								
3.	Check that timer					about th	e same	e time.	Check th	at a
	TFA is sent from									
4.	Stop traffic and c	check that the	re were n	o lost messa	ges, dup	lication	and no	misse	equencing	

TEST	NUMBER: 10.2.2				PAGE: 1 of 1		
REFEI	RENCE: clause 9/Q.70	04					
TITLE	: Signalling point rest	art					
	ITLE: Recovery of a l	inkset (SP A has S	STP function) – No	ot resulti	ng in the signallin	g point r	estart
proced	ure						
	OSE: To check the act	-		of a link	set		
PRE-T	EST CONDITIONS:	Linkset 1 unavail	able				
C	ONFIGURATION: D	TYI	PE OF TEST: VAT		TYPE OF	SP: STI	
MESS.	AGE SEQUENCE:						
SP	A	S	PΒ	SP	C	SP •	
Link		Linl	k	Link		Link	
:Start t	raffic						
2–1	TRAFFIC -		$\xrightarrow{\hspace*{1cm}}$	8–1	$\xrightarrow{\hspace*{1cm}}$		SP D
	(from A and F)			7–1	$\!$		SP E
	•	(2–1		7–1	SP E
						8-1	SP D
1-1	:Activate				(Note 1)		
	CHANGEBACKS	ARE PERFORM	ED IN A AND B (Note 2)			
1-1	TRAFFIC -	———→ 5−1	. ————				SP D
	(from A and F, from 2–1)	6–1	\				SP E
2-1	TRAFFIC -		\longrightarrow	7–1	$\xrightarrow{\hspace*{1cm}}$		SP E
	•	(2-1		7–1	SP E
						8-1	SP D
					(Note 1)		
:Wait							
:Stop t	raffic						
NOTE	1 – Depending on the	routing rules in I	and E the traffic	to A and	d E may be carried	l aithar a	n
	s 5 or 8, or on linksets		Jana E, the traffic	to A and	a r may be carried	i Citiici o	11
NOTE	2 – Changebacks are	performed but the	ey are not explicitly	y describ	ed in this point re	start test	
TEST	DESCRIPTION	•	-		*		
1.	Start traffic to D and	l E.					
2.	Activate link 1–1. C	•	start procedure is n	ot applie	ed in this case and	that	
3.	Check that the traffic in A.		verted on link 1–1	in accord	dance with the loa	d sharing	g rules
4	Check that the signa	lling route set test	nrocedure is not u	ised			

Stop traffic and check there were no lost messages, no duplication and no missequencing.

5.

TEST NUMBER: 10.3	3					PAGE: 1 of 1			
REFERENCE: clause						11102, 1 011			
	TITLE: Signalling point restart								
SUBTITLE: An adjacent SP becomes accessible via another SP (SP A does not have an STP function)									
PURPOSE: To check to	the actions o	of the syst	tem when an	adjacen	t SP beco	omes accessible v	a another	· SP	
PRE-TEST CONDITION	ONS: Links	ets 1, 3, 4	1, 5 and 6 are	unavail	lable				
CONFIGURATIO	ON: B	T	YPE OF TES	ST: VA	Т	ТҮРЕ О	F SP: SP		
MESSAGE SEQUEN	CE:								
SP A		SP I	3	SP	C		SP	•	
Link		Link		Link			Link		
		4 1	. A -4:4-						
		4–1	:Activate	4–1	TFP (A	1)			
	TFPs	4–1	•	4-1	IFF (A	A)			
	(D and E)	4-1	———→ T21		T21				
	(D and E)		121		121				
				4–1	TRA				
	TRA	4–1	$\!$						
		2-X	TFAx	7–1	TFAs ((A, B)	>	SP E	
			D and E) ting mode)	8–1	TFAs ((A, B)	>	SP D	
2–1, 2 TRAFFIC	${}$	4–1	$\xrightarrow{\hspace*{1cm}}$	7–1			•	SP E	
		2-1, 2		4–1			- 7–1	SP E	
2–1, 2 TRAFFIC	$\!$	4–1	$\!$	8-1			•	SP D	
		2–1, 2		4–1	\leftarrow		- 8–1	SP D	
:Wait									
:Stop traffic									

TEST DESCRIPTION

- 1. Activate link 4–1.
- 2. Check that on the reception of TFAs the traffic is immediately restarted in A to E and to D.
- 3. Stop traffic and check that there were no lost messages, no duplication and no missequencing.

TEST	NUMBER: 10.4					PAGE: 1 of 1		
REFEI	RENCE: clause 9/	Q.704						
TITLE	: Signalling point	restart						
	ITLE: An adjacen		s accessible vi	ia anoth	ner SP (SP A ha	s STP function)		
							er SP on	
	PURPOSE: To check the actions of the system when an adjacent SP becomes accessible via another SP on reception of a TFA							
	EST CONDITION	NS: Linksets	1, 3 and 4 are	unava	ilable			
CONFIGURATION: D TYPE OF TEST: VAT TYPE OF SP: STP								
MESS	AGE SEQUENCE	Ξ:						
SP		SP B		SP	С	SP D		
Link		Link		Link		Link		
2-1	TRAFFIC			7–1			SP E	
				8–1			SP D	
				2-1	<u> </u>	7–1	SP E	
		`				8–1	SP D	
				4–1	Activate	0 1	51 D	
				4–1		nk in service at level 2)		
		T21			T21	ink in service at level 2)		
		121		4–1	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$			
		\ 		4–1	TRA			
	TFP (PC = A)	4–1 –		7 1	TRA			
	TFP (PC = F)	4–1 –	•					
	TRA		→ →					
	IKA	4-1 —						
	TFA (PC = F)							
				2–1				
	TFA (PC = C)			2–1				
	$\overline{\text{TFA (PC = C)}}$			2-1	1		SP D	
	` ′					•		
	TFA (PC = C)				· · · · · · · · · · · · · · · · · · ·	•	SP E	
	TFA (PC = A)					•	SP D	
	TFA (PC = A)	6-1				>	SP E	
					TFA (PC = B)	,	SP E	
				8–1		,	SP D	
	•			2–1	TFA (PC = B))		
2–1	TFP (PC = F)							
				4–1				
:Wait								
:Stop t								
						ne global sequence of me	ssage.	
	nessages received	and sent by/1	from A are su	bject to	this test			
	DESCRIPTION							
1.	Start traffic.	1						
2.	Activate link 4—		magairead fr. T	O CD 4	ia avvana - £41	t D is on a diagont weigh	ما مناه	
3.	restarts, and con					t B is an adjacent point w -1 to B.	inch	
4.					-	ation and no missequenc	ing.	
					·		·	

TEST 1	EST NUMBER: 10.5 PAGE: 1 of 2					
REFER	RENCE: clause 9/Q.704					
TITLE	: Signalling point restart					
SUBTI	TLE: Restart of an SP havi	ng no STP function	1			
PURPO	OSE: To check the restart p	rocedure in an SP h	aving no STP funct	ion		
PRE-T	EST CONDITIONS: SP A	unavailable				
CO	ONFIGURATION: B	TYPE OF TES	ST: VAT, CPT	TYPE OF	SP: SP	
MESSA	AGE SEQUENCE:					
SP A	A	SP B	SP C		SP	?
Link		Link	Link		Link	
	:Activate					
X–X	Activation (first link in se	1	1		i .	
	T20	T21	T21		T21	SP D
		TRA 2–1				
			TRA 3–1			
	\			TRA	. 1–1	
	when all (or sufficient) li	nks are available	1		1	
	$TRA \longrightarrow$					
		A) are broadcast				
3–1	TRA ———					
		TFA (PC	C = A) are broadcast	t		
1–1	TRA ———			─ →		
1-1, 2	TRAFFIC			\longrightarrow		SP D
					1–1, 2	SP D
2–1, 2	TRAFFIC \longrightarrow	5–1		\longrightarrow		SP D
		6–1 ———		\longrightarrow		SP E
3–1, 2	TRAFFIC		8–1			SP E
			7–1 ———	,		SP E
	\		3−1, 2 ←			SP E
:Wait						
:Stop traffic						
TEST DESCRIPTION						
1.	Activate SP A					
2.	2. Check that when the first link is in service at level 2, the timer T20 is started.					
3.						
4	timer T20 is stopped.	TDA DC	1.D			
4.	Check that SP A broadcas					
5. 6	Check that the traffic is ca	iffed as described a	idove.			
6. 7	Stop traffic. In VAT repeat the test wi	thout canding TD A	from R to A and al	and that the duretic	on of Ti	O ic
,			THE PROPERTY OF THE PARTY OF TH			

In VAT, repeat the test without activating the link 1–1, and check that the duration of T20 is inside

inside the specified range.

the specified range.

8.

TEST	NUMBER: 10.5 (concluded	<i>l)</i>		PAGE: 2 of 2			
REFEI	RENCE: clause 9/Q.704						
TITLE	E: Signalling point restart						
SUBT	ITLE: Restart of an SP havi	ng no STP function					
PURP	OSE: To check the restart pr	rocedure in an SP having	no STP funct	tion			
PRE-T	EST CONDITIONS: SP A,	linksets 6 and 7 unavail	able				
C	ONFIGURATION: B	TYPE OF TEST	VAT	TYPE OF	SP: SP		
MESS	MESSAGE SEQUENCE:						
SP	A	SP B	SP C		SP	?	
Link		Link	Link		Link		
	:Activate						
Х-Х	Activation (first link in ser	vice at level 2)			_		
	T20	T21	T21		T21	SP D	
	\leftarrow TFP (PC = E)	2–1					
	← TRA	2–1					
	(TFP (PC = E)	3–1				
	\	TRA	3–1				
				—— TRA	1-1		
	when all (or sufficient) link	s are available			•		
2-1	TRA ———						
	TFAs (PC	= A) are broadcast					
3–1	TRA	·					
		TFAs (PC =	A) are broad	cast			
1–1	TRA		ŕ				
1–1	TRAFFIC					SP D	
					1-1, 2	SP D	
2_1 2	TRAFFIC				1 1,2	SP D	
2 1, 2	TRUTTIC ———————————————————————————————————	•		,		SP E	
2 1 2	TRAFFIC	0 1				SP D	
3-1, 2	TRAFFIC ———			→ →		SP E	
				•	7 1		
***	\		3−1, 2 ←		7–1	SP E	
:Wait	cc						
:Stop t							
	DESCRIPTION						
1.	Activate SP A.		2 4 4 77	20: 4 1			
2.	,						
3.	, , , , , , , , , , , , , , , , , , , ,						
4.	timer T20 is stopped. Check that SP A broadcast	to TDAs to P. C and D.					
5.		•					
6.	Check that the traffic is carried as described above.						
7.	Stop traffic. Repeat the test without sending TRA from B to A, and check that the duration of T20 is inside the						
/.	specified range.	iding TKA HUIII D 10 A,	and Check tha	u uit uuralion or 12	νο 12 IIISIC	ie iiie	
8.	Repeat the test without act	tivating the link 1–1, and	check that the	e duration of T20 is	inside th	ne	
[specified range.						

TEST N	NUMBER: 10.6		PAGE	2: 1 of 2			
REFERENCE: clause 9/Q.704							
	Signalling point restart						
	ΓLE: Restart of an SP hav						
	OSE: To check the restart 1		g STP function				
	EST CONDITIONS: SP A	1					
CONFI	GURATION: D	TYPE OF TEST: VAT	T, CPT TYPE	OF SP: STP			
	AGE SEQUENCE:						
SP A	Α	SP B	SP C	SP?			
Link		Link	Link	Link			
** **	:Activate						
X–X	Activation (first link in	i '	TO 1	T2.1	CD E		
T18	T20	T21	T21	T21	SP F		
	← TFP (
	← TRA	1–1	G F) 0.1				
		TFP (P					
		TRA	2–1				
	l l			3–1			
	n all (or sufficient) links a	i	I (or sufficient) TRAs	have been received			
1–1	TFP (PC = D)	· ·					
1–1	TFP (PC = E)						
2–1	TFP (PC = E)						
1–1	TRA	l l					
	← TFP (
2 1		(A&F) are broadcast					
2–1			,				
		TFP (P	,				
2.1		TFAs (A) are broadcast				
3–1	TRA ——			\longrightarrow	G . D		
1–1	_	→ 5–1 ——	G	<i>→</i>	SP D		
	(from A and F)		r C to A and F \leftarrow		SP D		
		-		,	SP D		
2–1	TRAFFIC		——→ 7–1 ———	•	SP E		
	(from A and F)	Via B o	r C to A and F \leftarrow	—— 6–1 or 7–1	SP E		
	:Wait						
_	:Stop traffic						
NOTE – Preventive TFPs are possibly sent after the expiry of T20. Preventive TFPs for the highest							
	routes might not be sent. DESCRIPTION						
		_					
1. 2.	Activate SP A. Check that when the first	link is in service at level	2 the timer T20 is sto	urtad			
۷.	CHECK WHEN WHEN THE	THIN IS III SELVICE AL IEVE	. 4, the timel 140 is sta	ii icu.			

- 3. Check that when all (or sufficient) links are activated, and all TRAs are received from B, C and D timer T18 is stopped.
- 4. Check that SP A broadcasts TRAs to B, C and F.
- 5. Check that the traffic is carried as described above.
- 6. Stop traffic.
- 7. Repeat the test (in VAT) but send the traffic from F to D and E via A immediately after alignment of link 3–1 and check that this traffic is discarded until the end of T20.

TEST N	UMBER: 10.6 (conclude	ed)			PAGE: 2 of 2	2	
REFERE	ENCE: clause 9/Q.704						
TITLE: S	Signalling point restart						
SUBTIT	LE: Restart of an SP ha	ving the ST	P function				
PURPOS	SE: To check the restart	procedure i	in an SP having S	STP function	1		
PRE-TES	ST CONDITIONS: SP	A unavailab	ole and linkset 2	and 4 definit	ively unavaila	ble	
CON	NFIGURATION: D	TYP	E OF TEST: VA	T, CPT	TYPE	E OF SP: ST	P
MESSAG	GE SEQUENCE:						
SP A			SP B		SP F	SP?	
Link			Link	Lin	nk	Link	
	:Activate						
Х-Х	Activation (first link i	n service a	t level 2)				
T18	T20		T21			T21	
	← TFP	,					
	← TFP	(PC = C)	1–1				
	← TRA	_	1–1				
	←				_ TRA	3–1	
at the	end of timer T18					1	
1–1	TFP (PC = C) \longrightarrow	\longrightarrow					
1–1	TFP (PC = D)						
1–1	TFP (PC = E)						
3–1	TFP (PC = C)		<u>.</u>		\rightarrow		
1-1	TRA						
	← TFP	(PC = F)	1-1				
	TFA	s (A & F) a	are broadcast				
3–1	TRA				\rightarrow		
1–1	TRAFFIC		5-1		\rightarrow	ı	SP D
	(from A and F)		6–1 –		\rightarrow		SP E
	,	to A	A and F		\rightarrow	5–1	SP D
		to A	A and F		\rightarrow	6–1	SP D
:Wait							
:Stop trai	ffic						
1							
NOTE – Preventive TFPs may be sent after the expiry of T20. Preventive TFPs for the highest priority							
routes might not be sent.							
TEST DESCRIPTION							
1. A	Activate SP A beginning	by the acti	ivation of $3-1$, ac	tivate link 1	-1.		
2. S	Stop traffic.						

TEST 1	TEST NUMBER: 10.7.1 PAGE: 1 of 1						
REFER	RENCI	E: clause 9/	Q.704				
TITLE	: Signa	alling point	restart				
SUBTI	TLE:	Reception of	of an unexpe	cted TRA – In an SP having no STP	function		
PURPO	OSE: T	To check the	e system in c	ase of reception of an unexpected T	RA		
PRE-T	EST C	CONDITIO	NS: Linkset	with one available link			
CC	ONFIC	GURATION	J: A	TYPE OF TEST: VAT	TYPE OF SP: SP		
MESSA	MESSAGE SEQUENCE:						
SP A	A				SP B		
Link					Link		
:Start tı		TD A FELG					
1–1		TRAFFIC			1 1 EDAFFIG		
					1–1 TRAFFIC		
		TT 1 0			1–1 TRA		
1–1		T19	TRA				
					1–1 TRA		
					1-1 1KA		
:Wait		ļ					
:Stop tr	affic						
.Stop ti	arric						
TEST I	DESC	RIPTION					
1.	Start	traffic to B	and C on lin	ık 1–1.			
2.	Send	a TRA from	m B to A and	I check that the timer T19 is started.			
3.	Durir	ng T19 send	l a TRA fron	n B to A and check that this message	e is ignored.		
4.	Stop	traffic and	check that it	has not been disturbed.			

REFERENCE: clause 9/Q.704 TITLE: Signalling point restart SUBTITLE: Reception of an unexpected TRA – In an SP having the STP function PURPOSE: See test 10.7.1 PRE-TEST CONDITIONS: Linksets 1, 4 and 8 are unavailable						
TITLE: Signalling point restart SUBTITLE: Reception of an unexpected TRA – In an SP having the STP function PURPOSE: See test 10.7.1						
PURPOSE: See test 10.7.1						
PRE-TEST CONDITIONS: Linksets 1, 4 and 8 are unavailable						
CONFIGURATION: D TYPE OF TEST: VAT TYPE OF SP: STP						
MESSAGE SEQUENCE:						
SP A SP B SP C SP ?						
Link Link Link Link						
$2-1$ TRAFFIC \longrightarrow 7-1 \longrightarrow SP E						
(from A and F)						
← 2-1 ← 7-1 SP E						
← 2−1 TRA						
$\begin{array}{c cccc} 2-1 & T19 & TFP (PC = B) & \longrightarrow \\ \end{array}$						
$TFP (PC = D) \longrightarrow$						
$TRA \longrightarrow 2.1 TPA$						
← 2−1 TRA						
<u>l</u>						
$2-1$ TRAFFIC \longrightarrow 7-1 \longrightarrow SP E						
(from A and F)						
← 2-1 ← 7-1 SP E						
:Wait						
:Stop traffic						
TEST DESCRIPTION						
1. Start traffic to E.						
2. Send a TRA from C to A and check that the timer T19 is started, and that TFPs concerning B and						
D are received, then, check that a TRA is received from A.						

Stop traffic and check that it has not been disturbed.

4.

TEST 1	NUMBER: 11		PAGE: 1 of 1		
REFER	RENCE: Q.706				
TITLE	: Traffic test				
SUBTI	TLE:				
PURPO	OSE: To check the behavior	ur of an STP in various traffic situatio	ns		
PRE-T	EST CONDITIONS: All lin	nks available			
CC	ONFIGURATION: C	TYPE OF TEST: VAT	TYPE OF SP: STP		
MESSA	AGE SEQUENCE:				
SP I	3	SP A	SP C		
Link		Link	Link		
:Start tı					
1–1	TRAFFIC ——	→ 2-1 → →			
1–2	TRAFFIC ——	→ 2-1 → →			
		1-1	2–1 TRAFFIC		
		1–2			
:Wait	27				
:Stop tr	raffic				
TEST I	DESCRIPTION				
1.		d C in both directions via A using the	traffic models presented in ITU-T		
2.		ss the STP is better than 20 millisecor	nds.		
3.	Stop traffic and check that				
4.	Repeat test but with a traffic model including 5% of messages with an SIF = 272 octets.				

TEST 1	NUMBER: 12.1		PAGE: 1 of 1			
REFER	RENCE: Q.707					
TITLE	: Signalling link test					
SUBTI	TLE: After activation of a l	ink				
PURPO	OSE: To check the signallin	g link test procedure after activation of	f a signalling link			
PRE-T	EST CONDITIONS: Signa	lling link 1–2 available				
CO	ONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP			
MESSAGE SEQUENCE:						
SP A	A		SP B			
Linl			Link			
:Start ti						
1–2	TRAFFIC					
			1–2 TRAFFIC			
1–1						
1–1	SLTM					
			1–1 SLTA			
			1–1 SLTm			
1–1	-					
CHAN	GEBACK					
1–1,	2 TRAFFIC					
	TRAFFIC	\	1–1, 2 TRAFFIC			
:Wait						
:Stop tı	raffic					
TEST 1	DESCRIPTION					
1.	Start traffic to B (and C in	VAT).				
2.	Activate link 1-1 and chec	ek that an SLTM is received from A.				
3.	Send an SLTM to A and c	heck that an SLTA is received.				
4.		comes available and that changeback i	s performed correctly.			
5.	Stop traffic.					
6.	In VAT, repeat the test with link 1–1 unavailable and inhibited (in this case changeback is not performed). Check that the link 1–1 becomes available and stays inhibited.					

TEST	NUMBER: 12.2		PAGE: 1 of 1		
REFER	RENCE: Q.707				
TITLE	: Signalling link test				
SUBTI	TLE: No acknowledgement	to first SLTM			
PURPO	OSE: To check that a second	SLTM is sent if the first is not acknow	wledged		
PRE-T	EST CONDITIONS: Signal	ling link 1–2 available			
CO	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESS	AGE SEQUENCE:				
SP.	A		SP B		
Lin			Link		
:Start t					
1-2	2 TRAFFIC				
			1–2 TRAFFIC		
1–1	:Activate				
1–1					
	,,,,,T1				
	_				
1–1	SLTM				
		(1–1 SLTA		
			1–1 SLTM		
1-1	SLTA				
CHAN	GEBACK				
1-1,	2 TRAFFIC				
			1–1, 2 TRAFFIC		
:Wait					
:Stop to	raffic				
TEST DESCRIPTION					
1.	Start traffic to B and C.				
2.	Activate link 1–1 and check	k that an SLTM is received and not ac	knowledged.		
3.	3. Check that when the time T1 expires a new SLTM is sent. Check that the duration of this time is inside of the specified range.				
4.	Check that the link 1–1 bed	comes available and that the changeba	ck is performed correctly.		
5.	Stop traffic.				
6.	Repeat the test with link 1–1 unavailable and inhibited (in this case changeback is not performed). Check that the link becomes available and stays inhibited.				

TEST 1	NUMBER: 12.3		PAGE: 1 of 1					
REFER	RENCE: Q.707							
TITLE	: Signalling link test							
SUBTI	TLE: No acknowledgement	to second SLTM						
PURPO	OSE: To check that the link	stays unavailable when the second S	LTM is not acknowledged					
PRE-T	EST CONDITIONS: Signal	ling link 1–2 available						
CC	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL							
MESSA	AGE SEQUENCE:							
SP A	A		SP B					
Link			Link					
:Start tı								
1–2	TRAFFIC							
			1–2 TRAFFIC					
1–1								
1–1	ı							
	,,,,,T1							
	_							
1–1	1							
	,,,,,T1							
	_							
1–2	TRAFFIC							
		\	1–2 TRAFFIC					
:Wait								
:Stop tr	raffic							
TEST I	DESCRIPTION							
1.	Start traffic to B and C.							
2.	Activate link 1–1 and chec	k that two SLTMs are received from	A.					
3.	Check that after the second system is informed.	l expiration of T1, link 1–1 stays una	vailable and that the management					
4.		-1 unavailable and inhibited.						

TEST	ST NUMBER: 12.4 PAGE: 1 of 1					
REFE	RENC	CE: Q.707				
TITLE	: Sigr	nalling link test				
SUBTI	TLE:	Unreasonable field in	an SLTA			
PURPO	OSE:	To check the actions o	f the system on reception of an SLTA	with an u	nreasonable field	
PRE-T	EST (CONDITIONS: Signal	lling link 1–2 available			
CO	ONFI	GURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL	
MESS	AGE	SEQUENCE:				
SP.	A			SP B		
Lin				Link		
:Start t						
1–2	2	TRAFFIC		1.0	TD A FFIG	
			(1–2	TRAFFIC	
1–1	-	:Activate				
1–1		SLTM		1 1	CI TA	
			\	1–1	SLTA (erroneous test pattern)	
					F	
1–1	[SLTM				
				1-1	SLTA	
CHAN	GEB.	ACK				
1–1,	2	TRAFFIC				
,			<u> </u>	1–1, 2	TRAFFIC	
:Wait			•	,		
:Stop ti	raffic					
1						
TEST	DESC	CRIPTION				
1.	Star	t traffic to B and C.				
2.	Acti	vate link 1–1 and chec	k that an SLTM is received and ackno	wledged v	with an SLTA	
containing an erroneous test pattern.						
3.	3. Check that a second SLTM is sent from A and correctly acknowledged.					
4.	Check that link 1–1 becomes available and that changeback is performed correctly.					
5.		t and stop traffic.				
6.	_		SLTA containing an erroneous SLC th			
7.	Repeat the test with the first and second erroneous SLTA and check that link 1–1 stays unavailable and that management system is informed.					

				1	
TEST	TEST NUMBER: 12.5 PAGE: 1 of 1				
REFER	RENC	CE: Q.707			
TITLE	: Sign	nalling link test			
SUBTI	ITLE:	Reception of an SLT	M in an attempt state		
PURPO	OSE:	To check the actions of	of the system when an SLTM is received	ed in an at	tempt state
PRE-T	EST (CONDITIONS: Signa	alling link 1–2 available		
CO	ONFI	GURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL
MESS	AGE	SEQUENCE:			
SP .	A			SP B	
Lin				Link	
:Start t					
1-2	2	TRAFFIC			
				1–2	TRAFFIC
1–1	_	:Activate			
1–1		SLTM			
					a
		T1		1–1	SLTM
1–1		SLTA			
1 1	ļ	OL TM			
1–1	L I	SLTM			
		T1		1 1	CLTM
1–1	1	SLTA		1–1	SLTM
1-1	L	SLIA			
			,	1–1	SLTA
CHAN	GER	ΛCK		1-1	SLIA
1–1,		TRAFFIC			
1-1,	2	TRAITIC	,	1–1, 2	TRAFFIC
:Wait				1 1, 2	TRAITIC
:Stop ti	raffic				
.Stop ti	iaiiic				
TEST	DESC	CRIPTION			
1.	1	t traffic to B and C.			
2.			ck that SLTM is received. Send an SL	ΓM and ch	eck that an SLTA is
	Activate link 1–1 and check that SLTM is received. Send an SLTM and check that an SLTA is received.				
3.	On reception of the second SLTM, send an SLTM and check that an SLTA is received. Send an				
		A to A.			
4.	Check that changeback is performed correctly, and stop traffic.				

TEST NUMBER: 12.6		PAGE: 1 of 1			
REFERENCE: Q.707					
TITLE: Signalling link test					
SUBTITLE: Additional SLTA and	SLTM				
PURPOSE: To check the actions of	of the system on reception of additiona	al SLTA and SLTM			
PRE-TEST CONDITIONS: Signa	lling link 1–2 available				
CONFIGURATION: A TYPE OF TEST: VAT, CPT TYPE OF SP: ALL					
MESSAGE SEQUENCE:					
SP A SP B					
Link		Link			
:Start traffic					
1–2 TRAFFIC					
		1–2 TRAFFIC			
		1–2 SLTA			
		1–2 SLTM			
1–2 SLTA					
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. Start traffic to B (and C in	VAT).				
2. Check that the reception of	, and the second				
	heck that an SLTA is received.				
4. Stop traffic and check that	it was not disturbed.				

TEST NUMBER: 13.1		PAGE: 1 of 1				
REFERENCE: Table 1/Q.704	1					
TITLE: Invalid messages						
SUBTITLE: Invalid H0-H1 in	n a signalling network management messag	e				
PURPOSE: To check the action received with a non-existing I	ons of the system when a signalling networ H0-H1	k management message is				
PRE-TEST CONDITIONS: A	All links available					
CONFIGURATION: A	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESSAGE SEQUENCE:						
SP A		SP B				
Link		Link				
:Start traffic						
ALL TRAFFIC						
		ALL TRAFFIC				
	\	1–X SIGNALLING NETWORK MANAGEMENT MESSAGE (Invalid H0-H1)				
ALL TRAFFIC						
:Wait	\	ALL TRAFFIC				
:Stop traffic						
TEST DESCRIPTION						
1. Start traffic to B and 0	C on all links.					
	work management message with a non-exis	ting H0-H1.				
3. Check that this messa	age is discarded without impact on the traffi	c.				
4. Stop traffic.						

TEST 1	NUMBER: 13.2		PAGE: 1	l of 1	
REFERENCE: clause 15/Q.704					
TITLE	: Invalid messages				
SUBTI	TLE: Invalid changeover	messages			
PURPO or OPC		of the system on reception of changed	over messag	ses with an invalid SLC	
PRE-T	EST CONDITIONS: Link	set with two available links			
CO	ONFIGURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL	
MESSA	MESSAGE SEQUENCE:				
SP A	A		SP B		
Linl	K		Link		
:Start tı	raffic				
1-1	TRAFFIC				
			1–1	TRAFFIC	
1–2	TRAFFIC		1–2	TRAFFIC	
			1–2	COO, SLC 1–X	
		(1–2	(non-existing SLC)	
		\	1–2	COO, SLC 1–1 (non-existing OPC)	
			1–2	ECO, SLC 1–X (non-existing SLC)	
		\	1–2	ECO, SLC 1–1 (non-existing OPC)	
		\	1–2	COA, SLC 1–X (non-existing SLC)	
		\	1–2	COA, SLC 1–1 (non-existing OPC)	
		\	1–2	ECA, SLC 1–X (non-existing SLC)	
		\	1–2	ECA, SLC 1–1 (non-existing OPC)	
1-1,	2 TRAFFIC			, ,	
		\	1–1, 2	TRAFFIC	
:Wait					
:Stop tr	raffic				
TEST I	DESCRIPTION				
1.	Start traffic to B and C or	n all links.			
2.	Send the invalid message	s as described above and check that the	ney are igno	red.	
3.	Stop traffic and check that	at it was not disturbed.	-		

TEST I	NUMBER: 1	3.3		PAGE: 1	of 1
REFER	RENCE: clau	se 15/Q.704			
TITLE	: Invalid mes	ssages			
SUBTI	TLE: Invalid	d changeback n	nessages		
PURPO or OPC		ck the actions o	of the system on reception of changeb	oack messag	ges with an invalid SLC
PRE-T	EST CONDI	ITIONS: Links	et with two available links		
CO	ONFIGURA'	TION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL
MESSA	AGE SEQUE	ENCE:			
SP A	A			SP B	
Linl				Link	
:Start ti		TELO			
1–1	TRAF	FIC		1–1	TRAFFIC
1–2	. TRAF	EIC	\	1-1	IKAFFIC
1-2	, IKAI	TIC		1–2	TRAFFIC
			/	1–2	CBD, SLC 1–X
				1 2	(non-existing SLC)
				1–2	CBD, SLC 1–1 (non-existing OPC)
				1–2	CBA, SLC 1–X (non-existing SLC)
				1–2	CBA, SLC 1–1 (non-existing OPC)
1-1,	2 TRAF	FIC			,
			\	1-1, 2	TRAFFIC
:Wait					
:Stop tı	raffic				
İ					
TDOT	DECORPE	OM			
	DESCRIPTION CONTROL OF THE PROPERTY OF THE PRO		all limba		
1. 2.		to B and C on	described above and check that they	ara ignoro	
3.			it was not disturbed.	are ignored	
٥.	stop marrie	Jiion tiitt			

TEST 1	NUMBER	: 13.4		PAGE:	1 of 1
REFER	RENCE: cl	lause 15/Q.704			
TITLE	: Invalid n	nessages			
SUBTI	TLE: Inva	alid changeback c	ode		
	OSE: To cl		of the system on reception of an inva	lid changeb	pack code in a
PRE-T	EST CON	DITIONS: Links	et with one link available		
CO	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESSA	AGE SEQ	UENCE:		·	
SP A	A			SP B	
Linl				Link	
:Start tı					
1–2	2 TRA	AFFIC			
				1–2	TRAFFIC
1–1			on the deactivation mean previously	y used)	
1–2	cBl	D, SLC 1–1			
		T4		1–2	CBA, SLC 1–1 (invalid changeback code ≠ CBD)
1–2	CB)	D, SLC 1–1			,
		Т5	\		
1–1		 AFFIC m 1–2)			
	(no	m 1 2)	\	1–1	TRAFFIC (from 1–2, Note)
1–2	2 TRA	AFFIC			
			\	1–2	TRAFFIC
:Wait					
:Stop tr	raffic				
NOTE	– B may p	perform a changel	back or not.		
TEST I	DESCRIP'	TION			
1.	Start traf	fic to B and C on	link 1–2.		
2.	Activate changeba		hat a CBD is received and acknowled	dged by a C	CBA with an invalid
3.		at a new CBD is a geback is perform	received after T4 expires and acknowned.	vledged by	a correct CBA. Check
4.		-	the invalid message has been discar	ded withou	t impact on the traffic.

TEST 1	NUMBER: 13.5		PAGE:	1 of 3
REFER	RENCE: clause 15/Q.704			
TITLE	: Invalid messages			
SUBTI	TLE: Invalid inhibition me	ssages		
PURPO	OSE: To check the actions of	of the system on reception of an invalid	d inhibitic	on message
PRE-T	EST CONDITIONS: Links	et with two available links		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL
MESSA	AGE SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start tı				
1–1	TRAFFIC			
			1–1	TRAFFIC
1–2	TRAFFIC			
		\	1–2	TRAFFIC
		\	1–2	LIN, SLC 1–X
			1 2	(non-existing SLC)
			1–2	LIN, SLC 1–2 (non-existing OPC)
			1–2	LIA, SLC 1–X
				(non-existing SLC)
			1–2	LIA, SLC 1–1
			1 0	(non-existing OPC)
			1–2	LID, SLC 1–X (non-existing SLC)
			1–2	LID, SLC 1–1
		•		(non-existing OPC)
TEST I	DESCRIPTION			
1.	Start traffic to B and C.			
2.	Send the invalid messages	described above and check that these	are ignore	ed.
3.	Stop traffic and check that	t it was not disturbed.		

TEST NUMBER: 13.5 (contin	ued)	PAGE:	2 of 3		
REFERENCE: clause 15/Q.70	4				
TITLE: Invalid messages	TITLE: Invalid messages				
SUBTITLE: Invalid inhibition messages					
PURPOSE: As page 1					
PRE-TEST CONDITIONS: Li	nkset with two available links				
CONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A		SP B			
Link		Link			
	\	1–2	LUN, SLC 1–X		
		1–2	(non-existing SLC)		
		1–2	LUN, SLC 1–1 (non-existing OPC)		
		1–2	LUA, SLC 1–X		
			(non-existing SLC)		
		1–2	LUA, SLC 1-1		
		1–2	(non-existing OPC) LFU, SLC 1–X		
		1-2	(non-existing SLC)		
		1–2	LFU, SLC 1–1		
			(non-existing OPC)		
TEST DESCRIPTION					
1. See page 1.					

TEST NUMBER: 13.5 (conclude	d)	PAGE:	3 of 3		
REFERENCE: clause 15/Q.704					
TITLE: Invalid messages					
SUBTITLE: Invalid inhibition me	SUBTITLE: Invalid inhibition messages				
PURPOSE: As page 1					
PRE-TEST CONDITIONS: Linkset with two available links					
CONFIGURATION: A	TYPE OF TEST: VAT	Т	YPE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A		SP B			
Link		Link			
	\	1–2	LLT, SLC 1–X (non-existing SLC)		
		1–2	LLT, SLC 1–1 (non-existing OPC)		
	\	1–2	LRT, SLC 1–X (non-existing SLC)		
	\	1–2	LRT, SLC 1–1 (non-existing OPC)		
ALL TRAFFIC			(1 1 2 8 1 1)		
.W.:4	\	ALL	TRAFFIC		
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. See page 1.					

TEST 1	NUMBER: 13.6		PAGE:	1 of 1	
REFER	RENCE: clause 15/Q.704				
TITLE	: Invalid messages				
SUBTI	SUBTITLE: Invalid transfer control messages				
PURPO	OSE: To check that there is	no problem on reception of a TFC with	th spare fie	eld or SLC not coded 00	
PRE-T	EST CONDITIONS: Link	1–1 available			
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL					
MESSA	AGE SEQUENCE:				
SP A	A		SP B		
Linl			Link		
:Start tı					
1–1	TRAFFIC				
			1–1	TRAFFIC	
			1–1	TFC, PC = C	
		,	1–1	(spare field \neq 0) TFC, PC = C	
		(1 1	$(SLC \neq 0000)$	
		\	1-1	TFC, $PC = X$	
				(non-existing PC)	
1–1	TRAFFIC				
			1–1	TRAFFIC	
:Wait					
:Stop tr	raffic				
TEST I	DESCRIPTION				
1.	Start traffic to B and C.				
2.	Send a TFC with invalid sexisting PC.	pare field to A, then a TFC with an in	valid SLC	then a TFC with a non-	
3.	Check that these messages values.	are correctly received without disturb	oances due	e to these incorrect	
4.	Stop traffic.				

TEST 1	NUMBER: 13.7		PAGE:	1 of 1
REFE	RENCE: clause 15/Q.704			
TITLE	: Invalid messages			
SUBTI	TLE: Invalid signalling route	e management messages		
PURPO	OSE: To check the actions of	the system on reception of invalid T	FA or TF	P
PRE-T	EST CONDITIONS: Links 1	−1 and 2−1 available		
CO	ONFIGURATION: A	TYPE OF TEST: VAT	-	ΓΥΡΕ OF SP: ALL
MESS	AGES SEQUENCE:			
SP .	A		SP B	
Linl			Link	
:Start t				
1–1	TRAFFIC		1 1	TDAFFIC
			1–1	TRAFFIC
		\	1–1	TFP, $PC = X$ (non-existing PC)
			1–1	TFA, PC = X
				(non-existing PC)
		\	1–1	TFP, PC = C
			1–1	(non-existing OPC) TFP, PC = C
			1-1	(spare bits # 00)
			2–1	:Deactivate
		(1–1	TFP, $PC = C$
			1–1	TFA, PC = C
			1 1	(non-existing OPC)
		\	1–1	TFA, $PC = C$ (spare bits # 00)
1-1	TRAFFIC			(1
			1–1	TRAFFIC
:Wait				
:Stop tı	raffic			
TEST	DESCRIPTION			
1.	Start traffic to B and C.			
2.		nvalid values to A (as described above the traffic, (except for spare bit # 0)		k that these messages are
3.	Deactivate linkset 2 and che	eck that C becomes inaccessible.		
4.	Send TFAs concerning C w messages are discarded with	ith invalid values to A (as described nout impact on the traffic.	above) aı	nd check that these
5.	Check the indications are gi	ven by the system (except for spare b	oits # 0).	
6.	Stop traffic.			

TEST 1	NUMBER: 13.8		PAGE:	1 of 1
REFER	RENCE: clause 15/Q.704			
TITLE	: Invalid messages			
SUBTI	TLE: Invalid signalling-route	-set-test messages		
PURPO	OSE: To check the actions of t	the system on reception of invalid R	ST messa	ges
PRE-T	EST CONDITIONS: Link 1-	1 available		
CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: STP				
MESSA	AGES SEQUENCE:			
SP A	A		SP B	
Linl			Link	
:Start tı				
1–1	TRAFFIC	<u> </u>		
			1–1	TRAFFIC
			1–1	RST, PC = X (non-existing PC)
			1–1	RST, PC = C (non-existing OPC)
			1–1	RST, PC = C (spare bits $\#$ 00)
1–1	TRAFFIC			(spare ons # oo)
		·	1–1	TRAFFIC
:Wait				
:Stop tr	raffic			
TEST I	DESCRIPTION			
1.	Start traffic to B and C.			
2.	Send to A the invalid messag without impact on the traffic	ges described above and check that to, (except for spare bits # 0).	these mess	sages are discarded
3.	Stop traffic.			

TEST NUMBER: 13.9		PAGE: 1 of 1	
REFERENCE: clause 15/Q.704			
TITLE: Invalid messages			
SUBTITLE: Invalid traffic restar	t allowed message		
PURPOSE: To check the actions	of the system on reception of an invalid	d traffic restart allowed message	
PRE-TEST CONDITIONS: Link	set with two available links		
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAGE SEQUENCE:			
SP A		SP B	
Link		Link	
:Start traffic			
1–1, 2 TRAFFIC			
		1–1, 2 TRAFFIC	
	\	1–1 TRA (unknown OPC)	
1–1, 2 TRAFFIC			
	\	1–1, 2 TRAFFIC	
:Wait			
:Stop traffic			
TEST DESCRIPTION			
1. Start traffic to B and C.			
	e described above and check that this me	essage is ignored	
5. Stop traffic and check the	at it was not distuibed.		

TEST NUMBER: 13.10		PAGE: 1 of 1			
REFERENCE: Q.707					
TITLE: Invalid messages					
SUBTITLE: Invalid H0-H1 in a signalling network testing	ng and mainter	nance message			
PURPOSE: To check the actions of the system on recept	tion of this inva	alid message			
PRE-TEST CONDITIONS: Link 1–1 available					
CONFIGURATION: A TYPE OF TES	CONFIGURATION: A TYPE OF TEST: VAT TYPE OF SP: ALL				
MESSAGE SEQUENCE:					
SP A	SP A				
Link	Link				
:Start traffic					
1–1 TRAFFIC ———————————————————————————————————	\rightarrow				
(1–1	TRAFFIC			
	<u> </u>	SIGNALLING NETWORK TESTING AND			
		MAINTENANCE MESSAGE			
		(Invalid H0-H1)			
1–1 TRAFFIC ———————————————————————————————————	\rightarrow				
(1–1	TRAFFIC			
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. Start traffic to B and C.					
2. Send a signalling network testing and maintenan	ce message wi	th a non-existing H0-H1.			
3. Check that this message is discarded without im	pact on the traf	fic.			
4. Stop traffic.					

TEST NUMBER: 13.11	PAGE: 1 of 1
REFERENCE: Q.707	
TITLE: Invalid messages	
SUBTITLE: Invalid signalling link test messages	
PURPOSE: To check the actions of the system on reception of	of an invalid signalling link test message
PRE-TEST CONDITIONS: Link 1-1 available	
CONFIGURATION: A TYPE OF TEST: V	TAT TYPE OF SP: ALL
MESSAGE SEQUENCE:	
SP A	SP B
Link	Link
:Start traffic	
1–1 TRAFFIC —————	
	——— 1–1 TRAFFIC
\	——— 1–1 SLTM (invalid SLC)
\	——— 1–1 SLTA (invalid SLC)
1–1 TRAFFIC —————	
\	——— 1–1 TRAFFIC
:Wait	
:Stop traffic	
TEST DESCRIPTION	
1. Start traffic to B and C.	
2. Send the invalid SLTM and SLTA described above a impact on the traffic.	nd check that they are discarded without
3. Stop traffic.	

TEST 1	NUMBER: 13.12		PAGE: 1 of 1
REFER	RENCE: clause 15/Q.704		
TITLE	: Invalid messages		
SUBTI	TLE: Invalid user part una	vailable messages	
PURPO	OSE: To check the actions of	of the system on reception of an inva	alid user part unavailable message
PRE-T	EST CONDITIONS: Link	1–1 available?	
CC	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
	AGE SEQUENCE:		
SP A	A		SP B
Link	94]	Link
:Start ti			
1–1	TRAFFIC		1 1 TRAFFIC
		·	1–1 TRAFFIC
			1–1 UPU (non-existing OPC)
1 1	TD A FELC		1–1 UPU (non-existing SI)
1–1	TRAFFIC		1 1 TRAFFIC
.337-:4		\	1–1 TRAFFIC
:Wait	cc -		
:Stop tı	таппс		
1	DESCRIPTION		
1.	Start traffic to B and C.	9 11 11 12 2	, ,
	2. Send the invalid UPUs described above and check that these messages are ignored.		
3.	Stop traffic and check that	t it was not disturbed.	

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure and Internet protocol aspects
Series Z	Languages and general software aspects for telecommunication systems
	Languages and general software aspects for telecommunication systems