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TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU

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

MTP level 3 test specification

ITU-T Recommendation Q.782

(Previously CCITT Recommendation)

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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 Recommendations Q.704 and Q.707. The level 3 performance aspects specified in Recommendation Q.706 are also partly checked whenever possible. This Recommendation conforms to Recommendation 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 revised by ITU-T Study Group 11 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 9th of July 1996.

FOREWORD

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NOTE

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Recommendation Q.782

MTP LEVEL 3 TEST SPECIFICATION

(Melbourne, 1988; modified at Helsinki, 1993; revised in 1996)

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 Recommendations Q.704 and Q.707. The level 3 performance aspects specified in Recommendation Q.706 are also partly checked whenever possible. This Recommendation conforms to Recommendation 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: STP
- 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, 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 to complicate 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.

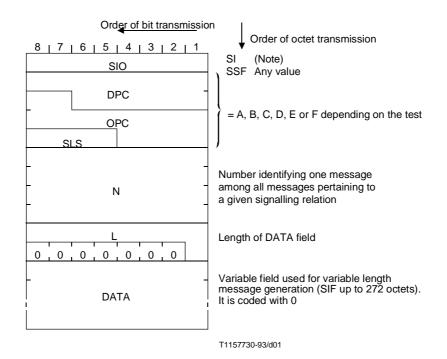
Set 11 deals with STP traffic test.

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.

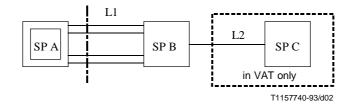


Figure 1/Q.782 – Configuration A

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:

$$-$$
 OPC = A, DPC = B and OPC = B, DPC = A

>>	Α	В	С
Α	_	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.

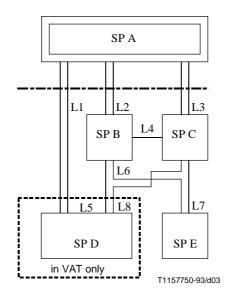


Figure 2/Q.702 – Configuration C

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).

>>	Α	В	С	D	Е	
Α	_	L2, L3	L3, L2	L1-L2-L3	L2-L3	
В	L2, L4	_	L4	L5, L4	L6, L4	
С	L3, L4	L4	_	L8, L4	L7, L4	
D	L1, L5, L8	L5, L8	L8, L5	_	Any	
Е	L7, L6	L6, L7	L7, L6	Any	_	
Li, Lj Li normal linkset and Lj alternative linkset Li-Lj Load sharing between Li and Lj						

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

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).

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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.

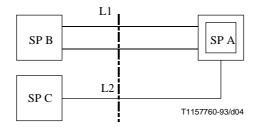


Figure 3/Q.782 – Configuration C

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.

>	А	В	С
Α	_	L1	L2
В	L1	_	L1
С	L2	L2	_

Table 3/Q.782 –	Routing	rules in	configuration	С
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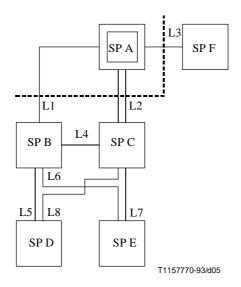
The tests performed with this configuration require that the traffic crosses the STP under test in both directions. Consequently the test traffic flows are, regarding the routing label of messages:

- 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 does 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.

<pre>></pre>	Α	В	С	D	Ε	F
Α	—	L1, L2	L2, L1	L1, L2	L1, L2	L3
В	L1, L4	_	L4	L5, L4	L6, L4	L1
С	L2, L4	L4	—	L8, L4	L7, L4	L2
D		Any		_	A	ny
Е	Any				_	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

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All tests with the indication "*" are validation and compatibility tests. The tests without asterisk are validation test 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 route failures
 - 2.7 Message transfer function
 - 3 Changeover
 - 3.1 Changeover initiated at one side of a linkset (COO <-> COA)
 - 3.2 Changeover initiated at the both ends at the same time (COO <-> 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 (- <- COO or ECO)
 - 3.7 Emergency changeover at one side of a linkset (COO <-> ECA)
 - 3.8 Emergency changeover at one side of a linkset (COO <-> ECO)
 - 3.9 Emergency changeover at one side of a linkset (ECO $\langle -\rangle$ COA)
 - 3.10 Emergency changeover at one side of a linkset (ECO <-> ECA)
 - 3.11 Emergency changeover at one side of a linkset (ECO <-> COO)
 - 3.12 Emergency changeover initiated at the both ends at the same time (ECO <-> 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

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- 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
 - 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

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- 7.14 Automatic uninhibition after test 7.5
- 7.15 Automatic uninhibition when two links are 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
*			9.1.1 Failure of normal linkset
*			9.1.2 On reception of a TFP
		9.2	Broadcast of TFPs
*			9.2.1 On one linkset failure
*			9.2.2 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 messages
		9.7	Reception of signalling-route-set-test messages
	10	Signe	alling point restart
		10.1	Recovery of a linkset (SP A does not have the STP function)
*			10.1.1 With use of point restart procedure
			10.1.2 Without use of point restart procedure
		10.2	Recovery of a linkset (SP A has the STP function)
*			10.2.1 With use of point restart procedure
			10.2.2 Without use of point restart procedure
			An adjacent signalling point becomes accessible via another signalling point (SP A
			does not have an STP function)
			An adjacent signalling point becomes accessible via another signalling point (SP A has STP function)
*			Restart of an SP having no STP function
*			Restart of an SP having STP function
			Reception of an unexpected TRA
			10.7.1 In an SP having no STP function
			10.7.2 In an SP having STP function
	11	Traff	fic test
	12	Signa	alling link test

12.1 After activation of a link

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- 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

TEST N	UMBER: 1.1			PAGE: 1 of 1			
REFERE	NCE: Q.704 clause 3	Fig. 7, Fig. 36, Fig. 37, I	Fig. 38				
TITLE:	TITLE: Signalling link management						
SUBTIT	SUBTITLE: First signalling link activation						
PURPOS	E: To put into service a sig	nalling linkset with 1 sig	nalling link				
PRE-TES	ST CONDITIONS: Signal	ing links deactivated					
СО	NFIGURATION: A	TYPE OF TEST:	VAT, CPT	TYPE (OF SP: ALL		
MESSAG	MESSAGE SEQUENCE:						
	SP A				SP B		
Linl	x		Link				
			1 – 1		:Activate		
1 – 1	1 :Activate						
		<	1 - 1	SLTM			
1 – 1	1 SLTA	>					
1 – 1	1 SLTM	>					
		<	1 – 1	SLTA			
:Start tra	ıffic						
1 – 1	1 TRAFFIC	>					
		<	1 – 1	TRAFFIC			
:Wait							
:Stop tra	ffic						
	ESCRIPTION						
1. 2.	Check that the signalling line Check the reception and set		messages on f	he activated linkset	from/to the SP at the		
2.	other end of this linkset (a						
3.	linkset).						
5.	Check that, after the alignment, the level 2 does not send any message received before or during the deactivation.						
4.	Check that all messages are	e correctly received (no le	oss of message	s, no duplication and	d no missequencing).		
5.	Stop traffic.						
6.	Repeat the test with differe	nt SLC values.					

TEST NUMBER: 1.2			PAGE: 1 of 1				
REFERENCE: Q.704 cla	use 3	Fig. 7, Fig. 36, Fig. 37, Fi	g. 38				
TITLE: Signalling link management							
SUBTITLE: Signalling h	SUBTITLE: Signalling linkset deactivation						
PURPOSE: To remove fr	rom service	a signalling linkset with 1	signalling lii	nk			
PRE-TEST CONDITION	S: One sig	nalling link (1 – 1) activa	ted				
CONFIGURATION: A TYPE OF TEST: VAT, CPT TYPE OF SP: ALL							
MESSAGE SEQUENCE	:						
SP A SP B							
Link							
1 – 1 :Deactivate							
TEST DESCRIPTION							
1. Check that the s	signalling lir	ikset becomes unavailable	2.				

TEST N	UMBER: 1.3		F	PAGE: 1 of 1	
REFERE	NCE: Q.704 clause 3, subc	lause 12.2.4.1 Fig. 7	, Fig. 36, Fig. 3'	7, Fig. 38	
TITLE:	Signalling link management	:			
SUBTITI	LE: Signalling linkset activ	ation			
PURPOS	E: To put into service a sig	nalling linkset with 4 sign	alling links		
PRE-TES	ST CONDITIONS: Signall	ing links deactivated			
CO	NFIGURATION: A	TYPE OF TEST:	VAT, CPT	TYPE OF SP	: ALL
MESSAC	GE SEQUENCE:	L			
	SP A				SP B
Linl	X		Link 1 – 1		:Activate
1 – 1	1 :Activate				
1 – 2	2 :Activate		1 – 2		:Activate
			1 – 3		:Activate
1 - 3	3 :Activate		1 - 4		:Activate
1 – 4	4 :Activate				
:Start tra					
1 – 1	1 TRAFFIC	> <	1 – 1	TRAFFIC	
1 - 2	2 TRAFFIC	<>	I = I	IRAFFIC	
		<	1 – 2	TRAFFIC	
1 - 3	3 TRAFFIC	>			
1 – 4	4 TRAFFIC	<>	1 – 3	TRAFFIC	
		<	1 - 4	TRAFFIC	
:Wait					
all signa are getti (changet	ffic This test describes the activ Illing links of the signalling ng aligned, changeback pro pack procedure is checked in ESCRIPTION	linkset (see 12.2.4.1/Q.70 ocedures will be performe	4). However, d	epending on in which o	rder the links
1LST D.	Check that the signalling li	nks become available and	etart traffic bot	veen A and R (and A and	1 C in VAT)
1. 2.	Check the reception and se other end of this linkset (a linkset).	ending of variable length n	nessages on the	activated linkset from/to	the SP at the
3.	Check that, after the align deactivation.	nment, the level 2 does r	not send any m	essage received before	or during the
4.	Check that all messages are	e correctly received (no los	ss of messages,	no duplication and no m	issequencing).
5.	Stop traffic.				

TEST NUMBER: 2.1		PAGE: 1 of 1			
REFERENCE: Q.704 clause 3, su	oclause 2.4 Fig. 24				
TITLE: Signalling message handli	ng				
SUBTITLE: Message received wi	th an invalid SSF (discrimination function	1)			
PURPOSE: To check the response	to a message with an invalid SSF				
PRE-TEST CONDITIONS: Signa	alling 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					
2. Check that no response in	s received.				

TEST NUMBER: 2.2		PAGE: 1 of 1			
REFERENCE: Q.704 clause 2 Fig. 24, Fig. 26					
TITLE: Signalling message handlin	g				
SUBTITLE: Message received with	an invalid DPC				
PURPOSE: To check the response t	o a message with an invalid DPC				
PRE-TEST CONDITIONS: Signal	ling linkset activated				
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL			
MESSAGE SEQUENCE:					
SP A		SP B			
Link	Link				
	< 1 – 1	:Invalid ECO (erroneous DPC)			
1 – 1 TFP	> (only if the	tested point A has an STP function)			
TEST DESCRIPTION					
2. Check that no response is the STP function, check th		e an STP function. If the tested point has			

TEST	TEST NUMBER: 2.3					PAGE: 1 of 1		
REFERENCE: Q.704 subclause 2.4 Fig. 24, Fig. 25								
TITL	E: S	ignalling	message hand	lling				
SUBT	FITLE	: Messa	ge received w	ith an erroneous SI (distribution fu	nction)		
PURE	POSE:	To cheo	ck the respons	se to a message receiv	ved with an err	oneous SI		
PRE-'	TEST	CONDI	FIONS: Sign	alling linkset activate	ed			
С	ONF	GURAT	ION: A	TYPE OF TES	Γ: VAT	TYPE O	F SP: ALL	
MESS	SAGE	SEQUE	NCE:					
		SP	А			SP	В	
Li	nk				Link			
				<	1 – 1	:Invalid SLTM :(invalid SI)		
TEST	DES	CRIPTIO	N					
1	Seno	l an SI TI	M message wi	th an invalid SI				
	1. Send an SLTM message with an invalid SI.						n the SI used	
2.	2. Check that no response is received except perhaps a UPU (cause unequipped) when the SI used does not exist.							

TEST N	UMBER: 2.4.1		PAGE: 1 of 1			
REFERE	NCE: Q.704 subclause 2.3	Fig. 26 Q.705	subclause 4.4			
TITLE:	Signalling message handling	7				
SUBTITI	LE: Load sharing within a l	inkset – All links availab	le			
PURPOS	E: To check the load sharir	ng within a linkset with a	ll the links ava	ilable		
PRE-TES	ST CONDITIONS: Signall	ing linkset activated				
CO	NFIGURATION: A	TYPE OF TEST:	VAT, CPT	TYPE OF SP: ALL		
MESSAC	GE SEQUENCE:					
	SP A			SP B		
Link	ζ.		Link			
:Start traf	fic					
1 – 1	TRAFFIC	>				
		<	1 - 1	TRAFFIC		
1 - 2	2 TRAFFIC	>	1 0			
1 – 3	3 TRAFFIC	<>	1 - 2	TRAFFIC		
1.		<	1 – 3	TRAFFIC		
1 - 4	4 TRAFFIC	>				
		<	1 - 4	TRAFFIC		
:Wait						
:Stop tra	ffic					
TEST DESCRIPTION						
1.	1. Start traffic to B (and C in VAT) for all SLS.					
2.			smitted on the	correct link in accordance with the SLS		
	Stop traffic, check that the messages have been transmitted on the correct link in accordance with the SLS field.					
3.	3. Check that there was no loss of messages, no duplication and no missequencing.					

TEST N	TEST NUMBER: 2.4.2 PAGE: 1 of 1					
REFERE	NCE: Q.704 subclause 2.3	Fig. 26 Q.705 subclause 4.4	4			
TITLE:	Signalling message handling	7				
SUBTIT	LE: Load sharing within a l	inkset – One link unavailable				
PURPOS	E: To check the load sharin	ng within a linkset when one link is una	vailable			
PRE-TES	ST CONDITIONS: Signall	ing link 1 – 3 deactivated				
СО	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL			
MESSAG	GE SEQUENCE:					
	SP A		SP B			
Link	ζ.	Link				
:Start traf	fic					
1 – 1	I TRAFFIC	>				
		< 1-1	TRAFFIC			
1 - 2	2 TRAFFIC	>				
		< 1 - 2	TRAFFIC			
1 - 4	4 TRAFFIC	>				
		< 1-4	TRAFFIC			
:Wait						
:Stop tra	ffic					
TEST DESCRIPTION						
1.						
2.		_	k in accordance with the SLS field on the			
	2. Check that the messages have been transmitted on the correct link in accordance with the SLS field on the remaining links.					

TEST NUN	TEST NUMBER: 2.5.1 PAGE: 1 of 1				
REFEREN	CE: Q.704 subclause 2.3	Fig. 26 Q.70.	5 subclause 4.4		
TITLE: Si	gnalling message handling	5			
SUBTITLE	E: Load sharing between l	inksets – Between two l	inksets		
PURPOSE:	: To check the load sharin	g between two linksets	under normal co	onditions	
PRE-TEST	CONDITIONS: All link	sets and routes available	2		
CONI	FIGURATION: B	TYPE OF TEST:	VAT, CPT	TYPE OF SP: ALL	
MESSAGE	E SEQUENCE:			·	
	SP A	SP B	SP C	SP E	
Link		Link	Link	Link	
:Start traffic	с				
3 – 1	TRAFFIC		> 7-1 -	>	
	<		3-1 <	< 7 – 1 TRAH	FIC
3 - 2	TRAFFIC		> 7_1 -		
52				< 7 – 1 TRAI	FIC
2 1					FIC
2 – 1	-	> 6-1			
2 - 2	TRAFFIC	> 6-1		>	
:Wait					
:Stop traffi	ic				
TEST DESCRIPTION					
1. S	Start the traffic to E for all	SLS.			
	-	hat the messages have b	een transmitted	on the correct linkset in accordance	e with
	the SLS and DPC. Check that there was no loss of messages, no duplication and no missequencing.				
	shoek that there was no los	s or messages, no dupin	and no m	assequencing.	

TEST NUMBER: 2.5.2 PAGE: 1 of 1						
REFERENCE: Q.704 subclause 2.3 Fig. 26 Q.705 subclause 4.4						
TITLE:	Signalling message handling	5				
SUBTITI	LE: Load sharing between 1	inksets – Between th	ree linksets			
PURPOS	E: To check the load sharin	g between three link	sets under normal co	onditions		
PRE-TES	T CONDITIONS: All link	sets and routes availa	able			
CO	NFIGURATION: B	TYPE OF 7	TEST: VAT	TYP	E OF SP:	ALL
MESSAC	BE SEQUENCE:					
	SP A	SP B	SP C		SP D	
Link		Link	Link		Link	
:Start traf	fic	Link	Link			
1 – 1						
1 - 1				, ,	1 – 1	TRAFFIC
1 - 2					I = I	TRAFFIC
1-2				-	1 2	
2 1					1 – 2	TRAFFIC
3 - 1						
3-2	-	> 5-1				
2 - 1		> 5-1				
2-2	2 TRAFFIC	> 5-1		>		
:Wait						
:Stop tra	ffic					
TEST DESCRIPTION						
1.	Start the traffic to D for all	SLS.				
2.	2. Stop the traffic and check that the messages have been transmitted on the correct linkset and on the correct					on the correct
3.	link in accordance with the Check that there was no los		plication and no mis	ssequencing		
5.			r und no mis			

TEST NUMBER: 2.5.3	TEST NUMBER: 2.5.3 PAGE: 1 of 1				
REFERENCE: Q.704 subclause 2.3	Fig. 26 Q.70)5 subclause 4.4			
TITLE: Signalling message handling	3				
SUBTITLE: Load sharing between l	inksets – Between three	e linksets and one ro	oute unavailable		
PURPOSE: To check the load sharir	ng between three linkset	s when one route is	unavailable		
PRE-TEST CONDITIONS: Linkset	ts 4 and 8 unavailable (ΓFP, PC = D from C	C to A)		
CONFIGURATION: B	TYPE OF TE	ST: VAT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A	SP B	SP C	SP D		
Link	Link	Link	Link		
:Start traffic 1 – 1 TRAFFIC			X		
1 – 2 TRAFFIC			>		
<			1 – 2 TRAFFIC		
_	> 5-1				
2 – 2 TRAFFIC	> 5-1		>		
:Stop traffic					
TEST DESCRIPTION					
1. Start the traffic for all SLS	1. Start the traffic for all SLS, wait and stop.				
2. Check that the traffic to D	via C has been shared o	n the remaining linl	ksets.		

TEST NU	TEST NUMBER: 2.5.4 PAGE: 1 of 1						
REFEREN	REFERENCE: Q.704 subclause 2.3 Fig. 26 Q.705 subclause 4.4						
TITLE: S	ignalling message handlin	g					
SUBTITL	E: Load sharing between	linksets – Between th	ree linksets and one	linkset unavailabl	e		
PURPOSE	E: To check the load sharing	ng between two linkse	ets after the unavaila	ability of the third	linkset		
PRE-TEST	Γ CONDITIONS: Linkse	t 1 deactivated					
CON	IFIGURATION: B	TYPE OF 7	TEST: VAT	TYPE	OF SP:	ALL	
MESSAG	E SEQUENCE:	1					
	SP A	SP B	SP C	:	SP D		
Link		Link	Link		Link		
:Start traff	ia						
.start trari			× 0 1	×			
3-2							
2 – 1		> 5-1					
			<		5 – 1	TRAFFIC	
2-2		> 5-1					
	<	2-2	<	:	5 – 1	TRAFFIC	
:Wait							
:Stop traf	fic						
TEST DESCRIPTION							
1.	1. Start the traffic for all SLS to D, wait and stop.						
2.							

TEST NUMBER: 2.6.1				PAGE: 1 of 1		
REFERE	NCE: Q.704 Fig. 26					
TITLE:	Signalling message handling	3				
SUBTITI	E: Inaccessible destination	n – Due to a linkset failure				
PURPOS	E: To check the signalling failure	message handling when a de	stination b	ecomes inaccessible due to a linkset		
PRE-TES	T CONDITIONS: Signall	ing linkset with one link avai	ilable			
CO	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL		
MESSAC	GE SEQUENCE:					
	SP A			SP B		
Link	5		Link			
:Start traf	fic					
1 – 1	TRAFFIC	>				
		<	1 - 1	TRAFFIC		
1 – 1	:Deactivate					
TEST DESCRIPTION						
1.	Start the traffic for all SLS					
2. 3.	Deactivate the last link 1 – Check that the SPs B and C	1 and check that the linkset	becomes u	navailable.		
3. 4.			vailabilitv	of the linkset are discarded.		
	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		
REFERENCE: Q.704 Fig. 26						
TITLE:	Signalling message handling	ŗ.				
SUBTITI	E: Inaccessible destination	– Due to a route failure				
PURPOS	E: To check the signalling TFP	message handling when a de	estination b	ecomes inaccessible on reception of a		
PRE-TES	T CONDITIONS: All link	s and routes available				
CO	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL		
MESSAC	E SEQUENCE:					
	SP A			SP B		
Link	:		Link			
:Start traf	fic					
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. 2.	Start the traffic to B and C Provoke the sending of a T	for all SLS. FP (PC = C) from SP B to S^{2}	SD A			
2. 3.	Check that the SP C becom		or A.			
4.	Stop traffic.					
5.		ored or received after the ina	ccessibility	have been discarded.		
6.	6. Check that traffic to B has not been disturbed.					

TEST	EST NUMBER: 2.6.3				PAGE: 1 of 1		
REFE	RENCE: Q	.704 Fig. 26					
TITL	E: Signalling	g message handling	7				
SUBT	TITLE: Inaco	cessible destination	n – Due to a linkset and	d a route failure			
PURF		eck the signalling the failure	message handling whe	en a destination be	ecomes inaccessible due to a linsket and		
PRE-	fest cone	DITIONS: Linkset	4 unavailable				
	CONFIGUR	ATION: B	TYPE OF T	EST: VAT	TYPE OF SP: ALL		
MESS	SAGE SEQU	JENCE:					
		SP A		SP B	SP C		
I	Link		Lir	nk	Link		
:Start	traffic						
1	– 1, 2	TRAFFIC	<		> SP D		
	3 – 1	TRAFFIC			> To D and E		
			<		3 – 1 TRÁFICO (desde E)		
	3 – 2	TRAFFIC			> To D and E		
			<		$3-2$ TRAFFIC (from E)		
	2 – 1	TRAFFIC	>	To D and E			
	2 - 2	TRAFFIC	>	To D and E			
					7 – 1 : Deactivate		
			<		$ \qquad 3-X \qquad \text{TFP, PC} = \text{E}$		
	2 – 1	TRAFFIC	>	To D and E			
			<	2 – 1 TRAFFIC (from E)			
	2 - 2	TRAFFIC	>	To D and E			
			<	2 – 2 TRAFFIC (from E)			
	2 – 1	:Deactivate					
	2 - 2	:Deactivate					
1	– 1, 2	TRAFFIC	<		> SP D		
:Wait							
:Stop	traffic						
			0 0	ent procedures) a	re not described in this test which checks		
only the signalling message handling.							
TEST	TEST DESCRIPTION						
1.		ffic to the SPs D ar					
2.		sending of a TFP he traffic to D is not		C to SP A, check	that the traffic to E is routed via B and		
3.	Deactivate t	he linkset 2 and ch	eck that the destinatio	on E becomes inac	ccessible. Stop traffic.		
4.	4. Check that all messages stored or received during the inaccessibility have been discarded.						

TEST N	UMBER: 2.7	PAGE: 1 of 1				
REFERE	ENCE: Q.704 clause 2	Fig. 26				
TITLE:	Signalling message handling	3				
SUBTIT	LE: Message transfer functi	on				
PURPOS	E: To test the transfer function	tion in an STP				
PRE-TES	ST CONDITIONS: All link	xs available				
СО	NFIGURATION: C	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL			
MESSAG	GE SEQUENCE:					
	SP B	SP	A SP C			
Linl	k	Link	Link			
:Start tra	ıffic					
1 – 1,	, 2 TRAFFIC	> 2-1				
		< 1-1,2 <-	TRAFFIC			
:Wait	c					
:Stop tra	linc					
NOTE – The traffic used in this test is in conformance with the traffic model presented in Recommendation 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 duplication and no missequencing. Check that the information field of these messages has not been corrupted.					

TEST NUMBER: 3.1	PAGE: 1 of 1					
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30						
TITLE: Changeover						
SUBTITLE: Changeover initiated at one side of a linkset (COO <-> COA)						
PURPOSE: To check the normal char	geover procedure					
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	TRAFFIC				
1–2 TRAFFIC	>					
	< 1-2	TRAFFIC				
1 – 1 :Deactivate (MML	command or failure)					
1 – 2 COO, SLC 1 – 1	>					
	< 1 – 2	COA, SLC 1 – 1				
1 – 2 TRAFFIC	>					
(from 1 – 1)						
	< 1 – 2	TRAFFIC (from 1 – 1)				
:Wait						
:Stop traffic						
TEST DESCRIPTION						
1. Start traffic to B and C on al	Start traffic to B and C on all the links.					
	Deactivate link $1 - 1$, check that a COO is sent (from A) for $1 - 1$ on $1 - 2$ and respond with a COA within					
T2.	· · · · ·					
3. Check that the time between Recommendation Q.706).	Check that the time between the deactivation and the sending of the COO is inside the specified value (see Recommendation Q.706).					
	Check that the traffic from link $1 - 1$ is changed over to $1 - 2$ and check that the traffic normally carried by $1 - 2$ is passed over to $1 - 2$.					
5. Stop traffic and check it missequencing).	Stop traffic and check it has been received correctly (no lost messages, no duplication and no missequencing).					
	Repeat the test by sending the COO from B (instead of A). In addition, check that the time between the reception of the COO and the sending of the COA is inside the specified value (see Recommendation					

TEST NUMBER: 3.2				PAGE: 1 of 1		
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30						
TITLE: Changeover						
SUBTITLE: Changeover initiated at both ends at the same time (COO <> 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						
CO	ONFIGURATION: A	TYPE OF TEST: V	AT	TYPE OF SP: ALL		
MESSAC	BE SEQUENCE:					
	SP A			SP B		
Link	(Link			
:Start traf	fic					
1 – 1	TRAFFIC	>				
		<	1 – 1	TRAFFIC		
1 - 2	2 TRAFFIC	·>				
1 - 2	I INALLIC	-	1 0			
			1 - 2	TRAFFIC		
1 – 1	× *	:Deactivate (MML command or failure)				
1 - 2	2 COO (SLC 1 – 1)	>				
		<	1 - 2	COO (SLC 1-1)		
1 - 2	2 COA (SLC 1-1)	>				
		<	1 - 2	COA (SLC 1 - 1)		
1 – 2	2 TRAFFIC (from 1 – 1)	>				
		<	1 – 2	TRAFFIC (from 1 – 1)		
:Wait						
: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.	4. Repeat the test without sending of COA from SP B to SP A.					

TEST NUMBER: 3.3					PAGE: 1 of 1		
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30							
TITLE:	TITLE: Changeover						
SUBTITI	SUBTITLE: Changeover on expiration of timer T2 (COO or ECO -> -)						
PURPOSE: To check the changeover procedure when no COA is received in response of a COO previously sent							
PRE-TES	T CONDITION	S: Linkset w	ith two available links				
CONFIGURATION: A			TYPE OF TEST:	VAT	TYPE OF SP: ALL		
MESSAC	BE SEQUENCE:						
		SP A			SP B		
Link	ζ.			Link			
:Start traf							
1 – 1		IC.	>				
				1 – 1	TRAFFIC		
1 – 2	2 TRAFF	IC.	` >				
		-	<	1 – 2	TRAFFIC		
1 – 1	:Deacti	vate (MML c	ommand or failure)				
1 – 2			>				
	,	T2					
1 – 2	2 TRAFFI (from 1	IC	>				
			<	1 – 2	TRAFFIC (from $1 - 1$)		
:Wait							
:Stop traffic							
TEST DESCRIPTION							
1. Start traffic to B and C on all the links.							
2.	Deactivate link $1 - 1$, check that a COO is received for $1 - 1$ on link $1 - 2$.						
3.	After the expiration of T2, check that the changeover procedure is performed.						
4. 5.	Check that the duration of T2 is inside the specified range. Stop traffic and check that there was no duplication and no missequencing, some messages may be lost as						
Э.	the system should not perform retrieval.						
6.	6. Repeat the test but replacing COO by ECO.						

TEST NUMBER: 3.4		PAGE: 1 of 1		
REFERENCE: Q.704 clause 5 F	ig. 28, Fig. 29, Fig. 30			
TITLE: Changeover				
SUBTITLE: Unreasonable FSN in CC	O/COA			
PURPOSE: To check the changeover	procedure on reception of a COO/COA	containing an unreasonable FSN		
PRE-TEST CONDITIONS: Linkset v	vith 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	TRAFFIC		
1 – 2 TRAFFIC	>			
	< 1-2	TRAFFIC		
1 – 1 :Deactivate (MML of	command or failure)			
1-2 COO, SLC $1-1$	>			
	< 1 – 2	COA, SLC 1 – 1 (unreasonable FSN)		
1 – 2 TRAFFIC (from 1 – 1)	>			
	< 1 – 2	TRAFFIC (from $1 - 1$)		
:Wait				
:Stop traffic				
TEST DESCRIPTION				
1. Start traffic to B and C on all the links.				
		ink $1 - 2$ and respond within T2 with a		
COA containing an unreasonable FSN.3. Stop traffic, check that the changeover procedure has been performed.				
_		e messages may be lost as the system		
should not perform retrieval.				
5. Check that an indication is gi				
6. Repeat the test with a COO s	Repeat the test with a COO sent from B (instead COA) containing an unreasonable FSN.			

TEST N	UMBER: 3.5			PAGE: 1 of 1	
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover				
SUBTITI	E: Reception of a changeo	over acknowledgement with	out sending	a changeover order (– <– COA or ECA)	
PURPOS	E: To check the changeove	er procedure on reception of	an unexpec	ted changeover acknowledgement	
PRE-TES	T CONDITIONS: Linkset	t with two available links			
CO	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAC	E SEQUENCE:				
	SP A			SP B	
Link	:		Link		
:Start traf	fic				
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	2 TRAFFIC	>			
		<	1 - 2	TRAFFIC	
:Wait					
:Stop tra	ffic				
	TEST DESCRIPTION				
1. 2.	 Start traffic to B and C on all the links. Send a COA for 1 – 1 on link 1 – 2, check that this message is ignored. 				
3.		it has been received correct.		orcu.	
4.	Repeat the test with an EC.				

TEST N	UMBER: 3.6			PAGE: 1 of 1
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30			
TITLE:	Changeover			
SUBTITI	LE: Reception of an additional	changeover order (- <- COO	or ECO))
PURPOS	E: To check the action of the s completion of changeover	system when a changeover ord	ler relatin	g to a particular link is received after
PRE-TES	ST CONDITIONS: Linkset wi	ith only the link $1-2$ available	e	
C	ONFIGURATION: A	TYPE OF TEST: V	AT	TYPE OF SP: ALL
MESSAG	GE SEQUENCE:			
	SP A			SP B
Linl	~		Link	
:Start traf			LIIK	
1 - 2	2 TRAFFIC	>		
			1 - 2	TRAFFIC
		<	1 – 1	COO, SLC 1 – 1
1 - 2	2 ECA, SLC 1 – 1	>		
1 - 2	2 TRAFFIC	>		
		<	1 - 2	TRAFFIC
:Wait				
:Stop tra	ffic			
TEST DESCRIPTION				
1.	Start traffic to B and C on link	x 1 – 2.		
2.				
 Stop traffic and check that it has been received correctly. 				
4.	Repeat the test with an ECO in	-		

TEST N	UMBER: 3.7			PAGE: 1 of 1	
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover				
SUBTITI	E: Emergency changeover a	at one side of a linkset (COO	O <-> ECA	A)	
PURPOS	E: To check the emergency	changeover procedure when	a COO is	acknowledged by an ECA	
PRE-TES	T CONDITIONS: Linkset	with two available links			
СО	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAC	E SEQUENCE:				
	SP A			SP B	
Link			Link		
:Start traf	fic				
1 – 1	TRAFFIC	>			
		<	1 - 1	TRAFFIC	
1 - 2	TRAFFIC	>			
		<	1 - 2	TRAFFIC	
1 – 1	:Deactivate (MML	command or failure)			
1 - 2	COO, SLC 1 – 1	>			
		<	1 - 2	ECA, SLC 1 – 1	
		<	1 - 2	TRAFFIC (from $1 - 1$)	
1 - 2	$\begin{array}{l} \mathbf{C} \qquad \mathbf{TRAFFIC} \\ (\text{from } 1-1) \end{array}$	>			
:Wait					
:Stop trai	ffic				
TEST DESCRIPTION					
1.	Start traffic to B and C on al				
2. 3.	 Check the sending of a COO (from A) for 1 – 1 on 1 – 2 and check that an ECA is sent inside T2. Check that the traffic is changed over from 1 – 1 to 1 – 2. 				
3. 4.		•		uplication and no missequencing. Some	
_	messages may be lost as the	system should not perform			
5.	Repeat the test by sending C	UU from B (instead of A).			

TEST N	UMBER: 3.8			PAGE: 1 of 1	
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover				
SUBTITI	LE: Emergency changeover	at one side of a linkset (COO	O <-> ECC))	
PURPOS	E: To check the emergency	changeover procedure when	a COO is	acknowledged by an ECO	
PRE-TES	T CONDITIONS: Linkset	with two available links			
СО	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAC	BE SEQUENCE:				
	SP A			SP B	
Link			Link		
:Start traf	fic				
1 – 1	TRAFFIC	>			
		<	1 – 1	TRAFFIC	
1 - 2	2 TRAFFIC	>			
		<	1 - 2	TRAFFIC	
1 – 1	:Deactivate (MML	command or failure)			
1 - 2	× ×	*			
	,		1 - 2	ECO, SLC 1 – 1	
1 - 2	2 COA, SLC 1 – 1	>		<i>,</i>	
1 - 2	,	>			
	(110111 - 1)	<	1 - 2	TRAFFIC (from 1 – 1)	
:Wait					
:Stop trat	ffic				
TEST DESCRIPTION					
1. 2.			2 and check	c that an ECO is sent (before T2 expires)	
2.	2. Check the sending of a COO (from A) for $1 - 1$ on $1 - 2$ and check that an ECO is sent (before T2 expires) and a COA is received.				
3.	Check that the traffic is changed over from $1 - 1$ to $1 - 2$.				
4.				uplication and no missequencing. Some	
5.	messages may be lost as the Repeat the test but send CO		reuneval.		
5.	report the tost out bond CO	C 110111 2 (111510000 01 71).			

TEST NUMBER: 3.9	9			PAGE: 1 of 1	
REFERENCE: Q.704	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE: Changeover					
SUBTITLE: Emerger	ncy changeover at	one side of a linkset (ECO <	<-> COA)		
PURPOSE: To check	the emergency ch	angeover procedure when a	n ECO is a	acknowledged by a COA	
PRE-TEST CONDITI	ONS: Linkset wi	th two available links			
CONFIGURAT	TION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAGE SEQUEN	CE:				
	SP A			SP B	
Link			Link		
:Start traffic					
1-1 TRA	AFFIC	>			
		<	1 - 1	TRAFFIC	
1-2 TRA	AFFIC	>			
		<	1 - 2	TRAFFIC	
1-1 :De	eactivate (failure)				
1 – 2 ECC	D, SLC 1 – 1	>			
		<	1 - 2	COA, SLC 1 – 1	
		<	1 - 2	TRAFFIC (from $1 - 1$)	
	AFFIC m 1 – 1)	>			
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. Start traffic	to B and C on all l	inks.			
	-	over from $1 - 1$ to $1 - 2$.	lu no d	plication and no missequencing, some	
		stem should not perform re		pheation and no missequencing, some	
5. Repeat the test but send ECO from B (instead of A).					

TEST NU	JMBER: 3.10		Р	AGE: 1 of 1
REFEREN	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30			
TITLE: 0	Changeover			
SUBTITL	E: Emergency changeover at	one side of a linkset (ECO <> EC	CA)	
PURPOSI	E: To check the emergency ch	angeover procedure when an ECO	is acl	knowledged by an ECA
PRE-TES	T CONDITIONS: Linkset wi	th two available links		
СС	ONFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL
MESSAG	E SEQUENCE:			
	SP A			SP B
Link		Li	nk	
:Start traff	fic			
1 – 1		>		
		< 1-1		TRAFFIC
1 – 2	TRAFFIC	>		
		< 1 – 2	2	TRAFFIC
1 – 1	:Deactivate (failure)			
1 – 2	ECO, SLC 1 – 1	>		
		< 1-2	2	ECA, SLC 1 – 1
		< 1-2	2	TRAFFIC (from 1 – 1)
1 – 2	TRAFFIC (from 1 – 1)	>		
:Wait				
:Stop traf	fic			
TEST DESCRIPTION				
1.	Start traffic to B and C on all			
2.	1			
3. 4.	Check that traffic is changed of Stop traffic and check that it		dunli	cation and no missequencing. Some
	-	stem should not perform retrieval	-	cation and no missequencing, some
5.	Repeat the test but send ECO	from B (instead of A).		

TEST N	TEST NUMBER: 3.11 PAGE: 1 of 1				
REFERE	NCE: Q.704 clause 5 F	Fig. 28, Fig. 29, Fig. 30			
TITLE:	Changeover				
SUBTITI	E: Emergency changeover a	at one side of a linkset (ECC) <-> COC))	
PURPOS	E: To check the emergency	changeover procedure when	an COO is	s received in response to an ECO	
PRE-TES	T CONDITIONS: Linkset	with two available links			
СО	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAC	E SEQUENCE:				
	SP A			SP B	
Link			Link		
:Start traf	fic				
1 – 1	TRAFFIC	>			
		<	1 – 1	TRAFFIC	
1 - 2	TRAFFIC	>			
		<	1 - 2	TRAFFIC	
1 – 1	:Deactivate (failure	e)			
1 - 2	ECO, SLC 1 – 1	>			
		<	1 - 2	COO, SLC 1 – 1	
1 - 2	ECA, SLC 1 – 1	>			
1 – 2	TRAFFIC (from 1 – 1)	>			
		<	1 - 2	TRAFFIC (from $1 - 1$)	
:Wait					
:Stop trat	ffic				
TEST DI	TEST DESCRIPTION				
1.	Start traffic to B and C on al				
2.	Check that an ECO is red acknowledged with an ECA		and that a	COO is sent before T2 expires and	
3.	Check that traffic is changed				
4.	Stop traffic and check that messages may be lost as the			uplication and no missequencing. Some	
5.	Repeat the test but sent ECC		iourovai.		
I					

TEST N	PAGE: 1 of 1				
REFERE	NCE: Q.704 clause 5 F	Fig. 28, Fig. 29, Fig. 30			
TITLE:	Changeover				
SUBTITI	LE: Emergency changeover i	nitiated at both ends at the s	same time (ECO <> ECO)	
PURPOS	E: To check the emergency of	changeover procedure when	it is initiat	ed at the both ends simultaneously	
PRE-TES	T CONDITIONS: Linkset	with two available links			
CO	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAC	BE SEQUENCE:				
	SP A			SP B	
Link	5		Link		
:Start traf	fic				
1 – 1	TRAFFIC	>			
		<	1 – 1	TRAFFIC	
1 - 2	2 TRAFFIC	>			
		<	1 - 2	TRAFFIC	
1 – 1	:Deactivate (failure)			
1 - 2	ECO, SLC 1 – 1	>			
		<	1 - 2	ECO, SLC 1 – 1	
1 - 2	2 ECA, SLC 1 – 1	>			
		<	1 - 2	ECA, SLC 1 – 1	
1 – 2	2 TRAFFIC (from 1 – 1)	>			
		<	1 - 2	TRAFFIC (from $1 - 1$)	
:Wait					
:Stop tra	ffic				
TEST DESCRIPTION					
1.	Start traffic to B and C on all	l links.			
2.	2. Check that an ECO is received for $1-1$ on $1-2$ and that an ECO is sent before T2 expires and				
3.	 acknowledged with ECA. Check that traffic is changed over from 1 – 1 to 1 – 2. 				
3. 4.	Stop traffic and check that	it has been received corre		uplication and no missequencing. Some	
5.	messages may be lost as the Repeat the test without sendi	•			

TEST N	UMBER: 3.13		PAGE: 1 of 1		
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover				
SUBTIT	LE: Reactivation of a link d	uring a changeover procedure			
PURPOS	E: To check the changeove procedure	r procedure when the link failure causing	ng the changeover is removed during the		
PRE-TES	ST CONDITIONS: Linkset	with two available links			
СО	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAG	GE SEQUENCE:				
	SP A		SP B		
Linl	x	Link			
:Start traf	ffic				
1 – 1	1 TRAFFIC	>			
		< 1-1	TRAFFIC		
1 - 2	2 TRAFFIC	>			
		< 1-2	TRAFFIC		
1 – 1	1 :Deactivate (failur	e)			
1 – 1	1 :Activate (end of f	failure)			
:Wait	:Wait				
:Stop tra	ffic				
NOTE – This test will be performed if applicable (some systems may terminate the changeover procedure, then perform the changeback).					
TEST D	TEST DESCRIPTION				
1.	Start traffic to B and C on a	all links.			
2.	2. Deactivate the link $1 - 1$ and reactivate this link immediately.				
3.					
4.		the links $1 - 1$ and $1 - 2$ normally.			

TEST N	NUMBER: 3.14 PAGE: 1 of 1				
REFERE	REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover				
SUBTIT	LE: Simultaneous changeove	er			
PURPOS	E: To check that the system	can correctly handle simult	aneous failt	ures of several links	
PRE-TES	ST CONDITIONS: Linkset	with three available links			
СС	NFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSAG	GE SEQUENCE:				
	SP A			SP B	
Linl	ζ.		Link		
:Start traf	fic				
1 -		>			
		<	1 – 1	TRAFFIC	
1 - 2	2 TRAFFIC	` >	1 1		
1 .		<	1 - 2	TRAFFIC	
1 – 2	3 TRAFFIC	>	1 – 2	IKAITE	
1 = .) INAFIC	> <	1 – 3	TRAFFIC	
1 – 1, 1	2 ·Deactivate (MMI	command or failure)	1 = 3	IRAITIC	
1 - 1, 1 1 - 1		>			
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		>			
1	3 COD, SLC 1 – 2	> <	1 – 3	COA SLC 1 1	
				COA, SLC 1 - 1	
1		<	1 – 3	COA, SLC $1-2$	
1 – 3	3 TRAFFIC (from 1 – 1 and	>			
	(10111 - 1) and $(1 - 2)$				
)	<	1 – 3	TRAFFIC	
				(from 1 - 1 and 1 - 2)	
:Wait					
:Stop tra	ffic				
TEST D	TEST DESCRIPTION				
1.	Start traffic to B and C on a	ll links.			
2.	Deactivate the links $1 - 1$ ar				
3.		-	_ 2 and rat	spond with COAs inside T2s. Check that	
5.	traffic is changed over from		<i>–</i> ∠, and res	spond with COAs fistue 128. Check lifth	
4.	•		rrectly (no	lost messages, no duplication and no	

TEST N	UMBER: 3.15		PAGE: 1 of 1		
REFERE	NCE: Q.704 clause 5	Fig. 28, Fig. 29, Fig. 30			
TITLE:	Changeover				
SUBTITI	E: Changeover to several a	lternative links within a lin	nkset		
PURPOS	E: To check the changeover	procedure when there are	several alterr	native links	
PRE-TES	T CONDITIONS: Linkset	with all links available			
CC	NFIGURATION: A	TYPE OF TEST	: VAT	TYPE OF SP: ALL	
MESSAC	BE SEQUENCE:				
	SP A			SP B	
Link			Link		
:Start traf $1-1$		>	1 1		
1 – 2	2 TRAFFIC	<> <>	1 - 1 1 - 2	TRAFFIC	
1 – 3	3 TRAFFIC	<> <>	1-2	TRAFFIC	
1 - 4	TRAFFIC	<> <>	1 – 3	TRAFFIC	
1 – 1		command or failure)			
1 – 2, 3		> <	1 – 2, 3 or 4	COA, SLC 1 – 1	
1 - 2	2 TRAFFIC (from 1 – 1)	>	1 2		
1 – 3	3 TRAFFIC (from 1 – 1)	<>	1 – 2	TRAFFIC (from $1 - 1$)	
1 – 4		<>	1 – 3	TRAFFIC (from $1 - 1$)	
:Wait		<	1 - 4	TRAFFIC (from $1 - 1$)	
:Stop tra	ffic				
TEST D	TEST DESCRIPTION				
1.	Start traffic to B and C on a	ll links.			
2.		-	-	ed to links $1 - 2$, $1 - 3$ and $1 - 4$.	
3.	this linkset.			s according to the load sharing policy of	
4.	Check that, for each destin missequencing.	ation and for each SLS,	there were no	o lost messages, no duplication and no	

TEST NUMBER: 3.16	T NUMBER: 3.16 PAGE: 1 of 1			
REFERENCE: Q.704 clause 5	Fig. 28, Fig. 29, Fig. 30			
TITLE: Changeover				
SUBTITLE: Changeover to anothe	er linkset with adjacent SP	accessible		
PURPOSE: To check that the syste becomes unavailable	em performs changeover to	an alternative	route when the last	link of a linkset
PRE-TEST CONDITIONS: Links	set 1 and link 3 – 1 unavail	able		
CONFIGURATION: B	TYPE OF TEST:	VAT, CPT	TYPE (OF SP: ALL
MESSAGE SEQUENCE:				
SP A	SP B	SP C	2	SP •
<	Link	8-1 < 3-2 <		
TRAFFIC	> 6 – 1 > 5 – 1 2 – 1, 2 < AL command or failure)		>	SP E SP D SP D
3 – 2	> 4-1 2-X <		COA, SLC	3-2
2 – 1, 2 TRAFFIC (from 3 – 2) <	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		> 5 – 1	SP E SP D SP D SP E
TEST DESCRIPTION				
 Start traffic to E (and D in VAT). 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. Stop traffic and check that it has been shared on the alternative links 2 - 1 and 2 - 2 according to the load sharing rules of linkset 2. Check that, for each SLS, there were no lost messages, no duplication and no missequencing. 				
	, there were no lost messag e COO with ECO (some n		-	encing.

TEST NUMBER: 3	.17			PAGE: 1 of 1	
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30					
TITLE: Changeover					
SUBTITLE: Change	over to anothe	r linkset with adjacent	SP inaccessible		
PURPOSE: To check link	k that the syste	m responds correctly v	when there is no	path between the ends o	f an unavailable
PRE-TEST CONDIT	IONS: Links	et 4 unavailable			
CONFIGURATIC	N: B	TYPE OF TEST:	VAT, CPT	TYPE OF	SP: ALL
MESSAGE SEQUE	NCE:				
SP A		SP B	SP C	SP	Е
Link :Start traffic 2 – 1 TRAFFIO	с	Link	Link	Link	
	C			>	
3–1 TRAFFI		;		> 7-1	TRAFFIC
3–2 TRAFFI	•				ΙΚΑΓΓΙΟ
	<		3-2 <	7 – 1	TRAFFIC
		nmand or failure) nmand or failure)			
T1					
3 – 1 TRAFFI	С	>	> 7-1	>	
(from 2 –	. ,		2 1	7 1	
3–2 TRAFFI		;			TRAFFIC
(from 2 –				~	
***	<		3-2 <	7 – 1	TRAFFIC
:Wait :Stop traffic					
TEST DESCRIPTION					
	to E on linkse	et 2 and 3.			
3. Check that traffic continues on linkset 3 at the expiration of T1.					
4. Stop traffic and check that it has been shared on links $3 - 1$ and $3 - 2$ according to the load sharing rules of the linkset 3.					
	the traffic has ed or duplicat		ly. Some messag	ges may have been lost	but none should be
6. Check that	the duration of	f T1 is inside the specif	fied range.		

TEST N	TEST NUMBER: 3.18 PAGE: 1 of 1			
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30				
TITLE:	Changeover			
SUBTITI	LE: Changeover to two lin	ksets		
PURPOS	E: To check the changeov	er procedure when it is	performed to sever	al links pertaining to two linksets
PRE-TES	T CONDITIONS: Link 1	– 1 unavailable, all oth	her available	
CON	FIGURATION: B	TYPE OF TES	ST: VAT	TYPE OF SP: ALL
MESSAC	GE SEQUENCE:			
	SP A	SP B	SP C	SP D
Link		Link	Link	Link
:Start traf				
1 – 2	110.11.10			<i>,</i>
1-2	 Deactivate (MML co:			1 – 2 TRAFFIC
1-2 2-X	,	> 5-1		>
2 11	SLC $1-2$	<i>,</i> , , , , , , , , , , , , , , , , , ,		
or 3 – X			-> 8-1	>
	<	2 – X <		
				SLC 1-2
2 – 1	TRAFFIC	> 5-1		>
		2 – X <		5 – 1 TRAFFIC
				(from 1-2)
2 - 2	TRAFFIC	> 5-1		
	(from 1 – 2)			
3 – 1	1101110		-> 8-1	>
3-2	(from 1-2) TRAFFIC		-> 8-1	>
5-2	(from $1-2$)			
:Wait				
:Stop tra	ffic			
TEST D	ESCRIPTION			
1.	Start traffic to D.			
2.	Deactivate the link $1 - 2$ from D to A via B or C in		for $1 - 2$ is sent to	D via B or C and that a COA is sent
3.			the alternative links	2 - 1, 2 - 2, 3 - 1 and $3 - 2$ according
5.	to the load sharing rules in		ine unernative miks	2 1, 2 2, 5 1 and $5 - 2$ according
4.	Check that, for each SLS,		sages, no duplicatio	n and no missequencing.
5.	Repeat the test but replace	COO with ECO (some	e messages may hav	ve been lost).

TEST N	TEST NUMBER: 3.19 PAGE: 1 of 1		
REFERENCE: Q.704 clause 5, subclause 3.2.2			
TITLE:	Changeover		
SUBTIT	LE: Changeover due to vari	ous reasons	
PURPOS	E: To check the interface L	2-L3	
PRE-TES	ST CONDITIONS: Linkset	with two available links	
СО	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAG	GE SEQUENCE:		
	SP A		SP B
Linl	x	Link	
:Start traf	fic		
1 – 1		>	
1		< 1-1	TRAFFIC
1 – 2	2 TRAFFIC	<> I = I	
1	2 ΙΚΑΓΓΙΟ	,	
		< 1-2	TRAFFIC
1 – 1		to various reasons (Note)	
	CHANGEOVER		
1 - 2	2 TRAFFIC (from 1 – 1)	>	
	(110111-1)	< 1-2	TRAFFIC (from 1 – 1)
:Wait		< 1 - 2	$\mathbf{I} \mathbf{K} \mathbf{A} \mathbf{I} \mathbf{I} \mathbf{C} (\mathbf{I} 0 \mathbf{I} \mathbf{I} - \mathbf{I})$
	ffin		
:Stop tra	IIIC		
NOTE – The object of this test is to check the interface L2-L3 by invoking a changeover 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, SIO and SIPO of L2, and 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 DESCRIPTION			
 Start traffic to B and C on all links. Invoke the deactivation of the link 1 – 1 (see Note above). Check that traffic is changed over from 1 – 1 to 1 – 2. Stop traffic and check that it has been received correctly. Repeat the test for each reason. 			

TEST N	JMBER: 3.20			PAGE: 1 of 1	
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30					
TITLE:	TITLE: Changeover				
SUBTITI	E: Changeover as compati	bility test			
PURPOS	E: To check the changeove	r procedure as compatibility	y test		
PRE-TES	T CONDITIONS: Linkset	t with two available links			
CO	NFIGURATION: A	TYPE OF TEST:	CPT	TYPE OF SP: ALL	
MESSAC	E SEQUENCE:				
SP A SP B					
Link			Link		
:Start traf	fic				
1 – 1		>			
1-1	marine		1 – 1	TRAFFIC	
1			I = I	TRAFFIC	
1 - 2	TRAFFIC	>			
		<	1 - 2	TRAFFIC	
1 – 1	:Deactivate (MMI	L command or failure)			
	CHANGEOVER				
1 - 2		>			
	(from 1 – 1)				
		<	1 - 2	TRAFFIC (from $1 - 1$)	
:Wait					
:Stop tra	ffic				
				changes of changeover messages because	
the descri	the description depends on the type of deactivation of the link and of the time necessary to detect the deactivation.				
TEST DESCRIPTION					
1. Start traffic to B on links $1 - 1$ and $1 - 2$.					
2.					
3.	3. Check that the sequence of changeover messages conforms to one of the descriptions 3.1 to 3.12. Stop				
4	traffic.	the different masses list 1	in the Mate	in test 2.10	
4.	Repeat the test by invoking	g the different reasons listed	m me Note	III test 3.19.	

TEST	EST NUMBER: 3.21 PAGE: 1 of 1				
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30					
TITL	E: Changeover				
SUB	TITLE: Reception of a char	ngeover order on an available link			
PURI	POSE: To check the change	over procedure on reception of a C	OO or ECO for a link in service		
PRE-	TEST CONDITIONS: Link	set with two available links			
С	ONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MES	SAGE SEQUENCE:				
	SP A		SP B		
Li	nk		Link		
:Start	traffic				
1	– 1 TRAFFIC	>			
1	– 2 TRAFFIC	<>	1 – 1 TRAFFIC		
		<	1-2 TRAFFIC		
		<	1-2 COO, SLC 1 – 1 (FSN corresponding to the last received message)		
1	– 2 COA, SLC 1 – 1	>			
1	- 2 TRAFFIC (from 1 -	- 1)>			
		<	1-2 TRAFFIC (from $1-1$)		
:Wait	traffic				
.stop	uame				
TEST	DESCRIPTION				
1.	1. Start traffic to B and C on all the links.				
2.	2. Send a COO from B to A for $1 - 1$ on link $1 - 2$ and check that the COA is received.				
3.	3. Check that the link $1 - 1$ becomes unavailable.				
4.	4. Stop traffic and check that the changeover procedure has been performed.				
5.	5. Check that there was no loss of messages, no duplication and no missequencing.				
6.	Repeat the test but send a messages may be lost.	an ECO (instead of a COO) and	check that a COA is received. Some		

TEST N	T NUMBER: 4.1 PAGE: 1 of 1			1	
REFERI	REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE:	Changeback				
SUBTIT	LE: Changeback within a li	nkset			
PURPOS	SE: To check that the chang	eback procedure is correctly performed	l on restoration	of a link in a linkset	
PRE-TE	ST CONDITIONS: Linkse	t with one available link (end of test 3.	1)		
СО	NFIGURATION: A	TYPE OF TEST: VAT, CPT	ΤY	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Linl :Start tra			Link		
1 - 2	2 TRAFFIC	> <	1 – 2	TRAFFIC	
1 – 1	Activate (depending	g on the deactivation mean previously	used)		
1 - 2	2 CBD, SLC 1 – 1	> <>	1 – X	CDA SLC 1 1	
1 – 1	TRAFFIC (from 1 –	2)>		CBA, SLC 1 – 1	
1 – 2	CBA, SLC 1 – 1	<>	1-2	CBD, SLC 1 – 1	
1 - 2	2 TRAFFIC	<>	1 – 1	TRAFFIC (from 1 – 2)	
		<	1 – 2	TRAFFIC	
:Wait :Stop tra	ffic				
TEST DESCRIPTION					
1.	Start traffic to B (and C in V	VAT) on link 1 – 2.			
2.	2. Activate the link $1 - 1$ and check that it enters the correct in service state.				
3.	3. Check that a CBD for SLC $1 - 1$ is received and that traffic for link $1 - 1$ is switched back after a CBA is sent.				
4.	Stop traffic and check the missequencing.	at it has been received correctly; no	lost messages	s, no duplication and no	
5.		ing the link $1 - 3$, then $1 - 4$.			
6.	As a compatibility test, repeat the test for several reasons chosen among those listed in test 4.10.				

TEST NUMBER: 4.2 PAGE: 1 of 1				
REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE: Changeback				
SUBTITLE: Additional CBA				
PURPOSE: To check the actions of	f the system on reception of an additiona	ıl CBA		
PRE-TEST CONDITIONS: Links	et with all links available			
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A		SP B		
Link :Start traffic		Link		
ALL TRAFFIC	> <	ALL TRAFFIC		
	<	1 – X CBA, SLC 1 – X		
ALL TRAFFIC	> <	ALL TRAFFIC		
W/-i4				
:Wait :Stop traffic				
TEST DESCRIPTION				
 Start traffic to B and C on all links. Send an unexpected CBA to A and check that this message is discarded without action on the traffic. Stop traffic. 				

TEST N	TEST NUMBER: 4.3 PAGE: 1 of 1			
REFERI	ENCE: Q.704 clause 6	Fig. 28, Fig. 29, Fig. 31		
TITLE:	Changeback			
SUBTIT	LE: Additional CBD			
PURPOS	SE: To check the action of t	the system on reception of an additional	CBD	
PRE-TE	ST CONDITIONS: Linkse	et with all links available		
СО	NFIGURATION: A	TYPE OF TEST: VAT	TY	'PE OF SP: ALL
MESSA	GE SEQUENCE:			
	SP A			SP B
Linl Start tra:			Link	
ALI	L TRAFFIC	> <	ALL	TRAFFIC
1 – 2	CBA, SLC 1 – X	<>	1 - X	CBD, SLC 1 – X
ALI	L TRAFFIC	> <	ALL	TRAFFIC
:Wait				
:Stop tra	ffic			
TEST D	ESCRIPTION			
 Start traffic to B and C on all links. Send an unexpected CBD to A and check that a CBA is send back in response without impact on the 				
a. Stop traffic and check that it has been received correctly.				
Э.				

TEST N	UMBER: 4.4		PAGE: 1 of	1	
REFERE	REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE:	Changeback				
SUBTIT	LE: No acknowledgement	to first CBD			
PURPOS	E: To check that a second	CBD is sent if the first is not acknowle	dged		
PRE-TE	ST CONDITIONS: Linkse	et with one available link			
CO	NFIGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Link :Start tra			Link		
1 - 2	TRAFFIC	>	1 – 2	TRAFFIC	
1 – 1					
1 - 2	CBD, SLC 1 – 1	>			
	T4				
1 - 2	CBD, SLC 1 – 1				
1 – 1	TRAFFIC (from 1 -	<>	1 - X	CBA, SLC 1 – 1	
		<	1 – 1	TRAFFIC (from 1 – 2, Note)	
1 - 2	TRAFFIC	>	1 0		
:Wait :Stop tra	fic	<	1 – 2	TRAFFIC	
	B may perform a changebac	ck or not.			
	ESCRIPTION				
 Start traffic to B and C on link 1 – 2. Activate link 1 – 1 and check that a CBD is received (no CBA in response). 					
 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. 					
4.	Check that the traffic is cha		-	-	
5.		there were no lost messages, no duplica	ation and no mi	ssequencing.	
6.	6. Check that the duration of T4 is inside the specified range.				

TEST N	UMBER: 4.	5		PAGE: 1 of	1
REFERE	REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE:	Changeback				
SUBTIT	'LE: No ackn	owledgement	of repeat changeback declaration		
PURPOS	SE: To check	that traffic is o	changed back after a repeat changeback	declaration is	not acknowledged
PRE-TE	ST CONDITI	IONS: Linkse	t with one available link		
CO	NFIGURATIO	ON: A	TYPE OF TEST: VAT	ТҮ	PE OF SP: ALL
MESSA	GE SEQUEN	ICE:			
	SP	А			SP B
Link :Start tra				Link	
1 – 2	2 TRA	FFIC	>	1-2	TRAFFIC
1 – 1	l :Activ	vate			
1 - 2	2 CBD	, SLC 1 – 1	>		
		T4			
1 – 2	2 CBD	, SLC 1 – 1	>		
		T5			
1 – 1	I TRA	FFIC (from 1 -	- 2)>		
			<	1 - 1	TRAFFIC (from 1 – 2, Note)
1 – 2	2 TRA	FFIC	>	1 - 2	TRAFFIC
:Wait					
:Stop tra					
NOTE – B may perform a changeback or not.					
TEST DESCRIPTION					
1. Start traffic to B and C on link $1 - 2$.					
 Check that a CBD is received and not acknowledged. Check that after T4, a CBD is repeated and not acknowledged by a CBA. 					
3. 4.			Is repeated and not acknowledged by a ffic is changed back on link $1 - 1$.	I UDA.	
4. 5.			there were no lost messages, no duplication $I = I$.	tion and no mis	sequencing
5. 6.	-		Γ5 is inside the specified range.	aton and no mis	sequenenig.
s. Enter that the duration of 15 is more the specified range.					

TEST N	UMBER: 4.6		PAGE: 1 of	1
REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE:	Changeback			
SUBTIT	LE: Simultaneous changeb	ack		
PURPOS	SE: To check simultaneous	changebacks of traffic onto two links		
PRE-TES	ST CONDITIONS: Linkse	t with one available link (end of test 3.	14)	
COI	NFIGURATION: A	TYPE OF TEST: VAT	ТУ	PE OF SP: ALL
MESSAG	GE SEQUENCE:			
Link Start trat:			Link	SP B
1 – 3	3 TRAFFIC	>	1 – 3	TRAFFIC
1 - 1 1 - 2 1 - 3 1 - 3	2 :Activate CBD, SLC 1 – 1	ng on the deactivation mean previously>> <>	v used) 1 – X	CBA, SLC 1 – 1
1 – 1	TRAFFIC (from 1 -	- 3)>	1 – X 1 – 1	CBA, SLC 1 – 2 TRAFFIC (from 1 – 3, Notes 1 and 2)
1 – 2		- 3)> <>	1 – 2	TRAFFIC (from $1 - 3$, Notes 1 and 2)
1 – 3 :Wait	3 TRAFFIC	>	1 – 3	TRAFFIC
:Stop traf NOTE 1 NOTE 2	– B may perform changebac	ks or not. ay be performed in sequence. The traft	fic sequence pre	esented here, after the
TEST D	ESCRIPTION			
 Start traffic to B and C on link 1 – 3. Simultaneously activate links 1 – 1 and 1 – 2. Check that CBDs are received and CBAs are sent (within T4) for 1 – 1 and 1 – 2 and that the traffic is changed back on links 1 – 1 and 1 – 2. 				
4.	Stop traffic and check that	there were no lost messages, no duplication	ation and no mi	ssequencing.

TEST NUMBER: 4.7		PAGE: 1 of 1		
REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE: Changeback				
SUBTITLE: Changeback from	several alternative links within a linkset			
PURPOSE: To check the chang	eback procedure when it is performed to se	veral links in a s	ame linkset	
PRE-TEST CONDITIONS: Li	nkset with one unavailable link (end of test	3.15)		
CONFIGURATION: A	TYPE OF TEST: VAT	TYI	PE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A			SP B	
Link :Start traffic		Link		
1 – 2, 3, 4 TRAFFIC	> <	1 – 2, 3, 4	TRAFFIC	
1 – 1 :Activate (dep	ending on the deactivation mean previously		IKAITIC	
1 – 2 CBD, SLC 1 –	>			
1 – 3 CBD, SLC 1 –				
1 – 4 CBD, SLC 1 –	>			
	<	1 - X	CBA, SLC 1 – 1	
	<	1 - X	CBA, SLC $1 - 1$	
1 – 1 TRAFFIC	<	1 – X	CBA, SLC 1 – 1	
1 - 1 TRAFFIC (from $1 - 2, 3, 4$.)			
(, <	1 – 1	TRAFFIC (from 1 – 2, 3, 4, Note)	
1 – 2, 3, 4 TRAFFIC	>		,	
	<	1-2, 3, 4	TRAFFIC	
:Wait				
:Stop traffic				
NOTE – B may perform changebacks or not.				
TEST DESCRIPTION				
	on links $1 - 2$, $1 - 3$ and $1 - 4$.			
 Start traffic to B and C on mixs 1 - 2, 1 - 5 and 1 - 4. Activate link 1 - 1 and check that a CBD is sent on links 1 - 2, 1 - 3 and 1 - 4. Check that each CBD contains a different changeback code. 				
	changed back on link $1 - 1$.			
	hat there were no lost messages, no duplica	tion and no miss	sequencing.	

TEST N	ST NUMBER: 4.8			PAGE: 1 of 1				
REFERI	REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31							
TITLE:	Changeback							
SUBTIT	LE: Changeback from	another linkset						
PURPOS	SE: To check the chang	geback procedure	when it is	performed fr	om another linkse	et		
PRE-TE	ST CONDITIONS: Li	inksets 1 and 3 un	available ((end of test 3.	16)			
CONI	FIGURATION: B	TYPE OF	TEST:	VAT, CPT	ТҮ	TPE OF SP: A	LL	
MESSA	GE SEQUENCE:							
	SP A			SP B	SP C		SP	•
Link			Link		Link	Link		
:Start tra								-
2-1,2	TRAFFIC	>			>		SP	D
					>	7 1	SP	E
							SP	D
	· · · · · · · ·					6 – 1	SP	E
3 - 2	:Activate (dependin	-						
2 - 1	CBD, SLC 3 – 2							
2 - 2	CBD, SLC 3 – 2			-				
					3-2 CBA, SLC			
		<			3-2 CBA, SLC			
2 1 2			- 1		CHANGEBA	СК	GD	D
2-1, 2	TRAFFIC	>			>		SP	D
					>		SP	E
2 2			,		0 1		SP	D
3 – 2	TRAFFIC			>	8 – 1 7 – 1		SP	D
XXZ · · ·	(from 2 – X)				/ - 1	>	SP	E
	:Wait							
*	:Stop traffic							
	NOTE 1 – It is possible that A and/or B prefers to perform a time controlled diversion procedure.							
	NOTE 2 – After activation of link 3 – 2, CBDs are sent from C to A via B and acknowledged by A. These messages are not presented to simplify the test description.							
	TEST DESCRIPTION							
1.								
1. 2.	Activate link $3 - 2$ and	,	are receiv	ved and that (BAs are cent hef	ore T4 expires	in A	
2. 3.	Check that the traffic i					-		
3. 4.		•				-		
7.	4. Stop traffic and check that there were no lost messages, no duplication and no missequencing.							

TEST N	TEST NUMBER: 4.9		PAG	PAGE: 1 of 1		
REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31						
TITLE:	Changeback					
SUBTIT	LE: Changeback fron	n two linksets				
PURPOS	SE: To check the char	geback procedure when it is performed	from two	o linksets		
PRE-TE	ST CONDITIONS: I	inkset 1 unavailable (end of test 3.18)				
CONF	TIGURATION: B	TYPE OF TEST: VAT		TYPE C	OF SP: A	LL
MESSA	GE SEQUENCE:					
	SP A	SP B	S	РС		SP D
Link		Link	Link	c	Link	
:Start tra	ffic					
2 - 1	TRAFFIC	> 5-1		>		
2 1	munne				5 – 1	TRAFFIC
2 - 2	TRAFFIC			>	5 1	munic
2-2	IKAIIIC				5 – 1	TRAFFIC
3 – 1	TRAFFIC	>			J = 1	IRATIC
3-1 3-2			-			
-	TRAFFIC			>		
1-2	· •	ng on the deactivation mean previously				
2 - 1	CBD, SLC 1 – 2	, , ,		>		
2 - 2	CBD, SLC 1 – 2	, , ,		>		
3 – 1	CBD, SLC 1 – 2	>				
3 - 2	CBD, SLC 1 – 2	>	-			CBAs
		< 2 – X <			5 - 1	SLC 1 – 2
		< 2 – X <			5 - 1	SLC 1 – 2
		< 2 – X <			5 - 1	SLC 1 – 2
		< 2 – X <			5 - 1	SLC 1 – 2
1 - 2	TRAFFIC (from	linksets 2 and 3)		>		
		<			1 - 2	TRAFFIC
						(from
						linksets 5,
						Notes 1
						and 2)
2-1,2	TRAFFIC	> 5-1				
3-1,2	TRAFFIC	>	- 1 -	>		
:Wait						
:Stop tra						
	 D may perform char 	-				
NOTE 2	– It is possible that A	and/or B prefers to perform a time contr	olled div	version procedur	e.	
TEST D	DESCRIPTION					
1.	Start traffic on linkse	ts 2 and 3 to D.				
2.		2 and check that CBDs are received ar	nd that C	BAs are sent be	efore T4 e	expires in A.
		has a different changeback code.				1
3.		is changed back to link $1 - 2$ in accorda	nce with	the load sharin	g rules in	A.
4.		that there were no lost messages, no du			-	
· · ·	4. Stop furthe and check that there were no tost messages, no duplication and no missequeneme.					

TEST N	UMBER: 4.10		PAGE: 1 of	1	
REFERE	REFERENCE: Q.704 clause 6 Fig. 28, Fig. 29, Fig. 31				
TITLE:	Changeback				
SUBTIT	LE: Changeback due to var	rious reasons			
PURPOS	SE: To check the interface l	L2-L3			
PRE-TE	ST CONDITIONS: Linkse	et with one available link (end of 3.19)			
CO	NFIGURATION: A	TYPE OF TEST: VAT	T	YPE OF SP: ALL	
MESSA	GE SEQUENCE:		·		
Link :Start tra			Link	SP B	
1 - 2	2 TRAFFIC	> <	1 – 2	TRAFFIC	
1 – 1	:Activation due to v	rarious reasons (Note)			
1 - 2	2 CBD, SLC 1 – 1	>	1 – 2	CBA, SLC 1 – 1	
1 – 1	TRAFFIC (from 1 -	- 2)>	1 – 2	CBD, SLC 1 – 1	
1 – 2	CBA, SLC 1 – 1	>	1 – 1	TRAFFIC (from 1 – 2)	
1 - 2	2 TRAFFIC	>	1 – 2	TRAFFIC	
in claus condition	The object of this test is to a 3/Q.704. These reasons a has ceased at the remote sign ESCRIPTION Start traffic to B and C on D Provoke the activation of th Check that the traffic is charged	the link $1 - 1$ (see Note above). Anged back to $1 - 1$. It has been received correctly.	pleted with su		

		MTP LEVEL 3		
TEST N	UMBER: 4.11		PAGE: 1 of 1	
REFERE	NCE: Q.704 clause 6	Fig. 28, Fig. 29, Fig. 31		
TITLE:	Changeback			
SUBTIT	LE: Time controlled diver	rsion procedure		
PURPOS	SE: To check the correct o	peration of the time controlled diversion	n procedure	
PRE-TES	ST CONDITIONS: Links	sets 1, 2 and 4 unavailable		
CO	NFIGURATION: B	TYPE OF TEST: VAT, CPT	TYF	PE OF SP: ALL
MESSAG	GE SEQUENCE:			
	SP A	SP B		SP C
Link		Link	Link	
:Start trat	ffic			
3 – 1	TRAFFIC	>		
	(to D and E)			
		<	3 - 1	TRAFFIC
				(from D and E)
3 - 2	TRAFFIC (to D and E)	>		
	(10 D and E)	<	3 – 2	TRAFFIC
		<	5 - 2	(from D and E)
2 - 1	:Activate (dependi	ng on the deactivation mean previously	used)	· · · · ·
	T21		,	
	TRA	>		
		< 2 – 1 «TRA»		
3 – 1,	2 TRAFFIC STOP	PED		
	T3			
2 - 1	TRAFFIC (from 3 – 1, 2)	>		
	(1101113 - 1, 2)	< 2 – 1 TRAFFIC (from	D Note)	
2 - 1,	2 TRAFFIC	>	1 D, Note)	
2 1,	2 1101110	<	3 - 1, 2	TRAFFIC (from E)
:Wait			- 7	
:Stop traf	ffic			
-		rt procedure and D, on reception of a T	FA for A, reroute	es its traffic to A. These
	es are not presented to simp	plify the test description.		
TEST D	ESCRIPTION			
1.	Start traffic to E (and D in	n VAT) on linkset 3.		
2.	Activate link 2 – 1.			
3.	Check that T21 is started	in A, and is stopped on reception of TRA	A from SP B (see	Note).
4.		cset 3 ceased in A and that after expin	ration T3 traffic	diverts to link 2 - 1 in
	accordance with the load	-	_	
5.		t there were no lost messages, no duplica	ation and no miss	equencing.
6.		T3 is inside the specified range.		
7.	-	without sending TRA from B to A and c	check that the tim	e controlled diversion is
	performed when T21 expi	105.		

TEST NUMBER: 5		PAGE: 1 of 1	
REFERENCE: Q.704 clause 7 Fig. 29, Fig. 32			
TITLE: Forced rerouting			
SUBTITLE:			
PURPOSE: To check that the sys	em can perform forced rerouting		
PRE-TEST CONDITIONS: Link	sets 1 and 4 unavailable		
CONFIGURATION: B	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL	
MESSAGE SEQUENCE:			
SP A	SP B	SP C	
Link	Link	Link	
:Start traffic			
2 – 1, 2 TRAFFIC	> to D and E < 2 – 1, 2 TRAFFIC (from	D)	
3 – 1, 2 TRAFFIC	> <> 6 – 1 :Deactivate < 2 – X TFP, PC = E	to D and E 3 – 1, 2 TRAFFIC (from E)	
3 – 1, 2 TRAFFIC	>		
(to D and from 2 – 1, 2 to E) 2 – 1, 2 TRAFFIC	<> to D < 2 – 1, 2 TRAFFIC (fro	3 – 1, 2 TRAFFIC (from E)	
:Wait :Stop traffic			
TEST DESCRIPTION			
1. Start traffic on linksets 2	and 3 to E (and D in VAT).		
	nd check the sending of a TFP concerning	-	
but not missequenced or	duplicated.	d correctly, messages may have been lost	
4. Check that the traffic to duplication and no misse		ot been disturbed (no lost messages, no	
5. Check that an indication			

TEST NUM	BER: 6		PAGE: 1 of 1
REFERENC	E: Q.704 clause 8	Fig. 29, Fig. 33	
TITLE: Cor	ntrolled rerouting		
SUBTITLE:			
PURPOSE:	To check that the system	m can perform controlled rerouting	
PRE-TEST	CONDITIONS: Linkse	ets 1, 4 and 6 unavailable (end of test 5)	
CONFIG	GURATION: B	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSAGE	SEQUENCE:		
	SP A	SP B	SP C
Link :Start traffic		Link	Link
3 – 1, 2	TRAFFIC	>	to D and E $3-1, 2$ TRAFFIC (from E)
2 - 1, 2	TRAFFIC	> to D < 2 - 1, 2 TRAFFIC (from 6 - 1 :Activate < 2 - X TFA, PC = E	
	Т6		
2 - 1, 2 (to D and $3 - 1, 2$	TRAFFIC from 3 – 1, 2 to E) TRAFFIC	> < 3 – 1, 2 TRAFFIC (from	D)
5 - 1, 2		<	3 – 1, 2 TRAFFIC (from E)
:Wait :Stop traffic			
TEST DESC	CRIPTION		
2. Act 3. Sto lost	p traffic and check that t messages, no duplicati	check the sending of a TFA concerning	E from B to A. ormed correctly (for all traffic flows, no

TEST N	UMBER: 7.1.1		PAGE: 1 of	1
REFERI	REFERENCE: Q.704 clause 10 Fig. 28			
TITLE:	TITLE: Management inhibiting			
SUBTIT	LE: Inhibition of a link – A	vailable link		
PURPOS	SE: To check for the correc	t response when link inhibition is reque	sted for an avai	lable link
PRE-TE	ST CONDITIONS: Linkse	t with two available links		
СО	NFIGURATION: A	TYPE OF TEST: VAT, CPT	ТҮ	PE OF SP: ALL
MESSA	GE SEQUENCE:		·	
	SP A			SP B
Link Start tra:			Link	
1 – 1	TRAFFIC	>	1 – 1	
1 - 2	2 TRAFFIC	<>		TRAFFIC
1 – 1	1	<	1 – 2	TRAFFIC
1 - 2	K LIN, SLC 1 – 1	> <	1 – X	LIA, SLC 1 – 1
	TIME – CONTRO	LLED CHANGEOVER (Note)		
1 - 2	2. TRAFFIC (from 1 -	- 1)> <>	1 – 2	TRAFFIC (from 1 – 1)
:Wait				
:Stop tra		after the inhibition of link 1 – 1 but it i	s not described	in this test which checks
	inhibition procedure.		s not described	In this test which checks
TEST D	ESCRIPTION			
1.		VAT) on links $1 - 1$ and $1 - 2$.		
2. 3.		-1 and check that LIN is received and ally carried by link $1 - 1$ is transferred to		ved in A within T14.
3. 4.		ters in the "Local inhibiting" state.	iiin 1 - 2,	
5.	Repeat test in the reverse d	_		

TEST N	NUMBER: 7.1.2		PAGE: 1 of 1
REFERENCE: Q.704 clause 10 Fig. 28			
TITLE:	Management inhibiting		
SUBTIT	LE: Inhibition of a link – U	navailable link	
PURPOS	SE: To check for the correct	response when link inhibition is reque	sted for an unavailable link
PRE-TE	ST CONDITIONS: Linkset	t with one available link	
CO	NFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSA	GE SEQUENCE:		
			CD D
	SP A		SP B
Link			Link
:Start tra	ffic		
1 – 1	I TRAFFIC	>	
1		<	1 – 1 TRAFFIC
1 - 2	2 :Request inhibition		
1 – 1	1 LIN, SLC 1 – 2	>	
1 – 2	• • • • • • • • • • • • • • • • • • •	<pre><g deactivation="" mean="" on="" pre="" previously<="" the=""></g></pre>	1 - 1 LIA, SLC $1 - 2$
1 - 1		>	
		<	1 – 1 TRAFFIC
:Wait			
:Stop traffic			
TEST DESCRIPTION			
1.	Start traffic to B (and C in V	VAT) on link 1 – 1	
1. 2.		-2, check the reception of LIN at B as	nd send LIA in response within T14.
3.	Check that the inhibition wa	as performed.	
4. 5.	Activate link $1 - 2$ and check stop traffic and check that i	ck that it stays in inhibited state.	
5. 6.	Repeat test in reverse direct		

TEST NUMB	BER: 7.2.1		PAGE: 1 of 1
REFERENCE: Q.704 clause 10 Fig. 28			
TITLE: Man	agement inhibiting		
SUBTITLE:	Inhibition not permitte	d – Local reject on available link	
PURPOSE: 7	To check the inhibition	procedure in case of local reject on an	available link
PRE-TEST C	ONDITIONS: Linkse	t with one available link	
CONFIG	URATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSAGE S	EQUENCE:		
	SP A		SP B
Link :Start traffic			Link
1 – 1	TRAFFIC	> <>	1 – 1 TRAFFIC
1 – 1	:Request inhibition		
1 – 1	TRAFFIC	> <	1 – 1 TRAFFIC
:Wait			
:Stop traffic			
TEST DESCRIPTION			
 Start traffic to B (and C in VAT) on link 1 – 1. Request inhibition of link 1 – 1 and check that this request is not permitted. Stop traffic and check that it has not been disturbed. Repeat the test but modify pre-test conditions as follows: link 1 – 1 available and link 1 – 2 inhibited by B. 			

TEST NUMBER: 7.2.2		PAGE: 1 of 1		
REFERENCE: Q.704 clause 10 Fig. 28				
TITLE: Management inhibiting				
SUBTITLE: Inhibition not permitt	ed – Local reject on unavailable link			
PURPOSE: To check the inhibition	n procedure in case of local reject on an	unavailable link		
PRE-TEST CONDITIONS: All lin	nks unavailable			
CONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A		SP B		
Link		Link		
1 – 1 :Request inhibition				
	TEST DESCRIPTION 1. Request inhibition of link 1 – 1 and check that it is rejected.			
	1 – 1 and encer that it is rejected.			

TEST NUMBER: 7.2.3		PAGE: 1 of 1		
REFERENCE: Q.704 clause 10 Fig. 28				
TITLE: Management inhibiting				
SUBTITLE: Inhibition not permitt	ed – Sending of LID			
PURPOSE: To check the reject of	an inhibition asked on reception of an Ll	IN		
PRE-TEST CONDITIONS: Links	et with one available link			
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A		SP B		
Link :Start traffic		Link		
1 – 1 TRAFFIC	> <	1 – 1 TRAFFIC		
1 – 1 LID, SLC 1 – 1	<>	1 – 1 LIN, SLC 1 – 1		
1 – 1 TRAFFIC	>	1 – 1 TRAFFIC		
:Wait :Stop traffic				
TEST DESCRIPTION				
 Start traffic to B and C on link 1 – 1. Send an LIN, SLC 1 – 1 from B to A and check the reception of an LID. Check that the inhibition is not performed. Stop traffic and check that it has not been disturbed. 				

TEST NUMBER: 7.2.4			PAGE: 1 of 1		
REFERENCE: Q.704	clause 10	Fig. 28			
TITLE: Management in	nhibiting				
SUBTITLE: Inhibition	not permitted -	- Reception of LID			
PURPOSE: To check the	he reject of an i	nhibition asked on sending of an LIN	1		
PRE-TEST CONDITIO	ONS: Linkset w	vith two available links			
CONFIGURATION	N: A	TYPE OF TEST: VAT	TYPE	E OF SP: ALL	
MESSAGE SEQUENC	E:				
SP A	Υ.			SP B	
Link :Start traffic			Link		
1 – 1, 2 TRAFI	FIC	> <	1 – 1, 2	TRAFFIC	
1 – 1 :Reque	st inhibition				
1 - X LIN, S	LC 1 – 1	> <	1 – X	LID, SLC 1 – 1	
1 – 1, 2 TRAFF	FIC	> <	1 – 1, 2	TRAFFIC	
:Wait :Stop traffic					
TEST DESCRIPTION					
 Start traffic to B and C on links 1 – 1 and 1 – 2. Request the inhibition of link 1 – 1 and check the reception of LIN and response with an LID before T14 expires in A. Check that the inhibition is not performed. Stop traffic and check that it was not disturbed. 					

TEST NUME	BER: 7.3.1		PAGE: 1 of	1
REFERENCE	: Q.704 clause 10	Fig. 28		
TITLE: Man	agement inhibiting			
SUBTITLE:	Expiration of T14 – Av	vailable link		
PURPOSE: 7	Γo check that the inhibi	tion procedure asked for an available li	nk is restarted w	hen T14 expires
PRE-TEST C	ONDITIONS: Linkse	t with two available links		
CONFIG	URATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL
MESSAGE S	EQUENCE:			
Link :Start traffic	SP A		Link	SP B
1 – 1	TRAFFIC	> <	1 - 1	TRAFFIC
1 – 2	TRAFFIC	> <	1 – 2	TRAFFIC
1 – 1 1 – X	:Request inhibition LIN, SLC 1 – 1 T14	>		
1 - X	 LIN, SLC 1 – 1	> <	1 - 1	LIA, SLC 1 – 1
1-2		ED CHANGEOVER (Note) 1)> <>	1 – 2	TRAFFIC (from 1 – 1)
:Wait :Stop traffic NOTE – A ch	angeover is performed	after the inhibition of link 1 – 1 but it is	s not described i	n this inhibition test
TEST DESCI	* *			
 Start traffic to B and C on links 1 – 1 and 1 – 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. 				
4. Rep	3. Check that the inhibition is performed. Stop traffic and check that it was not disturbed.			
5. Che	ck that the duration of T	Γ14 is inside the specified range.		

TEST NU	JMBER: 7.3.2		PAGE: 1 of 1	
REFEREN	NCE: Q.704 clause 10	Fig. 28		
TITLE: N	Management inhibiting			
SUBTITL	E: Expiration of T14 – U	navailable link		
PURPOSE	E: To check that the inhibi	tion procedure asked for an unavailable	e link is restarted when T14 expires	
PRE-TEST	T CONDITIONS: Linkse	t with one available link		
CON	FIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAG	E SEQUENCE:			
Link :Start traff	SP A		SP B Link	
1 - 1 1 - 2 1 - 1	TRAFFIC :Request inhibition LIN, SLC 1 – 2	> <>	1 – 1 TRAFFIC	
1 – 1 1 – 2	T14 LIN, SLC 1 – 2 :Activate	>	1 – 1 LIA, SLC 1 – 2	
1 – 1	TRAFFIC	> <>	1 – 1 TRAFFIC	
:Wait :Stop traffi	ïc			
TEST DE	ESCRIPTION			
1. Start traffic to B and C on link 1 – 1.				
2. Request inhibition of link $1 - 2$, 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. 0				
	Activate link $1 - 2$ and check that it stays unavailable.			
	Stop traffic and check that it was not disturbed.			
	Repeat the test but without is stopped.	sending of an LIA. Check that after the	e second expiration of T14, the procedure	

TEST NUMBER: 7.4 PAGE: 1 of 1			1		
REFERI	ENCE: Q.704 clause 10	Fig. 28			
TITLE:	Management inhibiting				
SUBTIT	LE: Additional inhibition r	nessages (LIA, LID, LIN)			
PURPO	SE: To check the action of t	he system on reception of an additional	LIA, LID or L	IN	
PRE-TE	ST CONDITIONS: End of	5 test 7.1.1			
СО	NFIGURATION: A	TYPE OF TEST: VAT	TY	(PE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Linl :Start tra			Link		
1 – 2	2 TRAFFIC	>			
		< <	1 - 2 1 - 2	TRAFFIC LIA, SLC 1 – 1	
		<	1 - 2 1 - 2	LID, SLC 1 – 1	
1 – 2	2 TRAFFIC	>			
		<	1 - 2	TRAFFIC	
		<	1 - 2	LIN, SLC 1 – 1	
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	· ·	>			
1-2		<>	1 - 2	TRAFFIC	
XX <i>z</i> · · · ·					
:Wait :Stop tra	ffic				
.500 10					
TEST DESCRIPTION					
1. Start traffic to B and C on link $1 - 2$.					
2.	Send an additional LIA and				
	3. Check that these messages are ignored without impact on the traffic.				
4. 5.	Send an additional LIN on	link 1 – 2. ved in response without impact on the t	raffic and that	the link 1 1 ontors in the	
э.	"Local and remote inhibiting			1 - 1 enters in the	
6.	6. Stop traffic.				

TEST N	UMBER: 7.5		PAGE: 1 of 1	PAGE: 1 of 1	
REFERE	ENCE: Q.704 clause 10	Fig. 28			
TITLE:	Management inhibiting				
SUBTIT	LE: Inhibition asked by the	e both ends of a link			
PURPOS	SE: To check the action of	the system on reception of an LIN after	sending of an L	IN	
PRE-TE	ST CONDITIONS: Links	et with two available links			
CO	NFIGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
Link :Start tra			Link	SP B	
1 – 1,	2 TRAFFIC	> <	1 – 1, 2	TRAFFIC	
1 - 1 $1 - \Sigma$	1	>	1 – X	LIN, SLC 1 – 1	
1 – 1	LIA, SLC 1 – 1	<> <>	1 - X 1 - X	LIA, SLC 1 – 1	
1 - 2		LED CHANGEOVER (Note) 	1 – 2	TRAFFIC (from 1 – 1)	
:Wait :Stop traffic NOTE – A changeover procedure is performed but not described in this inhibition test. TEST DESCRIPTION					
1. 2. 3. 4. 5.	Check the reception of an	1 - 1. Check the reception of LIN and re LIA and send an LIA. is correctly performed and that the	-		

TEST NUMBER: 7.6.1		PAGE: 1 of 1			
REFERENCE: Q.704 clause 10	Fig. 28				
TITLE: Management inhibiting					
SUBTITLE: Manual uninhibition of a l	link – With changeback				
PURPOSE: To check for correct restor	ation when link uninhibition is requ	ested by an opera	itor		
PRE-TEST CONDITIONS: End of tes	st 7.1.1				
CONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYF	PE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A Link :Start traffic		Link	SP B		
1 – 2TRAFFIC1 – 1:Request uninhibition	> <	1 – 2	TRAFFIC		
1 – 2 LUN, SLC 1 – 1 CHANGEBACK (Note)	<> CHANGEBACK (Note	1 – 2	LUA, SLC 1 – 1		
1 – 1 TRAFFIC (from 1 – 2)	> <	1 – 1	TRAFFIC (from 1 – 2)		
1 – 2 TRAFFIC	> <	1 – 2	TRAFFIC		
:Wait :Stop traffic NOTE – A changeback procedure is performed after uninhibition of link 1 – 1 but it is not described in this test which checks only uninhibition procedure.					
TEST DESCRIPTION					
 Start traffic to B and C on link 1 – 2. Request uninhibition of link 1 – 1, check the reception of an LUN and response with an LUA inside T12. Check that the uninhibition is performed and stop traffic. Check that the traffic was shared on links 1 – 1 and 1 – 2 according to the load sharing rules. Check that an uninhibition indication was given by the system. When B has initiated inhibition (point 5, test 7.1.1), repeat test in reverse direction. Check that uninhibition is not possible when it is requested by an operation in A. 					

TEST NUMBER: 7.6.2 PAGE: 1 of 1					
REFEREN	NCE: Q.704 clause 10	Fig. 28			
TITLE: N	Management inhibiting				
SUBTITL	E: Manual uninhibition of a	a link – Without changeback			
PURPOSE	E: To check manual uninhib	bition procedure when the uninhibited	link stays unavailable		
PRE-TES'	T CONDITIONS: End of t	est 7.1.2 without activation of link 1 -	- 2 (link 1 – 2 deactivated and inhibited)		
CON	FIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL		
MESSAG	E SEQUENCE:				
Link :Start traff	SP A		SP B Link		
1 - 1 1 - 2	TRAFFIC :Request uninhibition		1 – 1 TRAFFIC		
1 – 1 1 – 1	LUN, SLC 1 – 2 TRAFFIC	> <> <>	1 – 1 LUA, SLC 1 – 2 1 – 1 TRAFFIC		
:Wait :Stop traffic					
TEST DESCRIPTION					
 Start traffic B (and C in VAT) on link 1 – 1. Request uninhibition of link 1 – 2 and check that an LUN is received and that an LUA is sent in response inside T12. 					
5.	Stop traffic and check that it When B has initiated inhibit is not possible when it is req	ion (point 6, test 7.1.2), repeat test in	reverse direction. Check that uninhibition		

TEST NUMBER: 7.7		PAGE: 1 of 1		
REFERENCE: Q.704 clause 10	Fig. 28			
TITLE: Management inhibiting				
SUBTITLE: Expiration of T12				
PURPOSE: To check uninhibition	procedure on expiration of time T12			
PRE-TEST CONDITIONS: End	of test 7.1.1 $(1 - 1 \text{ inhibited by A})$			
CONFIGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A Link :Start traffic		Link	SP B	
1 – 2 TRAFFIC 1 – 1 :Request uninhibit	> <	1 – 2	TRAFFIC	
1 – 2 LUN, SLC 1 – 1 T12	>			
1-2 LUN, SLC $1-1$	> <	1 – 2	LUA, SLC 1 – 1	
CHANGEBACK (Note) 1 – 1 TRAFFIC (from 1	CHANGEBACK (Note - 2)>	e)		
1 – 2 TRAFFIC	<>	1 – 1	TRAFFIC (from 1 – 2)	
	<	1 - 2	TRAFFIC	
:Wait :Stop traffic NOTE – A changeback procedure is	s performed but not described in this unit	hibition test.		
TEST DESCRIPTION				
1. Start traffic B and C on li				
2. Request uninhibition of link 1 – 1 and check that an LUN is received.				
3. Check that after expiration of T12, a new LUN is received and acknowledged by an LUA.				
4. Check that uninhibition is		ding with the la	ad charing rules and that	
5. Stop traffic and check it was shared on links $1 - 1$ and $1 - 2$ according with the load sharing rules and that it was not disturbed.				
procedure is stopped and	out sending of an LUA. Check that a an indication is given to the management		t expiration of T12, the	
7. Check that the duration of	f T12 is inside the specified range.			

TEST NUMBER: 7.8		PAGE: 1 of 1			
REFERENCE: Q.704 clause 10	Fig. 28				
TITLE: Management inhibiting					
SUBTITLE: Not possible uninhibit	ion				
PURPOSE: To check the actions o	f the system when the uninhibition is no	t possible			
PRE-TEST CONDITIONS: Link	1 – 2 unavailable and inhibited and link	1 – 1 available			
CONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL			
MESSAGE SEQUENCE:					
SP A Link		SP B Link			
1 – 1 :Deactivate					
1 – X :Request uninhibiti	on				
TEST DESCRIPTION					
 Deactivate link 1 – 1. Check that uninhibition is not performed. 					

TEST NUMBER: 7.9 PAGE: 1 of 1				
REFERI	ENCE: Q.704 clause 10	Fig. 28		
TITLE:	Management inhibiting			
SUBTIT	LE: Automatic uninhibition of	f a link		
PURPOS	SE: To check that the system p	performs uninhibition procedure whe	n a point becomes inaccessible	
PRE-TE	ST CONDITIONS: End of ter	st 7.1.1		
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSA	GE SEQUENCE:			
	SP A		SP B	
Link			Link	
:Start tra			Liik	
.start tra	llic			
1 /				
1 - 2	2 TRAFFIC	>		
		<	1-2 TRAFFIC	
1 - 2				
1 – 1	LUN, SLC 1 – 1	>		
		<	1 – 1 LUA, SLC 1 – 1	
	POINT RESTART P	ROCEDURE IS APPLIED IN A	AND B (Note)	
1 – 1	TRAFFIC	>		
		<	1 – 1 TRAFFIC	
:Wait				
:Stop tra	ffic			
			ied 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 1	
2.	Deactivate link $1 - 2$ and che T12.	eck that an LUN is received on link	1 - 1 and response with an LUA within	
3.		formed and that the traffic is restarte	d on link 1 – 1 (see Note).	
4.	Stop traffic, some messages ha			
5.		nding of an LUA. Check that after the ven to the OMAP and the link $1 - 1$ c	e second expiration of T12 the procedure loes not carry traffic	
	is stopped, an indication is give	where the use of the the the the the test $1 - 1$ (ious not carry traffic.	

TEST N	UMBER: 7.10.1		PAGE: 1 of 1		
REFERE	NCE: Q.704 clause 10	Fig. 28			
TITLE:	Management inhibiting				
SUBTIT	LE: Forced uninhibition of	a link – Sending of an LFU			
PURPOS	E: To check forced uninhi	bition procedure when a point becomes	inaccessible		
PRE-TES	ST CONDITIONS: Link 1	– 1 available, link 1 – 2 inhibited by B			
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYP	E OF SP: ALL	
MESSAG	GE SEQUENCE:				
	CD A			CD D	
Link	SP A		Link	SP B	
:Start trat					
1 – 1	TRAFFIC	>			
1 – 1	:Deactivate (failure)	<	1 – 1	TRAFFIC	
1 - 2		,>			
		<	1 - 2	LUN, SLC 1 – 2	
1 - 2	LUA, SLC 1 – 2	>			
		PROCEDURE IS APPLIED IN A	AND B (Note)		
1 – 2	TRAFFIC	> <>	1 – 2	TRAFFIC	
		<	1 - 2	ΙΚΑΓΓΙΟ	
:Wait					
:Stop traf	fic				
NOTE – When link $1 - 2$ 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 I		1) D	her on LUNI Charlest	
2.	T13 is stopped and that an $T13$	check the reception of an LFU on link LUA is received.	1 - 2. Kesponse	by an LUN. Check that	
3.		performed and that the traffic is restarte	d on link $1-2$ (se	ee Note).	
4.	Stop traffic, some message	5 Have Deell 1081.			

TEST NUMBER: 7.10.2	TEST NUMBER: 7.10.2 PAGE: 1 of 1			
REFERENCE: Q.704 clause 10	Fig. 28			
TITLE: Management inhibiting				
SUBTITLE: Forced uninhibition of a	a link – Reception of an LFU			
PURPOSE: To check uninhibition p	rocedure on reception of an LFU			
PRE-TEST CONDITIONS: Link 1	– 1 available, link 1 – 2 inhibited by A			
CONFIGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A Link :Start traffic		Link	SP B	
1 – 1 TRAFFIC	> <>	1 - 1	TRAFFIC	
1 – 1 LUN, SLC 1 – 2	>	1 - 2	LFU, SLC 1 – 2	
CHANGEBACK (N 1 – 1 TRAFFIC	<>	1 – 1	LUA, SLC 1 – 2	
1 – 1 TRAFFIC	<>	1 – 1	TRAFFIC	
	<	1 – 2	TRAFFIC	
:Wait :Stop traffic NOTE – A changeback is performed but not described in this uninhibition test.				
TEST DESCRIPTION				
 Start traffic to B and C on link 1 – 1. Send an LFU to A on link 1 – 2 and check that an LUN is received within T13 and acknowledged by an LUA inside T12. Check that the uninhibition is performed. Stop traffic and check that it was carried on 1 – 1 and 1 – 2. 				

TEST NUMBER: 7.11		PAGE: 1 of 1		
REFERENCE: Q.704 clause 10	Fig. 28			
TITLE: Management inhibiting				
SUBTITLE: Expiration of T13				
PURPOSE: To check uninhibition	procedure when T13 expires			
PRE-TEST CONDITIONS: Link	1 - 1 available and link $1 - 2$ inhibited b	y B		
CONFIGURATION: A	TYPE OF TEST: VAT	TYI	PE OF SP: ALL	
MESSAGE SEQUENCE:				
SP A Link :Start traffic		Link	SP B	
1 – 1 TRAFFIC	> <	1 – 1	TRAFFIC	
$1 - 1 \qquad : Deactivate (failure)$ $1 - 2 \qquad LFU, SLC 1 - 2$ $T13$	>			
1 – 2 LFU, SLC 1 – 2 1 – 2 LUA, SLC 1 – 2	> <>	1 – 2	LUN, SLC 1 – 2	
POINT RESTART	PROCEDURE IS APPLIED IN A A	ND B (see Not	te in 7.9)	
1 – 2 TRAFFIC :Wait :Stop traffic	> <	1 – 2	TRAFFIC	
TEST DESCRIPTION				
 Start traffic to B and C on link 1 – 1. Deactivate link 1 – 1 and check the reception of an LFU. After T13 expires, check the reception of a second LFU and send an LUN. Check the reception of an LUA. 				
3. Check that uninhibition is performed correctly.				
5. Repeat the test but withou	t it has been restarted on link $1 - 2$. Some t sending an LUN. Check that after the s a is given to the OMAP and that the link	econd expiration	n of T13 the procedure is	
	Check that the duration of T13 is inside the specified range.			

TEST N	NUMBER: 7.12 PAGE: 1 of 1				
REFERI	ENCE: Q.704 clause 10	Fig. 28			
TITLE:	Management inhibiting				
SUBTIT	LE: Additional uninhibition	n messages (LUA, LUN, LFU)			
PURPOS	SE: To check the actions of	the system on reception of an additiona	ll LUA, LUN or I	LFU	
PRE-TE	ST CONDITIONS: Linkse	t with two available links			
СО	NFIGURATION: A	TYPE OF TEST: VAT	ТҮР	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
Link :Start tra			Link	SP B	
1 – 1,	2 TRAFFIC	> <>	1 - 1, 2	TRAFFIC	
1 – 1,	2 TRAFFIC	<> <>	1-2 1-1, 2 1-2	LUA, SLC 1 – 1 TRAFFIC	
1 – X 1 – 1,	,	<> > <>	1 - 2 1 - 1, 2	LUN, SLC 1 – 1 TRAFFIC	
1 – X	LUN, SLC 1 – 1	<>	1 – 2	LFU, SLC 1 – 1	
:Wait :Stop traffic					
TEST DESCRIPTION					
1.	1. Start traffic to B and C on link $1 - 1$ and $1 - 2$.				
2.					
	3. Check that this message has been ignored without impact on the traffic.				
4. 5.					
5. 6.	Check that an LUA is received in response without impact on the traffic. Send an LFU (SLC $1 - 1$) on link $1 - 2$.				
7.		ved in response without impact on the t	raffic.		
8.	Stop traffic.				

TEST NUMBER: 7.13 PAGE: 1 of 1				
REFERENCE: Q.704 clause 10	Fig. 28			
TITLE: Management inhibiting				
SUBTITLE: Uninhibition at one side	e after test 7.5			
PURPOSE: To check uninhibition pr	rocedure when the inhibition has been	asked by the two ends of a link		
PRE-TEST CONDITIONS: End of t	test 7.5			
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A Link :Start traffic		SP B Link		
1 – 2 TRAFFIC 1 – 1 :Request uninhibitior	> <	1 – 2 TRAFFIC		
1-2 LUN, SLC $1-11-2$ TRAFFIC	> <>	1 – 2 LUA, SLC 1 – 1		
	<	1–2 TRAFFIC		
:Wait :Stop traffic				
TEST DESCRIPTION				
 Start traffic to B and C on link 1 – 2. Request uninhibition of link 1 – 1. Check that an LUN is received and response with an LUA within T12. Check that the link stays inhibited (by B). Stop traffic and check that it was not disturbed. Repeat test in reverse direction. 				

TEST NUM	TEST NUMBER: 7.14 PAGE: 1 of 1				
REFERENCI	E: Q.704 clause 10	Fig. 28			
TITLE: Mar	nagement inhibiting				
SUBTITLE:	Automatic uninhibition	n after test 7.5			
PURPOSE:	To check automatic uni	nhibition of a link when the inhibition	has been initiate	ed by the both ends	
PRE-TEST (CONDITIONS: End of	f test 7.5			
CONFIG	GURATION: A	TYPE OF TEST: VAT	ТҮ	YPE OF SP: ALL	
MESSAGE	SEQUENCE:				
	SD A			מ מ	
Link	SP A		Link	SP B	
:Start traffic					
1 – 2	TRAFFIC	>			
1 2		<	1 - 2	TRAFFIC	
1 - 2	:Deactivate (failure))			
1 – 1	LFU, SLC 1 – 1	>			
		<	1 - 1 1 - 1	LFU, SLC $1 - 1$	
1 – 1	LUN, SLC 1 – 1	<>	1 - 1	LUN, SLC 1 – 1	
1 – 1	LUA, SLC 1 – 1	>			
		<	1 - 1	LUA, SLC 1 – 1	
	POINT RESTART	PROCEDURE IS APPLIED IN A	AND B (see N	Note in 7.9)	
1 - 1	TRAFFIC	>			
		<	1 – 1	TRAFFIC	
:Wait					
:Stop traffic					
•					
TEST DESC	TEST DESCRIPTION				
		by both ends in response and that LUAs	-		
4. Che	eck that the traffic is res	tarted on link $1 - 1$ and stop traffic.			

TEST NUI	MBER: 7.15		PAGE: 1 of 1	
REFEREN	CE: Q.704 clause 10	Fig. 28		
TITLE: M	anagement inhibiting			
SUBTITLE	: Automatic uninhibitio	n with two links inhibited		
PURPOSE	To check the actions of deactivated	f the system when two links are inhibit	ited and when th	ne third (and last) link is
PRE-TEST	CONDITIONS: Links	1 - 1 and $1 - 2$ inhibited (by A) and line	k 1 – 3 available	
CONF	IGURATION: A	TYPE OF TEST: VAT	TY	PE OF SP: ALL
MESSAGE	SEQUENCE:			
Link	SP A		Link	SP B
:Start traffic	2			
1 – 3	TRAFFIC	>	1 – 3	TRAFFIC
1 – 3	:Deactivate (failure)	<	1-5	IRATTIC
1 - X		>		
and/or	LUN, SLC $1-2$	>		
	(implementation dep	endent: at least one link must be uninhit	bited) 1 – X	LUA, SLC 1 – 1, and/or
		<	1 - X	LUA, SLC $1 - 2$
	POINT RESTART	PROCEDURE IS APPLIED IN A A		
1 - 1	TRAFFIC	>		
and/or		<	1 – 1	TRAFFIC
1 - 2	TRAFFIC	>	and/or	
		<	1 - 2	TRAFFIC
:Wait				
:Stop traffic				
TEST DES	SCRIPTION			
 Deactivate link 1 – 3. Check that at least one LUN is received and acknowledged with an LUA. Check that the traffic is restarted on linkset 1. Some messages have been lost. Stop traffic. 				

TEST NUMBER: 7.16	TEST NUMBER: 7.16 PAGE: 1 of 1			
REFERENCE: Q.704 clause 10	Fig. 28			
TITLE: Management inhibiting				
SUBTITLE: Reception of traffic o	n an inhibited link			
PURPOSE: To check the actions o	f the system on reception of traffic on ar	n inhibited link		
PRE-TEST CONDITIONS: Link	1 – 1 inhibited by A, link 1 – 2 available			
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAGE SEQUENCE:				
SP A		SP B		
Link :Start traffic		Link		
1 – 2 TRAFFIC	>			
	<	1 – 2 TRAFFIC		
	<	1 – 1 TRAFFIC		
:Wait				
:Stop traffic				
TEST DESCRIPTION				
1. Start traffic on link 1 – 1.				
2. Send traffic from B to A treated.	2. Send traffic from B to A on the inhibited link $1 - 2$. Check that the messages received in A are normally			
3. Stop traffic.				

TEST N	TEST NUMBER: 7.17.1 PAGE: 1 of 3			
REFERE	NCE: Q.704 clause 10	Fig. 28		
TITLE:	Management inhibiting			
SUBTIT	LE: Management inhibitin	g test – Normal procedure		
PURPOS	E: To check that the syste	m performs correctly the management	nhibiting test	
PRE-TE	ST CONDITIONS: Link	l – 1 inhibited by A, other links are ava	ilable	
CO	NFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL	
MESSA	GE SEQUENCE:			
Link	SP A		SP B Link	
1 – 2	T LLT, SLC 1 – 1 T22	>	$1 - X \qquad LRT, SLC 1 - 1$ $T23$	
1 – X LLT, SLC 1 – 1> <				
TEST DESCRIPTION				
 Check that an LLT is periodically sent by A and check (in VAT) that the duration of timer T22 is inside the specified range. Check that on the reception of an LRT, no action is taken in A. As compatibility test, check that an LRT is periodically sent from B to A. 				

TEST NUMBER:	TEST NUMBER: 7.17.1 (continued)PAGE: 2 of 3			
REFERENCE: Q.	704 clause 10	Fig. 28		
TITLE: Managem	ent inhibiting			
SUBTITLE: Inhib	biting test procedur	re – Normal procedure		
PURPOSE: See pa	age 1			
PRE-TEST COND	DITIONS: Link 1	– 1 inhibited by B, other links are avai	lable	
CONFIGURA	TION: A	TYPE OF TEST: VAT, CPT	TYP	E OF SP: ALL
MESSAGE SEQU	ENCE:			
SP Link	P A		Link	SP B
	RT, SLC 1 – 1 Г23	> <	1 – X	LLT, SLC 1 – 1 T22
1 – X LF	RT, SLC 1 – 1	>	1 – X	LLT, SLC 1 – 1
TEST DESCRIPTION				
 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. Check that, on the reception of an LLT, no action is taken in A. As compatibility test, check that an LLT is periodically sent from B to A. 				

TEST N	T NUMBER: 7.17.1 (concluded) PAGE: 3 of 3				
REFERE	NCE: Q.704 clause 10	Fig. 28			
TITLE:	Management inhibiting				
SUBTITI	LE: Inhibit test procedure -	- Normal procedure			
PURPOS	E: See page 1				
PRE-TES	ST CONDITIONS: Link 1	– 1 inhibited by A and B	. The other link	s are available	
CON	NFIGURATION: A	TYPE OF TEST:	VAT, CPT	TYPE O	F SP: ALL
MESSAC	GE SEQUENCE:			I	
Link	SP A		Link	SP B	
1 – X 1 – X	LLT, SLC 1 – 1 LRT	> <>	1 – X	LRT, SLC 1 – 1	
	T22 T23 —	<	1 - X	T23	LLT, SLC 1 – 1
1 – X 1 – X	LLT; SLC 1 – 1 SLC 1 – 1 LRT,	> <	1 - X	LRT;	T22 SLC 1 – 1
1 11	T22	> <	1 - X		 LLT; SLC 1 – 1
	T23			T23	T22
TEST DESCRIPTION					
			11		
1.	Check that the LLT and LF	C1 messages are periodical	ally sent from A	A to B and from B to A	

TEST NUME	TEST NUMBER: 7.17.2 PAGE: 1 of 1				
REFERENCE	: Q.704 clause 10	Fig. 28			
TITLE: Man	agement inhibiting				
SUBTITLE:	Inhibit test procedure -	- Reception of an LLT or LRT on an un	inhibited link		
PURPOSE: 7	Γο check the actions of	the system on reception of an LLT or I	RT on an uninhibited link		
PRE-TEST C	CONDITIONS: Link 1	– 1 available			
CONFIG	URATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL		
MESSAGE S	EQUENCE:				
Link	SP A		SP B Link		
		<	1 – 1 LLT, SLC 1 – 1		
1 – 1	LFU, SLC 1 – 1	>			
	T13				
		<	1 – 1 LUN, SLC 1 – 1		
1 – 1	LUA, SLC 1 – 1	>			
		<	1 – 1 LRT, SLC 1 – 1		
1 – 1	LUN, SLC 1 – 1	>			
	T12				
		<	1 – 1 LUA, SLC 1 – 1		
TEST DESCRIPTION					
1. Send an LLT from B to A and check that an LFU is received. Then, send an LUN and check that an LUA is received.					
2. Send					

TEST N	TEST NUMBER: 7.17.3 PAGE: 1 of 1			
REFERE	ENCE: Q.704 clause 10	Fig. 28		
TITLE:	Management inhibiting			
SUBTIT	LE: Inhibit test procedure -	- Reception of an LLT on a link locally	inhibited	
PURPOS	E: To check the actions of	the system on reception of an LLT on a	a link locally (not remotely) inhibited	
PRE-TE	ST CONDITIONS: Link 1	– 1 inhibited in A, other links are avail	able	
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSA	GE SEQUENCE:			
Link	SP A		SP B Link	
		<	1 – X LLT, SLC 1 – 1	
1 – X	K LFU, SLC 1 – 1	>		
	T13	<	1 – X LUN, SLC 1 – 1	
1 – 2	LUA, SLC 1 – 1	<		
TEST DESCRIPTION				
1. Send an LLT from B to A and check that an LFU is received as described above.				

TEST N	TEST NUMBER: 7.17.4 PAGE: 1 of 1			
REFERE	ENCE: Q.704 clause 10	Fig. 28		
TITLE:	Management inhibiting			
SUBTIT	LE: Inhibit test procedure -	- Reception of an LRT on a link remote	ly inhibited	
PURPOS	SE: To check the actions of	the system on reception of an LRT on a	a link remotely inhibited	
PRE-TES	ST CONDITIONS: Link 1	– 1 inhibited by B, other links are avai	lable	
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSAG	GE SEQUENCE:			
Link	SP A		SP B Link	
		<	1 – X LRT, SLC 1 – 1	
1 – X	LUN, SLC 1 – 1	>		
	T12			
		<	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: Q.704 clause 11,	subclause 12.6 Fig. 46A					
TITLE: Signalling traffic flow cor	trol					
SUBTITLE: Reception of a TFC						
PURPOSE: To check the actions of	of the system on reception of a TFC					
PRE-TEST CONDITIONS: One	or more link available					
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESSAGE SEQUENCE:	•	- ·				
SP A Link		SP B 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						
 Start traffic to B and C. Send a TFC concerning C and check that this message is received correctly. 						

TEST NUMBER: 8.2 PAGE: 1 of 1					
REFERENCE: Q.704 clause 11, subclause 12.6 Fig. 46A					
TITLE: Signalling traffic flow	control				
SUBTITLE: Sending of TFCs					
PURPOSE: To check the detect	ction of a	level 3 congestion			
PRE-TEST CONDITIONS: A	ll links av	zailable			
CONFIGURATION: C		TYPE OF TEST: VAT	TYPE OF SP: STP		
MESSAGE SEQUENCE:					
SP B		SP A	SP C		
Link	Link		Link		
:Start traffic					
1–1 TRAFFIC 1–2 TRAFFIC	<	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2 – 1 TRAFFIC (<n e)<="" td=""></n>		
			2 – 1 TRAFFIC (<n e)<="" td=""></n>		
:Wait	<	$1 - X$ TFC, DPC = C			
	<	. One TFC each 8 messag . or one TFC each 256 of . $1-X$ TFC, DPC = C			
1–1 TRAFFIC		.)> 2 - 1> > 1 - 1 <>	2–1 TRAFFIC		
1–2 TRAFFIC	(<n 2="" e<="" td=""><td>)> 2-1> 1-2 <></td><td>2 – 1 TRAFFIC (<n e)<="" td=""></n></td></n>)> 2-1> 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					
 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). Check that the signalling traffic flow control procedure is started in A. Check that a TFC message concerning C is received for each 8 messages or each 256 octets received in B during the congestion. Reduce the load below n/2 erlang on links 1 – 1 and 1 – 2. Check that the congestion disappears and that no TFC is received. Stop traffic. 					
6. Check that the traffic from C to B has not been disturbed.					

TEST NUMBER: 8.3		PAGE: 1 of 1			
REFERENCE: Q.704 subclau	se 11.2.7				
TITLE: Signalling traffic flow	control				
SUBTITLE: Reception of a UI	U				
PURPOSE: To check the actio	as of the system on reception of a UPU				
PRE-TEST CONDITIONS: O	ne link available				
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF S	P: see Note		
MESSAGE SEQUENCE:					
SP A Link :Start traffic		Link	SP B		
1 – 1 TRAFFIC (DPC = B, SI =	> X)				
1 - 1 TRAFFIC (DPC = C, SI =	> X)				
	<		TRAFFIC DPC = C, SI = X)		
	<		UPU DPC = B, SI = X)		
1 - 1 TRAFFIC (DPC = C, SI =	> X)				
	<		TRAFFIC OPC = C, SI = X)		
:Wait :Stop traffic 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 DESCRIPTION					
 Start traffic to B and C with SI = X. 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. Wait and stop traffic. 					
5. Repeat the test with a UPU with the cause "unequipped", and with the cause "unavailable".					

TEST N	UMBER: 8.4		PAGE: 1 of 1			
-	REFERENCE: Q.704 subclause 11.2.7					
	Signalling traffic flow control					
	LE: Sending of a UPU					
	E: To check the detection of an	unavailability of a user part				
	ST CONDITIONS: One link av					
COI	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: See Note			
MESSAG	GE SEQUENCE:					
Link :Start traf 1 – 1	ffic TRAFFIC	>	SP B Link			
	(to B and C, $SI = X$)	<				
	:Deactivate user part X	<	(from B and C, $SI = X$) 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	TRAFFIC (to B and C, SI = X)	<>	1 - 1 TRAFFIC (from B and C to A, SI = 2			
deactivat	The notion of unavailability of e a user part is implementation de	a user part is specific to the imp ependent. The SPs having user par	plementation; consequently, the ability to the concerned.			
1	ESCRIPTION Stort traffic to D and C with SL	- V				
1. 2.	Start traffic to B and C with SI = Deactivate the user part X.	- Λ.				
3.						
4.						
5.	5. Repeat point 3 and reactivate the user part.					
6.						
7.	Repeat the test for an unequiped	user part, and verify that a UPU i	s sent back with the cause "unequipped"			

TEST	NUMBER: 9.1.1					PAGE: 1 of 1		
REFE	RENCE: Q.704 claus	se 13	Fig. 29, Fig. 44					
TITLE	: Signalling route ma	nageme	nt					
SUBT	TLE: Sending of a T	FP on a	n alternative route –	Failure of nor	mal links	set		
PURP	OSE: To check the set	nding of	f a TFP on the alterr	ative route wh	en the no	ormal linkset become	s unava	ilable
PRE-T	EST CONDITIONS:	All link	sets available					
C	ONFIGURATION: I	C	TYPE OF TES	T: VAT, CPT	- -	TYPE OF SP	STP	
MESS.	AGE SEQUENCE:							
	SP A		SP B	SF	° C		SP	•
Link	L	ink	Lir	k	Link			
:Start t	raffic							
1 – 1		5 – 1	>		>	•	SP	D
1 1	-	6 – 1	-				SP	E
2 - 1	TRAFFIC	0 1					51	L
2 1	(from A and F)			~	7 1		SP	Е
1 – 1	:Deactivate		(MML commar	· · ·	/ - 1	/	51	L
2 - 1	TFP, $PC = B$							
2 - 1 2 - 1	TFP, $PC = D$			-				
2 - 1	TRAFFIC			·	7 _ 1	>	SP	Е
2 1	(from 1 - 1)					>	SP	D
:Wait					0 1		51	D
:Stop t	roffic							
.stop t	lanc							
NOTE	– A changeover proce	dure is	nerformed after dea	ctivation of lin	k1_1k	ut it is not described	in this	transfer
	ited test.		performed after dea		K I – I (fut it is not described	in uns	u ansier
•								
TEST	DESCRIPTION							
1.								
2.								
2.	2. Deactivate link 1 – 1 and check that TFPs concerning B and D are sent from A to C (anemative route to reach B and D). Check that no TFP concerning E is sent from A to C (load sharing between linksets 1 and 2 in A to reach E).							
3.	3. Check that time out T8 is started for each TFP sent.							
4.	4. Check that the traffic to D and E is diverted to C.							
5.	Stop traffic and checl							
5.	Stop traine and cheel	n mai ii	mus not disturbed.					

TEST NUMBER: 9.1.2				PAGE: 1 of 1		
REFERENCE: Q.704 clause 13	Fig. 29, I	Fig. 44		U		
TITLE: Signalling route managen	nent					
SUBTITLE: Sending of a TFP on	an alternative	route - On reception	n of a TFP			
PURPOSE: To check the sending				mal route becomes u	navailat	ole on
reception of a TFP						
PRE-TEST CONDITIONS: Links	set 4 unavailab	le				
CONFIGURATION: D	TYP	E OF TEST: VAT,	СРТ	TYPE OF SP	: STP	
MESSAGE SEQUENCE:						
SP A	SP B		SP C		SP	•
Link	Link	Link	L	Link		
:Start traffic						
1 – 1 TRAFFIC>	5 - 1		>		SP	D
(from A and F)	6 – 1		>		SP	Е
		>7 - 1	>		SP	Е
(from A and F)						
(Note) <	5 - 1 1 - 1 TFP	:Deactivate $PC = D$				
2 – 1 TFP,						
PC=D		,				
1 – 1 TRAFFIC>	6 – 1		>	>	SP	Е
(from A and F)						-
2 – 1 TRAFFIC		>8-1			SP SP	D E
:Wait	1 - 1 (0 D)	l = 1	>	>	SP	E
:Stop traffic						
.stop traine						
NOTE – A forced rerouting is perfe	ormed after the	e reception of TFP fo	or D in A but	t it is not described in	this tra	nsfer
prohibited test.		····				
TEST DESCRIPTION						
1. Start traffic to D and E.						
	Deactivate link 5 – 1 and check that a TFP concerning D is sent to A.					
3. Check that a TFP concern		red from A and that	traffic to D i	s diverted via C.		
4. Check that a time out T8						
5. Stop traffic and check that	t traffic to E ha	as not been disturbed	I. Some mes	sages to D may have	been los	st.

TEST NUMBE	TEST NUMBER: 9.2.1 PAGE: 1 of 1					
REFERENCE:	Q.704 clause 13	Fig. 29, Fig. 44				
TITLE: Signal	ling route management	nt				
SUBTITLE: B	roadcast of TFPs – O	n one linkset failure				
PURPOSE: To	check the broadcast	of TFPs when one point is inaccessible				
PRE-TEST CO	NDITIONS: All lin	ksets available				
CONFIGU	RATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP			
MESSAGE SE	QUENCE:					
	SP A	SP B	SP C SP F			
Link :Start traffic		Link	Link Link			
3 – 1	TRAFFIC (from A, D and E)		>			
3 – 1	:Deactivate	(MML command or failure)				
1 - 1 2 - 1	TFP, PC = F TFP, PC = F	>				
:Wait :Stop traffic						
NOTE – The propagation of TFPs is not presented to simplify the test description.						
TEST DESCRIP	TEST DESCRIPTION					
 Start traffic to F. Deactivate link 1 – 1 and check that TFPs concerning F are broadcasted. Check that a timer T8 is started. Stop traffic. 						

TEST NUMBER: 9.2.2	TEST NUMBER: 9.2.2 PAGE: 1 of 2				
REFERENCE: Q.704 clause 13	Fig. 29, Fig. 44				
TITLE: Signalling route manageme	nt				
SUBTITLE: Broadcast of TFPs – O	on multiple failures				
PURPOSE: To check the broadcast	of TFPs when several p	oints are inacces	ssible (various reasons)		
PRE-TEST CONDITIONS: Linkse	et 1 unavailable				
CONFIGURATION: D	TYPE OF TEST	VAT, CPT	TYPE OF SP: STP		
MESSAGE SEQUENCE:					
SP A	SP B	SP C	SP •		
Link	Link	Link	Link		
:Start traffic					
2 – 1 TRAFFIC (from A and F)	>		> SP E > SP D		
2 – 1 :Deactivate (MML command of 3 – 1 TFP, PC = B			>		
TEST DESCRIPTION					
 Start traffic to D and E. Deactivate linkset 2 and check that TFPs concerning B, C, D and E are broadcasted (to F). Check that for each TFP sent a timer T8 is started. Repeat test but with linkset 2 unavailable as pre-test condition and then deactivate linkset 1. 					

TEST NUMBER: 9.2.2 (concluded	PAGE: 2 of 2				
REFERENCE: Q.704 clause 13	Fig. 29, Fig. 44				
TITLE: Signalling route manageme	ent				
SUBTITLE: Broadcast of TFPs – C	On multiple failures				
PURPOSE: See page 1					
PRE-TEST CONDITIONS: Links	ets 1 and 4 unavailable				
CONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP			
MESSAGE SEQUENCE:	•				
SP A	SP C SP D	SP •			
Link	Link Link	Link			
:Start traffic					
(from A and F) <	> 8 – 1> 7 – 1> 8 – 1 :Deactivate 2 – 1 TFP, PC = D > 7 – 1	> SP F			
TEST DESCRIPTION					
 Start traffic to D and E. Deactivate linkset 8 and check that a TFP (PC = D) is sent. Check that TFPs are broadcasted (here to F). Check that a time out T8 started. 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 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 linkset 2. 					

TEST NUN	MBER: 9.3		PAGE:	1 of 2		
REFERENCE: Q.704 clause 13 Fig. 29, Fig. 44						
TITLE: Si	gnalling route managemer	ıt				
SUBTITLE	: Reception of a message	for an inaccessible destination				
PURPOSE:	To check that a TFP is s	ent in response to a message received f	or an inacc	cessible destination		
PRE-TEST	CONDITIONS: Linkset	s 1, 4 and 8 unavailable				
CONI	FIGURATION: D	TYPE OF TEST: VAT		TYPE OF SP: STP		
MESSAGE	SEQUENCE:					
	SP A			SP F		
Link			Link			
				:Sent a message to D		
		<	3 – 1	MESSAGE TO D		
3 – 1	TFP, $PC = D$	>				
	Т8	<	3 – 1	MESSAGE TO D		
	I					
TEST DESCRIPTION						
1. Send from F a message with $OPC = D$ to A.						
2. Chec	k that a TFP $PC = D$ is ser	at in response. Check that a time out T8				
3. Durin	ng 18, send a new message	e with $OPC = D$ to A and check that no	TFP is ser	nt.		

TEST NUMBER: 9.3 (concluded) PAGE			PAGE: 2 of 2			
REFERENCE: Q.704 clause 13	REFERENCE: Q.704 clause 13 Fig. 29, Fig. 44					
TITLE: Signalling route management	nt					
SUBTITLE: Reception of a message	e for an inaccessible dest	ination				
PURPOSE: See page 1						
PRE-TEST CONDITIONS: Linkse	ts 1 and 8 unavailable					
CONFIGURATION: D	TYPE OF TES	T: VAT	TYPE OF SP: STP			
MESSAGE SEQUENCE:						
SP A	SP B	SP C	SP •			
Link	Link	Link	Link			
:Start traffic						
3 – 1 TRAFFIC (from A, D and E)			> SP F			
3-1 :Deactivate (MML command o	or failure)					
	>					
Т8 <	J	4 – 1				
		2 - 1	MESSAGE TO F			
			MESSAGE TO F			
TEST DESCRIPTION						
3. Within T8, send one message with $DPC = F$ from C to A and check that no TFP is sent in response.						

TEST NUMBER: 9.4.1 PAGE: 1 of 1 REFERENCE: Q.704 clause 13 Fig. 29, Fig. 45 TITLE: Signalling route management SUBTITLE: Sending of a TFA on an alternative route - Recovery of normal linkset PURPOSE: To check the sending of a TFA on an alternative route when the normal linkset becomes available PRE-TEST CONDITIONS: Linkset 1 unavailable (end of test 9.1.1) CONFIGURATION: D TYPE OF TEST: VAT, CPT TYPE OF SP: STP MESSAGE SEQUENCE: SP B SP A SP C SP • Link Link Link Link :Start traffic 2 - 1TRAFFIC -----> 8-1 -----> SP D E (from A and F) 7-1 -----> SP 1 - 1: Activate (depending on the activation mean previously used) 2 - 1TFA, PC = B-----> 2 - 1TFA, PC = D-----> 1 - 1TFP, PC = D-----> 1 - 1TFP, PC = E----> 1 - 1TRAFFIC ----> 5-1 ----> SP D 6-1 ----> (from A and F SP Е and from 2-1) -----> 7-1 -----> 2 - 1TRAFFIC SP Е (from A and F) :Wait :Stop traffic NOTE – A changeback procedure is performed after activation of link 1 - 1 but it is not described in this transfer allowed test. TEST DESCRIPTION 1. Start traffic to D and E. 2. Activate linkset 1 and check that traffic to D and E is diverted on linkset 1 and that a TFA concerning D is sent from A to C. Check that no TFA is sent concerning E (load sharing in A between linksets 1 and 2). Stop traffic and check that it was rerouted correctly without loss of messages, duplication and missequencing. 3.

TEST	Г NUMBER: 9.4.2			PAGE: 1 of 1		
REF	ERENCE: Q.704 clause 13	Fig. 29, Fig. 45				
TITL	E: Signalling route managen	nent				
SUB	TITLE: Sending of a TFA on	an alternative route –	On reception of a '	TFA		
PUR	POSE: To check that a TFA reception of a TFA	A is sent on the alter	native route when	the normal route become	es available on	
PRE-	TEST CONDITIONS: Link	sets 4 and 5 unavailab	le (end of test 9.1.2	2)		
C	CONFIGURATION: D	TYPE OF TES	T: VAT, CPT	TYPE OF SP	: STP	
MES	SAGE SEQUENCE:					
S	P A	SP B	SP C	SP	•	
Link :Start	traffic	Link	Link	Link		
1 – 1	TRAFFIC (from A and F)	> 6-1		> SI	ΡΕ	
2 – 1						
	(from A and F)	5 - 1 :Act	-	> SI	P D	
	(Note) <	1 – 1 TFA	., PC = D			
1 - 1 2 - 1	,	>	>			
1 – 1	TRAFFIC	> 5-1			P D	
	A and F, from $2 - 1$ to D)					
2 – 1	TRAFFIC (from A and F)		> 7-1	> SI	P E	
:Wai :Stop	t traffic					
	E – A controlled rerouting is p red test.	erformed after the act	ivation of linkset 5	and it is not described in t	his transfer	
TEST	Γ DESCRIPTION					
1.	Start traffic to D and E.					
2.	Activate link 5 – 1 and check	that a TFA concernir	ng D is sent to A.			
3.	Check that the traffic to D vi		-	s sent from A to C.		
4.	Stop traffic and check that traffic was not disturbed.					

TEST NUMBER: 9.5.1		PAGE: 1 of 1			
REFERENCE: Q.704 clause 13	Fig. 29, Fig. 45				
TITLE: Signalling route manageme	nt				
SUBTITLE: Broadcast of TFAs – C	On one linkset recovery				
PURPOSE: To check the broadcast	of TFA when a destination bec	omes ac	cessible		
PRE-TEST CONDITIONS: Linkse	ts 3 unavailable (end of test 9.2	2.1)			
CONFIGURATION: D	TYPE OF TEST: VAT	, CPT	TYPE OF SP: STP		
MESSAGE SEQUENCE:					
SP A	SP B SP C		SP •		
Link	Link	Link	Link		
:Start traffic	> (Note 2)		, 		
: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					
 Activate linkset 3. Check that TFAs concerning F Start traffic to F and check that 		fic.			

TEST NUMBER: 9.5.2			PAGE: 1 of 2			
REFERENCE: Q.704 clause 13 Fig. 29, Fig. 45						
TITLE: Signalling route manageme	ent					
SUBTITLE: Broadcast of TFAs –	Various reasons					
PURPOSE: To check the broadca situations	ast of TFA when se	veral destinations	become accessible in various network			
PRE-TEST CONDITIONS: Links	ets 1 and 2 unavailabl	e (end of test 9.2.2	2 page 1 of 2)			
CONFIGURATION: D	TYPE OF TE	ST: VAT, CPT	TYPE OF SP: STP			
MESSAGE SEQUENCE:						
SP A	SP B	SP C	SP •			
Link	Link	Link	Link			
$3 - 1 {TFA}, PC = D {$	>	> > > 7-1	> SP F > SP F			
NOTE– After activation of the links this test.	et 2, SPs A and C per	form the point rest	art procedure which is not described in			
TEST DESCRIPTION	TEST DESCRIPTION					
 Activate linkset 2. Check that TFAs concerni Start traffic and check that Repeat test but activate lin 	t it is routed correctly;	stop traffic.				

TEST NUMBER: 9.5.2 (conclude		PAGE: 2 of 2		
REFERENCE: Q.704 clause 13	Fig. 29, Fig. 4	45		
TITLE: Signalling route manager	ment			
SUBTITLE: Broadcast of TFAs	– Various reasons			
PURPOSE: See page 1 of 2				
PRE-TEST CONDITIONS: Lin	ksets 1, 4 and 8 una	vailable (end of test 9.	2.2 page 2 of 2)	
CONFIGURATION: D	TYPE OF	TEST: VAT, CPT	TYPE OF SP: STP	
MESSAGE SEQUENCE:				
SP A	SP B	SP C	SP •	
Link	Link	Link	Link	
:Start traffic				
2 – 1 TRAFFIC (from A and F)		-> 7 - 1	>SP E	
		8-1 :Act		
< 2 – 1 TFP, PC = D			, PC = D	
3 – 1 TFA, PC = D			> SP F	
		, , 1	> SP E > SP D	
(from A and F)		8-1	> SP D	
:Wait				
:Stop traffic				
TEST DESCRIPTION				
 Start traffic to E. Activate linkset 8 and cl concerning D. 	heck that a TFA con	ncerning D is sent from	n C to A. Check that A broadcasts TFAs	
3. Check that the traffic to				
	unavailable as pre-to	est conditions and acti	itions and activate linkset 5. Repeat test vate linkset 1. Repeat test with linksets 2,	

TEST N	TEST NUMBER: 9.6 PAGE: 1 of 1						
REFERI	ENCE: Q.704 clause 13	Fig. 29, Fig. 46					
TITLE:	Signalling route manageme	nt					
SUBTIT	LE: Periodic sending of Sig	gnalling-Route-Set-Test messages (SRS	ST)				
PURPO	SE: To check the periodic to	est of an unavailable signalling route is	performed correctly				
PRE-TE	ST CONDITIONS: Linkse	t 2 unavailable					
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESSA	GE SEQUENCE:						
Lin	SP A	Link	SP B				
:Start traf 1 – 1		>					
1-1	<	> 1 – 1	TRAFFIC				
	T10						
1 – 1	RST, $PC = C$	>					
	T10	2 – 1	: Activate				
1 – 1		> 1 – 1	TFA, $PC = C$				
	<	1 – 1	TRAFFIC				
:Wait :Stop tra	:Wait :Stop traffic						
TEST DESCRIPTION							
1. Start traffic to B.							
2.	Check that at each expiration of T10, a signalling-Route-Set-Test message concerning C is received from A without response.						
3.	Activate linkset 2 and chec	k that a TFA is received and that T10 is	s stopped.				
4.	Check that traffic to C is re	started and stop traffic.					
5.	-	t sending of TFA after activation of l esponse. Check that T10 and signalling-	linkset 2 and check that when a RST is route-set-test procedure are stopped.				
6.	Check that the duration of T10 is inside the specified range.						

TEST NUMBER: 9.7 PAGE: 1 of 1								
REFERI	REFERENCE: Q.704 clause 13 Fig. 29, Fig. 46							
TITLE:	Signalling route managemen	t						
SUBTIT	LE: Reception of a Signallin	ng-Route-Set-Test-Message						
PURPOS	SE: To check the actions of t	he system on reception of an SRST						
PRE-TE	ST CONDITIONS: Linkset	s 2 and 3 unavailable						
CC	CONFIGURATION: D TYPE OF TEST: VAT TYPE OF SP: STP							
MESSA	GE SEQUENCE:							
Lin1 3 – 1	SP A :Activate	Link < 1 - 1 F	SP B SP F $Link$ $RST, PC = F$					
1 – 1	TFA, $PC = F$	> (Ignorec < 1 - 1 F						
1 – 1	TFA, PC = F	>	T10					
3 – 1	TRAFFIC (from A, D and E)		>					
:Wait :Stop tra	ffic							
TEST D	TEST DESCRIPTION							
1. 2. 3.	Send to A RST message concerning F and check that no response is received. Activate linkset 3 and check that a TFA is received but ignored in B. Send a RST message concerning F after activation of linkset 3 and check that a TFA is received in							
4.	response. Repeat the test but with link	sets 1 and 3 unavailable as pre-test cor	ditions and RST message sent from C.					

TEST NUMBER: 10.1.1	NUMBER: 10.1.1 PAGE: 1 of 1						
REFERENCE: Q.704 clause 9							
TITLE: Signalling point restart							
SUBTITLE: Recovery of a linkset (SP A does not have an S	STP function) – Wi	th use of point restart proc	edure			
PURPOSE: To check that point res connexity between two		rmed correctly who	en the recovery of a link	set restores			
PRE-TEST CONDITIONS: Linkse	ts 1, 2, 4 and 6 unavaila	ble					
CONFIGURATION: B	TYPE OF TES	T: VAT, CPT	TYPE OF SP:	SP			
MESSAGE SEQUENCE:	-		•				
SP A	SP B	SP C	SP	?			
Link	Link	Link	Link				
3 – 1, 2 TRAFFIC			-	SP E			
		8-1		SP D SP E			
<		- ,	7 = 1 8 - 1				
2-1 :Activate			0 1	51 D			
2 – 1 Activation (link in servic	e at level 2)						
T21	T21						
2 – 1 TRA>	2 1 TED (D						
< <	2 - 1 TFP (P 2 - 1 TFP (P	,					
<	2-1 TRA	- /					
		PC = A)	>	SP D			
TIME CONTROLLED I							
2 – 1 TRAFFIC	>5 – 1		>	SP D			
(from 3 – 1, 2)	>2 - 1		> 5-1	SP D			
	/2 1		- 51				
3 – 1, 2 TRAFFIC		> 7-1	>	SP E			
		8 - 1	>	SP D			
		3 – 1, 2	< 7-1	SP E			
:wait							
:Stop traffic		1	11.1				
NOTE – The time controlled divers These procedures are not described in		a in A and a com	fromed rerouting is perior	med m D.			
TEST DESCRIPTION	1						
1. Start traffic to E (and D in V	VAT)						
2. Activate link 2-1 and check	k that the timer T21 is s			eived in A.			
Check that the timer T21 is	•• •	•					
3. Check that the time control D is diverted to the link 2-1 diverted.	-	-					
4. Stop traffic and check that t	here were no lost messa	ges, no duplication	and no missequencing.				
5. Repeat the test (in VAT) w specified range.	vithout sending of TRA	and check that the	e duration of timer T21 i	s inside the			

TEST N	TEST NUMBER: 10.1.2 PAGE: 1 of 1					
REFERENCE: Q.704 clause 9						
TITLE:	Signalling point r	estart				
SUBTIT	LE: Recovery of	a linkse	t (SP A does not hav	e an STP function) -	- With use of point restart p	ocedure
PURPO	SE: To check the	actions	of the system in case	e of restart of a links	et	
PRE-TE	ST CONDITION	S: Link	sets 1, 2 and 6 are u	navailable		
CON	FIGURATION:	В	TYPE OF	TEST: VAT	TYPE OF SP:	SP
MESSA	GE SEQUENCE:					
SI Link :Start tra			SP B Link	SP (Link	C SF Link	
3 – 1, 2	TRAFFIC	4 - 	- 1 <		> 5-1	SP E SP D SP D
2 – 1		<	RE PERFORMED I	3 – 1, 2 N A AND B (Note)	< 7−1	
2 - 1 2 - 1 3 - 1, 2	TRAFFIC TRAFFIC TRAFFIC		> 5-1		> > 1>	SP E SP D SP E SP D SP D SP E
:Wait :Stop traffic						
NOTE – After activation of link 2 – 1, changebacks are performed in A and B but they are not explicitly described in this point restart test.						
	ESCRIPTION					
1. 2.	Start traffic to E and D. Activate link 2 – 1. Check that the point restart procedure is not applied and that changebacks are performed.					
3. 4.					dance with the load sharing ter the activation of the link	
4. 5.			-		and no missequencing.	2 - 1.

TEST NUMBER: 10.2.1 PAGE: 1 of 2 REFERENCE: Q.704 clause 9 TITLE: Signalling point restart SUBTITLE: Recovery of a linkset (SP A has STP function) – With use of point restart procedure PURPOSE: To check that restart procedure is performed correctly when the recovery of a linkset restores connexity between two adjacent SPs PRE-TEST CONDITIONS: Linksets 1, 3, 4 and 6 are unavailable TYPE OF TEST: VAT, CPT CONFIGURATION: D TYPE OF SP: STP **MESSAGE SEQUENCE:** SP B SP C SP? SP A Link Link Link Link :Start traffic ----->7-1 2 - 1TRAFFIC SP E ----> 8 - 1-----> SP D <----- 2-1 <-----7 - 1SP E <-----8 - 1SP D 1 - 1:Activate 1 - 1Activation (link in service at level 2) T21 T21 (PC = F) -----> 1 - 1TFP 1 - 1TRA ----> <-----1 - 1TFP (PC = C) <-----TFP (PC = E) SP D 1 - 1<-----1 - 1TRA 5 - 1TFA (PC = A) -----> 2 - 1TFA (PC = B) -----> 1 - 1TFP (PC = D) \rightarrow TIME CONTROLLED DIVERSION IS APPLIED -----> 5-1 -----> 2 - 1TRAFFIC SP D <----- 1-1 <-----5 - 1SP D <----- 2-1 <-----8 - 1SP D -----> 7-1 -----> 2 - 1TRAFFIC SP E <----- 2-1 <-----7 - 1SP E :Wait :Stop traffic TEST DESCRIPTION 1. Start traffic to D and E. 2. Activate link 1 - 1 and check that the timer T21 is started in A (and B in CPT). Check that TFPs are sent from B to A for E and C, and that a TFP is sent from A to B for F. 3. Check that timer T21 in SP A and timer T21 in SP B expire at about the same time. Check that a TFA is sent from A to C for B. 4. Check that the controlled time diversion is applied in A. Check that the traffic to D is diverted on link 1 -1. Stop traffic and check that there were no lost messages, no duplication and no missequencing. 5. Repeat the test (in VAT) without sending TRA from B to A and check that the duration of timer T21 is 6. inside the specified range.

TEST NUMBER: 10.2.1 (concluded)				PAGE: 2 of 2		
REFERENCE: Q.704 cl	ause 9					
TITLE: Signalling point r	estart					
SUBTITLE: Recovery of	a linkset	(SP A has STP function	n) – With use of	point restart	procedure	
PURPOSE: See page 1 of	2					
PRE-TEST CONDITION	S: Links	ets 3, 4 and 6 are unava	ilable (end of pa	ge 1)		
CONFIGURATION:	D	TYPE OF TH	EST: VAT		TYPE OF S	P: STP
MESSAGE SEQUENCE:						
SP A		SP B		SP C		SP ?
Link		Link	Link		Link	
1–1 TRAFFIC	<	> 5 – 1 1 – 1 <		-	5 – 1	SP D SP D
		1 - 1 <			3 - 1 8 - 1	SP D SP D
2–1 TRAFFIC					0 1	SP E
	<		2 – 1	<	7 - 1	SP E
(from A and F) 2 – 1 TRAFFIC (from A and F) :Wait	< <	>	> 7-1	> >	0 1	T21 SP F TRA SP F SP D SP D SP E SP E
:Stop traffic						
TEST DESCRIPTION						
1. Start traffic.			4			
3. Check that timer T	21 in SP /	that the timer T21 is s A and timer T21 in SP			me. Check th	at a TFA is sent
from A to C for F a				. .		
4. Stop traffic and check that there were no lost messages, duplication and no missequencing.						

TEST N	TEST NUMBER: 10.2.2 PAGE: 1 of 1					
REFERI	ENCE: Q.704 clause 9					
TITLE:	Signalling point restart					
SUBTIT	LE: Recovery of a linkse	t (SP A has STP function) – Witho	ut use of point restart pro	ocedure		
PURPOS	SE: To check the actions	of the system in case of restart of a	linkset			
PRE-TE	ST CONDITIONS: Link	set 1 unavailable				
CON	FIGURATION: D	TYPE OF TEST: VAT	TYPE	OF SP: STE)	
MESSA	GE SEQUENCE:		· · ·			
SP Link :Start tra	A	SP B Link	SP C Link	SP Link	•	
2 – 1	TRAFFIC (from A and F)	<	7 – 1>	7 - 1	SP D SP E SP E SP D	
1 – 1	:Activate CHANGEBACKS	ARE PERFORMED IN A AND B	(Note 1) (Note 2))		
1 – 1	TRAFFIC (from A and F, from $2-1$)	> 5 - 1 6 - 1<	>		SP D SP E	
2 – 1	TRAFFIC			0 1	SP E SP E SP D	
:Wait :Stop tra	ffic					
NOTE 1 – Depending on the routing rules in D and E, the traffic to A and F may be carried either on linksets 5 or 8, or on linksets 6 or 7. NOTE 2 – Changebacks are performed but they are not explicitly described in this point restart test.						
TEST D	ESCRIPTION					
1. 2.	Start traffic to D and E. Activate link 1 – 1. Check that point restart procedure is not applied in this case and that changebacks are performed.					
3.		D and E is diverted on link $1 - 1$ in		l sharing rules	in A.	
4. 5.		route set test procedure is not used ere were no lost messages, no dupli		cing.		

TEST NUMBER: 10.3 PAGE: 1 of 1							
REFERENCE: Q.704 clause 9							
TITLE: Signalling point restart	TITLE: Signalling point restart						
SUBTITLE: An adjacent SP become	es accessible via anotl	ner SP (SP A	A does not	t have an STP function)		
PURPOSE: To check the actions of	the system when an a	djacent SP b	becomes a	accessible via another S	P		
PRE-TEST CONDITIONS: Linkset	s 1, 3, 4, 5 and 6 are u	inavailable					
CONFIGURATION: B	TYPE OF 1	TEST: VAT	Г	TYPE OF S	P: SP		
MESSAGE SEQUENCE:							
SP A SP	В	SP C	C			SP•	
Link	Link	Link			Link		
4 – 1:Act			1				
	<>	4 - 1	TFP (A))			
TFPs 4 – 1	>						
(D and E)	T21		T21				
	<	4 - 1	TRA				
TRA 4 – 1	<>						
< 2 – X	TFAx	7 1	TEA _c (A	, B)>		SP E	
< 2 - X	(PCs = C, D and			. ,		SP D	
	(Broadcasting m		ITAS (A,	, b)>		SED	
2 – 1, 2							
TRAFFIC> 4 – 1	>	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	<		8 - 1	SP D	
:Wait :Stop traffic							
TEST DESCRIPTION							
 Activate link 4 – 1. Check that on the reception of 7. Stop traffic and check that there 		-					

TEST NUM	BER: 10.4			PAGE: 1 of 1	
REFERENCE	E: Q.704 clause	e 9			
TITLE: Sign	nalling point resta	rt			
SUBTITLE:	An adjacent SP	becomes accessible via and	ther SP (SP A has	STP function)	
	To check the ac reception of a TF	ctions of the system when	n an adjacent SP	becomes accessible	e via another SP on
PRE-TEST C	CONDITIONS:	Linksets 1, 3 and 4 are una	vailable		
CONFIGU	RATION: D	TYPE OF TE	EST: VAT	TYPE	OF SP: STP
MESSAGE S	SEQUENCE:				
SP A		SP B	SP	С	SP D
Link	L	ink		Link	Link
2 - 1 T	RAFFIC		~7	1 \	SP E
	rom A)		27 =	8 – 1>	SP D
(,	<	2	1 <	7-1 SP E
				<	8 – 1 SP D
TI TI TI TI TI	FP (PC = A) $FP (PC = F)$ RA $FA (PC = C)$ $FA (PC = C)$ $FA (PC = C)$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	T21 TFP (PC = F) TRA	on (link in service at	t level 2) SP D SP E SP D
	· · · · · ·	6 — 1			SP E
l I			· · · · ·	= B)	
				= B)	> SP D
2 – 1 TI				= B)	
:Wait :Stop traffic		< 4 – 1			
NOTE – Prev	ventive TFPs migl	ht be sent after the expiry o	f T21.		
TEST DESC	RIPTION				
	rt traffic.				
	tivate link 4 – 1.				
		e TFA is received for B, S sends a TFP concerning F		hat B is an adjacent	point which restarts,
		k that there were no lost me		tion and no missequ	iencing.

REFEREN TITLE: S SUBTITL	JMBER: 10.5NCE: Q.704 clause 9Signalling point restart			PAGE: 1 of 2	
TITLE: S					
SUBTITL	Signalling point restart				
PURPOSE	E: Restart of an SP havin	g no STP function			
I OIG ODI	E: To check the restart pro	ocedure in an SP having no	STP function	n	
	T CONDITIONS: SP A				
CON	FIGURATION: B	TYPE OF TEST:	VAT, CPT	TYPE O	F SP: SP
MESSAG	E SEQUENCE:	I			
SP		SP B	SP (2	SP ?
Link		Link	Link	Link	
X – X	T20 < TRA <	nk in service at level 2) T21 2 - 1 TF		T21	SP D
2 – 1	TRA>				
3 – 1		= A) are broadcast > TFA (PC =	A) are broade	rast	
			ri) uie bioud	oust	
1 – 1	TRA			>	
1 - 1, 2	2 TRAFFIC				SP D
1 - 1, 2				-	SP D
2 - 1, 2	2 TRAFFIC	> 5-1			SP D
		6 – 1 –			SP E
3 – 1, 2	2 TRAFFIC		1 1		SP E SP E
	<	3 – 1			SP E
:Wait					
:Stop traff					
	SCRIPTION				
	Activate SP A) • • • • • • • • •	
	Check that when the first line of the constant				B C and D timer
	Check that when all (or sufficient) links are activated, and all TRAs are received from B, C and D timer T20 is stopped.				
	Check that SP A broadcast	s TRAs to B, C and D.			
5. (Check that the traffic is carried as described above.				
	Stop traffic.				
	In VAT, repeat the test with specified range.	thout sending TRA from H	B to A, and ch	eck that the duration	of T20 is inside the
8. 1	In VAT, repeat the test wi specified range.	thout activating the link 1	-1, and che	eck that the duration of	of T20 is inside the

	UMBER: 10.5 (conclude	(d)		PAGE: 2 of 2
REFERE	ENCE: Q.704 clause 9			
TITLE:	Signalling point restart			
SUBTIT	LE: Restart of an SP have	ng no STP function		
PURPOS	SE: To check the restart p	rocedure in an SP having no	STP functio	n
PRE-TE	ST CONDITIONS: SP A	, linksets 6 and 7 unavailabl	e	
CO	NFIGURATION: B	TYPE OF TEST	: VAT	TYPE OF SP: SP
MESSA	GE SEQUENCE:			
S	P A	SP B		SP C SP ?
Link	ζ.	Link	Link	Link
X – X	:Activate Activation (first link in a	service at level 2)		
Λ-Λ	T20	T21	T21	T21 SP D
	< TFP (PC			
	< TRA	2 – 1		
	<	· · · · · · · · · · · · · · · · · · ·	C = E) $3 - 13 - 1$	
when	all (or sufficient) links are	available		
2 - 1	TRA>			
		As $(PC = A)$ are broadcast		
3 – 1	TRA	>		
1 – 1	ТР Л	TFAs (PC = A)		
1 - 1 1 - 1, 2				
,				1 – 1, 2 SP D
2 - 1, 2	TRAFFIC	>5 – 1		
2 1 2		6-1		
3-1,2	TRAFFIC		<i>,</i> 0	1> SP D 1> SP E
	<			1, 2 < 7 – 1 SP E
:Wait				
:Stop tra				
TEST D	ESCRIPTION			
1.	Activate SP A.			
2.		link is in service at level 2,		
3.	Check that when all (or T20 is stopped.	sufficient) links are activate	d, and all TH	RAs are received from B, C and D times
4.	Check that SP A broadca	sts TRAs to B. C and D.		
5.		arried as described above.		
6.	Stop traffic.			
7.	Repeat the test without specified range.	sending TRA from B to A	, and check	that the duration of T20 is inside the
8.		ctivating the link $1 - 1$, and	check that th	ne duration of T20 is inside the specified

TEST NUMBER: 10.6	ST NUMBER: 10.6 PAGE: 1 of 2					
REFERENCE: Q.704 clause 9						
TITLE: Signalling point restart						
SUBTITLE: Restart of an SP having	SUBTITLE: Restart of an SP having the STP function					
PURPOSE: To check the restart pr	ocedure in an SP having S	STP function				
PRE-TEST CONDITIONS: SP A	unavailable					
CONFIGURATION: D TYPE OF TEST: VAT, CPT TYPE OF SP: STP						
MESSAGE SEQUENCE:						
SP A	SP B		SP C		SP ?	
Link	Link	Link	Li	ink		
:Activate						
X - X Activation (first link in second	l'					
T18 T20	T21	T21		T21	SP F	
< TFP (PC = F)	1 – 1					
	1 - 1					
<						
<		2 - 1				
<	 	 	TRA 3	– 1 I		
when all (or sufficient) links are a	vailable and when all (or	sufficient) TR	As have been	received		
1 - 1 TFP (PC = D)>						
1 - 1 TFP (PC = E)>						
2 - 1 TFP (PC = D)						
$2-1 \qquad \text{TFP} (PC = E) $	> I					
1-1 TRA>						
< TFP (PC	f = F) $1 - 1) are broadcast$					
2-1 TRA						
<		2 - 1				
	TFAs (A) at					
3-1 TRA			>			
	> 5-1				SP D	
(from A and F)	Via B or C to			– 1 or 8 – 1	SP D	
2 – 1 TRAFFIC	6 – 1				SP E	
2 – 1 TRAFFIC (from A and F)	Via B or C to				SP E SP E	
:Wait			0-	101/-1		
:Stop traffic						
NOTE – Preventive TFPs are possi	bly sent after the expiry o	f T20. Prever	ntive TFPs for	the highest p	riority routes	
might not be sent.						
TEST DESCRIPTION						
1. Activate SP A.						
2. Check that when the first l						
3. Check that when all (or su T18 is stopped.	ufficient) links are activat	ed, and all T	RAs are receiv	ved from B, C	C and D timer	
4. Check that SP A broadcas	ts TRAs to B, C and F.					
5. Check that the traffic is ca	rried as described above.					
6. Stop traffic.						
7. Repeat the test (in VAT) b			a A immediate	ly after aligni	ment of link 3	
-1 and check that this traf	fic is discarded until the e	nd of T20.				

	NUMBER: 10.6 (concluded	<i>d</i>)	PAGI	E: 2 of 2	
REFER	ENCE: Q.704 clause 9				
TITLE:	Signalling point restart				
SUBTI	TLE: Restart of an SP having	ng the STP function			
PURPO	SE: To check the restart pr	ocedure in an SP having S	ΓP function		
PRE-TE	EST CONDITIONS: SP A	unavailable and linkset 2 a	nd 4 definitively una	available	
CC	ONFIGURATION: D	TYPE OF TEST:	/AT, CPT	TYPE OF S	P: STP
MESSA	GE SEQUENCE:				
5	SP A	SP B	SP	С	SP ?
Lin	k	Link	Link	Link	
	A				
X – X	:Activate Activation (first link in s	ervice at level 2)			
T_{18}	T20	T21		T21	SP F
110					
	< TFP (PC =	F) 1 – 1			
	< TFP (PC =				
		1 - 1			
	<	 	TRA	3 - 1	
l at the	e end of timer T18			I	
1 - 1	TFP (PC = C)>				
1 – 1	TFP (PC = D)>				
1 - 1	TFP (PC = E)>				
1 - 1	TRA>				
	< TFP (PC =				
	TFAs (A) at	re broadcast		I	
3 - 1	TFP (PC = C)		>		
3 - 1	TRA		>		
1 – 1	TRAFFIC>	5-1			SP D
1 1		6 – 1			SP E
	· · · ·	to A and F <			SP D
		to A and F $<$		- 6-1	SP D
:Wait					
:Stop tra	attic				
NOTE	Droughting TEDs may be as	ant often the evolution of T20	Dravantiva TEDa for	the high est mission	
not be se	- Preventive TFPs may be seent.	ant after the expiry of 120.	revenuve TFPS for	the highest priori	y routes may
	DESCRIPTION				
1.	I	by the activation of $3 - 1$, a	rtivate link 1 – 1		
1. 2.	Stop traffic.	j_{j} are activation of $j = 1, a$	1 - 1.		
	Stop nume.				
2.					
2.					

TEST NUMBER: 10.7.1 PAGE: 1 of 1					
REFERENCE: Q.704 clause 9					
TITLE: Signalling point restart					
SUBTITLE: Reception of an unexpect	ed TRA – In an SP having no STP fun	ction			
PURPOSE: To check the system in case	se of reception of an unexpected TRA				
PRE-TEST CONDITIONS: Linkset w	vith one available link				
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: SP			
MESSAGE SEQUENCE:					
SP A		SP B			
Link	Link				
1 1 1100110	> 1 – 1 TRAF				
<	1 – 1 TRAF	FIC			
1	> 1 – 1 TRA				
<	1 – 1 TRA				
:Wait					
:Stop traffic					
TEST DESCRIPTION					
1. Start traffic to B and C on link $1 - 1$.					
 Send a TRA from B to A and check that the timer T19 is started. During T19 send a TRA from B to A and check that this message is ignored. 					
4. Stop traffic and check that it h	nas not been disturbed.				

TEST NUMBER: 10.7.2 PAGE: 1 of 1					
REFERE	NCE:	Q.704 clause 9			
TITLE:	Signal	ling point restart			
SUBTITI	LE: R	eception of an unexpe	cted TRA – In an SP having STP func	ction	
PURPOS	E: Se	e test 10.7.1			
PRE-TES	T CO	NDITIONS: Linkset	1, 4 and 8 available link		
CON	IFIGU	RATION: D	TYPE OF TEST: VAT	TYPE OF S	P: STP
MESSAC	E SEG	QUENCE:			
SF	P A		SP B	SP C	SP ?
Link		Link	Link	Link	
2 – 1	TRAF	-	> 7 – 1	>	SP E
	(from	A and F) <	2-1 <	7 – 1	SP E
2 1	T10		2 – 1 TRA		
2 - 1	T19	TFP (PC = B) $TFP (PC = D)$	>		
		TFP (PC = E) $$			
		TRA	>		
		<	2 – 1 TRA		
2 - 1		-	> 7 - 1	>	SP E
	(from	A and F)	2 – 1 <	7 – 1	SP E
:Wait			2 1 1	, 1	
:Stop traf	fic				
TEST DE					
1. 2.		raffic to E. a TRA from C to A a	nd check that the timer T19 is started	d, and that TFPs concerni	ing B and D are
	receiv	ed, then, check that a	TRA is received from A.		-
3. 4.		-	m C to A and check that this message t has not been disturbed.	1s 1gnored.	
	P •				

TEST NUMBER: 11	NUMBER: 11 PAGE: 1 of 1				
REFERENCE: Q.706					
TITLE: Traffic test					
SUBTITLE:					
PURPOSE: To check the behavio	ur of an STP in various traffic situations				
PRE-TEST CONDITIONS: All I	inks available				
CONFIGURATION: C	TYPE OF TEST: VAT	TYPE OF SP: STP			
MESSAGE SEQUENCE:					
SP H Link	S SI Link	PA SPC Link			
:Start traffic					
1 – 2 TRAFFIC <	1 – 1 TRAFFIC> 2 – 1>				
:Wait :Stop traffic					
.stop traine					
TEST DESCRIPTION					
1. Start traffic between I Recommendation Q.706.	6 1				
2. Check that the time to cross the STP is better than 20 milliseconds.					
	1				
	4. Repeat test but with a traffic model including 5% of messages with an SIF = 272 octets.				

TEST N	TEST NUMBER: 12.1 PAGE: 1 of 1				
REFERI	REFERENCE: Q.707				
TITLE:	Signalling link test				
SUBTIT	LE: After activation of a lin	nk			
PURPOS	SE: To check the signalling	link test procedure after activation of a	signalling link		
PRE-TE	ST CONDITIONS: Signal	ling link 1 – 2 available			
CO	NFIGURATION: A	TYPE OF TEST: VAT, CPT	TYF	PE OF SP: STP	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Link	Σ.		Link		
:Start tra	ffic				
1 – 2	2 TRAFFIC	>	1 – 2	TRAFFIC	
1 – 1	:Activate				
1 – 1	SLTM	>			
		<	1 - 1	SLTA	
		<	1 - 1	SLTM	
1 – 1	I SLTA	>			
CHANC	JEBACK				
1 – 1,		>			
	TRAFFIC	<	1 - 1, 2	TRAFFIC	
:Wait					
:Stop tra	ffic				
.500 114					
TEST DESCRIPTION					
1. Start traffic to B (and C in VAT).					
2.		ck that an SLTM is received from A.			
3.					
4.		ecomes available and that changeback is	s performed corre	ectly.	
5.	Stop traffic.	C	-	-	
б.	In VAT, repeat the test	with link $1 - 1$ unavailable and inh link $1 - 1$ becomes available and stays		case changeback is not	

TEST N	TEST NUMBER: 12.2 PAGE: 1 of 1				
REFERENCE: Q.707					
TITLE:	Signalling link test				
SUBTIT	LE: No acknowledgement	to first SLTM			
PURPO	SE: To check that a second	SLTM is sent if the first is not acknowl	edged		
PRE-TE	ST CONDITIONS: Signal	ling link 1 – 2 available			
СО	NFIGURATION: A	TYPE OF TEST: VAT	TYF	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Linl	ς.		Link		
:Start tra	ffic				
1 – 2	2 TRAFFIC	>	1 0		
1 – 1	l :Activate	<	1 – 2	TRAFFIC	
1 – 1	I SLTM	>			
	,,,,,T1				
	_				
1 - 1	I SLTM	> <>	1 – 1	SLTA	
		` <	1 – 1	SLTM	
1 – 1		>			
	JEBACK				
1 – 1,	2 TRAFFIC	> <>	1 - 1, 2	TRAFFIC	
			1 1,2	manne	
:Wait					
:Stop tra					
	ESCRIPTION				
1.	Start traffic to B and C.		1		
	2. Activate link 1 – 1 and check that an SLTM is received and not acknowledged.				
э.	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 $1 - 1$ becomes available and that the changeback is performed correctly.				
5.	Stop traffic.				
6.	Repeat the test with link 1 that the link becomes available	 1 unavailable and inhibited (in this c able and stays inhibited. 	ase changeback i	s not performed). Check	

TEST N	TEST NUMBER: 12.3 PAGE: 1 of 1			
REFERE	ENCE: Q.707			
TITLE:	Signalling link test			
SUBTIT	LE: No acknowledgement	to second SLTM		
PURPOS	SE: To check that the link s	tays unavailable when the second SLTM	A is not acknowledged	
PRE-TE	ST CONDITIONS: Signal	ling link 1 – 2 available		
CO	NFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL	
MESSA	GE SEQUENCE:		· ·	
	SP A		SP B	
Link	5		Link	
:Start tra	ffic			
1 – 2	2 TRAFFIC	>		
1 – 1	:Activate	<	1-2 TRAFFIC	
1 - 1		>		
	,,,,,T1			
1 – 1	SLTM	>		
	,,,,,T1			
1 – 2	2 TRAFFIC	> <	1–2 TRAFFIC	
:Wait :Stop tra	ffic			
TEST DESCRIPTION				
1.	Start traffic to B and C.			
2. 3.		ck that two SLTMs are received from A level T_{1} link $1 = 1$ stays upon	vailable and that the management system	
э.	is informed.	i expiration of 11, mik 1 – 1 stays unav	anaore and that the management system	
4.	Repeat the test with link 1	- 1 unavailable and inhibited.		

TEST N	T NUMBER: 12.4 PAGE: 1 of 1				
REFERI	REFERENCE: Q.707				
TITLE:	Signalling link test				
SUBTIT	LE: Unreasonable field in	an SLTA			
PURPO	SE: To check the actions o	f the system on reception of an SLTA w	ith an unreasonat	ble field	
PRE-TE	ST CONDITIONS: Signa	lling link 1 – 2 available			
СО	NFIGURATION: A	TYPE OF TEST: VAT	TYF	PE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Linl	K		Link		
:Start tra	ffic				
1 – 2	2 TRAFFIC	> <	1 – 2	TRAFFIC	
1 – 1			1 2	nume	
1 – 1	1 SLTM	> <	1 – 1	SLTA (erroneous test pattern)	
1 – 1	$1 \qquad \text{SLTM}$	> <	1 – 1	SLTA	
CHANG			1 1	<u>BEIII</u>	
1 – 1,	2 TRAFFIC	> <	1 – 1, 2	TRAFFIC	
:Wait :Stop tra	ffic				
TEST D	ESCRIPTION				
 Start traffic to B and C. Activate link 1 – 1 and check that an SLTM is received and acknowledged with an SLTA containing an erroneous test pattern. 					
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.	5. Wait and stop traffic.				
6.	-	SLTA containing an erroneous SLC the			
7.	Repeat the test with the fi that management system i	rst and second erroneous SLTA and chose s informed.	eck that link 1 –	1 stays unavailable and	

TEST N	EST NUMBER: 12.5			PAGE: 1 of 1		
REFERE	ENCE: Q.707					
TITLE:	Signalling link test					
SUBTIT	LE: Reception of an SLTM	A in an attempt state				
PURPOS	SE: To check the actions o	f the system when an SLTM is received	in an attempt stat	e		
PRE-TE	ST CONDITIONS: Signa	lling link 1 – 2 available				
CO	NFIGURATION: A	TYPE OF TEST: VAT	ТҮР	E OF SP: ALL		
MESSA	GE SEQUENCE:					
	SP A			SP B		
Link			Link			
:Start tra	ffic					
1 – 2	2 TRAFFIC	> <	1 – 2	TRAFFIC		
1 – 1 1 – 1		<>	1-2	IKAITIC		
1 – 1	T1 SLTA	<>	1 - 1	SLTM		
1 – 1	SLTM	>				
1 – 1	T1 SLTA	<>	1 – 1	SLTM		
CHANGI	EBACK	<	1 – 1	SLTA		
1 – 1,	2 TRAFFIC	> <	1 – 1, 2	TRAFFIC		
:Wait :Stop trat						
	ESCRIPTION					
1.	Start traffic to B and C.					
2.		eck that SLTM is received. Send an SLT				
3. 4.	А.	d SLTM, send an SLTM and check tha performed correctly, and stop traffic.	I all SLIA IS FECE	erveu. Senu an SLIA to		

TEST NUME	BER: 12.6		PAGE: 1 of 1			
REFERENCE	E: Q.707					
TITLE: Sign	alling link test					
SUBTITLE:	Additional SLTA and S	SLTM				
PURPOSE: 7	To check the actions of	the system on reception of additional S	SLTA and SLTM	I		
PRE-TEST C	CONDITIONS: Signal	ling link 1 – 2 available				
CONFIG	GURATION: A	TYPE OF TEST: VAT, CPT	TY	PE OF SP: ALL		
MESSAGE S	EQUENCE:					
	SP A			SP B		
Link			Link			
:Start traffic						
1 – 2	TRAFFIC	>				
		< <	1 - 2 1 - 2	TRAFFIC SLTA		
		` <	1 - 2	SLTM		
1 – 2	SLTA	>				
:Wait						
:Stop traffic						
TEST DESCRIPTION						
1. Start traffic to B (and C in VAT).						
	ck that the reception of	-				
	d an SLTM to A and ch p traffic and check that i	eck that an SLTA is received.				
	a antic and cheer that					

TEST N	TEST NUMBER: 13.1			PAGE: 1 of 1	
REFERE	ENCE: Q.704 Table 1				
TITLE:	Invalid messages				
SUBTIT	LE: Invalid H0-H1 in a si	gnalling network management message			
PURPOS	SE: To check the actions non-existing H0-H1	of the system when a signalling network	manager	nent message is received with a	
PRE-TE	ST CONDITIONS: All li	nks available			
CO	NFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL	
MESSA	GE SEQUENCE:				
	SP A			SP B	
Link	5		Link		
:Start tra	ffic				
ALL ALL :Wait :Stop trat	. TRAFFIC	> <> <>	ALL 1 – X ALL	TRAFFIC SIGNALLING NETWORK MANAGEMENT MESSAGE (Invalid H0-H1) TRAFFIC	
TEST DESCRIPTION 1. Start traffic to B and C on all links. 2. Send a signalling network management message with a non-existing H0-H1. 3. Check that this message is discarded without impact on the traffic. 4. Stop traffic.					

TEST NUMBER:	13.2		PAGE:	PAGE: 1 of 1	
REFERENCE: Q	.704 clause 15				
TITLE: Invalid m	lessages				
SUBTITLE: Inva	lid changeover m	essages			
PURPOSE: To ch	neck the actions of	f the system on reception of changeover	messages	with an invalid SLC or OPC	
PRE-TEST CONE	DITIONS: Links	et with two available links			
CONFIGURA	ATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL	
MESSAGE SEQU	ENCE:				
S	P A			SP B	
Link :Start traffic			Link		
1 – 1 T	RAFFIC	>			
1 – 2 T	RAFFIC	<>	1 – 1	TRAFFIC	
		<	1 - 2 1 - 2	TRAFFIC COO, SLC 1 – X	
		<	1 – 2	(non-existing SLC) 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 T	RAFFIC	> <	1 – 1, 2	TRAFFIC	
:Wait :Stop traffic					
TEST DESCRIPTION					
1. Start traf	fic to B and C on	all links.			
	-	as described above and check that they	are ignore	ed.	
3. Stop traffic and check that it was not disturbed.					

TEST NUMBER: 13.3 PAGE: 1 of 1					
REFEREN	NCE: Q.704 clause 15		-		
TITLE: I	nvalid messages				
SUBTITL	E: Invalid changeback	messages			
PURPOSE	E: To check the actions	of the system on reception of changeba	ck message	s with an invalid SLC or OPC	
PRE-TEST	T CONDITIONS: Link	aset with two available links			
CON	FIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL	
MESSAG	E SEQUENCE:				
	SP A			SP B	
Link :Start traff	ic		Link		
1 – 1	TRAFFIC	>			
1 – 2	TRAFFIC	<>	1 – 1	TRAFFIC	
		< <	1 - 2 1 - 2 1 - 2	TRAFFIC CBD, SLC 1 – X (non-existing SLC) CBD, SLC 1 – 1	
		<	1 - 2 1 - 2	(non-existing OPC) CBA, SLC 1 – X (non-existing SLC)	
		<	1 – 2	CBA, SLC 1 – 1 (non-existing OPC)	
1 – 1, 2 Wait	TRAFFIC	> <	1 – 1, 2	TRAFFIC	
:Stop traff	ic				
	SCRIPTION				
	Start traffic to B and C o				
	 Send the invalid messages described above and check that they are ignored. Stop traffic and check that it was not disturbed. 				

TEST NUMBER: 13.4		PAGE: 1 of 1			
REFERENCE: Q.704 clause 15					
TITLE: Invalid messages					
SUBTITLE: Invalid changeback co	de				
PURPOSE: To check the actions message	of the system on reception of an inv	alid changeback code in a changeback			
PRE-TEST CONDITIONS: Links	et with one link available				
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL			
MESSAGE SEQUENCE:					
SP A Link :Start traffic		SP B Link			
1 – 2 TRAFFIC	> <	1–2 TRAFFIC			
1-1 :Activate (dependin 1-2 CBD, SLC $1-1$	g on the deactivation mean previously u				
T4	<	1 – 2 CBA, SLC 1 – 1 (invalid changeback code ≠ CBD)			
1 – 2 CBD, SLC 1 – 1	>				
Т5	<				
1 – 1 TRAFFIC (from 1 – 2)	>				
	<	$\begin{array}{l} 1-1 & \text{TRAFFIC} \\ (\text{from } 1-2, \text{Note}) \end{array}$			
1 – 2 TRAFFIC	> <	1 – 2 TRAFFIC			
:Wait :Stop traffic					
NOTE – B may perform a changeback or not.					
TEST DESCRIPTION					
	1. Start traffic to B and C on link $1 - 2$.				
code.	code.				
3. Check that a new CBD is changeback is performed.	Check that a new CBD is received after T4 expires and acknowledged by a correct CBA. Check that changeback is performed.				

TEST N	TEST NUMBER: 13.5 PAGE: 1 of 3				
REFERI	ENCE: Q	.704 clause 15		·	
TITLE:	Invalid m	lessages			
SUBTIT	LE: Inva	lid inhibition mes	sages		
PURPOS	SE: To ch	neck the actions of	f the system on reception of an invalid i	inhibitio	n message
PRE-TE	ST CONE	DITIONS: Links	et with two available links		
СО	NFIGURA	ATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL
MESSA	GE SEQU	ENCE:			
	S	P A			SP B
Linl Start tra:			Link		
1 – 1	I T	RAFFIC	>		
1 – 2	2 Т	RAFFIC	<>	1 – 1	TRAFFIC
			<	$1 - 2 \\ 1 - 2$	TRAFFIC LIN, SLC 1 – X (non existing SLC)
			<	1 - 2	(non-existing SLC) LIN, SLC 1 – 2 (non-existing OPC)
			<	1 – 2	LIA, SLC $1 - X$ (non-existing SLC)
			<	1 – 2	LIA, SLC $1 - 1$ (non-existing OPC)
			<	1 – 2	LID, SLC $1 - X$ (non-existing SLC)
			<	1 – 2	LID, SLC 1 – 1 (non-existing OPC)
TEST DESCRIPTION					
 Start traffic to B and C. Send the invalid messages described above and check that these are ignored. Stop traffic and check that it was not disturbed. 					

TEST NUMBER: 13.5 (continued)			PAGE: 2 of 3			
REFERENCE: Q.704 clause 15						
TITLE: Invalid messages						
SUBTITLE: Invalid inhibition me	essages					
PURPOSE: As page 1						
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				
	<	1 – 2	LUN, SLC 1 – X (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 (non-existing OPC)			
	<	1 – 2	LFU, SLC 1 – X (non-existing SLC)			
	<	1 – 2	LFU, SLC 1 – 1 (non-existing OPC)			
TEST DESCRIPTION	TEST DESCRIPTION					
1. See page 1.						

TEST NUMBER: 13.5 (concluded))	PAGE:	PAGE: 3 of 3	
REFERENCE: Q.704 clause 15				
TITLE: Invalid messages				
SUBTITLE: Invalid inhibition mess	ages			
PURPOSE: As page 1				
PRE-TEST CONDITIONS: Linkse	t with two available links			
CONFIGURATION: A	TYPE OF TEST: VAT		TYPE 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)	
11111 111110	» <	ALL	TRAFFIC	
:Wait				
:Stop traffic				
TEST DESCRIPTION				
See page 1.				

TEST NUMBER: 13.6		PAGE:	1 of 1		
REFERENCE: Q.704 clause 15					
TITLE: Invalid messages					
SUBTITLE: Invalid transfer control	ol messages				
PURPOSE: To check that there is r	no problem on reception of a TFC with s	spare field	d or SLC not coded 00		
PRE-TEST CONDITIONS: Link	1 – 1 available				
CONFIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL		
MESSAGE SEQUENCE:					
SP A			SP B		
Link :Start traffic 1 – 1 TRAFFIC	Link> < < <	1 - 1 1 - 1 1 - 1 1 - 1	TRAFFIC TFC, PC = C (spare field \neq 0) TFC, PC = C (SLC \neq 0000) TFC, PC = X (non-existing PC)		
1 – 1 TRAFFIC> < 1 – 1 TRAFFIC :Wait :Stop traffic					
TEST DESCRIPTION					
 Start traffic to B and C. Send a TFC with invalid spare field to A, then a TFC with an invalid SLC then a TFC with a non-existing PC. Check that these messages are correctly received without disturbances due to these incorrect values. Stop traffic. 					

TEST N	IUMBER: 13.7			PAGE: 1 of 1	
REFER	ENCE: Q.704 clause 15				
TITLE:	Invalid messages				
SUBTIT	TLE: Invalid signalling rou	te management messages			
PURPO	SE: To check the actions o	f the system on reception of	invalid TFA or	TFP	
PRE-TE	EST CONDITIONS: Links	1-1 and $2-1$ available			
СО	ONFIGURATION: A	TYPE OF TEST:	VAT	TYPE OF SP: ALL	
MESSA	GES SEQUENCE:				
	SP	A		SP B	
I	Link		Link		
:Start tra					
1	-1 TRAFFIC	>			
		<	1 - 1	TRAFFIC	
		<	1 - 1	TFP, $PC = X$	
				(non-existing PC)	
		<	1 - 1	TFA, $PC = X$	
		<	1 – 1	(non-existing PC) TFP, PC = C	
		<	$\mathbf{I} = \mathbf{I}$	(non-existing OPC)	
		<	1 - 1	TFP, $PC = C$	
			1 1	(spare bits # 00)	
			2 - 1	:Deactivate	
		<	1 - 1	TFP, $PC = C$	
		<	1 - 1	TFA, $PC = C$	
				(non-existing OPC)	
		<	1 - 1	TFA, PC = C	
				(spare bits # 00)	
1	-1 TRAFFIC	>	1 1		
		<	1 – 1	TRAFFIC	
:Wait					
:Stop tra	affic				
TEST DESCRIPTION					
1.	Start traffic to B and C.				
2.					
3.	-	eck that C becomes inacces			
3. 4.				e) and check that these messages are	
·.	discarded without impact of			, and check that these messages are	
5.					
6.	Stop traffic.	1	-		
	*				

TEST NUMBER: 13.8		PAGE: 1 of 1			
REFERENCE: Q.704 clause 15					
TITLE: Invalid messages					
SUBTITLE: Invalid signalling-rou	ite-set-test messages				
PURPOSE: To check the actions of	of the system on reception of invalid RST	nessages			
PRE-TEST CONDITIONS: Link	l – 1 available				
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: STP			
MESSAGES SEQUENCE:					
SP Link :Start traffic	A	SP B			
1 – 1 TRAFFIC 1 – 1 TRAFFIC	> < 1-1 < 1-1 < 1-1 < 1-1 > <>	RST, PC = X (non-existing PC) RST, PC = C (non-existing OPC) RST, PC = C (spare bits $\#$ 00)			
:Wait :Stop traffic					
TEST DESCRIPTION					
1. Start traffic to B and C.	1. Start traffic to B and C.				
	2. Send to A the invalid messages described above and check that these messages are discarded without impact on the traffic, (except for spare bits # 0).				
3. Stop traffic.					

TEST NU	MBER: 13.9		PAGE:	1 of 1		
REFEREN	REFERENCE: Q.704 clause 15					
TITLE: I	nvalid messages					
SUBTITL	E: Invalid traffic restart a	illowed message				
PURPOSE	: To check the actions of	f the system on reception of an invalid t	raffic resta	art allowed message		
PRE-TEST	CONDITIONS: Links	et with two available links				
CON	FIGURATION: A	TYPE OF TEST: VAT		TYPE OF SP: ALL		
MESSAGI	E SEQUENCE:					
	SP A			SP B		
Link :Start traffi 1 – 1, 2		Link				
1 – 1, 2			1 - 1, 2 1 - 1	TRAFFIC TRA (unknown OPC)		
1 1,2	in a re		1 – 1, 2	TRAFFIC		
:Wait :Stop traffic						
	SCRIPTION					
 Start traffic to B and C. Send the invalid message described above and check that this message is ignored. Stop traffic and check that it was not disturbed. 						

TEST NUMBER: 13.10			PAGE: 1 of 1			
REFERENCE: Q.707						
TITLE: Invalid messages						
SUBTITLE: Invalid H0-H1 in a signalling network testing and maintenance message						
PURPOSE: To check the actions of the system on reception of this invalid message						
PRE-TEST CONDITIONS: Link 1 – 1 available						
CONFIGURATION: A		TYPE OF TEST: VAT	TYPE OF SP: ALL			
MESSA	GE SEQUENCE:					
	SP A		SP B			
Link :Start tra 1 – 1 :Wait :Stop tra	ffic I TRAFFIC I TRAFFIC	> <> <>	Link 1 – 1 TRAFFIC 1 – 1 SIGNALLING NETWORK TESTING AND MAINTENANCE MESSAGE (Invalid H0-H1) 1 – 1 TRAFFIC			
TEST DESCRIPTION 1. Start traffic to B and C. 2. Send a signalling network testing and maintenance message with a non-existing H0-H1. 3. Check that this message is discarded without impact on the traffic. 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 an invalid signalling link test message						
PRE-TEST CONDITIONS: Link 1 – 1 available						
CONFIGURATION: A		TYPE OF TEST: VAT		TYPE OF SP: ALL		
MESSA	GE SEQUENCE:		l			
	SP A			SP B		
	Link Link Start traffic		Link			
:Start tra 1 – 1	TRAFFIC	> < <> <>	1 – 1 1 – 1 1 – 1 1 – 1	TRAFFIC SLTM (invalid SLC) SLTA (invalid SLC) TRAFFIC		
:Wait :Stop traffic						
TEST DESCRIPTION						
1. 2. 3.	Start traffic to B and C. Send the invalid SLTM and SLTA described above and check that they are discarded without impact on the traffic. Stop traffic.					

TEST NUMBER: 13.12	PAGE: 1 of 1					
REFERENCE: Q.704 clause 15						
TITLE: Invalid messages						
SUBTITLE: Invalid user part unavailable messages						
PURPOSE: To check the actions of the system on reception of an invalid user part unavailable message						
PRE-TEST CONDITIONS: Link 1 – 1 available?						
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL				
MESSAGE SEQUENCE:						
SP A		SP B				
Link :Start traffic		Link				
1 – 1 TRAFFIC	> <	1 – 1 TRAFFIC 1 – 1 UPU (non-existing OPC)				
1 – 1 TRAFFIC	<> <>	1 – 1 UPU (non-existing SI)1 – 1 TRAFFIC				
:Wait :Stop traffic						
TEST DESCRIPTION						
 Start traffic to B and C. Send the invalid UPUs described above and check that these messages are ignored. Stop traffic and check that it was not disturbed. 						

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