5i’

H.T. [T91.782]
MTP LEVEL 3

TEST NUMBER: 9.2.2		PAGE: 1 of 2	

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 44
}			

{
TITLE: Signalling route management
}			

{
SUB TITLE: Broadcast of TFPs — On
multiple failures
}			

{
PURPOSE:
To check the broadcast of TFPs when several point are
inaccessible (various reasons)
}			

{
PRE-TEST CONDITIONS: Linkset 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	{					
---------->							
}	7 — 1	---------->		SP E			
	(from A and F)		8 — 1	---------->		SP D	
2 — 1	{						
:Deactivate (MML command or failure)							
}							
3 — 1	TFP, PC = B	{					
---------->							
}		SP F					
3 — 1	TFP, PC = C	{					
---------->							
}							
3 — 1	TFP, PC = D	{					
---------->							
}							
3 — 1	TFP, PC = E	{					
---------->							
}							
:Wait							
:Stop traffic							

TEST DESCRIPTION	
1.	Start traffic to D and E.
2.	{
Deactivate linkset 2 and check that TFPs concerning B, C, D and E are broadcasted (to F).	
}	
3.	{
Check that for each TFP sent a timer T8 is started.	
}	
4.	{
Repeat test but with linkset 2 unavailable as pre-test condition and then deactivate linkset 1.	
}	

Tableau [T91.782], p.

H.T. [T92.782]
MTP LEVEL 3

{
TEST NUMBER: 9.2.2 Continued
}
	PAGE: 2 of 2		

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 44
}			

{
TITLE: Signalling route management
}			

{
SUB TITLE: Broadcast of TFPs — On multiple failures
}			

PURPOSE: See page 1			

{
PRE-TEST CONDITIONS: Linksets 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						
2 — 1	TRAFFIC	-------->	8 — 1	---------->		
	(from A and F)		7 — 1	{		
---------->						
}		SP E				
			8 — 1	:Deactivate		
		<--------	2 — 1	TFP, PC = D		
3 — 1	TFP, PC = D	{				
---------->						
}		SP F				
2 — 1	TRAFFIC (from A and F)	-------->	7 — 1	{		
---------->						
}		SP E				
:Wait						
:Stop traffic						

TEST DESCRIPTION	
1.	Start traffic to D and E.
2.	{
Deactivate linkset 8 and check that a TFP (PC = D) is sent. Check that TFPs are broadcasted (here to F).	
}	
3.	{
Check that a time out T8 started.	
}	
4.	{
Stop traffic and check that traffic to E has not been disturbed.	
}	
5.	{
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.	
}	
6.	{
Repeat the test with linksets 4 and 5 unavailable as pre-test conditions and then deactivate linkset 2.	
}	

Tableau [T92.782], p.

H.T. [T93.782]
MTP LEVEL 3

TEST NUMBER: 9.3		PAGE: 1 of 2

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 44
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: Reception of a message for an unaccessible
destination
}		

{
PURPOSE:
To check that a TFP is sent in response to a message received for an unaccessible destination
}		

{
PRE-TEST CONDITIONS: Linksets 1, 4 and 8
unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

Link :Sent a message **:** to D } 3 — 1 TFP, PC = D **TFP** **|** **TFP** | T8 **TFP** **|** **TFP** **|** } ----------> . . . <---------- }	SP A { { 3 — 1	 MESSAGE TO D	Link 3 — 1	SP F { MESSAGE TO D
TEST DESCRIPTION				
1. Send from F a message with OPC = D to A. } 2. Check that a TFP PC = D is sent in response. Check that a time out T8 is started. } 3. During T8, send a new message with OPC = D to A and check that no TFP is sent. }	{ { {			

Tableau [T93.782], p.

H.T. [T94.782]
MTP LEVEL 3

TEST NUMBER: 9.3 Continued		PAGE: 2 of 2

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 44
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: Reception of a message for an unaccessible destination
}		

PURPOSE: See page 1		

{
PRE-TEST CONDITIONS: Linksets 1 and 8 unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP ●

Link			Link		Link		Link	
:Start traffic 3 — 1 ----------> } 3 — 1 :Deactivate (MML command or failure) } 2 — 1 TFP, PC = F **TFP** | **TFP** | **TFP** | T8 **TFP** | **TFP** | **TFP** | } ----------> ---------- ---------- | ---------- <---------- . <---------- } . . 4 — 1 . . 2 — 1 } . . . . . MESSAGE TO F }	TRAFFIC (from A, D and E) { { { { {	{ SP F {						
TEST DESCRIPTION								
1. 2. Deactivate linkset 3 and check that TFPs are broadcasted. } 3. Within T8, send one message with DPC = F from C to A and check that no TFP is sent in response. }	Start traffic to F. { {							

Tableau [T94.782], p.

H.T. [T95.782]
MTP LEVEL 3

TEST NUMBER: 9.4.1		PAGE: 1 of 1

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 45
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: 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 A	SP B	SP C	SP ●

Link			Link		Link		Link
:Start traffic							
2 — 1	TRAFFIC	{					
---------->							
}	8 — 1	---------->		SP D			
	(from A and F)		7 — 1	---------->		SP E	
1 — 1	{						
:Activate (depending of the activation mean previously used)							
}							
2 — 1	TFA, PC = B	{					
---------->							
}							
2 — 1	TFA, PC = D	{					
---------->							
}							
1 — 1	TFP, PC = D	-------->					
1 — 1	TFP, PC = E	-------->					
1 — 1	TRAFFIC	-------->	5 — 1	{			
---------->							
}		SP D					
	{						
(from A and F and from 2 — 1)							
}		6 — 1	{				
---------->							
}		SP E					
2 — 1	TRAFFIC (from A and F)	{					
---------->							
}	7 — 1	---------->		SP E			
: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).	
}	
3.	{
Stop traffic and check that is was rerouted correctly without loss of messages, duplication and missequencing.	
}	

Tableau [T95.782], p.

H.T. [T96.782]
MTP LEVEL 3

TEST NUMBER: 9.4.2		PAGE: 1 of 1	
{ REFERENCE: Q.704 § 13 Fig. 29, Fig. 45 }			
{ TITLE: Signalling route management }			
{ SUB TITLE: Sending of a TFA on an alternative route — On reception of a TFA }			
{ PURPOSE: To check that a TFA is sent on the alternative route when the normal route becomes available on reception of a TFA }			
{ PRE-TEST CONDITIONS: Linksets 4 and 5 unavailable (end of test 9.1.2) }			
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							
1 — 1	TRAFFIC (from A and F)	-------->	6 — 1	{			
---------->							
}		SP E					
2 — 1	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
	(from A and F)		8 — 1	---------->		SP D	
			5 — 1	:Activate			
See note	<--------	1 — 1	TFA, PC = D				
1 — 1	TFP, PC = D	-------->					
2 — 1	TFA, PC = D	{					
---------->							
}							
1 — 1	TRAFFIC	-------->	5 — 1	{			
---------->							
}		SP D					
{							
(from A and F, from 2 — 1 to D)							
}	6 — 1	{					
---------->							
}		SP E					
2 — 1	TRAFFIC (from A and F)	{					
---------->							
}	7 — 1	---------->		SP E			
:Wait							
:Stop traffic							
{							
Note							
— a controlled rerouting is performed after the activation of linkset 5 it is not described in this transfer allowed test.							
}							

TEST DESCRIPTION	
1.	Start traffic to D and E.
2.	{
Activate link 5 — 1 and check that a TFA concerning D is sent to A.	
}	
3.	{
Check that the traffic to D is diverted via B and check that a TFA concerning D is sent from A to C.	
}	
4.	{
Stop traffic and check that traffic was not disturbed.	
}	

Tableau [T96.782], p.

H.T. [T97.782]
MTP LEVEL 3

TEST NUMBER: 9.5.1	PAGE: 1 of 1	
{ REFERENCE: Q.704 § 13 Fig. 29, Fig. 45 }		
{ TITLE: Signalling route management }		
{ SUB TITLE: Broadcast of TFAs — On one linkset recovery }		
{ PURPOSE: To check the broadcast of TFA when a destination becomes accessible }		
{ PRE-TEST CONDITIONS: Linkset 3 unavailable (end of test 9.2.1) }		
CONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •								
Link				Link		Link		Link			
3 — 1	:Activate (see Note 1)										
1 — 1	TFA, PC = F		-------->	(see Note 2)							
2 — 1	TFA, PC = F		{								
---------->											
}	(see Note 2)										
:Start traffic											
3 — 1	TRAFFIC (from A and F)		{								
---------->											
}			SP F								
:Wait											
:Stop traffic											
{ *Note 1* — After activation of the linkset 3, SPs A and F perform a point restart procedure which is not explicitly described in this test. }											
{ *Note 2* — The propagation of TFAs is not presented to simplify the test description. }											

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

Tableau [T97.782], p.

H.T. [T98.782]
MTP LEVEL 3

TEST NUMBER: 9.5.2		PAGE: 1 of 2

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 45
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: Broadcast of TFAs — Various reasons
}		

{
PURPOSE:
To check the broadcast of TFA when several destinations
become accessible in various network situations
}		

{
PRE-TEST CONDITIONS: Linksets 1 and 2 unavailable (end of
test 9.2.2 page 1 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
2 — 1	:Activate						
3 — 1	TFA, PC = B	{					
---------->							
}		SP F					
3 — 1	TFA, PC = C	{					
---------->							
}		SP F					
3 — 1	TFA, PC = D	{					
---------->							
}		SP F					
3 — 1	TFA, PC = E	{					
---------->							
}		SP F					
2 — 1	TFP, PC = B	{					
---------->							
}							
2 — 1	TFP, PC = D	{					
---------->							
}							
2 — 1	TFP, PC = E	{					
---------->							
}							
:Start traffic							
2 — 1	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
	(from A and F)		8 — 1	---------->		SP D	
:Wait							
:Stop traffic							
{							
Note							
— After activation of the linkset 2, SPs A and C perform the point restart procedure which is not described in this test.							
}							

TEST DESCRIPTION	
1.	Activate linkset 2.
2.	{
Check that TFAs concerning B, C, D and E are broadcasted.	
}	
3.	{
Start traffic and check that it is routed correctly; stop traffic.	
}	
4.	{
Repeat test but activate linkset 1 instead of linkset 2.	
}	

Tableau [T98.782], p.

H.T. [T99.782]
MTP LEVEL 3

{
TEST NUMBER: 9.5.2 Continued
}
	PAGE: 2 of 2	

{
REFERENCE: Q.704 § 13 Fig. 29,
Fig. 45
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: Broadcast of TFAs — Various reasons
}		

PURPOSE: See page 1 of 2		

{
PRE-TEST CONDITIONS: Linksets 1, 4 and 8 unavailable
(end of tests 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	:Activate			
		{					
<----------							
}	2 — 1	TFA, PC = D					
2 — 1	TFP, PC = D	{					
---------->							
}							
3 — 1	TFA, PC = D	{					
---------->							
}		SP F					
2 — 1	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
	(from A and F)		8 — 1	---------->		SP D	
:Wait							
:Start traffic							

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

Tableau [T99.782], p.

H.T. [T100.782]
MTP LEVEL 3

TEST NUMBER: 9.6	PAGE: 1 of 1	

{
REFERENCE: Q.704 § 13 Fig. 29, Fig. 46
}		

{
TITLE: Signalling route management
}		

{
SUB TITLE: Periodic sending of Signalling-Route-Set-Test messages (SRST)
}		

{
PURPOSE:
To check the periodic test of a unavailable signalling route is performed correctly
}		

{
PRE-TEST CONDITIONS: Linkset 2 unavailable
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

link	SP A		link	SP B
:Start traffic				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
1 — 1 RST, PC = C **ST** | **ST** | **ST** | T10 **ST** | **ST** | }	{ ---------->			
1 — 1 RST, PC = C **ST** | **ST** | **ST** | T10 **ST** | }	{ ---------->	2 — 1 .	:Activate .	
		<----------	1 — 1	TFA, PC = C
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
: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 check that a TFA is received and that T10 is stopped. }	{
4. Check that traffic to C is restarted and stop traffic. }	{
5. Repeat the test but without sending of TFA after activation of linkset 2 and check that when a RST is received a TFA is sent in response. Check that T10 and signalling-route-set-test procedure are stopped. }	{
6. Check that the duration of T10 is inside the specified range. }	{

Tableau [T100.782], p.

H.T. [T101.782]
MTP LEVEL 3

TEST NUMBER: 9.7		PAGE: 1 of 1

{
REFERENCE: Q.704 § 13 Fig. 29, Fig. 46
}		

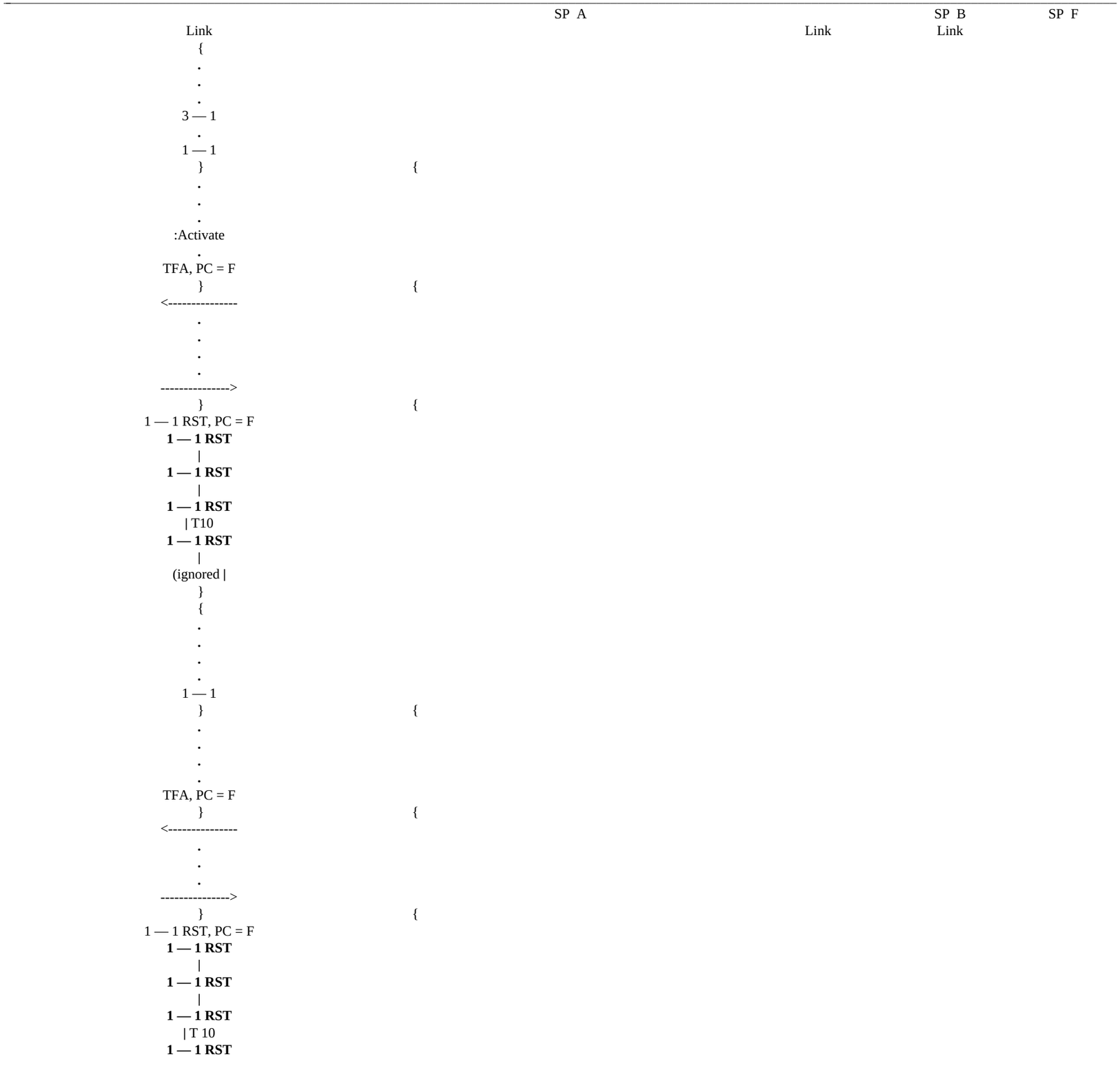
{
TITLE: Signalling route management
}		

{
SUB TITLE: Reception of a Signalling-Route-Set-Test-Message
}		

{
PURPOSE:
To check the actions of the system on reception of an SRST
}		

{
PRE-TEST CONDITIONS: Linksets 2 and 3 unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		


SP A
SP B
SP F
Link
Link
Link
{
3 — 1
1 — 1
}
{
:Activate
TFA, PC = F
}
{
<----------
---------->
}
{
1 — 1 RST, PC = F
1 — 1 RST
1 — 1 RST
1 — 1 RST
| T10
1 — 1 RST
(ignored |
}
{
1 — 1
}
{
TFA, PC = F
}
{
<----------
---------->
}
{
1 — 1 RST, PC = F
1 — 1 RST
1 — 1 RST
1 — 1 RST
| T 10
1 — 1 RST

| } 3 — 1 ----------> } :Wait :Stop traffic	TRAFFIC (from A, D and E)	{		|
TEST DESCRIPTION				
1. Send to A RST message concerning F and check that no response is received. } 2. Activate linkset 3 and check that a TFA is received but ignored in B. } 3. Send a RST message concerning F after activation of linkset 3 and check that a TFA is received in response. } 4. Repeat the test but with linksets 1 and 3 unavailable as pre-test conditions and RST message sent from C. }	{			

Tableau [T101.782], p.

H.T. [T102.782]
MTP LEVEL 3

TEST NUMBER: 10.1.1		PAGE: 1 of 1
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Recovery of a linkset (SP A has not STP function)
— With use of point restart procedure
}		

{
PURPOSE:
To check that point restart procedure is performed correctly
when the recovery of a linkset restores connexity between two adjacent
SPs
}		

{
PRE-TEST CONDITIONS: Linksets 1, 2, 4 and 6 are unavailable
}		

CONFIGURATION: B	TYPE OF TEST: VAT, CPT	TYPE OF SP: SP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link		Link		Link
:Start traffic							
3 — 1, 2	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
			8 — 1	---------->		SP D	
		{					
<----------							
}	3 — 1, 2	<----------	7 — 1	SP E			
				<----------	8 — 1	SP D	
2 — 1	{						
:Activate							
:							
|							
:							
| T21							
:							
|							
:							
|							
:							
—							
}	{						
.							
.							
<--------							
<--------							
<--------							
}	{						
.							
.							
.							
2 — 1 TFP (PC = C)							
2 — 1 TFP (PC = E)							
2 — 1 TRA							
}							
	{						
TIME CONTROLLED DIVERSION IS APPLIED							
}							
2 — 1	TRAFFIC (from 3 — 1, 2)	-------->	5 — 1	{			
---------->							
}		SP D					
		<--------	2 — 1	{			
<----------							
}	5 — 1	SP D					
3 — 1, 2	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
			8 — 1	---------->		SP D	
		{					
<----------							
}	3 — 1, 2	<----------	7 — 1	SP E			
:Wait							
:Stop traffic							
{							
Note							
— The time controlled diversion procedure is applied in A and a changeback is performed in D. These procedures are not described in this point restart test.							
}							

TEST DESCRIPTION

1. { Start traffic to E (and D in VAT).

}	
2. Activate link 2 — 1 and check that the timer T21 is started. Check that TFPs sent from B are received in A. Check that the timer T21 is stopped on reception of the TRA message received from B. }	{
3. Check that the time controlled diversion procedure is performed at the end of T21. Check that the traffic to D is diverted to the link 2 — 1 in accordance with the load sharing rules in A. Check that the traffic to E is not diverted. }	{
4. Stop traffic and check that there were no lost messages, no duplication and no missequencing. }	{
5. Repeat the test (in VAT) without sending of TRA and check that the duration of timer T21 is inside the specified range. }	{

Tableau [T102.782], p.

H.T. [T103.782]
MTP LEVEL 3

TEST NUMBER: 10.1.2		PAGE: 1 of 1
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Recovery of a linkset (SP A has not STP function) — Without use of point restart procedure
}		

{
PURPOSE:
To check the actions of the system in case of restart of a linkset
}		

{
PRE-TEST CONDITIONS: Linksets 1, 2 and 6 unavailable
}		

CONFIGURATION: B	TYPE OF TEST: VAT	TYPE OF SP: SP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link		Link		Link	
:Start traffic								
3 — 1, 2	TRAFFIC	{						
---------->								
}	7 — 1	---------->		SP E				
			8 — 1	---------->		SP D		
			4 — 1	{				
<----------								
}	5 — 1	SP D						
			| ---------->	3 — 1, 2				
		{						
<---------- |								
}								
		{						
<----------								
}	3 — 1, 2	<----------	7 — 1	SP E				
2 — 1	:Activate							
	{							
CHANGEBACKS ARE PERFORMED IN A AND B (see note)								
}								
2 — 1	TRAFFIC	-------->	4 — 1	-------->	7 — 1	---------->	|	SP E
2 — 1	TRAFFIC	-------->	5 —1	{				
---------->								
}		SP D						
3 — 1, 2	TRAFFIC	{						
---------->								
}	7 — 1	---------->		SP E				
			8 — 1	---------->		SP D		
		-------->	2 — 1	{				
<----------								
}	5 — 1	SP D						
		{						
---------->								
}	3 — 1, 2	---------->	7 — 1	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.								
}								

TEST DESCRIPTION	
1.	Start traffic to E and D.
2. Activate link 2 — 1. Check that the point restart procedure is not applied and that changebacks are performed.	{ }
3. Check that the traffic from A is diverted to the link 2 — 1 in accordance with the load sharing rules in A.	{ }
4. Check that the signalling route set test procedure is not applied after the activation of the link 2 — 1.	{ }
5. Stop traffic and check that there were no lost messages, no duplication and no missequencing.	{ }

Tableau [T103.782], p.

H.T. [T104.782]
MTP LEVEL 3

TEST NUMBER: 10.2.1		PAGE: 1 of 2
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

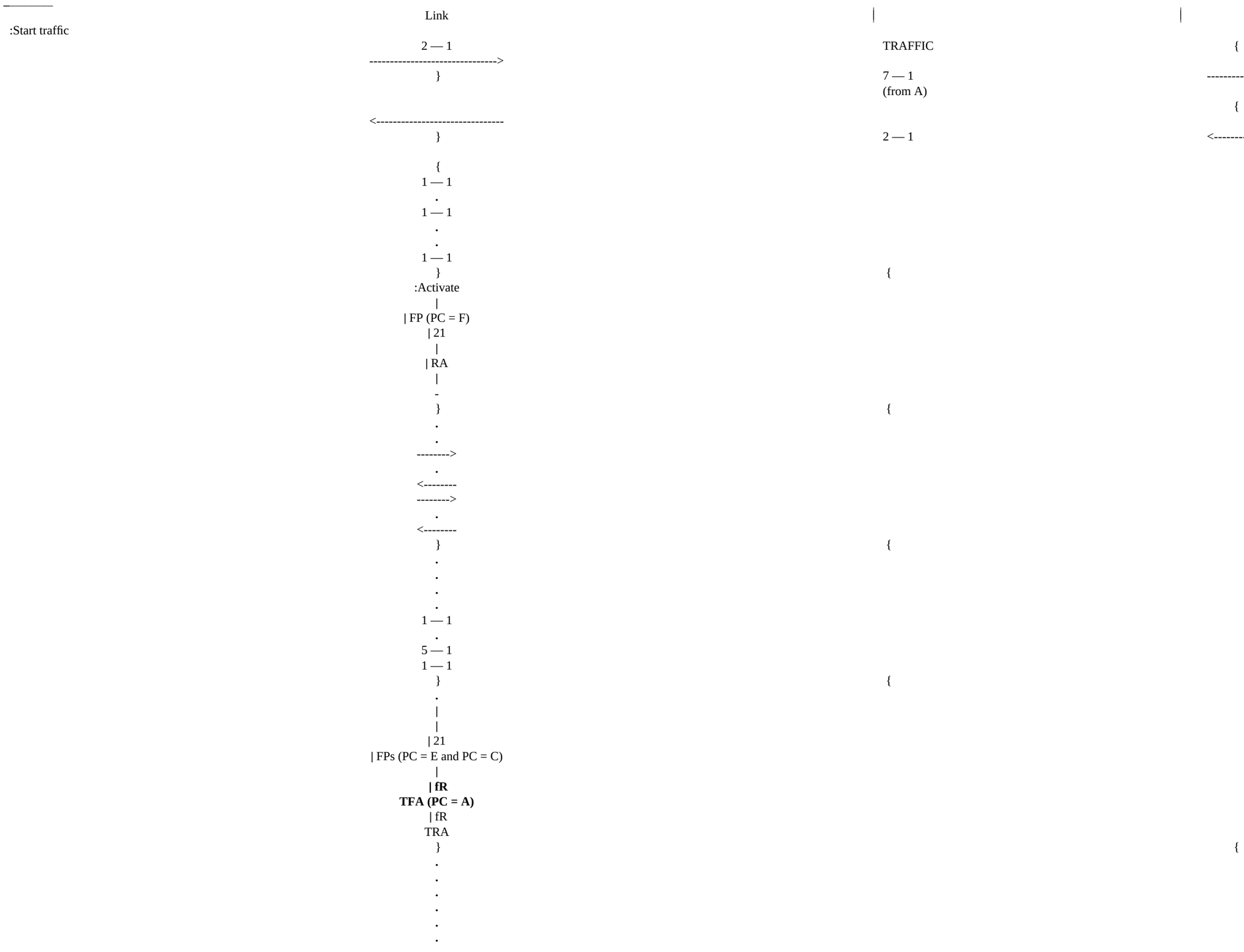
{
SUB TITLE:
Recovery of a linkset (SP A has the STP function) — With
use of point restart procedure
}		

{
PURPOSE:
To check that restart procedure is performed correctly
when the recovery of a linkset restores the connectivity between two
adjacent SPs
}		

{
PRE-TEST CONDITIONS: Linksets 1, 3, 4 and 6
unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •



```
_________
:Start traffic
                                  Link                                  |                                  |                  |  Link  |                  |  Link  |
                                2 — 1                                   TRAFFIC                                  {
                          ------------------------------->
                                  }                                     7 — 1                                  ------------>                SP E
                                                                        (from A)                                                  8 — 1   ------------>                SP D
                                                                                                                  {
                          <-------------------------------
                                  }                                     2 — 1                                  <------------    7 — 1    SP E
                                                                                                                                   <------------   8 — 1    SP D
                                  {
                                1 — 1
                                  .
                                1 — 1
                                  .
                                  .
                                1 — 1
                                  }                                     {
                              :Activate
                                  |
                            | FP (PC = F)
                                | 21
                                  |
                                | RA
                                  |
                                  -
                                  }                                     {
                                  .
                                  .
                              -------->
                                  .
                              <--------
                              -------->
                                  .
                              <--------
                                  }                                     {
                                  .
                                  .
                                  .
                                  .
                                1 — 1
                                  .
                                5 — 1
                                1 — 1
                                  }                                     {
                                  .
                                  |
                                  |
                                | 21
                          | FPs (PC = E and PC = C)
                                  |
                                | fR
                            TFA (PC = A)
                                | fR
                                TRA
                                  }                                                                  {
                                  .
                                  .
                                  .
                                  .
                                  .
                                  .
```

	SP D } 2 — 1 ----------> } 1 — 1				
TIME CONTROLLED DIVERSION IS APPLIED }					
	1 — 1 ----------> } <---------- }				
<---------- }					
	2 — 1 ----------> } <---------- }				
:Wait :Stop traffic					

TFA (PC = B)	{				
TFP (PC = D) {	-------->				
TRAFFIC	-------->	5 — 1	{		
	SP D <--------	1 — 1	{		
5 — 1	SP D {				
2 — 1 TRAFFIC	<---------- {	8 — 1	SP D		
7 — 1	----------> {		SP E		
2 — 1	<----------	7 — 1	SP E		

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 a TRA is sent from A to B and check that, on reception of TRA (sent from B to A), the timer T21 is stopped. Check that a TFA is sent from A to C for B. }	{
4. Check that the time controlled diversion is applied in A. Check that the traffic to D is diverted on link 1 — 1. }	{
5. Stop traffic. Check that there were no lost messages and no missequencing. }	{
6. In VAT, repeat the test without sending TRA from B to A and check that the duration of T21 is inside the specified range. }	{

Tableau [T104.782], p.

H.T. [T105.782]
MTP LEVEL 3

{
TEST NUMBER: 10.2.1 Continued
}
		PAGE: 2 of 2

REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Recovery of a linkset (SP A has the STP function) — With use of point restart procedure
}		

PURPOSE: See page 1 of 2		

{
PRE-TEST CONDITIONS: Linksets 3, 4 and 6 unavailable (end of page 1)
}		

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link		Link		Link	
:Start traffic								
1 — 1	TRAFFIC	-------->	5 — 1	{				
---------->								
}		SP D						
		<--------	1 — 1	{				
<----------								
}	5 — 1	SP D						
		{						
<----------								
}	2 — 1	<----------	8 — 1	SP D				
2 — 1	TRAFFIC	{						
---------->								
}	7 — 1	---------->		SP E				
		{						
<----------								
}	2 — 1	<----------	7 — 1	SP E				
3 — 1	:Activate							
3 — 1	TRAFFIC	{						
<----------								
}	3 — 1	SP F						
				| | | T21 | |				
3 — 1	TRA	{						

}		-						
1 — 1	TFA (PC = F)	-------->						
2 — 1	TFA (PC = F)	{						
---------->								
}								
1 — 1	TRAFFIC (from A and F)	-------->	5 — 1	{				
---------->								
}		SP D						
		<--------	1 — 1	{				
<----------								
}	5 — 1	SP D						
2 — 1	TRAFFIC (from A and F)	{						
---------->								
}	7 — 1	---------->		SP E				
		{						
<----------								
}	2 — 1	<----------	7 — 1	SP E				
:Wait								
:Stop traffic								

TEST DESCRIPTION	
1.	Start traffic.
2.	{
Activate the link 3 — 1 and check that the traffic from/to A to/from F is immediately restarted.	
}	
3.	{
Check that a TRA is sent from A to F and check that A broadcasts TFA for F.	
}	
4.	{
Stop traffic and check that there were no lost messages, no duplication and no missequencing.	
}	

Tableau [T105.782], p.

H.T. [T106.782]
MTP LEVEL 3

TEST NUMBER: 10.2.2		PAGE: 1 of 1	
REFERENCE: Q.704 § 9			

{
TITLE: Signalling point restart
}			

{
SUB TITLE:
Recovery of a linkset (SP A has the STP function) — Without use of point restart procedure
}			

{
PURPOSE:
To check the actions of the system in case of restart of a
linkset
}			

{
PRE-TEST CONDITIONS: Linkset 1
unavailable
}			

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP	
MESSAGES SEQUENCE: SP A	SP B	SP C	SP ●

Link			Link		Link		Link
:Start traffic							
2 — 1	TRAFFIC	{					
---------->							
}	8 — 1	---------->		SP D			
	(from A and F)		7 — 1	---------->		SP E	
		{					
<----------							
}	2 — 1	<----------	7 — 1	SP E			
				<----------	8 — 1	SP D	
1 — 1	:Activate			(see Note 1)			
	{						
CHANGEBACKS ARE PERFORMED IN A AND B (see Note 2)							
}							
1 — 1	TRAFFIC	-------->	5 — 1	{			
---------->							
}		SP D					
	(from A and F, from 2 — 1)	6 — 1	{				
<----------							
}		SP E					
2 — 1	TRAFFIC	{					
---------->							
}	7 — 1	---------->		SP E			
		{					
<----------							
}	2 — 1	<----------	7 — 1	SP E			
				<----------	8 — 1	SP D	
				(see Note 1)			
:Wait							
:Stop traffic							
{							
Note 1							
— Depending of 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 DESCRIPTION	
1.	Start traffic to D and E.
2.	{
Activate link 1 — 1. Check that point restart procedure is not applied in this case and that changebacks are performed.	
}	
3.	{
Check that the traffic to D and E is diverted on link 1 — 1 in accordance with the load sharing rules in A.	
}	
4.	{
Check that the signalling route set test procedure is not used.	
}	
5.	{
Stop traffic and check there were no lost messages, no duplication and no missequencing.	
}	

Tableau [T106.782], p.

H.T. [T107.782]
MTP LEVEL 3

TEST NUMBER: 10.3		PAGE: 1 of 1
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
An adjacent SP becomes accessible via another SP (SP A has not STP function)
}		

{
PURPOSE:
To check the actions of the system when an adjacent SP becomes accessible via another SP
}		

{
PRE-TEST CONDITIONS: Linksets 1, 3, 4, 5 and 6 are unavailable
}		

CONFIGURATION: B	TYPE OF TEST: VAT	TYPE OF SP: SP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link	Link	Link
			{		
4 — 1 . . TFPs 4 — 1 (D and E) . . TRA 4 — 1 } :Activate | | <-------- | --------> | T21 | | <-------- **| fR** --------> **}** . . 4 — 1 . . . 4 — 1 } . | | TFP (A) | | T21 | | TRA | } TFAs (A,B) -----> TFAs (A,B) -----> }	{				
	{				
	{				
	. |	<--------	2 — X	TFAx (PCs = C, D	7 — 1 8 — 1 {
	| T21 **| | TRAFFIC | | |**	**| fR SP E | SP D** **(for D and C)** **{**		**and E)**	**T21 in D for A |**
2 — 1, 2 . --------> <-------- } . 4 — 1 2 — 1, 2 } . ----------> <---------- } . . 7 — 1 } 2 — 1, 2	{				
	(Broadcasting mode) <--------	. 7 — 1 4 — 1	{		
	{				
	| | SP E | SP E | TRAFFIC	--------> <--------	4 — 1 **2 — 1, 2**	--------> <--------	8 — 1 ---------->

		4 — 1	<----------	**8 — 1**
:Wait :Stop traffic				
TEST DESCRIPTION				
1. 2. Check that on the reception of TFAs the traffic is immediately restarted in A to E and that traffic to D is restarted after expiration of T21. } 3. Stop traffic and check that there were no lost messages, no duplication and no missequencing. }	Activate link 4 — 1. { {			

Tableau [T107.782], p.

H.T. [T108.782]
MTP LEVEL 3

TEST NUMBER: 10.4	PAGE: 1 of 1		
REFERENCE: Q.704 § 9			

{
TITLE: Signalling point restart
}			

{
SUB TITLE:
An adjacent SP becomes accessible via another SP (SP A has STP function)
}			

{
PURPOSE:
To check the actions of the system when an adjacent SP
becomes accessible via another SP on reception of a TFA
}			

{
PRE-TEST CONDITIONS: Linksets 1, 3 and 4 are
unavailable
}			

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP	
MESSAGES SEQUENCE: SP A	SP B	SP C	SP ●

	Link				Link		Link	
:Start traffic								
	2 — 1	TRAFFIC	{					
	---------->							
	}	7 — 1	---------->		SP E			
		(from A)		8 — 1	---------->			SP
			{					
	<----------	2 — 1	<----------	7 — 1	SP E			
	}			4 — 1	:Activate			<----
					{			
|								
| **T21**								
Point restart								
| T21 procedure is								
| **T21**								
applied in B and C								
|								
}		| | | T21 | |						
					TRA <-------		4 — 1	| TRA
				4 — 1	TRA ------->			
			{					
<----------								
}		2 — 1	TFA (PC = B)					
	2 — 1	TFP (PC = F)	{					
	---------->							
	}	4 — 1						
		(sent to B via C)	<----------	--------				
	2 — 1	TRAFFIC	{					
	---------->							
	}	7 — 1	---------->		SP E			
				8 — 1	<----------			SP
	<----------		{					
	}	2 — 1	<----------	7 — 1	SP E			
					<----------	8 — 1		SP
:Wait								
:Stop traffic								

TEST DESCRIPTION	
1.	Start traffic.
2.	Activate link 4 — 1.
3.	{
Check that, when the TFA is received for B, SP A is aware of that B is an adjacent point which restarts, and consequently A sends a TFP concerning F on link 2 — 1 to B.	
}	
4.	{
Stop traffic and check that it was not disturbed.	
}	

Tableau [T108.782], p.

H.T. [T109.782]
MTP LEVEL 3

TEST NUMBER: 10.5		PAGE: 1 of 2
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Restart of an SP having no
STP function
}		

{
PURPOSE:
To check the restart procedure in an SP having no STP
function
}		

{
PRE-TEST CONDITIONS: SP A
unavailable
}		

CONFIGURATION: B	TYPE OF TEST: VAT, CPT	TYPE OF SP: SP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link		Link	Link	
	:Activate						
X — X	{						
:							
Activation (first link activated)							
}							
	||×T21||						
	- <----------	TRA received from B or C					
	{						
FINAL SITUATION (WHEN ALL LINKS ARE AVAILABLE)							
}							
1 — 1, 2	TRAFFIC	{					
---------->							
}		SP D					
		{					
<----------							
}	1 — 1, 2	SP D					
2 — 1, 2	TRAFFIC	-------->	5 — 1	{			
---------->							
}		SP D					
			6 — 1	{			
---------->							
}		SP E					
3 — 1, 2	TRAFFIC	{					
---------->							
}	8 — 1	---------->		SP D			
			7 — 1	---------->		SP E	
		{					
<----------							
}	3 — 1, 2	<----------	7 — 1	SP E			
:Wait							
:Stop traffic							

TEST DESCRIPTION	
1.	Activate SP A.
2.	{
Check that when the first link is activated, the timer T21 is started.	
}	
3.	{
Check that, on reception of a TRA received from B or C, T21 is stopped.	
}	
4.	{
Check that, when all links are activated, the traffic is carried as described above.	
}	
5.	Stop traffic.

Tableau [T109.782], p.

H.T. [T110.782]
MTP LEVEL 3

TEST NUMBER: 10.5 Continued		PAGE: 2 of 2
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Restart of an SP having no
STP function
}		

{
PURPOSE:
To check the restart procedure in an SP having no
STP function
}		

{
PRE-TEST CONDITIONS: SP A, linksets 6 and 7
unavailable
}		

CONFIGURATION: B	TYPE OF TEST: VAT	TYPE OF SP: SP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link
1 — 1
{
1 — 1
1 — 2
1 — 2
2 — 1
}
| TRAFFIC
|
| Activate
| TRAFFIC
|
| T21
|
| Activate
|
}
---------->
<----------
(changeback is performed)
---------->
<----------
(traffic from/to B is immediately restarted)
}

2 — 1 TFP (PC = E)
2 — 1 TRA
5 — 1 TFA (PC = A)
| ---------->
4 — 1 TFA (PC = A)
| ---------->
}

2 — 2
3 — 1, 2
1 — 1, 2
---------->
}

<----------
}
2 — 1, 2
---------->
}
3 — 1, 2
---------->
}

:Wait
:Stop traffic
{
Note
— Changebacks are performed, but they are not described in this
point restart test.
}

TEST DESCRIPTION

1.
2.
Check that after activation on link 1 — 1, the traffic between A and D is immediately restarted and check that T21 is started in A. Activate 1 — 2.
}
3.
Activate link 2 — 1 and send a TFP for E from B to A. Check that T21 is

| | | |

	stopped on reception of the TRA message. }	
	4. Check that the traffic is carried as described above, after the restart. }	{
	5.	Stop traffic.

Tableau [T110.782], p.

H.T. [T111.782]
MTP LEVEL 3

TEST NUMBER: 10.6	PAGE: 1 of 2		
REFERENCE: Q.704 § 9			

{
TITLE: Signalling point restart
}			

{
SUB TITLE:
Restart of an SP having the
STP function
}			

{
PURPOSE:
To check the restart procedure in an SP having STP
function
}			

{
PRE-TEST CONDITIONS: SP A
unavailable
}			

CONFIGURATION: D	TYPE OF TEST: VAT, CPT	TYPE OF SP: STP	
MESSAGES SEQUENCE:			
SP A	SP B	SP C	SP •

Link			Link		Link	Link
	:Activate					
X — X	**:** Activation					
	{					
| T18						
<-------- TRA may be received from B or C						
}						
	| T18	| T21	| T21	| T21		
	|	|	|	|		
	- all links are aligned	|	|	|		
	|	|	|	|		
	{					
| T 18						
<-------- TRA may be received from B or C						
}						
	|	|				
	|	|	|	|		
	| T19 (see note)	|	|	|		
		|	|	|		
1 — 1	| TFPs (for D and E) -->	|	|	|		
2 — 1	{					
| TFPs (for D and E) ---------->						
}	| -------->	|	|			
	| T20	|	|	|		
		|	|	|		
1 — 1	**| fR TRA**	-------->	**{**			
| fR						
TFAs (A) are sent						
}	|	|				
2 — 1	**| fR TRA**	**{**				
---------->						
}	**{**					
| fR						
TFAs (A) are sent						
}						
3 — 1	**| fR TRA**	**{**				
---------->						
}		**SP F**				
1 — 1	| fR TRAFFIC	-------->	5 — 1	{		
---------->						
}		SP D				
	{					
| fR						
(from A and F) <-------	**Via B or C to A and F**	**{**				
}						
----------> 5 | (em | | r | | (em |	**SP D**					
}			**6 — 1**	**{**		
----------> }		**SP E**				
2 — 1	| fR TRAFFIC	**{**				
---------->						
}	7 — 1	---------->		SP E		
	{					
| fR						
(from A and F) <-------	**Via B or C to A and F**	**{**				
}						
----------> 6 | (em | | r | | (em |	**SP E**					
}						
:Wait						
:Stop traffic						
{						
Note						

— If all TRAs are received during T18, T19 is not started. }	
TEST DESCRIPTION	
1. 2. Check that the signalling links become available and check that the received TRAs are correctly handled. } 3. Check that when all TRAs are received in A, TRAs are broadcasted from A. } 4. Check that the traffic is restarted correctly, wait and stop traffic. } 5. Repeat the test (in VAT) but send the traffic from F to D and E via A immediately after alignment of link 3 — 1 and check that this traffic is treated normally in A. }	Activate signalling point A. { { { {

Tableau [T111.782], p.

H.T. [T112.782]
MTP LEVEL 3

TEST NUMBER: 10.6 Continued		PAGE: 2 of 2
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Restart of an SP having the STP
function
}		

{
PURPOSE:
To check the restart procedure in an SP having STP
function
}		

{
PRE-TEST CONDITIONS: SP A, linksets 2 and 4
unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

SP A	SP B	SP C	SP •

Link			Link		Link		Link	
3 — 1 **:** Activation (traffic from/to F is immediately restarted) }	:Activate {							
1 — 1 | Activation (traffic from/to B is immediately restarted) }	| T18 {	|						
	|	<------	1 — 1	| TFP (PC = C)	|		
	|	<------	1 — 1	| TRA	|		
	|	|	|				
	|	|	|				
		|	|				
	|	|	|				
3 — 1 ----------> } 1 — 1	| T19 | TFP (PC = C)	| T21 {	| T21					
	| TFPs | (PC = C, D and E) - T20	| SP F --------> |	|	|	|	|	
1 — 1 **3 — 1** ----------> } 1 — 1 1 — 1 ----------> **}** ----------> **}**	**| fR TRA** | fR TRA	--------> {		**|**		**|**		
<---------- } <---------- **}**	**| fR TRAFFIC** **| fR (from A and F)** 5 — 1 **6 — 1**	--------> | fR SP D | fR SP E **| fR SP D** | fR SP E	**5 — 1** **6 — 1** to A and F **to A and F**	**{** **{** { **{**				

:Wait
:Stop traffic

TEST DESCRIPTION

1. {
Activate signalling point A beginning by the activation of 3 — 1. After activation of 3 — 1, activate link 1 — 1.
}

2. {
Check that T19 is started after expiration of T18. Check that the duration of T18 is inside the specified range.
}

3. {
Check that T20 is started after expiration of T19. Check that the duration of T19 is inside the specified range.
}

4. {
Check that TFPs are sent during T20.
}

5. {
Check that when T20 expires TRAs are broadcasted and that the traffic is correctly restarted, wait and stop traffic.
}

6. {
Repeat the test with activation of 2 — 1 during T19 and check that this

event is treated outside the procedure. }	
0	

Tableau [T112.782], p.

H.T. [T113.782]
MTP LEVEL 3

TEST NUMBER: 10.7.1	PAGE: 1 of 1	
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Reception of an unexpected TRA — In an SP having no STP function
}		

{
PURPOSE:
To check the actions of the system in case of reception of an unexpected TRA
}		

{
PRE-TEST CONDITIONS: Linkset with one available link
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: SP
MESSAGES SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
		<----------	1 — 1	TRA
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1. Start traffic to B and C on link 1 — 1. }	{
2. Send a TRA from B to A and check that this message is ignored. }	{
3. Stop traffic and check that it has not been disturbed. }	{

Tableau [T113.782], p.

H.T. [T114.782]
MTP LEVEL 3

TEST NUMBER: 10.7.2	PAGE: 1 of 1	
REFERENCE: Q.704 § 9		

{
TITLE: Signalling point restart
}		

{
SUB TITLE:
Reception of an unexpected TRA — In an SP having STP function
}		

PURPOSE: See test 10.7.1		

{
PRE-TEST CONDITIONS: Linksets 1, 4 and 8 unavailable
}		

CONFIGURATION: D	TYPE OF TEST: VAT	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			
		{					
<----------							
}	2 — 1	<----------	7 — 1	SP E			
		{					
<----------							
}	2 — 1	TRA					
2 — 1	TFP (PC = B)	{					
---------->							
}							
2 — 1	TFP (PC = D)	{					
---------->							
}							
2 — 1	TRAFFIC (from A and F)	{					
---------->							
}	7 — 1	---------->		SP E			
		{					
<----------							
}	2 — 1	<----------	7 — 1	SP E			
:Wait							
:Stop traffic							

TEST DESCRIPTION	
1.	Start traffic to E.
2. Send a TRA from C to A and check that TFPs concerning B and D are received, then, check that a TRAs received from A. }	{
3. Stop traffic and check that it was not disturbed. }	{

Tableau [T114.782], p.

H.T. [T115.782]
MTP LEVEL 3

TEST NUMBER: 11	PAGE: 1 of 1	
REFERENCE: Q.706		
TITLE: Traffic test		
SUB TITLE:		

{
PURPOSE:
To check the behaviour of an STP in various traffic situations
}		

{
PRE-TEST CONDITIONS: All links available
}		

CONFIGURATION: C	TYPE OF TEST: VAT	TYPE OF SP: STP
MESSAGE SEQUENCE:		

Link	SP B		SP A Link	SP C	Link	
:Start traffic						
1 — 1	TRAFFIC	---------->	2 — 1	---------->		
1 — 2	TRAFFIC	---------->	2 — 1	---------->		
		<----------	1 — 1	<----------	2 — 1	TRAFFIC
		<----------	1 — 2			
:Wait						
:Stop traffic						

TEST DESCRIPTION	
1. Start traffic between B and C in both directions via A using the traffic models presented in Recommendation Q.706. }	{
2. Check that the time to cross the STP is better than 20 milliseconds. }	{
3. Stop traffic and check that it was not disturbed. }	{
4. Repeat test but with a traffic model including 5% of messages with an SIF = 272 octets. }	{

Tableau [T115.782], p.

H.T. [T116.782]
MTP LEVEL 3

TEST NUMBER: 12.1	PAGE: 1 of 1	
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
After activation of a link
}		

{
PURPOSE:
To check the signalling link test procedure after activation of a signalling link
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2
available
}		

CONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

	Link	SP A		Link	SP B
:Start traffic					
	1 — 2	TRAFFIC	---------->		
			<----------	1 — 2	TRAFFIC
	1 — 1	:Activate			
	1 — 1	SLTM	---------->		
			<----------	1 — 1	SLTA
			<----------	1 — 1	SLTM
	1 — 1	SLTA	---------->		
CHANGEBACK					
	1 — 1, 2	TRAFFIC	---------->		
		TRAFFIC	<----------	1 — 1, 2	TRAFFIC
:Wait					
:Stop traffic					

TEST DESCRIPTION	
1. Start traffic to B (and C in VAT). }	{
2. Activate link 1 — 1 and check that an SLTM is received from A. }	{
3. Send an SLTM to A and check that an SLTA is received. }	{
4. Check that the link 1 — 1 becomes available and that changeback is performed correctly. }	{
5.	Stop traffic.
6. In VAT, repeat the test with link 1 — 1 unavailable and inhibited (in this case changeback is not performed). Check that the link 1 — 1 becomes available and stays inhibited. }	{

Tableau [T116.782], p.

H.T. [T117.782]
MTP LEVEL 3

TEST NUMBER: 12.2	PAGE: 1 of 1	
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
No acknowledgement to first SLTM
}		

{
PURPOSE:
To check that a second SLTM is sent if the first is not acknowledged
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2 available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 2	| **T1** TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
1 — 1	| **T1** :Activate			
1 — 1	| **T1** SLTM ||| T1 ||	---------->		
1 — 1	| **T1** SLTM	---------->		
		<----------	1 — 1	SLTA
		<----------	1 — 1	SLTM
1 — 1	| **T1** SLTA	---------->		
CHANGEBACK				
1 — 1, 2	| **T1** TRAFFIC	---------->		
		<----------	1 — 1, 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1.	Start traffic to B and C.
2. Activate link 1 — 1 and check that an SLTM is received and not acknowledged. }	{
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 — 1 unavailable and inhibited (in this case changeback is not performed). Check that the link becomes available and stays inhibited. }	{

Tableau [T117.782], p.

H.T. [T118.782]
MTP LEVEL 3

TEST NUMBER: 12.3	PAGE: 1 of 1	
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
No acknowledgement to second SLTM
}		

{
PURPOSE:
To check that the link stays unavailable when the second SLTM is not acknowledged
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2 available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 2	| **T1** TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
1 — 1	| **T1** :Activate			
1 — 1	| **T1** SLTM	---------->		
	| | | T1 | |			
1 — 1	| **T1** SLTM	---------->		
	| | | T1 | |			
1 — 2	| **T1** TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1.	Start traffic to B and C.
2. Activate link 1 — 1 and check that two SLTMs are received from A. }	{
3. Check that after the second expiration of T1, link 1 — 1 stays unavailable and that the management system is informed. }	{
4. Repeat the test with link 1 — 1 unavailable and inhibited. }	{

Tableau [T118.782], p.

H.T. [T119.782]
MTP LEVEL 3

TEST NUMBER: 12.4	PAGE: 1 of 1	
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
Unreasonable field in an SLTA
}		

{
PURPOSE:
To check the actions of the system on reception of an SLTA
with an unreasonable field
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2
available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 2	| T1 TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
1 — 1	| T1 :Activate			
1 — 1	| T1 SLTM	---------->		
		<----------	1 — 1	{
SLTA (erroneous test **SLTA** pattern)				
}				
1 — 1	**| T1** SLTM	---------->		
		<----------	1 — 1	SLTA
CHANGEBACK				
1 — 1, 2	**| T1** TRAFFIC	---------->		
		<----------	1 — 1, 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1.	Start traffic to B and C.
2. 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.	Wait and stop traffic.
6. Repeat the test with a first SLTA containing an erroneous SLC then OPC.	{
}	
7. Repeat the test with the first and second erroneous SLTA and check that link 1 — 1 stays unavailable and that management system is informed.	{
}	

Tableau [T119.782], p.

H.T. [T120.782]
MTP LEVEL 3

TEST NUMBER: 12.5	PAGE: 1 of 1	
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
Reception of an SLTM in an attempt state
}		

{
PURPOSE:
To check the actions of the system when an SLTM is received in an attempt state
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2
available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 2	| T1 TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
1 — 1	| T1 :Activate			
1 —1 1 — 1	{			
| T1				
SLTM				
|				
| T1				
| T1				
SLTA				
|				
}	{			
---------->				
<----------				
---------->				
}	. 1 — 1	. SLTM		
1 — 1 1 — 1	{			
| T1				
SLTM				
|				
| T1				
| T1				
SLTA				
|				
}	{			
---------->				
<----------				
---------->				
}	. 1 — 1	. SLTM		
		<----------	1 — 1	STLA
CHANGEBACK				
1 — 1, 2	TRAFFIC	---------->		
		<----------	1 — 1, 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1.	Start traffic to B and C.
2.	{
Activate link 1 — 1 and check that SLTM is received. Send an SLTM and check that an SLTA is received.	
}	
3.	{
On reception of the second SLTM, send an SLTM and check that an SLTA is received. Send an SLTA to A.	
}	
4.	{
Check that changeback is performed correctly, and stop traffic.	
}	

Tableau [T120.782], p.

H.T. [T121.782]
MTP LEVEL 3

TEST NUMBER: 12.6		PAGE: 1 of 1
REFERENCE: Q.707		
TITLE: Signalling link test		

{
SUB TITLE:
Additional SLTA and SLTM
}		

{
PURPOSE:
To check the actions of the system on reception of additional SLTA and SLTM
}		

{
PRE-TEST CONDITIONS: Signalling link 1 — 2 available
}		

CONFIGURATION: A	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 2	TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
		<----------	1 — 2	SLTA
		<----------	1 — 2	SLTM
1 — 2	SLTA	---------->		
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1. Start traffic to B (and C in VAT). }	{
2. Check that the reception of an SLTA is ignored. }	{
3. Send an SLTM to A and check that an SLTA is received. }	{
4. Stop traffic and check that it was not disturbed. }	{

Tableau [T121.782], p.

H.T. [T122.782]
MTP LEVEL 3

TEST NUMBER: 13.1	PAGE: 1 of 1	
REFERENCE: Q.704 Tab. 1		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid H0.H1 in a signalling network management message
}		

{
PURPOSE:
To check the actions of the system when a signalling network management message is received with a non existing H0.H1
}		

{
PRE-TEST CONDITIONS: All links available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

	SP A		Link	SP B
Link				
:Start traffic				
ALL	TRAFFIC	---------->		
		<----------	ALL	TRAFFIC
		<----------	1 — X	{
SIGNALLING NETWORK MANAGEMENT MESSAGE (Invalid H0.H1)				
}				
ALL	TRAFFIC	---------->		
		<----------	ALL	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1. Start traffic to B and C on all links.	{
}	
2. Send a signalling network management message with a nonexisting H0.H1.	{
}	
3. Check that this message is discarded without impact on the traffic.	{
}	
4.	Stop traffic.

Tableau [T122.782], p.

H.T. [T123.782]
MTP LEVEL 3

TEST NUMBER: 13.2	PAGE: 1 of 1	
REFERENCE: Q.704 § 15		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid changeover
messages
}		

{
PURPOSE:
To check the actions of the system on reception of changeover messages with an invalid SLC or OPC
}		

{
PRE-TEST CONDITIONS: Linkset with two available
links
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
1 — 2	TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
		<----------	1 — 2	{
COO, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
COO, SLC 1 — 1 (nonexisting OPC) }				
		<----------	1 — 2	{
ECO, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
ECO, SLC 1 — 1 (nonexisting OPC) }				
		<----------	1 — 2	{
COA, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
COA, SLC 1 — 1 (nonexisting OPC) }				
		<----------	1 — 2	{
ECA, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
ECA, SLC 1 — 1 (nonexisting OPC) }				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1, 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1. Start traffic to B and C on all links.	{
}	
2. Send the invalid messages as described above and check that they are ignored.	{
}	
3. Stop traffic and check that it was not disturbed.	{
}	

Tableau [T123.782], p.

H.T. [T124.782]
MTP LEVEL 3

TEST NUMBER: 13.3	PAGE: 1 of 1	
REFERENCE: Q.704 § 15		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid changeback
messages
}		

{
PURPOSE:
To check the actions of the system on reception of changeback messages with an invalid SLC or OPC
}		

{
PRE-TEST CONDITIONS: Linkset with two available
links
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
1 — 2	TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
		<----------	1 — 2	{
CBD, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
CBD, SLC 1 — 1 (nonexisting OPC) }				
		<----------	1 — 2	{
CBA, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
CBA, SLC 1 — 1 (nonexisting OPC) }				
1 — 1, 2	TRAFFIC	---------->		
		<----------	1 — 1, 2	TRAFFIC
:Wait				
:Stop traffic				

TEST DESCRIPTION	
1. Start traffic to B and C on all links. }	{
2. Send the invalid messages described above and check that they are ignored. }	{
3. Stop traffic and check that it was not disturbed. }	{

Tableau [T124.782], p.

H.T. [T125.782]
MTP LEVEL 3

TEST NUMBER: 13.4	PAGE: 1 of 1	
REFERENCE: Q.704 § 15		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid changeback
code
}		

{
PURPOSE:
To check the actions of the system on reception of an invalid changeback code in a changeback message
}		

{
PRE-TEST CONDITIONS: Linkset with one link
available
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

	SP A		Link	SP B
:Start traffic				
1 — 2	TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
1 — 1	{			
:Activate (depending of the deactivation mean previously used)				
}				
1 — 2	{			
CBD, SLC 1 — 1				
CBD				
|				
CBD				
|				
CBD				
| T4				
CBD				
|				
CBD				
|				
}	{			
---------->				
<----------				
}	. 1 — 2	{		
.				
CBA, SLC 1 — 1 (invalid changeback code ≠ CBD)				
}				
1 — 2	{			
CBD, SLC 1 — 1				
CBD				
|				
CBD				
|				
CBD				
| T5				
CBD				
|				
CBD				
|				
}	---------->			
1 — 1	TRAFFIC (from 1 — 2)	---------->		
		<----------	1 — 1	{
TRAFFIC (from 1 — 2 see note)				
}				
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.	{
}	
2.	{

Activate link 1 — 1, check that a CBD is received and acknowledged by a CBA with an invalid changeback code. }	
3. Check that a new CBD is received after T4 expires and acknowledged by a correct CBA. Check that changeback is performed. }	{
4. Stop traffic and check that the invalid message has been discarded without impact on the traffic. }	{

Tableau [T125.782], p.

H.T. [T126.782]
MTP LEVEL 3

TEST NUMBER: 13.5	PAGE: 1 of 3	
REFERENCE: Q.704 § 15		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid inhibition
messages
}		

{
PURPOSE:
To check the actions of the system on reception of an invalid inhibition messages
}		

{
PRE-TEST CONDITIONS: Linkset with two available
links
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

Link	SP A		Link	SP B
:Start traffic				
1 — 1	TRAFFIC	---------->		
		<----------	1 — 1	TRAFFIC
1 — 2	TRAFFIC	---------->		
		<----------	1 — 2	TRAFFIC
		<----------	1 — 2	{
LIN, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
LIN, SLC 1 — 2 (nonexisting OPC) }				
		<----------	1 — 2	{
LIA, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
LIA, SLC 1 — 1 (nonexisting OPC) }				
		<----------	1 — 2	{
LID, SLC 1 — X (nonexisting SLC) }				
		<----------	1 — 2	{
LID, SLC 1 — 1 (nonexisting OPC) }				

TEST DESCRIPTION	
1.	Start traffic to B and C.
2. Send the invalid messages described above and check that these are ignored. }	{
3. Stop traffic and check that it was not disturbed. }	{

Tableau [T126.782], p.

H.T. [T127.782]
MTP LEVEL 3

TEST NUMBER: 13.5 Continued	PAGE: 2 of 3	
REFERENCE: Q.704 § 15		
TITLE: Invalid messages		

{
SUB TITLE:
Invalid inhibition
messages
}		

PURPOSE: As page 1		

{
PRE-TEST CONDITIONS: Linkset with two available
links
}		

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL
MESSAGE SEQUENCE:		

SP A		Link	SP B
Link			
LUN, SLC 1 — X (nonexisting SLC) }	<----------	1 — 2	{
LUN, SLC 1 — 1 (nonexisting OPC) }	<----------	1 — 2	{
LUA, SLC 1 — X (nonexisting SLC) }	<----------	1 — 2	{
LUA, SLC 1 — 1 (nonexisting OPC) }	<----------	1 — 2	{
LFU, SLC 1 — X (nonexisting SLC) }	<----------	1 — 2	{
LFU, SLC 1 — 1 (nonexisting OPC) }	<----------	1 — 2	{
TEST DESCRIPTION			
See page 1.			

Tableau [T127.782], p.

H.T. [T128.782]
MTP LEVEL 3

TEST NUMBER: 13.5 Continued	PAGE: 3 of 3
REFERENCE: Q.704 § 15	