

H.T. [T47.781]
MTP LEVEL 2

TEST NUMBER: 3.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3, 8 STD: Fig. 8 }	
TITLE: Transmission failure	
{ SUB TITLE: Link aligned not ready (Corrupt FIBs — Basic) }	
{ PURPOSE: To check the response to a link failure after corruption of two FIBs — detected by reception control — while in “Aligned not ready” }	
{ PRE-TEST CONDITIONS: Link out of service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	SIOS	<----- ----->	1 — 0	SIOS
				: et LPO
				: tart
1 — 0	SIO	<----- ----->	1 — 0	SIO
1 — 0	SIN	<----- ----->	1 — 0	SIN
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	<----- ----->	1 — 0	SIPO
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	<----- ----->	1 — 0	SIOS
TEST DESCRIPTION				

1. 2. 3. Send two corrupt FISUs (corrupt FIBs) on link aligned not ready. } 4. Check link is taken out of service at A. }	Set LPO at A. Start link alignment at A. { }
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Tableau [T47.781], p.

H.T. [T48.781]
MTP LEVEL 2

TEST NUMBER: 3.5	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 4, 10.2 STD: Fig. 8 }	
TITLE: Transmission failure	
{ SUB TITLE: Link in service (Break Tx path) }	
{ PURPOSE: To test the response to a transmission failure when the link is ‘‘In service’’ }	
{ PRE-TEST CONDITIONS: Link in service }	

CONFIGURATION: 1	TYPE OF TEST: VAT, CPT
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{ EXPECTED SIGNAL UNIT SEQUENCE: }
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Link 1 — 0	SP B FISU : break Tx	<----- -----> <-----	Link 1 — 0 SIOS	SP A FISU
TEST DESCRIPTION				

1. Break Tx at B, check SIOS returned from A. }	{
2.	Repeat test, break at A.

Tableau [T48.781], p.

H.T. [T49.781]
MTP LEVEL 2

TEST NUMBER: 3.6	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 8 }	
TITLE: Transmission failure	
{ SUB TITLE: Link in service (Corrupt FIBs — Basic) }	
{ PURPOSE: To check the response to a link failure after corruption of two FIBS — detected by reception control — while “In service” }	
{ PRE-TEST CONDITIONS: Link in service }	

CONFIGURATION: 1	TYPE OF TEST: VAT
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{ EXPECTED SIGNAL UNIT SEQUENCE: }
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Link	SP B		Link	SP A
1 — 0	FISU (FIB+FISN=FF)	<------	1 — 0	FISU
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	----->		
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	----->		
		<------	1 — 0	SIOS
TEST DESCRIPTION				

1. Check that receipt of two FISUs at A with corrupt FIBs at link in service state causes the link to be taken out of service. }	{
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Tableau [T49.781], p.

H.T. [T50.781]
MTP LEVEL 2

TEST NUMBER: 3.7	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 8, 10.2 STD: Fig. 8 }	
TITLE: Transmission failure	
{ SUB TITLE: Link in processor outage (Break Tx path) }	
{ PURPOSE: To test the response to a transmission failure when the link is “Processor outage” }	
{ PRE-TEST CONDITIONS: Link in service }	

CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	FISU	<----- ----->	1 — 0	FISU
	: break Tx	<----- ----->	1 — 0	: et LPO SIPO
		<----- ----->	1 — 0	SIOS

TEST DESCRIPTION

1. Break Tx path at B when in “Processor outage” state, check that the SUERM detects the failure and the link is taken out of service. }	{
2.	Repeat test, break TX at A.

Tableau [T50.781], p.

H.T. [T51.781]
MTP LEVEL 2

TEST NUMBER: 3.8	PAGE: 1 OF 1
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{ REFERENCE: Q.703 § 5.3, 8 STD: Fig. 8 }	
TITLE: Transmission failure	
{ SUB TITLE: Link in processor outage (Corrupt FIBs — Basic) }	
{ PURPOSE: To check the response to a link failure after corruption of two FIBs — detected by reception control — while in “Processor outage” }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	FISU	<----- ----->	1 — 0	FISU
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	<----- ----->	1 — 0	: et LPO
1 — 0	FISU corrupt FIB (FIB+FSN=7F)	-----> ----->		SIPO
		<-----	1 — 0	SIOS
TEST DESCRIPTION				

1. Check that receipt of two FISUs at A with corrupt FIBs on processor outage state causes the link to be taken out of service. }	{
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Tableau [T51.781], p.

H.T. [T52.781]
MTP LEVEL 2

TEST NUMBER: 4.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 8 STD: Fig. 10 }	
{ TITLE: Processor outage control }	
{ SUB TITLE: Set and clear LPO while link in service }	
{ PURPOSE: To check the ability to perform correctly when LPO is set and recovered }	
{ PRE-TEST CONDITIONS: Link in service }	

CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0	SP B FISU	<----- -----> <----- <----- <-----	Link 1 — 0 1 — 0 1 — 0 1 — 0	SP A FISU : et LPO SIPO : lear LPO FISU MSU (FIB+FSN=80)
TEST DESCRIPTION				

1. Set LPO at A while link in service. }	{
2.	Check message is discarded.
3.	Clear LPO at A.
4.	Check MSU is sent correctly.

Tableau [T52.781], p.

H.T. [T53.781]
MTP LEVEL 2

TEST NUMBER: 4.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 8 STD: Fig. 10 }	
{ TITLE: Processor outage control }	
SUB TITLE: RPO during LPO	
{ PURPOSE: To test the response to RPO is set and cleared when “LPO” }	
{ PRE-TEST CONDITIONS: Link in service. PO set at B }	

CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	SIPO	<----- -----> <-----	1 — 0	: et LPO SIPO
1 — 0	: lear LPO FISU	-----> <-----	1 — 0	SIPO
TEST DESCRIPTION				
1.	Set LPO at A.			
2.	Clear LPO at B.			
3.	Check is SIPO sent from A.			

Tableau [T53.781], p.

H.T. [T54.781]
MTP LEVEL 2

TEST NUMBER: 4.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 8 STD: Fig. 10 }	
{ TITLE: Processor outage control }	
{ SUB TITLE: Clear LPO when “Both processor outage” }	
{ PURPOSE: To test the response to LPO, RPO recovered when “Both processor outage” }	
{ PRE-TEST CONDITIONS: PO set at A and B }	

CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	SIPO	<----- ----->	1 — 0	SIPO
				: lear LPO
	: lear LPO	<-----	1 — 0	FISU
1 — 0	FISU	-----> <-----	1 — 0	FISU
TEST DESCRIPTION				
1.	Clear LPO at A.			
2.	Clear LPO at B.			
3.	Check is FISU sent from A.			

Tableau [T54.781], p.

H.T. [T55.781]
MTP LEVEL 2

TEST NUMBER: 5.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 4.1 STD: Fig. 11 }	
{ TITLE: SU delimitation, alignment, error detection and correction }	
{ SUB TITLE: More than seven '1's between MSU opening and closing flags }	
{ PURPOSE: To test the signal unit delimitation, alignment, and error detection action on receipt of an MSU containing seven or more consecutive '1's }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<-----
1 — 0	{	----->
corrupt MSU (FIB+FSN=80) (containing seven consecutive '1's) }		
	----->	
1 — 0	FISU	<-----
		----->
TEST DESCRIPTION		
1. Send a corrupt MSU at B containing seven consecutive '1's. }	{	
2. Check that A discards the signal unit, and goes into octet counting mode. }	{	
3. On reception of a correct FISU, check that A leaves the octet counting mode and remains in the "in service" state. }	{	

Tableau [T55.781], p.

H.T. [T56.781]
MTP LEVEL 2

TEST NUMBER: 5.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 4.1 STD: Fig. 11 }	
{ TITLE: SU delimitation, alignment, error detection and correction }	
{ SUB TITLE: Greater than maximum signal unit length }	
{ PURPOSE: To test the signal unit delimitation, alignment, error detection action on receipt of signal unit greater than the maximum length }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<-----
1 — 0	{	-----
corrupt MSU (FIB+FSN=80) (signal unit length > max. allowed)		
}	----->	
1 — 0	FISU	<-----

TEST DESCRIPTION		
1. Send corrupt MSU at B with maximum length plus extra bits and good sumcheck. }	{	
2. Check A discards the signal unit, and goes into octet counting mode. }	{	
3. On reception of a correct FISU, check that A leaves the octet counting mode and remains in the “in service” state. }	{	

Tableau [T56.781], p.

H.T. [T57.781]
MTP LEVEL 2

TEST NUMBER: 5.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 4.1 STD: Fig. 11 }	
{ TITLE: SU delimitation, alignment, error detection and correction }	
{ SUB TITLE: Below minimum signal unit length }	
{ PURPOSE: To test the signal unit delimitation, alignment and error detection action on receipt of signal unit less than the minimum length }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<----- ----->
1 — 0	{	
corrupt MSU (FIB+FSN=80) (signal unit less than 6 octets)		
}	----->	
1 — 0	FISU	<----- ----->
TEST DESCRIPTION		
1. Generate a corrupt MSU at B of less than 6 octets (i.e. less than 5 octets between flags). }	{	
2. Check A discards the signal unit, and goes into octet counting mode. }	{	
3. On reception of a correct FISU, check that A leaves the octet counting mode and remains in the “in service” state. }	{	

Tableau [T57.781], p.

H.T. [T58.781]
MTP LEVEL 2

TEST NUMBER: 5.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 2 STD: Fig. 11 }	
{ TITLE: SU delimitation, alignment, error detection and correction }	
{ SUB TITLE: Reception of single and multiple flags between FISUs }	
{ PURPOSE: To check that single and multiple flags between FISUs can be received }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0 F: Flag n=number of flags } 1 — 0	SP B FISU case 1 case 2 FISU	-----> FISU F FISU FISU F F FISU n(≥"2 ----->
TEST DESCRIPTION		
1. Check that single and n flags, case 1 and case 2 respectively, can be received. }	{	

Tableau [T58.781], p.

H.T. [T59.781]
MTP LEVEL 2

TEST NUMBER: 5.5	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 2 STD: Fig. 11 }	
{ TITLE: SU delimitation, alignment, error detection and correction }	
{ SUB TITLE: Reception of single and multiple flags between MSUs }	
{ PURPOSE: To check that single and multiple flags between MSUs can be received }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0 F: Flag n=number of flags } 1 — 0	SP B FISU case 1 case 2 FISU	-----> MSU F MSU MSU F F MSU n(≥"2 ----->
TEST DESCRIPTION		
1. Check that single and n flags, case 1 and case 2 respectively, can be received. }	{	

Tableau [T59.781], p.

H.T. [T60.781]
MTP LEVEL 2

TEST NUMBER: 6.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.2 STD: Fig. 11, Fig. 18, Fig. 8 }	
TITLE: SUERM check	
{ SUB TITLE: Error rate of 1 in 256 — Link remains in service }	
{ PURPOSE: To check the SUERM at a link error rate of 1 in 256 units }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<----- ----->
Ct		
corrupt 1	{	
fB:		
in 256		
}		
TEST DESCRIPTION		
1. Check that “In service” state is maintained. The test should run for several minutes. }	{	
2.	Ct = the count of corrupted FISUs.	

Note — 1) The number (x) of corrupt signal units before an SIOS returned is calculated according to the following formula (a = number of correct signal units):

$$x = \left\lceil \frac{256 \times 64 \times 2u - 56}{a} - 1 \right\rceil \text{ for } a < 256$$

2) In this case as a = 255, so x = infinity.

Tableau [T60.781], p.

H.T. [T61.781]
MTP LEVEL 2

TEST NUMBER: 6.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.2 STD: Fig. 11, Fig. 18, Fig. 8 }	
TITLE: SUERM check	
{ SUB TITLE: Error rate of 1 in 254 — Link out of service }	
{ PURPOSE: To check the SUERM at a link error rate of 1 in 254 units }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0 corrupt 1 fB: in 254 } Ct	SP B FISU { 	<----- -----> <-----	Link 1 — 1 —
TEST DESCRIPTION			
1. SIOS should be returned after approx. 8192 corrupt FISUs (eg. CRC error). } 2. Ct = the count of corrupted FISUs. }	{ }		

Tableau [T61.781], p.

H.T. [T62.781]
MTP LEVEL 2

TEST NUMBER: 6.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.2 STD: Fig. 11, Fig. 18, Fig. 8 }	
TITLE: SUERM check	
{ SUB TITLE: Consecutive corrupted SUs }	
{ PURPOSE: To test the SUERM on consecutive corrupted signal units }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0 corrupt 1 fB: in 1 } Ct	SP B FISU { 	<----- -----> <-----	Link 1 — 0 1 — 0
TEST DESCRIPTION			
1. SIOS should be returned after approx. 64 corrupt FISUs (eg. CRC error). } 2. Ct = the count of corrupted FISUs. }	{ }		

Tableau [T62.781], p.

H.T. [T63.781]
MTP LEVEL 2

TEST NUMBER: 6.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.2 STD: Fig. 11, Fig. 18 }	
TITLE: SUERM check	
{ SUB TITLE: Time controlled break of the link }	
{ PURPOSE: To check response to a range of time controlled breaks of Tx or Rx }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU : break Tx : restore Tx FISU	<----- ----- ----- ----- -----
TEST DESCRIPTION		
1. Break the transmission link, and restore before level 2 goes out of service. (Break time is less than approx. 128ms for 64 kbit/s). }	{	
2. Check that A enters and leaves the octet counting mode on reception of an FISU. }	{	

Tableau [T63.781], p.

H.T. [T64.781]
MTP LEVEL 2

TEST NUMBER: 7.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.3 STD: Fig. 9, Fig. 11, Fig. 17 }	
TITLE: AERM check	
{ SUB TITLE: Error rate below the normal threshold }	
{ PURPOSE: To test the AERM on error rates below the normal threshold }	
{ PRE-TEST CONDITIONS: Link out of service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>{</p> <p>•</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p> <p>}</p> <p>•</p> <p>SIO</p> <p>SIN</p> <p>corrupt LSSUs</p> <p>SIN</p> <p>}</p> <p><-----</p> <p>-----></p> <p><-----</p> <p>-----></p> <p>-----></p> <p>-----></p> <p><-----</p> <p>}</p> <p>SIO</p> <p>SIN</p> <p> </p> <p> </p> <p> T4</p> <p> </p> <p> </p> <p>FISU</p> <p>}</p>	<p>SP B</p> <p>SIOS</p> <p>{</p> <p>{</p> <p>1 — 0 1 — 0 1 — 0</p> <p>{</p>	<p><-----</p> <p>-----</p>
TEST DESCRIPTION		
<p>1.</p> <p>2.</p> <p>Generate x number of corrupt LSSUs (e.g. CRC error) at B.(x < Tin).</p> <p>}</p> <p>3.</p> <p>Check that the proving period continues and the link aligns successfully.</p> <p>}</p>	<p>Start link at A.</p> <p>{</p> <p>{</p>	

Tableau [T64.781], p.

H.T. [T65.781]
MTP LEVEL 2

TEST NUMBER: 7.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.3 STD: Fig. 9, Fig. 11, Fig. 17 }	
TITLE: AERM check	
{ SUB TITLE: Error rate at the normal threshold }	
{ PURPOSE: To test the AERM at an error rate equal to the normal threshold }	
{ PRE-TEST CONDITIONS: Link out of service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	SIOS	<----- -----
1 — 0	SIO	<----- -----
1 — 0	SIN	<----- -----
1 — 0	corrupt LSSUs	----- -----
----->	SIN	{
<-----		
}	. 1 — 0	T4 FISU
TEST DESCRIPTION		
1. 2. Generate x number of corrupt LSSUs (e.g. CRC error) at B.(x ≥" Tin). } 3. Check that the proving period is aborted, then restarted and link aligns successfully. }	Start link at A. { {	

Tableau [T65.781], p.

H.T. [T66.781]
MTP LEVEL 2

TEST NUMBER: 7.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.3 STD: Fig. 9, Fig. 11, Fig. 17 }	
TITLE: AERM check	
{ SUB TITLE: Error rate above the normal threshold }	
{ PURPOSE: To test the AERM at an error rate above the threshold over five proving periods }	
{ PRE-TEST CONDITIONS: Link out of service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	SIOs	<----- -----
1 — 0	SIO	<----- -----
1 — 0	SIN	<----- -----
1 — 0	corrupt LSSUs	----- <-----
1 — 0	SIN	----- -----
1 — 0	corrupt LSSUs	----- <-----
1 — 0	SIN	----- -----
1 — 0	corrupt LSSUs	----- <-----
1 — 0	SIN	----- -----
1 — 0	corrupt LSSUs	----- <-----
1 — 0	SIN	----- -----
1 — 0	corrupt LSSUs	----- <-----
TEST DESCRIPTION		
1. 2. Generate x number of corrupt LSSUs (e.g. CRC error) at B.(x ≥" Tin). } 3. Observe that 5 proving period attempts are made before link out of service state. }	Start link at A. { {	

H.T. [T67.781]
MTP LEVEL 2

TEST NUMBER: 7.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 10.3 STD: Fig. 9, Fig. 11, Fig. 17 }	
TITLE: AERM check	
{ SUB TITLE: Error rate at the emergency threshold }	
{ PURPOSE: To test the AERM at the emergency threshold }	
{ PRE-TEST CONDITIONS: Link out of service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link
1 — 0	SIOS	<----- ----->	1 — 0
1 — 0	SIO	<----- ----->	1 — 0
1 — 0	SIE	<----- ----->	1 — 0
1 — 0 1 — 0 T4 (Pe)	{		
corrupt LSSU			
SIE			
}	{		
----->			
----->			
<-----			
<-----			
}	. 1 — 0 1 — 0	. SIN FISU	
TEST DESCRIPTION			
1. Start link at A, check emergency proving started from B. }	{		
2. Generate x number of corrupt LSSUs (e.g. CRC error) at B. (5 > x ≥" Tie). }	{		
3. Check that link aligns successfully. }	{		

Tableau [T67.781], p.

H.T. [T68.781]
MTP LEVEL 2

TEST NUMBER: 8.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.2 STD: Fig. 13, Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: MSU transmission and reception }	
{ PURPOSE: To check basic MSU transmission and reception }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT, CPT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>1 — 0</p> <p>FISU (FIB+FSN=FF) (BIB+BSN=80) }</p> <p>1 — 0</p> <p>FISU (FIB+FSN=80) (BIB+BSN=FF) }</p> <p>1 — 0</p> <p>FISU (FIB+FSN=80) (BIB+BSN=80) }</p> <p>FISU (FIB+FSN=80) (BIB+BSN=80) }</p>	<p>SP B</p> <p>FISU MSU (FIB+FSN=80) (BIB+BSN=FF)</p> <p>{</p> <p>-----></p> <p>{</p> <p>-----></p>	<p><-----</p> <p>-----></p> <p>-----></p> <p><-----</p> <p><-----</p>
TEST DESCRIPTION		
<p>1.</p> <p>2.</p> <p>Check that A receives the MSU correctly, and returns a positive acknowledgement.</p> <p>}</p> <p>3.</p> <p>4.</p> <p>Check that B receives the MSU correctly, and returns a positive acknowledgement.</p> <p>}</p>	<p>Generate an MSU at B.</p> <p>{</p> <p>Generate an MSU at A.</p> <p>{</p>	

Tableau [T68.781], p.

H.T. [T69.781]
MTP LEVEL 2

TEST NUMBER: 8.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 13 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Negative acknowledgement of an MSU }	
{ PURPOSE: To test the response to a negatively acknowledged MSU }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	FISU	<----- ----->	1 — 0	FISU
		<----- ----->	1 — 0	MSU
1 — 0	FISU (BIB+BSN=7F)	<----- ----->	1 — 0	MSU
		<----- ----->	1 — 0	MSU
		<----- ----->	1 — 0	MSU
TEST DESCRIPTION				
1. 2. Reply with negative acknowledgement from B. } 3. Check that A retransmits the MSU. }	Send MSU from A. { {			

Tableau [T69.781], p.

**H.T. [T70.781]
MTP LEVEL 2**

TEST NUMBER: 8.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 13 }	
{ TITLE: Transmission and reception control (Basic) }	
SUB TITLE: Check RTB full	
{ PURPOSE: To check that MSUs are buffered when no acknowledgements are received }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FIB+FSN=80)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p> <p>MSU (FIB+FSN=00)</p> <ul style="list-style-type: none"> • • <p>}</p>	<p>SP B</p> <p>FISU (BIB+BSN=FF)</p> <p>FISU (BIB+BSN=7F)</p>	<p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p>
TEST DESCRIPTION		
<p>1.</p> <p>Generate MSUs at A, at a rate of 100 per second, in order to fill the RTB before the EDA timer T7 expires.</p> <p>}</p> <p>2.</p> <p>No acknowledgements are sent from B until the last message is received, then send negative acknowledgement to the first message received.</p> <p>}</p> <p>3.</p> <p>Check that the complete contents of the RTB are retransmitted.</p> <p>}</p>	<p>{</p> <p>{</p> <p>{</p>	

H.T. [T71.781]
MTP LEVEL 2

TEST NUMBER: 8.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.2 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Single MSU with erroneous FIB }	
{ PURPOSE: To ensure correct performance when an MSU with erroneous FIB is received }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FIB+FSN=7F)	<-----
1 — 0	MSU (FIB+FSN=80)	-----

1 — 0	FISU (FIB+FSN=00)	<-----
1 — 0	FISU (FIB+FSN=00)	-----

1 — 0	MSU (FIB+FSN=80)	<-----

		<-----
TEST DESCRIPTION		
1. Generate an MSU at B with FIB inverted. }	{	
2.	Check A discards the MSU.	
3. Generate 2 FISUs at B with correct FIB. }	{	
4. Check A discards the FISU and negative acknowledgement returned. }	{	
5. Check that B retransmits the MSU correctly, and positive acknowledgement returned. }	{	

Tableau [T71.781], p.

H.T. [T72.781]
MTP LEVEL 2

TEST NUMBER: 8.5	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.2 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
SUB TITLE: Duplicated FSN	
{ PURPOSE: To test the reception control response to duplicated FSNs }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<-----
1 — 0	MSU (FIB+FSN=80)	-----

1 — 0	MSU (FIB+FSN=80)	<-----
1 — 0	FISU (FIB+FSN=81)	-----

1 — 0	MSU (FIB+FSN=01)	<-----

		<-----
TEST DESCRIPTION		
1. Generate an MSU at B, check A receives the MSU correctly and returns a positive acknowledgement. }	{	
2. Duplicate the FSN at B, check that A responds with a negative acknowledgement. }	{	
3. Retransmit the MSU with correct FSN, check that A replies with a positive acknowledgement. }	{	

Tableau [T72.781], p.

H.T. [T73.781]
MTP LEVEL 2

TEST NUMBER: 8.6	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.2 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Erroneous retransmission — Single MSU }	
{ PURPOSE: To test the reception control response to retransmission of a single MSU }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FIB+FSN=FF)	<-----
1 — 0	MSU (FIB+FSN=00)	----->
1 — 0	FISU (FIB+FSN=80)	----->
1 — 0	FISU (FIB+FSN=80)	----->
		<-----
1 — 0	MSU (FIB+FSN=00)	----->
		<-----
TEST DESCRIPTION		
1. A single MSU with FIB inverted in error is sent to A, followed by FISUs with correct FIBs. }	{	
2. Check that A returns a negative acknowledgement for the MSU. }	{	
3. 4. Check that A receives the MSU correctly and returns a positive acknowledgement. }	Retransmit the MSU correctly. {	

Tableau [T73.781], p.

H.T. [T74.781]
MTP LEVEL 2

TEST NUMBER: 8.7	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Erroneous retransmission — Multiple FISUs }	
{ PURPOSE: To test reception control response to retransmissions of multiple FISUs }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		Link	SP A
1 — 0	FISU (FIB+FSN=FF)	<-----	1 — 0	FISU
1 — 0	FISU (FIB+FSN=7F)	----->		
1 — 0	FISU (FIB+FSN=FF)	----->		
1 — 0	FISU (FIB+FSN=7F)	----->		
		<-----	1 — 0	SIOS
TEST DESCRIPTION				
1. Generate FISUs with the FIB inverted at B. }	{			
2. Check that A responds with link out of service. }	{			

Tableau [T74.781], p.

H.T. [T75.781]
MTP LEVEL 2

TEST NUMBER: 8.8	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Single FISU with corrupt FIB }	
{ PURPOSE: To test the response to receive an FISU with a corrupt FIB }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FIB+FSN=FF)	<----->
1 — 0	FISU (FIB+FSN=7F)	----->
		----->
1 — 0	FISU (FIB+FSN=FF)	<----->
		----->
		<----->
TEST DESCRIPTION		
1. Generate one FISU with a corrupt FIB at B, and check that the link status remains in service. }	{	

Tableau [T75.781], p.

H.T. [T76.781]
MTP LEVEL 2

TEST NUMBER: 8.9	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.2 STD: Fig. 10, Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Single FISU prior to RPO being set }	
{ PURPOSE: To test the response to RPO while in the abnormal FIB state }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU	<----->
1 — 0	FISU (one only) (FIB+FSN=7F)	----->
1 — 0	SIPO	----->
1 — 0	MSU (FIB+FSN=80)	----->
1 — 0	FISU (FIB+FSN=80)	{
-----> ua)		
}		
1 — 0	FISU (FIB+FSN=80)	----->
		<----->
1 — 0	MSU (FIB+FSN=00)	----->
		<----->
TEST DESCRIPTION		
1. Generate one FISU at B with abnormal FIB.	{	
}		
2. Send SIPO from B, followed by an MSU.	{	
}		
3. Check A responds correctly with negative acknowledgement and a retransmission is received correctly.	{	
}		

Tableau [T76.781], p.

H.T. [T77.781]
MTP LEVEL 2

TEST NUMBER: 8.10	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Abnormal BSN — single MSU }	
{ PURPOSE: To test the response to an abnormal BSN }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>FISU</p> <p>(FIB+FSN=FF)</p> <p>(BIB+BSN=FF)</p> <p>}</p> <p>1 — 0</p> <p>1 — 0</p> <p>FISU</p> <p>(FIB+FSN=80)</p> <p>(BIB+BSN=FF)</p> <p>}</p> <p>-----> ua)</p> <p>}</p> <p>1 — 0</p> <p>FISU</p> <p>(FIB+FSN=80)</p> <p>(BIB+BSN=FF)</p> <p>}</p> <p>1 — 0</p> <p>TEST DESCRIPTION</p>	<p>SP B</p> <p>{</p> <p>-----></p> <p>MSU (FIB+FSN=80) (BIB+BSN=BF)</p> <p>{</p> <p>{</p> <p>{</p> <p>-----></p> <p>MSU (FIB+FSN=00) (BIB+BSN=FF)</p>	<p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p>
<p>1.</p> <p>Generate a single MSU with abnormal BSN at B, followed by FISUs with correct BSN.</p> <p>}</p> <p>2.</p> <p>Check that A responds with a negative acknowledgement.</p> <p>}</p> <p>3.</p> <p>Retransmit the MSU correctly at B.</p> <p>}</p> <p>4.</p> <p>Check that the MSU is received correctly and positive acknowledgement is given.</p> <p>}</p>	<p>{</p> <p>{</p> <p>{</p> <p>{</p>	

Tableau [T77.781], p.

H.T. [T78.781]
MTP LEVEL 2

TEST NUMBER: 8.11	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Abnormal BSN — two consecutive FISUs }	
{ PURPOSE: To test the response to abnormal BSNs in two consecutive FISUs }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B		
1 — 0	FISU (BIB+BSN=FF)	<-----	Lin
1 — 0	FISU (BIB+BSN=BF)	----->	1 —
1 — 0	FISU (BIB+BSN=BF)	----->	
1 — 0	FISU (BIB+BSN=FF)	----->	
		----->	
		<-----	1 —
TEST DESCRIPTION			
1. Generate two consecutive FISUs at B with abnormal BSNs. }	{		
2. Check that A responds by taking the link out of service. }	{		

Tableau [T78.781], p.

MTP LEVEL 2

TEST NUMBER: 8.12	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 5.3 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Excessive delay of acknowledgement }	
{ PURPOSE: To test the transmission control response to the expiration of EDA timer T7 }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>T7 MSU T7 (FIB+FSN=80) T7 T7 }</p>	<p>SP B</p> <p>FISU (BIB+BSN=FF)</p>	<p><-</p> <p>---</p> <p><-</p> <p><-</p>
<p>TEST DESCRIPTION</p>		
<p>1.</p> <p>2.</p> <p>Discard the received MSU at B and send no acknowledgement to A for more than T7 period.</p> <p>}</p> <p>3.</p> <p>Check that the link is taken out of service by SIOS generated at A after T7 has expired.</p> <p>}</p> <p>4.</p> <p>Timer T7 shall be in the range 0.5 secs to 2.0 secs.</p> <p>}</p>	<p>Generate an MSU at A.</p> <p>{</p> <p>{</p> <p>{</p>	

H.T. [T80.781]
MTP LEVEL 2

TEST NUMBER: 8.13	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 7 STD: Fig. 14 }	
{ TITLE: Transmission and reception control (Basic) }	
{ SUB TITLE: Level 3 Stop command }	
{ PURPOSE: To test the response to a Stop command }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0	SP B FISU	<----- -----> <-----	Link 1 — 0 1 — 0	SP A FISU : stop SIOS
TEST DESCRIPTION				
1. 2. Check that A responds with link out of service. }	Give Stop command at A. {			

Tableau [T80.781], p.

**H.T. [T81.781]
MTP LEVEL 2**

TEST NUMBER: 9.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.2 STD: Fig. 15, Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: MSU transmission and reception }	
{ PURPOSE: To check basic MSU transmission and reception }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT, CPT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p> <p>1 — 0</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>FISU (FSN=7F, BSN=0)</p> <p>MSU (FSN=0, BSN=0)</p>	<p><-----</p> <p>-----></p> <p><-----</p> <p><-----</p> <p>-----></p> <p><-----</p> <p>-----></p> <p><-----</p>
TEST DESCRIPTION		
<p>1.</p> <p>2.</p> <p>Check that B receives the MSU correctly.</p> <p>}</p> <p>3.</p> <p>Check that A sends FISUs after receiving an FISU with a positive acknowledgement.</p> <p>}</p> <p>4.</p> <p>5.</p> <p>Check that A receives the MSU correctly and returns a positive acknowledgement.</p> <p>}</p>	<p>Generate an MSU at A.</p> <p>{</p> <p>{</p> <p>Generate an MSU at B.</p> <p>{</p>	

H.T. [T82.781]
MTP LEVEL 2

TEST NUMBER: 9.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.3 STD: Fig. 15, Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
SUB TITLE: Priority control	
{ PURPOSE: To check the preventive retransmission procedure }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=1, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=2, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=2, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>FISU (FSN=7F, BSN=0)</p> <p>FISU (FSN=7F, BSN=1)</p> <p>FISU (FSN=7F, BSN=2)</p>	<p><-----</p> <p>-----></p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p>-----></p> <p>-----></p> <p>-----></p> <p><-----</p>	<p>Li</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
TEST DESCRIPTION			
<p>1.</p> <p>2.</p> <p>No positive acknowledgement is sent from B.</p> <p>}</p> <p>3.</p> <p>Check that MSUs are retransmitted at A.</p> <p>}</p> <p>4.</p> <p>5.</p> <p>Check that B receives MSUs correctly.</p> <p>}</p> <p>6.</p> <p>Reply with positive acknowledgements at B.</p> <p>}</p> <p>7.</p> <p>Check that A stops retransmission after receiving the positive acknowledgement for the last MSU in RTB and sends FISU.</p> <p>}</p>	<p>Generate two MSUs at A.</p> <p>{</p> <p>{</p> <p>Generate another MSU at A.</p> <p>{</p> <p>{</p> <p>{</p>		

Tableau [T82.781], p.

H.T. [T83.781]
MTP LEVEL 2

TEST NUMBER: 9.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.4 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Forced retransmission with the value N 1 }	
{ PURPOSE: To check that “RTB full” is detected by N 1 and forced retransmission occurs }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p> <p>MSU (FSN=X+1, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>FISU (FSN=7F, BSN=0)</p>	<p><---</p> <p>-----</p> <p><---</p> <p><---</p> <p><---</p> <p><---</p> <p><---</p>
TEST DESCRIPTION		
<p>1.</p> <p>Generate 128 MSUs at A, at a rate of 100 per second, in order to fill the RTB before the EDA timer T7 expires.</p> <p>}</p> <p>2.</p> <p>No positive acknowledgement is sent from B until a forced retransmission starts at A.</p> <p>}</p> <p>3.</p> <p>Reply with a positive acknowledgement with BSN=0 before T7 expires at A.</p> <p>}</p> <p>4.</p> <p>Check that the forced retransmission is canceled after the transmission of the last MSU in RTB.</p> <p>}</p> <p><i>Note</i></p> <p>— N</p> <p>1 is the maximum number of MSUs which are available for retransmission. (The value of N 1 is normally 127).</p> <p>}</p>	<p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p>	

Tableau [T83.781], p.

H.T. [T84.781]
MTP LEVEL 2

TEST NUMBER: 9.4	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.4 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Forced retransmission with the value N 2 }	
{ PURPOSE: To check that “RTB full” is detected by N 2 and forced retransmission starts }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>FISU (FSN=7F, BSN=a—1)</p>	<p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p> <p><-----</p>
TEST DESCRIPTION		
<p>1.</p> <p>Generate N+1 MSUs at A, (the octet count of N MSUs is larger than N</p> <p>2).</p> <p>}</p> <p>2.</p> <p>Send no positive acknowledgement at B until a forced retransmission starts at A.</p> <p>}</p> <p>3.</p> <p>Check that B receives the MSUs with FSN=0 up to FSN=N—1 but does not receive the MSU with FSN=N.</p> <p>}</p> <p>4.</p> <p>Reply with a positive acknowledgement with BSN=a—1 at B.</p> <p>}</p> <p>5.</p> <p>Check that the retransmission restarts from the next value of FSN which is acknowledged by B when the retransmission is interrupted.</p> <p>}</p> <p>6.</p> <p>Check that B receives the MSU with FSN=N.</p> <p>}</p> <p><i>Note</i></p> <p>— N</p> <p>2 is the maximum number of octets which are available for retransmission.</p> <p>}</p>	<p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p>	

Tableau [T84.781], p.

H.T. [T85.781]
MTP LEVEL 2

TEST NUMBER: 9.5	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.4 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Forced retransmission cancel }	
{ PURPOSE: To check that the forced retransmission is canceled when BSN equal to FSNL is received }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>1 — 0</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>FISU (FSN=7F, BSN=7E)</p>	<p><----- -----> <-----</p> <p><----- -----></p> <p><----- -----> <-----</p>
TEST DESCRIPTION		
<p>1. Generate N 1+1 MSUs at A, (e.g. 128). }</p> <p>2. Send no positive acknowledgement at B until a retransmission occurs at A. }</p> <p>3. Reply with a positive acknowledgement with BSN=7E at B. }</p> <p>4. Check that a forced retransmission is canceled and the MSU with FSN=7F is sent at A. }</p> <p><i>Note 1</i> — FSNL is the FSN of the last MSU in RTB. }</p> <p><i>Note 2</i> — Alternatively, the number of octets threshold (N 2), instead of the number of MSUs threshold (N 1), could be used to start forced retransmission. }</p>	<p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p>	

Tableau [T85.781], p.

**H.T. [T86.781]
MTP LEVEL 2**

TEST NUMBER: 9.6	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.4 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Repetition of forced retransmission }	
{ PURPOSE: To check that the forced retransmission repeats when “RTB full” is still detected after finishing a forced retransmission }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p> <p>MSU (FSN=0, BSN=7F)</p> <ul style="list-style-type: none"> • • <p>}</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p>	<p><----- -----> <-----</p> <p><----- <-----</p> <p><----- <-----</p>	<p>Link</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p>
TEST DESCRIPTION			
<p>1. Generate MSUs at A at a rate of N per second, in order to make A repeat a forced retransmission. ($N \geq 127 \div T$, where T = lower limit of T7)</p> <p>}</p> <p>2. No acknowledgement is sent from B.</p> <p>}</p> <p>3. Check that A repeats a forced retransmission.</p> <p>}</p>	<p>{</p> <p>{</p> <p>{</p>		

Tableau [T86.781], p.

H.T. [T87.781]
MTP LEVEL 2

TEST NUMBER: 9.7	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.2 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: MSU transmission while RPO set }	
{ PURPOSE: To ensure correct performance while RPO is set }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <p>1 — 0</p> <p>MSU (FSN=0, BSN=7F)</p> <p>• • }</p> <p>1 — 0</p> <p>FISU (FSN=0, BSN=7F)</p> <p>• • }</p> <p>1 — 0</p> <p>1 — 0</p>	<p>SP B</p> <p>FISU (FSN=7F, BSN=7F)</p> <p>: set LPO SIPO (FSN=7F, BSN=7F)</p> <p>: clear LPO MSU (FSN=0, BSN=7F)</p> <p>MSU (FSN=0, BSN=0)</p>	<p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p>
TEST DESCRIPTION		
<p>1. 2. Instead of sending positive acknowledgement, set and keep PO at B. }</p> <p>3. Check A stops a retransmission of the MSU and sends FISUs, and not detect link failure by the expiration of T7. }</p> <p>4. Cease PO and send an MSU with no positive acknowledgement at B. }</p> <p>5. Check A starts a retransmission of the MSU. }</p> <p>6. Generate an MSU with a positive acknowledgement at B. }</p> <p>7. Check A receives the MSU and responds correctly. }</p>	<p>Generate an MSU at A. {</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p>	

Tableau [T87.781], p.

H.T. [T88.781]
MTP LEVEL 2

TEST NUMBER: 9.8	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.3 STD: Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Abnormal BSN — Single MSU }	
{ PURPOSE: To test the response to an abnormal BSN }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FSN=7F, BSN=7F)	<-----
1 — 0	MSU (FSN=0, BSN=0)	-----
1 — 0	MSU (FSN=0, BSN=7F)	-----
1 — 0	MSU (FSN=0, BSN=7F)	-----
		<-----
TEST DESCRIPTION		
1. Generate a single MSU at B with abnormal BSN followed by retransmission of that MSU with normal BSN. }	{	
2. Check that A responds with a positive acknowledgement and not detect link failure. }	{	

Tableau [T88.781], p.

H.T. [T89.781]
MTP LEVEL 2

TEST NUMBER: 9.9	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.3 STD: Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Abnormal BSN — Two MSUs }	
{ PURPOSE: To test the response to two consecutive MSUs with an MSU having normal BSN between them }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FSN=7F, BSN=7F)	<-----
1 — 0	MSU (FSN=0, BSN=7E)	-----
1 — 0	MSU (FSN=0, BSN=7F)	-----
1 — 0	MSU (FSN=0, BSN=7E)	-----
		<-----
TEST DESCRIPTION		
1. Generate two consecutive MSUs at B with abnormal BSN with an MSU having normal BSN between them. }	{	
2. Check that all MSUs are discarded at A. }	{	
3. Check that A responds by taking the link out of service. }	{	

Tableau [T89.781], p.

H.T. [T90.781]
MTP LEVEL 2

TEST NUMBER: 9.10	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.2 STD: Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
SUB TITLE: Unexpected FSN	
{ PURPOSE: To check the reception control response to an MSU with unexpected FSN }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FSN=7F, BSN=7F)	<-----
1 — 0	MSU (FSN=0, BSN=7F)	----->
1 — 0	MSU (FSN=2, BSN=7F)	----->
		----->
		<-----
TEST DESCRIPTION		
1. Generate an MSU with unexpected FSN at B. }	{	
2. Check A discards the MSU with unexpected FSN and not sends acknowledgement for that MSU. }	{	

Tableau [T90.781], p.

**H.T. [T91.781]
MTP LEVEL 2**

TEST NUMBER: 9.11	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.3 STD: Fig. 15 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Excessive delay of acknowledgement }	
{ PURPOSE: To test the transmission control response to the expiration of EDA timer T7 }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0 MSU (FSN=0, BSN=7F) fB T7 • T7 • fB T7 • }	SP B FISU (FSN=7F, BSN=7F)	<----- -----> <----- <-----
TEST DESCRIPTION		
1. 2. Suspend sending positive acknowledgement at B for more than T7 period. } 3. Check that A sends SIOSs instead of retransmission of MSU after T7 expires. } 4. Timer T7 shall be in the range 0.5 secs to 2.0 secs. }	Generate an MSU at A. { { {	

H.T. [T92.781]
MTP LEVEL 2

TEST NUMBER: 9.12	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 6.2 STD: Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: FISU with FSN expected for MSU }	
{ PURPOSE: To check that the received FISU having FSN expected for MSU is discarded }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link	SP B	
1 — 0	FISU (FSN=7F, BSN=7F)	----->
1 — 0	FISU (FSN=0, BSN=7F)	<-----
		----->
		<-----
TEST DESCRIPTION		
1. Generate an FISU with FSN expected for MSU at B. }	{	
2. Check that A discards the FISU and responds with an FISU with correct BSN. }	{	

Tableau [T92.781], p.

H.T. [T93.781]
MTP LEVEL 2

TEST NUMBER: 9.13	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 7 STD: Fig. 16 }	
{ TITLE: Transmission and reception control (PCR) }	
{ SUB TITLE: Level 3 Stop command }	
{ PURPOSE: To test the response to a Stop command }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

Link 1 — 0	SP B FISU	<----- -----> <-----	Link 1 — 0 1 — 0	SP A FISU : stop SIOS
TEST DESCRIPTION				
1. 2. Check that A responds with link out of service. }	Give Stop command at A. {			

Tableau [T93.781], p.

H.T. [T94.781]
MTP LEVEL 2

TEST NUMBER: 10.1	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 9 STD: Fig. 19 }	
TITLE: Congestion Control	
{ SUB TITLE: Congestion abatement }	
{ PURPOSE: To check the congestion abatement procedure }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<p>Link</p> <pre> T5 : make congestion T5 : state } T5 SIB T5 T5 T5 } T5 SIB T5 • T6 • } T5 : clear congestion T5 : state } </pre>	SP B	<div><-----</div> <div><-----</div> <div><-----</div>	<p>Link</p> <p>1 — 0</p> <p>1 — 0</p> <p>1 — 0</p>
TEST DESCRIPTION			
<p>1. Make congestion state at A and check A sends SIB. (Implementation of congestion control is not specified.)</p> <pre> } </pre> <p>2. Check B receives SIBs at the interval of T5.</p> <pre> } </pre> <p>3. Clear congestion state at A and check A stops sending SIBs.</p> <pre> } </pre> <p>4. Timer T5 shall be in the range 80 ms to 120 ms.</p> <pre> } </pre>	<pre> { { { { </pre>		

H.T. [T95.781]
MTP LEVEL 2

TEST NUMBER: 10.2	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 9.2 STD: Fig. 19 }	
TITLE: Congestion Control	
SUB TITLE: Timer T7	
{ PURPOSE: To check timer T7 is restarted at the reception of SIB (without expiring of T6) }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

6. Ct = more than T7 and less than T6. }	{
7.	Bt = less than T7.
8.	(Ct + Bt) is less than T6.

Tableau [T95.781], p.

H.T. [T96.781]
MTP LEVEL 2

TEST NUMBER: 10.3	PAGE: 1 OF 1
{ REFERENCE: Q.703 § 9.3 STD: Fig. 19 }	
TITLE: Congestion Control	
SUB TITLE: Timer T6	
{ PURPOSE: To check “Remote Congestion” Timer T6 }	
{ PRE-TEST CONDITIONS: Link in service }	
CONFIGURATION: 1	TYPE OF TEST: VAT
{ EXPECTED SIGNAL UNIT SEQUENCE: }	

<div> <div>Link</div> <div>{</div> <div>1 — 0</div> <div>1 — 0</div> <div>1 — 0</div> <div>1 — 0</div> <div>}</div> <div>SIB</div> <div>SIB</div> <div>•</div> <div>•</div> <div>SIB</div> <div>•</div> <div>•</div> <div>SIB</div> <div>}</div> <div>-----></div> <div>-----></div> <div>-----></div> <div>-----></div> <div><-----</div> <div>}</div> <div> </div> <div> </div> <div> </div> <div> T6</div> <div> </div> <div> </div> <div> </div> <div> </div> <div>SIOS</div> <div>}</div> </div>	<div> <div>SP B</div> <div>{</div> <div>{</div> <div>. 1 — 0</div> </div>		<div> <div>Link</div> </div>	<div> <div>SP A</div> </div>
TEST DESCRIPTION				
<div> <div>1.</div> <div>Generate SIB at B until Timer T6 expires.</div> <div>}</div> <div>2.</div> <div>Check link becomes out of service.</div> <div>}</div> <div>3.</div> <div>Timer T6 shall be in the range 3 secs to 6 secs (8 to 12 secs for 4.8 kbit/s).</div> <div>}</div> </div>	<div> <div>{</div> <div>{</div> <div>{</div> </div>			

Tableau [T96.781], p.

FIGURE 1/Q.781, p.

