

Recommendation Q.783**TUP TEST SPECIFICATION****1 Introduction**

This Recommendation contains a set of detailed tests for the Signalling System No. 7 Telephony User Part (TUP). These tests are intended to validate the protocol specified in Q.721-Q.724 Recommendations. This Recommendation conforms to Q.780 Recommendations which describes the basic rules of the test specification.

2 General principles of TUP tests

The TUP tests aim at testing TUP protocol conformance in a given implementation. The tests are described as “Validation” tests or “Validation” and “Compatibility” tests. Each test description indicates in the field “type of test” whether the test is “Validation” or “Validation” and “Compatibility”. As the TUP also describes the required call control actions resulting from TUP message transfer the TUP tester also checks the result of those call control actions, e.g. that speech/information transfer is possible.

3 Test configuration

A stable signalling relation is required between “SP A” and “SP B” in order to effectively test the TUP. In addition telephony circuits are required for some of the tests.

4 TUP test list

All tests may be validation tests. Tests marked “*” are compatibility tests. Tests marked “fs” are for further study.

1 *Circuit supervision*

* 1.1 Non allocated circuits

1.2 Reset of circuits

1.2.1 RSC received on an idle circuit

- 1.2.2 RSC sent on an idle circuit
- 1.2.3 Group reset received
- 1.2.4 Group reset sent

- 1.3 Blocking of circuits
 - 1.3.1 Group blocking/unblocking
 - 1.3.1.1 HGB received
 - 1.3.1.2 HGB sent
 - * 1.3.1.3 MGB received
 - * 1.3.1.4 MGB sent
 - 1.3.2 Circuit blocking/unblocking
 - * 1.3.2.1 BLO received
 - * 1.3.2.2 BLO sent
 - * 1.3.2.3 Circuit blocking from both ends; removal of blocking from one end
 - 1.3.2.4 Interruption for FDM circuits

- 1.4 Continuity check test call
 - * 1.4.1 CCTC received: successful
 - * 1.4.2 CCTC sent: successful
 - 1.4.3 CCTC received: unsuccessful
 - 1.4.4 CCTC sent: unsuccessful

- 1.5 Receipt of unreasonable signalling information
 - 1.5.1 Received

- 2 *Normal call set-up*
 - 2.1 Both way circuit selection
 - * 2.1.1 IAM sent by controlling SP
 - * 2.1.2 IAM sent by non controlling SP
 - 2.2 Called address sending
 - * 2.2.1 “en bloc” operation
 - * 2.2.2 Overlap operation
 - 2.3 Successful call set-up
 - 2.3.1 Ordinary call (with various ACM and ANS)
 - * 2.3.2 Call switched via satellite
 - * 2.3.3 Test for echo suppressor call set-up
 - * 2.3.4 Blocking and unblocking during a call (initiated)
 - * 2.3.5 Blocking and unblocking during a call (received)

- 3 *Normal call release*
 - * 3.1 Calling party clears: before ACM

 - * 3.2 Calling party clears: before ANS

- * 3.3 Calling party clears: after ANS
- * 3.4 Calling party clears: after CLEAR BACK
- * 3.5 Reanswer

4 *Unsuccessful set-up*

4.1 SEC

4.1.1 SEC received

4.1.2 SEC sent

4.2 CGC

4.2.1 CGCreceived

4.2.2 CGC sent

4.3 NNC

4.3.1 NNC received

4.3.2 NNC sent

4.4 ADI

* 4.4.1 ADI received

* 4.4.2 ADI sent

4.5 CFL

4.5.1 CFL received

4.5.2 CFL sent

4.6 SSB

* 4.6.1 SSB received

* 4.6.2 SSB sent

4.7 UNN

* 4.7.1 UNN received

* 4.7.2 UNN sent

4.8 LOS

4.8.1 LOS received

4.8.2 LOS sent

4.9 SST

4.9.1 SST received

4.9.2 SST sent

4.10 ACB

4.10.1 ACB received

4.10.2 ACB sent

4.11 DPN

4.11.1 DPN received

4.11.2 DPN sent

5 *Abnormal situation during a call*

5.1 Inability to release in response to a CLF

5.2 Inability to release in response to a backward signal

5.3 Timers

5.3.1 T2

5.3.2 T3

5.3.3 T4

5.3.4 T5

5.3.5 T6

* 5.3.6 ANS signal not received (Q.118 Timer)

* 5.3.7 Delay in clearing by calling party (Q.118 Timer)

5.4 Reset of circuits during a call

5.4.1 Of an outgoing circuit

5.4.2 Of an incoming circuit

- 5.5 Receipt of unreasonable signalling information
 - 5.5.1 (Now test No. 1.5.1)
 - fs 5.5.2 Received
- 5.6 Interruption of signalling relation
- 6 *Special call set-up*
 - 6.1 Continuity check call
 - * 6.1.1 COT applied on an outgoing circuit
 - * 6.1.2 COT applied on previous circuit
 - * 6.1.3 COT on a satellite circuit
 - 6.1.4 Calling party clears during a COT
 - * 6.1.5 Delay of through connect
 - 6.1.6 COT unsuccessful
 - 6.1.7 COT received on incoming circuit
 - 6.2 Automatic repeat attempt
 - 6.2.1 Dual seizure
 - 6.2.2 Circuit reset
 - 6.2.3 Reception of unreasonable signal information
 - * 6.2.4 Blocking of the circuit
 - 6.2.5 Continuity check failure
 - 6.3 Dual seizure
 - 6.3.1 Dual seizure for controlling side
- 7 *Supplementary services*
 - fs 7.1 CUG

- fs 7.2 User access to the calling line identity
- fs 7.3 User access to the called line identity
- fs 7.4 Redirection of calls
- fs 7.5 CCBS
- fs 7.6 Network access to calling line identity

8 *Performance tests*

Note — For further study.

Figure 1/Q.783, p.

**H.T. [T1.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|---------------------------|----------------|
| TEST NUMBER: 1.1 | | |
| REFERENCE: | | |
| TITLE: Circuit supervision | | |
| { SUBTITLE: Non-allocated circuits } | | |
| { PURPOSE: To verify that on receipt of a CIC relating to a circuit which does not exist, SP A will discard the message and alert maintenance personnel } | | |
| { PRE-TEST CONDITIONS: Arrange the data in signalling point B such that the CIC identifies a circuit that does not exist between SP A and SP B } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A | <----- | SP B IAM |
| TEST DESCRIPTION | | |
| <pre> 1. Arrange for SP B to send an initial address message. Record the message sequence using a signal monitor. } 2. CHECK A: IS THE CIRCUIT IDLE? } 3. CHECK B: WAS THE MESSAGE SEQUENCE AS SHOWN ABOVE? } 4. CHECK C: WAS THE INDICATION GIVEN TO THE MAINTENANCE PERSONNEL? } </pre> | <pre> { { { { </pre> | |

Tableau [T1.783], p.

**H.T. [T2.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--------------------|----------------|
| TEST NUMBER: 1.2.1 | | |
| REFERENCE: Q.724 § 1.15.1 | | |
| TITLE: Reset of circuits | | |
| { SUBTITLE: RSC received on an idle circuit } | | |
| { PURPOSE: To verify that on receipt of a reset circuit signal SP A will respond by sending a release guard signal } | | |
| { PRE-TEST CONDITIONS: The circuit is idle } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A | <----- -----> | SP B RSC |
| RLG | | |
| TEST DESCRIPTION | | |
| <pre> 1. Arrange for SP B to send a reset-circuit signal. Record the message sequence using a signal monitor. } 2. CHECK A: IS THE CIRCUIT IDLE? } 3. CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? } </pre> | <pre> { { { </pre> | |

Tableau [T2.783], p.

**H.T. [T3.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--------------------|-----------------|
| TEST NUMBER: 1.2.2 | | |
| REFERENCE: Q.724 § 1.15.1 | | |
| TITLE: Reset of circuits | | |
| { SUBTITLE: RSC sent on an idle circuit } | | |
| { PURPOSE: To verify that SP A is able to generate reset-circuit signal } | | |
| { PRE-TEST CONDITIONS: The circuit is idle } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A RSC | -----> <----- | SP B RLG |
| TEST DESCRIPTION | | |
| <pre> 1. Arrange for SP A to send a reset-circuit signal. Record the message sequence using a signal monitor. } 2. CHECK A: IS THE CIRCUIT IDLE? } 3. CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? } </pre> | <pre> { { { </pre> | |

Tableau [T3.783], p.

**H.T. [T6.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|----------------------------|--------------------|
| TEST NUMBER: 1.3.1.1 | | |
| REFERENCE: Q.724 § 5.2 | | |
| { TITLE: Group blocking/unblocking } | | |
| SUBTITLE: HGB received | | |
| { PURPOSE: To verify that the hardware failure group blocking procedure can be correctly initiated } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE O |
| EXPECTED MESSAGE SEQUENCE: SP A | <----- <----- -----> | SP B HGB HGB |
| HBA | <----- <----- -----> | HGU HGU |
| HUA | -----> | |
| TEST DESCRIPTION | | |
| 1. Arrange for SP B to send two hardware failure oriented group blocking messages within a period of 5 seconds. Record the message sequence using a signal monitor. } | { | |
| 2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP B ON THE CIRCUITS INDICATED BY THE RANGE FIELD IN THE HGB MESSAGE } | { | |
| 3. Arrange for SP B to send two hardware failure oriented group unblocking messages within a period of 5 seconds. } | { | |
| 4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS INDICATED BY THE RANGE FIELD } | { | |
| 5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } | { | |

Tableau [T6.783], p.

**H.T. [T7.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|------------------------------------|
| TEST NUMBER: 1.3.1.2 | | |
| REFERENCE: Q.724 § 5.2 | | |
| { TITLE: Group blocking/unblocking } | | |
| SUBTITLE: HGB sent | | |
| { PURPOSE: To verify that SP A is able to generate both hardware failure oriented group blocking messages and hardware failure oriented group unblocking messages } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE O |
| EXPECTED MESSAGE SEQUENCE: SP A HGB HGB HGU HGU | -----> -----> <----- -----> -----> <----- | SP B HGB HUA |
| TEST DESCRIPTION | | |
| 1. Arrange for SP A to send two hardware failure oriented group blocking messages within a period of 5 seconds. Record the message sequence using a signal monitor. } | { | |
| 2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP A ON THE CIRCUITS INDICATED BY THE RANGE FIELD IN THE HGB MESSAGE } | { | |
| 3. Arrange for SP A to send two hardware failure oriented group unblocking messages within a period of 5 seconds. } | { | |
| 4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUIT INDICATED BY THE RANGE FIELD } | { | |
| 5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } | { | |

Tableau [T7.783], p.

**H.T. [T8.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|--------------------|
| TEST NUMBER: 1.3.1.3 | | |
| REFERENCE: Q.724 § 5.1 | | |
| { TITLE: Group blocking/unblocking } | | |
| SUBTITLE: MGB received | | |
| { PURPOSE: To verify that the maintenance oriented group blocking procedure can be correctly initiated } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE O |
| EXPECTED MESSAGE SEQUENCE: SP A | <----- <----- -----> | SP B MGB MGB |
| MBA | <----- <----- -----> | MGU MGU |
| MUA | -----> | |
| TEST DESCRIPTION | | |
| <p style="text-align: center;">1. Arrange for SP B to send two maintenance oriented group blocking messages within a period of 5 seconds. Record the message sequence using a signal monitor. }</p> <p style="text-align: center;">2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP B ON THE CIRCUITS INDICATED BY THE RANGE FIELD IN THE MGB MESSAGE }</p> <p style="text-align: center;">3. Arrange for SP B to send two maintenance oriented group unblocking messages within a period of 5 seconds. }</p> <p style="text-align: center;">4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS INDICATED BY THE RANGE FIELD }</p> <p style="text-align: center;">5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? }</p> | <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> | |

Tableau [T8.783], p.

**H.T. [T9.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|--|------------------------------------|
| TEST NUMBER: 1.3.1.4 | | |
| REFERENCE: Q.724 § 5.1 | | |
| { TITLE: Group blocking/unblocking } | | |
| SUBTITLE: MGB sent | | |
| { PURPOSE: To verify that SP A is able to generate both maintenance oriented group blocking messages and maintenance oriented group unblocking messages } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE O |
| EXPECTED MESSAGE SEQUENCE: SP A MGB MGB MGU MGU | -----> -----> <----- -----> -----> <----- | SP B MGA MUA |
| TEST DESCRIPTION | | |
| <p style="text-align: center;">1. Arrange for SP A to send two maintenance oriented group blocking messages within a period of 5 seconds. Record the message sequence using a signal monitor. }</p> <p style="text-align: center;">2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP A ON THE CIRCUITS INDICATED BY THE RANGE FIELD IN THE MGB MESSAGE }</p> <p style="text-align: center;">3. Arrange for SP A to send two maintenance oriented group unblocking messages within a period of 5 seconds. }</p> <p style="text-align: center;">4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUIT INDICATED BY THE RANGE FIELD }</p> <p style="text-align: center;">5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? }</p> | <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> | |

Tableau [T9.783], p.

**H.T. [T10.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|---------------------------|------|
| TEST NUMBER: 1.3.2.1 | | |
| REFERENCE: Q.724 § 5.1 | | |
| { TITLE: Circuit blocking/unblocking } | | |
| SUBTITLE: BLO received | | |
| { PURPOSE: To verify that the blocking/unblocking procedure can be correctly initiated } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TY |
| EXPECTED MESSAGE SEQUENCE: SP A | <----- | SP I |
| BLA | -----> | BLO |
| UBA | <----- | UBL |
| | -----> | |
| TEST DESCRIPTION | | |
| 1. Arrange for SP B to send a blocking signal. Record the message sequence using a signal monitor. } | { | |
| 2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP B ON THIS CIRCUIT } | { | |
| 3. Arrange for SP B to send an unblocking signal. } | { | |
| 4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER EXCHANGE ON THIS CIRCUIT } | { | |
| 5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } | { | |

Tableau [T10.783], p.

**H.T. [T11.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|--------------------------------------|----------------------------|
| TEST NUMBER: 1.3.2.2 | | |
| REFERENCE: Q.724 § 5.1 | | |
| { TITLE: Circuit blocking/unblocking } | | |
| SUBTITLE: BLO sent | | |
| { PURPOSE: To verify that SP A is able to generate blocking messages } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF TEST: VAT and CPT |
| EXPECTED MESSAGE SEQUENCE: SP A BLO UBL | -----> <----- -----> <----- | SP B BLA UBA |
| TEST DESCRIPTION | | |
| 1. Arrange for SP A to send a blocking signal. Record the message sequence using a signal monitor. } | { | |
| 2. CHECK A: VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP A ON THIS CIRCUIT } | { | |
| 3. Arrange for SP A to send an unblocking signal. } | { | |
| 4. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT } | { | |
| 5. CHECK C: WAS THE MESSAGE SEQUENCE AS SHOWN ABOVE? } | { | |

Tableau [T11.783], p.

H.T. [T12.783]
TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER: 1.3.2.3

REFERENCE: Q.724 § 5.1

{
TITLE: Circuit blocking/unblocking
}

{
SUBTITLE: Blocking from both ends: removal of blocking from
one end
}

{
PURPOSE: To verify that the blocking/unblocking procedure can be correctly
initiated
}

PRE-TEST CONDITIONS:

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF TEST: VAT and CPT |
|---|--------------------------------------|---------------------------|
| EXPECTED MESSAGE SEQUENCE: SP A BLO | -----> <----- <----- | SP B BLA BLO |
| BLA UBL | -----> -----> <----- <----- | UBA UBL |
| UBA | -----> | |

TEST DESCRIPTION

```

1.
  Arrange for SP A to send a blocking signal.
  Record the message sequence using a signal monitor.
  }
2.
  CHECK A:
  VERIFY THAT A CALL CAN ONLY BE ORIGINATED FROM SP A ON THIS
  CIRCUIT
  }
3.
  Arrange for SP B to send a blocking signal.
  }
4.
  CHECK B:
  VERIFY THAT A CALL CANNOT BE ORIGINATED ON THIS CIRCUIT BY
  EITHER SP
  }
5.
  Arrange for SP A to send an unblocking signal.
  }
6.
  CHECK C:
  VERIFY THAT A CALL CAN ONLY BE ORIGINATED BY SP B
  }
7.
  Arrange for SP B to send an unblocking signal.
  }
8.
  CHECK D:
  WAS THE MESSAGE SEQUENCE AS
  ABOVE? | | | | |
  }

```

```

{
{
{
{
{
{
{
{
{
{

```

Tableau [T12.783], p.

**H.T. [T13.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|----------------------------|
| TEST NUMBER: 1.3.2.4 | | |
| REFERENCE: Q.724 § 9.2 | | |
| { TITLE: Circuit blocking/unblocking } | | |
| { SUBTITLE: Interruption from FDM circuits } | | |
| { PURPOSE: To verify th at an interruption of the pilot in FDM system causes a blocking signal to be sent } | | |
| { PRE-TEST CONDITIONS: The signa lling points must be linked by a transmission system using FDM } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF S |
| EXPECTED MESSAGE SEQUENCE: SP A BLO UBL | -----> <----- -----> <----- | SP B BLA UBA |
| TEST DESCRIPTION | | |
| <p style="text-align: center;">1. Arrange for the reception of the pilot signal at SP A to be interrupted more than 4-15 seconds. Record the message sequence using a signal monitor. }</p> <p style="text-align: center;">2. CHECK A: CONFIRM THAT A CALL CANNOT BE INITIATED BY EITHER SP }</p> <p style="text-align: center;">3. Arrange for the interruption of the pilot tone to be terminated. }</p> <p style="text-align: center;">4. CHECK B: CONFIRM THAT A CALL CAN BE INITIATED BY EITHER SP AFTER A PERIOD OF 4-15 SECONDS }</p> <p style="text-align: center;">5. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? }</p> | <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> | |

Tableau [T13.783], p.

**H.T. [T16.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | |
|--|---|
| } 2. CHECK A: WAS THE SECOND CONTINUITY CHECK INITIATED WITHIN 1 TO 3 MINUTES? } | { |
| 3. CHECK B: WERE THE MAINTENANCE STAFF ALERTED ON FAILURE OF THE SECOND CONTINUITY CHECK? } | { |
| 4. CHECK C: WAS THE CHECK REPEATED AT INTERVALS OF 1 TO 3 MINUTES? } | { |
| 5. CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? } | { |

Tableau [T16.783], p.

H.T. [T17.783]
TUP LEVEL 4 TEST SPECIFICATION

**H.T. [T18.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 1.5.1

REFERENCE: Q.724 § 6.5

{
TITLE: Receipt of unreasonable information
}

SUBTITLE: Received

{
PURPOSE:
To verify that the action taken by a signalling point upon
receipt of unreasonable signalling information is as stated in Q.724
§ 6.5
}

{
PRE-TEST CONDITIONS:
a)
Arrange the data in signalling point B such that CLF, RLG, and UBL
messages may be initiated
b)
The circuit should be idle and unblocked
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
|----------------------------|-------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: | | |
| SP A | | SP B |
| a) | <----- | CLF |
| RLG | -----> | |
| b) | <----- | RLG |
| c) | <----- | UBL |
| UBA | -----> | |
| TEST DESCRIPTION | | |

```

1. {
  Arrange for SP B to send a clear forward signal.
  }
2. {
  CHECK A:
  IS THE CIRCUIT IDLE? | | | | |
  }
3. {
  CHECK B:
  WAS THE MESSAGE SEQUENCE AS IN a)
  ABOVE? | | | | |
  }
4. {
  Arrange for SP B to send a release guard signal.
  }
5. {
  CHECK C:
  IS THE CIRCUIT IDLE? | | | | |
  }
6. {
  CHECK D:
  WAS THE MESSAGE SEQUENCE AS IN b)
  ABOVE? | | | | |
  }
7. {
  Arrange for SP B to send an unblocking signal.
  }
8. {
  CHECK E:
  IS THE CIRCUIT IDLE? | | | | |

```

}
9.
CHECK F:
WAS THE MESSAGE SEQUENCE AS IN c)
ABOVE? | | | | |
}

{

Note — This test covers only some of the ambiguous messages which could be received.

Tableau [T18.783], p.

H.T. [T19.783]
TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER: 2.1.1

REFERENCE: Q.724 § 1

{
TITLE: Both way circuit selection
}

{
SUBTITLE: IAM sent by controlling SP
}

{
PURPOSE:
To verify that signalling point A can initiate an outgoing
call on a circuit capable of bothway operation when the controlling
SP is A
}

{
PRE-TEST CONDITIONS:
a)
Called termination is free
b)
Circuit selected is capable of bothway operation
c)
Circuit selected is as in test number 2.1.2
d)
SP A is the controlling signalling point
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|---|-----------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: SP A IAM | -----> <----- { | SP B ACM |
| fR ----- } | Ringing tone <----- { | ANC |
| Speech ----- } | Speech -----> <----- | RLG |

TEST DESCRIPTION

1. {
 Make a call from SP A TO SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 CAN RINGING TONE BE HEARD? | | | | |
 }
3. {
 The called party should answer the call.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 The calling party should clear the call.
 }
6. {
 CHECK C:

IS THE CIRCUIT IDLE? | | | | |
}
7.
CHECK D:
WAS THE MESSAGE SEQUENCE AS
ABOVE? | | | | |
}

{

Tableau [T19.783], p.

**H.T. [T20.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.1.2

REFERENCE: Q.724 § 1

{
TITLE: Bothway circuit selection
}

{
SUBTITLE: IAM sent by non-controlling SP
}

{
PURPOSE:
To verify that signalling point A can initiate an outgoing
call on a circuit capable of bothway operation when the non-controlling
SP is A
}

{
PRE-TEST CONDITIONS:
a)
Called termination is free
b)
Circuit selected is capable of bothway operation
c)
Circuit selected is as in test number 2.1.1
d)
SP B is the controlling signalling point
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|--|--|---|
| EXPECTED MESSAGE SEQUENCE: SP A IAM fR ----- } Speech ----- } CLF | -----> <----- { Ringing tone <----- { -----> <----- | SP B ACM ANC RLG |

TEST DESCRIPTION

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 CAN RINGING TONE BE HEARD? | | | | |
 }
3. {
 The called party should answer the call.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 The calling party should clear the call.
 }
6. {
 CHECK C:

IS THE CIRCUIT IDLE? | | | | |
}
7.
CHECK D:
WAS THE MESSAGE SEQUENCE AS
ABOVE? | | | | |
}

{

Tableau [T20.783], p.

**H.T. [T21.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.2.1

REFERENCE: Q.724 § 1

{
TITLE: Called address sending
}

{
SUBTITLE: "EN BLOC" operation
}

{
PURPOSE: To verify that a call can be successfully established (all
digits included in the IAM)
}

{
PRE-TEST CONDITIONS:
a)
Called termination is free
b)
The exchange data is arranged such that all digits are included in the
IAM
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|---|-----------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: SP A IAM | -----> <----- { | SP B ACM |
| fR ----- } | Ringing tone <----- { | ANC |
| Speech ----- } | Speech -----> <----- | RLG |

TEST DESCRIPTION

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 IS RINGING TONE HEARD? | | | | |
 }
3. {
 The called party should answer the call.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 The calling party should clear the call.
 }
6. {
 CHECK C:
 IS THE CIRCUIT IDLE? | | | | |
 }
7. {
 CHECK D:
 WAS THE MESSAGE SEQUENCE AS

ABOVE? | | | | |

}

8.

For validation testing repeat this test in the reverse direction

Where SPA is in a position to know, by digit analysis that the final digit has been sent. Confirm that an End-of-pulsing (ST) signal is included in the IAM.

}

{

Tableau [T21.783], p.

**H.T. [T22.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.2.2

REFERENCE: Q.724 § 1

{
TITLE: Called address sending
}

{
SUBTITLE: Overlap operation (with SAM and SAO)
}

{
PURPOSE: To verify that signalling point A can initiate a call using
an IAM followed by SAM and a SAO
}

{
PRE-TEST CONDITIONS:
a)
Called termination is free
b)
The signalling point data is arranged such that digits are generated
in an IAM followed by a SAM and a SAO
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|----------------------------|---------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: | | |
| SP A | | SP B |
| IAM | -----> | |
| SAM | -----> | |
| SAO | -----> | |
| | <----- | ACM |
| | { | |
| fR | | |
| ----- | | |
| } | Ringing tone | |
| | <----- | ANC |
| Speech | { | |
| ----- | | |
| } | Speech | |
| CLF | -----> | |
| | <----- | RLG |

TEST DESCRIPTION

1. {
Make a call from SP A to SP B.
Record the message sequence using a signal monitor.
}
2. {
CHECK A:
IS RINGING TONE HEARD? | | | | |
}
3. {
The called party should answer the call.
}
4. {
CHECK B:
IS SPEECH POSSIBLE? | | | | |
}
5. {
The calling party should clear the call.
}
6. {
CHECK C:
IS THE CIRCUIT IDLE? | | | | |
}
7. {

H.T. [T23.783]
TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER: 2.3.1

{
REFERENCE: Q.724 § 1.6 and 1.10
}

{
TITLE: Successful call set-up
}

{
SUBTITLE: Ordinary call (with various ACM and ANS)
}

{
PURPOSE:
To verify that a call can be successfully completed using
various combinations of address complete messages and answer
messages
}

{
PRE-TEST CONDITIONS: Called termination is free
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
|---|-----------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: SP A IAM | -----> <----- { | SP B ACM |
| fR ----- } | Ringing tone <----- { | ANC |
| Speech ----- } | Speech -----> <----- | RLG |
| CLF | | |
| TEST DESCRIPTION | | |

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 CAN RINGING TONE BE HEARD? | | | | |
 }
3. {
 The called party should answer the call.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 The calling party should clear the call.
 }
6. {
 CHECK C:
 IS THE CIRCUIT IDLE? | | | | |
 }
7. {
 CHECK D:
 WAS THE MESSAGE SEQUENCE AS ABOVE? | | | | |
 }

| | |
|---|---|
| 8. | { |
| Repeat steps 1-7 with all combinations of bits A&B in the address complete message. | |
| } | |
| 9. | { |
| Repeat steps 1-8 with ANC replaced with an ANN. | |
| } | |
| 10. | { |
| Repeat this test in the reverse direction. | |
| } | |

Tableau [T23.783], p.

**H.T. [T24.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.3.2

REFERENCE: Q.724 § 1

{
TITLE: Successful call set-up
}

{
SUBTITLE: Call switched via a satellite
}

{
PURPOSE: To verify the satellite indicator in the initial address
message is correctly set
}

{
PRE-TEST CONDITIONS:

- a)
Called termination is free
 - b)
The signalling point data is arranged such that the call is switched via a satellite connection or has a satellite connection already included in the path
- }

CONFIGURATION: 1

EXPECTED MESSAGE SEQUENCE:

SP A
IAM

||fR

}

Speech

}
CLF

TEST DESCRIPTION

- | | |
|---|---|
| 1. | { |
| Make a call from SP A to SP B. Record the message sequence using a signal monitor. | |
| } | |
| 2. | { |
| CHECK A: IS RINGING TONE HEARD? | |
| } | |
| 3. | { |
| The called party should answer the call. | |
| } | |
| 4. | { |
| CHECK B: IS SPEECH POSSIBLE? | |
| } | |
| 5. | { |
| The calling party should clear the call. | |
| } | |
| 6. | { |
| CHECK C: IS THE CIRCUIT IDLE? | |
| } | |
| 7. | { |
| CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? | |

**H.T. [T25.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.3.3

REFERENCE: Q.724 § 11

{
TITLE: Successful call set-up
}

{
SUBTITLE: Test for echo suppressor call set-up
}

{
PURPOSE: To verify that a call can be successfully established with
the inclusion of echo suppressors
}

{
PRE-TEST CONDITIONS:
a)
Called termination is free
b)
The signalling point data is arranged such that the call is routed
over a route requiring echo suppressors or already has an
echo suppressor included in the connection
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|----------------------------|---------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: | | |
| SP A | | SP B |
| IAM | -----> | |
| | <----- | ACM |
| | { | |
| fR | | |
| ----- | | |
| } | Ringing tone | |
| | <----- | ANC |
| Speech | { | |
| ----- | | |
| } | Speech | |
| CLF | -----> | |
| | <----- | RLG |

TEST DESCRIPTION

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 IS RINGING TONE HEARD? | | | | |
 }
3. {
 The called party should answer.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 CHECK C:
 IS ECHO PERCEIVED BY EITHER PARTY? | | | | |
 }
6. {
 The calling party should clear the call.
 }
7. {
 CHECK D:

**H.T. [T26.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.3.4

REFERENCE: Q.724 § 5

{
TITLE: Successful call set-up
}

{
SUBTITLE: Blocking and unblocking during a call (initiated)
}

{
PURPOSE: To verify that the circuit blocking and unblocking procedure
can be correctly initiated during a call
}

{
PRE-TEST CONDITIONS: Called termination is free
}

CONFIGURATION: 1

TYPE OF TEST: VAT and CPT

TYPE OF SP: SP

EXPECTED MESSAGE SEQUENCE:

SP A
IAM

----->
<-----
{

SP B
ACM

||fR

}

Ringing tone

ANC

Speech

<-----
{

}

Speech

BLO

----->

BLA

CLF

<-----

RLG

UBL

----->

<-----

----->

<-----

UBA

TEST DESCRIPTION

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }

2. {
 CHECK A:
 CAN RINGING TONE BE HEARD? | | | | |
 }

3. {
 The called party should answer the call.
 }

4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }

5. {
 SP A should initiate circuit blocking relating to the circuit used
 for this call.
 }

6. {
 CHECK C:
 IS SPEECH STILL POSSIBLE? | | | | |
 }

7. {
 The calling party should clear the call.
 }

```

      }
      8.
      CHECK D:
      VERIFY THAT A CALL CAN ONLY BE ORIGINATED ON THIS
      CIRCUIT BY SP A? | | | | |
      }
      9.
      SP A should send an unblocking signal.
      }
      10.
      CHECK E:
      VERIFY THAT A CALL CAN BE SUCCESSFULLY ORIGINATED

      FROM EITHER SP.
      }
      11.
      CHECK F:
      WAS THE MESSAGE SEQUENCE AS ABOVE? | | | | |
      }
      12.
      Repeat this test in the reverse direction.
      }

      Note
      — The blocking signal may be generated after the call
      has cleared.
      }

```

```

{
{
{
{
{
{
{
{

```

Tableau [T26.783], p.

**H.T. [T27.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 2.3.5

REFERENCE: Q.724 § 5

{
TITLE: Successful call set-up
}

{
SUBTITLE: Blocking and unblocking during a call (received)
}

{
PURPOSE: To verify that the circuit blocking and unblocking procedure
can be correctly received during a call
}

{
PRE-TEST CONDITIONS: Called termination is free
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|----------------------------|---------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: | | |
| SP A | | SP B |
| IAM | -----> | |
| | <----- | ACM |
| | { | |
| fR | | |
| ----- | | |
| } | | |
| Speech | <----- | ANC |
| ----- | { | |
| } | | |
| | Speech | |
| | <----- | BLO |
| BLA | -----> | |
| CLF | -----> | |
| | <----- | RLG |
| | <----- | UBL |
| UBA | -----> | |
| TEST DESCRIPTION | | |

1. {
Make a call from SP A to SP B.
Record the message sequence using a signal monitor.
}
2. {
CHECK A:
CAN RINGING TONE BE HEARD? | | | | |
}
3. {
The called party should answer the call.
}
4. {
CHECK B:
IS SPEECH POSSIBLE? | | | | |
}
5. {
SP B should initiate circuit blocking relating to the circuit used
for this call.
}
6. {
CHECK C:
IS SPEECH STILL POSSIBLE? | | | | |
}
7. {
The calling party should clear the call.

**H.T. [T28.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|-----------------|
| TEST NUMBER: 3.1 | | |
| REFERENCE: Q.724 § 1.14 | | |
| TITLE: Normal call release | | |
| { SUBTITLE: Calling party clears before address complete } | | |
| { PURPOSE: To verify that the calling party can successfully release a call prior to receipt of an address complete message } | | |
| PRE-TEST CONDITIONS: | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A IAM CLF | -----> -----> <----- | SP B RLG |
| TEST DESCRIPTION | | |
| <p style="text-align: center;">1. Make a call from SP A to SP B. Record the message sequence using a signal monitor. }</p> <p style="text-align: center;">2. The calling party should clear the call prior to receipt of the address complete signal. }</p> <p style="text-align: center;">3. CHECK A: IS THE CIRCUIT IDLE? }</p> <p style="text-align: center;">4. CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? }</p> <p style="text-align: center;">5. Repeat this test in the reverse direction. }</p> | <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> | |

Tableau [T28.783], p.

**H.T. [T30.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|--|--|
| TEST NUMBER: 3.3 | | |
| REFERENCE: Q.724 § 1.14 | | |
| TITLE: Normal call release | | |
| { SUBTITLE: Calling party clears after answer } | | |
| { PURPOSE: To verify that the calling party can successfully release a call in the speech state } | | |
| { PRE-TEST CONDITIONS: Called termination is free } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
| <p>EXPECTED MESSAGE SEQUENCE:</p> <p>SP A IAM</p> <p> fR</p> <p>----- }</p> <p>Speech</p> <p>----- }</p> <p>CLF</p> | <p>-----></p> <p><-----</p> <p>{</p> <p> Ringing tone</p> <p><-----</p> <p>{</p> <p> Speech</p> <p>-----></p> <p><-----</p> | <p>SP B</p> <p>ACM</p> <p>ANC</p> <p>RLG</p> |
| TEST DESCRIPTION | | |
| <p>1. Make a call from SP A to SP B. Record the message sequence using a signal monitor. }</p> <p>2. CHECK A: IS RINGING TONE HEARD? }</p> <p>3. The called party should answer the call. }</p> <p>4. CHECK B: IS SPEECH POSSIBLE? }</p> <p>5. The calling party should clear the call. }</p> <p>6. CHECK C: IS THE CIRCUIT IDLE? }</p> <p>7. CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? }</p> <p>8. For validation testing this test should be repeated in the reverse direction. }</p> | <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> <p>{</p> | |

Tableau [T30.783], p.

**H.T. [T31.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 3.4

REFERENCE: Q.724 § 1.14

TITLE: Normal call release

{
SUBTITLE: Called party clears
}

{
PURPOSE: To verify that the calling party can successfully
release a call in the clear back state
}

{
PRE-TEST CONDITIONS: Called termination is free
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|----------------------------|---------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: | | |
| SP A | | SP B |
| IAM | -----> | |
| | <----- | ACM |
| | { | |
| fR | | |
| ----- | | |
| } | Ringing tone | |
| | <----- | ANC |
| Speech | { | |
| | Speech | |
| } | <----- | CBK |
| CLF | -----> | |
| | <----- | RLG |
| TEST DESCRIPTION | | |

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
 2. {
 CHECK A:
 IS RINGING TONE HEARD? | | | | |
 }
 3. {
 The called party should answer the call.
 }
 4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
 5. {
 The called party should clear the call.
 }
 6. {
 The calling party should clear the call.
 }
 7. {
 CHECK C:
 IS THE CIRCUIT IDLE? | | | | |
 }
 8. {
 CHECK D:
 WAS THE MESSAGE SEQUENCE AS ABOVE? | | | | |
 }
 9. {
 For validation testing repeat this test in the reverse

direction.
}

Tableau [T31.783], p.

**H.T. [T32.783]
TUP LEVEL 4 TEST SPECIFICATION**

TEST NUMBER: 3.5

REFERENCE: Q.724 § 1.14

TITLE: Normal call release

{
SUBTITLE: Called party clears and reanswers
}

{
PURPOSE: To verify that the called subscriber can successfully
clear and reanswer a call in the speech state
}

{
PRE-TEST CONDITIONS: Called termination is free
}

| CONFIGURATION: 1 | TYPE OF TEST: VAT and CPT | TYPE OF SP: SP |
|---|--------------------------------------|----------------|
| EXPECTED MESSAGE SEQUENCE: SP A IAM | -----> <----- { | SP B |
| fR ----- } | | ACM |
| Speech | <----- Ringing tone { | ANC |
| Speech | <----- Speech <----- { | CBK RAN |
| Speech CLF | <----- Speech -----> <----- | RLG |

TEST DESCRIPTION

1. {
 Make a call from SP A to SP B.
 Record the message sequence using a signal monitor.
 }
2. {
 CHECK A:
 IS RINGING TONE HEARD? | | | | |
 }
3. {
 The called party should answer the call.
 }
4. {
 CHECK B:
 IS SPEECH POSSIBLE? | | | | |
 }
5. {
 The called party should clear the call.
 }
6. {
 The called party should reanswer the call.
 }
7. {
 CHECK C:
 IS SPEECH STILL POSSIBLE? | | | | |
 }
8. {

| | |
|--|----------------------------|
| <p>The calling party should clear the call.</p> <p> }</p> <p> 9.</p> <p> CHECK D:</p> <p> IS THE CIRCUIT IDLE? </p> <p> }</p> <p> 10.</p> <p> CHECK E:</p> <p> WAS THE MESSAGE SEQUENCE AS ABOVE? </p> <p> }</p> <p> 11.</p> <p> For validation testing repeat this test in the reverse direction.</p> <p> }</p> | <p>{</p> <p>{</p> <p>{</p> |
|--|----------------------------|

Tableau [T32.783], p.

**H.T. [T37.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|---|--|----------------------------|
| TEST NUMBER: 4.3.1 | | |
| REFERENCE: Q. 724 § 1.8 | | |
| TITLE: NNC | | |
| SUBTITLE: NNC received | | |
| { PURPOSE: To verify that the call will be immediately released by the outgoing signalling point if a national network congestion signal is received and the correct indication is given to the calling party } | | |
| { PRE-TEST CONDITIONS: Arrange the data in SP B such that a national network congestion signal is returned to the call request } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A IAM CLF | -----> <----- -----> <----- | SP B NNC RLG |
| TEST DESCRIPTION | | |
| 1. Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor. } 2. CHECK A: IS THE APPROPRIATE TONE OR ANNOUNCEMENT RETURNED TO THE CALLING PARTY? } 3. CHECK B: IS THE CIRCUIT IDLE? } 4. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } <i>Note 1</i> — An address complete signal (without subscriber free) may be sent in the backward direction before a NNC signal is sent. } <i>Note 2</i> — It may not be possible to confirm that the appropriate tone is returned to the calling party. In this case it must be verified that the signalling point under test retransmits the signal received. } | { { { { { { | |

Tableau [T37.783], p.

**H.T. [T38.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|--------------------------------|
| TEST NUMBER: 4.3.2 | | |
| REFERENCE: Q.724 § 1.8 | | |
| TITLE: NNC | | |
| SUBTITLE: NNC sent | | |
| <pre>{ PURPOSE: To verify that SP A is able to generate a national network congestion signal }</pre> | | |
| <pre>{ PRE-TEST CONDITIONS: Arrange the data in signalling point A such that a national network congestion signal is returned to the call request, where SP A is now an I/C exchange }</pre> | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
| <p>EXPECTED MESSAGE SEQUENCE:</p> <p>SP A</p> <p>NNC</p> <p>RLG</p> | <pre><----- -----> <----- -----></pre> | <p>SP B IAM</p> <p>CLF</p> |
| TEST DESCRIPTION | | |
| <pre> 1. Attempt to make a call from SP B to SP A. } 2. CHECK A: IS THE APPROPRIATE TONE OR ANNOUNCEMENT RETURNED TO THE CALLING PARTY? } 3. CHECK B: IS THE CIRCUIT IDLE? } 4. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } Note 1 — An address complete signal (without subscriber free) may be sent in the backward direction before a NNC signal is sent. } Note 2 — It may not be possible to confirm that the appropriate tone is returned to the calling party. In this case it must be verified that the signalling point under test retransmits the signal received. }</pre> | <pre>{ { { { { { {</pre> | |

Tableau [T38.783], p.

**H.T. [T41.783]
TUP LEVEL 4 TEST SPECIFICATION**

| | | |
|--|--|----------------------------|
| TEST NUMBER: 4.5.1 | | |
| REFERENCE: Q.724 § 6.3 | | |
| TITLE: CFL | | |
| SUBTITLE: CFL received | | |
| { PURPOSE: To verify that the call will be immediately released by the outgoing signalling point if a call failure signal is received and the correct indication is given to the calling party } | | |
| { PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a call failure signal is returned to the call request } | | |
| CONFIGURATION: 1 | TYPE OF TEST: VAT | TYPE OF SP: SP |
| EXPECTED MESSAGE SEQUENCE: SP A IAM CLF | -----> <----- -----> <----- | SP B CFL RLG |
| TEST DESCRIPTION | | |
| 1. Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor. } 2. CHECK A: IS THE APPROPRIATE TONE OR ANNOUNCEMENT RETURNED TO THE CALLING PARTY? } 3. CHECK B: IS THE CALL IDLE? } 4. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? } <i>Note 1</i> — An address complete signal may be sent in the backward direction before a CFL signal is sent. } <i>Note 2</i> — It may not be possible to confirm that the appropriate tone is returned to the calling party. In this case it must be verified that the signalling point under test retransmits the signal received. } | { { { { { { | |

Tableau [T41.783], p.

