ETSI

EUROPEAN
TELECOMMUNICATION
STANDARD

Integrated Services Digital Network (ISDN);
Signalling System No.7;
Message Transfer Part (MTP);
Test specification

[ITU-T Recommendations Q.781 and Q.782 (1993), modified]

ETSI

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Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

Endorsement notice

The text of ITU-T Recommendations Q.781 and Q.782 (1993) was approved by ETSI as an ETS with agreed modifications as given below.

NOTE: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary. For the tests, bold font is used in addition to increase legibility.

Global modifications to ITU-T Recommendations Q.781 and Q.782

Insert the following two clauses (scope and normative references):

Scope

This European Telecommunication Standard (ETS) defines a set of detailed tests of the Signalling System No.7 Message Transfer Part (MTP) level 2 and level 3 protocol. These tests intend to validate the protocol specified in ETS 300 008-1 [1].

This ETS conforms to ITU-T Recommendation Q.780 [2] which describes the basic rules of the test specifications, however, it contains additional general principles specific to level 2 and level 3 tests, respectively.

Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ETS 300 008-1: "Integrated Services Digital Network (ISDN); Signalling System No.7; Message Transfer Part (MTP) to support international interconnection; Part 1: Protocol specification [ITU-T Recommendations Q.701 (1993), Q.702 (1988), Q.703 to Q.706 (1993), Q.707 (1988) and Q.708 (1993), modified]".

[2]   ITU-T Recommendation Q.780 (1993): "Signalling System No.7 test specification general description".

Throughout the text of ITU-T Recommendations Q.781 and Q.782

Replace references as shown below.

Reference in ITU-T Recommendations Q.781 and Q.782	Modified reference
ITU-T Recommendation Q.701	ITU-T Recommendation Q.701 as modified by ETS 300 008-1 [1]
ITU-T Recommendation Q.702	ITU-T Recommendation Q.702 as modified by ETS 300 008-1 [1]
ITU-T Recommendation Q.703	ITU-T Recommendation Q.703 as modified by ETS 300 008-1 [1]
ITU-T Recommendation Q.704	ITU-T Recommendation Q.704 as modified by ETS 300 008-1 [1]
ITU-T Recommendation Q.707	ITU-T Recommendation Q.707 as modified by ETS 300 008-1 [1]

Modifications to ITU-T Recommendation Q.781

Test number 1.5

Modify the test as follows:

TEST NUMBER: 1.5	PAGE: 1 OF 1
REFERENCE: Q.703 Clause 7 **STD: Fig. 8; Fig. 9**	
TITLE: Link State Control – Expected signal units/orders	
SUB TITLE: Normal alignment – correct procedure (FISU)	
PURPOSE: To check normal alignment procedure	
PRE-TEST CONDITIONS: Link out of service	
CONFIGURATION: 1	TYPE OF TEST: VAT, CPT

MESSAGE SEQUENCE:

```
           SP      B                                         SP       A

Link                                                  Link
                              <------------------------    1 – 0       SIOS
1 – 0     SIOS              ------------------------>

                                                                 :  start

                              <------------------------    1 – 0       SIO
1 – 0     SIO               ------------------------>
                              <------------------------    1 – 0       SIN

1 – 0     SIN               ------------------------>
                              <------------------------    1 – 0       FISU

1 – 0     FISU              ------------------------>
```

TEST DESCRIPTION

1. Start normal alignment procedure.

2. Check link aligns and enters "In service" state.

3. Check that "In service" state is maintained.

4. In VAT only check it is possible to perform a normal alignment procedure in the following cases:
   – use LSSU in point B with a status field of 8 bits;
   – use LSSU in point B with a status field of 16 bits.

Test number 1.7

Modify the test as follows:

TEST NUMBER: 1.7	PAGE: 1 OF 1
REFERENCE: Q.703 Clauses 7, 10.3 STD: Fig. 9; Fig. 17	
TITLE: Link State Control – Expected signal units/orders	
SUB TITLE: SIO received during normal proving period	
PURPOSE: To test the response to the reception of an SIO during the normal proving period	
PRE-TEST CONDITIONS: Link out of service	
CONFIGURATION: 1	TYPE OF TEST: VAT

EXPECTED SIGNAL UNIT SEQUENCE:

```
            SP      B                                         SP      A

Link                                              Link
                              <------------------    1 – 0         SIOS
1 – 0      SIOS              ------------------>
                                                                :  start
                              <------------------    1 – 0         SIO
1 – 0      SIO               ------------------>
                              <------------------    1 – 0         SIN
1 – 0      SIN               ------------------>
                                                                      |  T4
                                                                      |  Stopped
1 – 0      SIO (one only)    ------------------>                      |

1 – 0      SIN               ------------------>                      |
                              <------------------    1 – 0            |  SIN
                                                                      |  T4(Pn)
                              <------------------    1 – 0         FISU
```

TEST DESCRIPTION
1. Send an SIO at B during normal proving period.
2. Check that new normal period is entered.

Test number 4.1

Modify the test as follows:

TEST NUMBER: 4.1	PAGE: 1 OF 1
REFERENCE: Q.703 Clause 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:

```
          SP      B                                      SP        A

Link                                               Link

                       <------------------------   1 – 0      FISU
                                                             (FSN = 7F, BSN = 7F)
1 – 0     FISU         ------------------------>
          (FSN = 7F, BSN = 7F)

                            accepted
                       <------------------------   1 – 0      MSU (1)
                                                             (FSN = 0, BSN = 7F)

                       <------------------------   1 – 0      MSU (2)
                                                             (FSN = 1, BSN = 7F)

                                                        :  set LPO
1 – 0     MSU          ------------------------>
          (FSN = 0, BSN = 0)

                       <------------------------   1 – 0      SIPO
                                                             (FSN = 1 0, BSN = 7F)
1 – 0     FISU         ------------------------>
          (FSN = 0, BSN = 0)

                                                        :  clear LPO

                       <------------------------   1 – 0      MSU (3)
                                                             (FSN = 1, BSN = 5)
```

TEST DESCRIPTION

1. Set LPO at A while link in service.

2. Check that MSU from B is discarded.

3. Clear LPO at A **after at least 1,2 s**.

4. Check that "old" messages are flushed from level 2 buffers and not transmitted on the link. Check that new MSUs are sent correctly.

Test number 5.3

Modify the test as follows:

TEST NUMBER: 5.3	PAGE: 1 OF 1
REFERENCE: Q.703 Subclause 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:

```
                 SP      B                                              SP      A

Link                                                           Link

                              <------------------------       1 – 0        FISU
                                                                           (BIB + BSN = FF)

1 – 0      FISU               ------------------------>

1 – 0      corrupt MSU        ------------------------>
           (FIB + FSN = 80)
           (signal unit less
           than 6 octets)

                              <------------------------       1 – 0        FISU
                                                                           (BSN unchanged)

1 – 0      FISU               ------------------------>
```

TEST DESCRIPTION

1. Generate a corrupt MSU at B of less than 6 octet (i.e. less than 5 octets between flags).

2. Check A discards the signal unit, and **may go** ~~goes~~ into octet counting mode.

3. On reception of a correct FISU, check that A leaves the octet counting mode **if it was entered** and remains in the "in service" state.

Test number 9.7

Modify the test as follows:

TEST NUMBER: 9.7	PAGE: 1 OF 1
REFERENCE: Q.703 Subclause 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:

```
         SP      B                                        SP      A

Link                                             Link
                        <------------------------   1 – 0    FISU
                                                             (FSN = 7F, BSN = 7F)
1 – 0    FISU           ------------------------>
         (FSN = 7F, BSN = 7F)
                        <------------------------   1 – 0    MSU
                                                             (FSN = 0, BSN = 7F)
         : set LPO                                           :
                                                             :
1 – 0    SIPO           ------------------------>
         (FSN = 7F, BSN = 7F)
                        <------------------------   1 – 0    FISU
                                                             (FSN = 0, BSN = 7F)
         : clear LPO                                         :
                                                             :
1 – 0    MSU            ------------------------>
         (FSN = 0, BSN = 7F)
                        <------------------------   1 – 0    FISU
                                                             (FSN = **7F** 0̶, BSN = 0)
1 – 0    MSU            ------------------------>
         (FSN = 0, BSN = 7F)
                        <------------------------   1 – 0    FISU
                                                             (FSN = **7F** 0̶, BSN = 0)
```

TEST DESCRIPTION

1. Generate an MSU at A.

2. Instead of sending positive acknowledgement, set and keep PO at B **for at least 1,2 s**.

3. Check A stops a retransmission of the MSU and sends FISUs, and does not detect link failure by the expiration of T7.

4. Cease PO **after at least 1,2 s** and send an MSU with no positive acknowledgement at B.

5. Check A flushed its buffer and no old MSU is sent.

6. Generate an MSU at B.

7. Check A receives the MSU and responds correctly.

Modifications to ITU-T Recommendation Q.782

Test number 2.3

Modify the test as follows:

TEST NUMBER: 2.3	PAGE: 1 of 1

REFERENCE: Q.704 subclause 2.4   Fig. 24, Fig. 25

TITLE: Signalling message handling

SUBTITLE: Message received with an erroneous SI (distribution function)

PURPOSE: To check the response to a message received with an erroneous SI

PRE-TEST CONDITIONS: Signalling linkset activated

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

MESSAGE SEQUENCE:

```
              SP   A                                           SP   B


   Link                                          Link
                            <------------------------    1 – 1      :Invalid SLTM
                                                                     (erroneous i̶n̶v̶a̶l̶i̶d̶ SI)
```

TEST DESCRIPTION

1.	Send an SLTM message with an invalid SI.
2.	Check that no response is received **except perhaps a UPU (cause unequipped) when the SI used does not exist**.

Test number 3.21

Modify the test as follows:

TEST NUMBER: 3.21	PAGE: 1 of 1
REFERENCE: Q.704 clause 5 Fig. 28, Fig. 29, Fig. 30	
TITLE: Changeover	
SUBTITLE: Reception of a changeover order on an available link	
PURPOSE: To check the changeover procedure on reception of a COO or ECO for a link in service	
PRE-TEST CONDITIONS: Linkset with two available links	

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

MESSAGE SEQUENCE:

```
                SP   A                                        SP   B


     Link                                        Link

:Start traffic

   1 – 1      TRAFFIC       ----------------------------------------->

                           <---------------------------------------   1 – 1     TRAFFIC

   1 – 2      TRAFFIC       ----------------------------------------->

                           <---------------------------------------   1 – 2     TRAFFIC

                           <---------------------------------------   1 – 2     COO, SLC  1 – 1
                                                                                (FSN corresponding to
                                                                                the last received message)

   1 – 2      COA, SLC  1 – 1   ----------------------------------------->

   1 – 2      TRAFFIC       ----------------------------------------->
              (from 1 – 1)

                           <---------------------------------------   1 – 2     TRAFFIC (from 1 – 1)

:Wait

:Stop traffic
```

TEST DESCRIPTION

1.	Start traffic to B and C on all the links.
2.	Send a COO from B to A for 1 – 1 on link 1 – 2 and check that the COA is received.
3.	Check that the link 1 – 1 becomes unavailable.
4.	Stop traffic and check that the changeover procedure has been performed.
5.	Check that there was no loss of messages, no duplication and no missequencing.
6.	Repeat the test but send an ECO (instead of a COO) and check that **a COA** ~~an ECA~~ is received ~~(instead of a COA)~~. Some messages may be lost.

Test number 4.5

Modify the test as follows:

TEST NUMBER: 4.5	PAGE: 1 of 1
REFERENCE: Q.704 clause 6, Fig. 28, Fig. 29, Fig. 31	
TITLE: Changeback	
SUBTITLE: No acknowledgement of repeat changeback declaration	
PURPOSE: To check that traffic is changed back after a repeat changeback declaration is not acknowledged	
PRE-TEST CONDITIONS: Linkset with one available link	

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

MESSAGE SEQUENCE:

```
            SP   A
                                                         SP   B

     Link                                          Link
:Start traffic

    1 – 2      TRAFFIC           ------------------------------------>
                                 <------------------------------------    1 – 2      TRAFFIC

    1 – 1      :Activate
    1 – 2      CBD, SLC 1 – 1    ------------------------------------>
                  |
                  | T4
                  |
    1 – 2      CBD, SLC 1 – 1    ------------------------------------>
                  |
                  | T5
                  |
    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. Check that a CBD is received and not acknowledged.

3. Check that after T4, a CBD is repeated and not acknowledged by a CBA.

4. Check that after T5, the traffic is changed back on link 1 – 1.

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

6. Check that the duration of T5 is inside the specified range.

Test number 4.11

Modify the test as follows:

TEST NUMBER: 4.11	PAGE: 1 of 1
REFERENCE: Q.704 clause 6, Fig. 28, Fig. 29, Fig. 31	
TITLE: Changeback	
SUBTITLE: Time controlled diversion procedure	
PURPOSE: To check the correct operation of the time controlled diversion procedure	
PRE-TEST CONDITIONS: Linksets 1, 2 and 4 unavailable	

CONFIGURATION: B	TYPE OF TEST: VAT, CPT	TYPE OF SP: ALL

MESSAGE SEQUENCE:

```
                SP   A                              SP   B                SP   C

    Link                                  Link                  Link
:Start traffic
    3 – 1       TRAFFIC          ----------------------------------->
                (to D and E)
                                 <-----------------------------------   3 – 1      TRAFFIC (from D and E)
    3 – 2       TRAFFIC          ----------------------------------->
                (to D and E)
                                 <-----------------------------------   3 – 2      TRAFFIC (from D and E)
    2 – 1       :Activate (depending of the deactivation mean previously used)
                    | ½ T21
                    | ½ TRA      ----------->
                    | ½          <----------- 2 – 1         «TRA»
    3 – 1, 2    TRAFFIC  STOPPED
                    | ½
                    | ½ T3
                    | ½
    2 – 1       TRAFFIC          ----------->
                (from 3 – 1, 2)
                                 <----------- 2 – 1       TRAFFIC (from D, see Note)
    2 – 1, 2    TRAFFIC          ----------------------------------->
                                 <-----------------------------------   3 – 1, 2   TRAFFIC (from E)
:Wait
:Stop traffic
```

NOTE – B performs the point restart procedure and D on reception of a TFA for A reroutes its traffic to A. These procedures are not presented to simplify the test description.

TEST DESCRIPTION

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

Test number 8.2

Modify the test as follows:

TEST NUMBER: 8.2	PAGE: 1 of 1

REFERENCE: Q.704 clause 11, subclause 12.6, Fig. 46A

TITLE: Signalling traffic flow control

SUBTITLE: Sending of TFCs

PURPOSE: To check the detection of a level 3 congestion

PRE-TEST CONDITIONS: All links available

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

MESSAGE SEQUENCE:

```
        SP  B
                    SP   A                                          SP   C

   Link                Link                              Link
:Start traffic

   1 – 1      TRAFFIC    ( > n/2 E ) ------->   2 – 1  ----- (n E) ---------------->
                        <------------------   1 – 1  <----------------------   2 – 1   TRAFFIC (< n E)
   1 – 2      TRAFFIC    ( > n/2 E ) ------->   2 – 1  ----- (n E) ---------------->
                        <------------------   1 – 2  <----------------------   2 – 1   TRAFFIC (< n E)
:Wait

                        <------------------   1 – X  TFC, DPC = C
                                                 .
                                                 .
                                                 .  One TFC each 8 messages sent to C
                                                 .  or one TFC each 256 octets sent to C
                        <------------------   1 – X  TFC, DPC = C
                                                 .
                                                 .
   1 – 1      TRAFFIC    ( < n/2 E ) --------->  2 – 1  ---------------------------->
                        <------------------   1 – 1  <----------------------   2 – 1      TRAFFIC
   2 – 1      TRAFFIC (> n  ( < n/2 E ) --------->  2 – 1  ---------------------------->
E)
                        <------------------   1 – 2  <----------------------   2 – 1      TRAFFIC (< n E)
:Wait
:Stop traffic
```

NOTE – n is the maximum load capacity of linkset 2. The traffic model used in this test is described in Table 2/Q.706.

TEST DESCRIPTION

1. Start traffic to C with a load exceeding n/2 erlang on links 1 – 1 and 1 – 2 (n is the maximum load that the link 2 may carry without congestion).
2. Check that the signalling traffic flow control procedure is started in A. Check that a TFC message concerning C is received for each 8 messages received or each 256 octets received in B during the congestion.
3. Reduce the load to **n/2** ~~0.1~~ erlang or less on links 1 – 1 and 1 – 2.
4. Check that the congestion disappears and that no TFC is received.
5. Stop traffic.
6. Check that the traffic from C to B has not been disturbed.

Test number 9.1.1

Modify the test as follows:

TEST NUMBER: 9.1.1	PAGE: 1 of 1
REFERENCE: Q.704 clause 13, Fig. 29, Fig. 44	
TITLE: Signalling route management	
SUBTITLE: Sending of a TFP on an alternative route – Failure of normal linkset	
PURPOSE: To check the sending of a TFP on the alternative route when the normal linkset becomes unavailable	
PRE-TEST CONDITIONS: All linksets available	

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       ------------------------>  5 – 1 ------------------------>     SP   D
                 (from A and F)                           6 – 1 ------------------------>     SP   E
      2 – 1      TRAFFIC       -----------------------------------------> 7 – 1 -------->     SP   E
                 (from A and F)


      1 – 1      :Deactivate   (MML command or failure)

      2 – 1      TFP, PC = B   ----------------------------------------->
      2 – 1      TFA, PC = B        (this TFA is sent via C)
      2 – 1      TFP, PC = D   ----------------------------------------->
      2 – 1      TFA, PC = D        (this TFA is sent via C)
      2 – 1      TRAFFIC       -----------------------------------------> 7 – 1 -------->     SP   E
                 (from 1 – 1)                                             8 – 1 -------->     SP   D

:Wait
:Stop traffic
```

NOTE – A changeover procedure is performed after deactivation of link 1 – 1 but is not described in this transfer prohibited test.

TEST DESCRIPTION

1. Start traffic to D and E on linkset 1 and 2

2. Deactivate link 1 – 1 and check that TFPs concerning B and D are sent from A to C (alternative route to reach B and D). Check that no TFP concerning E is sent from A to C (load sharing between linksets 1 and 2 in A to reach E). Check that TFAs concerning B and D are sent from A to B (via C).

3. Check that time out T8 is started for each TFP sent.

4. Check that traffic to D and E is diverted to C.

5. Stop traffic and check that it was not disturbed.

Test number 9.1.2

Modify the test as follows:

TEST NUMBER: 9.1.2		PAGE: 1 of 1
REFERENCE: Q.704 clause 13, Fig. 29, Fig. 44		
TITLE: Signalling route management		
SUBTITLE: Sending of a TFP on an alternative route – On reception of a TFP		
PURPOSE: To check the sending of a TFP on the alternative route when the normal route becomes unavailable on reception of a TFP		
PRE-TEST CONDITIONS: Linkset 4 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

      1 – 1     TRAFFIC       ------------------------> 5 – 1 ------------------------>      SP   D
               (from A and F)                           6 – 1 ------------------------>      SP   E
      2 – 1     TRAFFIC       ----------------------------------------> 7 – 1 -------->      SP   E
               (from A and F)


                                                 5 – 1     :Deactivate
     See Note                       <------------------------ 1 – 1    TFP, PC = D

      2 – 1     TFP, PC = D   ----------------------------------------->
      1 – 1     TFA, PC = D   ──────────────────────>
      1 – 1     TRAFFIC       ------------------------> 6 – 1 ------------------------>      SP   E
               (from A and F)
      2 – 1     TRAFFIC       ----------------------------------------> 8 – 1 -------->      SP   D
               (from A and F, and from 1 – 1 to D)              7 – 1 -------->             SP   E
```

:Wait

:Stop traffic

NOTE – A forced rerouting is performed after the reception of TFP for D in A but it is not described in this transfer prohibited test.

TEST DESCRIPTION

1.	Start traffic to D and E.
2.	Deactivate link 5 – 1 and check that a TFP concerning D is sent to A.
3.	Check that a TFP concerning D is received from A and that traffic to D is diverted via C. ~~Check that a TFA concerning D is sent from A to B.~~
4.	Check that a time out T8 is started.
5.	Stop traffic and check that traffic to E has not been disturbed. Some messages to D may have been lost.

Test number 10.3

Delete test number 10.3. It is not part of this ETS.

Test number 13.7

Modify the test as follows:

TEST NUMBER: 13.7		PAGE: 1 of 1
REFERENCE: Q.704 clause 15		
TITLE: **<u>Unusual</u>** ~~Invalid~~ messages		
SUBTITLE: **<u>Unusual</u>** ~~Invalid~~ signalling route management messages		
PURPOSE: To check the actions of the system on reception of **<u>unusual</u>** ~~invalid~~ TFA or TFP		
PRE-TEST CONDITIONS: Link 1 – 1 available 2 – 1 available		
CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: ALL

MESSAGE SEQUENCE:

```
              SP   A
                                                                    SP   B

      Link                                                  Link
:Start traffic
      1 – 1        TRAFFIC       ----------------------------------->
                                 <----------------------------------    1 – 1    TRAFFIC
                                 <----------------------------------    1 – 1    TFP, PC = X
                                                                                 (non-existing PC)
                                 <----------------------------------    1 – 1    TFA, PC = X
                                                                                 (non-existing PC)
                                 <----------------------------------    1 – 1    TFP, PC = C
                                                                                 (non-existing OPC)
                                 <----------------------------------    1 – 1    TFP, PC = C
                                                                                 (spare bits ≠ 00)
                                                                       2 – 1        :Deactivate
                                 <----------------------------------    1 – 1    TFP, PC = C
                                 <----------------------------------    1 – 1    TFA, PC = C
                                                                                 (non-existing OPC)
                                 <----------------------------------    1 – 1    TFA, PC = C
                                                                                 (spare bits ≠ 00)
      1 – 1        TRAFFIC       ----------------------------------->
                                 <----------------------------------    1 – 1    TRAFFIC

:Wait
:Stop traffic
```

TEST DESCRIPTION	
1.	Start traffic to B and C.
2.	Send TFPs and TFAs with **<u>unusual</u>** ~~invalid~~ values to A (as described above). Check that these messages are discarded without impact on the traffic **(except for spare bits ≠ 0)**.
3.	Deactivate linkset 2 and check that **<u>C</u>** ~~B~~ becomes inaccessible.
4.	Send TFAs concerning C with **<u>unusual</u>** ~~invalid~~ values to A (as described above) and check that these messages are discarded without impact on the traffic.
5.	Check the indications are given by the system (except for SLC and spare bits 0).
6.	Stop traffic.

Test number 13.8

Modify the test as follows:

TEST NUMBER: 13.8	PAGE: 1 of 1

REFERENCE: Q.704 clause 15

TITLE: **<u>Unusual</u>** ~~Invalid~~ messages

SUBTITLE: **<u>Unusual</u>** ~~Invalid~~ Signalling-Route-Set-Test messages

PURPOSE: To check the actions of the system on reception of **<u>unusual</u>** ~~invalid~~ RST messages

PRE-TEST CONDITIONS: Link 1 – 1

CONFIGURATION: A	TYPE OF TEST: VAT	TYPE OF SP: STP

MESSAGE SEQUENCE:

```
                SP   A                                                    SP   B

     Link                                               Link
:Start traffic
     1 – 1      TRAFFIC       ----------------------------->
                             <-----------------------------    1 – 1    TRAFFIC
                             <-----------------------------    1 – 1    RST, PC = X
                                                                        (non-existing PC)
                             <-----------------------------    1 – 1    RST, PC = C
                                                                        (non-existing OPC)
                             <-----------------------------    1 – 1    RST, PC = C
                                                                        (spare bits ≢ 00)


     1 – 1      TRAFFIC       ----------------------------->
                             <-----------------------------    1 – 1    TRAFFIC
:Wait
:Stop traffic
```

TEST DESCRIPTION

1.	Start traffic to B and C.
2.	Send to A the **<u>unusual</u>** ~~invalid~~ messages described above and check that these messages are discarded without impact on the traffic **(except for spare bits ≠ 0)**.
3.	Stop traffic.

History

Document history			
May 1993	Public Enquiry	PE 42:	1993-05-24 to 1993-10-15
June 1996	Vote	V 106:	1996-06-24 to 1996-08-30