MTP LEVEL 3

TEST NUMBER:

7.15

PAGE:

1 of 1

REFERENCE:

Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE:

Automatic uninhibition with two links inhibited

PURPOSE: To check the actions of the system when two links are inhibited and when the third
(and last) link is deactivated

PRE–TEST CONDITIONS:
Links 1 – 1 and 1 – 2 inhibited (by A) and link 1 – 3 available

CONFIGURATION:
A

TYPE OF TEST:

VAT

TYPE OF SP:
ALL

MESSAGE SEQUENCE:

SP

SP

Link

Link

:Start traffic

1 – 3
TRAFFIC
 ------------------------>

<------------------------
1 – 3
TRAFFIC

1 – 3
:Deactivate (failure)

1 – X

LUN, SLC 1 – 1

------------------------>

and/or

LUN, SLC 1 – 2

------------------------>

(implementation dependent: at least one link must be uninhibited)

<------------------------

1 – X

LUA, SLC 1 – 1, and/or

<------------------------

1 – X

LUA, SLC 1 – 2

POINT RESTART PROCEDURE IS APPLIED IN A AND B (see note in 7.9)

1 – 1

TRAFFIC

 ------------------------>

and/or

<-----------------------
1 – 1

TRAFFIC

1 – 2

TRAFFIC

 ------------------------>
and/or

<-----------------------
1 – 2

TRAFFIC

:Wait

:Stop traffic

TEST DESCRIPTION

1.

Deactivate link 1 – 3.

2.

Check that at least one LUN is received and acknowledged with an LUA.

3.

Check that the traffic is restarted on linkset 1. Some messages have been lost.

4.

Stop traffic.

MTP LEVEL 3

TEST NUMBER:
                7.16

PAGE: 1 of 1

REFERENCE:
                Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE:
                Reception of traffic on an inhibited link

PURPOSE:

To check the actions of the system on reception of traffic on an inhibited link

PRE–TEST CONDITIONS:

        Link 1 – 1 inhibited by A, link 1 – 2 available

CONFIGURATION:

        A

TYPE OF TEST: VAT

TYPE OF SP:

        ALL

MESSAGE SEQUENCE:

SP

SP

  Link

Link

:Start traffic

   1 – 2
   TRAFFIC

------------------------>

<------------------------

1 – 2

<------------------------

1 – 1

:Wait

:Stop traffic

TEST DESCRIPTION

1.

Start traffic on link 1 – 1.

2.

Send traffic from B to A on the inhibited link 1 – 2. Check that the messages received in A are normally treated.

3.

Stop traffic.

MTP LEVEL 3

TEST NUMBER:

7.17.1

PAGE:

1 of 3

REFERENCE:

Q.704   § 10,   Fig. 28

TITLE:

Management inhibiting

SUB TITLE:Management inhibiting test – Normal procedure

PURPOSE: To check that the system performs correctly the management inhibiting test

PRE–TEST CONDITIONS:

CONFIGURATION: A

TYPE OF TEST: VAT, CPT

TYPE OF SP: ALL

MESSAGE SEQUENCE:

SP

SP

Link

Link

1 – X
 | LLT, SLC 1 – 1
 ------------->

 |
<-------------
1 – X
 | LRT, SLC 1 – 1

 |

 |

 | T22

 |

 |

| T23

|

|

--

|

--

1 – X
| LLT, SLC 1 – 1
-------------->

|
<-------------
1 – X
| LRT, SLC 1 – 1

|

|

|

|

|

|

|

TEST DESCRIPTION

1.

Check that an LLT is periodically sent by A and check (in VAT) that the duration of timer T22 is inside the specified range.

2.

Check that on the reception of an LRT, no action is taken in A.

3.

As compatibility test, check that an LRT is periodically sent from B to A.

MTP LEVEL 3

TEST NUMBER:
> 7.17.1 Continued

PAGE: 2 of 3

REFERENCE: Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE: Inhibit test procedure – Normal procedure

PURPOSE: See page 1

PRE–TEST CONDITIONS:
> Link 1 – 1 inhibited by B, other links are available

CONFIGURATION: A

TYPE OF TEST: VAT, CPT

TYPE OF SP: ALL

MESSAGE SEQUENCE:

                                            SP

                                             A

                                            SP

                                             B

   Link

Link

   1 – X   LRT, SLC 1 – 1
 ------------->

```
                    ½
                    ½ T22
                    ½
                    ∧
<-------------
1 – X

LLT, SLC 1 – 1

½

½ T23

½

∧


   1 – X    LRT, SLC 1 – 1
 ------------->



                    ½
                    ½ T22
                    ½

<-------------
1 – X

LLT, SLC 1 – 1

½

½ T22
```

TEST DESCRIPTION

1.

Check that an LRT is periodically sent by A and, in VAT, check that the duration of the timer T23 is inside the specified range.

2.

Check that, on the reception of an LLT, no action is taken in A.

3.

As compatibility test, check that an LLT is periodically sent from B to A.

MTP LEVEL 3

TEST NUMBER:
            7.17.1 Continued

PAGE:3 of 3

REFERENCE:
            Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE: Inhibit test procedure – Normal procedure

PURPOSE:See page 1

PRE–TEST CONDITIONS:

Link 1 – 1 inhibited by A and B. The other links are available

CONFIGURATION: A

TYPE OF TEST: VAT, CPT

TYPE OF SP: ALL

MESSAGE SEQUENCE:

SP

A

SP

B

Link

Link

1 – X

LRT, SLC 1 – 1
 ------------->
1 – X
LLT, SLC 1 – 1

½
<-------------

½

1 – X
LRT,
½SLC 1 – 1
------------->

½

½
½
½ T23
½
½T22
^
<-------------

1 – X
½T23
^

LLT, SLC 1 – 1
½
½T22

1 – X

^

LLT, SLC 1 – 1

------------->
<-------------

1 – X

LRT,

½SLC 1 – 1
^

LTT, SLC 1 – 1

1 – X

LRT,
½
½
½T23
½

½SLC 1 – 1
½
½T22

------------->
<-------------

1 – X

½
½
½T23

½
½T22
½

TEST DESCRIPTION

1.

Check that the LLT and LRT messages are periodically sent from A to B and from B to A.

MTP LEVEL 3

TEST NUMBER: 7.17.2

PAGE:1 of 1

REFERENCE: Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE: Inhibit test procedure – Reception of an LLT or LRT on an uninhibited link

PURPOSE:

To check the actions of the system on reception of an LLT or LRT on an uninhibited link

PRE–TEST CONDITIONS:
                        ink 1 – 1 available

CONFIGURATION: A

TYPE OF TEST:AT

TYPE OF SP: LL

MESSAGE SEQUENCE:

SP

A

SP

B

Link

Link

<------------------------

1 – 1

LLT, SLC 1 – 1

   1 – 1   LFU, SLC 1 – 1
 ------------------------>

            ½
            ½ T13
            ½
            ∧

<------------------------

1 – 1

LUN, SLC 1 – 1

   1 – 1   LUA, SLC 1 – 1

------------------------>

<------------------------
1 – 1

LRT, SLC 1 – 1

   1 – 1   LUN, SLC 1 – 1
------------------------>

        ½
        ½ T12
        ½
        ^

<------------------------ .

1 – 1

LUA, SLC 1 – 1

TEST DESCRIPTION

1.

Send an LLT from B to A and check that an LFU is received. Then, send an LUN and check that an LUA is received.

2.

Send an LRT from B to A and check that an LUN is received. Answer with an LUA.

MTP LEVEL 3

TEST NUMBER:

         7.17.3

PAGE:1 of 1

REFERENCE: Q.704 § 10, Fig. 28

TITLE: Management inhibiting

SUB TITLE: Inhibit test procedure – Reception of an LLT on a link locally inhibited

PURPOSE:To check the actions of the system on reception of an LLT on a link locally (not remotely) inhibited

PRE–TEST CONDITIONS:

Link 1 – 1 inhibited in A, other links are available

CONFIGURATION: A

TYPE OF TEST: VAT

TYPE OF SP: ALL

MESSAGE SEQUENCE:

SP

A

SP

B

Link

Link

<-------------------------

1 – X

LLT, SLC 1 – 1

   1 – X   LFU, SLC 1 – 1
------------------------>

       ½
       ½ T13
       ½
       ^

<------------------------

1 – X

LUN, SLC 1 – 1

   1 – X   LUA, SLC 1 – 1

<------------------------

TEST DESCRIPTION

1.

Send an LLT from B to A and check that an LFU is received as described above.

MTP LEVEL 3

TEST NUMBER:
            7.17.4

PAGE:1 of 1

REFERENCE: Q.704   § 10,   Fig. 28

TITLE: Management inhibiting

SUB TITLE: Inhibit test procedure – Reception of an LRT on a link remotely inhibited

PURPOSE:To check the actions of the system on reception of an LRT on a link remotely inhibited

PRE–TEST CONDITIONS:

Link 1 – 1 inhibited by B, other links are available

CONFIGURATION:
       A

TYPE OF TEST: VAT

TYPE OF SP:
    ALL

MESSAGE SEQUENCE:

SP

A

SP

B

Link

Link

```
<------------

1 – X

LRT, SLC 1 – 1


   1 – X    LUN, SLC 1 – 1
 ------------>


            ½
            ½ T12
            ½
            ^


<------------

1 – X

LUA, SLC 1 – 1
```

TEST DESCRIPTION

<div align="center">

1.

</div>

Send an LRT from B to A and check that an LUN is received as described above.

MTP LEVEL 3

TEST NUMBER:
      8.1

PAGE:1 of 1

REFERENCE: Q.704 § 11, 12.6, Fig. 46A

TITLE: Signalling traffic flow control

SUB TITLE: Reception of a TFC

PURPOSE:To check the actions of the system on reception of a TFC

PRE–TEST CONDITIONS:
      One or more link available

CONFIGURATION: A

TYPE OF TEST: VAT

TYPE OF SP: ALL

MESSAGE SEQUENCE:

SP

A

SP

B

   Link

Link

:Start traffic

1 – 1   TRAFFIC

------------>

<------------

1 – 1

TRAFFIC

<------------

1 – 1

TFC, DPC = C

:Wait

:Stop traffic

Note – This test requires further study.

TEST DESCRIPTION

1.

Start traffic to B and C.

2.

Send a TFC concerning C and check that this message is received correctly.

MTP LEVEL 3

TEST NUMBER:

8.2

PAGE:1 of 1

REFERENCE: Q.704   § 11, 12.6,   Fig. 46A

TITLE: Signalling traffic flow control

SUB TITLE: 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

.

<-----------------

1 – X

TFC, DPC = C

.

.

    1 – 1   TRAFFIC

(<n E) ---------->

2 – 1

 ------------------>

<-----------------

1 – 1

<-----------------
2 – 1

TRAFFIC

    2 – 1   TRAFFIC (<n E)

(<n E) ---------->

2 – 1

 ------------------>

<----------------

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 in B during the congestion.

3.

Reduce the load to 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.