MTP, LEVEL 2

TEST NUMBER:
                1.5

PAGE:1 OF 1

REFERENCE: Q.703 § 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

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

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

MTP, LEVEL 2

TEST NUMBER: 1.6

PAGE:1 OF 1

REFERENCE: Q.703 § 7   STD: Fig. 8; Fig. 9

TITLE: Link State Control – Expected signal
units/orders

SUB TITLE: Normal alignment – correct procedure (MSU)

PURPOSE: To check normal alignment procedure

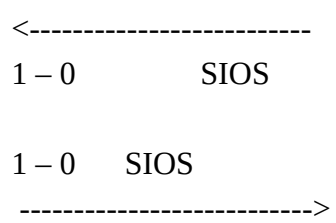PRE–TEST CONDITIONS: Link out of service

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

<--------------------------
1 – 0   FISU

1 – 0   MSU
  -------------------------->

TEST DESCRIPTION

1.

Start normal alignment procedure.

2.

Check link aligns and enters "In service" state.

3.

Check that "In service" state is maintained.

MTP, LEVEL 2

TEST NUMBER: 1.7

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 10.3   STD: Fig. 9; Fig. 17

TITLE: ink 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
 ------------------------>



1 – 0      SIN (one only)
 -------------------------->



1 – 0      SIN
 -------------------------->




<-------------------------
1 – 0



<-------------------------
1 – 0            FISU
```

TEST DESCRIPTION

1.

Send an SIO at B during normal proving period.

2.

Check that new normal proving period is entered.

MTP LEVEL 2

TEST NUMBER: 1.8

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 8   STD:
        Fig. 8

TITLE: Link State Control – Expected signal
units/orders

SUB TITLE: Normal alignment with PO set (FISU)

PURPOSE: To check the response following normal
alignment when PO has been set

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

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1 – 0   SIOS

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

                    :   set LPO

                    :   start

<-------------------------
1 – 0   SIO

1 – 0   SIO
------------------------->

<------------------------
1 – 0   SIN

1 – 0   SIN
 ----------------------->

<-------------------------
1 – 0   SIPO

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

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

1 – 0   SIPO

TEST DESCRIPTION

1.

Check that normal alignment is carried out with PLO set at A.

2.

Check that SIPO is returned when aligned, and that A stays in "processor outage" state.

3.

Repeat test with LPO set at B.

MTP, LEVEL 2

TEST NUMBER: 1.9

PAGE: 1 OF 1

REFERENCE: Q.703 §§ 7, 8   STD:
          Fig. 8

TITLE: Link State Control − Expected signal
units/orders

SUB TITLE: Normal alignment with PO set (MSU)

PURPOSE: To check the response following normal
alignment when PO has been set

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

\->

        : set LPO

        : start

<\-

1 – 0   SIO

1 – 0   SIO

 \->

<\-

1 – 0   SIN

1 – 0   SIN

 \->

<\-

1 – 0   SIPO

1 – 0   MSU

 \->

<\-

1 – 0   SIPO

TEST DESCRIPTION

1.

Check that normal alignment is carried out with LPO set at A.

2.

Check that SIPO is returned when aligned, and that A stays in "processor outage" state.

3.

Repeat test with LPO set at B.

MTP, LEVEL 2

TEST NUMBER:
                1.10

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 8
              STD: Fig. 8

TITLE:
        Link State Control – Expected signal units/orders

SUB TITLE:
            Normal alignment with PO set and clear

PURPOSE:
            To check the response following normal alignment when PO has been set and cleared

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




         :
    set LPO




      :   clear LPO




      :   start


<--------------------------
1 – 0          SIO


1 – 0    SIO
-------------------------->




<--------------------------
1 – 0          SIN


1 – 0    SIN
 -------------------------->
```

```
<--------------------------
1 – 0           FISU


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

TEST DESCRIPTION

1.

Check that normal alignment is carried out.

2.

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

MTP, LEVEL 2

TEST NUMBER:
            1.11

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 8
            STD: Fig. 8

TITLE:
    Link State Control – Expected signal units/orders

SUB TITLE:
    Set RPO when "Aligned not ready"

PURPOSE:
    To check the response following normal alignment when PO has been set

PRE–TEST CONDITIONS:
    Link out of service; ability to set PO

CONFIGURATION:
    1

TYPE OF TEST:
    VAT

EXPECTED SIGNAL UNIT SEQUENCE:

   SP
   B

   SP   A

Link

Link

<----------------------------
1 – 0   SIOS

1 – 0   SIOS
 ---------------------------->

      : set LPO

          :   set LPO

          :   start

```
<-----------------------------
1 – 0           SIO


1 – 0     SIO
------------------------------>




<-----------------------------
1 – 0           SIN


1 – 0     SIN
------------------------------>




<-----------------------------
1 – 0           SIPO


1 – 0     SIPO
 ------------------------------>
```

TEST DESCRIPTION

1.

Set LPO at A and B.

2.

Start alignment.

3.

Check that both LPO and RPO after alignment completes.

MTP, LEVEL 2

TEST NUMBER:
            12

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 8
            STD: Fig. 8

TITLE:
        Link State Control – Expected signal units/orders

SUB TITLE: SIOS received when "Aligned not ready"

PURPOSE:
            To check the response following normal alignment when PO has been set

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
  ------------------------->
```

```
              :  set LPO
```

```
              :  start
```

```
<--------------------------
1 – 0          SIO


1 – 0    SIO
-------------------------->
```

```
<--------------------------
1 – 0          SIN


1 – 0    SIN
 -------------------------->
```

```
<--------------------------
1 – 0          SIPO
```

```
        : stop
```

1 – 0   SIOS

`-------------------------->`

`<-------------------------`
1 – 0   SIOS

TEST DESCRIPTION

1.

Soon after alignment completes, A enters "Aligned not ready".

2.

Before alignment completes, stop command is given at B.

3.

Check that, on reception of SIOS, A enters "Out of service" state.

4.

Repeat test with LPO set at B.

MTP, LEVEL 2

TEST NUMBER:
1.13

REFERENCE: Q.703 §§ 7, 8
              STD: Fig. 8

TITLE: Link State Control – Expected signal units/orders

SUB TITLE:
          SIO received when "Aligned not ready"

PURPOSE:
          To check the response following normal alignment when PO has been set

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

:   set LPO

:   start

<--------------------------
1 – 0   SIO

1 – 0   SIO
 -------------------------->

<------------------------ -
1 – 0   SIN

1 – 0   SIN
 -------------------------->

<--------------------------
1 – 0   SIPO

1 – 0   SIO
 -------------------------->

<--------------------------
1 – 0   SIOS

TEST DESCRIPTION

1.

Soon after alignment completes, A enters "Aligned not ready".

2.

Before alignment completes at B, SIO is sent to A.

3.

Check that, on reception of SIO, A enters "Out of service" state.

4.

Repeat test with LPO set at B.

MTP, LEVEL 2

TEST NUMBER:
                1.14

PAGE:1 OF 1

REFERENCE: Q.703 §§ 7, 8
            STD: Fig. 8

TITLE:
        Link State Control – Expected signal units/orders

SUB TITLE:
    Set and clear LPO when "Initial alignment"

PURPOSE: To check normal alignment with PO set and clear during "Initial alignment"

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




               :   set LPO

1 – 0      SIN
 ------------------------>




               :   clear LPO



<------------------------
1 – 0          FISU

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




<------------------------
1 – 0          FISU
```

TEST DESCRIPTION

1.

Set LPO at A during "Initial alignment" state.

2.

Check A remains in "Initial alignment" state.

3.

Clear LPO before alignment completes at A.

4.

Check A enters "In service" state after normal alignment.

5.

Repeat the test at B.