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**Information technology –
Fibre Distributed Data Interface (FDDI) –
Part 25:
Abstract Test Suite for FDDI –
Station Management Conformance
Testing (SMT-ATS)**

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FOREWORD

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 9314-25 was prepared by Joint Technical Committee ISO/IEC JTC 1 *Information technology*, Subcommittee SC 25, *Interconnection of information technology equipment*.

ISO/IEC 9314 consists of the following parts, under the general title *Information technology – Fibre Distributed Data Interface (FDDI)*:

- *Part 1: Token Ring Physical Layer Protocol (PHY)*
- *Part 2: Token Ring Media Access Control (MAC)*
- *Part 3: Physical Layer Medium Dependent (PMD)*
- *Part 4: Single Mode Fibre Physical Layer Medium Dependent (SMF-PMD)*
- *Part 5: Hybrid Ring Control (HRC)*
- *Part 6: Station Management (SMT)*
- *Part 7: Physical Layer Protocol (PHY-2)*
- *Part 8: Media Access Control-2 (MAC-2)*
- *Part 9: Low-Cost Fibre – Physical Medium Dependent (LCF-PMD)*
- *Part 10: Token Ring Twisted Pair Physical layer Medium Dependent (TP-PMD)*
- *Part 13: Conformance Test Protocol Implementation Conformance Statement proforma (CT-PICS)*
- *Part 20: Physical Medium Dependent Conformance Testing (PMD-ATS)*
- *Part 21: Physical Layer Protocol Conformance Testing (PHY-ATS)*
- *Part 25: Abstract Test Suite for FDDI – Station Management Conformance Testing (SMT-ATS)*
- *Part 26: Media Access Control Conformance Testing (MAC-ATS)*

INTRODUCTION

The International Organization for Standardization (ISO) has developed a standard to define the procedures required for Conformance Testing. These procedures are set forth in ISO 9646, Parts 1-7. Part 3 defines the language syntax to be used for writing Abstract Test Suites (ATS), that language is Tree and Tabular, Combined Notation (TTCN).

The Station Management (SMT) Abstract Test Suite (ATS) directly supports the FDDI Protocol Implementation Conformance Statement (PICS) Proforma and works in correlation with three other FDDI ATS standards.

This ATS for FDDI SMT provides the test procedures and test cases required to test the station management protocol described in the SMT standards. SMT specified the local portion of the system management application process for FDDI, including the control required for proper operation of an FDDI station in an FDDI ring. SMT provided services such as connection management, station insertion and removal, station initialization, configuration management, fault recovery, communication protocol for external authority, scheduling policies and the collection of statistics. SMT interact with PMD, PHY, and MAC for testing.

The three ATS standards when combined with SMT, that make up the complete Conformance Test for the FDDI Protocol are:

- a) An ATS for FDDI Physical Medium Dependent (PMD) that provides a conformance test for FDDI PMD. PMD specifies the optical interface of FDDI stations. PMD is not a protocol standard and this ATS requires the measurement of physical quantities such as optical power, wavelength and signal jitter. The PMD ATS differs from the methodology of higher level protocol conformance tests written using the Tree and Tabular Combined Notation as specified by ISO 9643-3, because the TTCN notation does not provide a suitable vehicle for Physical Layer testing, where there is no concept of a protocol data unit and where physical quantities must be measured.
- b) An ATS for the FDDI Physical Layer Protocol (PHY) that provides a conformance test for FDDI PHY. PHY specifies the upper sublayer of the Physical Layer for the FDDI, including the data encode/decode, framing and clocking, as well as the elasticity buffer, smoothing and repeat filter functions. FDDI PHY, however, does contain several state machines and implements a protocol at the level of FDDI code symbols. The only physical quantity that must be measured in this conformance test is frequency. The PHY ATS cannot use the TTCN notation. A unique notation is developed in the PHY ATS for specifying test patterns and expected results in terms of FDDI code symbol strings.
- c) An ATS for FDDI Media Access Control (MAC) that provides a Conformance test for FDDI MAC. MAC specifies the lower sublayer of the Data Link Layer for FDDI. It specifies access to the medium, including addressing, data checking and data framing. MAC also specifies the receiver and transmitter state machines. Since MAC is a protocol that deals primarily with complete PDUs, the Tree and Tabular Combined Notation language specified in ISO 9643-3 is used to specify MAC protocol tests.

International Standard ISO/IEC 9314-25:1998, *Information technology - Fibre Distributed Data Interface (FDDI) - Station Management Conformance Testing (SMT-ATS)* was developed by ISO/IEC JTC 1/SC 25.

INFORMATION TECHNOLOGY – FIBRE DISTRIBUTED DATA INTERFACE (FDDI) –

Part 25: Abstract Test Suite for FDDI – Station Management Conformance Testing (SMT ATS)

1 Scope

This part of ISO/IEC 9314 contains the Abstract Test Suites for the Fiber Distributed Data Interface (FDDI) token ring Station Management (SMT) layer protocol. The SMT Protocol is extensive and very complex. In the development process, the protocol was broken into six separate areas. Those areas dealt with Physical Connection Management (PCM), Entity Coordination Management (ECM) Ring Management (RMT), Configuration Management (CMT), Frame Based Management (FBM) and Management Information Base (MIB).

This SMT ATS is divided along the same boundaries, with the exception that PCM and ECM are combined. Those two concepts are tested together. The formal description language used for Abstract Test Suite (ATS) development is Tree and Tabular Combined Notational (TTCN) and is defined in ISO 9646 Framework. TTCN is intended for higher layer protocol testing and requires the use of discrete Protocol Data Units (PDUs). The TTCN notation is used in the test cases for RMT, FBM and MIB. It cannot be used for PCM, ECM and CFM. These three protocols use line states as the method of conveying information.

The TTCN (P) is similar in structure to TTCN but changes the paradigm from PDUs to line states. A description of the concept of TTCN (P) can be found in the beginning of section 6, PCM.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9314. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 9314 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

ISO/IEC 9314-1:1989, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 1: Token Ring Physical Layer Protocol (PHY)*

ISO/IEC 9314-2:1989, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 2: Token Ring Media Access Control (MAC)*

ISO/IEC 9314-3:1990, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 3: Physical Layer Medium Dependent (PMD)*

ISO/IEC 9314-6:1998 *Information technology – Fibre Distributed Data Interface (FDDI) – Part 6: Station Management (SMT)*

ISO/IEC 9646 (all parts), *Information technology – Open Systems Interconnection – Conformance testing methodology and framework*

ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts*

ISO/IEC 9646-2:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract test suite specification*

3 Definitions

For the purposes of this part of ISO/IEC 9314, the following definitions apply.

- 3.1 Abstract Test Suite (ATS):** An ATS is a document, defined in ISO 9646, that depicts the suite of tests to be run by the test implementor to define conformance to a governing standard.

- 3.2 Frame Based Management (FBM):** FBM defines the frame formats and protocols used to manage FDDI stations on a ring in a peer-to-peer relationship.
- 3.3 Management Information Base (MIB):** The MIB provides the specification and capabilities of management information and its relationships to systems management.
- 3.4 Connection Management (CMT):** CMT controls the establishment and maintenance of an FDDI connection.
- 3.5 Physical Connection Management (PCM):** PCM controls initializations of a Physical connection, maintenance of the connection and closing of the connection.
- 3.6 Ring Management (RMT):** RMT monitors the MAC functions in an FDDI station and supports establishment and maintenance of an operational ring.

4 Convention and abbreviations

4.1 Conventions

4.2 Abbreviations

ATS:	Abstract Test Suite;
CFM:	Configuration Management;
F:	Fail (when used in the verdict column of the Dynamic Behavior tables);
I:	Inconclusive (when used in the verdict column of the Dynamic Behavior tables);
ILS:	Idle Line State;
IUT:	Implementation Under Test;
MAC:	Media Access Control;
MLS:	Master Line State;
P:	Pass (when used in the verdict column of the Dynamic Behaviour tables);
PCM:	Physical Connection Management;
PDU:	Protocol Data Unit defined in terms of SMT and MAC Frames;
PHY:	Physical Layer Protocol;
PICS:	Protocol Implementation Conformance Statement;
PIXIT:	Protocol Implementation extra Information for Testing;
TTCN:	Tree and Tabular Combined Notation;
TTCN(P):	Tree and Tabular Combined Notation for PCM & CFM;
QLS:	Quiet Line State;
ALS:	Active Line State;
HLS:	Halt Line State;
ERR:	Error;
RMT:	Ring Management;
MIB:	Management Information Base.

5 Timer definition

A set of timers, as described below, is used in the test suite, their values must be initialized prior to the beginning of test, unless a default value is specified.

T_REQ: the Target Token Rotation Timer

(TTRT) is configured in the IUT's MAC in units of μs . This value will be converted to units of 80 ns for MAC claim process.

T_REQ1: an alternate TTRT configured in the IUT's MAC in units of μs . This value will be converted to units of 80 ns for MAC claim process.

T_REQ2: an alternate TTRT configured in the Other's MAC in units of μs . This value will be converted to units of 80 ns for MAC claim process.

T_Max: the maximum token rotation time in μs .

D_Max: the maximum ring latency. The default value is 1773 μs .

T_Non_Op: time to allow ring recovery to occur before duplicate address conditions are examined. The default value is 1 s.

RM_React: maximum for the RMT state machine to recognize that transition conditions exist and to execute the appropriate transition. The default value is 83 ms.

T_Jam: time for which Jam Beacon is sent. The default value is 370 ms.

T_DBJ: time to start the second Beacon of the Double Beacon Jam after the first Beacon is sent. The default value is 82 ms.

T-Direct: time for which a Directed Beacon is sent before the Trace function is invoked. The default value is 370 ms.

T_Stuck: time to allow a Stuck Beacon to be sent, followed by the initiation of a Trace. The default value is 8 s.

T_Rmode: the maximum time allowable for Restricted Dialogue on the ring. The default value is zero seconds for Non-Used Restricted Dialogue.

T_Announce: the interval between sending Jam Beacons. The default value is 2 500 ms.

T_Limit: The rate-limiting interval for the Status Report Protocol. The default value is 2 s.

Topr: Time required for a test operator to initiate operation on the IUT, for example, triggering NIF request frame to be sent from the IUT. This is used in conjunction with the TTCN Implicit Send event for test coordination. This test suite uses a default value of 3 min.

The following are the expiration values of the timers used in PCM test cases. Whenever the name and the value correspond to ISO/IEC 9314-6 the reference is indicated.

TB_Min: Minimum Break time for link.

Range: $TB\_Min \geq 4.823 \text{ ms}$ with default values
Default: 5 ms (SMT PCM);

TB_Max: Break time before the BS_Flag is set. TB_Max shall be sufficiently large so that it will not be set inadvertently by noise generated by an optical bypass switch, which is bounded by MI_Max.

Range: $TB\_Max \geq 30.0 \text{ ms}$ with default values
Default: 50 ms (SMT PCM);

MI_Max: Maximum Optical Bypass media interruption time. The range and default value for MI_Max is specified in the PMD document.

Range: $MI\_Max \leq 15.0 \text{ ms}$
Default: 15 ms (SMT PCM)

C_Min: Minimum time required to remain in the Connect State to ensure that the other end has recognized Halt Line State.

Range: $C\_Min \geq 1.2 \text{ ms}$ with default values
Default: 1.6 ms (SMT PCM);

C_Second: A timer used to check PCM wait for a change in the Connect State since it enters Connector State from Break State and has not yet received HLS.

Default: 1 s;

PC_React: Maximum time for PCM to make a state transition to Break upon receiving QLS.

Range: $PC\_React \leq 3.0 \text{ ms}$
 Default: 3 ms (SMT PCM);

LS_Min: Length of time continuous reception of ILS is required to be used by PCM.

Range: $25 \mu\text{s} \geq LS\_Min \geq 0.48 \mu\text{s}$ with default values
 Default: $0.48 \mu\text{s}$ (SMT PCM);

LS_Max: Maximum time to reestablish the correct line state as specified in the PHY document.

Range: $LS\_Max \leq 25 \mu\text{s}$
 Default: $25 \mu\text{s}$ (SMT PCM);

TL_Min: Minimum time to transmit a PHY line state before advancing to the Next PCM state.

TL-Min is set to twice the time required for line state recognition (LS_Max).

Range: $TL\_Min \geq 50 \mu\text{s}$ with default values
 Default: $50 \mu\text{s}$ (SMT PCM);

N_Second: A Timer used to check PCM wait to receive ILS in Next State

Default: 1 s;

LS_Less: A timer which measures the amount of time that it take the IUT to make a correct Line State transition.

Default: $0.24 \mu\text{s}$;

T_Out: Signaling timeout. The minimum time that a PCM State Machine will remain in a state awaiting a line state change. When a line state change is expected and no transition is made in T_Out time, a transition shall be made to the Break State.

Range: $T\_Out \geq 100 \text{ ms}$
 Default: 100 ms (SMT PCM);

LC_Short: Short Link Confidence Test Time

Range: $LC\_Short > 5 \cdot 10(4) \text{ ns}$
 Default: 50 ms (SMT PCM);

LC_Medium: Medium Link Confidence Test Time.

Range: $LC\_Medium \geq 50 \cdot 10(LE\_Cutoff) \text{ ns}$
 Default: 500 ms (SMT PCM);

LC_Long: Long Link Confidence Test Time.

Range: $LC\_Long \geq 500 \cdot 10(LE\_Cutoff) \text{ ns}$
 Default: 5 s (SMT PCM);

LC_Extended: Extended Link Confidence Test Time.

Range: $LC\_Extended \geq 50 \text{ s}$
 Default: 50 s (SMT PCM);

T_Next(7): LC_Test, Time for Link Confidence Test (SMT PCM);

B_Second: A timer used to check when IUT detects Link Error Rate exceeds the LE_Cutoff threshold; it enters Break State and transmits QLS.

Default: 1 s;

T_Next(9): Time for the optional MAC Local Loop to prevent deadlock. This allows sufficient time for MAC recovery process completion and the exchange of neighbor information frames.

Range: $T\_Next(9) \geq 200 \text{ ms}$
 Default: 200 ms (SMT PCM).

NS_Max: The maximum length of time that noise as measured by TNE, is allowed before a connection is broken down and restarted.

Range: $5.8 \text{ ms} \geq \text{NS\_Max} \geq 0.7255 \text{ ms}$
 Default: 1.3 ms (SMT PCM);

Trace_Max: Maximum propagation time for a Trace on an FDDI topology. Trace_Max places a lower bound on the detection time for a nonrecovering ring (T_Stuck)

Range: $\text{Trace\_Max} \geq 6.001773 \text{ s}$ with default values
 Default: 7.0 s

6 Physical Connection Management (PCM) & Entity Coordination Management (ECM) - Abstract Test Suites

6.1 Notation for PCM Tests

PCM is implemented as a complex state machine and it is therefore highly desirable to use a formal notation to specify precisely conformance tests. One such formal notation is the Tree and Tabular Combined Notation (TTCN) as defined in ISO 9646-3. However PCM does not fit the TTCN paradigm well. The primary problem is that TTCN, which is intended for higher level protocol tests, requires that the protocol uses discrete Protocol Data Units (PDUs). It assumes that these PDUs are queued when received and that the TTCN "?" operator tests the PDU at the front of the receive queue. PCM signaling does not use PDUs but instead uses line states as the method of conveying information.

This document uses a notation called TTCN(P) to express the PCM tests. It is similar to TTCN, but changes the paradigm somewhat and simplifies the notation. The key to understanding TTCN(P) is that the Implementation Under Test (IUT) is always considered to take on one of the following values:

- Quiet Line State (QLS)
- Idle Line State (ILS)
- Halt Line State (HLS)
- Master Line State (MLS)
- Active Line State (ALS)
- Noise Line State (NLS)
- Line State Unknown (LSU)

No other values can be set.

NLS is defined to be any condition which occurs in any of the other line states, which satisfies the conditions for termination of that state but does not satisfy the criteria for entry into any of the other line state. The tester never transmits NLS, and, in most cases the reception of NLS causes the IUT to fail the test.

The TTCN(P) "?" operator tests the contents of a received line state register in the tester, for example, the test ?ILS is satisfied if the current line state is ILS.

The tester is either transmitting a predefined MAC frame, repeating symbols received when its input is in ALS or is continuously transmitting one of the following:

- QLS
- ILS
- HLS
- MLS
- ERR
- Port_Type

ERR is a special pattern transmitted during the Link Confidence Test.

Port_Type is used to mean either HLS or MLS as appropriate. This notation is used to reduce the number of separate routines. In particular the port type, which is signaled in the Signal States when

$n=1$ and $n=2$, is irrelevant to many test cases. Therefore the tests include subroutines, whose purpose is simply to step the IUT to the state where the actual test begins, use the Port_Type notation to allow the same routine to serve several port types.

A TTCN(P) test procedure consists of a sequence of event lines specifying an event or an action to take place at a given instant during the testing. The time progression is represented by the indentation number to the left of every event line in the form of [1], [2], etc. An event line may be one of the following: start transmitting line state symbols, check the current line state, start and test expiration of timers, invoke other test procedures (tree attachment), and a GOTO statement. These events are written in the format shown below:

```
[n] !line-state      /* Start transmitting
line-state symbols as specified, e.g. HLS */
[n] !Repeat          /* Repeat input symbols received while input is in ALS, starting with the J symbol
and stopping with the first V, I or H symbol. When V or H symbols are encountered the Repeat Filter
rules of PHY are observed */
[n] !Packet           /* cause the tester to transmit a single MAC Packet; when transmission of the
packet is complete, the tester transmits ILS */
[n] ?line-state       /* check if the current line state is in a specific state */
[n] ?OTHERWISE        /* any line state */
[n] START timer-name /* start the timer with pre-specified duration */
[n] ?TIMEOUT timer-name /* test for
expiration for the specified timer */
[n] +test-procedure-name /* call another test procedure */
[n] GOTO label         /* goto another event line with indicated label */
```

As in many programming languages, a comment is a character string of the following form:

```
/* Text of comment */
```

A label for an event line is denoted by a sequence of letters ending with a ":", and appears after the indentation level number, for example,

```
[3] L1:?TIMEOUT C_min.
```

The "!" Transmit event means that the tester begins sending the indicated line state and continues sending it until another "!" operator is encountered.

The START timer event may be combined with the Transmit (!) or Line state check (?) event lines. Multiple timers may be started on the same event. For example,

```
[1] !QLS START TB_Min, START TB_Max.
```

The event lines are evaluated starting from the first indentation level, [1]. There may be several event lines at each indentation level. These event lines represent a set of alternatives and the tester must wait for at least one of them to occur before proceeding to the next indentation level. If multiple events occur at the same time, the event line appearing first applies. A transmit event line (!) is considered to have occurred or completed when the transmission of the specified line state symbols is initiated. A line state check event (?) is satisfied when the current line state matches the specified state.

When an event line is satisfied, the tester moves on to the next indentation level following that event line. If there is no higher level event line, then the test is complete. If a completed event line contains a verdict specification, the test is also considered completed, even if there is a higher indentation level event line following.

The event lines, with the exception of GOTO, SEND and Tree Attachment Event, may assign one of these verdicts: PASS, FAIL, or INCONCLUSIVE.

A GOTO event can only specify the labels appearing on the first line of an indentation level that is lower or equal to the current indentation level.

An event line that invokes another procedure is considered not satisfied if none of the first level event lines in that procedure have occurred.

Note that PCM is intended to operate in very noisy environments (perhaps as bad as a BER of 10^{-2} and does not generally react to brief noise events. We do not simulate noise in our PCM tests except for the Link Quality Tests; rather we expect that the IUT and the tester transmit nothing but clean line states without any errors. If the IUT transmits NLS or LSU it is always grounds for failure.

"TTCN(P) does not use the normal TTCN Constraints. This is because the Constraints section of TTCN uses PDUs rather than Line States to define Constraints.

An example illustrates the TTCN(P) notation. This example is the test case `To_Next` specified in 6.2.1.5:

Procedure:

```
[1]+Start_To_Connect
[2] !HLS Start C_Min
[3] A:?Timeout C_Min /*Comment*/
[4] B:?HLS
[5] Goto B
[4] ?ILS Pass
[4] ?Otherwise Fail(2)
[3] ?HLS
[4] Goto A
[3] ?Otherwise Fail(1)
```

In `To_Next` the procedure `Start_To_Connect` is attached by the first statement:

[1]+Start_To_Connect, which is specified in 6.3.2, is:

Procedure:

```
[1]!QLS Start TB_Min
[2] ?Timeout TB_Min
[3] A:?QLS
[4] Goto A
[3] ?HLS /*Comment*/
[3] ?Otherwise Inconclusive
```

The key to understanding the attachment is that the attaching test is attached to each of the terminal leaves of the attached routine. A terminal leaf is any statement other than a GOTO that has no lower layer and is not qualified with Pass, Fail or Inconclusive verdict. In `Start_To_Connect` there is one terminal leaf:

```
[3] ?HLS
```

Each test has a specific purpose. The purpose of `To_Next` is to verify that the IUT remains in the Connect State for at least `C_Min` before going to the Next State. `Start_To_Connect` is used simply to bring the IUT to the Connect State. Therefore it is a simple routine to progress a correct IUT to the Connect State and does not attempt to test all the requirements of PCM to get to the Connect State; these are tested elsewhere in an incremental fashion.

The first statement of `Start_To_Connect`, and the only statement at level 1 is:

```
[1]!QLS Start TB_Min
```

This statement causes the tester to transmit QLS and to start the `TB_Min` timer.

Control falls to the next statement at level 2:

```
[2] ?Timeout TB_Min
```

This statement causes the tester to wait, still sending QLS, until the timer `TB_Min` expires, since there is no alternative at this level. This should cause the IUT to go to the Break State. There are three alternatives at level 3:

```
[3] A:?QLS
[3] ?HLS
[3] ?Otherwise Inconclusive
```

Alternatives at the same level are evaluated in order and then the evaluation is repeated until one of the alternatives becomes true. One of the alternatives is always true because of the otherwise statement. At this point the IUT should either be transmitting QLS or HLS; if not, something is wrong. However, because this is not the point of the test, we label the otherwise "Inconclusive" rather than "fail". If we receive QLS, then we fall down to the following statement at level 4:

[4] Goto A

This statement just returns the tester to level 3 at A and we loop back and evaluate the same three alternatives. Eventually the IUT should transmit HLS (signifying that it has entered the Connect State, the second alternative became true, Start_To_Connect has reached a terminal leaf), and control passes to the attaching test routine **To_Next**.

When the Start_To_Connect completes control passes to level 2, where there is one alternative:

[2] !HLS Start C_Min

This statement causes the tester to transmit HLS and to start the timer C_Min. Control then passes to level 3 and the following alternatives:

[3] A:?Timeout C_Min /*Comment*/

.

[3] ?HLS

[3] ?Otherwise Fail(1)

The test purpose is to see if the IUT remains in the Connect State for at least C_Min before going to the Next State, therefore if any signal other than HLS (signifying Connect State) is received before C_Min expires, the Otherwise statement causes the test to fail. The "(1)" is a parameter used to distinguish between possibly different failure points. As long as HLS is received control will fall to a GOTO at level 4, which loops control back to B:

[4] Goto A

Finally, when C_Min times out, control falls to:

[4] B:?HLS

[5] Goto B

[4] ?ILS Pass

[4] ?Otherwise Fail(2)

As long as HLS is received, the tester continues to loop back to level 4. If ILS is received, then the IUT has made the transition to the Next State after waiting for at least C_Min and this test is passed. If anything else is received, then the test is failed.

Note that we can expand the attachment of Start_To_Connect by To_Next and get the following equivalent test routine:

Procedure:

[1]!QLS Start TB_Min

[2] ?Timeout TB_Min

[3] A:?QLS

[4] Goto A

[3] ?HLS

[4] !HLS Start C_Min

[5] B:?Timeout C_Min /*Comment*/

[6] C:?HLS

[7] Goto C

[6] ?ILS Pass

[6] ?Otherwise Fail(2)

[5] ?HLS

[6] Goto B

[5] ?Otherwise Fail(1)

[3] ?Otherwise Inconclusive

6.2 Test Cases

6.2.1 Connection Initialization Test:

6.2.1.1 Case-ID: To_Connect_1

Purpose: Verify that IUT enters the Connect state after remaining in the Break state for at least TB_Min when it receives QLS.

Test Setup: See figure 1.

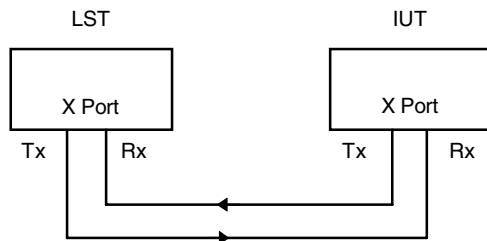


Figure 1 - Tester Configuration for Indicated Cases

Procedure:

```
[1]+Init /*Comment(1)*/
[2] !QLS Start TB_Min /*Comment(2)*/
[3] A:?Timeout TB_Min
[4] B:?QLS
[5] Goto B
[4] ?HLS Pass
[4] ?Otherwise Fail(2)
[3] ?QLS
[4] Goto A
[3] ?Otherwise Fail(1)
```

Extended Comments:

- (1) The Init function (6.3.1 of this document) is called to let the IUT start from the Break State.
- (2) In the Break State, the Tester transmits QLS, starts the timer TB_Min to ensure that the IUT remains in the Break State for at least TB_Min. (PC-13)

Reasons for Failure:

- (1) Initially, the IUT is in the Break State while QLS is transmitted for at least TB_Min. If the IUT does not transmit QLS within TB_Min, then the IUT fails.
- (2) The IUT transmits QLS while in the Break State and HLS when it enters the Connect State. Any other output is invalid.

6.2.1.2 Case-ID: To_Connect_2

Procedure:

```
[1]+Init/*Comment(1)*/
[2] !HLS Start TB_Min /*Comment(2)*/
[3] A:?Timeout TB_Min
[4] B:?QLS
[5] Goto B
[4] ?HLS Pass
[4] ?Otherwise Fail(2)
[3] ?QLS
[4] Goto A
[3] ?Otherwise Fail(1)
```

Extended Comments:

- (1) The Init function (6.3.1 of this document) is called to let the IUT start from the Break state.
 (2) In the Break state, the Tester transmits HLS, starts the timer TB_Min to ensure that the IUT remains in the Break state for at least TB_Min. (PC-13)

Reasons for Failure:

- (1) IUT must transmit QLS for TB_Min at the beginning of this procedure. If it does not meet this requirement then the IUT fails.
 (2) After remaining in the Break State for longer than TB_Min, the IUT may either stay in Break or change to Connect. If the IUT transmits any line state other than QLS or HLS, the test fails.

6.2.1.3 Case-ID: Wait_for_Connect

Purpose: Show that the IUT progresses to Connect from the Break State and remains in the Connect State until HLS is received.

Test Setup: See figure 1.

Procedure:

```
[1]+Init
[2] !QLS
[3] A:?QLS
[4]   Goto A
[3] ?HLS /*Comment(1)*/
[4]   Start C_Second /*Comment(2)*/
[5]   B:?Timeout C_Second      Pass
[5]   ?HLS
[6]   Goto B
[5]   ?Otherwise              Fail(2)
[3] ?Otherwise              Fail(1)
```

Extended Comments:

- (1) IUT enters the Connect State from the Break State and transmit HLS. (Connect_Actions)
 (2) In this step, the IUT is in the Connect State, it is going to receive a sequence of HLS to process to the Next State. At this point, The Tester keeps sending QLS to the IUT to see what happen on the IUT. (PC-33)

Reasons for Failure:

- (1) IUT transmit QLS when it enters the Break State. After TB_Min, it must enter the Connect State and transmit HLS. If the IUT does not transmit QLS followed by HLS then the IUT fails.
 (2) When the IUT enters the Connect state, it will enter the Next state after receiving sufficient HLS. The tester remains in the Break state which should cause the IUT to remain in the Connect state forever. If the IUT transmits other than HLS then it is failed.

6.2.1.4 Case-ID: Connect_Error

Purpose: Verify that the IUT enters the Break State if the ILS is received before HLS is received in the Connect State.

Test Setup: See figure 1.

Procedure:

```
[1]+Start_To_Connect /*Comment*/
[2] !ILS Start T_Out
[3] A:?Timeout T_Out      Fail(1)
[3] ?HLS
[4]   Goto A
[3] ?QLS                  Pass
[3] ?Otherwise            Fail(2)
```

Extended Comments: The IUT is in the Connect State (see 6.3.2).

Reasons for Failure:

- (1) If the IUT does not enter the Break State within T_Out when ILS is received before HLS is received, the IUT fails. (PC-33, PC-31b)
- (2) IUT may either be in the Connect State (not changed to Break State yet) or in the Break State otherwise it is failed.

6.2.1.5 Case-ID: To_Next

Purpose: Verify that the IUT remains in the Connect State for at least C_Min before entering the Next State.

Test Setup: See figure 1.

Procedure:

```
[1]+Start_To_Connect
[2] !HLS Start C_Min
[3] A:?Timeout C_Min /*Comment*/
[4] B:?HLS
[5] Goto B
[4] ?ILS Pass
[4] ?Otherwise Fail(2)
[3] ?HLS
[4] Goto A
[3] ?Otherwise Fail(1)
```

Extended Comments:

IUT enters the Connect State from the Break State and must remain in the Connect State for at least C_Min. (PC-33, PC-34)

Reasons for Failure:

- (1) When the IUT enters the Connect State, it remains for at least C_Min. If the C_Min timer does not timeout and the IUT does not transmit HLS then the IUT fails.
- (2) After C_Min, the IUT may stay in the Connect State or enter the Next State. If the IUT transmits a Line State other than HLS or ILS then the IUT fails.

6.2.1.6 Case-ID: Next_0

Purpose: Verify that the IUT remains in the Next State for at least TL_Min.

Test Setup: See figure 1.

Procedure:

```
[1]+Start_To_Next /*Comment*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min
[4] B:?ILS
[5] Goto B
[4] ?MLS Pass
[4] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)
```

Extended Comments: IUT is in the Next State with n=0.

Reasons for Failure:

- (1) Initially, the IUT is in the Next State, ILS is transmitted for at least TL_Min. After TL_Min, the IUT may remain in the Next or enter the Signal State. If the IUT does not transmit ILS and TL_Min is not expired, then the IUT fails. (PC-44b, Next_Actions)
- (2) After TL_Min, the IUT may remain in the Next State or enter the Signal State. If the IUT does not transmit ILS or MLS, then the IUT fails.

6.2.1.7 Case-ID: Wait_In_Next

Purpose: Verify that the IUT will not enter the Signal State until ILS is received for at least LS_Min.

Test Setup: See figure 1.

Procedure:

```
[1]+Start_To_Next
[2] !ILS Start LS_Less, Start N_Second
[3] A:?Timeout LS_Less /*Comment(1)*/
[4] !MLS /*Comment(2)*/
[5] B:?Timeout N_Second      Pass
[5] ?ILS /*Comment(3)*/
[6] Goto B
[5] ?QLS                      Pass
[5] ?Otherwise                Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise                Fail(1)
```

Extended Comments:

- (1) LS_Less is a timer which is set to half the time required for LS_Min (the default value of LS_Less is 0.24 microseconds). It is to verify that the IUT will wait in the Next State without changing to the Signal State (the Tester sends ILS for 0.24 microseconds) unless it receives ILS for at least LS_Min. (0.48 microseconds)
- (2) Tester continuously transmits MLS to the IUT.
- (3) IUT will stay in the Next State, if ILS is not received for longer than LS_Min. (PC-44a, PC-44b)

Reasons for Failure:

- (1) IUT does not remain in the Next State to transmit ILS or LS_Less is not expired.
- (2) If the IUT does not receive sufficient ILS, the IUT enters the Next State from the Connect State, it must wait to receive enough ILS. So, if the IUT does not transmit ILS (IUT may not remain in the Next State) and the N_Second timer is not expired then the IUT fails. (PC-44a, PC-44b)

6.2.1.8 Case-ID: Next_Error1

Purpose: Verify that the IUT transitions from the Next state to Break, if QLS is received. (PC-41b)

Test Setup: See figure 1.

Procedure:

```
[1]+Start_To_Next
[2] !QLS Start PC_React
[3] A:?Timeout PC_React      Fail(2)
[3] ?QLS                      Pass
[3] ?ILS
[4] Goto A
[3] ?Otherwise                Fail(1)
```

Reasons for Failure:

- (1) IUT does not transmit ILS, QLS and PC_React is not expired.
- (2) IUT does not enter the Break State within PC_React when QLS is received. (PC-41b, Next_Error, Break_Actions)

6.2.1.9 Case-ID: Next_Error2

Purpose: Verify that the IUT transitions from the Next state to Break, if T_Out expires prior to the IUT receiving ILS, with n > zero. (PC-41b)

Test Setup: See figure 1.

Procedure:

```

[1]+To_Next_0 /*Comment*/
[2] !MLS Start T_Out
[3] A:?Timeout T_Out
[4]   ?QLS                      Pass
[4]   ?Otherwise                Fail(2)
[3] ?ILS
[4]   Goto A
[3]   ?Otherwise                Fail(1)

```

Extended Comments: The IUT enters the Next State with n=1.

Reasons for Failure:

- (1) IUT does not transmit ILS or T_Out is not expired.
- (2) IUT does not enter the Break State from Next because ILS has not been received for T_Out and n is greater than zero since entering the Next State. (Next_Error, Break_Actions)

6.2.1.10 Case-ID: Signal_Error1

Purpose: Verify that the IUT transitions from the Signal state to Break if QLS is received. (PC-51b)

Test Setup: See figure 1.

Procedure:

```

[1]+Start_To_Next /*Comment(1)*/
[2] !ILS
[3] A:?ILS /*Comment(2)*/
[4]   Goto A
[3] ?MLS /*Comment(3)*/
[4]   !QLS Start PC_React
[5]   B:?Timeout PC_React      Fail(2)
[5]   ?MLS
[6]   Goto B
[5]   ?QLS                    Pass
[5]   ?Otherwise              Fail(3)
[3]   ?Otherwise              Fail(1)

```

Extended Comments:

- (1) IUT is in Next State with n = 0.
- (2) Tester keeps receiving ILS from the IUT until the IUT changes to the Signal State and transmits MLS.
- (3) IUT enters the Signal State and transmits MLS. (PC-54, T_Val(0), Signal_Actions)

Reasons for Failure:

- (1) Initially, the IUT is in the Next State, ILS is transmitted. After TL-Min, the IUT enters the Signal State. If the IUT does not transmit ILS, MLS then the IUT fails.
- (2) IUT does not enter the Break State while QLS is received for PC_React in the Signal State. (PC-41b, Next_Error, Break_Actions)
- (3) IUT does not transmit QLS, MLS or PC_React has not timed out.

6.2.1.11 Case-ID: Signal_Error2

Purpose: Verify that the IUT transitions from the Signal state to the Break state if the MLS or HLS has not been received for a period T_Out. (PC-51b)

Test Setup: See figure 1.

Procedure:

```

[1]+Start_To_Next /*Comment(1)*/
[2] !ILS
[3] A:?ILS /*Comment(2)*/
[4]   Goto A
[3] ?MLS /*Comment(3)*/
[4]   Start T_Out
[5]   B:?Timeout T_Out
[6]     ?QLS                      Pass
[6]     ?Otherwise                Fail(3)
[5]     ?MLS
[6]     Goto B
[5]     ?Otherwise                Fail(2)
[3]     ?Otherwise                Fail(1)

```

Extended Comments:

- (1) IUT enters the Next State with n=0.
- (2) Tester keeps receiving ILS until IUT enters the Signal State and transmits MLS.
- (3) IUT enters the Signal State and transmits MLS. (PC-54, T_Val(0), Signal_Actions)

Reasons for Failure:

- (1) Initially, the IUT is in the Next State transmitting ILS for at least TL_Min. The IUT enters the Signal State and transmits MLS. If the IUT does not transmit ILS or MLS, then the IUT fails.
- (2) If the IUT does not transmit MLS, the test fails.
- (3) If MLS is not received within T_Out, the IUT transitions to the Break State and transmits QLS. If the IUT does not transmit QLS, the test fails. This is a test of the break state response. (PC-55a, PC-55b, PC-51b)

6.2.1.12 Case-ID: To_Pseudo_0

Purpose: In this procedure, the Tester enters the Signal State before the IUT does, and the IUT must enter the Signal State later.

Test Setup: See figure 1.

Procedure:

```

[1]+Start_To_Next
[2] !ILS Start LS_Min
[3] A:Timeout LS_Min
[4]   !MLS Start T_Out
[4]   B:?Timeout T_Out          Fail(3)
[5]   ?ILS
[6]   Goto B
[5]   ?MLS                      Pass
[5]   ?Otherwise                Fail(2)
[3]   ?ILS
[4]   Goto A
[3]   ?Otherwise                Fail(1)

```

Reasons for Failure:

- (1) Initially, the Tester enters the Next State the same time as the IUT does. After ILS is transmitted for LS_Min, the Tester enters the Signal State without waiting for IUT change. The IUT must enter the Signal State later, if the IUT does not transmit ILS (IUT is not in the Next State) or LS_Min is not expired then the IUT fails. (PC-44a, PC-44b)
- (2) IUT does not transmit ILS or MLS (IUT is in the Next State in the beginning of this procedure, then it will enter the Signal State and transmit MLS). (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)
- (3) IUT stuck in the Next state.

6.2.2 Port Dependent Tests:

6.2.2.1 Case-ID: A_Next_1

Purpose: Verify that the IUT transmits MLS when its port type is A with n=1.

Test Setup: See figure 2.

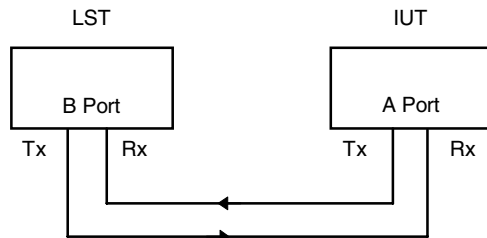


Figure 2 - Tester Configuration for Indicated Cases

Procedure:

```

1]+To_Next_0 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail
  
```

Extended Comments: IUT is in the Next State with n=1.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State and ILS is transmitted. Prior to T_OUT, the IUT transitions to the Signal State and transmits MLS to signal its port type is A or B. If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45) Next_Actions, Signal_Actions)

6.2.2.2 Case-ID: A_Next_2

Purpose: Verify that the IUT transmits MLS when its port type is A with n=2.

Test Setup: See figure 2.

Procedure:

```

[1]+To_Next_1 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail
  
```

Extended Comments: IUT is in the Next State with n=2.

Reasons for Failure:

The IUT signals MLS when n=2 and its port type is A. If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions).

6.2.2.3 Case-ID: B_Next_1

Purpose: Verify that the IUT transmits MLS when its port type is B with $n=1$.

Test Setup: See figure 3.

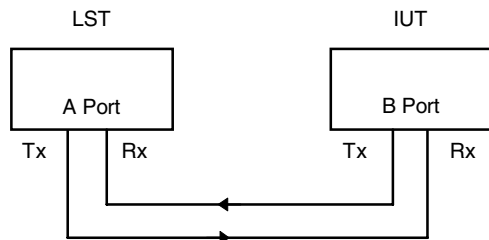


Figure 3 - Tester Configuration for Indicated Cases

Procedure:

```
[1]+To_Next_0 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with $n=1$.

Reasons for Failure:

Initially, the IUT is in the Next State with $n=1$ and ILS is transmitted, the IUT should enter the Signal State and transmit MLS (IUT's port type is B), if not, then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.2.4 Case-ID: B_Next_2

Purpose: Verify that the IUT transmits HLS when its port type is B with $n=2$.

Test Setup: See figure 3.

Procedure:

```
[1]+To_Next_1 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with $n=2$.

Reasons for Failure:

The IUT signals HLS when $n=2$ and its port is B. If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.2.5 Case-ID: S_Next_1

Purpose: Verify that the IUT transmits HLS when its port type is S with $n=1$.

Test Setup: See figure 4.

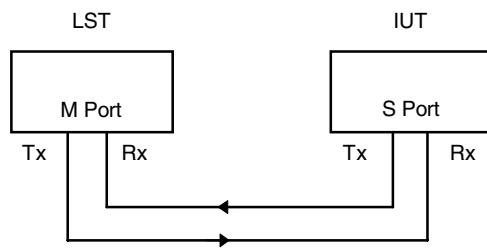


Figure 4 - Tester Configuration for Indicated Cases

Procedure:

```

[1]+To_Next_0 /*Comment*/
[2] !ILS
[3]  A:?ILS
[4]   Goto A
[3]  ?HLS           Pass
[3]  ?Otherwise     Fail

```

Extended Comments: IUT is in the Next State with n=1.

Reasons for Failure:

Initially, the IUT is in the Next State and transmitting ILS. The IUT transitions to the Signal State and transmits HLS (IUT's port type is S). If the IUT does not transmit ILS or HLS, then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.2.6 Case-ID: S_Next_2

Purpose: Verify that the IUT transmits MLS when its port type is S with n=2.

Test Setup: See figure 4.

Procedure:

```

[1]+To_Next_1 /*Comment*/
[2] !ILS
[3]  A:?ILS
[4]   Goto A
[3]  ?MLS           Pass
[3]  ?Otherwise     Fail

```

Extended Comments: IUT is in the Next State with n=2.

Reasons for Failure:

IUT must signal MLS when n=2 and its port type is S. If the IUT does not transmit ILS or MLS, then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.2.7 Case-ID: M_Next_1

Purpose: Verify that the IUT transmits HLS when its port type is M with n=1.

Test Setup: See figure 5.

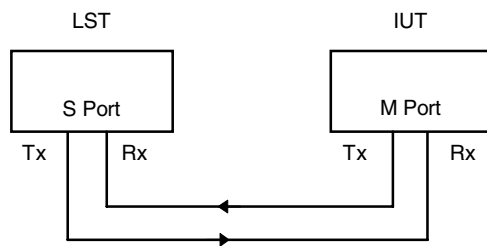


Figure 5 - Tester Configuration for Indicated Cases

Procedure:

```
[1]+To_Next_0 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with n=1.

Reasons for Failure:

Initially, the IUT is in the Next State and transmitting ILS. The IUT transitions to the Signal State and transmits HLS. If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.2.8 Case-ID: M_Next_2

Purpose: Verify that the IUT transmits HLS when its port type is M with n=2.

Test Setup: See figure 5.

Procedure:

```
[1]+To_Next_1 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with n=2.

Reasons for Failure:

IUT signals HLS when n=2 and its port type is M. If the IUT does not transmit ILS or HLS, then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.3 Connection Policy tests:

6.2.3.1 Case-ID: Valid_Connection

Purpose: Verify that the IUT transmits HLS to indicate the station has a policy which allows the connection for the configuration listed below.

Test Setup: A to A, A to B, A to S, B to A, B to B, B to S, S to A, S to B, S to S, S to M, M to A, M to B, M to S, A to M, B to M.

Procedure:

```

[1]+To_Next_2 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail

```

Extended Comments: IUT is in the Next State with n=3.

Reasons for Failure:

Initially, the IUT is in the Next State with n=3 and ILS transmitting. PCM Pseudo Code initiates the transitions from Next_Action to Signal state and HLS is transmitted to signal the accepted connection (PC-45). If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.3.2 Case-ID: Undesirable_Connection

Purpose: Verify that the IUT transmits MLS to indicate the station has a policy which rejects the connection for the configuration listed below.

Test Setup: A to A, A to B, A to S, B to A, B to B, B to S, S to A, S to B, S to S, S to M, M to A, M to B, M to S, A to M, B to M.

Procedure:

```

[1]+To_Next_2 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail

```

Extended Comments: IUT is in the Next State with n=3.

Reasons for Failure:

Initially, the IUT is in the Next State with n=3 and ILS is transmitting. PCM Pseudo Code initiates the transitions from Next_Action to Signal state and MLS is transmitted to signal the un-accepted connection (PC-45). If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.3.3 Case-ID: Illegal_Connection

Purpose: Verify that the IUT transmits MLS to indicate an Illegal Connection when its port type is M, the Tester's port type is M and n = 3.

Procedure:

```

[1]+To_Next_2I /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail

```

Extended Comments: IUT is in the Next State with n=3.

Reasons for Failure:

Initially, the IUT is in the Next State with n=3 and transmitting ILS. MLS is transmitted to indicate that the Connection is illegal. If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4 Required Link Confidence Duration Tests

6.2.4.1 Short Link Confidence Test

6.2.4.1.1 Case-ID: SET_Duration_S1

Purpose: Verify that the IUT transmits MLS to indicate the Short, Medium LCT Duration or HLS to indicate a Long LCT Duration with n=4 for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

```
[1]+To_Next_3 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with n=4.

Reasons for Failure:

Initially, the IUT is in the Next State with n=4 and ILS is transmitted. After a little while, PCM Pseudo Code is performed and MLS is signaled to indicate the Short or Medium LCT Duration, or HLS is signaled to indicate the Long LCT Duration. If the IUT does not transmit ILS, HLS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4.1.2 Case-ID: SET_Duration_S2

Purpose: Verify that the IUT transmits MLS to indicate the Short, Medium LCT Duration or HLS to indicate a Long LCT Duration with n=5 for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

```
[1]+To_Next_3 /*Comment 1*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment 2*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment 3*/
[6] !ILS
[7] C:?ILS
[8] Goto C
[7] ?MLS Pass
[7] ?HLS Pass
[7] ?Otherwise Fail(4)
[5] ?Otherwise Fail(2)
[3] ?HLS /*Comment 4*/
[4] !HLS
[5] D:?HLS
[6] Goto D
[5] ?ILS /*Comment 3*/
[6] !ILS
[7] E:?ILS
```

[8]	Goto E	
[7]	?MLS	Pass
[7]	?HLS	Pass
[7]	?Otherwise	Fail(4)
[5]	?Otherwise	Fail(3)
[3]	?Otherwise	Fail(1)

Extended Comments:

- (1) IUT is in the Next State with $n=4$.
- (2) IUT transmits MLS to indicate Short or Medium LCT Duration.
- (3) IUT ends in the Next State with $n=5$.
- (4) IUT transmits HLS to indicate Long LCT Duration.

Reasons for Failure:

- (1) Initially, the IUT is in the Next State with n equal 4 and transmitting ILS. After a little while, IUT enters Signal State, PCM Pseudo Code is performed and MLS is signaled to indicate the Short or Medium LCT Duration, or HLS is signaled to indicate a Long LCT Duration. So, if the IUT does not transmit ILS, HLS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)
- (2) The legal Line States which IUT transmit are MLS (IUT remains in Signal State) or ILS (IUT enters Next State), if IUT does not transmit ILS or MLS then the IUT fails.
- (3) The legal Line States which IUT transmit are ILS or HLS, if IUT does not transmit ILS or HLS, then the IUT fails.
- (4) IUT does not transmit ILS or MLS.

6.2.4.2 Medium Link Confidence Test**6.2.4.2.1 Case-ID: SET_Duration_M1**

Purpose: Verify that the IUT transmits MLS to indicate a Medium LCT Duration or HLS to indicate a Long LCT Duration with $n = 4$ for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

[1]	+Break_In_Next7 /*Comment(1)*/	
[2]	+To_Next3 /*Comment(2)*/	
[3]	!ILS	
[4]	A:?ILS	
[5]	Goto A	
[4]	?MLS	Pass
[4]	?HLS	Pass
[4]	?Otherwise	Fail

Extended Comments:

- (1) IUT enters the Break State while the last Link Confidence Test is failed, the PC_LCT_Fail is increased.
- (2) IUT enters the Next State with $n=4$.

Reasons for Failure:

IUT has restarted from the last Link Confidence Test and retained the LCT failure history. So, when the IUT processes up to the Next State with $n=4$, it signals MLS to indicate the LCT Duration shall be Medium, or signals HLS to indicate the LCT Duration shall be Long. If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4.2.2 Case-ID: Set_Duration_M2

Purpose: Verify that the IUT transmits HLS or MLS to indicate a Medium or Long Link Confidence Test Duration with $n=5$ for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

```

[1]+Break_In_Next7 /*Comment(1)*/
[2] +To_Next_3 /*Comment(2)*/
[3] !ILS
[4] A:?ILS
[5] Goto A
[4] ?MLS /*Comment(3)*/
[5] !MLS
[6] B:?MLS
[7] Goto B
[6] ?ILS /*Comment(4)*/
[7] !ILS
[8] C:?ILS
[9] Goto C
[8] ?HLS Pass
[8] ?Otherwise Fail(2)
[4] ?HLS /*Comment(5)*/
[5] !HLS
[6] D:?HLS
[7] Goto D
[6] ?ILS /*Comment(3)*/
[7] !ILS
[8] E:?ILS
[9] Goto E
[8] ?MLS Pass
[8] ?HLS Pass
[8] ?Otherwise Fail(4)
[6] ?Otherwise Fail(3)
[4] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT enters the Break State while the Last Link Confidence Test is failed. The PC_LCT_Fail is increased.
- (2) IUT is in the Next State with n=4.
- (3) IUT transmits MLS to indicate Medium LCT Duration.
- (4) IUT ends in the Next State with n=5.
- (5) IUT transmits HLS to indicate Long LCT Duration.

Reasons for Failure:

- (1) At the beginning of this procedure, the IUT is in the Next State with n = 4, ILS is transmitted. After a little while, IUT enters Signal State, PCM Pseudo is performed and MLS is signaled to indicate the LCT Duration is Medium or HLS is signaled to indicate the LCT Duration is Long. If the IUT does not transmit ILS, MLS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)
- (2) The legal Line States which IUT transmit are HLS (IUT remains in Signal State) or ILS (IUT enters Next State). If IUT does not transmit ILS or HLS then the IUT fails.
- (3) The legal Line States which IUT transmit are ILS or HLS, if IUT does not transmit ILS or HLS, then the IUT fails.
- (4) IUT does not transmit ILS or MLS.

6.2.4.3 Long Link Confidence Test**6.2.4.3.1 Case-ID: Set_Duration_L1**

Purpose: Verify that the IUT transmits HLS to indicate a Long LCT duration with n=4 for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

```

[1]+Break_In_Active /*Comment(1)*/
[2] +To_Next_3 /*Comment(2)*/
[3]  !ILS
[4]  A:?ILS
[5]    Goto A
[4]  ?HLS                Pass
[4]  ?Otherwise          Fail

```

Extended Comments:

- (1) IUT enters Break from Active and sets the LEM_Fail to indicate Link Error Rate is greater than LER_Cutoff.
 (2) IUT is in the Next State with n=4.

Reasons for Failure:

IUT must signal HLS to indicate the Long LCT Duration. If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4.3.2 Case-ID: Set_Duration_L2

Purpose: Verify that the IUT transmits MLS to indicate a Long LCT Duration with n=5 for the configuration listed below.

Test Setup: All configurations except M to M.

Procedure:

```

[1]+To_Next_4L/*Comment*/
[2]  !ILS
[3]  A:?ILS
[4]    Goto A
[3]  ?MLS                Pass
[3]  ?HLS                Pass
[3]  ?Otherwise          Fail

```

Extended Comments: IUT is in the Next State with n=5.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State with n=5 and ILS is transmitted. After a little while, PCM Pseudo Code is performed, a MLS is signaled to indicate the LCT Duration is Long. If the IUT does not transmit ILS, MLS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4.4 Extended Link Confidence Test (Illegal Connections)**6.2.4.4.1 Case-ID: Set_Duration_E1**

Purpose: Verify that the IUT transmits HLS indicating an Extended LCT Duration for illegal connections.

Test Setup: M to M.

Procedure:

```

[1]+To_Next_MM3 /*Comment*/
[2]  !ILS
[3]  A:?ILS
[4]    Goto A
[3]  ?HLS                Pass
[3]  ?Otherwise          Fail

```

Extended Comments: IUT is in the Next State with n=4.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State with n=4 and ILS is transmitted. After a little while, PCM Pseudo Code is performed and HLS is signaled to indicate Extended LCT Duration. If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.4.4.2 Case-ID: Set_Duration_E2

Purpose: Verify that the IUT transmits HLS indicating an Extended LCT Duration for illegal connections.

Test Setup: M to M.

Procedure:

```
[1]+To_Next_4E /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments: IUT is in the Next State with n=5.

Reasons for Failure:

Initially, the IUT is in the Next State with n=5 and transmitting ILS. If the IUT does not transmit ILS or HLS then the IUT fails.

6.2.5 Link Confidence Tests:

6.2.5.1 Normal Case (Test Success):

6.2.5.1.1 Case-ID: In_Next_6

Perform test case 6.2.5.1.1.1, In_Next_6_With_MAC, only if IUT offers a MAC for the LCT as entered in the PICS/PIXIT entry. Perform test case 6.2.5.1.1.2, In_Next_6_Without_MAC, only if IUT does not offer a MAC for the LCT as entered in the PICS/PIXIT entry.

6.2.5.1.1.1 Case-ID: In_Next_6_With_MAC

Purpose: Verify that the IUT transmits HLS to indicate that its MAC is available for the LCT.

Test Setup: All configurations.

Procedure:

```
[1]+To_Next_5S /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS Pass
[3] ?Otherwise Fail
```

Extended Comments:

IUT is in the Next State with n=6.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State with n=6 and ILS is transmitted. After a little while, PCM Pseudo Code is performed and HLS is signaled to indicate that its MAC is available for LCT. If the IUT does not transmit ILS or HLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.5.1.1.2 Case-ID: In_Next_6_Without_MAC

Purpose: Verify that the IUT transmits MLS to indicate that its MAC is not available for the LCT.

Test Setup: All configurations.

Procedure:

```
[1]+To_Next_5S /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS Pass
[3] ?Otherwise Fail
```

Extended Comments:

IUT is in the Next State with n=6.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State with n=6 and ILS is transmitted. After a little while, PCM Pseudo Code is performed and MLS is signaled to indicate that its MAC is not available for LCT. If the IUT does not transmit ILS or MLS then the IUT fails. (PC-44a, PC-44b, PC-45, Next_Actions, Signal_Actions)

6.2.5.1.2 Case-ID: Short_LCT_1

Purpose: Verify that the IUT performs the Short LCT with ILS, if neither IUT nor Tester has history of excessive link errors and PC_LCT_Fail = 0. (In this case, neither IUT nor Tester has a MAC available for the LCT)

Test Setup: All configurations except M to M.

Procedure:

```

[1] +No_MAC_6S /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min /*Comment(2)*/
[4] Start LC_Short
[5] B:?Timeout LC_Short/*Comment(3)*/
[6] C:?ILS
[7] !ILS
[8] Goto C
[6] ?ALS
[7] !Repeat /*See Note*/
[8] Goto C
[6] ?MLS Pass
[6] ?HLS Inconclusive
[6] ?Otherwise Fail(3)
[5] ?ILS
[6] !ILS
[7] Goto B
[5] ?ALS
[6] !Repeat
[7] Goto B
[5] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Note: The !Repeat operation is the normal operation of PHY when it repeats symbols. PHY repeats symbols only when its input is in ALS. When the !Repeat statement is executed, the Tester transmits each symbol it receives while the input is in ALS until the input enters another state. Specifically, ALS begins with the symbol sequence JK, which is repeated. Following the JK any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, T, R or S maintain the ALS and are repeated when received. The symbol pair JK, if received in the symbol sequence, also maintains ALS and is repeated. If an Idle symbol is received, ALS is terminated and the Idle is not repeated. If Halt, Quiet, any Violation symbol, a K symbol not preceded by a J symbol, or a J symbol not followed by a K are received, ALS is terminated, and the input is no longer repeated by the !Repeat operation, which then transmits four successive Halt symbols before terminating its operation.

Extended Comments:

(1) IUT is in the Next State with n=7.

(2) The Receive Pseudo Code processing may start when the IUT stays in the Next State and ILS is received for at least TL_Min. (PC-44a, PC-44b)

(3) When the IUT performs Short LCT, ILS shall be sent for at least LC_Short. (PC-44b, PC-44c, PC-44d, PC_RCode(7)_Actions)

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS, ALS or LC_Short is not expired.
- (3) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.1.3 Case-ID: Short_LCT_2

Purpose: Verify that the IUT performs Short Link Confidence Test with PDUs, if there is no history of excessive link errors and PC_LCT_Fail = 0. (This case is performed only when the IUT has at least a MAC available for the LCT)

Test Setup: All configurations except M to M.

Procedure:

```

[1]+IUT_MAC_6S      /*Comment(1)*/
[2] !ILS Start T_Out /*Comment(2)*/
[3]  A:?Timeout T_Out      Fail(1)
[3]  ?ILS
[4]    Goto A
[3]  ?ALS /*Comment(3)*/
[4]    Start LC_Short
[5]    !Repeat /*See Note*/
[6]      B:?Timeout LC_Short
[7]      C:?ALS
[8]      !Repeat
[9]      Goto C
[7]      ?ILS
[8]      !ILS
[9]      Goto C
[7]      ?MLS      Pass
[7]      ?HLS      Inconclusive
[7]      ?Otherwise Fail(4)
[6]      ?ALS
[7]      !Repeat
[8]      Goto B
[6]      ?ILS
[7]      !ILS
[8]      Goto B
[6]      ?Otherwise Fail(3)
[3]  ?Otherwise      Fail(2)

```

Note: See note of 6.2.5.1.2

Extended Comments:

- (1) IUT is in the Next State with n=7.
- (2) Tester continuously transmits ILS and starts Timer T_Out. Because if n = 7, and the IUT remains in the Next State for longer than T_Out then the IUT fails. (Next_Errors)
- (3) After ILS is received for at least TL_Min, the IUT must process PC_RCode(7)_Actions, sends out its PDUs (ALS) during the Link Confidence Test. (T_Val(6), PC_RCode(7)_Actions)

Reasons for Failure:

- (1) The Link Confidence Test shall be performed after the IUT enters the Next State with n=7 and ILS is received for at least TL_Min but not longer than T_Out. (PC-44a, PC-44b, PC-44c, PC-41b)
- (2) At the beginning of this procedure, the IUT is in the Next State, ILS is transmitted. After a little while, the IUT performs the Link Confidence Test, a sequence of PDU (ALS) is sent. If the IUT does not send ILS or ALS then the IUT fails.
- (3) IUT must send PDUs (ALS) for at least LC_Short (default: 50 milliseconds). If the IUT does not send ILS or ALS within LC_Short then the IUT fails.
- (4) IUT does not send ALS, ILS, MLS or HLS.

6.2.5.1.4 Case-ID: Medium_LCT_1

Purpose: Verify that the IUT performs Medium LCT with ILS, when PC_LCT_Fail is greater than zero. (This case is performed only when neither IUT nor Tester has a MAC available for the LCT)

Test Setup: All configurations except M to M.

Procedure:

```

[1]+No_MAC_6M /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min /*Comment(2)*/
[4] Start LC_Medium
[5] B:?Timeout LC_Medium/*Comment(3)*/
[6] C:?ILS
[7] !ILS
[8] Goto C
[6] ?ALS
[7] !Repeat /*See Note*/
[8] Goto C
[6] ?MLS Pass
[6] ?HLS Inconclusive
[6] ?Otherwise Fail(3)
[5] ?ILS
[6] !ILS
[7] Goto B
[5] ?ALS
[6] !Repeat
[7] Goto B
[5] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Note: See note of 6.2.5.1.2.

Extended Comments:

- (1) IUT is in the Next State with n=7.
- (2) The Received Pseudo Code is performed while the IUT stays in the Next State with ILS is received for at least TL_Min. (PC-44a, PC-44b)
- (3) When the IUT performs Medium LCT, ILS shall be sent for at least LC_Medium. (PC-44b, PC-44c, PC-44d, PC_RCode(7)_Actions)

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS, ALS or LC_Medium is not expired.
- (3) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.1.5 Case-ID: Medium_LCT_2

Purpose: Verify that the IUT performs Medium LCT with PDUs when PC_LCT_Fail is greater than zero. (This case is performed only when IUT has at least a MAC available for the LCT)

Test Setup: All configurations except M to M.

Procedure:

```

[1]+IUT_MAC_6M /*Comment(1)*/
[2] !ILS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out Fail(1)
[3] ?ILS
[4] Goto A
[3] ?ALS /*Comment(3)*/
[4] Start LC_Medium

```



```

[5]    !Repeat /*See Note*/
[6]    B:?Timeout LC_Medium
[7]    C:?ALS
[8]    !Repeat
[9]    Goto C
[7]    ?ILS
[8]    !ILS
[9]    Goto C
[7]    ?MLS                      Pass
[7]    ?HLS                      Inconclusive
[7]    ?Otherwise                Fail(4)
[6]    ?ALS
[7]    !Repeat
[8]    Goto B
[6]    ?ILS
[7]    !ILS
[8]    Goto B
[6]    ?Otherwise                Fail(3)
[3]    ?Otherwise                Fail(2)

```

Note: See note of 6.2.5.1.2.

Extended Comments:

- (1) This procedure is to test that the IUT performs the Medium LCT when PC_LCT_Fail is greater than zero. The function IUT_MAC_6M has included all the required steps from when the IUT was turned on, processed to the Link Confidence Test, restarted and went on until the Next State with n = 7. (Link Confidence Test Actions)
- (2) IUT must not remain in the Next State for longer than T_Out. (PC-41b, PC-44a, PC-44b)
- (3) IUT will transmit PDUs (ALS) in the Link Confidence Test duration.

Reasons for Failure:

- (1) The Link Confidence Test shall be performed after IUT enters the Next State with n=7 and ILS is received for at least TL_Min but not longer than T_Out. (PC-41b, PC-44a, PC-44b)
- (2) At the beginning of this procedure, the IUT is in the Next State, ILS is transmitted. After a little while, the IUT performs the Link Confidence Test, PDUs (ALS) are transmitted. If the IUT does not transmit ALS or ILS then the IUT fails.
- (3) IUT must perform the Link Confidence Test for at least LC_Medium, if the IUT does not transmit ALS, ILS or LC_Medium is not expired then the IUT fails.
- (4) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.1.6 Case-ID: Long_LCT_1

Purpose: Verify that the IUT performs the Long LCT with ILS while a link has been rejected due to an excessive Link Error Rate. (This case is performed only when neither IUT nor Tester has a MAC available for the LCT):

Test Setup: All configurations except M to M.

Procedure:

```

[1] +No_MAC_6L /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min /*Comment(2)*/
[4] Start LC_Long
[5] B:?Timeout LC_Long /*Comment(3)*/
[6] C:?ILS
[7] !ILS
[8] Goto C
[6] ?ALS
[7] !Repeat /*See Note*/
[8] Goto C
[6] ?MLS                      Pass

```

[6]	?HLS	Inconclusive
[6]	?Otherwise	Fail(3)
[5]	?ILS	
[6]	!ILS	
[7]	Goto B	
[5]	?ALS	
[6]	!Repeat	
[7]	Goto B	
[5]	?Otherwise	Fail(2)
[3]	?ILS	
[4]	Goto A	
[3]	?Otherwise	Fail(1)

Note: See note 6.2.5.1.2.

Extended Comments:

- (1) IUT is in the Next State with n=7.
- (2) The Received Pseudo Code is performed while IUT stays in the Next State with ILS is received for at least TL_Min. (PC-44a, PC-44b)
- (3) When the IUT performs Long LCT, ILS shall be sent for at least LC_Long. (PC-44b, PC-44c, PC-44d, PC_RCode(7)_Actions)

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS, ALS or LC_Long is not expired.
- (3) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.1.7 Case-ID: Long_LCT_2

Purpose: Verify that the IUT performs the Long LCT with PDUs when a link has been rejected due to an excessive Link Error Rate. (This case is performed only when IUT has at least a MAC available for the LCT)

Test Setup: All configurations except M to M.

Procedure:

[1]	+IUT_MAC_6L /*Comment(1)*/	
[2]	!ILS Start T_Out /*Comment(2)*/	
[3]	A:?Timeout T_Out	Fail(1)
[3]	?ILS	
[4]	Goto A	
[3]	?ALS /*Comment(3)*/	
[4]	Start LC_Long	
[5]	!Repeat /*See Note*/	
[6]	B:?Timeout LC_Long	
[7]	C:?ALS	
[8]	!Repeat	
[9]	Goto C	
[7]	?ILS	
[8]	!ILS	
[9]	Goto C	
[7]	?MLS	Pass
[7]	?HLS	Inconclusive
[7]	?Otherwise	Fail(4)
[6]	?ALS	
[7]	!Repeat	
[8]	Goto B	
[6]	?ILS	
[7]	!ILS	
[8]	Goto B	
[6]	?Otherwise	Fail(3)
[3]	?Otherwise	Fail(2)

Note: See note of 6.2.5.1.2.

Extended Comments:

- (1) This procedure is to test that the IUT performs the Long LCT when the link has been rejected due to an excessive Link Error Rate. The function IUT_MAC_6L has included all the steps from when the IUT was turned on, processed to the Active State, restarted when an excessive Link Error Rate was occurred and went on until the Next State with n=7.
- (2) IUT must not remain in the Next State for longer than T_Out. (PC-41b, PC-44a, PC-44b)
- (3) IUT will transmit PDUs (ALS) in the Link Confidence Test procedure.

Reasons for Failure:

- (1) The Link Confidence Test must be performed after the IUT enters the Next State with n=7 and ILS is received for at least TL_Min but not longer than T_Out. (PC-41b, PC-44a, PC-44b)
- (2) At the beginning of this procedure, the IUT is in the Next State, ILS is transmitted. After a little while, IUT performs the Link Confidence Test, PDUs (ALS) are transmitted. If the IUT does not transmit ALS or ILS then the IUT fails.
- (3) IUT must perform the Link Confidence Test for at least LC_Long, if the IUT does not transmit ALS, ILS or LC_Long is not expired then the IUT fails.
- (4) IUT does not transmit ILS, MLS, ALS or HLS.

6.2.5.1.8 Case-ID: Extended_LCT_1

Purpose: Verify that the IUT performs the Extended LCT with ILS and signals MLS to indicate the test is passed. (This case is used when neither IUT nor Tester has a MAC available for the LCT.)

Test Setup: M to M.

Procedure:

```

[1]+No_MAC_6E
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min
[4] Start LC_Extended
[5] B:?Timeout LC_Extended
[6] C:?ILS
[7] !ILS
[8] Goto C
[6] ?ALS
[7] !Repeat /*See Note*/
[8] Goto C
[6] ?MLS Pass
[6] ?HLSInconclusive
[6] ?Otherwise Fail(3)
[5] ?ILS
[6] !ILS
[7] Goto B
[5] ?ALS
[6] !Repeat
[7] Goto B
[5] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Note: See note of 6.2.5.1.2.

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS, ALS or LC_Extended is not expired.
- (3) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.1.9 Case-ID: Extended_LCT_2

Purpose: Verify that the IUT performs Extended Link Confidence Test with PDUs and signals MLS to indicate the LCT test is passed. (This case is performed only when IUT has at least a MAC available for the LCT)

Test Setup: M to M.

Procedure:

```

[1]+IUT_MAC_6E
[2] !ILS Start T_Out
[3] A:?Timeout T_Out          Fail(1)
[3] ?ILS
[4] Goto A
[3] ?ALS
[4] Start LC_Extended
[5] !Repeat /*See Note*/
[6] B:?Timeout LC_Extended
[7] C:?ILS
[8] !ILS
[9] Goto C
[7] ?ALS
[8] !Repeat
[9] Goto C
[7] ?MLS          Pass
[7] ?HLS          Inconclusive
[7] ?Otherwise    Fail(4)
[6] ?ALS
[7] !Repeat
[8] Goto B
[6] ?ILS
[7] !ILS
[8] Goto B
[6] ?Otherwise    Fail(3)
[3] ?Otherwise    Fail(2)

```

Note: See note of 6.2.5.1.2.

Reasons of Failure:

- (1) The Link Confidence Test shall be performed after the IUT enters the Next State with n=7 and ILS is received for at least TL_Min but not longer than T_Out.
- (2) At the beginning of this state, the IUT is in the Next State, ILS is transmitted. After a little while, the IUT performs Link Confidence Test, a sequence of PDUs (ALS) is sent. If the IUT does not send ILS or ALS then the IUT fails.
- (3) IUT must send PDUs (ALS) for at least LC_Extended, if the IUT does not send ILS, ALS or LC_Extended is not expired then the IUT fails.
- (4) IUT does not transmit ILS, ALS, MLS or HLS.

6.2.5.2 Abnormal Case (Test Failed):

6.2.5.2.1 Case-ID: LCT_Fail_1

Purpose: Verify that the IUT performs Short LCT with ERR and transmits HLS to indicate the LCT fail. (This case is performed only when neither IUT nor Tester has a MAC available for the LCT.)

Test Setup: All configurations except M to M.

Procedure:

```

[1]+No_MAC_6S          /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min /*Comment(2)*/
[4] !ERR Start LC_Short, LC_Long
    /*Comment(3)*/
[5] B:?Timeout LC_Short

```

[6]	C: ?Timeout LC_Long	Fail(3)
[6]	?ILS	
[7]	Goto C	
[6]	?ALS	
[7]	Goto C	
[6]	?HLS	Pass
[6]	?Otherwise	Fail(4)
[5]	?ILS	
[6]	Goto B	
[5]	?ALS	
[6]	Goto B	
[5]	?Otherwise	Fail(2)
[3]	?ILS	
[4]	Goto A	
[3]	?Otherwise	Fail(1)

Extended Comments:

- (1) IUT is in the Next State with n=7.
- (2) The Receive Pseudo Code processing may start when the IUT stays in the Next State and receives ILS for at least TL_Min. (PC-44a, PC-44b)
- (3) Tester continuously transmits Error Line State for the LCT.

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS or LC_Short is not expired.
- (3) IUT shall not perform Short LCT longer than LC_Long.
- (4) IUT does not transmit ILS, HLS or LC_Long is not expired.

6.2.5.2.2 Case-ID: LCT_Fail_2

Purpose: Verify that the Tester performs the Link Confidence Test with BADPDUs, the IUT must signal HLS to indicate the LCT fail. (This case is performed only when the IUT has at least a MAC available for the LCT.)

Test Setup: All configurations except M to M.

Procedure:

[1]	+IUT_MAC_6S /*Comment(1)*/	
[2]	!ILS Start TL_Min /*Comment(2)*/	
[3]	A: ?ILS	
[4]	Goto A	
[3]	?Timeout TL_Min	
[4]	!ILS	
[5]	B: ?ILS	
[6]	Goto B	
[5]	?ALS /*Comment(3)*/	
[6]	Start LC_Short, LC_Long	
[7]	!BADPDU /*Comment(4)*/	
[8]	C: ?Timeout LC_Short	
[9]	D: ?Timeout LC_Long	Fail(4)
[9]	?ALS	
[10]	!BADPDU	
[11]	Goto D	
[9]	?ILS	
[10]	!ILS /*Comment(5)*/	
[11]	Goto D	
[9]	?HLS	Pass
[9]	?Otherwise	Fail(5)
[8]	?ALS	
[9]	!BADPDU	
[10]	Goto C	
[8]	?ILS	

```

[9]      !ILS
[10]     Goto C
[8]      ?Otherwise          Fail(3)
[5]      ?Otherwise          Fail(2)
[3]      ?Otherwise          Fail(1)

```

Extended Comments:

- (1) IUT is in the Next State with $n = 7$.
- (2) The Receive Pseudo Code processing may start when the IUT received ILS for at least TL_Min in the Next State.
- (3) IUT transmits PDUs (ALS) for the Duration of the LCT.
- (4) Tester changes the FCS of IUT's frame to be the incorrect FCS. (In this case, the Tester shall prepare a bad FCS pattern in the buffer in order to use later. It repeats every symbol received from IUT until the reception of FCS. If the FCS is received, the Tester transmits the bad FCS pattern instead of repeating IUT's FCS, then the End Delimiter and the Frame Status are repeated.)

Reasons for Failure:

- (1) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS, ALS.
- (3) IUT does not transmit ILS, ALS or LC_Short is not expired.
- (4) IUT performs Short LCT for longer than LC_Long.
- (5) IUT does not transmit ILS, ALS, HLS or LC_Long is not expired.

6.2.5.2.3 Case-ID: Restart_LCT_Fail1

Purpose: Verify that the IUT goes to the Break State and transmits QLS when the Link Error Rate is greater than LER_Cutoff. (This case is performed only when neither IUT nor Tester has a MAC for the LCT.)

Test Setup: All configurations except M to M.

Procedure:

```

[1]+To_Next7_ERR /*Comment(1)*/
[2] !HLS /*Comment(2)*/
[3]  A:?HLS
[4]   Goto A
[3]  ?ILS
[4]   !ILS Start T_Out
[5]   B:?Timeout T_Out      Fail(2)
[5]   ?ILS
[6]   Goto B
[5]   ?QLS                  Pass
[5]   ?Otherwise            Fail(3)
[3]  ?Otherwise            Fail(1)

```

Extended Comments:

- (1) IUT is in the Next State with $n=7$.
- (2) Tester transmits HLS indicating the LCT Fail. (PC_TCode(7)_Actions)

Reasons for Failure:

- (1) IUT does not transmit HLS or ILS.
- (2) IUT does not enter the Break State within T_Out. (PC_RCode(8)_Actions, PC-51b)
- (3) IUT does not transmit ILS, QLS or T_Out is not expired.

6.2.5.2.4 Case-ID: Restart_LCT_Fail2

Purpose: Verify that the IUT goes to the Break State and transmits QLS when the Link Error Rate is greater than LER_Cutoff. (This case is performed only when the IUT has at least a MAC available for the LCT).

Test Setup: All configurations except M to M.

Procedure:

```

[1]+To_Next7_BADPDU
[2] !HLS
[3] A:?HLS
[4] Goto A
[3] ?ILS
[4] !ILS Start T_Out
[5] B:?Timeout T_Out          Fail(2)
[5] ?ILS
[6] Goto B
[5] ?QLS                      Pass
[6] ?Otherwise                Fail(3)
[3] ?Otherwise                Fail(1)

```

Reasons for Failure:

- (1) IUT does not transmit HLS or ILS.
- (2) IUT does not enter the Break State within T_Out.
- (3) IUT does not transmit ILS, QLS or T_Out is not expired.

6.2.6 MAC Local Loop Tests**6.2.6.1 Case-ID: In_Next_8**

Purpose: Verify that the IUT will transmit HLS to indicate its MAC is available for the MAC Local Loop or MLS to indicate that its MAC is not available for the Local Loop.

Test Setup: All configurations.

Procedure:

```

[1]+To_Next_7 /*Comment*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS                      Pass
[3] ?MLS                      Pass
[3] ?Otherwise                Fail

```

Extended Comments:

IUT is in the Next State with n=8.

Reasons for Failure:

At the beginning of this procedure, the IUT is in the Next State while ILS is transmitted continuously. After a little while, the IUT changes to the Signal State, an HLS is transmitted to indicate its MAC is available, or a MLS is transmitted to indicate its MAC is not available. If the IUT does not transmit ILS, HLS or MLS then the IUT fails.

6.2.6.2 Case-ID: MAC_LocalLoop_Next9

Purpose: Verify that the IUT performs the Local Loop using PDUs and transmits HLS to indicate its MAC output is to be connected to PHY in PCM (CFM) Active State.

Note: This case is performed only if the IUT places a MAC on the output port for Local Loop testing.

Test Setup: All configurations.

Procedure:

```

[1]+To_Next_8 /*Comment(1)*/
[2] !ILS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out          Fail(2)
[3] ?ILS
[4] Goto A
[3] ?ALS /*Comment(3)*/
[4] Start T_Next_9 /*Comment(4)*/
[5] !Repeat /*Note*/

```

```

[6]      B:?Timeout T_Next_9
[7]      C:?ILS /*Comment(5)*/
[8]      !ILS
[9]      Goto C
[7]      ?ALS /*Comment(5)*/
[8]      !Repeat
[9]      Goto C
[7]      ?HLS                               Pass
[7]      ?Otherwise                         Fail(4)
[6]      ?ILS
[7]      !ILS
[8]      Goto B
[6]      ?ALS
[7]      !Repeat
[8]      Goto B
[6]      ?Otherwise                         Fail(3)
[3]      ?Otherwise                         Fail(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=9.
- (2) Tester starts a timer T_Out to make sure that the IUT performs the Local Loop within T_Out.
- (3) IUT performs the Local Loop using PDUs. (ALS)
- (4) IUT must perform the Local Loop for at least T_Next_9. (T_Next(9), PC-44d)
- (5) After T_Next(9), the IUT may either perform Local Loop or signal HLS to indicate its MAC output will connect to PHY in PCM (CFM) Active State.

Note: At this point, the tester repeats any PDUs (ALS) received from the IUT for the Local Loop test. The Loopback ends when the IUT signals HLS or MLS.

Reasons for Failure:

- (1) At the beginning of this procedure, the IUT is in the Next State, a sequence of ILS is transmitted. After a little while, the IUT performs the Local Loop, PDUs (ALS) are transmitted, if the IUT does not transmit ILS or ALS then the IUT fails.
- (2) IUT remains in the Next State for longer than T_Out.
- (3) IUT performs the Local Loop, PDUs are transmitted. If the Tester does not receive ILS (preamble), ALS (from the Start Delimiter of the frame until the End Delimiter of the frame), or T_Next_9 is not expired, then the IUT fails.
- (4) After the IUT performs Local Loop for T_Next_9, it may perform either the Local Loop (transmit ILS, ALS) or signal HLS. If the IUT does not transmit ILS, ALS or HLS then the IUT fails.

6.2.6.3 Case-ID: No_MAC_LocalLoop_Next9

Purpose: Verify that the IUT performs the Local Loop Test when it doesn't have a MAC available for the Local Loop Test and the Tester does have a MAC available by repeating packets sent by the Tester during the Local Loop Test.

Note: This case is performed only if the IUT does not places a MAC on the output port for Local Loop Testing.

Test Setup: All configurations except M to M.

Procedure:

```

[1] +To_Next8_N /*Comment(1)*/
[2] !ILS Start TL_Min /*Comment(2)*/
[3] A:?Timeout TL_Min
[4] !Packet Start T_Next_9
    /*Comment(3)*/
[5] B:?ALS /*Comment(4)*/
[6] Goto B
[5] ?ILS
[6] Goto B
[5] ?Timeout T_Next_9
[6] C:?ILS
[7] Goto C

```


[6]	?ALS	
[7]	Goto C	
[6]	?MLS	Pass
[6]	?Otherwise	Fail(3)
[5]	?Otherwise	Fail(2)
[3]	?ILS	
[4]	Goto A	
[3]	?Otherwise	Fail(1)

Extended Comments:

(1) IUT is in the Next State with n=9 and has signaled that it does not have a MAC available for Local Loop Test.

(2) Tester starts a timer TL_Min to ensure that it sends ILS for the minimum required time.

(3) Tester starts a timer T_Next_9 to ensure that the IUT loops back the packet it received for at least T_Next_9. (T_Next(9))

(4) IUT is now repeating the Tester's packet.

Reasons for failure:

(1) IUT does not transmit ILS, or TL_Min is not timeout.

(2) IUT does not transmit ILS, ALS or T_Next_9 is not timeout.

(3) IUT does not transmit ILS, MLS or ALS.

6.2.6.4 Case-ID: Restart_Illegal_Connection1

Purpose: Verify that the IUT will enter the Break State and transmits QLS after Local Loop due to the illegal connection (Port M to Port M).

Note: This case is performed only when the IUT has at least a MAC available.

Test Setup: M to M.

Procedure:

[1]	+To_Next_8E	
[2]	!ILS Start T_Out	
[3]	A:?Timeout T_Out	Fail(2)
[3]	?ILS	
[4]	Goto A	
[3]	?ALS	
[4]	Start T_Next_9	
[5]	!Repeat	
[6]	B:?Timeout T_Next_9	
[7]	C:?ILS	
[8]	!ILS	
[9]	Goto C	
[7]	?ALS	
[8]	!Repeat	
[9]	Goto C	
[7]	?QLS	Pass
[5]	?Otherwise	Fail(4)
[6]	?ILS	
[7]	!ILS	
[8]	Goto B	
[6]	?ALS	
[7]	!Repeat	
[8]	Goto B	
[6]	?Otherwise	Fail(3)
[3]	?Otherwise	Fail(1)

Reasons for Failure:

(1) IUT does not transmit ILS, ALS or T_Out is not expired.

(2) IUT remains in the Next State for longer than T_Out.

(3) IUT does not transmit ILS, ALS or T_Next_9 is not expired.

(4) IUT does not transmit ILS, ALS or QLS.

6.2.7 Join to Active Tests

6.2.7.1 Case-ID: To_Join

Purpose: Verify that the IUT remains in the Join State for TL_Min but not longer than T_Out.

Test Setup: All Configurations.

Procedure:

```
[1]+IN_Join /*Comment(1)*/
[2] !HLS Start T_Out, Start TL_Min /*Comment(2)*/
[3] A:?Timeout TL_Min
[4] B:?Timeout T_Out          Fail(2)
[4] ?HLS
[5] Goto B
[4] ?MLS Pass
[4] ?Otherwise                Fail(3)
[3] ?HLS
[4] Goto A
[3] ?Otherwise                Fail(1)
```

Extended Comments:

- (1) IUT is in the Join State.
- (2) Tester transmits HLS and starts timers TL_Min and T_Out to figure out that the IUT remains in the Join State for at least TL_Min but not longer than T_out. (PC-67, Join_Error)

Reasons for Failure:

- (1) IUT does not transmit HLS or TL_Min is not expired.
- (2) IUT remains in the Join State for longer than T_Out. (PC-61b)
- (3) IUT does not transmit HLS, MLS or T_Out is not expired.

6.2.7.2 Case-ID: Join_Error1

Purpose: Verify that the IUT enters the Break State if HLS has not been received for a period T_Out since it entered the Join State.

Test Setup: All Configurations.

Procedure:

```
[1]+IN_Join /*Comment(1)*/
[2] !MLS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out
[4] ?QLS                      Pass
[4] ?Otherwise                Fail(2)
[3] ?HLS /*Comment(3)*/
[4] Goto A
[3] ?Otherwise                Fail(1)
```

Extended Comments:

- (1) IUT is in the Join State.
- (2) Tester transmits wrong Line State (MLS) to force IUT to enter the Break State (PC-61b, Join_Error).
- (3) IUT transmits HLS while in the Join State.

Reasons for Failure:

- (1) IUT does not transmit HLS or T_Out is not expired.
- (2) IUT does not transmit QLS. (PC-61b)

6.2.7.3 Case-ID: Join_Error2

Purpose: Verify that the IUT enters the Break State when QLS is received in the Join State.

Test Setup: All Configurations.

Procedure:

```

[1]+IN_Join /*Comment(1)*/
[2] !QLS Start PC_React /*Comment(2)*/
[3] A:?Timeout PC_React          Fail(2)
[3] ?HLS
[4]   Goto A
[4] ?QLS                          Pass
[3] ?Otherwise                    Fail(1)

```

Extended Comments:

- (1) IUT is in the Join State.
- (2) Tester transmits Quiet Line State to force IUT to enter the Break State. (PC-61b)

Reasons for Failure:

- (1) IUT does not transmit HLS,QLS or PC_React is not expired.
- (2) IUT does not enter the Break State when QLS is received for longer than PC_React. (PC-61b)

6.2.7.4 Case-ID: Join_Error3

Purpose: Verify that the IUT enters the Break State when it remains in the Join State for longer than T_Out.

Test Setup: All Configurations.

Procedure:

```

[1]+IN_Join /*Comment(1)*/
[2] Start T_Out
[3] A:?Timeout T_out /*Comment(2)*/
[4] B:?HLS
[5]   Goto B
[4] ?QLS                          Pass
[4] ?Otherwise                    Fail(2)
[3] ?HLS
[4]   Goto A
[3] ?Otherwise                    Fail(1)

```

Extended Comments:

- (1) IUT is in the Join State.
- (2) IUT remains in the Join State for T_Out.

Reason for Failure:

- (1) IUT does not transmit HLS or T_out is not expired.
- (2) IUT does not transmit QLS or HLS.

6.2.7.5 Case-ID: To_Verify

Purpose: Verify that the IUT remains in the Verify State for at least TL_Min but not longer than T_Out.

Test Setup: All Configurations.

Procedure:

```

[1]+IN_Verify /*Comment(1)*/
[2] !MLS Start T_Out, Start TL_Min
[3] A:?Timeout TL_Min /*Comment(2)*/
[4] B:?Timeout T_Out          Fail(2)
[4] ?MLS
[5]   Goto B
[4] ?ILS                      Pass
[4] ?Otherwise                Fail(3)
[3] ?MLS /*Comment(3)*/
[4]   Goto A
[3] ?Otherwise                Fail(1)

```

Extended Comments:

- (1) IUT is in the Verify State.
- (2) IUT must remain in the Verify State for at least TL_Min but not longer than T_Out. (PC-78)
- (3) IUT transmits MLS while in the Verify State.(Verify_Actions)

Reasons for Failure:

- (1) IUT does not transmit MLS or TL_Min is not expired.
- (2) IUT remains in the Verify State for longer than T_Out. (PC-71b)
- (3) IUT does not transmit MLS, ILS or T_Out is not expired.

6.2.7.6 Case-ID: Verify_Error1

Purpose: Verify that the IUT enters the Break State due to MLS has not been received for a period T_Out since it entered the Verify State.

Test Setup: All Configurations.

Procedure:

```
[1]+IN_Verify /*Comment(1)*/
[2] !ILS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out
[4] ?QLS Pass
[4] ?Otherwise Fail(2)
[3] ?MLS /*Comment(3)*/
[4] Goto A
[3] ?Otherwise Fail(1)
```

Extended Comments:

- (1) IUT is in the Verify State.
- (2) Tester transmits wrong Line State (ILS) and starts a timer T_Out to figure out that the IUT will enter the Break State after T_Out. (PC-77, PC-71b)
- (3) IUT transmits MLS while in the Verify State. (Verify_Actions)

Reasons for Failure:

- (1) IUT does not transmit MLS or T_Out is not expired.
- (2) IUT does not transmit QLS. (PC-71b)

6.2.7.7 Case-ID: Verify_Error2

Purpose: Verify that the IUT enters the Break State when QLS is received in the Verify State.

Test Setup: All Configurations.

Procedure:

```
[1]+IN_Verify /*Comment(1)*/
[2] !QLS Start PC_React /*Comment(2)*/
[3] A:?Timeout PC_React Fail(1)
[4] ?QLS Pass
[3] ?MLS
[4] Goto A
[3] ?Otherwise Fail(2)
```

Extended Comments:

- (1) IUT is in the Verify State.
- (2) IUT must enter the Break State while QLS is received within PC_React.

Reasons for Failure:

- (1) IUT does not enter the Break State after QLS is received for PC_React. (PC-71b).
- (2) IUT does not transmit QLS, MLS or PC_React is not expired.

6.2.7.8 Case-ID: Verify_Error3

Purpose: Verify that the IUT enters the Break state when HLS is received in the Verify state.

Test Setup: All Configurations.

Procedure:

```

[1]+IN_Verify /*Comment(1)*/
[2] !HLS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out
[4] ?QLS Pass
[4] ?Otherwise Fail(2)
[3] ?MLS /*Comment(3)*/
[4] Goto A
[3] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT is in the Verify state.
- (2) Tester transmits wrong Line State (HLS) and starts a timer T_Out to figure out that the IUT will enter the Break state after T_Out. (PC-77, PC-71b)
- (3) IUT transmits MLS while in the Verify state. (Verify_Actions)

Reason for Failure:

- (1) IUT does not transmit MLS or T_Out is not expired.
- (2) IUT does not transmit QLS. (PC-71b)

6.2.7.9 Case-ID: To_Active

Purpose: Verify that the IUT transmits ALS after ILS has been transmitted for a sufficient time in the Active State.

Test Setup: All Configuratin.

Procedure:

```

[1]+IN_Active /*Comment(1)*/
[2] !ILS Start TL_Min /*Comment(2)*/
[3] A:?Timeout TL_Min
[4] B:?ILS
[5] Goto B
[4] ?ALS Pass
[4] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT is in the Active State.
- (2) Tester transmits ILS and starts a timer TL_Min. (PC-88a, PC-88b)

Reasons for Failure:

- (2) IUT does not transmit ILS or TL_Min is not expired.
- (2) IUT does not transmit ILS or ALS in the Active State. (Active_Actions, PC-88a, PC-88b)

6.2.7.10 Case-ID: Active_Error1

Purpose: Verify that the IUT enters the Break State since HLS has been received for longer than T_Out in the Active State.

Test Setup: All Configurations.

Procedure:

```

[1]+IN_Active /*Comment(1)*/
[2] !HLS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_out
[4] ?QLS Pass
[4] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?ALS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT is in the Active State.
- (2) Tester transmits wrong Line State (HLS) for T_Out to force IUT to enter the Break State. (PC-81b)

Reasons for Failure:

- (1) IUT does not transmit ILS, ALS or T_Out is not expired.
- (2) IUT does not transmit QLS.

6.2.7.11 Case-ID: Active_Error2

Purpose: Verify that the IUT enters the Break State from the Active State while the Link Error Rate is greater than LER_Cutoff.

Test Setup: All Configurations.

Procedure:

```
[1]+IN_Active /*Comment(1)*/
[2] IERR Start T_Out /*Comment(2)*/
[3] A:?Timeout T_Out
[4]   ?QLS                      Pass
[4]   ?Otherwise                Fail(2)
[3] ?ILS
[4]   Goto A
[3] ?ALS
[4]   Goto A
[3] ?Otherwise                Fail(1)
```

Extended Comments:

- (1) IUT is in the Active State.
- (2) Tester transmits Error Line State for T_Out to force the IUT to enter the Break State. (PC-81b)

Reasons for Failure:

- (1) IUT does not transmit ILS, ALS or T_Out is not expired.
- (2) IUT does not enter the Break State when ERR is received and the Link Error Rate is greater than LER_Cutoff for longer than T_Out. (PC-81b)

6.2.7.12 Case-ID: Active_Error3

Purpose: Verify that the IUT enters the Break state since QLS has been received for longer than T_Out in the Active state.

Test Setup: All configurations.

Procedure:

```
[1]+IN_Active /*Comment(1)*/
[2] !QLS Start T_Out /*Comment(2)*/
[3] A:?Timeout T_out
[4]   ?QLS                      Pass
[4]   ?Otherwise                Fail(2)
[3] ?ILS
[4]   Goto A
[3] ?ALS
[4]   Goto A
[3] ?Otherwise                Fail(1)
```

Extended Comments:

- (1) IUT is in the Active state.
- (2) Tester transmits wrong Line State (QLS) for T_Out to force IUT to enter the Break state. (PC-81b)

Reason for Failure:

- (1) IUT does not transmit ILS, ALS or T_Out is not expired.
- (2) IUT does not transmit QLS.

6.3 Subroutines used for internal function call:

6.3.1 Init

Purpose: This routine starts with the IUT in an unknown State, brings it to the Break State, progresses it to be in the Next State, then returns it to the Break State. When the routine completes, the IUT has just entered the Break State.

Procedure:

```
[1] !QLS
[2] A:?QLS /*Comment(1)*/
[3] Goto A
[2] ?HLS /*Comment(2)*/
[3] !HLS /*Comment(3)*/
[4] B:?HLS
[5] Goto B
[4] ?ILS /*Comment(4)*/
[5] !QLS Start PC_React /*Comment(5)*/
[6] C:?Timeout PC_React Inconclusive(3)
[6] ?ILS
[7] Goto C
[6] ?QLS /*Comment(6)*/
[6] ?Otherwise Inconclusive(4)
[4] ?Otherwise Inconclusive(2)
[2] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT may stay in the Break State or the Off State.
- (2) IUT enters the Connect State and transmits HLS. (PC-13, PC-33)
- (3) Tester keeps transmitting HLS.
- (4) IUT enters the Next State and transmits ILS. (PC-34)
- (5) Tester transmits Quiet Line State when the IUT is in the Next State to force IUT to enter the Break State. (PC-41b)
- (6) IUT ends with entering the Break State and transmitting Quiet Line State.

6.3.2 Start_To_Connect

Purpose: This procedure begins with the IUT in any state and ends with the entry of the IUT into the Connect State while the tester is sending QLS.

Procedure:

```
[1] !QLS Start TB_Min
[2] B:?Timeout TB_Min
[3] A:?QLS
[4] Goto A
[3] ?HLS /*Comment*/
[3] ?Otherwise Inconclusive(2)
[2] ?QLS
[3] Goto B
[2] ?Otherwise Inconclusive(1)
```

Extended Comments: IUT ends in the Connect State and transmits HLS. (PC-13, PC-33)

6.3.3 Start_To_Next

Purpose: This procedure begins with the IUT in the Connect State and ends with the entry of the IUT into the Next State while the tester is sending HLS.

Procedure:

```

[1]+Start_To_Connect /*Comment(1)*/
[2] !HLS
[3] A:?HLS /*Comment(2)*/
[4]   Goto A
[3] ?ILS /*Comment(3)*/
[3] ?Otherwise      Inconclusive

```

Extended Comments:

- (1) IUT is in the Connect State.
- (2) IUT stays in the Connect State.
- (3) IUT ends in the Next State and transmits ILS. (PC-34)

6.3.4 To_Next_0

Purpose: This procedure begins when the IUT enters the Next State from the Connect State ($n=0$), goes through the Signal State and ends in the Next State with $n=1$.

Procedure:

```

[1]+Start_To_Next /*Comment(1)*/
[2] !ILS
[3] A:?ILS /*Comment(2)*/
[4]   Goto A
[3] ?MLS /*Comment(3)*/
[4]   !MLS
[5]   B:?MLS /*Comment(4)*/
[6]     Goto B
[5]   ?ILS /*Comment(5)*/
[5]   ?Otherwise      Inconclusive(2)
[3] ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State.
- (2) Tester waits for the IUT to perform PCM Pseudo Code with $n=0$. (PC-44a, PC-44b, PC_R-Code(0)_Actions)
- (3) IUT enters the Signal State and transmit MLS. (T_Val(0), PC-45)
- (4) Tester waits for the IUT to go back to the Next State from Signal State. (PC-55b)
- (5) IUT ends in the Next State with $n=1$. (PC-54)

6.3.5 To_Next_1

Purpose: This procedure begins when the IUT enters the Next State with $n=1$, indicates its port type, and ends in the Next State with $n=2$.

Note: This procedure is used for all of the connections except port M to port M when $n=1$.

Procedure:

```

[1]+To_Next_0 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS
[4]   !Port_Type /*Comment(2)*/
[5]   B:?MLS
[6]     Goto B
[5]   ?ILS /*Comment(3)*/
[5]   ?Otherwise      Inconclusive(2)
[3] ?HLS
[4]   !Port_Type /*Comment(2)*/
[5]   C:?HLS
[6]     Goto C
[5]   ?ILS /*Comment(3)*/
[5]   ?Otherwise      Inconclusive(3)
[3] ?Otherwise      Inconclusive(1)

```


Extended Comments:

- (1) IUT is in the Next State with n=1.
- (2) Port_Type is the Line State which is transmitted continuously by the Tester in order to show the Tester's port type. If the Tester's port type is A or B, then MLS shall be transmitted here, otherwise, HLS shall be transmitted here.
- (3) IUT ends in the Next State with n=2.

6.3.5.1 To_Next_1W

Purpose: This procedure begins as the IUT enters the Next State with n=1 and ends with n=2.

Note: This procedure is called by the connection of port A to port M or port B to port M.

Procedure:

```

[1]+To_Next_0
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(1)*/
[4] !HLS /*Comment(2)*/
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits MLS to indicate its port type is A or B. (T_Val(1))
- (2) Tester transmits HLS to indicate its port type is M or S. (T_Val(1))
- (3) IUT ends in the Next State with n=2. (PC-54)

6.3.5.2 To_Next_1I

Purpose: This procedure begins when the IUT enters the Next State with n=1 and ends with n=2.

Note: This procedure is called by the connection of port M to port M only.

Procedure:

```

[1]+To_Next_0
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(1)*/
[4] !HLS /*Comment(2)*/
[5] B:?HLS
[6] Goto B
[5] ?ILS
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits HLS to indicate its port type is M or S. (T_Val(1))
- (2) Tester transmits HLS to indicate its port type is M or S. (T_Val(1))
- (3) IUT ends in the Next State with n=2.

6.3.6 To_Next_2

Purpose: This procedure begins when the IUT enters the Next State with n=2, signals the second PC_Type bit and ends with the IUT in the Next State with n=3.

Note: This procedure is called by all of the configurations except for port M to port M.

Procedure:

```

[1]+To_Next_1
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS
[4]   !Port_Type /*Comment(1)*/
[5]   B:?MLS
[6]   Goto B
[5]   ?ILS /*Comment(2)*/
[5]   ?Otherwise           Inconclusive(2)
[3] ?HLS
[4]   !Port_Type /*Comment(1)*/
[5]   C:?HLS
[6]   Goto C
[5]   ?ILS /*Comment(2)*/
[5]   ?Otherwise           Inconclusive(3)
[3]   ?Otherwise           Inconclusive(1)

```

Extended Comments:

(1) At this point, if the Tester's port type is A or S then MLS shall be transmitted; if the Tester's port type is B or M then HLS shall be transmitted.

(2) IUT ends in the Next State with n=3.

6.3.6.1 To_Next_2W

Purpose: This procedure begins when the IUT enters Next State with n=2 and ends with n=3.

Note: This procedure is called by the configuration of port A to port M or port B to port M.

Procedure:

```

[1]+To_Next_1W
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS /*Comment(1)*/
[4]   !HLS /*Comment(3)*/
[5]   B:?MLS
[6]   Goto B
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise           Inconclusive(2)
[3] ?HLS /*Comment(2)*/
[4]   !HLS /*Comment(3)*/
[5]   C:?HLS
[6]   Goto C
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise           Inconclusive(3)
[3]   ?Otherwise           Inconclusive(1)

```

Extended Comments:

(1) IUT transmits MLS to indicate its port type is A(IUT has transmitted MLS when n=1).

(T_Val(2))

(2) IUT transmits HLS to indicate its port type is B (IUT has transmitted MLS when n=1). (T_Val(2))

(3) Tester transmits HLS to indicate its port type is M. (Tester has transmitted HLS when n=1) (T_Val-2))

(4) IUT ends in the Next State with n=3. (PC-54)

6.3.6.2 To_Next_2I

Purpose: This procedure begins when the IUT enters the Next State with n=2 and ends with n=3.

Note: This procedure is used for the connection of M port to M port only.

Procedure:

```

[1]+To_Next_1I
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(1)*/
[4] !HLS /*Comment(2)*/
[5] B:?HLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits HLS to indicate its port type is M. (IUT has transmitted HLS when n=1). (T_Val(2))
- (2) Tester transmits HLS to indicate its port type is M. (Tester has transmitted HLS when n=1). (T_Val(2))
- (3) IUT ends in the Next State with n=3. (PC-54)

6.3.7 To_Next_3

Purpose: This procedure begins when the IUT enters the Next State (n=3), checks its connection policy and ends in the Next State with n=4.

Procedure:

```

[1]+To_Next_2 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(2)*/
[4] !HLS /*Comment(3)*/
[5] B:?HLS
[6] Goto B
[5] ?ILS /*Comment(4)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=3.
- (2) (IUT checks the Tester's Port type according to the values from the Tester's R_Val(1) and R_Val(2) bits and decides the connection policy is valid. (PC_RCode(3)_Actions, PC_TCode(3)_Actions)
- (3) Tester transmits HLS to indicate the Valid Connection, IUT must memorize this information in order to use it later.
- (4) IUT ends in the Next State with n=4. (PC-54)

Purpose: This procedure begins when the IUT enters Next State (n=3), transmits MLS to indicate its policy is illegal for the connection of M Port to M Port, and ends with n=4.

Procedure:

```

[1]+To_Next_2I
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(1)*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(2)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT checks the Tester's Port type according to the received bits of R_Val(1) and R_Val(2) and decides that the connection is Illegal. (M port to M port)
 (2) IUT ends in the Next State with n=4.

6.3.8 To_Next_4S

Purpose: This procedure begins when the IUT enters the Next State (n=4), sets the Short (Medium or Long) Link Confidence Test Duration and ends in the Next State with n=5.

Procedure:

```
[1]+To_Next_3 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS /*Comment(4)*/
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(6)*/
[5] ?Otherwise Inconclusive(2)
[3] ?HLS /*Comment(3)*/
[4] !HLS /*Comment(5)*/
[5] C:?HLS
[6] Goto C
[5] ?ILS /*Comment(6)*/
[5] ?Otherwise Inconclusive(3)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n=4.
 (2) IUT transmits MLS to indicate the Duration of LCT is Short or Medium. (T_Val(4))
 (3) IUT transmits HLS to indicate the Duration of LCT is Long. (T_Val(4) note)
 (4) Tester transmits MLS to indicate Short or Medium LCT Duration.
 (5) Tester transmits HLS to indicate Long LCT Duration.
 (6) IUT ends in the Next State with n=5. (PC-54)

6.3.9 To_Next_4M

Purpose: IUT transmits MLS to indicate a Medium (Long) Link Confidence Test Duration with n=4 and PC_LCT_Fail > 0.

Procedure:

```
[1]+Break_In_Next7 /*Comment(1)*/
[2] +To_Next_3 /*Comment(2)*/
[3] !ILS
[4] A:?ILS
[5] Goto A
[4] ?MLS /*Comment(3)*/
[5] !MLS
[6] B:?MLS
[7] Goto B
[6] ?ILS /*Comment(5)*/
[6] ?Otherwise Inconclusive(2)
[4] ?HLS /*Comment(4)*/
[5] !HLS
[6] C:?HLS
[7] Goto C
[6] ?ILS /*Comment(5)*/
[6] ?Otherwise Inconclusive(3)
[4] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT enters the Break State and increases the PC_LCT_Fail value.
- (2) IUT is in the Next State with n=4.
- (3) IUT transmits MLS to indicate a Short or Medium LCT Duration. (T_Val(4))
- (4) IUT transmits HLS to indicate a Long LCT Duration. (T_Val(4) Note)
- (5) IUT ends in the Next State with n=5. (PC-54)

6.3.10 To_Next_4L

Purpose: IUT transmits HLS to indicate a Long Link Confidence Test Duration while its LEM_Fail is set because the link error rate is greater than LER_Cutoff in the last Active State.

Procedure:

```

[1]+Break_In_Active /*Comment(1)*/
[2]+To_Next_3 /*Comment(2)*/
[3]  !ILS
[4]  A:?ILS
[5]    Goto A
[4]  ?HLS /*Comment(3)*/
[5]    !HLS
[6]    B:?HLS
[7]      Goto B
[6]    ?ILS /*Comment(4)*/
[6]    ?Otherwise           Inconclusive(2)
[4]  ?Otherwise           Inconclusive(1)

```

Extended Comments:

- (1) IUT enters the Break State and set the LEM_Fail because the Link Error Rate is greater than LER_Cutoff.
- (2) IUT is in the Next State with n=4.
- (3) IUT transmits HLS indicating a Long or Extended LCT Duration. (T_Val(4))
- (4) IUT ends in the Next State with n=5. (PC-54)

6.3.11 To_Next_4E

Purpose: This procedure begins when the IUT enters Next State (n=4), sets the Extended Link Confidence Test Duration and ends in the Next State with n=5.

Note: This procedure is used for the configuration of M port to M port only.

Procedure:

```

[1]+To_Next_MM3 /*Comment(1)*/
[2]  !ILS
[3]  A:?ILS
[4]    Goto A
[3]  ?HLS /*Comment(2)*/
[4]    !HLS /*Comment(3)*/
[5]    B:?HLS
[6]      Goto B
[5]    ?ILS /*Comment(4)*/
[5]    ?Otherwise           Inconclusive(2)
[3]  ?Otherwise           Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=4.
- (2) IUT transmits HLS to indicate the Duration of LCT is Long or Extended. (T_Val(4))
- (3) Tester transmits HLS to indicate Long or Extended Duration.
- (4) IUT ends in the Next State with n=5. (PC-54)

6.3.12 To_Next_5S

Purpose: This procedure begins when the IUT enters the Next State, sets the Short (Medium, Long) LCT Duration (n=4, 5) and ends in the Next State with n=6.

Procedure:

```
[1]+To_Next_3 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[6] !ILS
[7] C:?ILS
[8] Goto C
[7] ?MLS /*Comment(4)*/
[8] !MLS
[9] D:?MLS
[10] Goto D
[9] ?ILS /*Comment(6)*/
[9] ?Otherwise Inconclusive(5)
[7] ?HLS /*Comment(5)*/
[8] !HLS
[9] E:?HLS
[10] Goto E
[9] ?ILS /*Comment(6)*/
[9] ?Otherwise Inconclusive(6)
[7] ?Otherwise Inconclusive(3)
[5] ?Otherwise Inconclusive(2)
[3] ?HLS /*Comment(2)*/
[4] !HLS
[5] F:?HLS
[6] Goto F
[5] ?ILS /*Comment(3)*/
[6] !ILS
[7] G:?ILS
[8] Goto G
[7] ?MLS /*Comment(7)*/
[8] !MLS
[9] H:?MLS
[10] Goto H
[9] ?ILS /*Comment(6)*/
[9] ?Otherwise Inconclusive(7)
[7] ?Otherwise Inconclusive(4)
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n=4.
- (2) IUT transmits MLS to indicate the Duration of LCT is Short or HLS to indicate the Duration of LCT is Long. (T_Val(4))
- (3) IUT ends in the Next State with n=5.
- (4) IUT transmits MLS to indicate the Short LCT Duration. (T_Val(5))
- (5) IUT transmits HLS to indicate the Medium LCT Duration. (T_Val(5))
- (6) IUT ends in Next State with n=6.
- (7) IUT transmits MLS to indicate the Long LCT Duration. (T_Val(5))

6.3.13 To_Next_5M

Purpose: This procedure begins when the IUT enters the Next State, sets the Medium (Long) Link Confidence Test Duration ($n=4, 5$) and ends in Next State with $n=6$.

Procedure:

```

[1]+To_Next_3 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[6] !ILS
[7] C:?ILS
[8] Goto C
[7] ?HLS /*Comment(4)*/
[8] !HLS
[9] D:?HLS
[10] Goto D
[9] ?ILS /*Comment(5)*/
[9] ?Otherwise Inconclusive(5)
[7] ?Otherwise Inconclusive(3)
[5] ?Otherwise Inconclusive(2)
[3] ?HLS /*Comment(2)*/
[4] !HLS
[5] E:?HLS
[6] Goto E
[5] ?ILS /*Comment(3)*/
[6] !ILS
[7] F:?ILS
[8] Goto F
[7] ?MLS /*Comment(6)*/
[8] !MLS
[9] G:?MLS
[10] Goto G
[9] ?ILS /*Comment(5)*/
[9] ?Otherwise Inconclusive(6)
[7] ?Otherwise Inconclusive(4)
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with $n=4$.
- (2) IUT transmits MLS to indicate a Medium LCT Duration or HLS to indicate a Long LCT.
(T_Val(4))
- (3) IUT ends in the Next State with $n=5$.
- (4) IUT transmits HLS to indicate a Medium LCT Duration.
- (5) IUT ends in the Next State with $n=6$.
- (6) IUT transmits MLS to indicate a Long LCT Duration.

6.3.14 To_Next_5L

Purpose: IUT transmits MLS to indicate a Long Link Confidence Test Duration. (n=5)

Procedure:

```
[1]+To_Next_4L /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS /*Comment(2)*/
[4]   !MLS /*Comment(3)*/
[5]   B:?MLS
[6]   Goto B
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise Inconclusive(2)
[3]   ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n=5.
- (2) IUT transmits MLS indicating a Long LCT Duration. (T_Val(4,5))
- (3) Tester transmits MLS indicating a Long LCT Duration.
- (4) IUT ends in the Next State with n=6. (PC-54)

6.3.15 To_Next_5E

Purpose: This procedure begins when the IUT enters the Next State (n=5), sets the Extended Link Confidence Test Duration and ends in the Next State with n=6.

Procedure:

```
[1]+To_Next_4E /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?HLS /*Comment(2)*/
[4]   !HLS /*Comment(3)*/
[5]   B:?HLS
[6]   Goto B
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise Inconclusive(2)
[3]   ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n=5.
- (2) IUT transmits HLS to indicate the Duration of LCT is Extended. (T_Val(4,5))
- (3) Tester transmits HLS to indicate the Extended Duration.
- (4) IUT ends in the Next State with n=6. (PC-54)

6.3.16 No_MAC_6S

Purpose: This procedure begins when the IUT enters the Next State with n=6, transmits MLS to indicate its MAC is not available for the Short LCT and ends in the Next State with n=7.

Procedure:

```
[1]+To_Next_5S /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS /*Comment(2)*/
[4]   !MLS /*Comment(3)*/
[5]   B:?MLS
[6]   Goto B
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise Inconclusive(2)
[3]   ?Otherwise Inconclusive(1)
```


Extended Comments:

- (1) IUT is in the Next State with $n = 6$.
- (2) IUT transmits MLS to indicate its MAC is not available for the LCT. (PC_TCode(6)_Actions)
- (3) Tester's MAC is not available for the LCT.
- (4) IUT ends in the Next State with $n=7$. (PC-54)

6.3.17 IUT_MAC_6S

Purpose: This procedure begins when the IUT enters the Next State ($n=6$), transmits HLS to indicate its MAC is available for the Short LCT.

Procedure:

```
[1]+To_Next_5S
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(1)*/
[4] !MLS /*Comment(2)*/
[5] B:?HLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT transmits HLS to indicate its MAC is available for the Short Link Confidence Test.
- (2) Tester transmits MLS to indicate its MAC is not available for the Short Link Confidence Test.
- (3) IUT ends in the Next State with $n = 7$.

6.3.18 No_MAC_6M

Purpose: This procedure begins when the IUT enters Next State with $n=6$, transmits MLS to indicate its MAC is not available for the Medium LCT and ends in the Next State with $n = 7$.

Procedure:

```
[1]+To_Next_5M /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with $n = 6$.
- (2) IUT transmits MLS to indicate its MAC is not available for the Medium LCT.
- (3) IUT ends in the Next State with $n = 7$.

6.3.19 IUT_MAC_6M

Purpose: This procedure begins when the IUT enters the Next State, $n=6$, transmits HLS to indicate its MAC is available for the Medium LCT and ends in the Next State with $n=7$.

Procedure:

```

[1]+To_Next_5M
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?HLS /*Comment(1)*/
[4]   !MLS
[5]   B:?HLS
[6]     Goto B
[5]   ?ILS /*Comment(2)*/
[5]   ?Otherwise      Inconclusive(2)
[3]   ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits HLS to indicate its MAC is available for the Medium LCT.
- (2) IUT ends in the Next State with $n = 7$.

6.3.20 No_MAC_6L

Purpose: This procedure begins when the IUT enters the Next State ($n=6$), transmits MLS to indicate its MAC is not available for the Long LCT, and ends in the Next State with $n=7$.

Procedure:

```

[1]+To_Next_5L /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS /*Comment(2)*/
[4]   !MLS
[5]   B:?MLS
[6]     Goto B
[5]   ?ILS /*Comment(3)*/
[5]   ?Otherwise      Inconclusive(2)
[3]   ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with $n = 6$.
- (2) IUT transmits MLS to indicate its MAC is not available for the Long LCT.
- (3) IUT ends in the Next State with $n = 7$.

6.3.21 IUT_MAC_6L

Purpose: This procedure begins when the IUT enters the Next State ($n=6$), transmits HLS to indicate its MAC is available for the Long LCT and ends in the Next State with $n = 7$.

Procedure:

```

[1]+To_Next_5L /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?HLS /*Comment(2)*/
[4]   !MLS
[5]   B:?HLS
[6]     Goto B
[5]   ?ILS /*Comment(3)*/
[5]   ?Otherwise      Inconclusive(2)
[3]   ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with $n = 6$.
- (2) IUT transmits HLS to indicate its MAC is available for the Long LCT.
- (3) IUT ends in the Next State with $n = 7$.

6.3.22 No_MAC_6E

Purpose: This procedure begins when the IUT enters the Next State (n=6), transmits MLS to indicate its MAC is not available for the Extended LCT, and ends in the Next State with n=7.

Procedure:

```
[1]+To_Next_5E /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n = 6.
- (2) IUT transmits MLS to indicate its MAC is not available for the Extended LCT.
- (3) IUT ends in the Next State with n = 7.

6.3.23 IUT_MAC_6E

Purpose: This procedure begins when the IUT enters the Next State (n=6), transmits HLS to indicate its MAC is available for the Extended LCT, ends in the Next State with n=7.

Procedure:

```
[1]+To_Next_5E /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(2)*/
[4] !MLS
[5] B:?HLS
[6] Goto B
[5] ?ILS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with n = 6.
- (2) IUT transmits HLS to indicate its MAC is available for the Extended LCT.
- (3) IUT ends in the Next State with n = 7.

6.3.24 To_Next_7

Purpose: This procedure begins when the IUT enters the Next State with n=6 and transmits HLS (MLS) to indicate its MAC is available for LCT or not, returns the Next State, increases n value then performs LCT using ILS or PDUs (if at least a MAC available for the LCT) and returns to the Next State with n=8.

Procedure:

```
[1]+To_Next_5S
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(1)*/
```

```

[4]  !MLS /*Comment(3)*/
[5]  B:?MLS
[6]  Goto B
[5]  ?!LS /*Comment(4)*/
[6]  !ILS
[7]  C:?ILS
[8]  Goto C
[7]  ?MLS /*Comment(7)*/
[8]  !MLS /*Comment(8)*/
[9]  D:?MLS
[10] Goto D
[9]  ?ILS /*Comment(9)*/
[9]  ?Otherwise      Inconclusive(6)
[7]  ?Otherwise      Inconclusive(4)
[5]  ?Otherwise      Inconclusive(2)
[3]  ?HLS /*Comment(2)*/
[4]  !MLS
[5]  E:?HLS
[6]  Goto E
[5]  ?!LS /*Comment(4)*/
[6]  !ILS
[7]  F:?ILS
[8]  Goto F
[7]  ?ALS /*Comment(5)*/
[8]  !Repeat /*Comment(6)*/
[9]  G:?ALS
[10] !Repeat
[11] Goto G
[9]  ?ILS
[10] !ILS
[11] Goto G
[9]  ?MLS /*Comment(7)*/
[10] !MLS /*Comment(8)*/
[11] H:?MLS
[12] Goto H
[11] ?!LS /*Comment(9)*/
[11] ?Otherwise      Inconclusive(8)
[9]  ?Otherwise      Inconclusive(7)
[7]  ?Otherwise      Inconclusive(5)
[5]  ?Otherwise      Inconclusive(3)
[3]  ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits MLS to indicate its MAC is not available for the Link Confidence Test. (PC_TCode(6)_Actions)
- (2) IUT transmits HLS to indicate its MAC is available for the Link Confidence Test.
- (3) Tester transmits MLS to indicate its MAC is not available for the LCT.
- (4) IUT returns the Next State from the Signal State with n=7.
- (5) IUT transmits PDUs for the Short Link Confidence Test.
- (6) The Repeat operation is the normal operation of PHY when it repeats symbols. PHY repeats symbols only when its input is in ALS.
- (7) IUT transmits MLS to indicate its LCT is passed.
- (8) Tester transmits MLS to indicate its LCT is passed.
- (9) IUT ends in the Next State with n=8.

6.3.24.1 To_Next_7E

Purpose: This procedure begins when the IUT enters the Next State (n=6), transmits MLS to indicate its MAC is not available or HLS to indicate its MAC is available for LCT. Then goes back to Next State, increases n value and performs the LCT using ILS (if MAC not available) or PDUs (if at least a MAC available) and passes the LCT, ends in the Next State with n=8.

Procedure:

```

[1]+To_Next_5E
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?MLS /*Comment(1)*/
[4]   !MLS /*Comment(3)*/
[5]   B:?MLS
[6]     Goto B
[5]   ?ILS /*Comment(4)*/
[6]     !ILS
[7]     C:?ILS
[8]     Goto C
[7]     ?MLS /*Comment(7)*/
[8]     !MLS /*Comment(8)*/
[9]     D:?MLS
[10]      Goto D
[9]      ?ILS /*Comment(9)*/
[9]      ?Otherwise      Inconclusive(6)
[7]      ?Otherwise      Inconclusive(4)
[5]      ?Otherwise      Inconclusive(2)
[3] ?HLS /*Comment(2)*/
[4]   !MLS
[5]   E:?HLS
[6]     Goto E
[5]   ?ILS /*Comment(4)*/
[6]     !ILS
[7]     F:?ILS
[8]     Goto F
[7]     ?ALS /*Comment(5)*/
[8]     !Repeat /*Comment(6)*/
[9]     G:?ALS
[10]      !Repeat
[11]      Goto G
[9]      ?ILS
[10]      !ILS
[11]      Goto G
[9]      ?MLS /*Comment(7)*/
[10]      !MLS /*Comment(8)*/
[11]      H:?MLS
[12]      Goto H
[11]      ?ILS /*Comment(9)*/
[11]      ?Otherwise      Inconclusive(8)
[9]      ?Otherwise      Inconclusive(7)
[7]      ?Otherwise      Inconclusive(5)
[5]      ?Otherwise      Inconclusive(3)
[3]      ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT transmits MLS to indicate its MAC is not available for the Extended LCT.
- (2) IUT transmits HLS to indicate its MAC is available for the Extended LCT.
- (3) Tester transmits MLS to indicate its MAC is not available for the Extended LCT.
- (4) IUT enters the Next State with $n = 7$.
- (5) IUT transmits PDUs for the Extended LCT.
- (6) The !Repeat operation is the normal operation of PHY when it repeats symbols. PHY repeats symbols only when its input is in ALS.
- (7) IUT transmits MLS to indicate its LCT is passed.
- (8) Tester transmits MLS to indicate its LCT is passed.
- (9) IUT ends in the Next State with $n = 8$.

6.3.24.2 To_Next7_ERR

Purpose: This procedure begins when the IUT enters Next State ($n=7$), performs the Link Confidence Test using ERR, and ends with transmitting HLS to indicate the LCT fail.

Note: This procedure is performed only when neither the IUT nor the Tester has a MAC.

Procedure:

```
[1]+No_MAC_6S /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min
[4] !ERR /*Comment(2)*/
[5] B:?ILS
[6] Goto B
[5] ?HLS /*Comment(3)*/
[5] ?Otherwise Inconclusive(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) IUT is in the Next State with $n=7$.
- (2) Tester transmits ERR for the LCT.
- (3) IUT ends with transmitting HLS to indicate $LCT\_Fail > 0$. (PC_TCode(7)_Actions)

6.3.24.3 To_Next7_BADPDU

Purpose: This procedure is performed when the IUT has at least 1 MAC for the Link Confidence Test with $n=7$.

Procedure:

```
[1]+IUT_MAC_6S
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?ALS
[4] !BADPDU /*Comment(1)*/
[5] B:?ALS
[6] !BADPDU
[7] Goto B
[5] ?ILS
[6] !ILS
[7] Goto B
[5] ?HLS /*Comment(2)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)
```

Extended Comments:

- (1) Tester repeats the IUT's frame and changes the FCS to be the incorrect FCS.
- (2) IUT ends with transmitting HLS to indicate $LCT\_Fail > 0$. (PC_TCode(7)_Actions)

6.3.24.4 Break_In_Next7

Purpose: This procedure begins when the IUT transmits HLS to indicate $LER > LER\_Cutoff$ and ends in the Break State.

Procedure:

```

[1]+To_Next7_ERR /*Comment(1)*/
[2] !HLS /*Comment(2)*/
[3] A:?HLS /*Comment(3)*/
[4]   Goto A
[3] ?ILS /*Comment(4)*/
[4]   !ILS
[5]   B:?ILS
[6]   Goto B
[5]   ?QLS /*Comment(5)*/
[5]   ?Otherwise           Inconclusive(2)
[3]   ?Otherwise           Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Signal State with n=7.
- (2) Tester transmits HLS to indicate LER > LER_Cutoff. (ISO/IEC 9314-6:1998)
- (3) IUT transmits HLS to indicate LER > LER_Cutoff.
- (4) IUT returns to the Next State with n=8. (PC-54)
- (5) IUT ends with transmitting QLS to indicate it enters the Break State. (PC_RCode(8) Actions)

6.3.25 To_Next_8

Purpose: This procedure begins when the IUT enters the Next State with n = 8, Tester transmits MLS indicating its MAC is not available for the Local Loop Test and ends in the Next State with n = 9.

Note: This function is used only when IUT has a MAC available for the Local Loop Test.

Procedure:

```

[1]+To_Next_7 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4]   Goto A
[3] ?HLS /*Comment(2)*/
[4]   !HLS /*Comment(3)*/
[5]   B:?HLS
[6]   Goto B
[5]   ?ILS /*Comment(4)*/
[5]   ?Otherwise           Inconclusive(2)
[3]   ?Otherwise           Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=8.
- (2) IUT transmits HLS to indicate its MAC is available for the Local Loop Test. (PC_TCode(8)_Actions)
- (3) Tester transmits HLS to indicate its MAC is available for the Local Loop Test.
- (4) IUT ends in the Next State with n=9. (PC-54)

6.3.25.1 To_Next8_N

Purpose: This procedure is used to setup the Local Loop Test when the IUT does not make a MAC available. This procedure begins when the IUT enters the Next State (n=8), The Tester transmits HLS to indicate its MAC is available for the Local Loop Test. The IUT signals MLS to indicate its MAC is not available for Local Loop and returns to the Next State with n=9.

Procedure:

```

[1]+To_Next_7 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !HLS /*Comment(3)*/
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(4)*/
[5] ?Otherwise Inconclusive(2)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=8.
- (2) IUT transmits MLS to indicate its MAC is not available. (PC_TCode(8)_Actions)
- (3) Tester transmits HLS to indicate its MAC is available for the Local Loop.
- (4) IUT ends in the Next State with n=9. (PC-54)

6.3.25.2 To_Next_8E

Purpose: This procedure begins when the IUT enters the Next State (n=8), transmits HLS (MLS) to indicate its MAC is available for the Local Loop Test or not, then ends in the Next State with n=9.

Procedure:

```

[1]+To_Next_7E /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[4] !MLS /*Comment(4)*/
[5] B:?MLS
[6] Goto B
[5] ?ILS /*Comment(6)*/
[5] ?Otherwise Inconclusive(2)
[3] ?HLS /*Comment(3)*/
[4] !MLS /*Comment(4)*/
[5] C:?HLS
[6] Goto C
[5] ?ILS /*Comment(5)*/
[5] ?Otherwise Inconclusive(3)
[3] ?Otherwise Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=8.
- (2) IUT transmits MLS to indicate its MAC is not available for the Local Loop Test.
- (3) IUT transmits HLS to indicate its MAC is available for the Local Loop test.
- (4) Tester transmits MLS to indicate its MAC is not available for the Local Loop Test.
- (5) IUT ends in the Next State with n=9.

6.3.26 To_Next_9

Purpose: This procedure begins when the IUT enters the Next State (n=8), transmits HLS (MLS) to indicate its MAC is available for the Local Loop Test or not. Goes back to the Next State with n = 9, performs the Local loop and ends with transmitting HLS to indicate the IUT's MAC is to be connected to PHY or MLS to indicate the IUT's MAC is not to be connected to PHY.

Procedure:

```

[1] +To_Next_7 /*Comment(1)*/
[2] !ILS
[3] A: ?ILS
[4]   Goto A
[3] ?HLS /*Comment(2)*/
[4]   !MLS /*Comment(4)*/
[5]   B: ?HLS
[6]     Goto B
[5]   ?ILS /*Comment(5)*/
[6]     !ILS
[7]     D: ?ILS
[8]       Goto D
[7]     ?ALS /*Comment(6)*/
[8]       !Repeat /*Comment(8)*/
[9]         E: ?ALS
[10]          !Repeat
[11]            Goto E
[9]          ?ILS
[10]            !ILS
[11]              Goto E
[9]            ?HLS /*Comment(9)*/
[9]              ?Otherwise      Inconclusive(6)
[7]              ?Otherwise      Inconclusive(4)
[6]              ?Otherwise      Inconclusive(2)
[3] ?MLS /*Comment(3)*/
[4] !HLS /*Comment(4)*/
[5] C: ?MLS
[6]   Goto C
[5]   ?ILS /*Comment(5)*/
[6]     !ILS
[7]     H: ?ILS
[8]       Goto H
[7]       ?MLS /*Comment(7)*/
[7]       ?Otherwise      Inconclusive(5)
[5]       ?Otherwise      Inconclusive(3)
[3]       ?Otherwise      Inconclusive(1)

```

Extended Comments:

- (1) IUT is in the Next State with n=8.
- (2) IUT transmits HLS to indicate its MAC is available for the Local Loop Test.
- (3) IUT transmits MLS to indicate its MAC is not available for the Local Loop Test.
- (4) A MLS is transmitted by Tester to indicate its MAC is not available for the Local Loop Test, an HLS is transmitted by Tester to indicate its MAC is available for the Local Loop Test.
- (5) IUT returns to the Next State from the Signal State with n=9.
- (6) IUT performs Local Loop Test with transmitting PDUs. (ALS)
- (7) IUT ends with transmitting MLS to indicate its MAC output not to be connected to PHY.
(PC_TCode(9)_Actions)
- (8) At this point, the tester repeats any PDUs (ALS) received from the IUT for the Local Loop Test. The Loopback ends, then the IUT signals HLS or MLS.
- (9) IUT ends with transmitting HLS to indicate its MAC output to be connected to PHY.
(PC_RCode(9)_Actions)

6.3.27 To_Next_10

Purpose: This procedure begins when the IUT signals HLS to indicate its MAC output to be connected to PHY or MLS to indicate its MAC output not to be connected to PHY, ends in the Next State with n = 10.

Procedure:

```

[1]+To_Next_9
[2] A:?MLS /*Comment(1)*/
[3] !MLS
[4] Goto A
[2] B:?HLS /*Comment(2)*/
[3] !HLS
[4] Goto B
[2] ?ILS /*Comment(3)*/
[2] ?Otherwise Inconclusive

```

Extended Comments:

- (1) IUT transmits MLS to indicate its MAC output is not to be connected to PHY in PCM (CFM) Active State.
- (2) IUT transmits HLS to indicate its MAC output is to be connected to PHY in PCM (CFM) Active State.
- (3) IUT ends in the Next State with n = 10.

6.3.28 IN_Join

Purpose: This procedure begins when the IUT enters the Next State with n=10 and ends in the Join State.

Procedure:

```

[1]+To_Next_10 /*Comment(1)*/
[2] !ILS
[3] A:?ILS
[4] Goto A
[3] ?HLS /*Comment(2)*/
[3] ?Otherwise Inconclusive

```

Extended Comments:

- (1) IUT is in Next State with n=10.
- (2) IUT ends in the Join State. (PC-46)

6.3.29 IN_Verify

Purpose: This procedure begins when the IUT enters the Join State and ends in the Verify State.

Procedure:

```

[1]+IN_Join /*Comment(1)*/
[2] !HLS
[3] A:?HLS
[4] Goto A
[3] ?MLS /*Comment(2)*/
[3] ?Otherwise Inconclusive

```

Extended Comments:

- (1) IUT is in the Join State.
- (2) IUT ends in the Verify State. (PC-67)

6.3.30 IN_Active

Purpose: This procedure begins when the IUT enters the Verify State and ends in the Active State.

Procedure:

```

[1]+IN_Verify /*Comment(1)*/
[2] !MLS
[3] A:?MLS
[4] Goto A
[3] ?ILS /*Comment(2)*/
[3] ?Otherwise Inconclusive

```

Extended Comments:

- (1) IUT is in the Verify State.
- (2) IUT ends in the Active State. (PC-78)

6.3.31 Break_In_Active

Purpose: IUT starts in the Active State, keeps monitoring the incoming Line State and ends with entering the Break State when LER is greater than LER_Cutoff.

Procedure:

```
[1]+IN_Active /*Comment(1)*/
[2] !ERR /*Comment(2)*/
[3] A:?ILS
[4] Goto A
[3] ?ALS
[4] Goto A
[3] ?QLS /*Comment(3)*/
[3] ?Otherwise Inconclusive
```

Extended Comments:

- (1) IUT is in the Active State.
- (2) Tester transmits Error Line State to force IUT returns the Break State.
- (3) IUT ends up with entering the Break State. (PC-81b)

6.4 ECM Abstract Test Suite**6.4.1 Scope**

Entity Coordination Management (ECM) performs five distinct functions described as states in the ECM state machine. These ECM functions are:

- (1) Connect/Disconnect PCM,
- (2) Insert/Deinsert optical bypass switch,
- (3) Propagate/Terminate Trace,
- (4) Initiate Path Test, and
- (5) Participate in Hold Policy.

Most of these functions cannot be directly observed because they occur while PCM is in the OFF state. In fact, the only ECM states which cause observable PCM behavior are the IN(EC1) and TRACE(EC2) states - which means that these are the only ECM states which can be directly observed by a remote tester. In addition, it may be possible to indirectly observe the actions of the INSE-RT(EC5) and DEINSERT(EC7) states by monitoring the disruption on the physical medium caused by the bypass switch.

This Abstract Test Suite is designed to test only ECM observable functions using the same notation as the PCM notation written in the PCM test suite above.

To perform the connect or insert function, ECM responds to signals from other management entities by sending the PC_Start signal to PCM. Since ECM primarily passes the information on to PCM, it seems that any PCM which can be made to go through its initialization sequence can also be considered to have performed this ECM connect or insert sequence. On the other hand, this sequence cannot be forced by a remote tester, since the IUT has to be connected before it can receive the appropriate PMF_SET_REQ(Connect) frame. Therefore, the ECM connect and insert tests are considered covered by the PCM Connection Initialization Test in the PCM ATS above and not separately tested.

Test cases for the ECM disconnect, deinsert, and Trace propagate and terminate functions are developed below to satisfy the conformance testing of the FDDI ECM. The IN_Active subroutine in section 6.3.30 of the PCM ATS above is re-used in these test cases.

Note: These test cases can be performed only if the Parameter Management Protocol, PMF_SET, is implemented.

6.4.2 Test Cases

6.4.2.1 ECM Disconnect Test

6.4.2.1.1 Case-ID: ECM_Disconnect

Purpose: Verify that IUT enters the Out state when it receives a Disconnect signal while in the In state.

Procedure:

```

[1] +IN_Active /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A: ?Timeout TL_Min
    /*Comment(2)*/
[4] B: ?ILS
[5] Goto B
[4] ?ALS /*Comment(3)*/
[5] C: !PMF_SET_REQ
    /*Comment(4)*/
[6] Start PC_React
[7] ?QLS /*Comment(5)*/
[8] !QLS Start TD_Min
[9] D: ?Timeout TD_Min Pass
    /*Comment(6)*/
[9] ?QLS
[10] Goto D
[9] ?Otherwise Fail(4)
[7] ?ALS
[8] Goto C
[7] ?Otherwise Fail(3)
[7] ?Timeout PC_React Fail(3)
[4] ?Otherwise Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT's PCM is in the Active state. (PC8)
- (2) IUT's PCM has been transmitting ILS for TL_Min in the Active state.
- (3) IUT's PCM transmits ALS in the Active state after TL_Min expires. IUT is in the In state. (PC88b, EC1)
- (4) Tester sends a Disconnect request signal to cause IUT to change its state. (In this case, Tester shall prepare a PMF SET Request frame containing the fddiSMTStationAction of Disconnect to be invoked. It sends this frame to force IUT to enter the Leave state (IUT's PCM to enter the Off state) and waits for the IUT to respond. (EC13))
- (5) IUT's PCM is in the Off state. IUT is in the Leave state. (PC0, EC3)
- (6) TD_Min expires. IUT enters the Out state and waits for Connect request signal. (EC30, PC0)

Reasons for Failure:

- (1) IUT's PCM does not transmit ILS in the Active state or TL_Min is not expired.
- (2) IUT's PCM does not transmit ILS or ALS in the Active state.
- (3) IUT's PCM is not in the Active state or the Off state or PC_React expires
- (4) IUT's PCM does not transmit QLS while IUT in the Leave state or TD_Min is not expired.

6.4.2.2 ECM Deinsert Test

6.4.2.2.1 Case-ID: ECM_Deinsert

Purpose: Verify that IUT deinserts the bypass switch and enters the Out state when it receives a Disconnect signal while in the In state.

Procedure:

```

[1] +IN_Active      /*Comment(1)*/
[2] !ILS Start TL_Min
[3] A:?Timeout TL_Min
      /*Comment(2)*/

[4] B:?ILS
[5] Goto B
[4] ?ALS           /*Comment(3)*/
[5] C:!PMF_SET_REQ
      /*Comment(4)*/

[6] Start PC_React
[7] ?QLS           /*Comment(5)*/
[8] !QLS Start TD_Min
[9] D:?Timeout TD_Min
      /*Comment(6)*/

[10] Start I_Max
[11] ?Timeout I_Max
      /*Comment(7)*/

[12] !SMT_DATA
      /*Comment(8)*/

[13] Start D_Max
[14] ?SMT_DATA      Pass
      /*Comment(9)*/

[14] ?Otherwise      Fail(6)
[14] ?Timeout D_Max  Fail(6)
[11] ?Otherwise      Fail(5)
[9] ?QLS
[10] Goto D
[9] ?Otherwise      Fail(4)
[7] ?ALS
[8] Goto C
[7] ?Otherwise      Fail(3)
[7] ?Timeout PC_React Fail(3)
[4] ?Otherwise      Fail(2)
[3] ?ILS
[4] Goto A
[3] ?Otherwise      Fail(1)

```

Extended Comments:

- (1) IUT's PCM is in the Active state. (PC8)
- (2) IUT's PCM has been transmitting ILS for TL_Min in the Active state.
- (3) IUT's PCM transmits ALS in the Active state after TL_Min expires. IUT is in the In state. (PC88b, EC1)
- (4) Tester sends a Disconnect request signal to cause IUT to change its state. (In this case, Tester shall prepare a PMF SET Request frame containing the fddiSMTStationAction of Disconnect to be invoked. It sends this frame to force IUT to enter the Leave state (IUT's PCM to enter the Off state) and waits for the IUT to respond. (EC13))
- (5) IUT's PCM is in the Off state. IUT is in the Leave state. (PC0, EC3)
- (6) TD_Min expires. IUT enters the Deinsert state. (EC37, EC7)
- (7) I_Max expires. IUT enters the Out state. Now IUT is in the bypass mode (IUT withdraws itself from the ring). (EC70, PC0)
- (8) Tester sends a SMT_DATA frame to check the continuity of the restored ring. (In this case, Tester shall prepare a SMT frame containing its own data. It sends this frame on the restored ring and waits for the frame to come back.)
- (9) The SMT_DATA frame comes back to the tester. The continuity of the ring is restored.

Reasons for Failure:

- (1) IUT's PCM does not transmit ILS in the Active state or TL_Min is not expired.
- (2) IUT's PCM does not transmit ILS or ALS in the Active state.
- (3) PC_React expires or IUT's PCM does not enter the Off state. IUT does not enter the Leave state.
- (4) IUT's PCM does not transmit QLS or TD_Min is not expired.
- (5) I_Max is not expired.
- (6) D_Max expires but the SMT_DATA frame does not come back to the tester. The ring is not restored.

6.4.2.3 ECM Trace Tests:

In this series of test, there will be two defined quantities for Trace_Max. The first is Trace_Max_Hi, which will be longer than the normal default timer of 7 seconds. The other, Trace_Max_Lo, will be shorter than the normal default timer. Both quantities will be set by the tester depending on the test purpose. Since two Points of Control and Observation (PCOs) are needed when conducting test cases 6.4.2.3.4 - 6.4.2.3.12, for classification reason, a PCO for an event line is denoted by sequence of capital letters, which indicates a tester post, appears between the indentation level number and the label, for example:

[4]TB A: ?ALS

Where TB is denoted tester port B.

6.4.2.3.1 Case-ID: Trace_Max

Purpose: Verify that the IUT remains in the Trace state for Trace_Max. This test case is applicable to a station containing at least one MAC and has one port connected to the tester.

Test Setup: See figure 6.

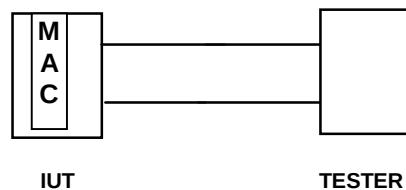


Figure 6 - Tester Configuration for Indicated Cases

Procedure:

```
[1]+IN_Trace /*Comment(1)*/
[2] Start Trace_Max_Lo
[3] A:?MLS
[4] Goto A
[3] ?Timeout Trace_Max_Lo Pass
    /*Comment(2)*/
[3] ?Otherwise Fail
```

Extended Comments:

- (1) IUT is in the Trace state.
- (2) IUT maintains in the Trace state for Trace_Max.

Reason for Failure:

IUT does not repeat MLS for Trace_Max.

6.4.2.3.2 Case-ID: Trace_Term

Purpose: Verify that the IUT terminates the Trace process when a QLS is received. This test case is applicable to a station containing at least one MAC and has one port connected to the tester.

Test Setup: See figure 6.

Procedure:

```

[1]+IN_Trace /*Comment(1)*/
[2] Start Trace_Max_Hi
[3] ?MLS
[4] !QLS Start Trace_React
    /*Comment(2)*/
[5] A:?MLS
[6] Goto A
[5] ?QLS Pass
    /*Comment(3)*/
[5] ?Otherwise Fail(2)
[5] ?Timeout Trace_React Fail(2)
[3] ?Otherwise Fail(1)
[3] ?Timeout Trace_Max_Hi Inconclusive

```

Extended Comments:

- (1) IUT is in the Trace state.
- (2) Tester continuously sends QLS to force IUT to terminate the Trace.
- (3) Tester receives QLS from IUT indicating the IUT has terminated Trace before Trace_React timed out.

Reason for Failure:

- (1) IUT does not transmit MLS.
- (2) IUT does not transmit MLS or QLS or Trace_React has expired.

6.4.2.3.3 Case-ID: To_Leave

Purpose: Verify that IUT transition to the Leave state when it remains in the Trace state for longer than Trace_Max. This test case is applied to station containing at least one MAC and one port connected to the Tester.

Test Setup: See figure 6.

Procedure:

```

[1]+IN_Trace /*Comment(1)*/
[2] Start Trace_Max_Hi
[3] A:?MLS
[4] Goto A
[3] ?Timeout Trace_Max_Hi
    /*Comment(2)*/
[4] B:?MLS
[5] Goto B
[4] ?QLS Pass
    /*Comment(3)*/
[4] ?Otherwise Fail(2)
[3] ?Otherwise Fail(1)

```

Extended Comments:

- (1) IUT is in the Trace state.
- (2) Trace_Max expires. IUT has been in the Trace state for Trace_Max.
- (3) IUT terminates the Trace. Receive QLS.

Reason for Failure:

- (1) IUT does not transmit MLS.
- (2) IUT does not transmit MLS or QLS.

6.4.2.3.4 Case-ID: Trace_Mac_Prop

Purpose: Verify that IUT terminates the Trace process when it receives MLS on its port which is connected to a MAC (within a station). This test case is applied to a single port station or an B port of SM-DAS Thru configuration (figure 7) or an A or B port of DM-DAS Thru configuration (figure 8).

Test Setup: See figure 7 and figure 8.

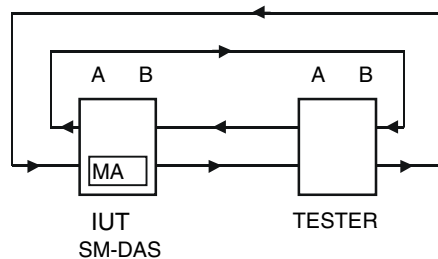


Figure 7 - Tester Configuration for Indicated Cases

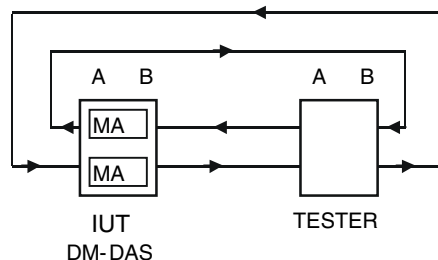


Figure 8 - Tester Configuration for Indicated Cases

Procedure:

[1]TA	+IN_Active_PDR	
[2]TB	+IN_Active_PDR	
[3]TA	!MLS Start Trace_React	
[4]TB	A: ?ALS	
[5]	Goto A	
[4]TB	?ILS	
[5]	Goto A	
[4]TB	?QLS	Pass
	/*Comment*/	
[4]TB	?Otherwise	Fail(1)
[4]TA	?QLS	Pass
	/*Comment*/	
[4]TA	?Otherwise	Fail(1)
[4]	?Timeout Trace_React	Fail(1)

Extended Comments:

IUT propagates the Trace from its B port to its MAC (figure 7) or from its A or B port to its MAC (figure 8) and terminates the Trace by transmitting QLS. Receive QLS on Tester B and A ports (figure 7 or 8).

Reason for Failure:

(1) IUT does not transmit ALS, ILS or QLS or Trace_React has expired.

6.4.2.3.5 Case-ID: Trace_Prop_Max 1

Purpose: Verify that IUT propagates the Trace from its A port to the upstream B port by generating MLS for Trace_Max. This test case is applied to a SM-DAS Thru configuration on the secondary ring.

Test Setup: See figure 7.

Procedure:

```

[1]TA      +IN_Active_PDR
[2]TB      +IN_Active_PDR
[3]TB A:    !MLS Start Trace_React
[4]TA      ?MLS
[5]        Start Trace_Max_Lo
[6]TA B:    ?MLS
[7]        Goto B
[6]        ?Timeout Trace_Max_Lo Pass
           /*Comment*/
[6]TA      ?Otherwise          Fail(2)
[4]TA      ?ILS
[5]        Goto A
[4]TA      ?ALS
[5]        Goto A
[4]TA      ?Otherwise          Fail(1)
[4]        ?Timeout Trace_React Fail(1)

```

Extended Comments:

Trace_Max expires. IUT has propagated the Trace for Trace_Max.

Reason for Failure:

- (1) IUT does not transmit ILS, ALS or MLS or Trace_React has expired.
- (2) IUT does not transmit MLS.

6.4.2.3.6 Case-ID: Trace_Ack1

Purpose: Verify that IUT acknowledges the termination of Trace when it receives QLS while propagating the Trace from its A port to the upstream B port. This test case is applicable to a SM-DAS Thru configuration on the secondary ring.

Test Setup: See figure 7.

Procedure:

```

[1]TA      +IN_Active_PDR
[2]TB      +IN_Active_PDR
[3]TB A:    !MLS Start Trace_React
[4]TA      ?MLS
[5]TA      !QLS Start Trace_React
[6]TA B:    ?MLS
[7]        Goto B
[6]TA      ?QLS          Pass
           /*Comment*/
[6]TA      ?Otherwise          Fail(2)
[6]        ?Timeout Trace_React Fail(2)
[6]TB      ?QLS          Pass
           /*Comment*/
[6]TB      ?Otherwise          Fail(2)
[4]TA      ?ALS
[5]        Goto A
[4]TA      ?ILS
[5]        Goto A
[4]TA      ?Otherwise          Fail(1)
[4]        ?Timeout Trace_React Fail(1)

```

Extended Comments:

IUT transmits QLS to acknowledge the termination of Trace. Receive QLS on both tester ports.

Reason for Failure:

- (1) IUT does not transmit MLS, ALS, ILS or Trace_React is expired.
- (2) IUT does not transmit MLS, QLS or Trace_React is expired.

6.4.2.3.7 Case-ID: Trace_Prop_Max2

Purpose: Verify that IUT propagates the Trace from an M Port to an upstream M Port (within a station) for Trace_Max. This test is applicable when there is no MAC in the internal token path between active M ports.

Test Setup: See figure 9. (Assume M1 and M4 are inserted into the primary path)

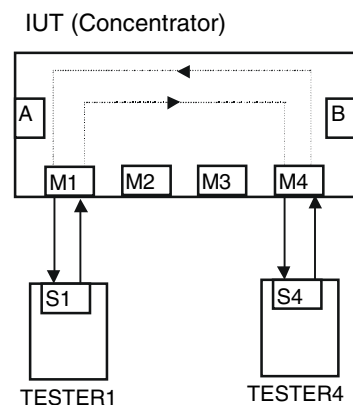


Figure 9 - Tester Configuration for Indicated Cases

Procedure:

```

[1]TS1  +IN_Active_PDR
[2]TS4  +IN_Active_PDR
[3]TS4  A: !MLS Start Trace_React
[4]TS1  ?MLS
[5]TS1  Start Trace_Max_Lo
[6]TS1  B: ?MLS
[7]      Goto B
[6]TS1  ?Timeout Trace_Max_Lo Pass
/*Comment*/
[6]TS1  ?Otherwise Fail(2)
[4]TS1  ?ILS
[5]      Goto A
[4]TS1  ?ALS
[5]      Goto A
[4]TS1  ?Otherwise Fail(1)
[4]TS4  ?Timeout Trace_React Fail(1)

```

Extended Comments:

Trace_Max expires. IUT has propagated the Trace for Trace_Max.

Reason for Failure:

- (1) IUT does not transmit ILS, MLS or ALS or Trace_React has expired.
- (2) IUT does not transmit MLS.

6.4.2.3.8 Case-ID: Trace_Ack2

Purpose: Verify that IUT acknowledges the termination of Trace when it receives QLS while propagating the Trace from an M port to an upstream M port (within a station). This test is applicable when there is no MAC in the internal token path between active M ports.

Test Setup: See figure 9. (Assume M1 and M4 are inserted into primary path)

Procedure:

```

[1]TS1      +IN_Active_PDR
[2]TS4      +IN_Active_PDR
[3]TS4      A: !MLS Start_Trace_React
[4]TS1      ?MLS
[5]TS4      !QLS Start_Trace_React
[6]TS1      B: ?MLS
[7]          Goto B
[6]TS1      ?QLS                      Pass
          /*Comment*/
[6]TS1      ?Otherwise                Fail(2)
[6]TS4      ?QLS                      Pass
          /*Comment*/
[6]TS4      ?Otherwise                Fail(2)
[6]TS4      ?Timeout Trace_React      Fail(2)
[4]TS1      ?ALS
[5]          Goto A
[4]TS1      ?ILS
[5]          Goto A
[4]TS1      ?Otherwise                Fail(1)
[4]TS4      ?Timeout Trace_React      Fail(1)

```

Extended Comments:

IUT transmits QLS to acknowledge the termination of Trace. Receive QLS on both testers.

Reason for Failure:

- (1) IUT does not transmit MLS, ALS or ILS or Trace_React is expired.
- (3) IUT does not transmit MLS or QLS or Trace_React is expired.

6.4.2.3.9 Case-ID: Trace_Prop_Max3

Purpose: Verify that IUT propagates the Trace from the A Port to the M Port internally, for Trace_Max. This test is applicable for any station (concentrator) that does not have a MAC in the token path.

Test Setup: See figure 10. (Assume M4 is inserted into the primary path)

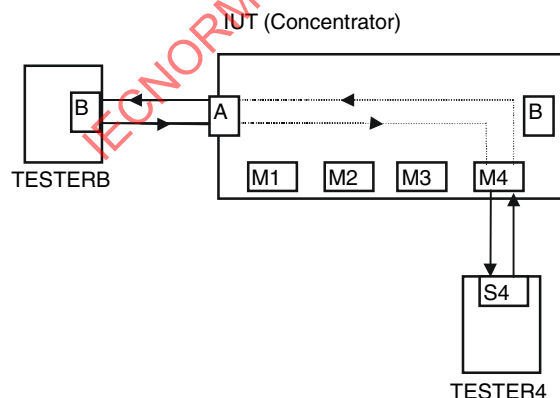


Figure 10 - Tester Configuration for Indicated Cases

Procedure:

```

[1]TB   +IN_Active_PDR
[2]TS4   +IN_Active_PDR
[3]TS4 A: !MLS Start Trace_React
[4]TB     ?MLS
[5]TB     Start Trace_Max_Lo
[6]TB B:  ?MLS
[7]       Goto B
[6]TB     ?Timeout Trace_Max_Lo Pass
           /*Comment*/
[6]TB     ?Otherwise Fail(2)
[4]TB     ?ALS
[5]       Goto A
[4]TB     ?ILS
[5]       Goto A
[4]TB     ?Otherwise Fail(1)
[4]TS4    ?Timeout Trace_React Fail(1)

```

Extended Comments:

IUT has propagated the Trace for Trace_Max.

Reason for Failure:

- (1) IUT does not transmit MLS, ALS or ILS or Trace_React is expired.
- (2) IUT does not transmit MLS.

6.4.2.3.10 Case-ID: Trace_Ack3

Purpose: Verify that IUT acknowledges the termination of Trace when it receives QLS while propagating the Trace from an A Port to the upstream M Port (within a station). This test is applicable for any station (concentrator) that does not have a MAC in the token path.

Test Setup: See figure 10. (Assume M4 is inserted in the primary path).

Procedure:

```

[1]TB   +IN_Active_PDR
[2]TS4   +IN_Active_PDR
[3]TS4 A: !MLS Start Trace_React
[4]TB     ?MLS
[5]TB     !QLS Start Trace_React
[6]TS4 B:  ?MLS
[7]       Goto B
[6]TS4     ?QLS Pass
           /*Comment*/
[6]TS4     ?Otherwise Fail(2)
[6]TS4     ?Timeout Trace_React Fail(2)
[4]TB     ?ALS
[5]       Goto A
[4]TB     ?ILS
[5]       Goto A
[4]TB     ?Otherwise Fail(1)
[4]TB     ?Timeout Trace_React Fail(1)

```

Extended Comments:

IUT transmits QLS to acknowledge the termination of Trace.

Reason for Failure:

- (1) IUT does not transmit MLS, ALS or ILS or Trace_React has expired.
- (2) IUT does not transmit MLS or QLS or Trace_React expired.

6.4.2.3.11 Case-ID: Trace_Prop_Max4

Purpose: Verify that the IUT propagates Trace from the B Port, internally, to the M1 Port, by generating MLS for Trace_Max_Hi. This test is applicable to stations that do not have a MAC in the Trace Path.

Test Setup: See figure 11. (Assume M1 is inserted into the primary ring).

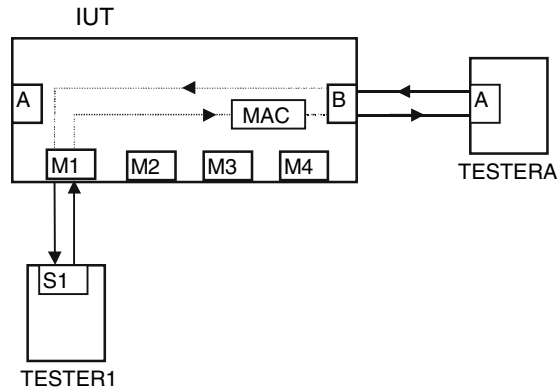


Figure 11 - Tester Configuration for Indicated Cases

Procedure:

```
[1]TS1  +IN_Active_PDR
[2]TA   +IN_Active_PDR
[3]TA   A: !MLS Start Trace_React
[4]TS1  ?MLS
[5]TS1   Start Trace_Max_Lo
[6]TS1 B: ?MLS
[7]      Goto B
[6]TS1  ?Timeout Trace_Max_Lo  Pass
/*Comment*/
[6]TS1  ?Otherwise              Fail(2)
[4]TS1  ?ALS
[5]      Goto A
[4]TS1  ?ILS
[5]      Goto A
[4]TS1  ?Otherwise              Fail(1)
[4]TS4  ?Timeout Trace_React    Fail(1)
```

Extended Comments:

IUT propagates the Trace for Trace_Max.

Reason for Failure:

- (1) IUT does not transmit MLS.
- (2) IUT does not transmit ALS, ILS or MLS or Trace_React has expired.

6.4.2.3.12 Case-ID: Trace_Ack4

Purpose: Verify that IUT acknowledges the termination of Trace when it receives QLS while propagating the Trace from its B port to the upstream M1 port (within a station). This test case is applicable to stations that do not have a MAC in the Trace path.

Test Setup: See figure 11. (Assume M1 is inserted into the primary ring).

Procedure:

```
[1]TS1  +IN_Active_PDR
[2]TA   +IN_Active_PDR
[3]TA   A: !MLS Start Trace_React
[4]TS1  ?MLS
[5]TA   !QLS Start Trace_React
```

```

[6]TS1 B: ?MLS
[7]      Goto B
[6]TS1   ?QLS Pass
        /*Comment*/
[6]TS1   ?Otherwise Fail(2)
[6]TA    ?Timeout Trace_React Fail(2)
[4]TS1   ?ALS
[5]      Goto A
[4]TS1   ?ILS
[5]      Goto A
[4]TS1   ?Otherwise Fail(1)
[6]TA    ?Timeout Trace_React Fail(1)

```

Extended Comments:

IUT transmits QLS to acknowledge the termination of Trace.

Reason for Failure:

- (1) IUT does not transmit MLS, ALS or ILS or Trace_React has expired.
- (2) IUT does not transmit MLS or QLS or Trace_React has expired.

6.4.3 Subroutine used for internal function call:**6.4.3.1 IN_Trace**

Purpose: Force IUT to enter the Trace state.

Procedure:

```

[1]+IN_Active /*Comment(1)*/
[2] !ILS
[3] A: ?ILS
[4]   Goto A
[3] ?ALS
[4] !Lower_Claim Start T_Non_Op
    /*Comment(2)*/
[5] B: ?IUT_Claim /*Comment(3)*/
[6]   Goto B
[5] ?Timeout T_Non_Op
    /*Comment(4)*/
[6] !ILS /*Comment(5)*/
[7] C: ?IUT_Beacon /*Comment(6)*/
[8]   Goto C
[7] ?IUT_D_Beacon
    /*Comment(7)*/
[8]   Goto C
[7] ?MLS /*Comment(8)*/
[7] ?Otherwise Inconclusive
[5] ?ALS
[6] !Lower_Claim
[7]   Goto B
[5] ?Otherwise Inconclusive
[3] ?Otherwise Inconclusive

```

6.4.3.2 IN_Active_PDR

Purpose: This subroutine is used in the ECM Trace action to ensure that the IUT has completed PC(88b) and transmitting ALS.

Procedure:

```

[1] +IN_Active
[2]   !ILS
[3]     A:?ILS
[4]       Goto A
[3]     ?ALS
[3]     ?Otherwise   Inconclusive

```

7 CFM conformance tests

ISO/IEC 9314-6:1998 specifies the configuration Management (CFM) rules for ports, paths and MACs for each of the following types of FDDI Nodes:

- Dual Attachment Station (DAS);
- Single Attachment Station (SAS);
- Dual Attachment Concentrator (DAC);
- Single Attachment Concentrator (SAC).

This clause specifies four test groups, each of which tests a particular type of FDDI node.

7.1 Test purpose

Each test group in this clause verifies the correct operation of Configuration Management (CFM) for a particular type of FDDI node.

7.1.1 Path configuration

The following test groups verify that the IUT configures its ports, MACs and paths as specified in ISO/IEC 9314-6:1998, when its ports are connected to various combinations of tester A, B, S and M ports. Each test case is accompanied by a configuration drawing, showing the connections between the IUT and the Tester or Testers, and the internal paths through the IUT. At the bottom of the figure for each test case is a figure of the ring maps for the test configuration, showing the order of the MACs on each ring. Note that the relative order of MACs is significant, but the map can start with any MAC.

Whenever a DAS Tester is needed it is a dual MAC station. In the configuration and ring map figures that accompany each test case, the tester MAC associated with the primary path (i.e., the MAC on the primary path when the Tester is in the thru CF_State) is labeled "B" and the Tester MAC associated with secondary path is labeled "A."

For single MAC test case figures, the IUT MAC is labeled "1". For the dual MAC test cases, the IUT MAC located on the primary ring in the thru CF_State is labeled "1", and the IUT MAC located on the secondary ring in the thru CF_State is labeled "2".

The correct IUT configuration for each configuration test case shall be verified by direct observation of the token paths through the IUT using the normal NIF procedures to construct logical ring maps. Because each active IUT port is connected to a Tester port (or not connected to any other port), there is complete visibility of where each path enters and exits the IUT.

The neighbor notification protocol may take some time to complete after a ring is initialized. The NIF protocol used to form ring maps is defined in ISO/IEC 9314-6:1998. The completion of the ring map can be determined when the set of MAC addresses and upstream neighbor MAC addresses listed in the NIF frames forms a consistent closed ring. The tester used to form the ring map shall be capable of determining when the complete ring is known.

7.1.2 MIB

The test groups of this clause verify that the configuration relevant IUT MIB attributes are set to values consistent with the configuration. The values of the specified attributes shall be verified with PMF Get Request and Response frames. The CF-State attribute shall be verified for each test case. The following port attributes shall be verified for each port and test case:

- CurrentPathType;
- MyTypeType;
- NeighborTypeType;
- RequestedPathsType;

7.1.3 Events and conditions

While this CFM test will not provide a detailed test of the Status Report Protocol or of SRF frames, it does provide a reasonably detailed test of the configuration relevant aspects of status reporting. The only additional test actions required to accomplish this are to verify the generation of the appropriate SRF frames by the IUT after each configuration change. Note that SRF events depend upon the sequence of the configuration changes.

Each test group in this clause verifies that appropriate SRF frames are generated for the following events and conditions:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

7.2 Test constraints

The following constraints apply to the tests specified in this clause.

7.2.1 Permitted path bits

The conformance tests in this clause verify conformance of FDDI CMT for those stations using the default values of the CFM PermittedPath bits for Ports and MACs. They do not test CFM for cases where PermittedPath bits are set to values other than their default values, nor for implementations that choose to restrict the MAC path choices for alternate bits as allowed by ISO/IEC 9314-6:1998. Note that with default values, the Requested - Paths for Port Resources never rely upon the alternate bits to determine the RequestedPaths.

7.2.2 Order of test cases

Each test group is an ordered set of test cases. The test cases of each test group specified in this clause shall be executed in the order specified. This is necessary to verify events, which are a product of the specific configuration change, rather than the final configuration state.

7.3 Test equipment

The tester for CMT conformance tests consists of a conforming FDDI station with a general FDDI ring management capability. The tester shall be capable of being configured to simultaneously provide any combination of two A, B, S and M ports with a MAC associated with each A, B or S exit port and appropriate management software to:

- issue PMF Get Request Frames for the specified attributes and record and display or verify the response frame of the IUT;
- record and display or verify the SRF frames generated by the IUT;
- construct a logical ring map showing the logical paths through the IUT and the location of MACs in the IUT. This shall be done by direct observation of frames entering and exiting the IUT (rather than by relying on the values of the IUTs MIB) and by operation of the NIF protocol.

In each case the connection policy of the tester shall be to accept all connection types except the illegal M-to-M connection.

It is desirable that the tester be one station that is capable of dynamically configuring its ports in accordance to a test script (so that manual recabling is not required) and of either recording IUT responses for later analysis or of verifying them in real time and recording the test verdict for each case, to automate the testing process. However it is possible to run the entire test suite using several management stations that between them provide 2 ports of each kind (A, B, M and S) by manually recabling at each test step and manually recording the test results from the management displays maintained by the tester stations.

7.4 DAS CFM Conformance Test Group

This test group verifies the conformance of Configuration Management (CFM) for Dual Attachment Stations (DAS). It consists of 24 ordered test cases that exhaustively test each of the 25 possible configuration states of a DAS, except for the isolated case, which is not externally testable. The test group tests a representative but not exhaustive set of configuration state transitions. Table 1 summarizes the 24 configuration state test cases.

Note that both the single and dual MAC DAS are verified with the same test group. In each case the test actions are identical for single and dual MAC DAS, however the pass_fail criteria are different. Therefore each test case includes separate pass-fail criteria for the single and dual MAC DAS tests.

The correct value of the following MIB parameters shall be verified using PMF Get Request Frames for each test case configuration except case number 1 (isolated):

- CF-State;
- A:CurrentPathType;
- A:MyTypeType;
- A:NeighborTypeType;
- A:RequestedPathsType;
- B:CurrentPathType;
- B:MyTypeType;
- B:NeighborTypeType;
- B:RequestedPathsType.

The SRF verification portion of the test requires that the test cases be executed in the order specified.

In DAS test cases, DAS_1 through DAS_16, the generation of appropriate SRF frames for each configuration test step shall be verified for the following events and conditions:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

In test cases DAS_17 through DAS_24 two separate configuration events occur between each case. The order and timing of these events is not specified in this test, therefore the precise sequence of events generated is also not specified and is not verified in the Pass_Fail criteria. Conditions, however, are not dependent upon the order of the configuration changes and appropriate SRF announcement of the Peer Wrap Condition is a Pass_Fail criterion for test cases DAS_1 through DAS_24.

Each test case identifies a figure that shows the test configuration for that case, and the logical ring maps for that case. There are separate figures for single and dual MAC cases.

7.4.1 Case-ID: DAS_1

Test Purpose: Test configuration when IUT A is connected to a B port and IUT B is not connected.

Initial Condition: IUT A and B not connected. The IUT is isolated.

Test Actions: Connect IUT A to Tester B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12.

MIB:

- SMT.CF_State = c_wrap_a;
- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 15. The MIB and SRF Report are the same as for a Single MAC Station.

7.4.2 Case-ID: DAS_2

Test Purpose: Test configuration when IUT A is connected to a B port and IUT B is connected to an A port.

Initial Condition: IUT A port is connected to Tester B port.

Test Actions: Connect IUT B to Tester A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12. MAC 1 is on the primary ring (the ring that exits through the B port).

MIB:

- SMT.CF-State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = Peer.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 15. MAC 1 is the MAC on the primary ring (the ring that exits through the B port), while MAC 2 is on the secondary Ring. The MIB and SRF Report are the same as for a Single MAC Station.

7.4.3 Case-ID: DAS_3

Test Purpose: Test configuration when IUT B is connected to an A port and IUT A is not connected.

Initial Condition: IUT A port is connected to Tester B port, IUT B port is connected to Tester A port.

Test Actions: Disconnect IUT A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12

MIB:

- SMT.CF-State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC station

IUT configuration: see figure 15. MAC 1 remains the B port exit MAC. The MIB and SRF Report are the same as for a Single MAC Station.

7.4.4 Case-ID: DAS_4

Test purpose: Test configuration when IUT A is connected to a M port and IUT B is connected to an A port.

Initial condition: IUT B port is connected to Tester A port.

Test actions: Connect IUT A to Tester M port.

Pass_Fail criteria:

a. Single MAC Station

IUT configuration: see figure 12.

MIB:

- SMT.CF-State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition.

b. Dual MAC Station

IUT configuration: see figure 15.

MIB:

- SMT.CF-State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = Peer.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event;
- Peer Wrap Condition.

7.4.5 Case-ID: DAS_5

Test Purpose: Test configuration when A is connected to a M port and IUT B is not connected.

Initial Condition: IUT A port is connected to Tester M port, IUT B port is connected to Tester A port.

Test Actions: Disconnect IUT B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12.

MIB:

SMT.CF_State = c_wrap_a;

- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 15.

MIB:

- Same as Single MAC Station.

7.4.6 Case-ID: DAS_6

Test Purpose: Test configuration when IUT A is connected to a M port and IUT B is connected to a B port.

Initial Condition: IUT A port is connected to Tester M port.

Test Actions: Connect IUT B to Tester B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- Undesirable Connection Event;
- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 15.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

7.4.7 Case-ID: DAS_7

Test Purpose: Test configuration when IUT B is connected to a B port and IUT A is not connected.

Initial Conditions: IUT A port is connected to Tester M port, IUT B port is connected to Tester B port.

Test Actions: Disconnect IUT A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12.

MIB:

- SMT.CF-State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition.

b. Dual MAC Station

IUT configuration: see figure 15.

MIB:

- SMT.CF-State = c_wrap_b;
- A:CurrentPathType = isolated.
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

7.4.8 Case-ID: DAS_8

Test Purpose: Test configuration when IUT A is connected to an S port and IUT B is connected to a B port.

Initial Conditions: IUT B is connected to Tester B port and IUT A is not connected.

Test Actions: Connect IUT A to Tester S port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 12.

MIB:

- SMT.CF-State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestedPathsType = Peer.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

b. Dual MAC Station

IUT configuration: see figure 15

MIB:

- Same as Single MAC Station.

7.4.9 Case-ID: DAS_9

Test Purpose: Test configuration when IUT A is connected to an S port and IUT B is not connected.

Initial Condition: IUT A port is connected to Tester S port and IUT B port is connected to Tester B port.

Test Actions: Disconnect IUT B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13.

MIB:

- SMT.CF_State = c_wrap_a;
- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- Same as Single MAC Station.

7.4.10 Case-ID: DAS_10

Test Purpose: Test configuration when IUT A is connected to an S port and IUT B is connected to a M port.

Initial Condition: IUT A is connected to Tester S port.

Test Actions: Connect IUT B to Tester M port

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = primary;
- B:MyTypeType = b;

- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

7.4.11 Case-ID: DAS_11

Test Purpose: Test configuration when IUT B is connected to an M port and IUT A is not connected.

Initial Condition: IUT A port is connected to Tester S port and IUT B port is connected to Tester M port.

Test Actions: Disconnect IUT A port.

Pass/Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedTypeType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- None.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedTypeType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.4.12 Case-ID: DAS_12

Test Purpose: Test configuration when IUT A is connected to an A port and IUT B is connected to a M port.

Initial Condition: IUT B is connected to Tester M port.

Test Actions: Connect IUT A to Tester A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13.

MIB:

- SMT.CF_State = c_wrap_b.
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = a;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- None.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = a;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

7.4.13 Case-ID: DAS_13

Test Purpose: Test configuration when IUT A is connected to an A port and IUT B is not connected.

Initial Condition: IUT A is connected to Tester A port and IUT B is connected to Tester M port.

Test Actions: Disconnect IUT B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13

MIB:

- SMT.CF_State = c_wrap_a;
- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = a;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathType = none.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

b. Dual MAC Station

IUT Configuration: see figure 16.

MIB:

- Same as Single MAC Station.

7.4.14 Case-ID: DAS_14

Test Purpose: Test configuration when IUT A is connected to Tester A port and B is connected to Tester S port.

Initial Condition: IUT A port is connected to Tester A port and IUT B port is not connected.

Test Actions: Connect IUT B to Tester S port.

a. Single MAC Station

IUT configuration: see figure 13.

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = a;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

b. Dual MAC Station

IUT configuration: see figure 16.

MIB:

- Same as Single MAC Station.

7.4.15 Case-ID: DAS_15

Test Purpose: Test configuration when IUT B is connected to an S port and IUT A is not connected.

Initial Condition: IUT A port is connected to Tester A port and IUT B port is connected to Tester S port.

Test Actions: Disconnect IUT A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = none;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = none;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

SRF Report:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event.

7.4.16 Case-ID: DAS_16

Test Purpose: Test configuration when IUT A is connected to a B port and IUT B is connected to an S port.

Initial Condition: IUT B is connected to Tester S port and IUT A is not connected.

Test Actions: Connect IUT A to Tester B port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 13.

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

SRF Report:

- MAC Path Change Event;
- Port Path Change Event.

b. Dual MAC Station

IUT configuration: see figure 16

MIB:

- Same as Single MAC Station.

7.4.17 Case-ID: DAS_17

Test Purpose: Test configuration when IUT A is connected to a B port and IUT B is connected to a B port.

Initial Condition: IUT A port is connected to Tester B port and IUT B port is connected to Tester S port.

Test Actions: Disconnect IUT B port and Connect IUT B port to Tester B port.

Pass_Fail Criteria:

Note: Because two configuration changes occur in cases 18 through 25, events are not included in the Pass_Fail Criteria.

a. Single MAC Station

IUT configuration: see figure 14

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = b;
- B:RequestedPathsType = Peer.

b. Dual MAC Station

IUT Configuration: see figure 17

MIB:

- Same as Single MAC Station.

7.4.18 Case-ID: DAS_18

Test Purpose: Test configuration when IUT A is connected to a B port and IUT B is connected to a M port.

Initial Condition: IUT A is connected to Tester B port and IUT B is connected to Tester B port.

Test Actions: Disconnect IUT B port and Connect IUT B port to Tester M port.

Pass_Fail Criteria:**a. Single MAC Station**

IUT configuration: see figure 14.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

b. Dual MAC Station

IUT configuration: see figure 17.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

7.4.19 Case-ID: DAS_19

Test Purpose: Test configuration when IUT A is connected to a M port and IUT B is connected to a M port.

Initial Condition: IUT A is connected to Tester B port and IUT B is connected to Tester M port.

Test Actions: Disconnect IUT A port and Connect IUT A port to Tester M port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

b. Dual MAC Station

IUT configuration: see figure 17.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = Tree.

7.4.20 Case-ID: DAS_20

Test Purpose: Test configuration when IUT A is connected to a M port and IUT B is connected to an S port.

Initial Condition: IUT A is connected to Tester M port and IUT B is connected to Tester M port.

Test Action: Disconnect IUT B port and Connect IUT B to Tester S port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

b. Dual MAC Station

IUT configuration: see figure 17.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = Tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

7.4.21 Case-ID: DAS_21

Test Purpose: Test configuration when IUT A is connected to an S port and IUT B is connected to an S port.

Initial Condition: IUT A is connected to Tester M port and IUT B is connected to Tester S port.

Test Actions: Disconnect IUT A port and Connect IUT A port to Tester S port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14.

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = s;
- B:RequestedPathsType = Peer.

b. Dual MAC Station

IUT configuration: see figure 17.

MIB:

- Same as Single MAC Station.

7.4.22 Case-ID: DAS_22

Test Purpose: Test configuration when IUT A is connected to a S port and IUT B is connected to an A port.

Initial Condition: IUT A is connected to Tester S port and IUT B is connected to Tester S port.

Test Actions: Disconnect IUT B port and Connect IUT B port to Tester A port.

Pass_Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14.

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = s;
- A:RequestedPathsType = Peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;

- B:NeighborType = a;
- B:RequestedPathsType = Peer.

b. Dual MAC Station

IUT configuration: see figure 17

MIB:

- Same as Single MAC Station.

7.4.23 Case-ID: DAS_23

Test Purpose: Test configuration when IUT A is connected to an S port and IUT B is connected to an A port.

Initial Condition: IUT A is connected to Tester S port and IUT B is connected to Tester A port.

Test Actions: Disconnect IUT A port and Connect IUT A port to Tester A port.

Pass/Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyType = a;
- A:NeighborType = a;
- A:RequestedPathsType = Peer.
- B:CurrentPathType = thru;
- B:MyType = b;
- B:NeighborType = a;
- B:RequestedPathType = Peer.

b. Dual MAC Station

IUT configuration: see figure 17.

MIB:

- Same as Single MAC Station.

7.4.24 Case-ID: DAS_24

Test Purpose: Test configuration when IUT A is connected to an A port and IUT B is connected to a B port.

Initial Condition: IUT A is connected to Tester A port and IUT B is connected to Tester A port.

Test Actions: Disconnect IUT B port and Connect IUT B port to Tester B port.

Pass/Fail Criteria:

a. Single MAC Station

IUT configuration: see figure 14

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
 - A:MyType = a;
 - A:NeighborType = a;
 - A:RequestedPathType = Peer;
 - B:CurrentPathType = thru;
 - B:MyType = b;
 - B:NeighborType = b;
 - B:RequestedPathType = Peer.

b. Dual MAC Station

IUT configuration: see figure 17

MIB:

- Same as Single MAC Station.

7.5 Test Description Dual Attachment Concentrator

This test group verifies the conformance of Configuration Management (CFM) for Dual Attachment Concentrators (DAC). A DAC is also a DAS and a DAC shall first be tested as a DAS using the test procedure specified in 7.4 above with none of its M ports connected. Table 2 summarized this test group.

This test group consists of 10 additional test cases that test concentrator functionality, that is Master ports. The assumptions of the Pass_Fail Criteria specified in this test group are that:

- the implementation's M port PermittedPath bits follow the default settings given in ISO/IEC 9314-6:1998;
- the implementation performs path selection based solely on the rules specified in ISO/IEC 9314-6:1998 for the M port alternate PermittedPath bits;
- the implementation does not further restrict the choice among the various alternates based on implementator defined conditions.

The detailed Pass_Fail Criteria specified below in this subclause are applicable to such implementations only. Note that item 6 of the Selection criteria in ISO/IEC 9314-6:1998 does specifically permit further restriction of the choice among various alternatives based on implementor defined conditions. This test group may also be used to test such concentrators. However, for conformance tests of such implementations the Pass_Fail Criteria are limited to the following:

- The MIB attributes listed below are consistent with the configuration of the station as determined by the ring maps constructed by the tester;
- Any active M port is inserted in either the primary or secondary path;
- No wrap conditions exist where a MAC is not placed on the wrapped path. That is the IUT withholds connections with its A or B port whenever the result of the connection would be a wrap with no MAC on the path.

Note that both single and dual MAC DACs are verified with the same test group. In each case the test actions are identical for single and dual MAC DACs, however the pass_fail criteria are different. Therefore each test case includes separate pass-fail criteria for single and dual MAC DAC.

The functionality of 2 concentrator M ports is tested in this test group. These are labeled M1 and M2 and can be any two arbitrarily selected M ports.

The correct value of the following MIB parameters shall be verified using PMF Get Request Frames for each test case configuration:

- CF-State;
- A:CurrentPathType;
- A:MayTypeType;
- A:NeighborTypeType;
- A:RequestedPathsType;
- B:CurrentPathType;
- B:MyTypeType;
- B:NeighborTypeType;
- B:RequestedPathsType;
- M1:CurrentPathType;
- M1:MyTypeType;
- M1:NeighborTypeType;
- M1:RequestedPathsType;
- M2:CurrentPathType;
- M2:MyTypeType;
- M2:NeighborTypeType;
- M2:RequestedPathsType.

The SRF verification portion of the test requires that the test cases be executed in the order specified. The generation of appropriate SRF frames for each configuration test step shall be verified for the following events and conditions:

- Peer Wrap Condition;
- MAC Path Change Event;
- Port Path Change Event;
- Undesirable Connection Event.

7.5.1 Case-ID: DAC_1

Test Purpose: Test configuration when IUT M1 port is connected to an S port.

Initial Condition: IUT A, B, M1 and M2 ports not connected. The IUT is isolated

Test Actions: Connect IUT M1 port to Tester S port.

Pass/Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18.

MIB:

- SMT.CF_State = isolated;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathsType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathType = none;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree
- M2:CurrentPathType = isolated;
- M2:MyTypeType = m;
- M2:RequestedPathType = none.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 20 The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.2 Case-ID: DAC_2

Test Purpose: Test configuration when IUT M1, M2 ports are connected to S ports.

Initial Condition: IUT M1 port is connected to Tester S port.

Test Actions: Connect IUT M2 port to Tester S port.

Pass/Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18.

MIB:

- SMT.CF_State = isolated;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;

- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 20. The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.3 Case-ID: DAC_3

Test Purpose: Test configuration when IUT A port is connected to a B port, M1, M2 ports are connected to S ports.

Initial Condition: IUT M1, M2 ports are connected to Tester S ports.

Test Actions: Connect IUT A port to Tester B port.

Pass/Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18. The IUT MAC is placed after the M ports on the A port exit.
MIB:

- SMT.CF_State = c_wrap_a;
- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = peer;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event;
- Peer Wrap Condition.

b. Dual MAC Concentrator

IUT configuration: see figure 20. The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.4 Case-ID: DAC_4

Test Purpose: Test configuration when IUT A port is connected to a B port, B port is connected to an A port and M1, M2 ports are connected to S ports.

Initial Condition: IUT A port is connected to Tester B port, M1, M2 ports are connected to Tester S ports.

Test Actions: Connect IUT B port to Tester A port.

Pass_Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18. The IUT MAC is placed after the M ports on the B port exit.

MIB:

- SMT.CF_State = thru;
- A:CurrentPathType = thru;
- A:MyTypeType = a;
- A:NeighborTypeType = b;
- A:RequestedPathsType = peer;
- B:CurrentPathType = thru;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = peer;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 20. The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.5 Case-ID: DAC_5

Test Purpose: Test configuration when IUT B port is connected to an A port and M1, M2 ports are connected to S ports.

Initial Condition: IUT A port is connected to Tester B port, B port is connected to Tester A port and M1, M2 ports are connected to Tester S ports.

Test Actions: Disconnect IUT A port.

Pass_Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18.

MIB:

SMT.CF_State = c_wrap_b;

- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = none;
- A:RequestedPathsType = none;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = a;

- B:RequestedPathsType = peer;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event;
- Peer Wrap Condition.

b. Dual MAC Concentrator

IUT configuration: see figure 20. The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.6 Case-ID: DAC_6

Test Purpose: Test configuration when IUT B port is connected to an A port, IUT A port is connected to an M port and M1, M2 ports are connected to S ports.

Initial Condition: IUT B port is connected to Tester A port and M1, M2 ports are connected to Tester S ports.

Test Actions: Connect IUT A port to Tester M port.

Pass/Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 18.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = peer;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Peer Wrap Condition.

b. Dual MAC Concentrator

IUT configuration: see figure 20.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = primary;

- B:MyTypeType = b;
- B:NeighborTypeType = a;
- B:RequestedPathsType = peer;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Peer Wrap Condition;
- Port Path Change Event;
- MAC Path Change Event.

7.5.7 Case-ID: DAC_7

Test Purpose: Test configuration when IUT A port is connected to an M port and M1, M2 ports are connected to S ports.

Initial Condition: IUT B port is connected to Tester A port, A port is connected to Tester M port and M1, M2 ports are connected to Tester S ports.

Test Actions: Disconnect IUT B port.

Pass_Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 19. The IUT MAC is after the M ports next to the A port exit.

MIB:

- SMT.CF_State = c_wrap_a;
- A:CurrentPathType = concatenated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = isolated;
- B:MyTypeType = b;
- B:NeighborTypeType = none;
- B:RequestedPathsType = none;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 21. The MIB and SRF Reports are the same as for the Single MAC Concentrator.

7.5.8 Case-ID: DAC_8

Test Purpose: Test configuration when IUT A port, B port are connected to M ports and M1, M2 ports are connected to S ports.

Initial Condition: IUT A port is connected to Tester M port and M1, M2 ports are connected to Tester S ports.

Test Actions: Connect IUT B port to Tester Mport.

Pass_Fail Criteria:

a. Single MAC Concentrator

IUT configuration: see figure 19.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 21.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = primary;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.5.9 Case-ID: DAC_9

Test Purpose: Test configuration when IUT A port, B port are connected to M ports and M2 port is connected to an S port.

Initial Condition: IUT A, B ports are connected to Tester M ports and M1, M2 ports are connected to Tester S ports.

Test Actions: Disconnect IUT M1 port.

Pass_Fail Criteria:**a. Single MAC Concentrator**

IUT configuration: see figure 19.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 21.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = primary;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.5.10 Case-ID: DAC_10**Test Purpose:** Test configuration when IUT A port, B port are connected to M ports.**Initial Condition:** IUT A, B ports are connected to Tester M ports and M2 port is connected to Tester S port.**Test Actions:** Disconnect IUT M2 port.

Pass_Fail Criteria:**a. Single MAC Concentrator**

IUT configuration: see figure 19.

MIB:

- SMT.CF_State = c_wrap_b;
- A:CurrentPathType = isolated;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = concatenated;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = isolated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = none;
- M2:RequestedPathsType = none.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

b. Dual MAC Concentrator

IUT configuration: see figure 21.

MIB:

- SMT.CF_State = wrap_ab;
- A:CurrentPathType = secondary;
- A:MyTypeType = a;
- A:NeighborTypeType = m;
- A:RequestedPathsType = tree;
- B:CurrentPathType = primary;
- B:MyTypeType = b;
- B:NeighborTypeType = m;
- B:RequestedPathsType = tree;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = isolated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = none;
- M2:RequestedPathsType = none.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.6 Test Description Single Attachment Station

This test group verifies the conformance of CFM for Single Attachment Stations (SAS). It consists of four test cases. The test cases may be executed in any order. All test cases begin with the station isolated. Table 3 summarized this text group.

The correct value of the following MIB parameters shall be verified using PMF Get Request Frames for each test case configuration:

- CF-State;
- S:CurrentPathType;
- S:MyTypeType;
- S:NeighborTypeType;
- S:RequestedPathsType;

The generation of appropriate SRF frames for each configuration test step shall be verified for the following events and conditions:

- MAC Path Change Event;
- Port Path Change Event;
- Peer Wrap Condition.

7.6.1 Case-ID: SAS_1

Test Purpose: Test configuration when IUT S port is connected to an M port.

Initial Condition: IUT S, port is not connected. The IUT is isolated.

Test Actions: Connect IUT S port to Tester M port.

Pass_Fail Criteria:

The connection is accepted by the IUT and the IUT's MAC is inserted on the ring. See figure 22.

MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = m;
- S:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.6.2 Case-ID: SAS_2

Test Purpose: Test configuration when IUT S port is connected to an A port.

Initial Condition: IUT S, port is not connected. The IUT is isolated.

Test Actions: Connect IUT S port to Tester A port.

Pass_Fail Criteria:

The connection is accepted by the IUT and the IUT's MAC is inserted on the ring. See figure 22.

MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = a;
- S:RequestedPathsType = peer.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event;
- Peer Wrap Condition.

7.6.3 Case-ID: SAS_3

Test Purpose: Test configuration when IUT S port is connected to an A port.

Initial Condition: IUT S, port is not connected. The IUT is isolated.

Test Actions: Connect IUT S port to Tester A port.

Pass_Fail Criteria:

The connection is accepted by the IUT and the IUT's MAC is inserted on the ring. See figure 22.
MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = b;
- S:RequestedPathsType = peer.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event;
- Peer Wrap Condition.

7.6.4 Case-ID: SAS_4

Test Purpose: Test configuration when IUT S port is connected to an S port.

Initial Condition: IUT S port is not connected. The IUT is isolated.

Test Actions: Connect IUT S port to Tester S port.

Pass_Fail Criteria:

The connection is accepted by the IUT and the IUT's MAC is inserted on the ring. See figure 22.
MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = s;
- S:RequestedPathsType = peer.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event;
- Peer Wrap Condition.

7.7 Single Attachment Concentrator

This test group verifies the conformance of CFM for Single Attachment Concentrators (SAC). It consists of five ordered test cases that test concentrator functionality. Table 4 summarizes this test group.

An SAC may or may not have a MAC. An SAC with a MAC is also an SAS. An SAS with a MAC shall first be verified as an SAS using the test procedures specified in 7.6 above. All concentrator M ports shall be isolated during this test.

This test group consists of 5 test cases that test concentrator functionality. The assumptions of the Pass_Fail Criteria specified in this test group are that:

- the implementation's M port PermittedPath bits follow the default settings given in ISO/IEC 9314-6:1998;
- the implementation performs path selection based solely on the rules specified in ISO/IEC 9314-6:1998 for the M port alternate PermittedPath bits;
- the implementation does not further restrict the choice among the various alternates based on implementator defined conditions.

The detailed Pass_Fail Criteria specified below in this subclause are applicable to such implementations only. Note that item 6 of the Selection criteria in ISO/IEC 9314-6:1998 does specifically permit further restriction of the choice among various alternatives based on implementor defined conditions. This test group may also be used to test such concentrators. However, for conformance tests of such implementations the Pass_Fail Criteria are limited to the following:

- The MIB attributes listed below are consistent with the configuration of the station as determined by the ring maps constructed by the tester (note that MIB attributes cannot be checked in concentrators with no MAC);
- Any active M port is inserted in either the primary or secondary path;
- No wrap conditions exist where a MAC is not placed on the wrapped path. That is the IUT withholds connections with its S port whenever the result of the connection would be a wrap with no MAC on the path.

An SAC may have a MAC, or it may have no MAC. Both kinds of SACs may be verified with this test group. In each case the test actions are identical for SACs with and without a MAC, however the pass_fail criteria are different. Therefore each test case includes separate pass-fail criteria for SACs with a MAC and SACs with no MAC.

The functionality of two concentrator M ports is tested in this test group. These are labeled M1 and M2 and can be any two arbitrarily selected M ports.

For concentrators with a MAC, the correct value of the following MIB parameters shall be verified using PMF Get Request Frames for each test case configuration:

- CF-State;
- S:CurrentPathType;
- S:MyTypeType;
- S:NeighborTypeType;
- S:RequestedPathsType;
- M1:CurrentPathType;
- M1:MyTypeType;
- M1:NeighborTypeType;
- M1:RequestedPathsType;
- M2:CurrentPathType;
- M2:MyTypeType;
- M2:NeighborTypeType;
- M2:RequestedPathsType.

For concentrators with a MAC, the SRF verification portion of the test requires that the test cases be executed in the order specified. The generation of appropriate SRF frames for each configuration test step shall be verified for the following events and conditions:

- MAC Path Change Event;
- Port Path Change Event.

In the case of no MAC concentrators the Pass_Fail Criteria are only the ring maps, since with no MAC the MIB is not accessible and events are not reported.

7.7.1 Case-ID: SAC_1

Test Purpose: Test configuration when IUT S port is connected to an M port.

Initial Condition: IUT S, M1 and M2 ports not connected. The IUT is isolated.

Test Actions: Connect IUT S port to Tester M port.

Pass_Fail Criteria:

a. No MAC concentrator

The IUT passes if the connection between the tester and the IUT S port is withheld. The IUT fails if the connection between the tester and the IUT s port is established. See figure 23.

b. Concentrator with MAC

IUT configuration: see figure 24.

MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = m;
- S:RequestedPathsType = tree;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = isolated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = none;
- M2:RequestedPathsType = none.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.7.2 Case-ID: SAC_2

Test Purpose: Test configuration when IUT S port is connected to an M port, IUT M1 port is connected to Tester S port.

Initial Condition: IUT S port is connected to Tester M port.

Test Actions: Connect IUT M1 port to Tester S port.

Pass_Fail Criteria:

a. No MAC Concentrator

The IUT passes if a ring is established through the concentrator joining the two testers in one ring. The IUT fails if a ring joining the two testers is not established. See figure 23.

b. Concentrator with MAC

IUT configuration: see figure 24.

MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = m;
- S:RequestedPathsType = tree;
- M1:CurrentPathType = primary or concatenated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = isolated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = none;
- M2:RequestedPathsType = none.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.7.3 Case-ID: SAC_3

Test Purpose: Test configuration when IUT S port is connected to an M port, IUT M1 and M2 ports are connected to Tester S ports.

Initial Condition: IUT S port is connected to Tester M port and IUT M1 port is connected to Tester S port.

Test Actions: Connect IUT M2 port to Tester S port.

Pass_Fail Criteria:

a. No MAC Concentrator

The IUT passes if a ring is established through the concentrator joining the three testers in one ring. The IUT fails if a ring joining the three testers is not established. See figure 23.

b. Concentrator with MAC

IUT configuration: see figure 24.

MIB:

- SMT.CF_State = wrap_s or c_wrap_s;
- S:CurrentPathType = primary or concatenated;
- S:MyTypeType = s;
- S:NeighborTypeType = m;
- S:RequestedPathsType = tree;
- M1:CurrentPathType = primary or concatenated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;
- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary or concatenated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.7.4 Case-ID: SAC_4

Test Purpose: Test configuration when IUT S port is isolated while IUT M1 and M2 ports are connected to Tester S ports.

Initial Condition: IUT S port is connected to Tester M port and IUT M1, M2 ports are connected to Tester S ports.

Test Actions: Disconnect IUT S port.

Pass_Fail Criteria:

a. No MAC Concentrator

The IUT passes if a ring is established through the concentrator joining the two testers in one ring. The IUT fails if a ring joining the two testers is not established. See figure 23.

b. Concentrator with MAC

IUT configuration: see figure 24.

MIB:

- SMT.CF_State = isolated;
- S:CurrentPathType = isolated;
- S:MyTypeType = s;
- S:NeighborTypeType = none;
- S:RequestedPathsType = none;
- M1:CurrentPathType = primary or concatenated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = s;

- M1:RequestedPathsType = tree;
- M2:CurrentPathType = primary or concatenated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.7.5 Case-ID: SAC_5

Test Purpose: Test configuration when IUT S port is isolated, and one IUT M port is connected to an S port.

Initial Condition: IUT S port is isolated and IUT M1 and M2 are connected to Tester S ports.

Test Actions: Disconnect IUT M1 port.

Pass/Fail Criteria:

a. No MAC Concentrator

The IUT passes if the connection between the IUT M2 port and the tester S port is rejected. The IUT fails if the connection between the tester S port and the IUT M1 port is not rejected. See figure 23.

b. Concentrator with MAC

IUT configuration: see figure 24.

MIB:

- SMT.CF_State = isolated;
- S:CurrentPathType = isolated;
- S:MyTypeType = s;
- S:NeighborTypeType = none;
- S:RequestedPathsType = none;
- M1:CurrentPathType = isolated;
- M1:MyTypeType = m;
- M1:NeighborTypeType = none;
- M1:RequestedPathsType = none;
- M2:CurrentPathType = primary or concatenated;
- M2:MyTypeType = m;
- M2:NeighborTypeType = s;
- M2:RequestedPathsType = tree.

SRF Report:

- Port Path Change Event;
- MAC Path Change Event.

7.8 M port Permitted Path option

An implementation may optionally have the capability to allow the Permitted Path bits for MACs and ports to be set to values other than the default values specified in ISO/IEC 9314-6:1998. This test group applies to dual attachment concentrators that implement the capability for users to set the secondary-preferred and primary-preferred permitted path bits of M ports. Users may wish to control the setting of M port permitted path bits for load balancing and to establish certain redundant configurations.

There are five test cases which shall be executed in order. The pass criteria are the sequence of ring maps. MIB parameters and SRF conditions and events are not examined in this test group. The test steps for single MAC and dual MAC DACs are identical, however the pass/fail criteria are different.

For this test group two IUT M ports are used. One of these, labeled Mp, shall have its Tree mode Permitted Path bits set to:

local
secondary-alternate
primary-alternate
-
primary-preferred

The other M port, labeled Ms, shall have its Tree mode Permitted Path bits set to:

local
secondary-alternate
primary-alternate
secondary-preferred
-

7.8.1 Case-ID: PP_1

Test Purpose: Establish initial configuration with IUT in wrap state and all master ports isolated.

Initial Condition: The IUT is isolated.

Test Actions: Connect IUT A port to Tester B port and the IUT B port to the Tester M port.

Pass_Fail Criteria:

a. Single MAC DAC

The IUT enters the c_wrap_b CF_State with the IUT A to Tester B connection withheld. One ring with 3 MACs exists. See figure 25.

b. Dual MAC DAC

The IUT enters the wrap_ab CF_State. One ring exists with 4 MACs. See figure 26.

7.8.2 Case-ID: PP_2

Test Purpose: Test configuration when an S port is connected to IUT Mp port.

Initial Condition: The IUT A port is connected to the Tester B port and the IUT B port is connected to the Tester M port.

Test Actions: Connect IUT Mp port to Tester S port.

Pass_Fail Criteria:

a. Single MAC DAC

The IUT remains in the c_wrap_b CF_State with the IUT A to Tester B connection withheld. The IUT Mp port is included in the concatenated path and one ring with 4 MACs exists. See figure 25

b. Dual MAC DAC

The IUT remains in the wrap_ab CF_State. The IUT Mp port is included in the primary path and one ring exists with 5 MACs. See figure 26.

7.8.3 Case-ID: PP_3

Test Purpose: Test configuration when an S port is connected to the IUT Ms port. This case also tests the "tree pruning" algorithm for the single MAC concentrator, since a MAC becomes available on the secondary path when the Ms port is connected to an S port.

Initial Condition: The IUT A port is connected to the Tester B port and the IUT B port is connected to the Tester M port. A Tester S port is connected to the IUT Mp port.

Test Actions: Connect IUT Ms port to Tester S port.

Pass_Fail Criteria:**a. Single MAC DAC**

The connection between the Tester B port and the IUT A port is initialized and the IUT goes to the wrap_ab CF_State. The IUT Ms port is included in the secondary path and one ring with 5 MACs exists. See figure 25.

b. Dual MAC DAC

The IUT remains in the wrap_ab CF_State. The IUT Ms port is included in the secondary path and one ring exists with 6 MACs. See figure 26.

7.8.4 Case-ID: PP_4

Test Purpose: Test configuration when the IUT B port is disconnected from the Tester M port.

Initial Condition: The IUT A port is connected to the Tester B port and the IUT B port is connected to the Tester M port. Tester S ports are connected to the IUT Mp and Ms ports.

Test Actions: Disconnect the Tester M port and IUT B ports.

Pass_Fail Criteria:**a. Single MAC DAC**

The IUT enters the c_wrap_a CF_State. One ring with 5 MACs exists. See figure 25.

b. Dual MAC DAC

The IUT enters the c_wrap_a CF_State and one ring exists with 6 MACs. See figure 26.

7.8.5 Case-ID: PP_5

Test Purpose: Test configuration when the IUT B port is connected to the Tester A port, allowing a dual ring to be established.

Initial Condition: The IUT A port is connected to the Tester B. Tester S ports are connected to the IUT Mp and Ms ports.

Test Actions: Connect the IUT B port to the Tester A port.

Pass_Fail Criteria:**a. Single MAC DAC**

The IUT enters the thru CF_state and a dual ring exists. The primary ring has 3 MACs and the secondary ring has 2 MACs. See figure 25.

b. Dual MAC DAC

The IUT enters the thru CF_State and a dual ring exists. Both the primary and secondary rings have 3 MACs. See figure 26.

7.9 Test Description Ring Hold Option

This test group applies to dual attachment stations that implement the Ring Hold Option. These are dual attachment stations subject to the provisions of 7.4. To perform these tests both the IUT and the Tester are DAS that implement the Ring Hold Option. This option is evident in CFM only when one of the two links in a peer connection is interrupted. Therefore a test cable assembly is required in which one of the two links can be interrupted.

There are three test cases which shall be executed in order. The pass criteria are the sequence of ring maps. MIB parameters are not examined in this test group.

7.9.1 Case-ID: RH_1

Test Purpose: Initialize IUT in a dual ring.

Initial Condition: The IUT is isolated.

Test Actions: Connect IUT A port to Tester B port and the IUT B port to the Tester A port.

Pass_Fail Criteria:

A dual ring is formed with two token paths, as shown in figure 27.

7.9.2 Case-ID: RH_2

Test Purpose: Test configuration when one of two links is interrupted.

Initial Condition: IUT A port is connected to Tester B port and IUT B port is connected to Tester A port. A normal dual ring is in effect.

Test Actions: Interrupt the link exiting from the Tester A port, so that the input to the IUT B port is dark.

Pass_Fail Criteria:

The IUT remains in the thru CF_State and does not wrap. The primary ring remains operational as shown in figure 27.

Case-ID: RH_3

Test Purpose: Test configuration when the complete connection is removed, causing both the primary and secondary rings to become nonoperational.

Initial Condition: The link exiting the Tester A port and entering the IUT B port is interrupted, interrupting the secondary ring. The primary ring remains held operational and the IUT is in the thru state due to the Ring Hold option.

Test Actions: Disconnect the cable linking the Tester A port and the IUT B port. This breaks both rings.

Pass_Fail Criteria:

IUT wraps as shown in figure 27 and a single wrapped ring is formed. Note that the recovery process is complex and results from the fact that both rings become nonoperational. Several seconds may be needed before the reconfiguration to a wrapped ring is complete.

Table 1 - DAS Configuration Test Case Summary

No.	Test Action	IUT Port		Pass Criteria IUT Final State	
		A	B	single MAC	Dual MAC
1	plug tester B to IUT A	B	-	c_wrap_a	c_wrap_a
2	plug tester A to IUT B	B	A	thru	thru
3	unplug IUT A	-	A	c_wrap_b	c_wrap_b
4	plug tester M to IUT A	M	A	c_wrap_b	wrap_ab
5	unplug IUT B	M	-	c_wrap_a	c_wrap_a
6	plug tester B to IUT B	M	B	c_wrap_b	c_wrap_ab
7	unplug IUT A	-	B	c_wrap_b	c_wrap_b
8	plug tester S to IUT A	S	B	thru	thru
9	unplug IUT B	S	-	c_wrap_a	c_wrap_a
10	plug tester M to IUT B	S	M	c_wrap_b	wrap_ab
11	unplug IUT A	-	M	c_wrap_b	c_wrap_b
12	plug tester A to IUT A	A	M	c_wrap_b	wrap_ab
13	unplug IUT B	A	-	c_wrap_a	c_wrap_a
14	plug tester S to IUT B	A	S	thru	thru
15	unplug IUT A	-	S	c_wrap_b	c_wrap_b
16	plug tester B to IUT A	B	S	thru	thru
17	unplug IUT B	B	B	thru	thru
18	unplug IUT B	B	M	c_wrap_b	wrap_ab
19	unplug IUT A	M	M	c_wrap_b	wrap_ab
20	unplug IUT B	M	S	c_wrap_b	wrap_ab
21	unplug IUT A	S	S	thru	thru
22	unplug IUT B	S	A	thru	thru
23	unplug IUT A	A	A	thru	thru
24	unplug IUT B plug tester to IUT B	A	B	thru	thru

Table 2 - DAC Configuration Test Case Summary

No.	Test Action	Current_Path_Type		CF_State	
		Port M1	Port M2	single MAC	dual MAC
1	connect IUT M1 to tester S	primary	isolated	isolated	isolated
2	connect IUT M2 to tester S	primary	primary	isolated	isolated
3	connect IUT A to tester B	primary	primary	c_wrap_a	c_wrap_a
4	connect IUT B to tester A	primary	primary	thru	thru
5	disconnect IUT A	primary	primary	c_wrap_b	c_wrap_b
6	connect IUT A to tester M	primary	primary	c_wrap_b	wrap_ab
7	disconnect IUT B	primary	primary	c_wrap_a	c_wrap_a
8	connect IUT B to tester M	primary	primary	c_wrap_b	wrap_ab
9	disconnect IUT M1	isolated	primary	c_wrap_b	wrap_ab
10	disconnect IUT M2	isolated	isolated	c_wrap_b	wrap_ab

Table 3 - SAS Configuration Test Summary

No.	Test Action	CF_State
1	connect IUT S to Tester M	wrap_s or c_wrap_s
2	connect IUT S to Tester A	wrap_s or c_wrap_s
3	connect IUT S to Tester B	wrap_s or c_wrap_s
4	connect IUT S to Tester S	wrap_s or c_wrap_s

Table 4 - SAC Configuration Test Case Summary

No.	Test Action	Current_Path_Type		CF_State	
		Port M1	Port M2	No MAC	with MAC
1	connect IUT S to tester M	isolated	isolated	isolated	c_wrap_s
2	connect IUT M1 to tester S	primary	isolated	wrap_s	c_wrap_s
3	connect IUT M2 to tester S	primary	primary	wrap_s	c_wrap_s
4	disconnect IUT S	primary	isolated	isolated	isolated
5	disconnect IUT M1	isolated	isolated	isolated	isolated

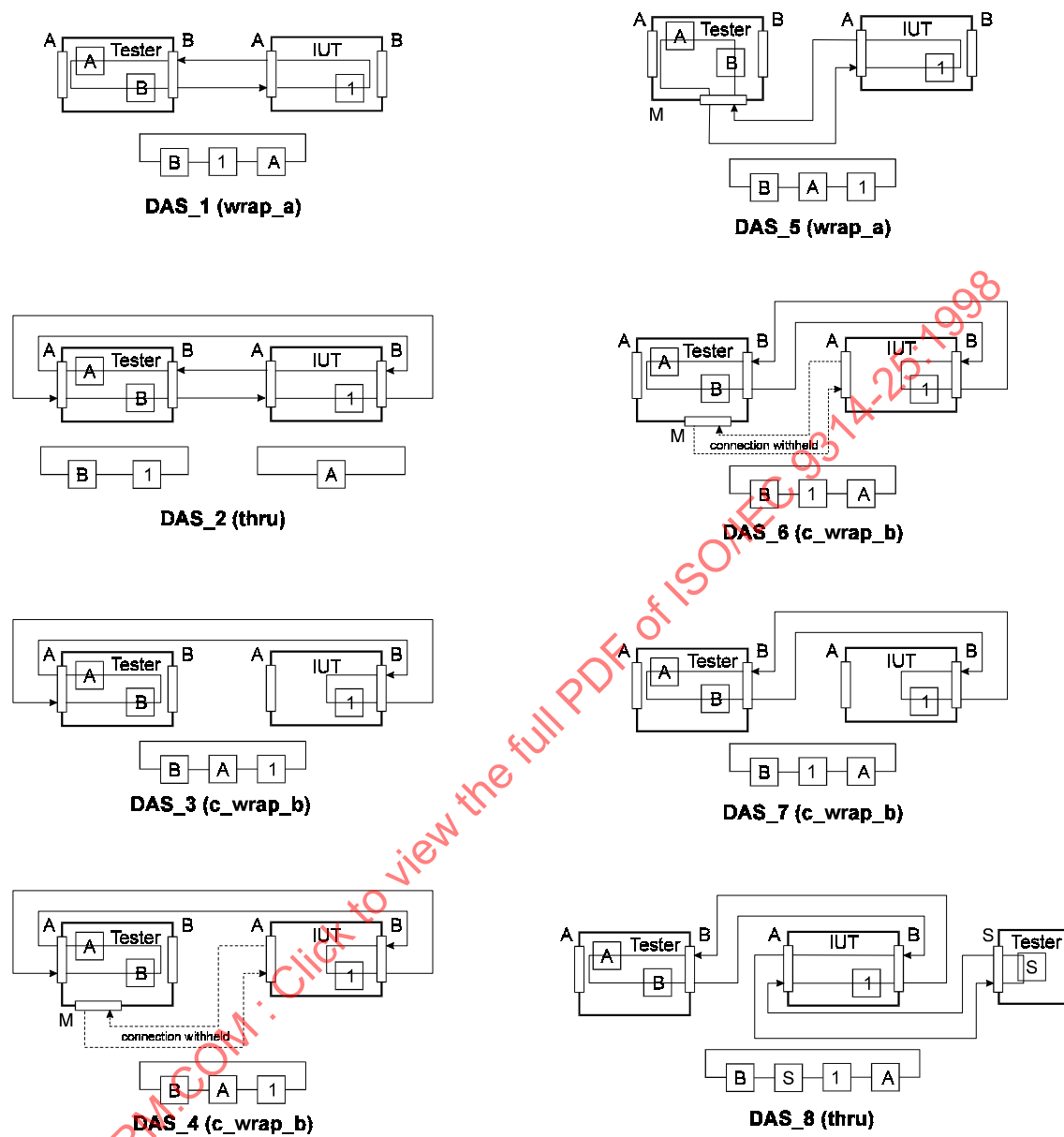


Figure 12 - Single MAC DAS Test Configurations (1 of 3)

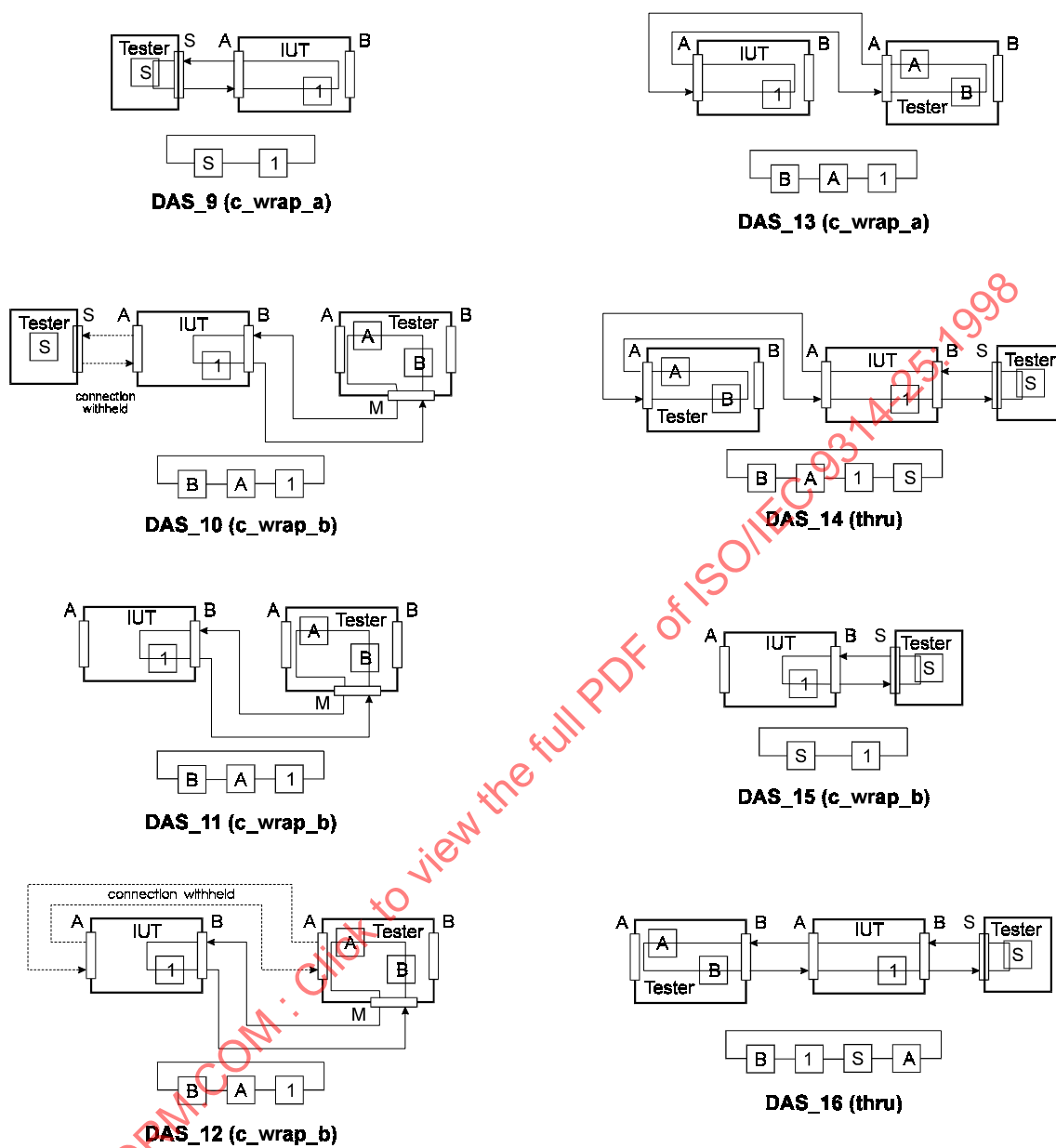


Figure 13 - Single MAC DAS Test Configurations (2 of 3)

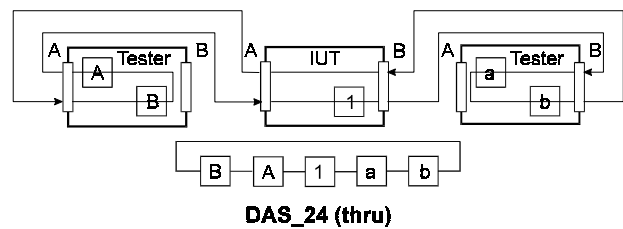
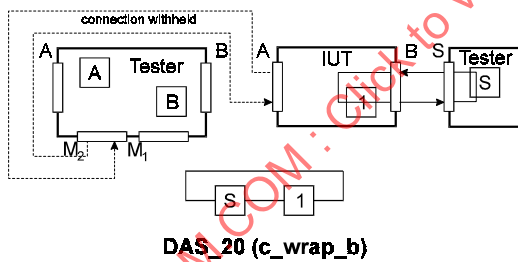
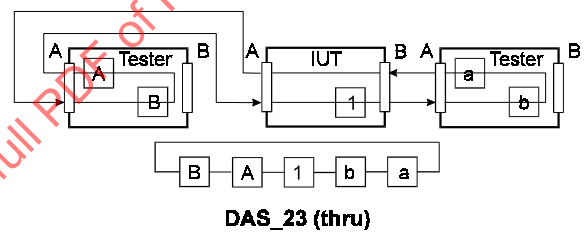
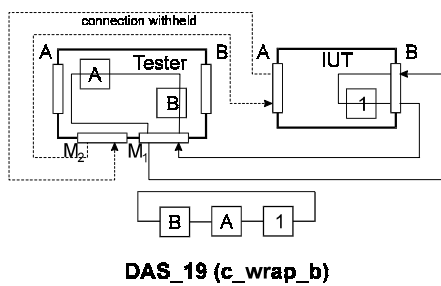
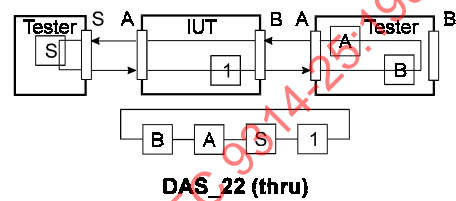
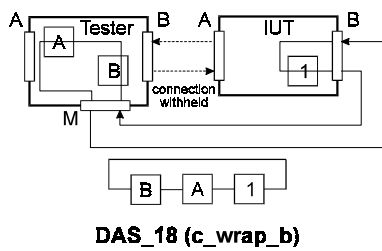
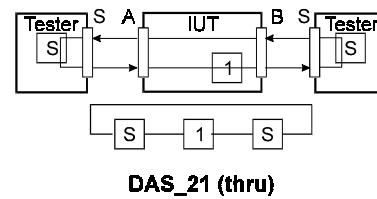
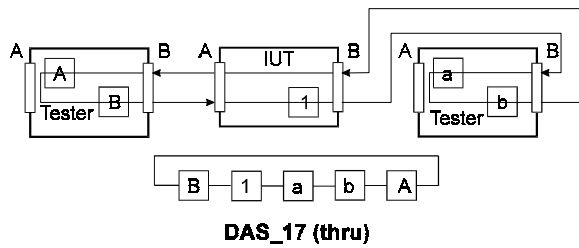


Figure 14 - Single MAC DAS Test Configurations (3 of 3)

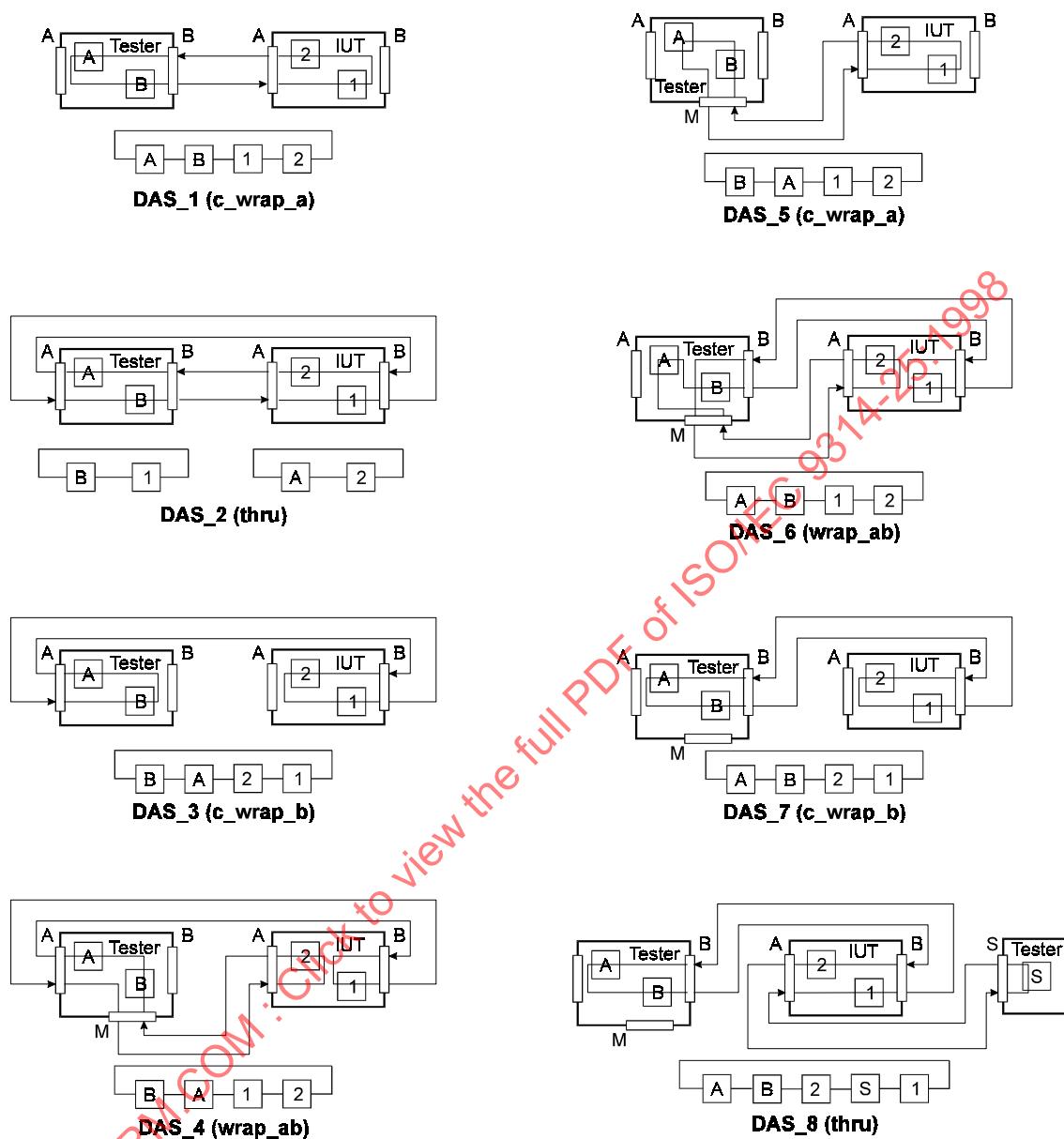


Figure 15 - Dual MAC DAS Test Configurations (1 of 3)

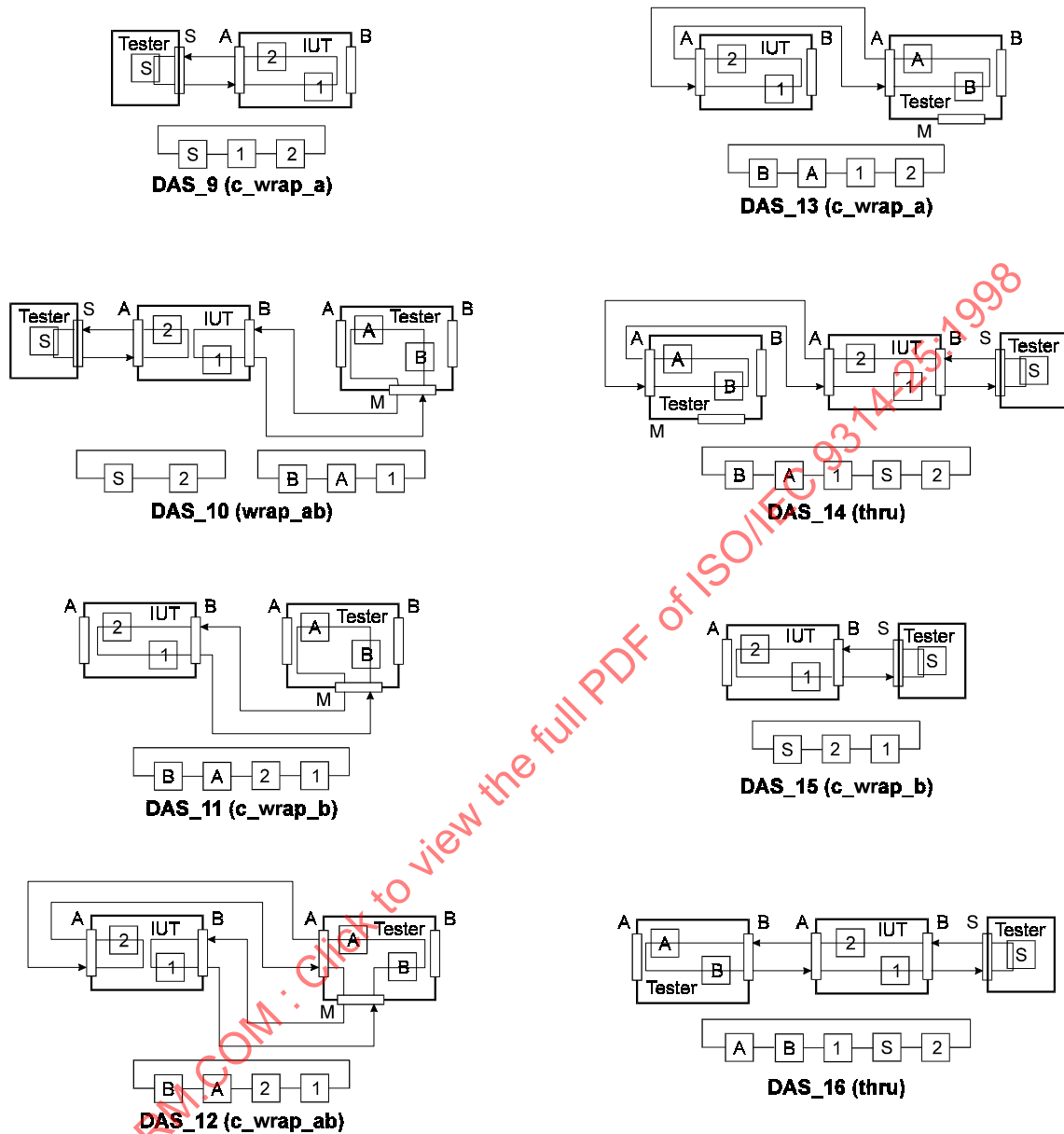


Figure 16 - Dual MAC DAS Test Configurations (2 of 3)

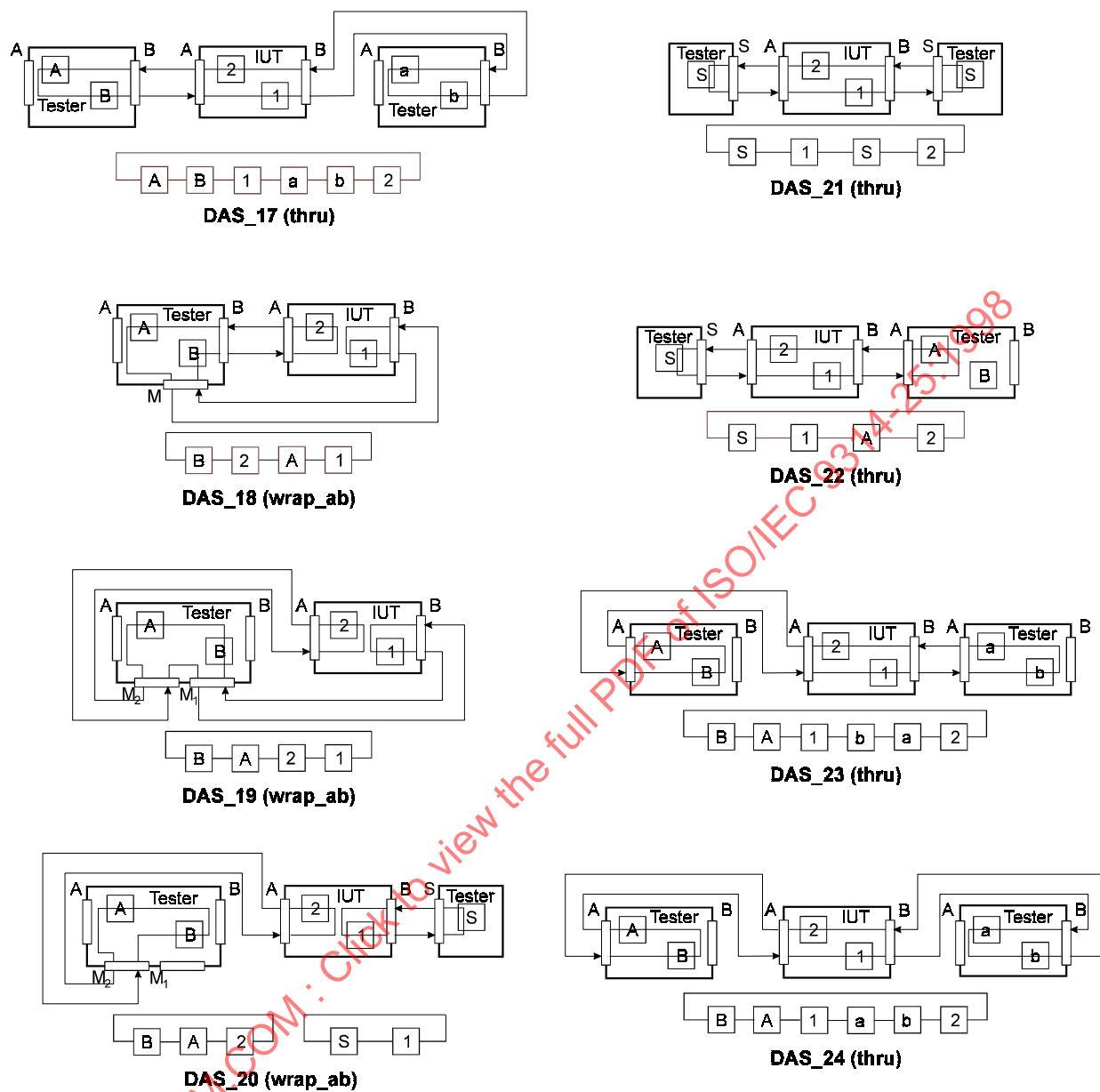


Figure 17 - Dual MAC DAS Test Configurations (3 of 3)

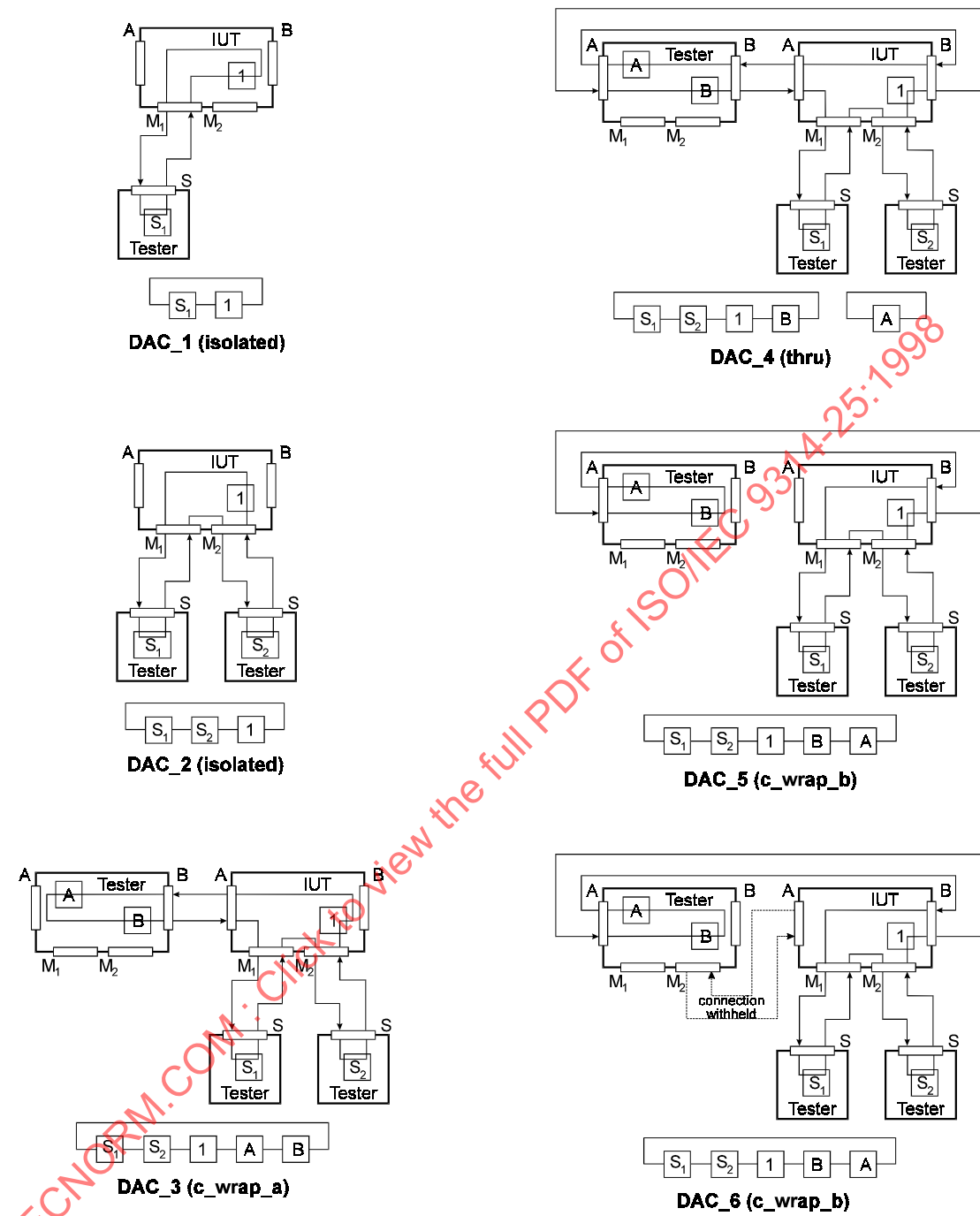


Figure 18 - Single MAC DAC Test Configurations (1 of 2)

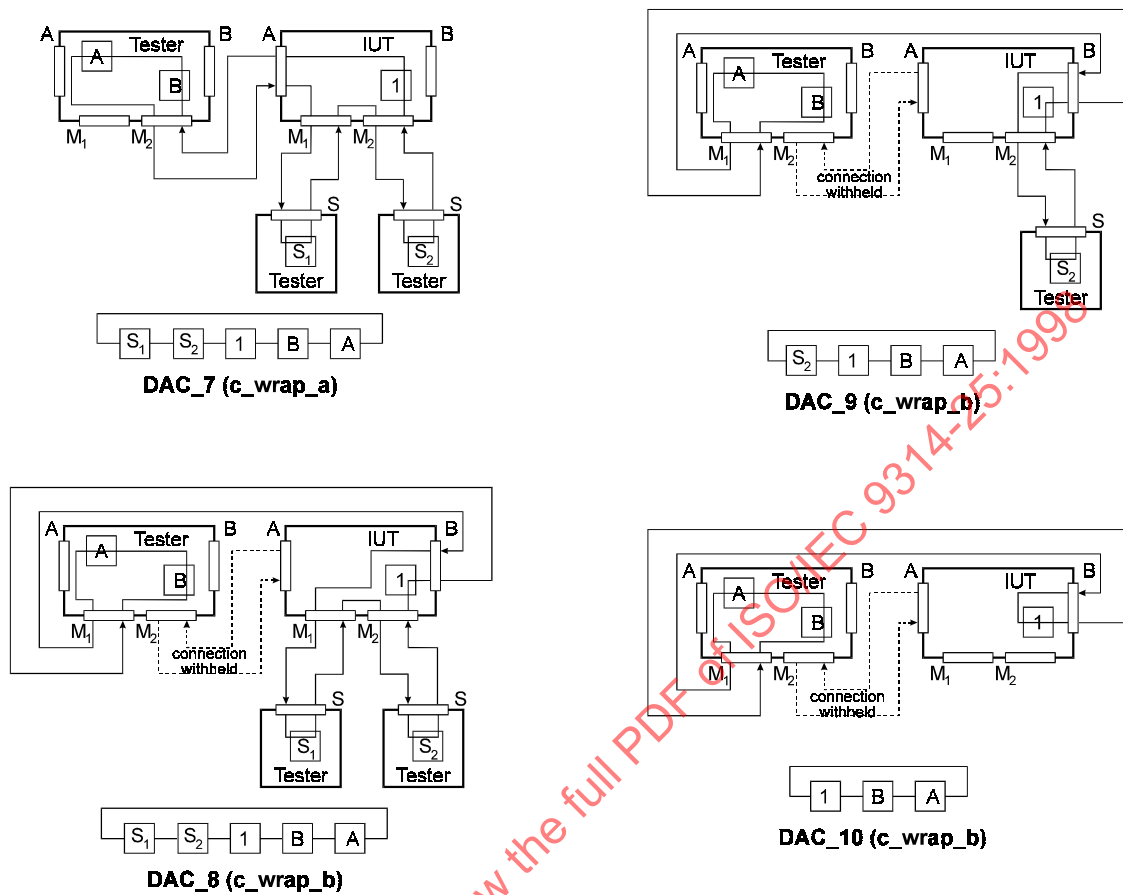


Figure 19 - Single MAC DAC Test Configurations (2 of 2)

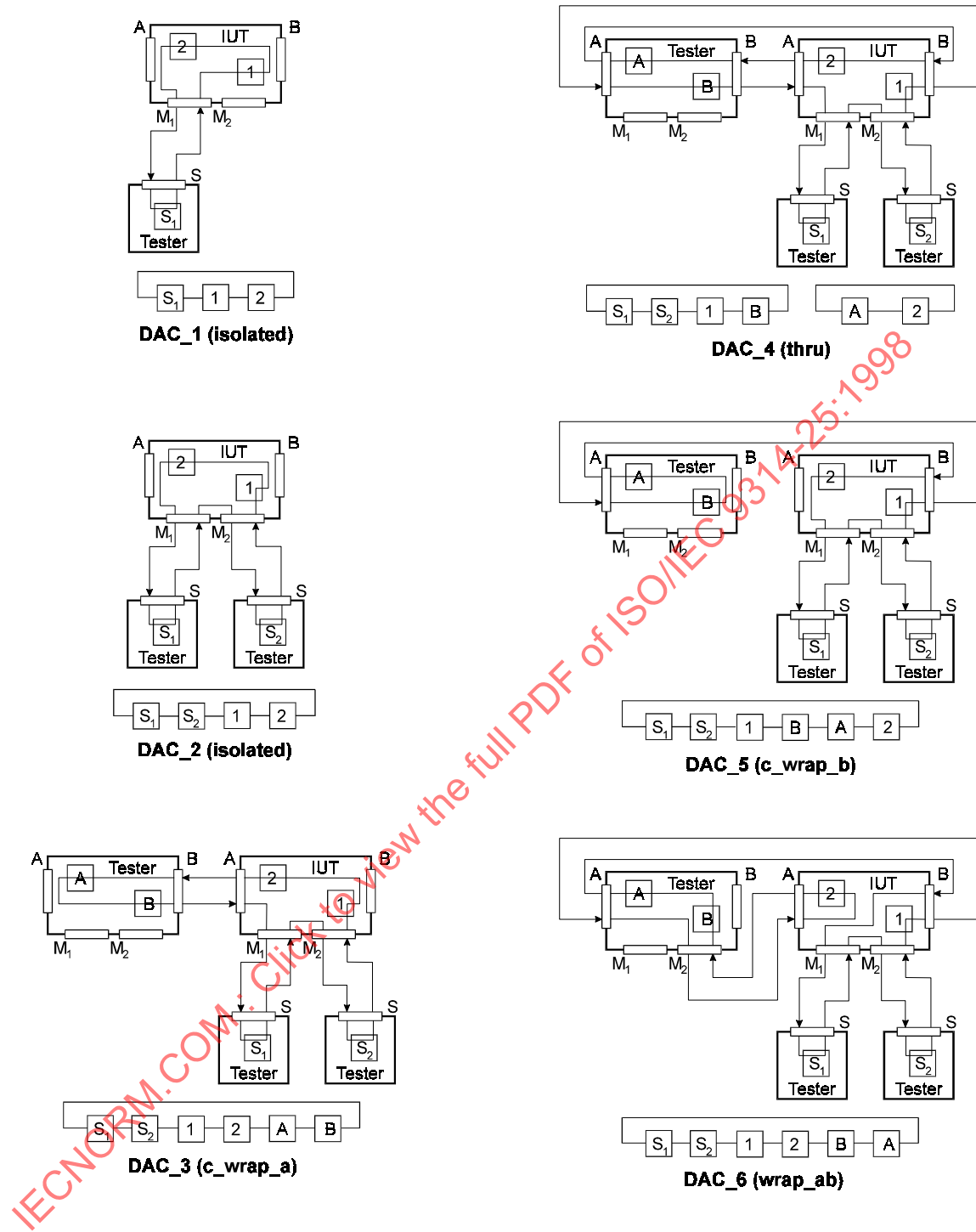


Figure 20 - Dual MAC DAC Test Configurations (1 of 2)

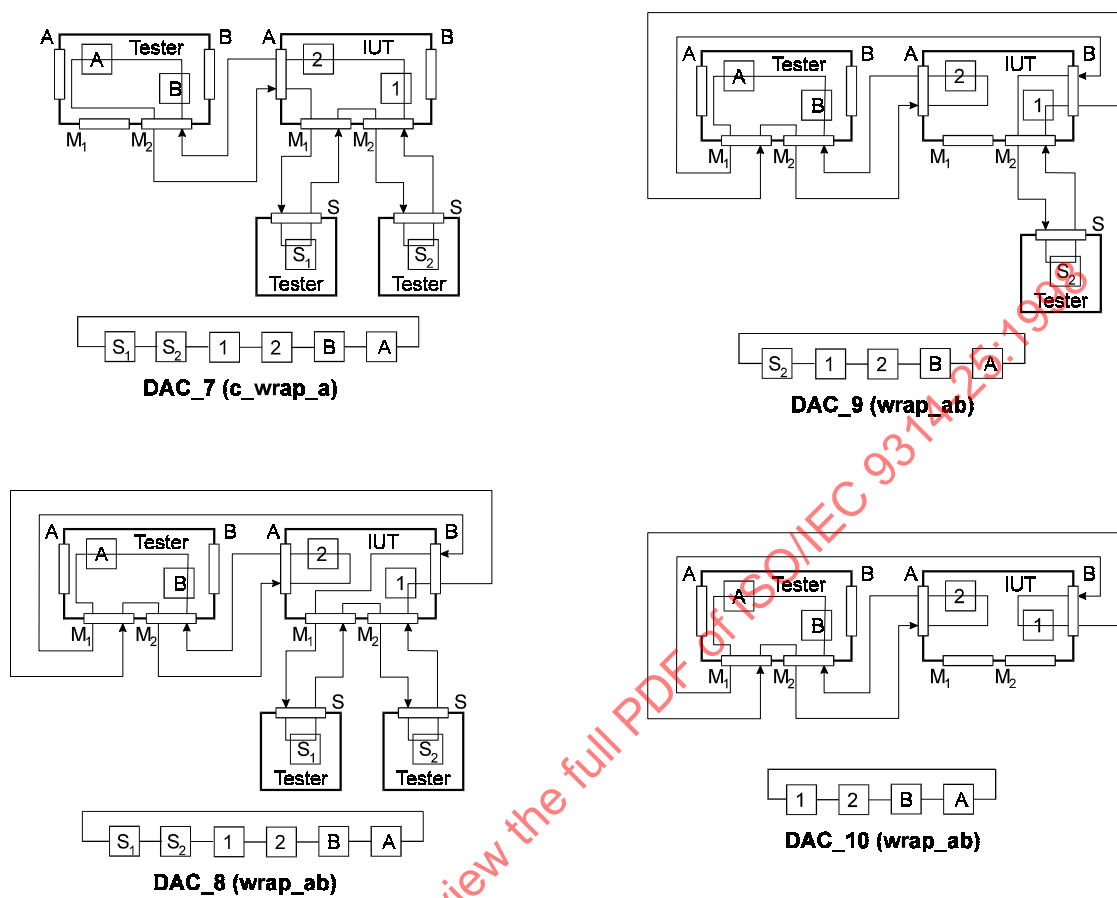


Figure 21 - Dual MAC DAC Test Configurations (2 of 2)

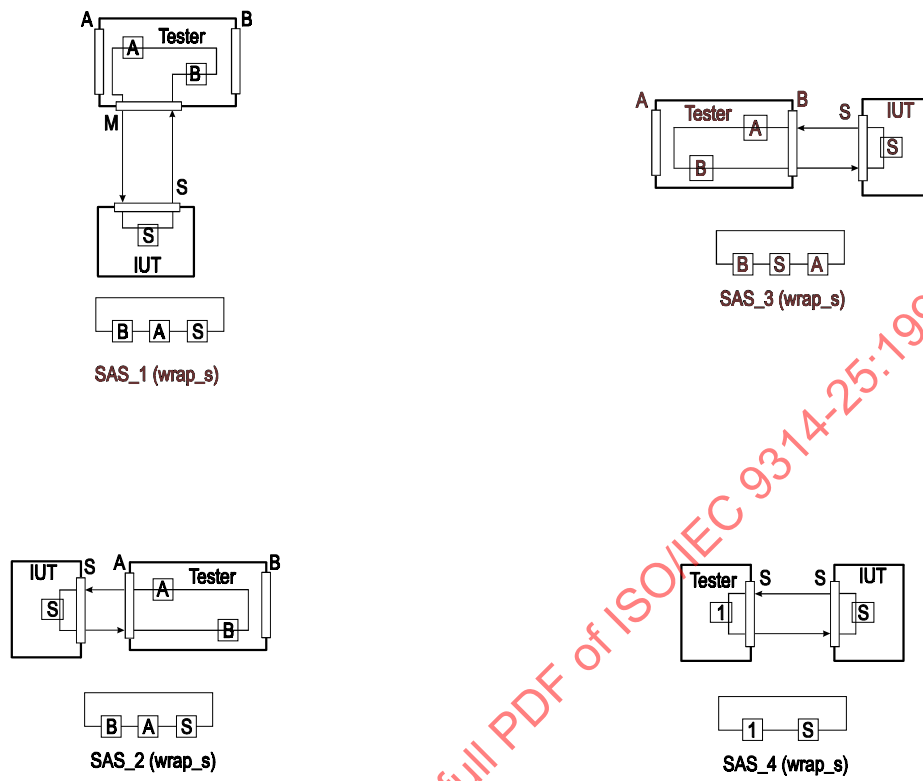


Figure 22 - SAS Test Configurations

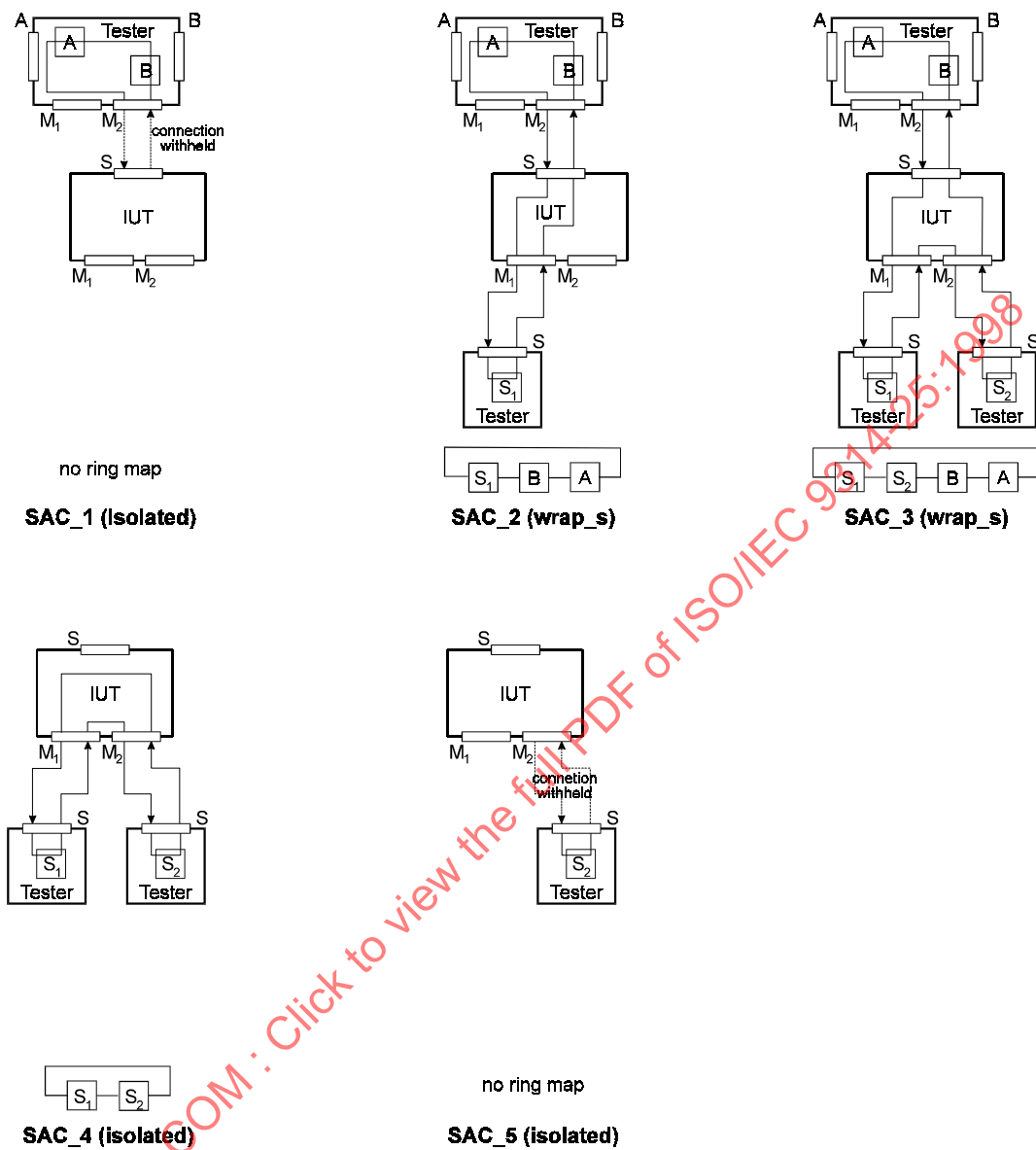


Figure 23 - No MAC SAC Test Configurations

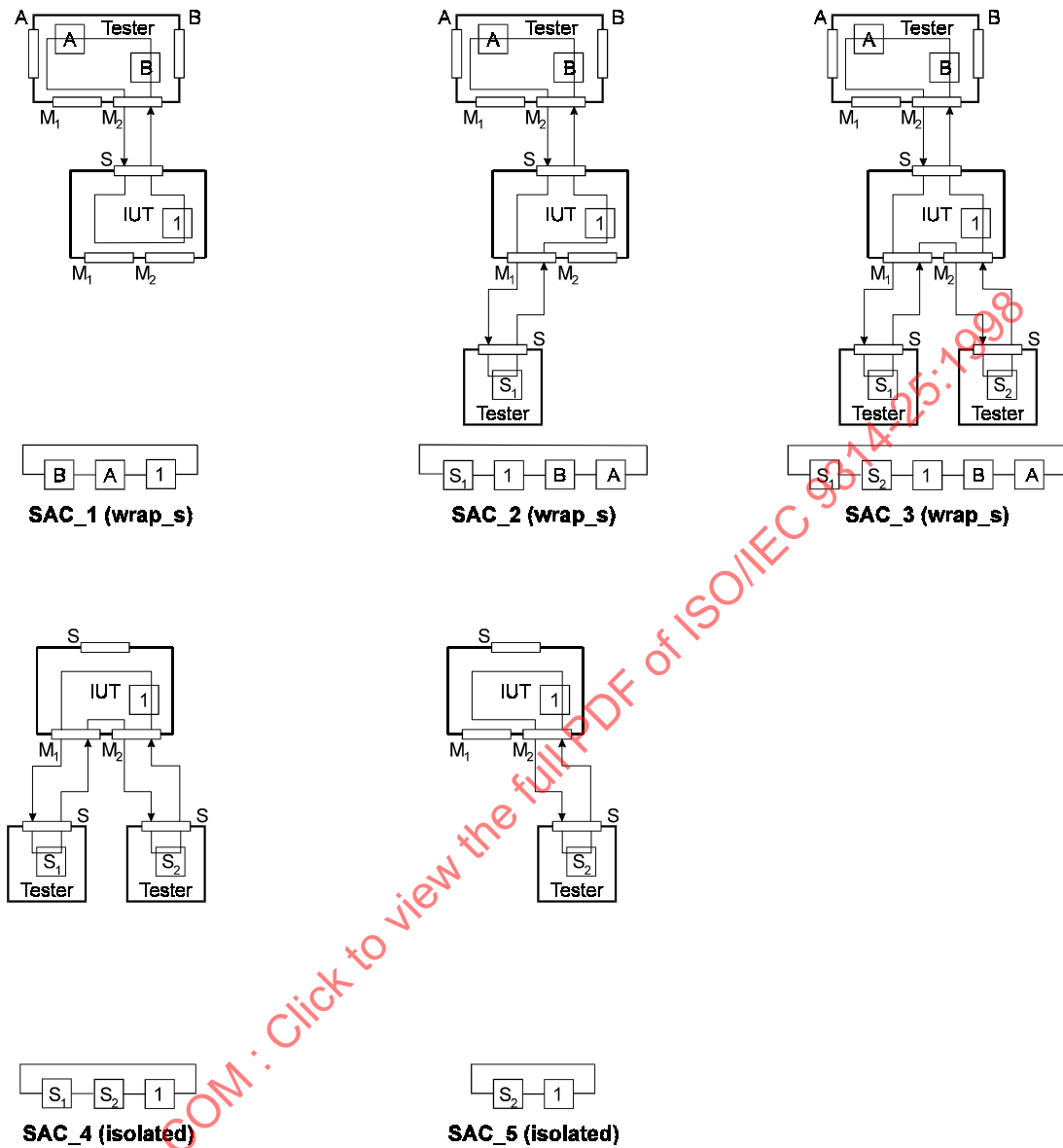


Figure 24 - Single MAC SAC Test Configurations

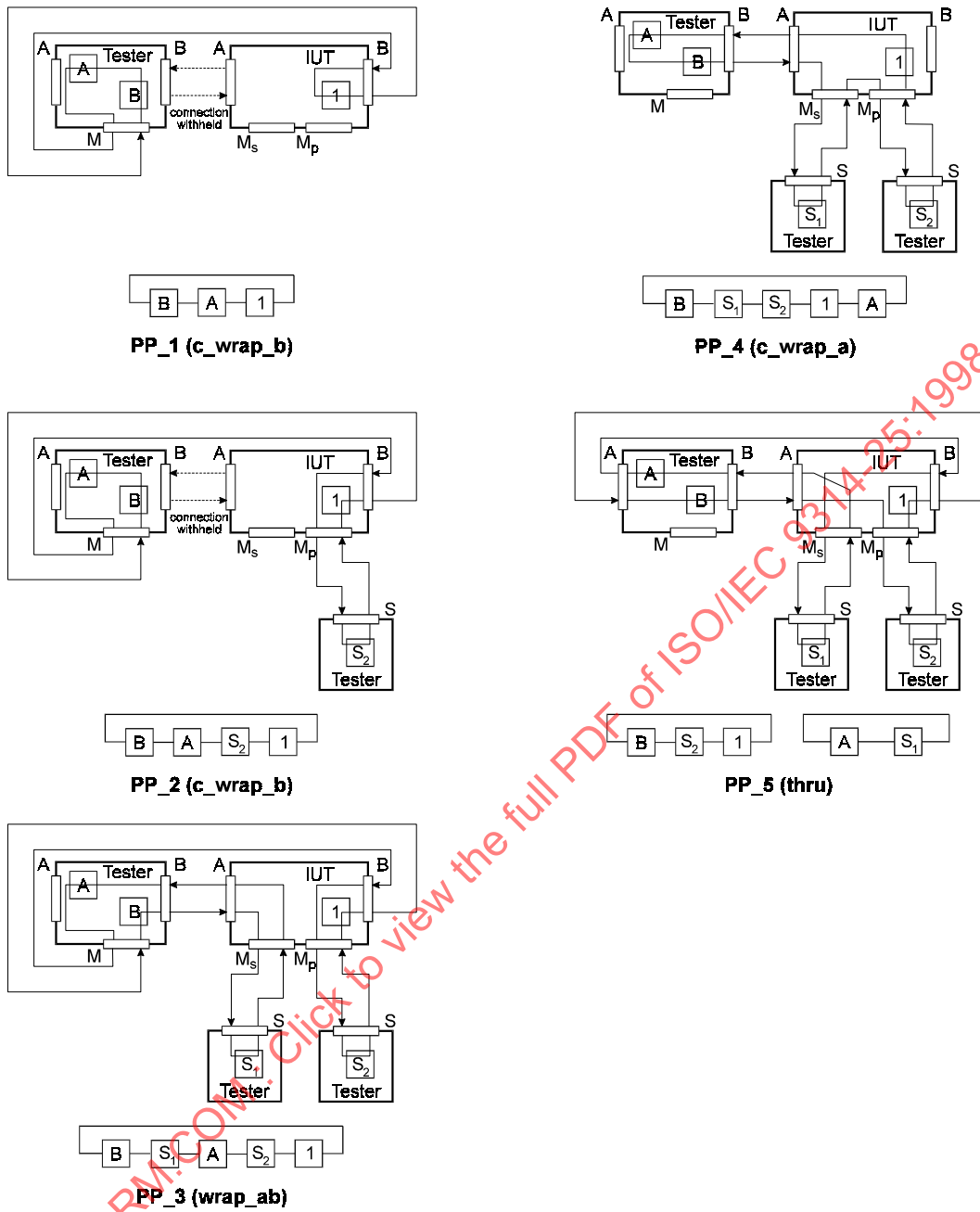
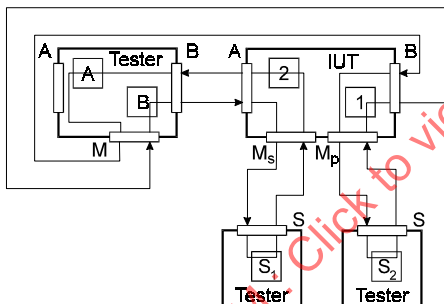
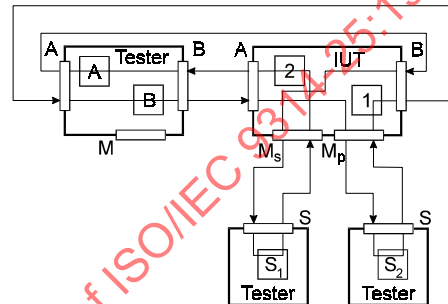
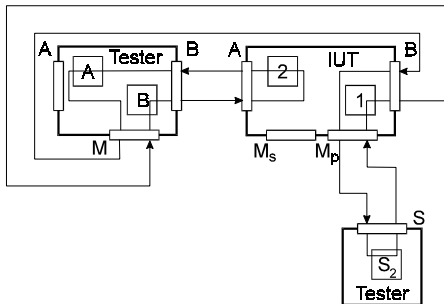
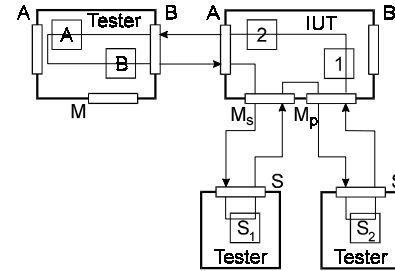


Figure 25 - Optional Master Port Permitted Path Single MAC DAC Test Configurations



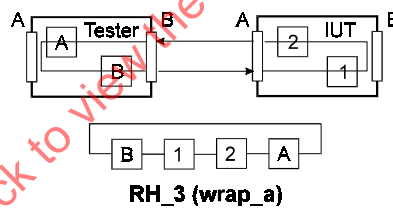
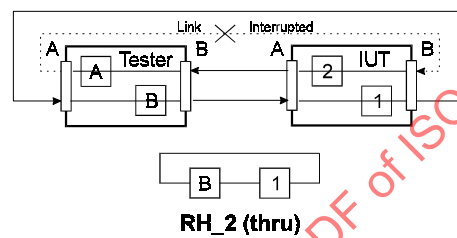
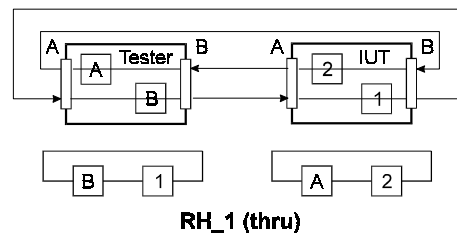


Figure 27 - Ring Hold Option DAS Test Configurations

8 Ring Management (RMT) - Abstract Test Suite

8.1 Test Suite Overview

Test Suite Overview			
Suite Name : FDDI_RMT Standards ref : ISO/IEC 9314-6:1998. PICS proforma ref : ISO/IEC 9314-13:1997. PIXIT proforma ref : Annex A of this standard. PICS/PIXIT use : Test case selection and test suite parameters. Test Method(s) : Remote Single Layer. Comments :			
Test Case Identifier	Test Case Reference	Page	Description
My_Claim1	FDDI_RMT/DUP_ADD_- RESOL/TX_TOKEN/My_ Claim1	143	Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Local Address after not Claiming or Beaconsing for longer than 2 (D_Max).
My_Claim2	FDDI_RMT/DUP_ADD_- RESOL/BEACONING/- My_Claim2	145	Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Local Address while Beaconsing for longer than 2 (D_Max).
My_Beacon	FDDI_RMT/DUP_ADD_- RESOL/My_Beacon	146	Verify that IUT resolves a duplicate address condition on the ring when it receives its own Beacon frame with Local Address while Claiming for longer than 2 (D_Max).
My_Claim_Diff_T_-Bid	FDDI_RMT/DUP_ADD_- RESOL/My_Claim_Diff T_Bid	147	Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Universal Address and T_Bid<>T_Req and the time since T_Req changes is greater than 2(D_Max)
T_Ann	FDDI_RMT/DUP_ADD_- RESOL/T_Ann	149	Verify that IUT resolves a duplicate address condition on the ring when TRM>T_Announce. Note: IUT's MAC Address is Local Address
Directed_Beacon1	FDDI_RMT/STUCK_- BEACONING/NO_DUP_ ADD/Directed_Beacon1	151	Verify that IUT transmits Directed Beacon frame when its MAC has Beaconsed for longer than T_Stuck and there is no duplicate address on the ring.

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Test Case Identifier	Test Case Reference	Page	Description
Directed_Beacon2	FDDI_RMT/STUCK_- BEACONING/DUP_AD D/Directed_Beacon2	152	Verify that IUT transmits Directed Beacon frame when its MAC has Beacons for longer than T_Stuck and there is a duplicate address on the ring.
Ring_Op	FDDI_RMT/REST_- DIALOG/Ring_Op	155	Verify that IUT terminates a Restricted Dialog that has persisted on the ring for longer than T_Rmode. Note: This test case is optional.
Ring_Op_Dup	FDDI_RMT/REST_- DIALOG/Ring_Op_Dup	156	Verify that IUT terminates a Restricted Dialog that has persisted on the ring for longer than T_Rmode and there is a duplicate address on the ring. Note: This Test case is optional.
Trace	FDDI_RMT/TRACE_- FUNCTION/Trace	158	Verify that IUT initiates the Trace function when its MAC has transmitted Directed Beacon frames for longer than T_Direct.
INIT_RING	FDDI_RMT/LIBRARY/- INIT_RING	159	Initiate the ring. At the end of initialization, the second Token would have circulated back to the tester.
INIT_BID	FDDI_RMT/LIBRARY/- INIT_BID	160	To initiate the T_Bid.
DUP_ADD_DETECT T	FDDI_RMT/LIBRARY/- DUP_ADD_DETECT	161	Force IUT to detect a duplicate address condition on the ring.
DUP_ADD_DETECT1	FDDI_RMT/LIBRARY/- DUP_ADD_DETECT1	162	Force IUT to detect a duplicate address condition on the ring. Note: IUT's MAC Address is Local Address.
DUP_ADD_DETECT2	FDDI_RMT/LIBRARY/- DUP_ADD_DETECT2	163	Force IUT to detect a duplicate address condition on the ring. Note: IUT's MAC Address is Universal Address.
JAM_A1	FDDI_RMT/LIBRARY/- JAM_A1	164	IUT blocks its MAC input and sources Jam Beacon frames. Note: IUT's MAC Address is Local Address.
JAM_A2	FDDI_RMT/LIBRARY/- JAM_A2	165	IUT blocks its MAC input and sources Jam Beacon frames. Note: IUT's MAC Address is Universal Address.
JAM_ACTION1	FDDI_RMT/LIBRARY/- JAM_ACTION1	166	Verify that IUT performs Jam_Action by blocking its MAC input and sourcing Jam Beacon frames. Note: IUT's MAC Address is Local Address.

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Test Step Identifier	Test Step Reference	Page	Description
JAM_ACTION2	FDDI_RMT/LIBRARY/- JAM_ACTION2	167	Verify that IUT performs Jam_Action by blocking its MAC input and sourcing Jam Beacon frames. Note: IUT's MAC Address is Universal Address.
JAM_B1	FDDI_RMT/LIBRARY/- JAM_B1	168	IUT initiates the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Local Address.
JAM_B2	FDDI_RMT/LIBRARY/- JAM_B2	169	IUT initiates the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Universal Address.
DBJ_ACTION1	FDDI_RMT/LIBRARY/- DBJ_ACTION1	170	Verify that IUT performs Double Beacon Jam Action by initiating the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Local Address.
DBJ_ACTION2	FDDI_RMT/LIBRARY/- DBJ_ACTION2	171	Verify that IUT performs Double Beacon Jam Action by initiating the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Universal Address.
CHANGE_ADD	FDDI_RMT/LIBRARY/- CHANGE_ADD	172	IUT changes its MAC Local Address to Universal Address.
CHANGE_MAC_ADD	FDDI_RMT/LIBRARY/- CHANGE_MAC_ADD	172	Verify that IUT changes its MAC Local Address to Universal Address.
TX_D_BEACON	FDDI_RMT/LIBRARY/- TX_D_BEACON	173	Verify that IUT transmits Directed Beacon frames after its MAC has Beacons for longer than T_Stuck.
Default Identifier	Default Reference	Page	Description

8.2 User Type Definition

User Type Definitions			
Name	Base Type	Definition	Comments
SYMBOL		BITSTRING [5]	

8.3 User Operation Definition

User Operation Definition	
Operation Name	: TWOS_COM (NUM:INTEGER)
Result Type	: INTEGER
Description	
This operator will convert the integer NUM into two's complement format.	

User Operation Definition	
Operation Name	: LINE_STATE_ILS
Result Type	: BOOLEAN
Description	
This operator is equal "true" when the current line state is Idle Line State, "false" otherwise.	

User Operation Definition	
Operation Name	: SEC_LINE_STATE_MLS
Result Type	: BOOLEAN
Description	
This operator is equal "true" when the current line state on the secondary ring is Master Line State, "false" otherwise.	

User Operation Definition	
Operation Name	: LINE_STATE_QLS
Result Type	: BOOLEAN
Description	
This operator is equal "true" when the current line state is Quiet Line State, "false" otherwise.	

8.4 Test Suite Parameters

Test Suite Parameters			
Name	Type	PICS/PIXIT Ref.	Comments
IUT_ADDRESS	OCTETSTRING[6]	Annex A, 1.1	48_bit address assigned to IUT's MAC. MSB on the left.
IUT_L_ADD	OCTETSTRING[6]	Annex A, 1.2	48_bit Local Address assigned to IUT's MAC. MSB on the left.
IUT_U_ADD	OCTETSTRING[6]	Annex A, 1.3	48_bit Universal Address assigned to IUT's MAC. MSB on the left.
TESTER_ADDRESS	OCTETSTRING[6]	Annex A, 1.4	48_bit address assigned to Tester's MAC. MSB on the left.
OTHER_ADDRESS	OCTETSTRING[6]	Annex A, 1.5	48_bit address assigned to Other's MAC. MSB on the left.
T_REQ	INTEGER	Annex A, 4.1.1	Value of TTRT on IUT's MAC (in usec). The upper bound of this value is T_Max_LB.
T_REQ1	INTEGER	Annex A, 4.1.2	Another value of TTRT on IUT's MAC (in usec). The upper bound of this value is T_Max_LB.
T_REQ2	INTEGER	Annex A, 4.1.3	Value of TTRT on Other's MAC (in usec). The upper bound of this value is T_Max_LB.
T_Max	INTEGER	Annex A, 4.2	Maximum TRT value (in usec).
T_Rmode_Value	INTEGER	Annex A, 4.3	T_Rmode value (in sec) for restricted dialog on the ring.

8.5 Test suite Constant

Test Suite Constants			
Name	Type	Value	Comments
JK	SYMBOL[2]	'1100010001'B	J and K SYMBOLS.
TT	SYMBOL[2]	'0110101101'B	Token's ED.
T	SYMBOL	'01101'B	T SYMBOL.
M	INTEGER	'1000000'B	Factor of multiplication for timers.
DELTA	INTEGER	1000	Timer adjustment factor, in usec.
SET	SYMBOL	'11001'B	SET symbol.
RESET	SYMBOL	'00111'B	RESET symbol.
SMT_SRF_DA	OCTETSTRING[6]	'800143008008'H	SRF Multicast Address.
SMT_Directed_Beacon_DA	OCTETSTRING[6]	'800143008000'H	SMT_Directed_Beacon Destination Address.

8.6 Test Suite Variables

Test Suite Variables			
Name	Type	Value	Comments
T_NEG	INTEGER		TRT value in unit of usec, after the Claim process.
HIGHER_T_BID	INTEGER		Bid value higher than IUT's bid, in unit of 80 ns, in 2's complement.
LOWER_T_BID	INTEGER		Bid value lower than IUT's bid, in unit of 80ns, in 2's complement.
IUT_T_BID	INTEGER		IUT's bid, in unit of 80 ns in 2's complement.
DIFF_T_BID	INTEGER		Another IUT's bid, in unit of 80ns in 2's complement.
OTHER_T_BID	INTEGER		Other's bid, in unit of 80ns in 2's complement.
T1	INTEGER		Variable for temporary values.

8.7 Timer Declarations

Timer Declarations			
Timer Name	Duration	Units	Comments
D_Max	1773	us	Maximum Ring Latency time.
Twice_D_Max	3546	us	2(D_Max).
Timer_TRM	T_Max	us	Ring Management Timer. A timer used by RMT to monitor the MAC operation.
T_Non_Op	1	sec	Time to allow ring recovery to occur before duplicate address conditions are examined.
RM_React	83	ms	Maximum time for the RMT state machine to recognize that transition conditions exist and to execute the appropriate transition.
T_Jam	370	ms	Time for which Jam Beacon is sent.
T_DBJ	82	ms	Time to start second Beacon of Double Beacon Jam after the first Beacon is sent.
T_Direct	370	ms	Time for which Directed Beacon is sent before the Trace function is invoked.
T_Stuck	8	sec	Time to allow a Stuck Beacon condition before a Directed Beacon is sent, followed shortly by the initiation of a Trace.
T_Rmode	T_Rmode - Value	sec	Time for which a Restricted Dialog may persist on the ring before being terminated by this MAC. Default value is 0 sec.
T_Announce	2500	ms	Default time for intervals between sending Jam Beacons.
T_Limit	2	sec	The rate-limiting interval for Status Report Protocol.
Topr	180	sec	Operator Timer (in seconds).

8.8 PDU Type Declarations

8.8.1 PDU Declaration of Token

PDU Type Declaration		
PDU Name: TOKEN	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[1]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
ED	SYMBOL[2]	End Delimiter

8.8.2 PDU Declaration of Claim

PDU Type Declaration		
PDU Name: CLAIM	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
INFO	OCTETSTRING[1]	T_Bid Value
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.8.3 PDU Declaration of Beacon

PDU Type Declaration		
PDU Name: BEACON	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
INFO1	OCTETSTRING[1]	First byte of Info
INFO2	OCTETSTRING[3]	Last three bytes of Info
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.8.4 PDU Declaration of Directed Beacon

PDU Type Declaration		
PDU Name: D_BEACON	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
BEACON_INFO	GROUP	
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.8.5 PDU Declaration of Jam Beacon

PDU Type Declaration		
PDU Name: J_BEACON	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
BEACON_INFO	GROUP	
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.8.6 PDU Declaration of Status Report Frame

PDU Type Declaration		
PDU Name: SRF_FRAME	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
INFO_SRF	GROUP	Text of SRF frame
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.8.7 PDU Declaration of Neighbour Information Frame

PDU Type Declaration		
PDU Name: NIF_FRAME	PCO Type:	Comments:
PDU Field Information		
Field Name	Type	Comments
SD	SYMBOL[2]	Start Delimiter
FC	OCTETSTRING[1]	Frame Control
DA	OCTETSTRING[6]	Destination Address
SA	OCTETSTRING[6]	Source Address
INFO_NIF	GROUP	Text of NIF frames
FCS	OCTETSTRING[4]	Frame Check Sequence
ED	SYMBOL[1]	End Delimiter
FS_E	SYMBOL[1]	Control Indicator E (Error)
FS_A	SYMBOL[1]	Control Indicator A (Address)
FS_C	SYMBOL[1]	Control Indicator C (Copy)
FS_2	SYMBOL[0..4]	Additional Control Indicators
FS_T	SYMBOL[1]	Symbol T

8.9 PDU Field Group Type Declarations

8.9.1 BEACON_INFO

PDU Field Group Type Declaration		
Field Group Name: BEACON_INFO		Comments:
PDU Field Information		
Field Name	Type	Comments
BEACON_TYPE	OCTETSTRING[1]	
PAD	OCTETSTRING[3]	
UNA	OCTETSTRING[6]	

8.9.2 INFO_SRF

PDU Field Group Type Declaration		
Field Group Name: INFO_SRF		Comments:
PDU Field Information		
Field Name	Type	Comments
FRAME_CLASS	OCTETSTRING[1]	SRF (Status Report Frame) Announcement=01
FRAME_TYPE	OCTETSTRING[1]	
VERSION_ID	OCTETSTRING[2]	
TRANSACTION_ID	OCTETSTRING[4]	
STATION_ID1	OCTETSTRING[2]	X'1033', fddiSMTTimeStamp
STATION_ID2	OCTETSTRING[6]	
PAD	OCTETSTRING[2]	
INFO_FIELD_LENGTH	OCTETSTRING[2]	
PARAMETER_TYPE1	OCTETSTRING[2]	X'1034', fddiSMTTransitionTimeStamp
PARAMETER_LENGTH1	OCTETSTRING[2]	
SRF_DATA1	OCTETSTRING[8]	
PARAMETER_TYPE2	OCTETSTRING[2]	
PARAMETER_LENGTH2	OCTETSTRING[2]	X'208C', fddiMACDuplicateAddressCondition
SRF_DATA2	OCTETSTRING[8]	
PARAMETER_TYPE3	OCTETSTRING[2]	
PARAMETER_LENGTH3	OCTETSTRING[2]	
RESOURCE_INDEX	OCTETSTRING[4]	ConditionState: True=1;False=0
PAD31	OCTETSTRING[3]	
SRF_DATA31	OCTETSTRING[1]	
PAD32	OCTETSTRING[2]	
SRF_DATA32	OCTETSTRING[2]	DupCondition: mydup='0000'H (DA_Flag=SET); unadup='0001'H (UNDA_Flag=SET) My_Long_Address UNA_Long_Address
SRF_DATA33	OCTETSTRING[6]	
SRF_DATA34	OCTETSTRING[6]	

8.9.3 INFO_NIF

PDU Field Group Type Declaration		
Field Group Name: INFO_NIF		Comments:
PDU Field Information		
Field Name	Type	Comments
FRAME_CLASS	OCTETSTRING[1]	NIF (Neighbor Information Frame) Ann=01, Req=02, Resp=03 X'0001', Upstream Neighbor Address (UNA)
FRAME_TYPE	OCTETSTRING[1]	
VERSION_ID	OCTETSTRING[2]	
TRANSACTION_ID	OCTETSTRING[4]	
STATION_ID1	OCTETSTRING[2]	
STATION_ID2	OCTETSTRING[6]	
PAD	OCTETSTRING[2]	
INFO_FIELD_LENGTH	OCTETSTRING[2]	
PARAMETER_TYPE	OCTETSTRING[2]	
PARAMETER_LENGTH	OCTETSTRING[2]	
NIF_DATA1	OCTETSTRING[2]	
NIF_DATA2	OCTETSTRING[0..32]	

8.10 PDU Constraint Declarations

8.10.1 PDU Constraint Declaration of Unrestricted Token

PDU Constraint Declaration	
PDU Name: TOKEN	Constraint Name: TOKEN_UR
Field Name	Value
SD	JK
FC	'80'H
ED	TT
Comments:	

8.10.2 PDU Constraint Declaration of Restricted Token

PDU Constraint Declaration	
PDU Name: TOKEN	Constraint Name: TOKEN_R
Field Name	Value
SD	JK
FC	'C0'H
ED	TT
Comments:	

8.10.3 PDU Constraint Declaration of IUT's Claim

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_IUT(BID: integer)
Field Name	Value
SD	JK
FC	'C3'H
DA	IUT_ADDRESS
SA	IUT_ADDRESS
INFO	BID
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments: IUT Claim frame, BID contains the Value of T_Req.	

8.10.4 PDU Constraint Declaration of IUT's Claim Using Local Address

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_IUT1(BID: integer)
Field Name	Value
SD	JK
FC	'C3'H
DA	IUT_L_ADD
SA	IUT_L_ADD
INFO	BID
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments: IUT Claim frame, BID contains the Value of T_Req.	

8.10.5 PDU Constraint Declaration of IUT's Claim Using Universal Address

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_IUT2(BID: integer)
Field Name	Value
SD	JK
FC	'C3'H
DA	IUT_U_ADD
SA	IUT_U_ADD
INFO	BID
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments: UT Claim frame, BID contains the Value of T_Req.	

8.10.6 PDU Constraint Declaration of Tester's Claim

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_TESTER(BID: integer)
Field Name	Value
SD	JK
FC	'C3'H
DA	TESTER_ADDRESS
SA	TESTER_ADDRESS
INFO	BID
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments: Tester Claim frame, BID contains the Value of T_Req.	

8.10.7 PDU Constraint Declaration of Other Claim

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_OTHER(BID: integer)
Field Name	Value
SD	JK
FC	'C3'H
DA	OTHER_ADDRESS
SA	OTHER_ADDRESS
INFO	BID
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments: Other Claim frame, BID contains the Value of T_Req.	

8.10.8 PDU Constraint Declaration of Stripped Claim

PDU Constraint Declaration	
PDU Name: CLAIM	Constraint Name: CLAIM_STRIP
Field Name	Value
SD	JK
FC	'C3'H
DA	IUT_L_ADD
SA	IUT_L_ADD
INFO	-
FCS	-
ED	-
FS_E	-
FS_A	-
FS_C	-
FS_2	-
FS_T	-
Comments:	

8.10.9 PDU Constraint Declaration of IUT's Beacon

PDU Constraint Declaration	
PDU Name: BEACON	Constraint Name: BEACON_IUT
Field Name	Value
SD	JK
FC	'C2'H
DA	'000000000000'H
SA	IUT_ADDRESS
INFO1	'00'H
INFO2	'000000'H
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.10 PDU Constraint Declaration of IUT's Beacon Using Local Address

PDU Constraint Declaration	
PDU Name: BEACON	Constraint Name: BEACON_IUT1
Field Name	Value
SD	JK
FC	'C2'H
DA	'000000000000'H
SA	IUT_L_ADD
INFO1	'00'H
INFO2	'000000'H
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.11 PDU Constraint Declaration of IUT's Beacon Using Universal Address

PDU Constraint Declaration	
PDU Name: BEACON	Constraint Name: BEACON_IUT2
Field Name	Value
SD	JK
FC	'C2'H
DA	'000000000000'H
SA	IUT_U_ADD
INFO1	'00'H
INFO2	'0000'H
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.12 PDU Constraint Declaration of Tester's Beacon

PDU Constraint Declaration	
PDU Name: BEACON	Constraint Name: BEACON_TESTER
Field Name	Value
SD	JK
FC	'C2'H
DA	'000000000000'H
SA	TESTER_ADDRESS
INFO1	'00'H
INFO2	'000000'H
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.13 PDU Constraint Declaration of Stripped Beacon

PDU Constraint Declaration	
PDU Name: BEACON	Constraint Name: BEACON_STRIP
Field Name	Value
SD	JK
FC	'C2'H
DA	'000000000000'H
SA	IUT_L_ADD
INFO1	-
INFO2	-
FCS	-
ED	-
FS_E	-
FS_A	-
FS_C	-
FS_2	-
FS_T	-
Comments:	

8.10.14 PDU Constraint Declaration of IUT's Directed Beacon

PDU Constraint Declaration	
PDU Name: D_BEACON	Constraint Name: D_BEACON_IUT
Field Name	Value
SD	JK
FC	'C2'H
DA	SMT_Directed_Beacon_DA
SA	IUT_ADDRESS
BEACON_INFO	DIRECTED_INFO
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.15 PDU Constraint Declaration of IUT's Directed Beacon Using Universal Address

PDU Constraint Declaration	
PDU Name: D_BEACON	Constraint Name: D_BEACON_IUT2
Field Name	Value
SD	JK
FC	'C2'H
DA	SMT_Directed_Beacon_DA
SA	IUT_U_ADD
BEACON_INFO	DIRECTED_INFO
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.16 PDU Constraint Declaration of IUT's Directed Beacon Using Local Address

PDU Constraint Declaration	
PDU Name: J_BEACON	Constraint Name: J_BEACON_IUT1
Field Name	Value
SD	JK
FC	'C2'H
DA	IUT_L_ADD
SA	IUT_L_ADD
BEACON_INFO	JAM_INFO
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.17 PDU Constraint Declaration of IUT's Jammed Beacon Using Universal Address

PDU Constraint Declaration	
PDU Name: J_BEACON	Constraint Name: J_BEACON_IUT2
Field Name	Value
SD	JK
FC	'C2'H
DA	IUT_U_ADD
SA	IUT_U_ADD
BEACON_INFO	JAM_INFO
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.18 PDU Constraint Declaration of IUT's Status Report Frame

PDU Constraint Declaration	
PDU Name: SRF_FRAME	Constraint Name: SRF_ANN
Field Name	Value
SD	JK
FC	'41'H
DA	SMT_SRF_DA
SA	IUT_ADDRESS
INFO_SRF	INFO_SRF_ANN
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.19 PDU Constraint Declaration of IUT's NIF Request Frame

PDU Constraint Declaration	
PDU Name: NIF_FRAME	Constraint Name: NIF_REQ
Field Name	Value
SD	JK
FC	'4F'H
DA	'FFFFFFFFFFFF'H
SA	IUT_ADDRESS
INFO_NIF	INFO_NIF_REQ
FCS	?
ED	T
FS_E	RESET
FS_A	RESET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.10.20 PDU Constraint Declaration of IUT's NIF Response Frame

PDU Constraint Declaration	
PDU Name: NIF_FRAME	Constraint Name: NIF_RESP
Field Name	Value
SD	JK
FC	'41'H
DA	IUT_ADDRESS
SA	TESTER_ADDRESS
INFO_NIF	INFO_NIF_RESP
FCS	?
ED	T
FS_E	RESET
FS_A	SET
FS_C	RESET
FS_2	-
FS_T	T
Comments:	

8.11 PDU Field Group Constraint Declarations

8.11.1 PDU Field Group Constraint Declaration of Directed BEACON_INFO

PDU Field Group Constraint Declaration	
Field Group Name: BEACON_INFO	Constraint Name: DIRECTED_INFO
Field Name	Value
BEACON_TYPE	'01'H
PAD	'000000'H
UNA	?
Comments:	

8.11.2 PDU Field Group Constraint Declaration of Jammed BEACON_INFO

PDU Field Group Constraint Declaration	
Field Group Name: BEACON_INFO	Constraint Name: JAM_INFO
Field Name	Value
BEACON_TYPE	'02'H
PAD	'000000'H
UNA	?
Comments:	

8.11.3 PDU Field Group Constraint Declaration of SRF_INFO

PDU Field Group Constraint Declaration	
Field Group Name: INFO_SRF	Constraint Name: INFO_SRF_ANN
Field Name	Value
FRAME_CLASS	'07'H
FRAME_TYPE	'01'H
VERSION_ID	'0002'H
TRANSACTION_ID	'00000002'H
STATION_ID1	0000'H
STATION_ID2	IUT_ADDRESS
PAD	0000'H
INFO_FIELD_LENGTH	'0034'H
PARAMETER_TYPE1	'1033'H
PARAMETER_LENGTH1	'0008'H
SRF_DATA1	?
PARAMETER_TYPE2	'1034'H
PARAMETER_LENGTH2	'0008'H
SRF_DATA2	?
PARAMETER_TYPE3	'208C'H
PARAMETER_LENGTH3	'0018'H
RESOURCE_INDEX	?
PAD31	'000000'H
SRF_DATA31	'01'H
PAD32	'0000'H
SRF_DATA32	'0000'H
SRF_DATA33	IUT_ADDRESS
SRF_DATA34	?
Comments:	

8.11.4 PDU Field Group Constraint Declaration of Requested NIF_INFO

PDU Field Group Constraint Declaration	
Field Group Name: INFO_NIF	Constraint Name: INFO_NIF_REQ
Field Name	Value
FRAME_CLASS	'01'H
FRAME_TYPE	'02'H
VERSION_ID	'0001'H
TRANSACTION_ID	'00000001'H
STATION_ID1	'0000'H
STATION_ID2	IUT_ADDRESS
PAD	'0000'H
INFO_FIELD_LENGTH	'000C'H
PARAMETER_TYPE	'0001'H
PARAMETER_LENGTH	'0008'H
NIF_DATA1	'0000'H
NIF_DATA2	IUT_ADDRESS[6]
Comments:	

8.11.5 PDU Field Group Constraint Declaration of Responded NIF_INFO

PDU Field Group Constraint Declaration	
Field Group Name: INFO_NIF	Constraint Name: INFO_NIF_RESP
Field Name	Value
FRAME_CLASS	'01'H
FRAME_TYPE	'03'H
VERSION_ID	'0001'H
TRANSACTION_ID	'00000001'H
STATION_ID1	'0000'H
STATION_ID2	TESTER_ADDRESS
PAD	'0000'H
INFO_FIELD_LENGTH	'000C'H
PARAMETER_TYPE	'0001'H
PARAMETER_LENGTH	'0008'H
NIF_DATA1	'0000'H
NIF_DATA2	IUT_ADDRESS[6]
Comments:	

8.12 Test Case Dynamic Behavior

8.12.1 My_Claim1

Test Case Dynamic Behavior				
Reference : FDDI_RMT/DUP_ADD_RESOL/TX_TOKEN/My_Claim1 Identifier : My_Claim1 Purpose : Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Local Address after not Claiming or Beaconsing for longer than 2(D_Max). Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT1				(1)
!BEACON START D_Max		BEACON_IUT1		
?CLAIM	L0	CLAIM_IUT1(IUT_T_BID)		(2)
!CLAIM START D_Max		CLAIM_IUT1(IUT_T_BID)		
?TOKEN	L1	TOKEN_UR		(3)
START Twice_D_Max				
!TOKEN	L2	TOKEN_UR		
?TOKEN		TOKEN_UR		
GOTO L2				
?TIMEOUT Twice_D_Max				(4)
!CLAIM (T_NEG:=T_REQ)	L3	CLAIM_IUT1(IUT_T_BID)		(5)
!CLAIM (T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(6)
START RM_React				
?CLAIM		CLAIM_STRIP	(P)	(7)
+CHANGE_MAC_ADD				(8)
?CLAIM		CLAIM_OTHER(OTHER_T_BID)	(P)	(9)
+JAM_ACTION1				(10)
+DBJ_ACTION1				(11)
[LINE_STATE_QLS=TRUE]			P	(12)
?TOKEN		TOKEN_UR		
GOTO L3				
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
?CLAIM		CLAIM_IUT1(IUT_T_BID)		
!CLAIM		CLAIM_IUT1(IUT_T_BID)		
GOTO L1				
?OTHERWISE			F	
?TIMEOUT D_Max			F	
?BEACON		BEACON_IUT1		
!BEACON		BEACON_IUT1		
GOTO L0				

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Behavior Description	Label	Constraints Reference	V	Comments
?OTHERWISE			F	
?TIMEOUT D_Max			F	
Extended Comments: (1) IUT starts to detect a duplicate address condition on the ring. (2) IUT's MAC is in the Claim process. (3) IUT's MAC transmits a Token. (4) 2(D_Max) expires. IUT's MAC has transmitted Token for 2(D_Max). (5) IUT receives its own Claim frame with Local Address after not Claiming or Beacons for longer than 2(D_Max). (6) IUT receives other Claim frame with nonzero address not detected as duplicate and $T_{Req} \leq T_{Max\_LB}$. (7) IUT scrubs its own Claim frame using its Local Address. (8) IUT changes its Local Address to UniversalAddress. (9) IUT configures its MAC to yield in the Claim process to the other MAC. (10) IUT performs Jam Action. (11) IUT performs Double Jam Beacon Action. (12) IUT disconnects the signal (removes its MAC from the ring). RM(34a)				

8.12.2 My_Claim2

Test Case Dynamic Behavior				
Reference : FDDI_RMT/DUP_ADD_RESOL/BEACONING/My_Claim2 Identifier : My_Claim2 Purpose : Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Local Address while Beaconsing for longer than 2(D_Max). Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT1				(1)
START Twice_D_Max				
?BEACON	L0	BEACON_IUT1		(2)
GOTO L0				
?TIMEOUT Twice_D_Max				(3)
!CLAIM(T_NEG:=T_REQ)	L1	CLAIM_IUT1(IUT_T_BID)		(4)
!CLAIM(T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(5)
START RM_React				
?CLAIM		CLAIM_STRIP	(P)	(6)
+CHANGE_MAC_ADD				(7)
?CLAIM		CLAIM_OTHER(OTHER_T_BID)	(P)	(8)
+JAM_ACTION1				(9)
+DBJ_ACTION1				(10)
[LINE_STATE_QLS=TRUE]			P	(11)
?BEACON		BEACON_IUT1		
GOTO L1				
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
Extended Comments: (1) IUT starts to detect a duplicate address condition on the ring. (2) IUT's MAC is in the Beacon process. (3) 2(D_Max) expires. IUT's MAC has been Beaconsing for 2(D_Max). (4) IUT receives its own Claim frame with Local Address while Beaconsing for longer than 2(D_Max). (5) IUT receives other Claim frame with nonzero address not detected as duplicate and T_Req<=T_Max_LB. (6) IUT scrubs its own Claim frame using its Local Address. (7) IUT changes its MAC Local Address to Universal Address. (8) IUT configures its MAC to yield in the Claim process to the other MAC. (9) IUT performs Jam Action. (10) IUT performs Double Beacon Jam Action. (11) IUT disconnects the signal (removes its MAC from the ring). RM(34a)				

8.12.3 My_Beacon

Test Case Dynamic Behavior				
Reference : FDDI_RMT/DUP_ADD_RESOL/My_Beacon Identifier : My_Beacon Purpose : Verify that IUT resolves a duplicate address condition on the ring when it receives its own Beacon frame with Local Address while Claiming for longer than 2(D_Max). Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT1				(1)
!BEACON		BEACON_IUT1		(2)
START D_Max				
?CLAIM	L0	CLAIM_IUT1(IUT_T_BID)		(3)
START Twice_D_Max				
!CLAIM(T_NEG:=T_REQ+DELTA)	L1	CLAIM_TESTER(LOWER_T_BID)		
?CLAIM		CLAIM_IUT1(IUT_T_BID)		
GOTO L1				
?TIMEOUT Twice_D_Max				(4)
!BEACON	L2	BEACON_IUT1		(5)
!CLAIM(T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(6)
START RM_React				
?BEACON		BEACON_STRIP	(P)	(7)
+CHANGE_MAC_ADD				(8)
?CLAIM		CLAIM_OTHER(OTHER_T_BID)	(P)	(9)
+JAM_ACTION1				(10)
+DBJ_ACTION1				(11)
[LINE_STATE_QLS=TRUE]			P	(12)
?CLAIM		CLAIM_IUT1(IUT_T_BID)		
GOTO L2				
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
?BEACON		BEACON_IUT1		
!BEACON		BEACON_IUT1		
GOTO L0				
?OTHERWISE			F	
?TIMEOUT D_Max			F	
Extended Comments: (1) IUT starts to detect a duplicate address condition on the ring. (2) Force IUT's MAC to enter the Claim process. (3) IUT's MAC is in the Claim process. (4) 2(D_Max) expires. IUT's MAC has Claimed for 2(D_Max). (5) IUT receives its own Beacon frame with Local Address while Claiming for longer than 2(D_Max). (6) IUT receives other Claim frame with nonzero address not detected as duplicate and T_Req<=T_Max_LB. (7) IUT scrubs its own Claim frame using its Local Address. (8) IUT changes its MAC Local Address to Universal Address. (9) IUT configures its MAC to yield in the Claim process to the other MAC. (10) IUT performs Jam Action. (11) IUT performs Double Beacon Jam Action. (12) IUT disconnects the signal (removes its MAC from the ring). RM(34b)				

8.12.4 My_Claim_Diff_T_Bid

Test Case Dynamic Behavior				
Reference : FDDI_RMT/DUP_ADD_RESOL/My_Claim_Diff_T_Bid Identifier : My_Claim_Diff_T_Bid Purpose : Verify that IUT resolves a duplicate address condition on the ring when it receives its own Claim frame with Universal Address and T_Bid<>T_Req and the time since T_Req changes is greater than 2(D_Max). Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT2				(1)
!BEACON		BEACON_IUT2		(2)
START D_Max				
?CLAIM	L0	CLAIM_IUT2(IUT_T_BID)		(3)
START Twice_D_Max				
!CLAIM(T_NEG:=T_REQ+DELTA)	L1	CLAIM_TESTER(LOWER_T_BID)		
?CLAIM		CLAIM_IUT2(IUT_T_BID)		
GOTO L1				
?TIMEOUT Twice_D_Max				(4)
!CLAIM(T_NEG:=T_REQ1)	L2	CLAIM_IUT2(DIFF_T_BID)		(5)
!CLAIM(T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(6)
START RM_React				
?CLAIM		CLAIM_OTHER(OTHER_T_BID)	(P)	(7)
+JAM_ACTION2				(8)
+DBJ_ACTION2				(9)
[LINE_STATE_QLS=TRUE]			P	(10)
?CLAIM		CLAIM_IUT2(IUT_T_BID)		
GOTO L2				
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
?BEACON		BEACON_IUT2		
!BEACON		BEACON_IUT2		
GOTO L0				
?OTHERWISE			F	
?TIMEOUT D_Max			F	
Extended Comments: (1) IUT starts to detect a duplicate address condition on the ring. (2) Force IUT's MAC to enter the Claim process. (3) IUT's MAC is in the Claim process. (4) 2(D_Max) expires. IUT's MAC has Claimed for 2(D_Max). (5) IUT receives its own Claim frame with T_Bid<>T_Req and the time since T_Req changes is greater than 2(D_Max). (6) IUT receives other Claim frame with nonzero address not detected as duplicate and T_Req<=T_Max_LB. (7) IUT configures its MAC to yield in the Claim process to the other MAC. (8) IUT performs Jam Action. (9) IUT performs Double Beacon Jam Action. (10) IUT disconnects the signal (removes its MAC from the ring). RM(34c)				

8.12.5 T_Ann

Test Case Dynamic Behavior				
Reference : FDDI_RMT/DUP_ADD_RESOL/T_Ann Identifier : T_Ann Purpose : Verify that IUT resolves a duplicate address condition on the ring when TRM>T_Announce. Note: IUT's MAC Address is Local Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT1				(1)
!BEACON		BEACON_IUT1		(2)
START D_Max				
?CLAIM	L0	CLAIM_IUT1(IUT_T_BID)		(3)
START Twice_D_Max				
!CLAIM(T_NEG:=T_REQ+DELTA)	L1	CLAIM_TESTER(LOWER_T_BID)		
?CLAIM		CLAIM_IUT1(IUT_T_BID)		
GOTO L1				
?TIMEOUT Twice_D_Max				(4)
!BEACON	L2	BEACON_IUT1		(5)
!CLAIM(T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(6)
START RM_React				
?BEACON		BEACON_STRIP		(7)
+CHANGE_ADD				(8)
START T_Announce				
?TIMEOUT T_Announce	L3			(9)
!BEACON		BEACON_IUT1		(5)
		CLAIM_OTHER(OTHER_T_BID)		(6)
!CLAIM(T_NEG:=T_REQ2)				
START RM_React				
?BEACON		BEACON_STRIP	(P)	(7)
				(8)
+CHANGE_MAC_ADD				
?CLAIM		CLAIM_OTHER(OTHER_T_BID)	(P)	(10)
				(11)
+JAM_ACTION1				(12)
+DBJ_ACTION1				
[LINE_STATE_QLS=TRUE]			P	(13)
			F	
			F	
RM_React				
?CLAIM				
+JAM_A1		CLAIM_OTHER(OTHER_T_BID)		(10)
START T_Announce				(11)
?TIMEOUT T_Announce	L4			(9)
START RM_React				
[LINE_STATE_ILS=TRUE]				
GOTO L4				
+JAM_ACTION1				(11)
+DBJ_ACTION1				(12)
?OTHERWISE			F	
?TIMEOUT			F	
RM_React				
+JAM_B1				(12)

Continued on next page

8.12.6 Directed_Beacon1

Test Case Dynamic Behavior				
Reference : FDDI_RMT/STUCK_BEACONING/NO_DUP_ADD/Directed_Beacon1 Identifier : Directed_Beacon1 Purpose : Verify that IUT transmits Directed Beacon frame when its MAC has Beacons for longer than T_Stuck and there is no duplicate address on the ring. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT				(1)
START T_Stuck				
?BEACON	L0	BEACON_IUT		(2)
GOTO L0				
?TIMEOUT T_Stuck				(3)
START RM_React				
?BEACON	L1	BEACON_IUT		
GOTO L1				
[LINE_STATE_ILS=TRUE]			(P)	(4)
?D_BEACON		D_BEACON_IUT	P	(5)
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
Extended Comments: (1) IUT starts to detect a duplicate address condition on the ring. (2) IUT's MAC is Beacons. (3) T_Stuck expires. (4) IUT resets its MAC. Receives ILS. (5) IUT transmits Directed Beacon frame. RM3, RM(33b), RM(36) & RM6				

8.12.7 Directed_Beacon2

Test Case Dynamic Behavior				
Reference : FDDI_RMT/STUCK_BEACONING/DUP_ADD/Directed_Beacon2 Identifier : Directed_Beacon2 Purpose : Verify that IUT transmits Directed Beacon frame when its MAC has Beaconsed for longer than T_Stuck and there is a duplicate address on the ring. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT2				(1)
!BEACON		BEACON_IUT2		(2)
START D_Max				
?BEACON	L0	BEACON_IUT2		
!BEACON		BEACON_IUT2		
GOTO L0				
?CLAIM		CLAIM_IUT2(IUT_T_BID)		(3)
START Twice_D_Max				
!CLAIM(T_NEG:=T_REQ+DELTA)	L1	CLAIM_TESTER(LOWER_T_BID)		
?CLAIM		CLAIM_IUT2(IUT_T_BID)		
GOTO L1				
?TIMEOUT Twice_D_Max				(4)
!CLAIM(T_NEG:=T_REQ1)	L2	CLAIM_IUT2(DIFF_T_BID)		(5)
!CLAIM(T_NEG:=T_REQ2)		CLAIM_OTHER(OTHER_T_BID)		(6)
START RM_React				
?CLAIM		CLAIM_IUT2(IUT_T_BID)		
GOTO L2				
?CLAIM		CLAIM_OTHER(OTHER_T_BID)		(7)
+JAM_A2		CLAIM_TESTER(LOWER_T_BID)		(8)
!CLAIM(T_NEG:=T_REQ+DELTA)				
START Timer_TRM(T_Max)				
[LINE_STATE_ILS=TRUE]	L3	CLAIM_TESTER(LOWER_T_BID)		
!CLAIM				
GOTO L3				
?CLAIM		CLAIM_IUT2(IUT_T_BID)		
!CLAIM		CLAIM_TESTER(LOWER_T_BID)		
GOTO L3				
?TIMEOUT Timer_TRM				(9)
?CLAIM	L4	CLAIM_IUT2(IUT_T_BID)		
GOTO L4				
?BEACON		BEACON_IUT2		(10)
+TX_D_BEACON				(11)
?OTHERWISE				
?OTHERWISE				
+JAM_B2			F	(12)
!CLAIM(T_NEG:=T_REQ+DELTA)		CLAIM_TESTER(LOWER_T_BID)	F	
START Timer_TRM(T_Max)				
[LINE_STATE_ILS=TRUE]	L5	CLAIM_TESTER(LOWER_T_BID)		
!CLAIM				
GOTO L5				

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8.12.8 Ring_Op

Test Case Dynamic Behavior				
Reference : FDDI_RMT/REST_DIALOG/Ring_Op Identifier : Ring_Op Purpose : Verify that IUT terminates a Restricted Dialog that has persisted on the ring for longer than T_Rmode. Note: This test case is optional. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+INIT_RING				(1)
!TOKEN		TOKEN_R		(2)
START T_Rmode				
?TOKEN	L1	TOKEN_R		(3)
!TOKEN		TOKEN_R		
GOTO L1				
?TIMEOUT T_Rmode				(4)
START RM_React				
?TOKEN	L2	TOKEN_R		
GOTO L2				
[LINE_STATE_ILS=TRUE]			(P)	(5)
?CLAIM		CLAIM_IUT(IUT_T_BID)	P	(6)
?BEACON		BEACON_IUT	P	(7)
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?TOKEN		TOKEN_UR		(8)
!TOKEN		TOKEN_R		
GOTO L1				
?OTHERWISE			F	
Extended Comments: (1) The ring is operational. (2) Force IUT to monitor a Restricted Dialog on the ring. (3) IUT is monitoring the Restricted Dialog on the ring. (4) T_Rmode expires. (5) IUT resets its MAC. Receives ILS. (6) IUT enters the Claim process. (7) IUT enters the Beacon process. (8) Some unrestricted Token is still on the ring. RM(21b)				

8.12.9 Ring_Op_Dup

Test Case Dynamic Behavior				
Reference : FDDI_RMT/REST_DIALOG/Ring_Op_Dup Identifier : Ring_Op_Dup Purpose : Verify that IUT terminates a Restricted Dialog that has persisted on the ring for longer than T_Rmode and there is a duplicate address on the ring. Note: This test case is optional. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+INIT_RING				(1)
<IUT!NIF_FRAME>		NIF_REQ		(2)
START Topr				(3)
!TOKEN		TOKEN_UR		
?NIF_FRAME	L0	NIF_REQ		(4)
!NIF_FRAME		NIF_RESP		(5)
START RM_React				
?TIMEOUT RM_React	L1			(6)
!TOKEN		TOKEN_UR		
START T_Limit				
?SRF_FRAME	L2	SRF_ANN		(7)
!TOKEN		TOKEN_R		(8)
START T_Rmode				
?TOKEN	L3	TOKEN_R		(9)
!TOKEN		TOKEN_R		
GOTO L3				
?TIMEOUT T_Rmode				(10)
START RM_React				
?TOKEN	L4	TOKEN_R		
GOTO L4				
[LINE_STATE_ILS=TRUE]			(P)	(11)
?CLAIM		CLAIM_IUT(IUT_T_BID)	P	(12)
?BEACON		BEACON_IUT	P	(13)
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?SRF_FRAME		SRF_ANN		
!TOKEN		TOKEN_R		
GOTO L3				
?OTHERWISE			F	
?TOKEN		TOKEN_UR		
!TOKEN		TOKEN_UR		
GOTO L2				
?OTHERWISE			F	
?TIMEOUT T_Limit			I	
?NIF_FRAME		NIF_REQ		
!NIF_FRAME		NIF_RESP		
GOTO L1				
?OTHERWISE			F	
?TOKEN		TOKEN_UR		

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Behavior Description	Label	Constraints Reference	V	Comments
!TOKEN GOTO L0 ?OTHERWISE ?TIMEOUT Topr		TOKEN_UR	F I	
Extended Comments: (1) The ring is operational. (2) Force IUT to transmit a NIF request frame. (3) Wait for operator to send the request frame. (4) Receives NIF request frame. (5) Tester sends a NIF response frame with the A bit SET (Dup_Addr_Test=Fail) to simulate a duplicate address condition on the ring. (6) Wait for RM_React expires. IUT sets DA_Flag, clears MAC_Avail & Loop_Avail. (7) Receive SRF Announcement frame with DupCondition=mydup (DA_Flag=SET) to indicate that IUT's MAC address has the same address as another MAC on the ring. The ring is operational. (8) Force IUT to monitor a Restricted Dialog on the ring. (9) IUT is monitoring the Restricted Dialog on the ring. (10) T_Rmode expires. (11) IUT resets its MAC. Receive ILS. (12) IUT enters the Claim process. (13) IUT enters the Beacon process. RM(25), RM5, RM(55) & RM (54b)				

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8.12.10 Trace

Test Case Dynamic Behavior				
Reference : FDDI_RMT/TRACE_FUNCTION/Trace Identifier : Trace Purpose : Verify that IUT initiates the Trace function when its MAC has transmitted Directed Beacon frames for longer than T_Direct. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+DUP_ADD_DETECT				(1)
START T_Stuck				
?BEACON	L0	BEACON_IUT		(2)
GOTO L0				
?TIMEOUT T_Stuck				(3)
START RM_React				
?BEACON	L1	BEACON_IUT		
GOTO L1				
[LINE_STATE_ILS=TRUE]				(4)
?D_BEACON		D_BEACON_IUT		(5)
START T_Direct				
?D_BEACON	L2	D_BEACON_IUT		
GOTO L2				
?TIMEOUT T_Direct				(6)
START RM_React				
?D_BEACON	L3	D_BEACON_IUT		
GOTO L3				
[SEC_LINE_STATE_MLS=TRUE]			P	(7)
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
Extended Comments: (1) The primary ring is not operational for longer than T_Non_Op. IUT detects a duplicate address condition on the ring. (2) IUT is in the Beacon process. (3) T_Stuck expires. (4) IUT resets its MAC. Receive ILS. (5) IUT transmits Directed Beacon frames. (6) T_Direct expires. (7) IUT initiates the Trace function. Receives MLS on the secondary ring. PC2, RM(67) & RM7				

8.13 Test Step Dynamic Behavior

8.13.1 INIT_RING

[illegible]

8.13.2 INIT_BID

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/INIT_BID Identifier : INIT_BID Objective : To initiate the T_Bid. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
(T1:=(T_REQ-DELTA)*M/80, HIGHER_T_BID:=TWOS_COM(T1), T1:=(T_REQ+DELTA)*M/80, LOWER_T_BID:=TWOS_COM(T1), T1:=T_REQ*M/80, IUT_T_BID:=TWOS_COM(T1), T1:=T_REQ1*M/80, DIFF_T_BID:=TWOS_COM(T1), T1:=T_REQ2*M/80, OTHER_T_BID:=TWOS_COM(T1))				
Extended Comments:				

8.13.3 DUP_ADD_DETECT

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/DUP_ADD_DETECT Identifier : DUP_ADD_DETECT Objective : Force IUT to detect a duplicate address condition on the ring. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+INIT_BID !CLAIM(T_NEG:=T_REQ+DELTA) START Timer_TRM(T_Max) ?CLAIM START T_Non_Op !CLAIM START Timer_TRM(T_Max) ?CLAIM !CLAIM GOTO L1 ?TIMEOUT Timer_TRM ?CLAIM GOTO L2 ?BEACON ?BEACON GOTO L3 ?TIMEOUT T_Non_Op ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE !CLAIM GOTO L0 ?TIMEOUT Timer_TRM	L0	CLAIM_TESTER(LOWER_T_BID)		(1)
		CLAIM_IUT(IUT_T_BID)		(2)
	L1	CLAIM_IUT(IUT_T_BID)		(3)
		CLAIM_TESTER(LOWER_T_BID)		(4)
	L2	CLAIM_IUT(IUT_T_BID)		(5)
		CLAIM_TESTER(LOWER_T_BID)		(6)
	L3	BEACON_IUT		(7)
		BEACON_IUT		(8)
		CLAIM_TESTER(LOWER_T_BID)		
Extended Comments: (1) Initiate the bids. (2) Force IUT to enter the Non_Op state. (3) IUT enters the Non_Op state. IUT's MAC enters the Claim process. (4) IUT resets timer TRM. (5) T_Max expires in the Claim process. (6) Some Claim frame is still on the ring. (7) IUT's MAC enters the Beacon process. (8) T_Non_Op expires. IUT enters the Detect state and starts to detect a duplicate address condition on the ring.				
RM(13)				

8.13.4 DUP_ADD_DETECT1

Test Step Dynamic Behavior					
Reference : FDDI_RMT/LIBRARY/DUP_ADD_DETECT1					
Identifier : DUP_ADD_DETECT1					
Objective : Force IUT to detect a duplicate address condition on the ring. Note: IUT's MAC Address is a Local Address.					
Default :					
Behavior Description	Label	Constraints Reference	V	Comments	
+INIT_BID !CLAIM(T_NEG:=T_REQ+DELTA) START Timer_TRM(T_Max) ?CLAIM START T_Non_Op !CLAIM START Timer_TRM(T_Max) ?CLAIM !CLAIM GOTO L1 ?TIMEOUT Timer_TRM ?CLAIM GOTO L2 ?BEACON ?BEACON GOTO L3 ?TIMEOUT T_Non_Op ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE !CLAIM GOTO L0 ?TIMEOUT Timer_TRM	L0	CLAIM_TESTER(LOWER_T_BID)		(1)	
				(2)	
	L1	CLAIM_IUT1(IUT_T_BID)		(3)	
		CLAIM_TESTER(LOWER_T_BID)		(4)	
	L2	CLAIM_IUT1(IUT_T_BID)		(5)	
		CLAIM_TESTER(LOWER_T_BID)		(6)	
	L3	BEACON_IUT1		(7)	
		BEACON_IUT1		(8)	
			CLAIM_TESTER(LOWER_T_BID)		
Extended Comments:					
(1) Initiate the bids.					
(2) Force IUT to enter the Non_Op state.					
(3) IUT enters the Non_Op state. IUT's MAC enters the Claim process.					
(4) IUT resets timer TRM.					
(5) T_Max expires in the Claim process.					
(6) Some Claim frame is still on the ring.					
(7) IUT's MAC enters the Beacon process.					
(8) T_Non_Op expires. IUT enters the Detect state and starts to detect a duplicate address condition on the ring.					
RM(13)					

8.13.5 DUP_ADD_DETECT2

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/DUP_ADD_DETECT2 Identifier : DUP_ADD_DETECT2 Objective : Force IUT to detect a duplicate address condition on the ring. Note: IUT's MAC Address is Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
+INIT_BID !CLAIM(T_NEG:=T_REQ+DELTA) START Timer_TRM(T_Max) ?CLAIM START T_Non_Op !CLAIM START Timer_TRM(T_Max) ?CLAIM !CLAIM GOTO L1 ?TIMEOUT Timer_TRM ?CLAIM GOTO L2 ?BEACON ?BEACON GOTO L3 ?TIMEOUT T_Non_Op ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE !CLAIM GOTO L0 ?TIMEOUT Timer_TRM	L0	CLAIM_TESTER(LOWER_T_BID)		(1)
		CLAIM_IUT2(IUT_T_BID)		(2)
	L1	CLAIM_IUT2(IUT_T_BID)		(3)
		CLAIM_TESTER(LOWER_T_BID)		(4)
	L2	CLAIM_IUT2(IUT_T_BID)		(5)
		CLAIM_TESTER(LOWER_T_BID)		(6)
	L3	BEACON_IUT2		(7)
		BEACON_IUT2		(8)
		CLAIM_TESTER(LOWER_T_BID)		
Extended Comments: (1) Initiate the bids. (2) Force IUT to enter the Non_Op state. (3) IUT enters the Non_Op state. IUT's MAC enters the Claim process. (4) IUT resets timer TRM. (5) T_Max expires in the Claim process. (6) Some Claim frame is still on the ring. (7) IUT's MAC enters the Beacon process. (8) T_Non_Op expires. IUT enters the Detect state and starts to detect a duplicate address condition on the ring. RM(13)				

8.13.6 JAM_A1

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/JAM_A1				
Identifier : JAM_A1				
Objective : IUT blocks its MAC input and sources Jam Beacon frames. Note: IUT's MAC Address is Local Address.				
Default :				
Behavior Description	Label	Constraints Reference	V	Comments
!CLAIM (T_NEG:=T_REQ2) [LINE_STATE_ILS=TRUE] ?J_BEACON START T_Jam ?J_BEACON GOTO L0 ?TIMEOUT T_Jam ?J_BEACON GOTO L1 [LINE_STATE_ILS=TRUE] ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE	L0	CLAIM_OTHER(OTHER_T_BID)		(1)
		J_BEACON_IUT1		(2)
		J_BEACON_IUT1		(3)
	L1	J_BEACON_IUT1		(4)
		J_BEACON_IUT1		(5)
Extended Comments: (1) Tester sends a Claim frame to check if IUT's MAC input is blocked. (2) IUT blocks its MAC input, disconnects MAC PHY_DATA.indication, and resets its MAC. Receives ILS. (3) IUT is sourcing Jam Beacon frames. (4) IUT has sourced Jam Beacon frames for T_Jam. (5) IUT reconnects MAC PHY_DATA.indication and resets its MAC again. Receive ILS.				

8.13.7 JAM_A2

Test Step Dynamic Behavior				
Reference	: FDDI_RMT/LIBRARY/JAM_A2			
Identifier	: JAM_A2			
Objective	: IUT blocks its MAC input and sources Jam Beacon frames. Note: IUT's MAC Address is Universal Address.			
Default	:			
Behavior Description	Label	Constraints Reference	V	Comments
!CLAIM (T_NEG:=T_REQ2) [LINE_STATE_ILS=TRUE] ?J_BEACON START T_Jam ?J_BEACON GOTO L0 ?TIMEOUT T_Jam ?J_BEACON GOTO L1 [LINE_STATE_ILS=TRUE] ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE	L0	CLAIM_OTHER(OTHER_T_BID)		(1)
		J_BEACON_IUT2		(2)
		J_BEACON_IUT2		(3)
	L1	J_BEACON_IUT2		(4)
		J_BEACON_IUT2		(5)
Extended Comments: (1) Tester sends a Claim frame to check if IUT's MAC input is blocked. (2) IUT blocks its MAC input,disconnects MAC PHY_DATA.indication, and resets its MAC. Receives ILS. (3) IUT is sourcing Jam Beacon frames. (4) IUT has sourced Jam Beacon frames forT_Jam. (5) IUT reconnects MAC PHY_DATA.indication and resets its MAC again. Receive ILS.				

8.13.8 JAM_ACTION1

Test Step Dynamic Behavior					
Reference : FDDI_RMT/LIBRARY/JAM_ACTION1					
Identifier : JAM_ACTION1					
Objective : Verify that IUT performs Jam_Action by blocking its MAC input and sourcing Jam Beacon frames. Note: IUT's MAC Address is Local Address.					
Default :					
Behavior Description	Label	Constraints Reference	V	Comments	
!CLAIM (T_NEG:=T_REQ2) [LINE_STATE_ILS=TRUE] ?J_BEACON START T_Jam ?J_BEACON GOTO L0 ?TIMEOUT T_Jam ?J_BEACON GOTO L1 [LINE_STATE_ILS=TRUE] ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE	L0	CLAIM_OTHER(OTHER_T_BID)	P	(1)	
		J_BEACON_IUT1	P	(2)	
		J_BEACON_IUT1		(3)	
	L1	J_BEACON_IUT1		(4)	
			P F F F F	(5)	
	Extended Comments:				
	(1) Tester sends a Claim frame to check if IUT's MAC input is blocked.				
	(2) IUT blocks its MAC input, disconnects MAC PHY_DATA.indication, and resets its MAC. Receives ILS.				
	(3) IUT is sourcing Jam Beacon frames.				
	(4) IUT has sourced Jam Beacon frames for T_Jam.				
(5) IUT reconnects MAC PHY_DATA.indication and resets its MAC again. Receive ILS.					

8.13.9 JAM_ACTION2

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/JAM_ACTION2 Identifier : JAM_ACTION2 Objective : Verify that IUT performs Jam_Action by blocking its MAC input and sourcing Jam Beacon frames. Note: IUT's MAC Address is Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
!CLAIM (T_NEG:=T_REQ2) [LINE_STATE_ILS=TRUE] ?J_BEACON START T_Jam ?J_BEACON GOTO L0 ?TIMEOUT T_Jam ?J_BEACON GOTO L1 [LINE_STATE_ILS=TRUE] ?OTHERWISE ?OTHERWISE ?OTHERWISE ?OTHERWISE	L0	CLAIM_OTHER(OTHER_T_BID)	(P)	(1)
		J_BEACON_IUT2	(P)	(2)
		J_BEACON_IUT2		(3)
	L1	J_BEACON_IUT2		(4)
			P F F F F	(5)
Extended Comments: (1) Tester sends a Claim frame to check if IUT's MAC input is blocked. (2) IUT blocks its MAC input, disconnects MAC PHY_DATA.indication, and resets its MAC. Receives ILS. (3) IUT is sourcing Jam Beacon frames. (4) IUT has sourced Jam Beacon frames for T_Jam. (5) IUT reconnects MAC PHY_DATA.indication and resets its MAC again. Receive ILS.				

8.13.10 JAM_B1

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/JAM_B1 Identifier : JAM_B1 Objective : IUT initiates the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Local Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
[LINE_STATE_ILS=TRUE]				(1)
?J_BEACON		J_BEACON_IUT1		(2)
START T_Jam, START T_DBJ				
?J_BEACON	L0	J_BEACON_IUT1		
GOTO L0				
?TIMEOUT T_DBJ				(3)
?J_BEACON	L1	J_BEACON_IUT1		
GOTO L1				
[LINE_STATE_ILS=TRUE]				(1)
?J_BEACON	L2	J_BEACON_IUT1		(4)
GOTO L2				
?TIMEOUT T_Jam				(5)
?J_BEACON	L3	J_BEACON_IUT1		
GOTO L3				
[LINE_STATE_ILS=TRUE]				(1)
?OTHERWISE				
?OTHERWISE				
?OTHERWISE				
?OTHERWISE				
?TIMEOUT T_Jam				
?OTHERWISE				
?OTHERWISE				
Extended Comments: (1) IUT resets its MAC. Receive ILS. (2) IUT initiates the 1st Jam Beacon process. Receive Jam Beacon frame. (3) T_DBJ expires. (4) IUT initiates the 2nd Jam Beacon process. Receive Jam Beacon frame. (5) T_Jam expires.				

8.13.11 JAM_B2

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/JAM_B2 Identifier : JAM_B2 Objective : IUT initiates the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
[LINE_STATE_ILS=TRUE]				(1)
?J_BEACON		J_BEACON_IUT2		(2)
START T_Jam, START T_DBJ				
?J_BEACON	L0	J_BEACON_IUT2		
GOTO L0				
?TIMEOUT T_DBJ				(3)
?J_BEACON	L1	J_BEACON_IUT2		
GOTO L1				
[LINE_STATE_ILS=TRUE]				(1)
?J_BEACON	L2	J_BEACON_IUT2		(4)
GOTO L2				
?TIMEOUT T_Jam				(5)
?J_BEACON	L3	J_BEACON_IUT2		
GOTO L3				
[LINE_STATE_ILS=TRUE]				(1)
?OTHERWISE				
?OTHERWISE				
?OTHERWISE				
?TIMEOUT T_Jam				
?OTHERWISE				
?OTHERWISE				
Extended Comments: (1) IUT resets its MAC. Receive ILS. (2) IUT initiates the 1st Jam Beacon process. Receive Jam Beacon frame. (3) T_DBJ expires. (4) IUT initiates the 2nd Jam Beacon process. Receive Jam Beacon frame. (5) T_Jam expires.				

8.13.12 DBJ_ACTION1

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/DBJ_ACTION1 Identifier : DBJ_ACTION1 Objective : Verify that IUT performs Double Beacon Jam Action by initiating the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Local Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
[LINE_STATE_ILS=TRUE]			(P)	(1)
?J_BEACON		J_BEACON_IUT1	(P)	(2)
START T_Jam, START T_DBJ				
?J_BEACON	L0	J_BEACON_IUT1		
GOTO L0				
?TIMEOUT T_DBJ				(3)
?J_BEACON	L1	J_BEACON_IUT1		
GOTO L1				
[LINE_STATE_ILS=TRUE]			(P)	(1)
?J_BEACON	L2	J_BEACON_IUT1	(P)	(4)
GOTO L2				
?TIMEOUT T_Jam				(5)
?J_BEACON	L3	J_BEACON_IUT1		
GOTO L3				
[LINE_STATE_ILS=TRUE]			P	(1)
?OTHERWISE			F	
?OTHERWISE			F	
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT T_Jam			F	
?OTHERWISE			F	
?OTHERWISE			F	
Extended Comments: (1) IUT resets its MAC. Receive ILS. (2) IUT initiates the 1st Jam Beacon process. Receive Jam Beacon frame. (3) T_DBJ expires. (4) IUT initiates the 2nd Jam Beacon process. Receive Jam BEACON frame. (5) T_Jam expires.				

8.13.13 DBJ_ACTION2

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/DBJ_ACTION2 Identifier : DBJ_ACTION2 Objective : Verify that IUT performs Double Beacon Jam Action by initiating the Jam Beacon process twice while its MAC input is not blocked. Note: IUT's MAC Address is Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
[LINE_STATE_ILS=TRUE]			(P)	(1)
?J_BEACON		J_BEACON_IUT2	(P)	(2)
START T_Jam, START T_DBJ				
?J_BEACON	L0	J_BEACON_IUT2		
GOTO L0				
?TIMEOUT T_DBJ				(3)
?J_BEACON	L1	J_BEACON_IUT2		
GOTO L1				
[LINE_STATE_ILS=TRUE]			(P)	(1)
?J_BEACON	L2	J_BEACON_IUT2	(P)	(4)
GOTO L2				
?TIMEOUT T_Jam				(5)
?J_BEACON	L3	J_BEACON_IUT2		
GOTO L3				
[LINE_STATE_ILS=TRUE]			P	(1)
?OTHERWISE			F	
?OTHERWISE			F	
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT T_Jam			F	
?OTHERWISE			F	
?OTHERWISE			F	
Extended Comments: (1) IUT resets its MAC. Receive ILS. (2) IUT initiates the 1st Jam Beacon process. Receive Jam Beacon frame. (3) T_DBJ expires. (4) IUT initiates the 2nd Jam Beacon process. Receive Jam BEACON frame. (5) T_Jam expires.				

8.13.14 CHANGE_ADD

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/CHANGE_ADD Identifier : CHANGE_ADD Objective : IUT changes its MAC Local Address to Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
!CLAIM(T_NEG:=T_REQ+DELTA) START Timer_TRM(T_Max) ?CLAIM !CLAIM GOTO L0 ?CLAIM ?OTHERWISE ?TIMEOUT Timer_TRM	L0	CLAIM_TESTER(LOWER_T_BID)		(1)
		CLAIM_IUT1(IUT_T_BID) CLAIM_TESTER(LOWER_T_BID)		(2)
		CLAIM_IUT2(IUT_T_BID)	I I	(3)
Extended Comments: (1) Force IUT's MAC to enter the Claim process to check its MAC address. (2) IUT may not change its MAC address yet. (3) IUT changes its MAC Local Address to Universal Address.				

8.13.15 CHANGE_MAC_ADD

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/CHANGE_MAC_ADD Identifier : CHANGE_MAC_ADD Objective : Verify that IUT changes its MAC Local Address to Universal Address. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
!CLAIM(T_NEG:=T_REQ+DELTA) START Timer_TRM(T_Max) ?CLAIM !CLAIM GOTO L0 ?CLAIM ?OTHERWISE ?TIMEOUT Timer_TRM	L0	CLAIM_TESTER(LOWER_T_BID)		(1)
		CLAIM_IUT1(IUT_T_BID) CLAIM_TESTER(LOWER_T_BID)		(2)
		CLAIM_IUT2(IUT_T_BID)	P F F	(3)
Extended Comments: (1) Force IUT's MAC to enter the Claim process to check its MAC address. (2) IUT may not change its MAC address yet. (3) IUT changes its MAC Local Address to Universal Address.				

8.13.16 TX_D_BEACON

Test Step Dynamic Behavior				
Reference : FDDI_RMT/LIBRARY/TX_D_BEACON Identifier : TX_D_BEACON Objective : Verify that IUT transmits Directed Beacon frames after its MAC has Beaconsed for longer than T_Stuck. Default :				
Behavior Description	Label	Constraints Reference	V	Comments
START T_Stuck	L0	BEACON_IUT2		(1)
?BEACON GOTO L0				(2)
?TIMEOUT T_Stuck START RM_React	L1	BEACON_IUT2		
?BEACON GOTO L1				
[LINE_STATE_ILS=TRUE]		D_BEACON_IUT2	P	(3)
?D_BEACON			P	(4)
?OTHERWISE			F	
?OTHERWISE			F	
?TIMEOUT RM_React			F	
?OTHERWISE			F	
Extended Comments: (1) IUT is in Beacon process. (2) T_Stuck expires. (3) IUT resets its MAC. Receive ILS. (4) IUT transmits Directed Beacon frames.				

9 Frame Base Management (FBM) - Abstract Test Suite

9.1 Test Suite Overview

9.1.1 Test Suite Structure

Test Suite Structure			
Suite Name : FDDI_FBM Standards ref. : ISO/IEC 9314-6:1998 PICS proforma ref. : ISO/IEC 9314-13:1998 PIXIT proforma ref. : PICS/PIXIT use : Test Method(s) : Remote Single Layer Method Comments :			
Test Group Reference	Selection Ref.	Test Group Objective	Page
NIF		Test Neighbor Notification process	271
SIF			271
ECF			272
RAF			272
ESF			273
PMF			274

9.1.2 Test Case Index

Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page
FDDI/FBM/NIF/announce	NIF_Announce1	OPTION_01	optional implementation	501
FDDI/FBM/NIF/request	NIF_Request1	SELECT_00	testing neighbor notification	501
	Invalid_UNA	SELECT_00	testing neighbor notification	
FDDI/FBM/PMF/GET/Response	Valid_DNA	SELECT_00	testing a valid DNA	503
	Invalid_DNA	SELECT_00	testing neighbor notification	
	Old_UNA	SELECT_00	testing neighbor notification	
	Old_DNA	SELECT_00	testing neighbor notification	
FDDI/FBM/SIF/CONF/request	SIFC_Request1	SELECT_00	testing SIF Configuration Request	507
FDDI/FBM/SIF/CONF/response	SIFC_Resp1	SELECT_00	Testing SIF Configuration Response	507
	SIFC_Resp2	SELECT_00		
FDDI/FBM/SIF/OPER/request	SIFO_Request1	SELECT_00	Testing SIF Operation Request	508
FDDI/FBM/SIF/OPER/response	SIFO_Oper_-Response1	SELECT_00	Testing SIF Operation Response	509
	SIFO_Oper_-Response2	SELECT_00		
FDDI/FBM/ECHO/request	ECHO_Request1	SELECT_00	Testing ECF Request	510
FDDI/FBM/ECHO/response	ECHO_Receive1	SELECT_00	Testing ECHO Response	510
	ECHO_Receive2	SELECT_00		
FDDI/FBM/RAF/ALLOC/request	SBA_REQ_Req1	SELECT_00	Testing SBA AllocationRequest Request	512
FDDI/FBM/RAF/ALLOC/response	SBA_REQ_Resp1	SELECT_00	Testing SBA AllocationRequest Response	513
FDDI/FBM/RAF/REPORT/request	SBA_REP_Req1	SELECT_00	Testing SBA AllocationReport Request	513
FDDI/FBM/RAF/REPORT/-response	SBA_REP_Resp1	SELECT_00	Testing SBA AllocationReport Response	514
FDDI/FBM/RAF/CHANGE/request	SBA_CHG_Req1	SELECT_00	Testing SBA AllocatiionChange Request	515

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page
FDDI/FBM/RAF/CHANGE/-response	SBA_CHG_Resp1	SELECT_00	Testing SBA AllicationChange Response	515
FDDI/FBM/ESF/request	ESF_Request1	SELECT_00		516
FDDI/FBM/SRF/announce	SRF_announce	SELECT_00		517
FDDI/FBM/PMF/GET/request	SingleAttribute_TX MultipleAttribute_TX	SELECT_00		518
FDDI/FBM/PMF/GET/response	MultipleGroup-Attributes_TX			519
	SingleAttribute_RX MultipleAttribute_RX			
	MultipleGroup-Attributes_RX			
	InvalidMultipleGroup-Attributes_RX			

9.1.3 Test Step Index

Test Group Reference	Test Case Id	Selection Ref	Description	Page
NIF/Transmit	NIF_Announce1			501
	NIF_Request1			502
SIF/SIF_CONF/transmit	SIFC_Request1			507
SIF/SIF_CONF/receive	SIFC_Resp1			507
SIF/SIF_OPER/transmit	SIFO_Request1			508
SIF/SIF_OPER/receive	SIF_Oper_Response1			509

Continued on next page

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Test Group Reference	Test Case Id	Selection Ref	Description	Page
ECHO/transmit	ECHO_Request1			510
ECHO/receive	ECHO_Receive1			510
ECHO/receive	ECHO_Receive2			511
RAF/SBA_ALLOC/transmit	SBA_REQ_Request1			512
RAF/SBA_ALLOC/receive	SBA_REQ_Resp1			513
RAF/SBA_REPORT/transmit	SBA_REP_Req1			513
RAF/SBA_REPORT/receive	SBA_REP_Resp1			514
RAF/SBA_CHANGE/transmit	SBA_CHG_Req1			515
RAF/SBA_CHANGE/receive	SBA_CHG_Resp1			515
SRF/transmit	SRF_Announce1			517
ESF/transmit	ESF_Request1			516

9.2 Declaration Part

9.2.1 Definitions

9.2.1.1 ASN.1 Type Definitions for SMT Attributes

ASN.1 Type Definition		
Type Name : SMTMIBGRP_Group		
Comments :		
Type Definition		
CHOICE	{smtstationldgrp smtstationconfiggrp smtstatusgrp smtmiboperationgrp maccapabilitiesgrp macconfiggrp macaddressgrp macoperationgrp maccountersgrp macframeerrorconditiongrp macnotcopiedconditiongrp macstatusgrp pathconfiggrp portlergrp portoperationgrp porterrorctrsgp portlergrp portstatusgrp }	SMTStationId_Group, SMTStationConfig_Group, SMTStatus_Group, SMTMIBOperation_Group, MACCapabilities_Group, MACConfig_Group, MACAddress_Group, MACOperation_Group, MACCounters_Group, MACFrameErrorCondition_Group, MACNotCopiedCondition_Group, MACStatus_Group, PATHConfig_Group, PORTLer_Group, PORTOperation_Group, PORTErrorCtrs_Group, PORTLer_Group, PORTStatus_Group

ASN.1 Type Definition		
Type Name : ValidMultiple_Attributes		
Comments :		
Type Definition		
SET	{stationid opversionid	SMTStationId, SMTOpVersionId }

ASN.1 Type Definition		
Type Name : InvalidMultiple_Attributes		
Comments :		
Type Definition		
SET	{stationid framestatusfunctions	SMTStationId, MACFrameStatusFunctions }

ASN.1 Type Definition		
Type Name : ValidMultiple_Group		
Comments :		
Type Definition		
SET	{smtstationldgrp smtstationconfiggrp	SMTStationId_Group, SMTStationConfig_Group }

ASN.1 Type Definition		
Type Name : InvalidMultiple_Group		
Comments :		
Type Definition		
SET	{smtstationldgrp capabilitiesgrp	SMTStationId_Group, MACCapabilities_Group }

ASN.1 Type Definition		
Type Name : SYMBOL		
Comments :		
Type Definition		
SEQUENCE OF BITSTRING(SIZE(5..5))		

ASN.1 Type Definition		
Type Name : UNA_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD una	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACUpstreamNbrType }

ASN.1 Type Definition		
Type Name : StationDescriptor_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Type Node_Class Macct NonMaster_Ct Master_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)) }
-- When one of more Ports of MACs physically instantiated in the MIB are not physically present, -- the Macct, NonMaster_Ct, and Master_Ct will differ from the corresponding MIB attributes.		

ASN.1 Type Definition		
Type Name : StationState_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD Topology DuplAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), BITSTRING(SIZE(8..8)), BITSTRING(SIZE(8..8)) }

ASN.1 Type Definition		
Type Name : MsgTimeStamp_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length msgtimestamp	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(8)), SMTTimeStampType }

ASN.1 Type Definition		
Type Name : StationPolicies_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length configpolicy connectionpolicy	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTConfigPolicyType, SMTConnectionPolicyType }

ASN.1 Type Definition		
Type Name : PathLatency_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PORTOutIndex PathLatencyRing1 PORTOutIndex PathLatencyRing2	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)) }
-- This is the latency contribution of the Paths within the station. It is not a MIB attribute and is -- optional. The latency is given in octet units. The Port indices are those used to form the Path -- descriptor SMT Parameter, X'0008'.		

ASN.1 Type Definition		
Type Name : MACNeighbors_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD mibindex macindex una dna	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), MACUpstreamNbrType, MACDownstreamNbrType }

ASN.1 Type Definition		
Type Name : PathDescriptor_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex PortType ConnectState RemotePORTType RemoteMAC ConResourceIndex MAC_Addr ConResourceIndex	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPortType, PORTConnectStateType, CMNPortType, PORTMACIndicatedType, OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)) }

ASN.1 Type Definition		
Type Name : MACStatus_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex macindex T_Req T_Neg T_Max TVXValue T_Min SBA Frame_Ct Error_Ct Lost_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)), MACTReqType, MACTNegType, MACTMaxType, MACTVXValueType, OCTETSTRING(SIZE(4)), PATHSbaPayloadType, MACFrame_CtType, MACError_CtType, MACLost_CtType }

ASN.1 Type Definition		
Type Name : PortLEMStatus_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_TypeCMNCounter_Q Parameter_Length mibindex portindex PAD Ler_Cutoff Ler_Alarm Ler_Estimate Lem_Reject_Ct Lem_CT	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLer_CutoffType, PORTLer_AlarmType, PORTLer_EstimateType, PORTLem_Reject_CtType, PORTLem_CtType }

ASN.1 Type Definition		
Type Name : MACFrameCounters_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex macindex Copied_Ct Transmit_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACCopied_CtType, MACTransmit_CtType }

ASN.1 Type Definition		
Type Name : MACFrameNotCopiedCount_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex macindex NotCopied_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACNotCopied_CtType }

ASN.1 Type Definition		
Type Name : MACPriorityValues_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex macindex T_Pri0 T_Pri1 T_Pri2 T_Pri3 T_Pri4 T_Pri5 T_Pri6	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACT_Pri0Type, MACT_Pri1Type, MACT_Pri2Type, MACT_Pri3Type, MACT_Pri4Type, MACT_Pri5Type, MACT_Pri6Type }

ASN.1 Type Definition		
Type Name : PortElasticityBuffer_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length mibindex portindex EBErrorCt	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTEBError_CtType }

ASN.1 Type Definition		
Type Name : ManufacturerField_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length menuf_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTManufacturerDataType }

ASN.1 Type Definition		
Type Name : UserField_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length user_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTUserDataType }

ASN.1 Type Definition		
Type Name : ECHOData_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD Echo_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1..3)) DEFAULT NULL, ECH_DATA(length:INTEGER) }

ASN.1 Type Definition		
Type Name : ReasonCode_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length reason	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : RejectedFrame_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD RejectedFrameBeginning	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(?)) }

ASN.1 Type Definition		
Type Name : SMTSupportedVersions_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD numVersions indexOpVersion Version_1 Version_2	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) }

ASN.1 Type Definition		
Type Name : ResourceType_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ResourceType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBACommand_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaCommand	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBAPayloadRequest_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaRequest	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBAOverheadRequest_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaOverheadReq	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBAAallocationAddress_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD SbaAllocationAddr	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : SBACatagory_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Catagory	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) }

ASN.1 Type Definition		
Type Name : MaximumT_Neg_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MaxTneg	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : MinimumSBASegment_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MinSegment	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) DEFAULT {'00000001'H} }

ASN.1 Type Definition		
Type Name : SBAAAllocatable_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaAllocatable	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : Authorization_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Authorization	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(?)) }

ASN.1 Type Definition		
Type Name : ESFID_GENERAL		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD ESF_ID	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

9.2.1.1.1 SMT Station ID Group Attributes

ASN.1 Type Definition		
Type Name : SMTStationId_Group		
Comments :		
Type Definition		
SET	{stationid opversionid hiversionid loversionid manufacturerdata userdata mibversionid	SMTStationId, SMTOpVersionId, SMTHiVersionId, SMTLoVersionId, SMTManufacturerData OPTIONAL, SMTUserData, SMTMIBVersionId }

ASN.1 Type Definition		
Type Name : GroupAttribute		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) }

ASN.1 Type Definition		
Type Name : SMTStationId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length stationidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTStationIdentifierType }

ASN.1 Type Definition		
Type Name : SMTOpVersionId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD opversionidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTVersionType }

ASN.1 Type Definition		
Type Name : SMTHiVersionId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD hiversionidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTVersionType }

ASN.1 Type Definition		
Type Name : SMTLoVersionId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD loverversionidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTVersionType }

ASN.1 Type Definition		
Type Name : SMTManufacturerData		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length manufacturerdatatype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTManufacturerDataType }

ASN.1 Type Definition		
Type Name : SMTUserData		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length userdatastype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTUserDataTypes }

ASN.1 Type Definition		
Type Name : SMTMIBVersionId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD mibversionidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTVersionType }

9.2.1.1.2 SMT Station Configuration Group Attributes

ASN.1 Type Definition		
Type Name : SMTStationConfig_Group		
Comments :		
Type Definition		
SET	{macct nonmasterct masterct availablepaths configcapabilities configpolicy connectionpolicy tnotify statrptpolicy tracemacexpiration portindexes macindexes bypasspresent	SMTMac_Ct, SMTNonMaster_Ct, SMTMaster_Ct, SMTAvailablePaths, SMTConfigCapabilities, SMTConfigPolicy, SMTConnectionPolicy, SMTT_Notify, SMTStatRptPolicy, SMTTTrace_MaxExpiration, SMTPORTIndexes, SMTMACIndexes, SMTBypassPresent }

ASN.1 Type Definition		
Type Name : SMTMac_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD maccttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), SMTMac_CtType }

ASN.1 Type Definition		
Type Name : SMTNonMaster_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD nonmastercttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), SMTNonMaster_CtType}

ASN.1 Type Definition		
Type Name : SMTMaster_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD mastercttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), SMTMaster_CtType }

ASN.1 Type Definition		
Type Name : SMTAvailablePaths		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SEQUENCE {PAD availablepathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNAvailablePathsType } }

ASN.1 Type Definition		
Type Name : SMTConfigCapabilities		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD configcapabilitiestype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTCapabilitiesType }

ASN.1 Type Definition		
Type Name : SMTSMTConfigPolicy		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD configpolicytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTConfigPolicyType }

ASN.1 Type Definition		
Type Name : SMTConnectionPolicy		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD connectionpolicytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTConnectionPolicyType }

ASN.1 Type Definition		
Type Name : SMTT_Notify		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD tnotifytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTT_NotifyType }

ASN.1 Type Definition		
Type Name : SMTStatRptPolicy		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD statrptpolicytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNFlag DEFAULT TRUE }

ASN.1 Type Definition		
Type Name : SMTTrace_MaxExpiration		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD tracemaxexpirationtype CMNTime	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), }

ASN.1 Type Definition		
Type Name : SMTPORTIndexes		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindexestype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNResourceIdType }

ASN.1 Type Definition		
Type Name : SMTMACIndexes		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindexestype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNResourceIdType }

ASN.1 Type Definition		
Type Name : SMTBypassPresent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD bypasspresenttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNFlag DEFAULT TRUE }

9.2.1.1.3 SMT Status Group Attributes

ASN.1 Type Definition		
Type Name : SMTStatus_Group		
Comments :		
Type Definition		
SET	{ecmstate cfstate holdstate remotedisconnectflag stationstatus peerwrapflag	SMTECMState, SMTCF_State, SMTHoldState OPTIONAL, SMTRemoteDisconnectFlag, SMTStationStatus, SMTPeerWrapFlag }

ASN.1 Type Definition		
Type Name : SMTECMState		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD ecmstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTECMStateType }

ASN.1 Type Definition		
Type Name : SMTCF_State		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD cfstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTCF_StateType }

ASN.1 Type Definition		
Type Name : SMTHoldState		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD holdstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTHoldStateType }

ASN.1 Type Definition		
Type Name : SMTRemoteDisconnectFlag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD remotedisconnectflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNFlag DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : SMTStationStatus		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD stationstatustype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTStatus }

ASN.1 Type Definition		
Type Name : SMTPeerWrapFlag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD peerwrapflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNFlag DEFAULT FALSE }

9.2.1.1.4 SMT MIB Operation Group Attributes

ASN.1 Type Definition		
Type Name : SMTMIBOperation_Group		
Comments :		
Type Definition		
SET	{timestamp transitiontimestamp setcount lastsetstationid	SMTTimeStamp, SMTTransitionTimeStamp, SMTSetCount OPTIONAL, SMTLastSetStationId OPTIONAL }

ASN.1 Type Definition		
Type Name : SMTTimeStamp		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length timestamptype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTTimeStampType }

ASN.1 Type Definition		
Type Name : SMTTransitionTimeStamp		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length transitiontimestamptype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNTimeStampType }

ASN.1 Type Definition		
Type Name : SMTSetCount		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD setcounttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTSetCountType }

ASN.1 Type Definition		
Type Name : SMTLastSetStationId		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD lastsetstationidtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTStationIdentifierType }

ASN.1 Type Definition		
Type Name : SMTVendorAttrib		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(?)), CMNVendorMIBType }

9.2.1.2 ASN.1 Type Definitions for MAC Attributes

9.2.1.2.1 MAC Capabilities Group Attributes

ASN.1 Type Definition		
Type Name : MACCapabilities_Group		
Comments :		
Type Definition		
SET	{framestatusfunctions bridgefunctions tmaxcapability tvxcapability	MACFrameStatusFunctions, MACBridgeFunctions OPTIONAL, MACT_MaxCapability, MACTVXCapability }

ASN.1 Type Definition		
Type Name : MACFrameStatusFunctions		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD framestatusfunctiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACFS_Functions }

ASN.1 Type Definition		
Type Name : MACBridgeFunctions		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD bridgefunctiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACBridgeType }

ASN.1 Type Definition		
Type Name : MACT_MaxCapability		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tmaxcapabilitytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), CMNTwosComplementType }

ASN.1 Type Definition		
Type Name : MACTVXCapability		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tvxcapabilitytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), CMNTwosComplementType }

9.2.1.2.2 MAC Configuration Group Attributes

ASN.1 Type Definition		
Type Name : MACConfig_Group		
Comments :		
Type Definition		
SET	{availablepaths currentpath upstreamnbr downstreamnbr oldupstreamnbr olddownstreamnbr dupaddresstest requestedpaths downstreamporttype macindex	MACAvailablePaths, MACCurrentPath, MACUpstreamNbr MACDownstreamNbr, MACOldUpstreamNbr, MACOldDownstreamNbr, MACDupAddressTest, MACRequestedPaths, MACDownstreamPORTType, MACIndex }

ASN.1 Type Definition		
Type Name : MACAvailablePaths		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD availablepathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNAvailablePathsType }

ASN.1 Type Definition		
Type Name : MACCurrentPath		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD currentpathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNCurrentPathType }

ASN.1 Type Definition		
Type Name : MACUpstreamNbr		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD upstreamnbrtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACDownstreamNbr		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD downstreamnbrtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACOldUpstreamNbr		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD oldupstreamnbrtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACOldDownstreamNbr		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD olddownstreamnbrtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACDupAddressTest		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD dupaddresstesttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACDupAddressTestType }

ASN.1 Type Definition		
Type Name : MACRequestedPaths		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD requestedpathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), CMNPermittedPathsType }

ASN.1 Type Definition		
Type Name : MACDownstreamPORTType		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD downstreamporttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPortType }

ASN.1 Type Definition		
Type Name : MACIndex		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD macindextype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNResourceIdType }

9.2.1.2.3 MAC Address Group Attributes

ASN.1 Type Definition		
Type Name : MACAddress_Group		
Comments :		
Type Definition		
SET	{smtaddress longgrpaddress shortgrpaddress	MACSMTAddress, MACLongGrpAddress OPTIONAL, MACShortGrpAddress OPTIONAL }

ASN.1 Type Definition		
Type Name : MACSMTAddress		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD smtaddresstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACLongGrpAddress		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD longgrpaddresstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNLongAddressType }

ASN.1 Type Definition		
Type Name : MACShortGrpAddress		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD shortgrpaddresstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF MACShortAddressType }

9.2.1.2.4 MAC Operation Group Attributes

ASN.1 Type Definition		
Type Name : MACOperation_Group		
Comments :		
Type Definition		
SET	{treq tneg tmax tvxvalue tpri0 tpri1 tpri2 tpri3 tpri4 tpri5 tpri6	MACT_Req, MACT_Neg, MACT_Max, MACTvxValue, MACT_Pri0 OPTIONAL MACT_Pri1 OPTIONAL MACT_Pri2 OPTIONAL MACT_Pri3 OPTIONAL MACT_Pri4 OPTIONAL MACT_Pri5 OPTIONAL MACT_Pri6 OPTIONAL }

ASN.1 Type Definition		
Type Name : MACT_Req		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex treqtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACTReqType }

ASN.1 Type Definition		
Type Name : MACT_Neg		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tnegtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_NegType }

ASN.1 Type Definition		
Type Name : MACT_Max		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tmaxtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACTMaxType }

ASN.1 Type Definition		
Type Name : MACTvxValue		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tvxvaluetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACTVXValueType }

ASN.1 Type Definition		
Type Name : MACT_Pri0		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri0type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri0Type }

ASN.1 Type Definition		
Type Name : MACT_Pri1		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri1type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri1Type }

ASN.1 Type Definition		
Type Name : MACT_Pri2		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri2type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri2Type }

ASN.1 Type Definition		
Type Name : MACT_Pri3		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri3type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri3Type }

ASN.1 Type Definition		
Type Name : MACT_Pri4		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri4type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri4Type }

ASN.1 Type Definition		
Type Name : MACT_Pri5		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri5type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri5Type }

ASN.1 Type Definition		
Type Name : MACT_Pri6		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tpri6type	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACT_Pri6Type }

9.2.1.2.5 MAC Counters Group Attributes

ASN.1 Type Definition		
Type Name : MACCounters_Group		
Comments :		
Type Definition		
SET	{framect copiedct transmitct tokenct errorct lostct tvxexpiredct notcopiedct latect ringopct	MACFrame_Ct, MACCopied_Ct, MACTransmit_Ct, MACToken_Ct OPTIONAL, MACError_Ct, MACLost_Ct, MACTvxExpired_Ct OPTIONAL, MACNotCopied_Ct OPTIONAL, MACLate_Ct OPTIONAL, MACRingOp_Ct OPTIONAL }

ASN.1 Type Definition		
Type Name : MACFrame_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex framecttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACFrame_CtType }

ASN.1 Type Definition		
Type Name : MACCopied_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex copiedcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACCopied_CtType }

ASN.1 Type Definition		
Type Name : MACTransmit_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex transmitctype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACTransmit_CtType }

ASN.1 Type Definition		
Type Name : MACToken_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tokenctype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACToken_CtType }

ASN.1 Type Definition		
Type Name : MACError_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex errorctype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACError_CtType }

ASN.1 Type Definition		
Type Name : MACLost_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex lostcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACLost_CtType }

ASN.1 Type Definition		
Type Name : MACTvxExpired_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex tvxexpiredcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACTvxExpired_CtType }

ASN.1 Type Definition		
Type Name : MACNotCopied_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex notcopiedcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACNotCopied_CtType }

ASN.1 Type Definition		
Type Name : MACLate_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex latecttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACLate_CtType }

ASN.1 Type Definition		
Type Name : MACRingOp_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex ringopctype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), MACRingOp_CtType }

9.2.1.2.6 MAC Frame Error Condition Group Attributes

ASN.1 Type Definition		
Type Name : MACFrameErrorCondition_Group		
Comments :		
Type Definition		
SET	{frameerrorthreshold frameerrorratio	MACFrameErrorThreshold, MACFrameErrorRatio }

ASN.1 Type Definition		
Type Name : MACFrameErrorThreshold		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD frameerrorthresholdtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACFrameErrorThresholdType }

ASN.1 Type Definition		
Type Name : MACFrameErrorRatio		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD frameerrorratio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACFrameErrorRatioType }

9.2.1.2.7 MAC Not Copied Condition Group Attributes

ASN.1 Type Definition		
Type Name : MACNotCopiedCondition_Group		
Comments :		
Type Definition		
SET	{macnotcopiedthreshold macnotcopiedratio	MACNotCopiedThreshold OPTIONAL, MACNotCopiedRatio OPTIONAL }

ASN.1 Type Definition		
Type Name : MACNotCopiedThreshold		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD notcopiedthresholdtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACNotCopiedThresholdType }

ASN.1 Type Definition		
Type Name : MACNotCopiedRatio		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD notcopiedratio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACNotCopiedRatioType }

9.2.1.2.8 MAC Status Group Attributes

ASN.1 Type Definition		
Type Name : MACStatus_Group		
Comments :		
Type Definition		
SET	{rmtstate daflag undaflag frameerrorflag notcopiedflag unitdataavailable hardwarepresent maunitdataavailable	MACRMTState, MACDA_Flag, MACUNDA_Flag, MACFrameErrorFlag, MACNotCopiedFlag OPTIONAL MACUnitDataAvailable, MACHardwarePresent, MACMA_UnitdataEnable }

ASN.1 Type Definition		
Type Name : MACRMTState		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD rmtstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACRMTStateType }

ASN.1 Type Definition		
Type Name : MACDA_Flag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD daflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), MACDA_FlagType DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACUNDA_Flag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD undaflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)) MACUNDA_Flag DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACFrameErrorFlag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD frameerrorflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), MACFrameErrorFlagType DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACNotCopiedFlag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD notcopiedflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), MACNotCopiedFlagType DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACMA_UnitdataAvailable		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD maunitdataavailabletype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), MACMA_UnitdataAvailableType DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACHardwarePresent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD_2 macindex PAD hwpresenttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPresent }

ASN.1 Type Definition		
Type Name : MACMA_UnitdataEnable		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD maunitdataenabletype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), MACMA_UnitdataEnableType DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACVendorAttrib		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), CMNVendorMIBType }

9.2.1.3 ASN.1 Type Definitions for PATH Attributes

ASN.1 Type Definition		
Type Name : PATHConfig_Group		
Comments :		
Type Definition		
SET	{index ringlatency tracestatus sbapayload sbaoverhead configuration trmode sbaavailable tvxlowerbound tmaxlowerbound maxtreq	PATHIndex, PATHRingLatency OPTIONAL, PATHTraceStatus OPTIONAL, PATHSbaPayload OPTIONAL, PATHSbaOverhead OPTIONAL, PATHConfiguration, PATHT_Rmode OPTIONAL, PATHSbaAvailable OPTIONAL, PATHTVXLowerBound, PATHT_MaxLowerBound, PATHMaxT_Req }

ASN.1 Type Definition		
Type Name : PATHIndex		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD indextype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PATHIndexType }

ASN.1 Type Definition		
Type Name : PATHRingLatency		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex ringlatencytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), CMNTime }

ASN.1 Type Definition		
Type Name : PATHTraceStatus		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD tracestatustype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PATHTraceStatusType }

ASN.1 Type Definition		
Type Name : PATHSbaPayload		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex sbapayloadtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), PATHSbaPayloadType }

ASN.1 Type Definition		
Type Name : PATHSbaOverhead		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex sbaoverheadtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), PATHSbaOverheadType }

ASN.1 Type Definition		
Type Name : PATHConfiguration		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD configurationtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPathConfig }

ASN.1 Type Definition		
Type Name : PATHT_Rmode		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD trmodetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNTime }

ASN.1 Type Definition		
Type Name : PATHSbaAvailable		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex sbaavailabletype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PATHSbaAvailableType }

ASN.1 Type Definition		
Type Name : PATHTVXLowerBound		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex tvxlowerboundtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNTwosComplementType }

ASN.1 Type Definition		
Type Name : PATHTT_MaxLowerBound		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length pathindex tmaxlowerboundtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), CMNTwosComplementType }

ASN.1 Type Definition		
Type Name : PATHMaxT_Req		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex maxtreotype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNTwosComplementType }

ASN.1 Type Definition		
Type Name : PATHVendorAttrib		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), CMNVendorMIBType }

9.2.1.4 ASN.1 Type Definitions for PORT Attributes

9.2.1.4.1 PORT Configuration Group Attributes

ASN.1 Type Definition		
Type Name : PORTConfig_Group		
Comments :		
Type Definition		
SET	{mytype neighbortype connectionpolicies macindicated currentpath requestedpath macplacement availablepath maclooptime pmdclass connectioncapabilities index	PORTMy_Type, PORTNeighborType, PORTConnectionPolicies, PORTMACIndicated, PORTCurrentPath, PORTRequestedPaths, PORTMACPlacement, PORTAvailablePaths, PORTMACLoop_Time OPTIONAL, PORTPMDClass, PORTConnectionCapabilities, PORTIndex }

ASN.1 Type Definition		
Type Name : PORTMy_Type		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD mytype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPortType }

ASN.1 Type Definition		
Type Name : PORTNeighbor_Type		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD neighbortype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPortType }

ASN.1 Type Definition		
Type Name : PORTConnectionPolicies		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD connectionpoliciestype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTConnectionPoliciesType }

ASN.1 Type Definition		
Type Name : PORTMACIndicated		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD macindicatedtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), PORTMACIndicatedType }

ASN.1 Type Definition		
Type Name : PORTCurrentPath		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD currentpathtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNCurrentPathType }

ASN.1 Type Definition		
Type Name : PORTRequestedPaths		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD requestedpathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTRequestedPathsType }

ASN.1 Type Definition		
Type Name : PORTMACPlacement		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD macplacementtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNResourceIdType }

ASN.1 Type Definition		
Type Name : PORTAvailablePaths		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD availablepathstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNAvailablePathsType }

ASN.1 Type Definition		
Type Name : PORTMACLoop_Time		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD maclooptimetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNTime }

ASN.1 Type Definition		
Type Name : PORTPMDClass		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD pmdclasstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTPMDClassType }

ASN.1 Type Definition		
Type Name : PORTConnectionCapabilities		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD connectioncapabilitiestype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTConnectionPoliciesType }

ASN.1 Type Definition		
Type Name : PORTIndex		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD portindextype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNResourceIdType }

9.2.1.4.2 PORT Operation Group Attributes

ASN.1 Type Definition		
Type Name : PORTOperation_Group		
Comments :		
Type Definition		
SET	{maintls bsflag pcls	PORTMaint_LS OPTIONAL, PORTBS_Flag, PORTPC_LS OPTIONAL }

ASN.1 Type Definition		
Type Name : PORTMaint_LS		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD maintlstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLineStateType }

ASN.1 Type Definition		
Type Name : PORTBS_Flag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD bsflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNFlag DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : PORTPC_LS		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD pclstype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLineStateType }

9.2.1.4.3 PORT Error Counters Group Attributes

ASN.1 Type Definition		
Type Name : PORTErrCtrs_Group		
Comments :		
Type Definition		
SET	{eberrorct lctfailct	PORTEBError_Ct OPTIONAL, PORTLCTFail_Ct }

ASN.1 Type Definition		
Type Name : PORTEBError_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD eberrorcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNCounter }

ASN.1 Type Definition		
Type Name : PORTLCTFail_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD lctfailcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNCounter }

9.2.1.4.4 PORT LER Group Attributes

ASN.1 Type Definition		
Type Name : PORTLer_Group		
Comments :		
Type Definition		
SET	{lerestimate lemrejectct lemct lercutoff leralarm	PORTLer_Estimate, PORTLem_Reject_Ct, PORTLem_Ct, PORTLer_Cutoff, PORTLer_Alarm }

ASN.1 Type Definition		
Type Name : PORTLer_Estimate		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD lerestimatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), PORTLerExponentType }

ASN.1 Type Definition		
Type Name : PORTLem_Reject_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex lemrejectctype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNCounter }

ASN.1 Type Definition		
Type Name : PORTLem_Ct		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex lemcttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), CMNCounter }

ASN.1 Type Definition		
Type Name : PORTLer_Cutoff		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD lercutofftype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLerExponentType }

ASN.1 Type Definition		
Type Name : PORTLer_Alarm		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD leralarmtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLerExponentType }

9.2.1.4.5 PORT Status Group Attributes

ASN.1 Type Definition		
Type Name : PORTStatus_Group		
Comments :		
Type Definition		
SET	{connectionstate pcmstate pcwithhold lerflag hardwarepresent	PORTConnectState, PORTPCMState, PORTPC_Withhold, PORTLerFlag, PORTHardwarePresent }

ASN.1 Type Definition		
Type Name : PORTConnectState		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD connectstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTConnectStateType }

ASN.1 Type Definition		
Type Name : PORTPCMState		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD pcmstatetype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTPCMStateType }

ASN.1 Type Definition		
Type Name : PORTPC_Withhold		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD pcwithholdtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTPC_WithholdType }

ASN.1 Type Definition		
Type Name : PORTLerFlag		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD lerflagtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNFlag DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : PORTHardwarePresent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD presenttype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNPresent }

ASN.1 Type Definition		
Type Name : PORTVendorAttrib		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), CMNVendorMIBType }

9.2.1.5 ASN.1 Type Definitions for Actions and Notifications

9.2.1.5.1 Actions

ASN.1 Type Definition		
Type Name : SMTStationAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD actioninfo	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTActionInfoType }

ASN.1 Type Definition		
Type Name : SMTVendorAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNVendorMIBType }

ASN.1 Type Definition		
Type Name : MACVendorAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNVendorMIBType }

ASN.1 Type Definition		
Type Name : PATHVendorAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNVendorMIBType }

ASN.1 Type Definition		
Type Name : PORTAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length actiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTActionType }

ASN.1 Type Definition		
Type Name : PORTVendorAction		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CMNVendorMIBType }

9.2.1.5.2 Notifications

ASN.1 Type Definition		
Type Name : SMTHoldCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD holdconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTHoldConditionDataType }

ASN.1 Type Definition		
Type Name : SMTPPeerWrapCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD cf_state	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SMTPCF_StateType }

ASN.1 Type Definition		
Type Name : SMTVendorNotification		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD vendormibtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)) CMNVendorMIBType

ASN.1 Type Definition		
Type Name : MACDuplicateAddressCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD duplicateaddressconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACDuplicateAddressDataType}

ASN.1 Type Definition		
Type Name : MACFrameErrorCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD frameerrorconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACFrameErrorDataType }

ASN.1 Type Definition		
Type Name : MACNotCopiedCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD notcopiedconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACNotCopiedDataType }

ASN.1 Type Definition		
Type Name : MACNeighborChangeEvent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD neighborchangeeventtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACNeighborChangeDataType }

ASN.1 Type Definition		
Type Name : MACPathChangeEvent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD pathchangeeventtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), MACPathChangeDataType }

ASN.1 Type Definition		
Type Name : MACVendorNotification		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD macindex PAD vendornotificationtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNVendorMIBType }

ASN.1 Type Definition		
Type Name : PATHVendorNotification		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD pathindex PAD vendornotificationtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNVendorMIBType }

ASN.1 Type Definition		
Type Name : PORTLerCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD lerconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTLerDataType }

ASN.1 Type Definition		
Type Name : PORTUndesiredConnectionAttemptEvent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD undesiredconnectionattempteventtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTUndesiredConnectionDataType }

ASN.1 Type Definition		
Type Name : PORTEBErrorCondition		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD eberrorconditiontype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTEBErrorDataType }

ASN.1 Type Definition		
Type Name : PORTPathChangeEvent		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD pathchangeeventtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PORTPathChangeDataType }

ASN.1 Type Definition		
Type Name : PORTVendorNotification		
Comments :		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD portindex PAD vendornotificationtype	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SET OF CMNVendorMIBType }

9.2.1.6 ASN.1 Type Definitions for SMT Definitions

9.2.1.6.1 Common Definitions

ASN.1 Type Definition			
Type Name : CMNAvailablePathsType			
Comments :			
Type Definition			
[8] IMPLICIT BITSTRING			
{primary	(0),		
secondary	(1),		
local	(2)	}	(SIZE(8))

ASN.1 Type Definition			
Type Name : CMNCounter			
Comments :			
Type Definition			
Counter ::= INTEGER(0..4294967295) -- 4 octets			

ASN.1 Type Definition			
Type Name : CMNCurrentPathType			
Comments :			
Type Definition			
ENUMERATED	{isolated	(0),	
	local	(1),	
	secondary	(2),	
	primary	(3),	
	concatenated	(4),	
	thru	(5)	}

ASN.1 Type Definition			
Type Name : CMNFlag			
Comments :			
Type Definition			
IMPLICIT BITSTRING			
{false	(0),		
true	(1)	}	-- BOOLEAN

ASN.1 Type Definition
Type Name : CMNLongAddressType Comments :
Type Definition
longgaddress ::= OCTETSTRING(SIZE(6))

ASN.1 Type Definition
Type Name : CMNPermittedPathsType Comments :
Type Definition
[8] IMPLICIT BITSTRING {local secondary_alterate primary_alterate concatenate_alterate secondary_prefered primary_prefered concatenated_prefered thru (0), (1), (2), (3), (4), (5), (6), (7) } (SIZE(8))

ASN.1 Type Definition
Type Name : CMNPortType Comments :
Type Definition
ENUMERATED {a (0), b (1), s (2), m (3), none (4) }

ASN.1 Type Definition
Type Name : CMNPresent Comments :
Type Definition
ENUMERATED {notpresent (0), present (1) }

ASN.1 Type Definition	
Type Name : CMNResourceIdType	
Comments :	
Type Definition	
resourceid ::= INTEGER(0..65535)	-- 2octets

ASN.1 Type Definition	
Type Name : CMNResourceTagType	
Comments :	
Type Definition	
SEQUENCE	{resource_type resource_index current_port CMNResourceType, CMNResourceIdType, CMNCurrentPathType }

ASN.1 Type Definition	
Type Name : CMNResourceType	
Comments :	
Type Definition	
ENUMERATED	{mac port (2), (4) }

ASN.1 Type Definition	
Type Name : :CMNTime	
Comments :	
Type Definition	
time ::= INTEGER(0..4294967295)	-- 4 octets

ASN.1 Type Definition	
Type Name : CMNTimeComplementType	
Comments :	
Type Definition	
timertwocomplement ::= OCTETSTRING(SIZE(4))	

ASN.1 Type Definition	
Type Name : CMNTimeStampType Comments :	
Type Definition	
timestamp ::= INTEGER(0..824467440737095516115)	-- 8 octets

ASN.1 Type Definition	
Type Name : CMNVendorMIBType Comments :	
Type Definition	
SEQUENCE {manufactureroui vendoroctet specificdata	OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(ANY)) }

9.2.1.6.2 SMT Definitions

ASN.1 Type Definition	
Type Name : SMTActionInfoType Comments :	
Type Definition	
ENUMERATED {connect disconnect path_test self_test disable_a disable_b disable_m ec7	(0), (1), (2), (3), (4), (5), (6), (7) }

ASN.1 Type Definition	
Type Name : SMTAvailablePathsType Comments :	
Type Definition	
availablepaths ::= CMNAvailablePathsTypes	

ASN.1 Type Definition
Type Name : SMTBypassPresentType Comments :
Type Definition
bypasspresent ::= CMNFlag

ASN.1 Type Definition
Type Name : SMTCapabilitiesType Comments :
Type Definition
[16] IMPLICIT BITSTRING {holdavailable cf_wrap_ab (0), (1) } } (SIZE(16))

ASN.1 Type Definition
Type Name : SMTCF_StateType Comments :
Type Definition
ENUMERATED {isolated local_a local_b local_ab local_s wrap_a wrap_b wrap_ab wrap_s c_wrap_a c_wrap_b c_wrap_s thru (0), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12) } }

ASN.1 Type Definition
Type Name : SMTConfigCapabilitiesType Comments :
Type Definition
capabilities ::= SMTCapabilitiesType

ASN.1 Type Definition		
Type Name : SMTConfigPolicyType		
Comments :		
Type Definition		
[16] IMPLICIT BITSTRING		
{configurationhold	(0) }	(SIZE(16))

ASN.1 Type Definition		
Type Name : SMTConnectionPolicyType		
Comments :		
Type Definition		
[16] IMPLICIT BITSTRING		
{rejectA_A	(0),	
rejectA_B	(1),	
rejectA_S	(2),	
rejectA_M	(3),	
rejectB_A	(4),	
rejectB_B	(5),	
rejectB_S	(6),	
rejectB_M	(7),	
rejectS_A	(8),	
rejectS_B	(9),	
rejectS_S	(10),	
rejectS_M	(11),	
rejectM_A	(12),	
rejectM_B	(13),	
rejectM_S	(14),	
rejectM_M	(15) }	(SIZE(16))

ASN.1 Type Definition		
Type Name : SMTECMStateType		
Comments :		
Type Definition		
ENUMERATED	{ec0	(0),
	ec1	(1),
	ec2	(2),
	ec3	(3),
	ec4	(4),
	ec5	(5),
	ec6	(6),
	ec7	(7) }

ASN.1 Type Definition	
Type Name : SMTHiVersionIdType	
Comments :	
Type Definition	
hiversionid ::= SMTVersionType	

ASN.1 Type Definition	
Type Name : SMTHoldConditionDataType	
Comments :	
Type Definition	
SEQUENCE	{conditionstate holdcondition CMNFlag DEFAULT FALSE, SMTHoldStateType }

ASN.1 Type Definition	
Type Name : SMTHoldStateType	
Comments :	
Type Definition	
ENUMERATED	{not_holding (0), holding_prm (1), -- holding on primary holding_sec (2) } -- holding on secondary

ASN.1 Type Definition	
Type Name : SMTLoVersionIdType	
Comments :	
Type Definition	
loversionid ::= SMTVersionType	

ASN.1 Type Definition	
Type Name : SMTMac_CtType	
Comments :	
Type Definition	
macct ::= INTEGER(0..255)	-- 1 octet

ASN.1 Type Definition			
Type Name : SMTManufacturerDataType			
Comments :			
Type Definition			
SEQUENCE	{manufactureroui manufacturerdata	OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(29))	}

ASN.1 Type Definition			
Type Name : SMTMaster_CtType			
Comments :			
Type Definition			
master_ct ::= INTEGER(0..255)			

ASN.1 Type Definition			
Type Name : SMTMIBVersionIdType			
Comments :			
Type Definition			
mibversionid ::= SMTVersionType			

ASN.1 Type Definition			
Type Name : SMTNonMaster_CtType			
Comments :			
Type Definition			
nonmaster_ct ::= INTEGER(0..255)			

ASN.1 Type Definition			
Type Name : SMTOpVersionIdType			
Comments :			
Type Definition			
opversionid ::= SMTVersionType			

ASN.1 Type Definition		
Type Name : SMTPPeerWrapConditionDataType		
Comments :		
Type Definition		
SEQUENCE	{conditionstate peerwrapcondition	CMNFlag DEFAULT FALSE, SMTCF_StateType }

ASN.1 Type Definition		
Type Name : SMTPPeerWrapConditionType		
Comments :		
Type Definition		
cfstate ::= SMTCF_StateType		

ASN.1 Type Definition		
Type Name : SMTPPeerWrapFlagType		
Comments :		
Type Definition		
peerwrapflag ::= CMNFlag		

ASN.1 Type Definition		
Type Name : SMTRemoteDisconnectFlagType		
Comments :		
Type Definition		
remotedisconnectflag ::= CMNFlag		

ASN.1 Type Definition		
Type Name : SMTSetCountType		
Comments :		
Type Definition		
SEQUENCE	{count settimestamp	CMNCounter, CMNTimeStampType }

ASN.1 Type Definition		
Type Name : SMTStationIdentifierType		
Comments :		
Type Definition		
SEQUENCE	{implememteroctet longaddress	OCTETSTRING(SIZE(2)), CMNLongAddressType }

ASN.1 Type Definition		
Type Name : SMTStatusType		
Comments :		
Type Definition		
ENUMERATED	{concatenated separated thru	(0), (1), (2) }

ASN.1 Type Definition		
Type Name : SMTStatRptPolicyType		
Comments :		
Type Definition		
flag ::= CMNFlag		

ASN.1 Type Definition		
Type Name : SMTT_NotifyType		
Comments :		
Type Definition		
t_notify ::= OCTETSTRING(SIZE(2))		

ASN.1 Type Definition		
Type Name : SMTTimeStampType		
Comments :		
Type Definition		
timestamp ::= CMNTimeStamp		

ASN.1 Type Definition
Type Name : SMTTrace_MaxExpirationType Comments :
Type Definition
tracemaxexpiration ::= CMNTime

ASN.1 Type Definition
Type Name : SMTTransitionTimeStampType Comments :
Type Definition
transitiontimestamp ::= CMNTimeStamp

ASN.1 Type Definition
Type Name : SMTUserDataTypes Comments :
Type Definition
userdata ::= OCTETSTRING(SIZE(32))

ASN.1 Type Definition
Type Name : SMTVersionType Comments :
Type Definition
versiontype ::= INTEGER(0..65535) -- 2 octets

9.2.1.6.3 MAC Definitions

ASN.1 Type Definition
Type Name : MACAvailablePathsType Comments :
Type Definition
availablepaths ::= CMNAvaivablePaths

ASN.1 Type Definition	
Type Name : MACBridgeType Comments :	
Type Definition	
IMPLICIT BITSTRING	
{tb (0), sr (1), srt (2) }	(SIZE(16))

ASN.1 Type Definition	
Type Name : MACCopied_CtType Comments :	
Type Definition	
copiedct ::= CMNCounter	

ASN.1 Type Definition	
Type Name : MACCurrentPathType Comments :	
Type Definition	
currentpath ::= CMNCurrentPaths	

ASN.1 Type Definition	
Type Name : MACDA_FlagType Comments :	
Type Definition	
daflag ::= CMNFlag	

ASN.1 Type Definition	
Type Name : MACDownstreamNbrType Comments :	
Type Definition	
longaddress ::= CMNLongAddressType	

ASN.1 Type Definition		
Type Name : MACDownstreamPORTType		
Comments :		
Type Definition		
porttype ::= CMNPortType		

ASN.1 Type Definition		
Type Name : MACDupAddressTestType		
Comments :		
Type Definition		
ENUMERATED	{none pass fail	(0), (1), (2) }

ASN.1 Type Definition		
Type Name : MACDupConditionType		
Comments :		
Type Definition		
IMPLICIT BITSTRING	{mydup (0), unadup (1) }	(SIZE(16))

ASN.1 Type Definition		
Type Name : MACDuplicatedAddressDataType		
Comments :		
Type Definition		
SEQUENCE	{conditionstate duplicatedaddresstype	CMNFlag DEFAULT FALSE, MACDuplicatedAddressType }

ASN.1 Type Definition		
Type Name : MACDuplicatedAddressType		
Comments :		
Type Definition		
SEQUENCE	{dupcondition fddilong fddiunalong	MACDupConditionType, CMNLongAddressType, CMNLongAddressType }

ASN.1 Type Definition
Type Name : MACError_CtType Comments :
Type Definition
errorct ::= CMNCounter

ASN.1 Type Definition
Type Name : MACFrame_CtType Comments :
Type Definition
framect ::= CMNCounter

ASN.1 Type Definition
Type Name : MACFrameErrorDataType Comments :
Type Definition
SEQUENCE {conditionstate CMNFlag DEFAULT FALSE, framect CMNCounter, errorct CMNCounter, lostct CMNCounter, frameerrorratio MACFrameErrorRatioType }

ASN.1 Type Definition
Type Name : MACFrameErrorRatioType Comments :
Type Definition
frameerrorratio ::= INTEGER(0..65536) -- 2 octets

ASN.1 Type Definition
Type Name : MACFrameErrorThresholdType Comments :
Type Definition
frameerrorthreshold ::= INTEGER(0..65535) -- 2 octets

ASN.1 Type Definition	
Type Name : MACFS_Functions Comments :	
Type Definition	
IMPLICIT BITSTRING	
{fs_repeating (0), fs_setting (1), fs_clearing (2) }	(SIZE(16))

ASN.1 Type Definition	
Type Name : MACHWPresentType Comments :	
Type Definition	
present ::= CMNPresent	

ASN.1 Type Definition	
Type Name : MACLate_CtType Comments :	
Type Definition	
latect ::= CMNCounter	

ASN.1 Type Definition	
Type Name : MACLost_CtType Comments :	
Type Definition	
lostct ::= CMNCounter	

ASN.1 Type Definition	
Type Name : MACMAUnitdataAvailableType Comments :	
Type Definition	
maunitdataavailable ::= CMNFlag	

ASN.1 Type Definition
Type Name : MACMAUnitdataEnableType Comments :
Type Definition
naunitdataenable ::= CMNFlag

ASN.1 Type Definition
Type Name : MACNAConditionType Comments :
Type Definition
IMPLICIT BITSTRING {unachang dnachange (0), (1) } (SIZE(8))

ASN.1 Type Definition
Type Name : MACNeighborChangeDataType Comments :
Type Definition
SEQUENCE {multipleoccurrence neighborchangetype CMNFlag DEFAULT FALSE, MACNeighborChangeType }

ASN.1 Type Definition
Type Name : MACNeighborChangeType Comments :
Type Definition
SEQUENCE {nacondition old_una new_una old_dna new_dna currentpath smtaddress MACNAConditionType, CMNLongAddressType, CMNLongAddressType, CMNLongAddressType, CMNLongAddressType, CMNLongAddressType, CMNLongAddressType }

ASN.1 Type Definition
Type Name : MACNotCopied_CtType Comments :
Type Definition
notcopiedct ::= CMNCounter

ASN.1 Type Definition
Type Name : MACNotCopiedFlagType Comments :
Type Definition
notcopiedflag ::= CMNFlag

ASN.1 Type Definition
Type Name : MACNotCopiedDataType Comments :
Type Definition
SEQUENCE {conditionstate CMNFlag DEFAULT FALSE, notcopiedct CMNCounter, copiedct CMNCounter, notcopiedratio MACNotCopiedRatioType }

ASN.1 Type Definition
Type Name : MACNotCopiedRatioType Comments :
Type Definition
notcopiedratio ::= INTEGER(0..65536) -- 2 octets

ASN.1 Type Definition
Type Name : MACNotCopiedThresholdType Comments :
Type Definition
notcopiedthreshold ::= INTEGER(0..65536) -- 2 octets

ASN.1 Type Definition
Type Name : MACOldDownStreamNbrType Comments :
Type Definition
lonagddress ::= CMNLongaddressType

ASN.1 Type Definition
Type Name : MACOldUpStreamNbrType Comments :
Type Definition
lonagddress ::= CMNLongaddressType

ASN.1 Type Definition
Type Name : MACPathChangeDataType Comments :
Type Definition
SEQUENCE {multipleoccurence CMNFlag, pathchangetype MACPathChangeType }

ASN.1 Type Definition
Type Name : MACPathChangeType Comments :
Type Definition
SEQUENCE {availablepath CMNAvailablePathsType, currentpath CMNCurrentPathType, requestedpath MACRequestedPathsType }

ASN.1 Type Definition
Type Name : MACRequestedPathsType Comments :
Type Definition
requestedpaths ::= CMNPermittedPathsType

ASN.1 Type Definition
Type Name : MACRingOp_CtType Comments :
Type Definition
ringopct ::= CMNCounter

ASN.1 Type Definition			
Type Name : MACRMTStateType			
Comments :			
Type Definition			
ENUMERATED	{rm0	(0),	-- Isolated
	rm1	(1),	-- Non_Op
	rm2	(2),	-- Ring_Op
	rm3	(3),	-- Detect
	rm4	(4),	-- Non_Op_Dup
	rm5	(5),	-- Ring_Op_Dup
	rm6	(6),	-- Directed
	rm7	(2) }	-- Trace

ASN.1 Type Definition	
Type Name : MACShortAddressType	
Comments :	
Type Definition	
shortaddress ::= OCTETSTRING(SIZE(2))	

ASN.1 Type Definition	
Type Name : MACSMTAddressType	
Comments :	
Type Definition	
smtaddress ::= CMNLongAddressType	

ASN.1 Type Definition	
Type Name : MACT_MaxCapabilityType	
Comments :	
Type Definition	
tmaxcapability ::= CMNTwosComplementType	

ASN.1 Type Definition	
Type Name : MACT_Pri0Type	
Comments :	
Type Definition	
tpri0 ::= CMNTwosComplementType	

ASN.1 Type Definition
Type Name : MACT_Pri1Type Comments :
Type Definition
tpri1 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACT_Pri2Type Comments :
Type Definition
tpri2 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACT_Pri3Type Comments :
Type Definition
tpri3 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACT_Pri4Type Comments :
Type Definition
tpri4 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACT_Pri5Type Comments :
Type Definition
tpri5 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACT_Pri6Type Comments :
Type Definition
tpri6 ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACTMaxType Comments :
Type Definition
tmax ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACTNegType Comments :
Type Definition
tneg ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACToken_CtType Comments :
Type Definition
tokenct ::= CMNCounter

ASN.1 Type Definition
Type Name : MACTransmit_CtType Comments :
Type Definition
transmitct ::= CMNCounter

ASN.1 Type Definition
Type Name : MACTReqType Comments :
Type Definition
treq ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACTVXCapabilityType Comments :
Type Definition
tvxcapability ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACTvxExpired_CtType Comments :
Type Definition
tvxexpiredct ::= CMNCounter_Q

ASN.1 Type Definition
Type Name : MACTVXValueType Comments :
Type Definition
tvxvalue ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : MACUNDA_FlagType Comments :
Type Definition
undaflag ::= CMNFlag

ASN.1 Type Definition
Type Name : MACUpstreamNbrType Comments :
Type Definition
upstreamnbr ::= CMNLongAddressType

9.2.1.6.4 PATH Definitions

ASN.1 Type Definition
Type Name : PATHIndexType Comments :
Type Definition
INTEGER(0..65535) {primary (1), secondary (2) } --2 octets

ASN.1 Type Definition
Type Name : PATHMaxT_ReqType Comments :
Type Definition
maxtreq ::= CMNTwosComplementType

ASN.1 Type Definition
Type Name : PATHRingLatencyType Comments :
Type Definition
ringlatency ::= CMNTime

ASN.1 Type Definition
Type Name : PATHSbaAvailableType Comments :
Type Definition
sbaavailable ::= INTEGER(0..4294967295) -- 4 octets

ASN.1 Type Definition
Type Name : PATHSbaPayloadType Comments :
Type Definition
sbapayload ::= INTEGER(0..4294967295) -- 4 octets

ASN.1 Type Definition
Type Name : PATHSbaOverHeadType Comments :
Type Definition
sbaoverhead ::= INTEGER(0..4294967295) -- 4 octets

ASN.1 Type Definition
Type Name : PATHT_MaxLowerBoundType Comments :
Type Definition
tmaxlowerboundCMNTwosComplementType

ASN.1 Type Definition
Type Name : PATHT_RmodeType Comments :
Type Definition
trmode ::= CMNTime

ASN.1 Type Definition
Type Name : PATHTraceStatusType Comments :
Type Definition
IMPLICIT BITSTRING {traceinitiated (0), tracepropagated (1), traceterminated (2), tracetimeout (3) }

ASN.1 Type Definition
Type Name : PATHTVXLowerBoundType Comments :
Type Definition
tvxlowerbound ::= CMNTwosComplementType

9.2.1.6.5 PORT Definitions

ASN.1 Type Definition
Type Name : PORTActionType Comments :
Type Definition
ENUMERATED {mainport (0), -- signal PC_Maint enableport (1), -- signal PC_Enable disableport (2), -- signal PC_Disable startport (3), -- signal PC_Start stopport (4) -- signal PC_Stop }

ASN.1 Type Definition		
Type Name : PORTConnectionPoliciesType		
Comments :		
Type Definition		
IMPLICIT BITSTRING		
{pc_mac_lct	(0),	
pc_mac_loop	(1) }	(SIZE(8))

ASN.1 Type Definition		
Type Name : PORTConnectStateType		
Comments :		
Type Definition		
ENUMERATED	{disabled	(0),
	connected	(1),
	standby	(2),
	active	(3) }

ASN.1 Type Definition		
Type Name : PORTEBError_CtType		
Comments :		
Type Definition		
eberrorct ::= CMNCounter		

ASN.1 Type Definition		
Type Name : PORTEBErrorDataType		
Comments :		
Type Definition		
SEQUENCE	{conditionstate	CMNFlag DEFAULT FALSE,
	eberrorcount	CMNCounter }

ASN.1 Type Definition		
Type Name : PORTHWPPresentType		
Comments :		
Type Definition		
present ::= CMNFlag		

ASN.1 Type Definition
Type Name : PORTLCTFail_CtType Comments :
Type Definition
lctfailct ::= CMNCounter

ASN.1 Type Definition
Type Name : PORTLem_CtType Comments :
Type Definition
lemct ::= CMNCounter

ASN.1 Type Definition
Type Name : PORTLem_Reject_CtType Comments :
Type Definition
lemrejectct ::= CMNCounter

ASN.1 Type Definition
Type Name : PORTLerDataType Comments :
Type Definition
SEQUENCE {conditionstate CMNFlag DEFAULT FALSE, lertype PORTLerType }

ASN.1 Type Definition
Type Name : PORTLerExponentType Comments :
Type Definition
lerexponent ::= INTEGER(0..255) -- 1 octet

ASN.1 Type Definition		
Type Name : :PORTLerType		
Comments :		
Type Definition		
SEQUENCE	{lercutoff leralarm lerestimate lerrejectct lerct	PORTLerExponentType, PORTLerExponentType, PORTLerExponentType, CMNCounter, CMNCounter }

ASN.1 Type Definition			
Type Name : PORTLineStateType			
Comments :			
Type Definition			
ENUMERATED	{qls ils mls hls pdr isu nls	(0), (1), (2), (3), (4), (5), (6)}	-- quiet -- idle -- master -- halt -- receive = active, transmit = PDR -- receive = unknown -- receive = noise

ASN.1 Type Definition		
Type Name : PORTMACIndicatedType		
Comments :		
Type Definition		
SEQUENCE	{tval9 rval9	CMNFlag DEFAULT TRUE, CMNFlag DEFAULT TRUE }

ASN.1 Type Definition		
Type Name : PORTPathChangeDataType		
Comments :		
Type Definition		
SEQUENCE	{multipleoccurrence pathchangetype	CMNFlag DEFAULT FALSE, PORTPathChangeType }

ASN.1 Type Definition		
Type Name : PORTPathChangeType		
Comments :		
Type Definition		
SEQUENCE	{availablepaths currentpath requestedpaths mytype neighbortype	CMNAvailablePathsType, CMNCurrentPathType, PORTRequestedPathsType, CMNPortType, CMNPortType }

ASN.1 Type Definition		
Type Name : PORTPCMStateType		
Comments :		
Type Definition		
ENUMERATED	{pc0 pc1 pc2 pc3 pc4 pc5 pc6 pc7 pc8 pc9	(0), -- Off (1), -- Break (2), -- Trace (3), -- Connect (4), -- Next (5), -- Signal (6), -- Join (7), -- Verify (8), -- Active (9) } -- Maint

ASN.1 Type Definition		
Type Name : PORTPC_WithholdType		
Comments :		
Type Definition		
ENUMERATED	{none mm otherincompative pathnotavailable	(0), (1), (2), (3) }

ASN.1 Type Definition		
Type Name : PORTPMDClassType		
Comments :		
Type Definition		
EMUNERATED	{multimode single_mode1 single_mode2 sonet low_cost_fiber twisted_pair unknown unspecified	(0), (1), (2), (3), (4), (5), (6), (7) }

ASN.1 Type Definition		
Type Name : PORTRequestedPathsType		
Comments :		
Type Definition		
SEQUENCE	{none tree peer	CMNPermittedPathsType, CMNPermittedPathsType, CMNPermittedPathsType }

ASN.1 Type Definition		
Type Name : PORTUndesiredConnectionDataType		
Comments :		
Type Definition		
SEQUENCE	{multipleoccurrence undesiredconnectiontype	CMNFlag DEFAULT FALSE, PORTUndesiredConnectionType }

ASN.1 Type Definition		
Type Name : PORTUndesiredConnectionType		
Comments :		
Type Definition		
SEQUENCE	{porttype connectstate pcneighbor pcwithhold	CMNPortType, PORTConnectStateType, CMNPortType, PORTPC_WithholdType }

9.2.1.7 ASN.1 Type Definitions for SMT InfoField

9.2.1.7.1 NIF InfoField Type Definition

ASN.1 Type Definition		
Type Name : NIF_Info		
Comments :		
Type Definition		
SET	{UNA stationdescriptor stationstate macframestatusfunctions	UNA_GENERAL, StationDescriptor_GENERAL, StationState_GENERAL, MACFrameStatusFunctions }

9.2.1.7.2 SIF InfoField Type Definition

ASN.1 Type Definition		
Type Name : SIFConf_Res		
Comments :		
Type Definition		
SET	{msgtimestamp stationdescriptor smtsupportedversions stationstatus stationpolicies pathlatency macneighbors pathdescriptor smtsetcount	MsgTimeStamp_GENERAL, StationDescriptor_GENERAL, SMTSupportedVersions_GENERAL, StationStatus_GENERAL, StationPolicies_GENERAL, PathLatency_GENERAL OPTIONAL, MACNeighbors_GENERAL, PathDescriptor_GENERAL, SMTSetCount OPTIONAL }

ASN.1 Type Definition		
Type Name : SIFOper_Res		
Comments :		
Type Definition		
SET	{msgtimestamp macstatus portlemstatus macframecount macframenotcount macpriorityvalues portebstatus manufacturerfield userfield smtsetcount	MsgTimeStamp_GENERAL, MACStatus_GENERAL, PortLEMStatus_GENERAL, MACFrameCount_GENERAL, MACFrameNotCount_GENERAL OPTIONAL, MACPriorityValues_GENERAL OPTIONAL, PortEBStatus_GENERAL OPTIONAL, ManufacturerField_GENERAL OPTIONAL, UserField_GENERAL, SMTSetCount OPTIONAL }

9.2.1.7.3 NO ECHO InfoField Type Definition is defined!!**9.2.1.7.4 RAF InfoField Type Definition**

ASN.1 Type Definition		
Type Name : SBAResponse_Info		
Comments :		
Type Definition		
SET	{pathtype sbapayload sbaoverhead currentsbapayload currentsbaoverhead allocationaddress catagory maxtneg minsbasegment }	PATHIndex, SBAPayloadRequest_GENERAL, SBAOverheadRequest_GENERAL, PATHSbaPayload, PATHSbaOverhead, SBAAllocationAddress_GENERAL, SBACatagory_GENERAL, MaximumT_Neg_GENERAL, MinimumSBASegment_GENERAL

ASN.1 Type Definition		
Type Name : SBAResponse_Response		
Comments :		
Type Definition		
SET	{reasoncode pathtype currentsbapayload currentsbaoverhead allocationaddress catagory sbaallocatable }	ReasonCode_GENERAL, PATHIndex, PATHSbaPayload, PATHSbaOverhead, SBAAllocationAddress_GENERAL, SBACatagory_GENERAL, SBAAllocatable_GENERAL

ASN.1 Type Definition		
Type Name : SBAResponse_Response		
Comments :		
Type Definition		
SET	{pathtype currentsbapayload currentsbaoverhead pathtype currentsbapayload currentsbaoverhead }	PATHIndex, PATHSbaPayload, PATHSbaOverhead PATHIndex OPTIONAL, PATHSbaPayload OPTIONAL, PATHSbaOverhead OPTIONAL

ASN.1 Type Definition		
Type Name : SBACChange_Info		
Comments :		
Type Definition		
SET	{pathtype newsbapayload newsbaoverhead catagory }	PATHIndex, PATHSbaPayload, PATHSbaOverhead, SBACatagory_GENERAL

ASN.1 Type Definition		
Type Name : SBACChange_Response		
Comments :		
Type Definition		
SET	{pathtype currentsbapayload currentsbaoverhead catagory }	PATHIndex, PATHSbaPayload, PATHSbaOverhead, SBACatagory_GENERAL

9.2.1.7.5 RDF InfoField Type Definition

ASN.1 Type Definition		
Type Name : RDF_Info		
Comments :		
Type Definition		
SET	{reasoncode smtsupportedversions rejectedframe	ReasonCode_GENERAL, SMTSupportedVersions_GENERAL OPTIONAL, RejectedFrame_GENERAL OPTIONAL }

9.2.1.7.6 ESF InfoField Type Definition

ASN.1 Type Definition		
Type Name : ESF_Info		
Comments :		
Type Definition		
SET	{ESFID OTHER	ESFID_GENERAL, TBD}

9.2.1.7.7 SRF InfoField Type Definition

ASN.1 Type Definition		
Type Name : SRF_Info		
Comments :		
Type Definition		
SET	{TimeStamp TransitionTimeStamp eventcondition	SMTTimeStamp, SMTTransitionTimeStamp, TBD }

9.2.1.7.8 PMF InfoField Type Definition

ASN.1 Type Definition		
Type Name : PMFGetResponse_INFO		
Comments :		
Type Definition		
SET	{reasoncode timestamp setcount lastsetstaionid getresponseinfo }	ReasonCode_GENERAL, SMTTimeStamp, SMTSetCount DEFAULT { }, SMTLastSetStationId DEFAULT { }, ANY -- requested parameter(s)

ASN.1 Type Definition		
Type Name : PMFSetRequest_INFO		
Comments :		
Type Definition		
SET	{authorization setcount setrequestinfo }	Authorization_GENERAL DEFAULT { }, SMTSetCount DEFAULT { }, ANY

ASN.1 Type Definition		
Type Name : PMFSetResponse_INFO		
Comments :		
Type Definition		
SET	{reasoncode timestamp setcount lastsetstationid setresponseinfo }	ReasonCode_GENERAL, SMTTimeStamp, SMTSetCount, SMTLastSetStationId, ANY

9.2.1.8 Test Suite Operation Definition

Test Suite Operation Definition	
Operation Name	: ECH_DATA(length: INTEGER)
Result Type	: OCTETSTRING
Comments	:
Description	
ECH_DATA is an operator defined any length characters. For example: ECH_DATA(5) = "sgGer" ECH_DATA(21) = "Any Length Characters"	

9.2.2 Parameterizations and Selection of Test Cases

9.2.2.1 Test Suite Parameter Declarations

Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
MIB_INDEX	OCTETSTRING	PIXIT x.x.x	
MAC_INDEX	OCTETSTRING	PIXIT x.x.x	
PATH_INDEX	OCTETSTRING	PIXIT x.x.x	
PORT_INDEX	OCTETSTRING	PIXIT x.x.x	
T_REQ		PIXIT x.x.x	
T_MAX		PIXIT x.x.x	
TVXValue		PIXIT x.x.x	
NodeClass	HEXSTRING	PICS x.x.x	'00'..'01'H
Macct	HEXSTRING	PICS x.x.x	'00'..'FF'H
NonMaster_Ct	HEXSTRING	PICS x.x.x	'00'..'02'H
NodeMaster_Ct	HEXSTRING	PICS x.x.x	'00'..'FF'H

9.2.2.2 Test Case Selection Expressions

Test Case Selection Expression Definitions		
Expression Name	Selection Expression	Comments

9.2.2.3 Test Suite Constant Declaration

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
JK	SYMBOL[2]	'1100010001'B	Start Delimiter
TT	SYMBOL[2]	'0110101101'B	End Delimiter
T	SYMBOL	'01101'B	T Symbol
SET	SYMBOL	'11001'B	SET Symbol
RESET	SYMBOL	'00111'B	RESET Symbol
PAD_1	HEXADECIMAL	00	
PAD_2	HEXADECIMAL	0000	
PAD_3	HEXADECIMAL	000000	
SMT_Directed_Beacon_DA	HEXADECIMAL	800143008000	MSB Representation
SMT_SRF_DA	HEXADECIMAL	800143008008	MSB Representation
AllFDDIConcentratorMACs	HEXADECIMAL	800143008004	MSB Representation
SMT_SBA_DA	HEXADECIMAL	80014300800C	MSB Representation
SMT_Unknown_Address	HEXADECIMAL	00001F000000	MSB Representation
Broadcast	HEXADECIMAL	FFFFFFFFFFFF	MSB Representation

9.2.2.4 Test Suite Variable Declarations

Test Suite Variable Declarations			
Variable Name	Type	Value	Comments
TESTER_ADDRESS	OCTETSTRING(SIZE(6))		Canonical order in HEX value
TESTER_ADDRESS2	OCTETSTRING(SIZE(6))		Canonical order in HEX value
IUT_ADDRESS	OCTETSTRING(SIZE(6))		Canonical order in HEX value
OUI_REF	OCTETSTRING(SIZE(3))		Manufacturer OUI
VENDOR_OCTET	OCTETSTRING(SIZE(1))		Vendor octet
IMPLEMENT_OCTET	OCTETSTRING(SIZE(2))		Implementer octet
PORTINDEX_REF	OCTETSTRING(SIZE(2))	A: B: S: M:	Implementer shall list all PORT Indexes
PATHINDEX_REF	OCTETSTRING(SIZE(2))	primary: secondary: local:	Implementer shall list all PATH Indexes including primary, secondary, and local PATH (if appropriate)
MACINDEX_REF	OCTETSTRING(SIZE(2)) OCTETSTRING(SIZE(2))		Implementer shall list all MAC Indexes on the IUT

9.2.3 Test Case Declarations and Definitions

9.2.3.1 Test Case Variable Declarations

Test Case Variable Declarations			
Variable Name	Type	Value	Comments

9.2.3.2 Timer Declarations

Timer Declarations			
Timer Name	Duration	Unit	Comments
TIMER30	30	sec	Tester timer for the interval between successive iterations of the Neighbor Notification Protocol.
TIMER228	228	sec	Tester timer for the maximum interval between successive NIF receptions from the upstream and downstream neighbors to maintain neighbor information validity.
T_Limit	2	sec	The Rate-limiting interval for the Status Report protocol.
TIMER60	60	sec	The interval of the test timer of which awaits the receiving a frame from the IUT.
TRT	T_REQ	us	Token Rotation Timer
Timer_TVX	TVXvalue	sec	Valid Transmission Timer
D_MAX	1617	us	Maximum Ring Latency Timer
OPR_TIMER	180	sec	Operator Timer during testing when an implicit send event is required.

9.2.3.3 ASN.1 PDU Type Definition**9.2.3.3.1 NIF PDU Type Definition**

ASN.1 PDU Type Definition		
PDU Name: NIF_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length Info FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), NIF_Info, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

9.2.3.3.2 SIF PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name:	SIF_Frame	
PCO Type:		
Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length CHOICE FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), {sifrequest configurationresponse operationresponse SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) } NULL, SIFConf_Res, SIFOper_Res } }

9.2.3.3.3 ECHO PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: ECHO_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length Info FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ECHOData_GENERAL, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

9.2.3.3.4 RAF PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: SBA_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length resourcetype sbacommmand CHOICE FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ResourceType_GENERAL, SBACommmand_GENERAL, {requestallocation SBAResponse_Info, reportallocation NULL, changeallocation SBACHange_Info, requestresponse SBAResponse_Response, reportresponse SBAREport_Response, changeresponse SBACHange_Response } SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

9.2.3.3.5 RDF PDU Type Definitions

ASN.1 PDU Type Definition		
PDU Name: RDF_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length Info FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), RDF_Info, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

9.2.3.3.6 ESF PDU Type Definitions

ASN.1 PDU Type Definition		
PDU Name: ESF_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length Info FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ESF_Info, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

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9.2.3.3.7 SRF PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: SRF_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length Info FCS ED FS_E FS_A FS_C FS_2 FS_T	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SRF_Info, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1)) }

9.2.3.3.8 PMF PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: PMFGetRequest_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length getrequest FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ANY, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

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ASN.1 PDU Type Definition		
PDU Name: PMFGetResponse_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length getresponse FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PMFGetResponse_INFO, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

ASN.1 PDU Type Definition		
PDU Name: PMFSetRequest_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length setrequest FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PMFSetRequest_INFO, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

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ASN.1 PDU Type Definition		
PDU Name: PMFSetResponse_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length setresponse FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PMFSetResponse_INFO, SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

9.2.3.3.9 ERROR PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: ERROR_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

9.2.3.3.10 Synchronous PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name: SYNC_Frame PCO Type: Comments:		
Type Definition		
SEQUENCE	{SD FC DA SA INFO FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), SYMBOL(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)), SYMBOL(SIZE(1))

9.3 Constraint Parts

9.3.1 ASN.1 Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMT73MIB_00
Structured Type	:	SMTMIBGRP_Group
Comments	:	
Constraint Value		
{	smtstationldgrp	SMTStationId_Grp_00,
	smtstationconfiggrp	SMTStationConfig_Grp_00,
	smtstatusgrp	SMTStatus_Grp_00,
	smtmiboperationgrp	SMTMIBOperation_Grp_00,
	maccapabilitiesgrp	MACCapabilities_Grp_00,
	macconfiggrp	MACConfig_Grp_00,
	macaddressgrp	MACAddress_Grp_00,
	macoperationgrp	MACOperation_Grp_00,
	maccountersgrp	MACCounters_Grp_00,
	macframeerrorconditiongrp	MACFrameErrorCondition_Grp_00,
	macnotcopiedconditiongrp	MACNotCopiedCondition_Grp_00,
	macstatusgrp	MACStatus_Grp_00,
	pathconfiggrp	PATHConfig_Grp_00,
	portlergrp	PORTLer_Grp_00,
	portoperationgrp	PORTOperation_Grp_00,
	porterrorctrsgp	PORTErrorCtrs_Grp_00,
	portlergrp	PORTLer_Grp_00,
	portstatusgrp	PORTStatus_Grp_00 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ValidMultiple_PmfGet
Structure Type	:	ValidMultiple_Attributes
Derivation Path	:	
Comments	:	
Constraint Value		
{	stationid opversionid	SMTStationId_PmfGet, SMTOpVersionId_PmfGet }

ASN.1 Type Constraint Declaration	
Constraint Name	: ValidMultiple_Pmf_00
Structure Type	: ValidMultiple_Attributes
Derivation Path	:
Comments	:
Constraint Value	
{	stationid SMTStationId_01, opversionid SMTOpVersionId_01 }

ASN.1 Type Constraint Declaration	
Constraint Name	: InvalidMultiple_PmfGet
Structure Type	: InvalidMultiple_Attributes
Derivation Path	:
Comments	:
Constraint Value	
{	stationid SMTStationId_PmfGet, framestatusfunctions MACFrameStatusFunctions_PmfGet }

ASN.1 Type Constraint Declaration	
Constraint Name	: InvalidMultiple_Pmf_00
Structure Type	: InvalidMultiple_Attributes
Derivation Path	:
Comments	:
Constraint Value	
{	stationid SMTStationId_Q, framestatusfunctions MACFrameStatusFunctions_PmfGet }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ValidMultipleGrp_PmfGet
Structure Type	:	ValidMultiple_Group
Derivation Path	:	
Comments	:	
Constraint Value		
{	smtstationidgrp SMTStationId_Grp_00, smtstationconfiggrp SMTStationConfig_Grp_00	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	ValidMultipleGrp_Pmf_00
Structure Type	:	ValidMultiple_Group
Derivation Path	:	
Comments	:	
Constraint Value		
{	smtstationidgrp SMTStationId_Grp_00, smtstationconfiggrp SMTStationConfig_Grp_00	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	InvalidMultipleGrp_PmfGet
Structure Type	:	InvalidMultiple_Group
Derivation Path	:	
Comments	:	
Constraint Value		
{	smtstationidgrp SMTStationId_Grp_00, capabilitiesgrp MACCapabilities_Grp_PmfGet	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	InvalidMultipleGrp_Pmf_00
Structure Type	:	InvalidMultiple_Group
Derivation Path	:	
Comments	:	
Constraint Value		
{	smtstationidgrp SMTStationId_Grp_00, capabilitiesgrp MACCapabilities_Grp_00	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	UNA_UNKNOWN
Structure Type	:	UNA_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0001'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	una	SMT_Unknown_Address }

ASN.1 Type Constraint Declaration		
Constraint Name	:	StationDescriptor_Q
Structured Type	:	StationDescriptor_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0002'H,
	Parameter_Length	'0004'H,
	NodeClass	('00'H, '01'H),
	Macct	?
	NonMaster_Ct	('00'H, '01'H, '02'H),
	Master_Ct	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	StationState_Q
Structured Type	:	StationState_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0003'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	Topology	Topology_Q,
	DupAddress	DuplAddress_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MsgTimeStamp_Q
Structured Type	:	MsgTimeStamp_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0004'H,
	Parameter_Length	'0008'H,
	msgtimestamp	SMTTimeStampType_Q}

ASN.1 Type Constraint Declaration		
Constraint Name	:	StationPolicies_Q
Structured Type	:	StationPolicies_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0005'H,
	Parameter_Length	'0004'H,
	configpolicy	SMTConfigPolicyType_Q,
	connectionpolicy	SMTConnectionPolicyType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PathLatency_01
Structured Type	:	PathLatency_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0006'H,
	Parameter_Length	'0008'H,
	PORTOutIndex	?,
	PathLatencyRing1	?,
	PORTOutIndex	'0000'H, -- Single attach
	PathLatencyRing2	'0000'H -- Single attach }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNeighbors_Q
Structured Type	:	MACNeighbors_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0007'H,
	Parameter_Length	'0010'H,
	mibindex	MIBINDEX_REF,
	macindex	MACINDEX_REF,
	una	MACUpstreamNbrType_Q,
	dna	MACDownstreamNbrType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PathDescriptor_Q
Structured Type	:	PathDescriptor_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0008'H,
	Parameter_Length	?,
	mibindex	MIBINDEX_REF,
	PortType	CMNPortType_Q,
	ConnectState	PORTConnectStateType_Q,
	RemotePORTType	CMNPortType_Q,
	RemoteMAC	PORTMACIndicatedType_Q,
	ConResourceIndex	'0001'H..'FFFF'H,
	MAC_Addr	?,
	ConResourceIndex	'0001'H..'FFFF'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACStatus_Q
Structured Type	:	MACStatus_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0009'H,
	Parameter_Length	'0028'H,
	mibindex	MIBINDEX_REF,
	macindex	MACINDEX_REF,
	T_Req	MACTReqType_Q,
	T_Neg	MACTNegType_Q,
	T_Max	MACTMaxType_Q,
	TVXValue	MACTVXValueType_Q,
	T_Min	CMNTwosComplementType_Q,
	SBA	PATHSbaPayloadType_Q,
	Frame_Ct	MACFrame_CtType_Q,
	Error_Ct	MACError_CtType_Q,
	Lost_Ct	MACLost_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PortLERStatus_Q
Structured Type	:	PortLERStatus_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000A'H,
	Parameter_Length	'0010'H,
	mibindex	MIBINDEX_REF,
	portindex	PORTINDEX_REF,
	PAD	PAD_1,
	Ler_Cutoff	'04'H..'0F'H,
	Ler_Alarm	'04'H..'0F'H,
	Ler_Estimate	PORTLerExponentType_Q,
	Lem_Reject_Ct	PORTLem_Reject_CtType_Q,
	Lem_Ct	PORTLem_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameCounters_Q
Structured Type	:	MACFrameCounters_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000B'H,
	Parameter_Length	'000C'H,
	mibindex	MIBINDEX_REF,
	macindex	MACINDEX_REF,
	Copied_Ct	MACCopied_CtType_Q,
	Transmit_Ct	MACTransmit_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameNotCopiedCount_Q
Structured Type	:	MACFrameNotCopiedCount_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000C'H,
	Parameter_Length	'0008'H,
	mibindex	MIBINDEX_REF,
	macindex	MACINDEX_REF,
	NotCopied_Ct	MACNotCopied_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACPriorityValues_Q
Structured Type	:	MACPriorityValues_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000D'H,
	Parameter_Length	'0020'H,
	mibindex	MIBINDEX_REF,
	macindex	MACINDEX_REF,
	T_Pri0	MACT_Pri0Type_Q,
	T_Pri1	MACT_Pri1Type_Q,
	T_Pri2	MACT_Pri2Type_Q,
	T_Pri3	MACT_Pri3Type_Q,
	T_Pri4	MACT_Pri4Type_Q,
	T_Pri5	MACT_Pri5Type_Q,
	T_Pri6	MACT_Pri6Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PortElasticityBuffer_Q
Structured Type	:	PortElasticityBuffer_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000E'H,
	Parameter_Length	'0008'H,
	mibindex	MIBINDEX_REF,
	portindex	PORTINDEX_REF,
	EbErrorCt	PORTEBError_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ManufacturerField_Q
Structured Type	:	ManufacturerField_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'000F'H,
	Parameter_Length	'0020'H,
	manuf_data	SMTManufacturerDataType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	UserField_Q
Structured Type	:	UserField_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0010'H,
	Parameter_Length	'0020'H,
	user_data	SMTUserDataType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ECHOData_MAX
Structured Type	:	ECHOData_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0011'H,
	Parameter_Length	'1166'H,
	echo_data	ECH_DATA(4454) } -- maximum length of ECHO data

ASN.1 Type Constraint Declaration		
Constraint Name	:	ReasonCode_Q
Structured Type	:	ReasonCode_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0012'H,
	Parameter_Length	'0004'H,
	reason	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	RejectedFrame_Q
Structured Type	:	RejectedFrame_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0013'H,
	Parameter_Length	?,
	PAD	PAD_2,
	rejected_frame_beginning	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTSupportedVersions_Q
Structured Type	:	SMTSupportedVersions_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0014'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2 OR NULL,
	numVersions	?,
	indexOpVersion	?,
	Version_1	?,
	Version_2	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTSupportedVersions_73	
Structured Type		: SMTSupportedVersions_GENERAL	
Derivation Path		: SMTSupportedVersions_Q	
Comments		:	
Constraint Value			
REPLACE	PAD	BY	PAD_2,
REPLACE	numVersions	BY	‘02’H,
REPLACE	indexOpVersion	BY	‘02’H,
REPLACE	Version_1	BY	‘0001’H,
REPLACE	Version_2	BY	‘0002’H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ResourceType_01	
Structured Type	:	ResourceType_GENERAL	
Derivation Path	:		
Comments	:		
Constraint Value			
{	Parameter_Type	'0015'H,	
	Parameter_Length	'0004'H,	
	Resource_Type	'00000001'H	}

ASN.1 Type Constraint Declaration			
Constraint Name		: SBACommand_Request	
Structured Type		: SBACommand_GENERAL	
Derivation Path		:	
Comments		: SBA Request Allocation Command	
Constraint Value			
{	Parameter_Type	'0016'H,	
	Parameter_Length	'0004'H,	
	SbaCommand	'00000001'H	}

ASN.1 Type Constraint Declaration			
Constraint Name	: SBACommand_Report		
Structured Type	: SBACommand_GENERAL		
Derivation Path	: SBACommand_Request		
Comments	: SBA Report Allocation Command		
Constraint Value			
REPLACE	SbaCommand	BY	‘00000002’H

ASN.1 Type Constraint Declaration			
Constraint Name		: SBACommand_Change	
Structured Type		: SBACommand_GENERAL	
Derivation Path		: SBACommand_Request	
Comments		: SBA Change Allocation Command	
Constraint Value			
REPLACE	SbaCommand	BY	'00000003'H

ASN.1 Type Constraint Declaration			
Constraint Name		: SBAPayloadRequest_Q	
Structured Type		: SBAPayloadRequest_GENERAL	
Derivation Path		:	
Comments		:	
Constraint Value			
{	Parameter_Type	'0017'H,	
	Parameter_Length	'0004'H,	
	SbaRequest	? }	

ASN.1 Type Constraint Declaration			
Constraint Name	:	SBAPayloadRequest_00	
Structured Type	:	SBAPayloadRequest_GENERAL	
Derivation Path	:		
Comments	:		
Constraint Value			
{	Parameter_Type	'0017'H,	
	Parameter_Length	'0004'H,	
	SbaRequest	'00000000'H	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAOverheadRequest_Q
Structured Type	:	SBAOverheadRequest_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0018'H,
	Parameter_Length	'0004'H,
	SbaOverheadReq	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAOverheadRequest_00
Structured Type	:	SBAOverheadRequest_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0018'H,
	Parameter_Length	'0004'H,
	SbaOverheadReq	'00000000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAAllocationAddress_TESTER
Structured Type	:	SBAAllocationAddress_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0019'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	SbaAllocationAddr	TESTER_ADDRESS }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAAllocationAddress_IUT
Structured Type	:	SBAAllocationAddress_GENERAL
Derivation Path	:	SBAAllocationAddress_TESTER
Comments	:	
Constraint Value		
REPLACE	SbaAllocationAddr	BY IUT_ADDRESS

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBACatagory_Q
Structured Type	:	SBACatagory_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'001A'H,
	Parameter_Length	'0004'H,
	Catagory	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: SBACatagory_00	
Structured Type		: SBACatagory_GENERAL	
Derivation Path		: SBACatagory_Q	
Comments		: Catagory not supported or unknown	
Constraint Value			
REPLACE	Catagory	BY	'00000000'H

ASN.1 Type Constraint Declaration			
Constraint Name		: SBACatagory_01	
Structured Type		: SBACatagory_GENERAL	
Derivation Path		: SBACatagory_Q	
Comments		: Static Allocation	
Constraint Value			
REPLACE	Catagory	BY	'00000001'H

ASN.1 Type Constraint Declaration			
Constraint Name		: SBACatagory_02	
Structured Type		: SBACatagory_GENERAL	
Derivation Path		: SBACatagory_Q	
Comments		: Allocator defined classification for the bandwidth	
Constraint Value			
REPLACE	Catagory	BY	'00000002'H..'FFFFFFFF'H

ASN.1 Type Constraint Declaration		
Constraint Name	:	MaximumT_Neg_Q
Structured Type	:	MaximumT_Neg_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'001B'H,
	Parameter_Length	'0004'H,
	MaxTneg	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MinimumSBASegment_Q
Structured Type	:	MinimumSBASegment_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'001C'H,
	Parameter_Length	'0004'H,
	MinSegment	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAAllocatable_Q
Structured Type	:	SBAAllocatable_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'001D'H,
	Parameter_Length	'0004'H,
	SbaAllocatable	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SBAAllocatable_00
Structured Type	:	SBAAllocatable_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'001D'H,
	Parameter_Length	'0004'H,
	SbaAllocatable	'00000000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	Authorization_Q
Structured Type	:	Authorization_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'0021'H,
	Parameter_Length	?,
	Authorization	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ESFID_Q
Structured Type	:	ESFID_GENERAL
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'FFFF'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	ESF_ID	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	DuplAddress_Q
Structured Type	:	DuplAddressType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	DuplAddress_00
Structured Type	:	DuplAddressType
Derivation Path	:	
Comments	:	my duplicate -- fddiMACDA_Flag for this MAC
Constraint Value		
'00000001'B,		

ASN.1 Type Constraint Declaration		
Constraint Name	:	DuplAddress_01
Structured Type	:	DuplAddressType
Derivation Path	:	
Comments	:	my UNA duplicate -- fddiMACUNDA_Flag for this MAC
Constraint Value		
'00000010'B,		

ASN.1 Type Constraint Declaration				
Constraint Name		: ECHOData_MIN		
Structured Type		: ECHOData_GENERAL		
Derivation Path		: ECHOData_MAX		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0000'H,	
REPLACE	echo_data	BY	NULL	-- null data

ASN.1 Type Constraint Declaration				
Constraint Name		: ECHOData_SMTMAX		
Structured Type		: ECHOData_GENERAL		
Derivation Path		: ECHOData_MAX		
Comments		: maximum length of SMT Infocfield		
Constraint Value				
REPLACE	Parameter_Length	BY	'117E'H,	
REPLACE	echo_data	BY	ECH_DATA(4458)	

ASN.1 Type Constraint Declaration				
Constraint Name		: ECHOData_INVALID		
Structured Type		: ECHOData_GENERAL		
Derivation Path		: ECHOData_MAX		
Comments		: maximum length of SMT Infocfield		
Constraint Value				
REPLACE	Parameter_Length	BY	'1194'H,	
REPLACE	echo_data	BY	ECH_DATA(4500)	

ASN.1 Type Constraint Declaration				
Constraint Name		: PathLatency_02		
Structured Type		: PathLatency_GENERAL		
Derivation Path		:		
Comments		:		
Constraint Value				
REPLACE	PORTOutIndex	BY	'0001'..'FFFF'H,	-- Dual attach
REPLACE	PathLatencyRing2	BY	'0001'..'FFFF'H	-- Dual attach

ASN.1 Type Constraint Declaration			
Constraint Name		:	ReasonCode_01
Structured Type		:	ReasonCode_GENERAL
Derivation Path		:	ReasonCode_Q
Comments		:	frame class not supported
Constraint Value			
REPLACE	reason	BY	'00000001'H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_02	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	frame version not supported	
Constraint Value			
REPLACE	reason	BY	'00000002'H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_03	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	success	
Constraint Value			
REPLACE	reason	BY	'00000003'H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_04	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	bad set count	
Constraint Value			
REPLACE	reason	BY	'00000004'H

ASN.1 Type Constraint Declaration			
Constraint Name		: ReasonCode_05	
Structured Type		: ReasonCode_GENERAL	
Derivation Path		: ReasonCode_Q	
Comments		: illegal operation	
Constraint Value			
REPLACE	reason	BY	‘00000005’H

ASN.1 Type Constraint Declaration			
Constraint Name		: ReasonCode_06	
Structured Type		: ReasonCode_GENERAL	
Derivation Path		: ReasonCode_Q	
Comments		: no parameter	
Constraint Value			
REPLACE	reason	BY	'00000006'H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_08	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	out of range	
Constraint Value			
REPLACE	reason	BY	‘00000008’H

ASN-1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_09	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	not authorized	
Constraint Value			
REPLACE	reason	BY	‘00000009’H

ASN.1 Type Constraint Declaration			
Constraint Name		: ReasonCode_0A	
Structured Type		: ReasonCode_GENERAL	
Derivation Path		: ReasonCode_Q	
Comments		: length error	
Constraint Value			
REPLACE	reason	BY	‘0000000A’H

ASN.1 Type Constraint Declaration			
Constraint Name	:	ReasonCode_0B	
Structured Type	:	ReasonCode_GENERAL	
Derivation Path	:	ReasonCode_Q	
Comments	:	frame too long	
Constraint Value			
REPLACE	reason	BY	'0000000B'H

ASN.1 Type Constraint Declaration			
Constraint Name		: ReasonCode_0D	
Structured Type		: ReasonCode_GENERAL	
Derivation Path		: ReasonCode_Q	
Comments		: sba denied	
Constraint Value			
REPLACE	reason	BY	'0000000D'H

ASN.1 Type Constraint Declaration			
Constraint Name		: StationDescriptor_01	
Structured Type		: StationDescriptor_GENERAL	
Derivation Path		: StationDescriptor_Q	
Comments		: tester description for a single MAC DAS FDDI Station	
Constraint Value			
REPLACE	NodeClass	BY	'00'H,
REPLACE	Macct	BY	'01'H,
REPLACE	NonMaster_Ct	BY	'02'H,
REPLACE	Master_Ct	BY	'00'H

ASN.1 Type Constraint Declaration			
Constraint Name		: StationState_01	
Structured Type		: StationState_GENERAL	
Derivation Path		: StationState_Q	
Comments		: Normal FDDI Asynchronous operation	
Constraint Value			
REPLACE	Topology	BY	TopologyType_01,
REPLACE	DupAddress	BY	DuplAddress_Q

ASN.1 Type Constraint Declaration	
Constraint Name	: Topology_Q
Structured Type	: TopologyType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: Topology_01
Structured Type	: TopologyType
Derivation Path	:
Comments	: Normal FDDI Asynchronous operation with SRF enabled by default
Constraint Value	
'00100000'B,	

ASN.1 Type Constraint Declaration	
Constraint Name	: Topology_02
Structured Type	: TopologyType
Derivation Path	:
Comments	: Synchronous service and SRF enabled.
Constraint Value	
'01100000'B,	

ASN.1 Type Constraint Declaration	
Constraint Name	: SbaPayloadType_Q
Structured Type	: SbaPayloadType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration			
Constraint Name	:	SbaAvailableType_Q	
Structured Type	:	SbaAvailableType	
Derivation Path	:		
Comments	:		
Constraint Value			
{	sbaavailable	0..12500	}

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTSupportedVersions_62	
Structured Type	:	SMTSupportedVersions_GENERAL	
Derivation Path	:		
Comments	:	Check if version 62 has this format!!	
Constraint Value			
REPLACE	numVersions	BY	'01'H,
REPLACE	indexOpVersion	BY	'01'H,
OMIT	Version_2		

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTSupportedVersions_XX	
Structured Type	:	SMTSupportedVersions_GENERAL	
Derivation Path	:	SMTSupportedVersion_73	
Comments	:		
Constraint Value			
REPLACE	Parameter_Length	BY	?,
REPLACE	PAD	BY	PAD_2,
REPLACE	numVersions	BY	'01'H..'FF'H,
REPLACE	indexOpVersion	BY	'01'H..'FF'H
REPLACE	Version_1	BY	'0000'H..'FFFF'H,
REPLACE	Version_n	BY	'0000'H..'FFFF'H,
REPLACE	PAD	BY	?

ASN.1 Type Constraint Declaration			
Constraint Name	:	UNA_IUT	
Structure Type	:	UNA_GENERAL	
Derivation Path	:	UNA_UNKNOWN	
Comments	:		
Constraint Value			
REPLACE	una	BY	IUT_ADDRESS

ASN.1 Type Constraint Declaration			
Constraint Name		:	UNA_TESTER
Structure Type		:	UNA_GENERAL
Derivation Path		:	UNA_UNKNOWN
Comments		:	
Constraint Value			
REPLACE	una	BY	TESTER_ADDRESS

ASN.1 Type Constraint Declaration			
Constraint Name		:	UNA_TESTER2
Structure Type		:	UNA_GENERAL
Derivation Path		:	UNA_UNKNOWN
Comments		:	
Constraint Value			
REPLACE	una	BY	TESTER_ADDRESS2

9.3.1.1 ASN.1 Type Constraint for SMT Attributes

9.3.1.1.1 SMT Station ID Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTStationId_Grp_00	
Structured Type	:	SMTStationId_Group	
Comments	:		
Constraint Value			
{	stationid	SMTStationId_01,	
	opversionid	SMTOpVersionId_01,	
	hiversionid	SMTHiVersionId_01,	
	loversionid	SMTLoVersionId_01,	
	manufacturerdata	SMTManufacturerData_01,	-- optional
	userdata	SMTUserData_01,	
	mibversionid	SMTMIBVersionId_01 }	

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTStationIdGrp_PmfReq	
Structured Type	:	GroupAttribute	
Comments	:		
Constraint Value			
{	ParameterType	'100A'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTStationId_01	
Structured Type		: SMTStationId	
Derivation Path		:	
Comments		:	
Constraint Value			
{	Parameter_Type	'100A'H,	
	Parameter_Length	'0008'H,	
	stationidtype	SMTStationIdentifierType_Q	}

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTStationId_PmfReq	
Structured Type		: SMTStationId	
Derivation Path		: SMTStationId_01	
Comments		:	
Constraint Value			
REPLACE OMIT	Parameter_Length stationidtype	BY	'0000'H,

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTOpVersionId_01
Structured Type	:	SMTOpVersionId
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘100D’H,
	Parameter_Length	‘0008’H,
	PAD	PAD_2,
	opversionidtype	‘0002’H }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTOpVersionId_PmfReq	
Structured Type		: SMTOpVersionId	
Derivation Path		: SMTOpVersionId_01	
Comments		:	
Constraint Value			
REPLACE OMIT OMIT	Parameter_Length PAD, opversionidtype	BY	‘0000’H,

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHiVersionId_01
Structured Type	:	SMTHiVersionId
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'100D'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	hiversionidtype	'0002'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHiVersionId_PmfReq
Structured Type	:	SMTHiVersionId
Derivation Path	:	SMTHiVersionId_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	hiversionidtype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTLoVersionId_01
Structured Type	:	SMTLoVersionId
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'100D'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	loversionidtype	'0001'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTLoVersionId_PmfReq
Structured Type	:	SMTLoVersionId
Derivation Path	:	SMTLoVersionId_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	loversionidtype	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTManufacturerData_01
Structured Type	: SMTManufacturerData
Derivation Path	:
Comments	:
Constraint Value	
{	Parameter_Type '1010'H, Parameter_Length '0032'H, manufacturerdatatype SMTManufacturerDataType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTManufacturerData_PmfReq
Structured Type	: SMTManufacturerData
Derivation Path	: SMTManufacturerData_01
Comments	:
Constraint Value	
REPLACE OMIT	Parameter_Length BY '0000'H, manufacturerdatatype

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTMIBVersionId_Q
Structured Type	: SMTMIBVersionId
Derivation Path	:
Comments	:
Constraint Value	
{	Parameter_Type '100D'H, Parameter_Length '0008'H, PAD PAD_2, mibversionidtype '0002'H }

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTMIBVersionId_PmfReq
Structured Type	: SMTMIBVersionId
Derivation Path	: SMTMIBVersionId_Q
Comments	:
Constraint Value	
REPLACE OMIT OMIT	Parameter_Length BY '0000'H, PAD, mibversionidtype

9.3.1.1.2 SMT Station Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationConfig_Grp_00
Structured Type	:	SMTStationConfig_Group
Comments	:	
Constraint Value		
{	macct	SMTMac_Ct_01,
	nonmasterct	SMTNonMaster_Ct_01,
	masterct	SMTMaster_Ct_01,
	availablepaths	SMTAvailablePaths_01,
	configcapabilities	SMTConfigCapabilities_01,
	configpolicy	SMTConfigPolicy_01,
	connectionpolicy	SMTConnectionPolicy_01,
	tnotify	SMTT_Notify_01,
	statrptpolicy	SMTStatRptPolicy_01,
	tracemacexpiration	SMTTrace_MaxExpiration_01,
	portindexes	SMTPORTIndexes_01,
	macindexes	SMTMACIndexes_01,
	bypasspresent	SMTBypassPresent_01 }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTStationConfigGrp_PmfReq	
Structured Type		: GroupAttribute	
Comments		:	
Constraint Value			
{	ParameterType	'10014'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMac_Ct_01
Structured Type	:	SMTMac_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1015'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	macctype	? }

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTMac_Ct_PmfReq		
Structured Type		: SMTMac_Ct		
Derivation Path		: SMTMac_Ct_01		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0000'H,	
OMIT	PAD,			
OMIT	macctype			

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTNonMaster_Ct_01
Structured Type	:	SMTNonMaster_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD nonmastercttype	'1016'H, '0004'H, PAD_2, ? }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTNonMaster_Ct_PmfReq	
Structured Type		: SMTNonMaster_Ct	
Derivation Path		: SMTNonMaster_Ct_01	
Comments		:	
Constraint Value			
REPLACE OMIT OMIT	Parameter_Length PAD, nonmastercttype	BY	'0000'H,

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMaster_Ct_01
Structured Type	:	SMTMaster_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘1017’H,
	Parameter_Length	‘0004’H,
	PAD	PAD_2,
	mastercttype	? }

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTMaster_Ct_PmfReq		
Structured Type		: SMTMaster_Ct		
Derivation Path		: SMTMaster_Ct_01		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0000'H,	
OMIT	PAD,			
OMIT	mastercttype			

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTAvailablePaths_01	
Structured Type	:	SMTAvailablePaths	
Derivation Path	:		
Comments	:		
Constraint Value			
{	Parameter_Type	'1018'H,	
	Parameter_Length	'0004'H,	
	{	PAD	PAD_1,
	availablepathstype	CMNAvailablePathsType_Q	} }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTAvailablePaths_PmfReq	
Structured Type		: SMTAvailablePaths	
Derivation Path		: SMTAvailablePaths_01	
Comments		:	
Constraint Value			
REPLACE	Parameter_Length	BY	'0000'H,
REPLACE	PAD,		
REPLACE	availablepathstype		

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConfigCapabilities_01
Structured Type	:	SMTConfigCapabilities
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1019'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	capabilitiesstype	SMTCapabilitiesType_Q}

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTConfigCapabilities_PmfReq		
Structured Type		: SMTConfigCapabilities		
Derivation Path		: SMTConfigCapabilities_01		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0000'H,	
OMIT	PAD,			
OMIT	capabilities_type			

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConfigPolicy_01
Structured Type	:	SMTConfigPolicy
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD configpolicytype	‘100A’H, ‘0008’H, PAD_2, SMTConfigPolicyType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTConfigPolicy_PmfReq	
Structured Type		: SMTConfigPolicy	
Derivation Path		: SMTConfigPolicy_01	
Comments		:	
Constraint Value			
REPLACE OMIT OMIT	Parameter_Length PAD, configpolicytype	BY	'0000'H,

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTConnectionPolicy_01	
Structured Type		: SMTConnectionPolicy	
Derivation Path		:	
Comments		:	
Constraint Value			
{	Parameter_Type	‘100B’H,	
	Parameter_Length	‘0004’H,	
	PAD	PAD_2,	
	connectionpolicytype	ConnectionPolicyType_Q	}

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTConnectionPolicy_PmfReq	
Structured Type		: SMTConnectionPolicy	
Derivation Path		: SMTConnectionPolicy_01	
Comments		:	
Constraint Value			
REPPACE OMIT OMIT	Parameter_Length PAD, connectionpolicytype	BY	‘0000’H,

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTT_Notify_01
Structured Type	:	SMTT_Notify
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘101D’H,
	Parameter_Length	‘0004’H,
	PAD	PAD_2,
	tnotifytype	SMTT_NotifyType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTT_Notify_PmfReq	
Structured Type		: SMTT_Notify	
Derivation Path		: SMTT_Notify_01	
Comments		:	
Constraint Value			
REPLACE	Parameter_Length	BY	‘0000’H,
OMIT	PAD,		
OMIT	tnotifytype		

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatRptPolicy_01
Structured Type	:	SMTStatRptPolicy
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'101E'H,
	Parameter_Length	'0004'H,
	PAD	PAD_1,
	statrptpolicy	TRUE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatRptPolicy_PmfReq
Structured Type	:	SMTStatRptPolicy
Derivation Path	:	SMTStatRptPolicy_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	statrptpolicytype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTTrace_MaxExpiration_01
Structured Type	:	SMTTrace_MaxExpiration
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'101F'H,
	Parameter_Length	'0004'H,
	tracemaxexpirationtype	CMNTime_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTTrace_MaxExpiration_PmfReq
Structured Type	:	SMTTrace_MaxExpiration
Derivation Path	:	SMTTrace_MaxExpiration_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	tracemaxexpirationtype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPORTIndexes_01
Structured Type	:	SMTPORTIndexes
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1020'H,
	Parameter_Length	?,
	PAD	PAD_2 or NULL,
	portindexestype	SET OF CMNResourceId_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPORTIndexes_PmfReq
Structured Type	:	SMTPORTIndexes
Derivation Path	:	SMTPORTIndexes_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	portindexestype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMACIndexes_01
Structured Type	:	SMTMACIndexes
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1021'H,
	Parameter_Length	'0004'H,
	PAD	PAD_1,
	macindexestype	SET OF CMNResourceId_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMACIndexes_PmfReq
Structured Type	:	SMTMACIndexes
Derivation Path	:	SMTMACIndexes_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	macindexestype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTBypassPresent_01
Structured Type	:	SMTBypassPresent
Derivation Path	:	
Comments	:	IUT has a bypass switch
Constraint Value		
{	Parameter_Type	'1022'H,
	Parameter_Length	'0004'H,
	PAD	PAD_1,
	bypassresenttype	TRUE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTBypassPresent_PmfReq
Structured Type	:	SMTBypassPresent
Derivation Path	:	SMTBypassPresent_01
Comments	:	IUT has a bypass switch
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	bypasspresent	

9.3.1.1.3 SMT Status Group Attribute Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatus_Grp_00
Structured Type	:	SMTStatus_Group
Comments	:	
Constraint Value		
{	ecmstate	SMTECMState_01,
	cfstate	SMTCF_State_01,
	holdstate	SMTHoldState_01,
	remotedisconnectflag	SMTRemoteDisconnectFlag_01, -- optional
	stationstatus	SMTStationStatus_01,
	peerwrapflag	SMTPeerWrapFlag_01 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatusGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'10028'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTECMState_01
Structured Type	:	SMTECMState
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1029'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	ecmstatetype	SMTECMStateType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTCF_State_01
Structured Type	:	SMTCF_State
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'102A'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	cfstatetype	SMTCF_StateType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHoldState_01
Structured Type	:	SMTHoldState
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'102B'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	holdstatetype	SMTHoldStateType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTRemoteDisconnectFlag_01
Structured Type	:	SMTRemoteDisconnectFlag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'102C'H,
	Parameter_Length	'0004'H,
	PAD	PAD_1,
	remotedisconnectflagtype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationStatus_01
Structured Type	:	SMTStationStatus
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'102D'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	stationstatustype	SMTStatus_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPeerWrapFlag_01
Structured Type	:	SMTPeerWrapFlag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'102E'H,
	Parameter_Length	'0004'H,
	PAD	PAD_1,
	peerwrapflagtype	FALSE }

9.3.1.1.4 SMT MIB Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTMIBOperation_Grp_00	
Structured Type	:	SMTMIBOperation_Group	
Comments	:		
Constraint Value			
{	timestamp	SMTTimeStamp_01,	
	transitiontimestamp	SMTTransitionTimeStamp_01,	
	setcount	SMTSetCount_01,	-- optional
	lastsetstationid	SMTLastSetStationId_01	-- optional }

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTMIBOperationGrp_PmfReq	
Structured Type	:	GroupAttribute	
Comments	:		
Constraint Value			
{	ParameterType	'10032'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTTimeStamp_01	
Structured Type	:	SMTTimeStamp	
Derivation Path	:		
Comments	:		
Constraint Value			
{	Parameter_Type	'1033'H,	
	Parameter_Length	'0008'H,	
	timestamptype	CMNTimeStampType_Q	}

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTTransitionTimeStamp_01	
Structured Type	:	SMTTransitionTimeStamp	
Derivation Path	:		
Comments	:		
Constraint Value			
{	Parameter_Type	'1034'H,	
	Parameter_Length	'0008'H,	
	transitiontimestamptype	CMNTimeStampType_Q	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTSetCount_01
Structured Type	:	SMTSetCount
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1035'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	setcounttype	SMTSetCountType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTLastSetStationId_01
Structured Type	:	SMTLastSetStationId
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'1036'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	lastsetstationidtype	SMTStationIdentifierType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTVendorAttrib_01
Structured Type	:	SMTVendorAttrib
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'10FF'H,
	Parameter_Length	?,
	PAD	?,
	vendorattrib	CMNVendorMIBType_Q}

9.3.1.2 ASN.1 Type Constraint for MAC Attributes

9.3.1.2.1 MAC Capabilities Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCapabilities_Grp_00
Structured Type	:	MACCapabilities_Group
Comments	:	
Constraint Value		
{	framestatusfunctions	MACFrameStatusFunctions_01,
	bridgefunctions	MACBridgeFunctions_01,
	tmaxcapability	MACT_MaxCapability_01,
	tvxcapability	MACTVXCapability_01 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCapabilitiesGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'200A'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameStatusFunctions_01
Structured Type	:	MACFrameStatusFunctions
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'200B'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	framestatusfunctionstype	MACFS_Functions_00 }

ASN.1 Type Constraint Declaration				
Constraint Name		:	MACFrameStatusFunctions_Q	
Structured Type		:	MACFrameStatusFunctions	
Derivation Path		:	MACFrameStatusFunctions_01	
Comments		:		
Constraint Value				
REPLACE	fsfunctions	BY	MACFS_Functions_Q	}

ASN.1 Type Constraint Declaration			
Constraint Name		: MACFrameStatusFunctions_PmfReq	
Structured Type		: MACFrameStatusFunctions	
Derivation Path		: MACFrameStatusFunctions_01	
Comments		:	
Constraint Value			
REPLACE	Parameter_Length	BY	‘0000’H,
OMIT	PAD,		
OMIT	macindex,		
OMIT	PAD,		
OMIT	fsfunctions		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACBridgeFunction_01
Structured Type	:	MACBridgeFunctions
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘200C’H,
	Parameter_Length	‘0008’H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	bridgetype	MACBridgeType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACBridgeFunction_PmfReq	
Structured Type		: MACBridgeFunctions	
Derivation Path		: MACBridgeFunction_01	
Comments		:	
Constraint Value			
REPLACE	Parameter_Length	BY	‘0000’H,
OMIT	PAD,		
OMIT	macindex,		
OMIT	PAD,		
OMIT	bridgetype		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_MaxCapability_01
Structured Type	:	MACT_MaxCapability
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'200D'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tmaxcapabilitytype	CMNTwosComplementType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_MaxCapability_PmfReq
Structured Type	:	MACT_MaxCapability
Derivation Path	:	MACT_MaxCapability_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0000'H,
OMIT	PAD,	
OMIT	macindex,	
OMIT	tmaxcapabilitytype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTVXCapability_01
Structured Type	:	MACTVXCapability
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'200E'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tvacabilitytype	CMNTwosComplementType_Q }

ASN.1 Type Constraint Declaration				
Constraint Name		: MACTVXCapability_PmfReq		
Structured Type		: MACTVXCapability		
Derivation Path		: MACTVXCapability_01		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0000'H,	
OMIT	PAD,			
OMIT	macindex,			
OMIT	tvxcapabilitytype			

9.3.1.2.2 MAC Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACConfig_Grp_00
Structured Type	:	MACConfig_Group
Comments	:	
Constraint Value		
{	availablepaths	MACAvailablePaths_01,
	currentpath	MACCurrentPath_01,
	upstreamnbr	MACUpstreamNbr_01,
	downstreamnbr	MACDownstreamNbr_01,
	oldupstreamnbr	MACOldUpstreamNbr_01,
	olddownstreamnbr	MACOldDownstreamNbr_01,
	dupaddresstest	MACDupAddressTest_01,
	requestedpaths	MACRequestedPaths_01,
	downstreamporttype	MACDownstreamPORTType_01,
	macindex	MACIndex_01 }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACConfigGrp_PmfReq	
Structured Type		: GroupAttribute	
Comments		:	
Constraint Value			
{	ParameterType	'2014'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACAvailablePaths_01
Structured Type	:	MACAvailablePaths
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2016'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	availablepathstype	CMNAvailablePathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCurrentPath_01
Structured Type	:	MACCurrentPath
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2017'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	currentpathstype	CMNCurrentPathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUpstreamNbr_01
Structured Type	:	MACUpstreamNbr
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2018'H,
	Parameter_Length	'000C'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	upstreamnbrtype	CMNLongAddress_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamNbr_01
Structured Type	:	MACDownstreamNbr
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2019'H,
	Parameter_Length	'000C'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	downstreamnbrtype	CMNLongAddressType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamNbr_Pmf_00
Structured Type	:	MACDownstreamNbr
Derivation Path	:	MACDownstreamNbr_01
Comments	:	
Constraint Value		
REPLACE	Parameter_Length	BY '0004'H,
OMIT	PAD,	
OMIT	macindex,	
OMIT	PAD,	
OMIT	downstreamnbrtype	

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldUpstreamNbr_01
Structured Type	:	MACOldUpstreamNbr
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'201A'H,
	Parameter_Length	'000C'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	oldupstreamnbrtype	CMNLongAddressType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACOldUpstreamNbr_Pmf_00	
Structured Type		: MACOldUpstreamNbr	
Derivation Path		: MACOldUpstreamNbr_01	
Comments		:	
Constraint Value			
REPLACE	Parameter_Length	BY	'0004'H,
OMIT	PAD,		
OMIT	macindex,		
OMIT	PAD,		
OMIT	oldupstreamnbrtype		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldDownstreamNbr_01
Structured Type	:	MACOldDownstreamNbr
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'201B'H,
	Parameter_Length	'000C'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	olddownstreamnbrtype	CMNLongAddressType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDupAddressTest_01
Structured Type	:	MACDupAddressTest
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'201D'H,
	Parameter_Length	'0004'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	dupaddresstesttest	MACDupAddressTestType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRequestedPaths_01
Structured Type	:	MACRequestedPaths
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2020'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	requestedpathstype	CMNPermittedPathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamPORTType_01
Structured Type	:	MACDownstreamPORTType
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2021'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	downstreamporttype	CMNPortType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACIndex_01
Structured Type	:	MACIndex
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2022'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	macindextype	CMNResourceIdType_Q }

9.3.1.2.3 MAC Address Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	MACAddress_Grp_00	
Structured Type	:	MACAddress_Group	
Comments	:		
Constraint Value			
{	smtaddress	MACSMTAddress_01,	
	longgrpaddress	MACLong_QAddress_01,	-- optional when HP
	shortgrpaddress	MACShort_QAddress_01	-- optional when HP }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACAddressGrp_PmfReq	
Structured Type		: GroupAttribute	
Comments		:	
Constraint Value			
{	ParameterType	'2028'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACSMTAddress_01
Structured Type	:	MACSMTAddress
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2029'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	smtaddersstype	CMNLongAddress_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLongGrpAddress_01
Structured Type	:	MACLongGrpAddress
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'202C'H,
	Parameter_Length	?,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	longgrpaddresstype	SET OF CMNLongAddress_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACShortGrpAddress_01
Structured Type	:	MACShortGrpAddress
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'202D'H,
	Parameter_Length	?,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	shortgrpaddresstype	SET OF MACShortAddressType_Q }

9.3.1.2.4 MAC Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOperation_Grp_00
Structured Type	:	MACOperation_Group
Comments	:	
Constraint Value		
{	treq	MACT_Req_01,
	tneg	MACT_Neg_01,
	tmax	MACT_Max_01,
	tvxvalue	MACTvxValue_01,
	tpri0	MACT_Pri0_01, -- optional when HP
	tpri1	MACT_Pri1_01, -- optional when HP
	tpri2	MACT_Pri2_01, -- optional when HP
	tpri3	MACT_Pri3_01, -- optional when HP
	tpri4	MACT_Pri4_01, -- optional when HP
	tpri5	MACT_Pri5_01, -- optional when HP
	tpri6	MACT_Pri6_01 -- optional when HP }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOperationGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType Parameter_Length	'2032'H, '0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Req_01
Structured Type	:	MACT_Req
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD macindex treqtype	'2033'H, '0008'H, PAD_2, MACINDEX_REF, MACTReqType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Neg_01
Structured Type	:	MACT_Neg
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD macindex tnegtype	'2034'H, '0008'H, PAD_2, MACINDEX_REF, MACT_NegType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Max_01
Structured Type	:	MACT_Max
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2035'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tmaxtype	MACTMaxType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxValue_01
Structured Type	:	MACTvxValue
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2036'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tvxvaluetype	MACTVXValueType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri0_01
Structured Type	:	MACT_Pri0
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2038'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri0type	MACT_Pri0Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri1_01
Structured Type	:	MACT_Pri1
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2039'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri1type	MACT_Pri1Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri2_01
Structured Type	:	MACT_Pri2
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'203A'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri2type	MACT_Pri2Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri3_01
Structured Type	:	MACT_Pri3
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'203B'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri3type	MACT_Pri3Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri4_01
Structured Type	:	MACT_Pri4
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'203C'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri4type	MACT_Pri4Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri5_01
Structured Type	:	MACT_Pri5
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'203D'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri5type	MACT_Pri5Type_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri6_01
Structured Type	:	MACT_Pri6
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'203E'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tpri6type	MACT_Pri6Type_Q }

9.3.1.2.5 MAC Counters Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	MACCounters_Grp_00	
Structured Type	:	MACCounters_Group	
Comments	:		
Constraint Value			
{	framect	MACFrame_Ct_01,	
	copiedct	MACCopied_Ct_01,	
	transmitct	MACTransmit_Ct_01,	
	tokenct	MACToken_Ct_01,	-- optional when HP
	errorct	MACError_Ct_01,	
	lostct	MACLost_Ct_01,	
	tvxexpiredct	MACTvxExpired_Ct_01,	-- optional when HP
	notcopiedct	MACNotCopied_Ct_01,	-- optional when HP
	latect	MACLate_Ct_01,	-- optional when HP
	ringopct	MACRingOp_Ct_01	-- optional when HP }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCountersGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'2046'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrame_Ct_01
Structured Type	:	MACFrame_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘2047’H,
	Parameter_Length	‘0008’H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	framectype	MACFrame_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCopied_Ct_01
Structured Type	:	MACCopied_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2048'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	copiedcttype	MACCopied_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTransmit_Ct_01
Structured Type	:	MACTransmit_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2049'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	transmitcttype	MACTransmit_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACToken_Ct_01
Structured Type	:	MACToken_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'204A'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tokencttype	MACToken_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACError_Ct_01
Structured Type	:	MACError_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2051'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	errorctype	MACError_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLost_Ct_01
Structured Type	:	MACLost_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2052'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	lostctype	MACLost_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxExpired_Ct_01
Structured Type	:	MACTvxExpired_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2053'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	tvexpiredctype	MACTvxExpired_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopied_Ct_01
Structured Type	:	MACNotCopied_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2054'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	notcopiedcttype	MACNotCopied_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLate_Ct_01
Structured Type	:	MACLate_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2055'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	latecttype	MACLate_CtType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRingOp_Ct_01
Structured Type	:	MACRingOp_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2056'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	ringopcttype	MACRingOp_CtType_Q }

9.3.1.2.6 MAC Frame Error Condition Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorCondition_Grp_00
Structured Type	:	MACFrameErrorCondition_Group
Comments	:	
Constraint Value		
{	frameerrorthreshold	MACFrameErrorThreshold_Q,
	frameerrorratio	MACFrameErrorRatio_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorConditionGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'205A'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorThreshold_Q
Structured Type	:	MACFrameErrorThreshold
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'205F'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	frameerrorthresholdtype	MACFrameErrorThresholdType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorRatio_Q
Structured Type	:	MACFrameErrorRatio
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2060'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	frameerrorratio	MACFrameErrorRatioType }

9.3.1.2.7 MAC Not Copied Condition Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedCondition_Grp_00
Structured Type	:	MACNotCopiedCondition_Group
Comments	:	
Constraint Value		
{	macnotcopiedthreshold	MACNotCopiedThreshold_Q, -- optional
	macnotcopiedratio	MACNotCopiedRatio_Q -- optional when HP }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedConditionGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'2064'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedThreshold_Q
Structured Type	:	MACNotCopiedThreshold
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2067'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	notcopiedthresholdtype	MACNotCopiedThresholdType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedRatio_Q
Structured Type	:	MACNotCopiedRatio
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘2069’H,
	Parameter_Length	‘0008’H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	notcopiedratiotype	MACNotCopiedRatioType_Q }

9.3.1.2.8 MAC Status Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACStatus_Grp_00
Structured Type	:	MACStatus_Group
Comments	:	
Constraint Value		
{	rmtstate	MACRMTState_Q,
	daflag	MACDA_Flag_Q,
	undaflag	MACUNDA_Flag_Q,
	frameerrorflag	MACFrameErrorFlag_Q,
	notcopiedflag	MACNotCopiedFlag_Q OPTIONAL
	unitdataavailable	MACUnitDataAvailable_Q,
	hardwarepresent	MACHardwarePresent_Q,
	maunitdataavailable	MACMA_UnitdataEnable_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACStatusGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType Parameter_Length	'206E'H, '0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRMTState_Q
Structured Type	:	MACRMTState
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD macindex PAD rmtstatetype	'206F'H, '0008'H, PAD_2, MACINDEX_REF, PAD_2, MACRMTStateType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDA_Flag_Q
Structured Type	:	MACDA_Flag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length PAD macindex PAD daflagtype	'2070'H, '0008'H, PAD_2, MACINDEX_REF, PAD_1, FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUNDA_Flag_Q
Structured Type	:	MACUNDA_Flag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2071'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	undaflagtype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorFlag_Q
Structured Type	:	MACFrameErrorFlag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2072'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	frameerrorflagtype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedFlag_Q
Structured Type	:	MACNotCopiedFlag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2073'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	notcopiedflagtype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACMA_UnitdataAvailable_Q
Structured Type	:	MACMA_UnitdataAvailable
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2074'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	maunitdataavailabletype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACHardwarepresent_Q
Structured Type	:	MACHardwarePresent
Derivation Path	:	
Comments	:	IUT does not have a MAC
Constraint Value		
{	Parameter_Type	'2075'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	hwpresenttype	'00'I }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACHardwarepresent_01
Structured Type	:	MACHardwarePresent
Derivation Path	:	MACHardwarePresent_Q
Comments	:	IUT has a MAC
Constraint Value		
REPLACE	hwpresenttype	BY '01'I

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACMA_UnitdataEnable_Q
Structured Type	:	MACMA_UnitdataEnable
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'2076'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_1,
	maunitdataenabletype	FALSE}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACVendorAttrib_Q
Structured Type	:	MACVendorAttrib
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'20FF'H,
	Parameter_Length	?,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	?,
	vendormibtype	CMNVendorMIBType_Q}

9.3.1.3 ASN.1 Type Constraint for PATH Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHConfig_Grp_00
Structured Type	:	PATHConfig_Group
Comments	:	
Constraint Value		
{	index	PATHIndex_Q,
	ringlatency	PATHRingLatency_Q, -- optional
	tracestatus	PATHTraceStatus_Q, -- optional
	sbapayload	PATHSbaPayload_Q, -- optional
	sbaoverhead	PATHSbaOverhead_Q, -- optional
	configuration	PATHConfiguration_Q,
	trmode	PATHT_Rmode_01, -- optional
	sbaavailable	PATHSbaAvailable_01, -- optional
	tvxlowerbound	PATHTVXLowerBound_01,
	tmaxlowerbound	PATHT_MaxLowerBound_01,
	maxtreq	PATHMaxT_Req_01 }

ASN.1 Type Constraint Declaration			
Constraint Name		: PATHConfigGrp_PmfReq	
Structured Type		: GroupAttribute	
Comments		:	
Constraint Value			
{	ParameterType	'320A'H,	
	Parameter_Length	'0000'H	}

ASN.1 Type Constraint Declaration			
Constraint Name	:	PATHIndex_01	
Structured Type	:	PATHIndex	
Derivation Path	:	PATHIndex_Q	
Comments	:		
Constraint Value			
{	Parameter_Type	‘320B’H,	
	Parameter_Length	‘0008’H,	
	PAD	PAD_2,	
	pathindex	PATHINDEX_REF,	-- primary path index
	PAD	PAD_2,	
	indextype	PATHIndexType_01	}

ASN.1 Type Constraint Declaration			
Constraint Name		:	PATHIndex_02
Structured Type		:	PATHIndex
Derivation Path		:	PATHIndex_01
Comments		:	
Constraint Value			
REPLACE	pathindex	BY	SECONDARY_PATHINDEX,
REPLACE	indextype	BY	PATHIndexType_02 }

ASN.1 Type Constraint Declaration				
Constraint Name		: PATHIndex_PmfReq		
Structured Type		: PATHIndex		
Derivation Path		:		
Comments		:		
Constraint Value				
REPLACE	Parameter_Length	BY	'0004'H,	
REPLACE	pathindex	BY	'0000'H,	-- for all path indexes
OMIT	indextype			

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHRingLatency_Q
Structured Type	:	PATHRingLatency
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'320D'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	ringlatencytype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHTraceStatus_Q
Structured Type	:	PATHTraceStatus
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'320E'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	PAD	PAD_2,
	ringlatencytype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaPayload_Q
Structured Type	:	PATHSbaPayload
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'320F'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	sbapayloadtype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaPayload_00
Structured Type	:	PATHSbaPayload
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'320F'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	sbapayloadtype	'00000000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaOverhead_Q
Structured Type	:	PATHSbaOverhead
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3210'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	sbaoverheadtype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHConfiguration_Q
Structured Type	:	PATHConfiguration
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3212'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	PAD	?,
	configurationtype	CMNPathConfig_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_Rmode_Q
Structured Type	:	PATHT_Rmode
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3213'H,
	Parameter_Length	'0008'H,
	pathindex	PATHINDEX_REF
	trmodetype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaAvailable_01
Structured Type	:	PATHSbaAvailable
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3214'H,
	Parameter_Length	'0008'H,
	pathindex	PATHINDEX_REF
	PAD	PAD_2,
	sbaavailabletype	'0'..'12500000'I }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHTVXLowerBound_01
Structured Type	:	PATHTVXLowerBound
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3215'H,
	Parameter_Length	'0008'H,
	pathindex	PATHINDEX_REF
	tvxlowerboundtype	CMNTwosComplementType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_MaxLowerBound_01
Structured Type	:	PATHT_MaxLowerBound
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3216'H,
	Parameter_Length	'0008'H,
	pathindex	PATHINDEX_REF
	tmaxlowerboundtype	CMNTwosComplementType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHMaxT_Req_01
Structured Type	:	PATHMaxT_Req
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'3217'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	maxtreqtype	CMNTwosComplementType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHVendorAttrib_01
Structured Type	:	PATHVendorAttrib
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'32FF'H,
	Parameter_Length	'0008'H,
	PAD	PAD_2,
	pathindex	PATHINDEX_REF,
	PAD	PAD_1,
	vendormibtype	CMNVendorMIBType_Q }

9.3.1.4 ASN.1 Type Constraint for PORT Attributes

9.3.1.4.1 PORT Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConfig_Grp_00
Structured Type	:	PORTConfig_Group
Comments	:	
Constraint Value		
{	mytype	PORTMy_Type_Q,
	neighbortype	PORTNeighborType_Q,
	connectionpolicies	PORTConnectionPolicies_Q,
	macindicated	PORTMACIndicated_Q,
	currentpath	PORTCurrentPath_Q,
	requestedpath	PORTRequestedPaths_Q,
	macplacement	PORTMACPlacement_Q,
	availablepath	PORTAvailablePaths_Q,
	maclooptime	PORTMACLoop_Time_Q, -- optional
	pmdclass	PORTPMDClass_Q,
	connectioncapabilities	PORTConnectionCapabilities_Q,
	index	PORTIndex_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConfigGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'400A'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMy_Type_Q
Structured Type	:	PORTMy_Type
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'400C'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	mytype	CMNPortType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTNeighbor_Type_Q
Structured Type	:	PORTNeighbor_Type
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'400D'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	neighbortype	CMNPortType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectionPolicies_Q
Structured Type	:	PORTConnectionPolicies
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'400E'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	connectionpoliciestype	PORTConnectionPoliciesType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACIndicated_Q
Structured Type	:	PORTMACIndicated
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'400F'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_1,
	macindicatedtype	PORTMACIndicatedType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTCurrentPath_Q
Structured Type	:	PORTCurrentPath
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4010'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	currentpathtype	CMNCurrentPathType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTRequestedPaths_Q
Structured Type	:	PORTRequestedPaths
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4011'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	requestedpathstype	PORTRequestedPathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACPlacement_Q
Structured Type	:	PORTMACPlacement
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4012'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	macplacementtype	CMNResourceIdType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTAvailablePaths_Q
Structured Type	:	PORTAvailablePaths
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4013'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	availablepathstype	CMNAvailablePathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACLoop_Time_Q
Structured Type	:	PORTMACLoop_Time
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4015'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	maclooptimetype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPMDClass_Q
Structured Type	:	PORTPMDClass
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4016'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	pmdclasstype	PORTPMDClassType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectionCapabilities_Q
Structured Type	:	PORTConnectionCapabilities
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘4017’H,
	Parameter_Length	‘0008’H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	connectioncapabilitiestype	PORTConnectionPoliciesType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTIndex_Q
Structured Type	:	PORTIndex
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'401D'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	portindextype	CMNResourceId_Q }

9.3.1.4.2 PORT Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTOperation_Grp_00	
Structured Type		: PORTOperation_Group	
Comments		:	
Constraint Value			
{	maintls	PORTMaint_LS_Q,	-- optional
	bsflag	PORTBS_Flag_Q,	
	pcls	PORTPC_LS_Q	-- optional when HP }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTOperationGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType Parameter_Length	'401E'H, '0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMaint_LS_Q
Structured Type	:	PORTMaint_LS
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length portindex PAD maintlstype	'401F'H, '0008'H, PORTINDEX_REF, PAD_2, PORTLineStateType_?? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTBS_Flag_Q
Structured Type	:	PORTBS_Flag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length portindex PAD bsflagtype	'4021'H, '0008'H, PORTINDEX_REF, PAD_2, FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_LS_Q
Structured Type	:	PORTPC_LS
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘4022’H,
	Parameter_Length	‘0008’H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	pclstype	PORTLineStateType_??
		}

9.3.1.4.3 PORT Error Counters Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTErrorCtrs_Grp_00	
Structured Type		: PORTErrorCtrs_Group	
Comments		:	
Constraint Value			
{	eberrorct lctfailct	PORTEBError_Ct_Q, PORTLCTFail_Ct_Q }	-- optional when HP

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTErrCtrsGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType Parameter_Length	'4028'H, '0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTEBError_Ct_Q
Structured Type	:	PORTEBError_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	‘4029’H,
	Parameter_Length	‘0008’H,
	portindex	PORTINDEX_REF,
	eberrorctype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLCTFail_Ct_Q
Structured Type	:	PORTLCTFail_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'402A'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	lctfailcttype	? }

9.3.1.4.4 PORT LER Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Grp_00
Structured Type	:	PORTLer_Group
Comments	:	
Constraint Value		
{	lerestimate	PORTLer_Estimate_Q,
	lemrejectct	PORTLem_Reject_Ct_Q,
	lemct	PORTLem_Ct_Q,
	lercutoff	PORTLer_Cutoff_Q,
	leralarm	PORTLer_Alarm_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType	'4032'H,
	Parameter_Length	'0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Estimate_Q
Structured Type	:	PORTLer_Estimate
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4033'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_1,
	lerestimatetype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLem_Reject_Ct_Q
Structured Type	:	PORTLem_Reject_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4034'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	lemrejectcttype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLem_Ct_Q
Structured Type	:	PORTLem_Ct
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4035'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	lemcttype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Cutoff_Q
Structured Type	:	PORTLer_Cutoff
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'403A'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_1,
	lercutofftype	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Alarm_Q
Structured Type	:	PORTLer_Alarm
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'403B'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_1,
	leralarmtype	? }

9.3.1.4.5 PORT Status Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTStatus_Grp_00
Structured Type	:	PORTStatus_Group
Comments	:	
Constraint Value		
{	connectionstate	PORTConnectState_01,
	pcmstate	PORTPCMState_01,
	pcwithhold	PORTPC_Withhold_01,
	lerflag	PORTLerFlag_01,
	hardwarepresent	PORTHardwarePresent_01 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTStatusGrp_PmfReq
Structured Type	:	GroupAttribute
Comments	:	
Constraint Value		
{	ParameterType Parameter_Length	'403C'H, '0000'H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectState_01
Structured Type	:	PORTConnectState
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length portindex PAD connectstatetype	'403D'H, '0008'H, PORTINDEX_REF, PAD_2, PORTConnectStateType_0 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPCMState_01
Structured Type	:	PORTPCMState
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type Parameter_Length portindex PAD pcmstatetype	'403E'H, '0008'H, PORTINDEX_REF, PAD_2, PCMState }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_Withhold_01
Structured Type	:	PORTPC_Withhold
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'403F'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	pcwithholdtype	PORTPC_WithholdType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerFlag_01
Structured Type	:	PORTLerFlag
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4040'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	lerflagtype	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTHardwarePresent_01
Structured Type	:	PORTHardwarePresent
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4041'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	presenttype	CMNPresent_01 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTVendorAttrib_01
Structured Type	:	PORTVendorAttrib
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'40FF'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	vendormibtype	CMNVendorMIBType_Q}

9.3.1.5 ASN.1 Type Constraint for SMT Actions and Notifications

9.3.1.5.1 Actions

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTAction_01
Structured Type	:	PORTAction
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4046'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	actioninfo	PORTActionType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTVendorAction_01
Structured Type	:	PORTVendorAction
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'40FE'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	vendormibtype	CMNVendorMIBType_Q}

9.3.1.5.2 Notifications

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHoldCondition_01
Structured Type	:	SMTHoldCondition
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'1047'H,
	Parameter_Length	?,
	PAD	PAD_2,
	holdconditiontype	SMTHoldConditionDataType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPeerWrapCondition_01
Structured Type	:	SMTPeerWrapCondition
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'1048'H,
	Parameter_Length	?,
	PAD	PAD_2,
	conditionstate	FALSE
	peerwrapcondition	SMTCF_StateType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTVendorNotification_01
Structured Type	:	SMTVendorNotification
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'10FC'H,
	Parameter_Length	?,
	PAD	PAD_2,
	vendormibtype	CMNVendorMIBType_Q}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDuplicateAddressCondition_01
Structured Type	:	MACDuplicateAddressCondition
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'208C'H,
	Parameter_Length	?,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	conditionstate	FALSE,
	duplicateaddresstype	DuplicateAddressType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorCondition_01
Structured Type	:	MACFrameErrorCondition
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'208D'H,
	Parameter_Length	'0018'H,
	PAD	PAD_2,
	macindex	MACINDEX_REF,
	PAD	PAD_3,
	conditionstate	FALSE,
	framect	CMNCounter_Q,
	errorct	CMNCounter_Q,
	lostct	CMNCounter_Q,
	PAD	PAD_2,
	frameerrorratio	FrameErrorRatioType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedCondition_01
Structured Type	:	MACNotCopiedCondition
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'208E'H,
	Parameter_Length	?,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	conditionstate	FALSE,
	notcopiedct	CMNCounter_Q,
	copiedct	CMNCounter_Q,
	notcopiedratio	NotCopiedRatioType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNeighborChangeEvent_01
Structured Type	:	MACNeighborChangeEvent
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'208F'H,
	Parameter_Length	?,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	multipleoccurrence	FALSE,
	neighborchangetype	NeighborChangeType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACPathChangeEvent_01
Structured Type	:	MACPathChangeEvent
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'2090'H,
	Parameter_Length	?,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	pathchangedatatype	PathChangeDataType_01 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PathChangeDataType_Q
Structured Type	:	PathChangeDataType
Derivation Path	:	
Comments	:	
Type Definition		
{	multipleoccurrence	FLASE,
	pathchangetype	PathChangeType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PathChangeType_Q
Structured Type	:	PathChangeType
Derivation Path	:	
Comments	:	
Type Definition		
{	availablepaths	CMNAvailablePathsType_o?,
	currentpath	CMNCurrentPathType_o?,
	requestedpaths	CMNPermittedPathsType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACVendorNotification_01
Structured Type	:	MACVendorNotification
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'20FC'H,
	Parameter_Length	?,
	macindex	MACINDEX_REF,
	PAD	PAD_2,
	vendornotification	CMNVendorMIBType_Q}

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHVendorNotification_01
Structured Type	:	PATHVendorNotification
Derivation Path	:	
Comments	:	
Type Definition		
{	Parameter_Type	'32FC'H,
	Parameter_Length	?,
	pathindex	PATHINDEX_REF,
	PAD	PAD_2,
	vendornotification	CMNVendorMIBType_Q}

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerCondition_01
Structured Type	:	PORTLerCondition
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4050'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	conditionstate	FALSE,
	lertype	PORTLerType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerType_Q
Structured Type	:	PORTLerType
Derivation Path	:	
Comments	:	
Constraint Value		
{	lercutoff	LerExponentType_Q,
	leralarm	LerExponentType_Q,
	lerestimate	LerExponentType_Q,
	lerreectct	CMNCounter_Q,
	lerct	CMNCounter_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTUndesiredConnectionAttemptEvent_01
Structured Type	:	PORTUndesiredConnectionAttemptEvent
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4051'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	multipleoccurrence	FALSE,
	undesiredconndectiontype	UndesiredConnectionType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	UndesiredConnectionType_Q
Structured Type	:	UndesiredConnectionType
Derivation Path	:	
Comments	:	
Constraint Value		
{	porttype	CMNPortType_Q,
	connectstate	PORTConnectStateType_Q,
	pcneighbor	CMNPortType_Q
	pcwithhold	PORTPC_Withhold_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTEBErrorCondition_01
Structured Type	:	PORTEBErrorCondition
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4052'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	conditionstate	FALSE,
	eberrorcount	CMNCounter_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPathChangeEvent_01
Structured Type	:	PORTPathChangeEvent
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'4053'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	pathchangedatatype	PathChangeDataType_01, }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTVendorNotification_01
Structured Type	:	PORTVendorNotification
Derivation Path	:	
Comments	:	
Constraint Value		
{	Parameter_Type	'40FC'H,
	Parameter_Length	'0008'H,
	portindex	PORTINDEX_REF,
	PAD	PAD_2,
	vendormibtype	CMNVendorMIBType_Q}

9.3.1.6 ASN.1 Type Constraint for Definitions

Common Definitions

ASN.1 Type Constraint Declaration		
Constraint Name	:	CMNAvailablePathsType_Q
Structured Type	:	CMNAvailablePathsType
Derivation Path	:	
Comments	:	
Type Definition		
'00000???'B		

ASN.1 Type Constraint Declaration		
Constraint Name	:	CMNAvailablePathsType_00
Structured Type	:	CMNAvailablePathsType
Derivation Path	:	
Comments	:	
Type Definition		
'00000001'B -- primary		

ASN.1 Type Constraint Declaration		
Constraint Name	:	CMNAvailablePathsType_01
Structured Type	:	CMNAvailablePathsType
Derivation Path	:	
Comments	:	
Type Definition		
'00000010'B -- secondary		

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNAvailablePathsType_02
Structured Type	: CMNAvailablePathsType
Derivation Path	:
Comments	:
Type Definition	
'00000100'B	-- local

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCounter_Q
Structured Type	: CMNCounter
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_Q
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_00
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0000'I	-- isolated

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_01
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0001'I -- local	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_02
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0002'I -- secondary	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_03
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0003'I -- primary	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_04
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0004'I -- concatenated	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNCurrentPathType_05
Structured Type	: CMNCurrentPathType
Derivation Path	:
Comments	:
Type Definition	
'0005'I -- thru	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNFlag_Q
Structured Type	: CMNFlag
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNFlag_00
Structured Type	: CMNFlag
Derivation Path	:
Comments	:
Type Definition	
'00000001'B -- false	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNFlag_01
Structured Type	: CMNFlag
Derivation Path	:
Comments	:
Type Definition	
'00000010'B -- true	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNLongAddressType_Q
Structured Type	: CMNLongAddressType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPermittedPathsType_Q
Structured Type	: CMNPermittedPathsType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_Q
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_00
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
'0000'1 -- A port	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_01
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
'0001'I -- B port	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_02
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
'0002'I -- S port	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_03
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
'0003'I -- M port	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPortType_04
Structured Type	: CMNPortType
Derivation Path	:
Comments	:
Type Definition	
'0004'I -- none	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPresent_Q
Structured Type	: CMNPresent
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPresent_00
Structured Type	: CMNPresent
Derivation Path	:
Comments	:
Type Definition	
'0000'I -- notpresent	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNPresent_01
Structured Type	: CMNPresent
Derivation Path	:
Comments	:
Type Definition	
'0001'I -- present	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNResourceId_Q
Structured Type	: CMNResourceId
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNResourceTagType_Q
Structured Type	: CMNResourceTagType
Derivation Path	:
Comments	:
Type Definition	
{resourcetype resource_index current_port	CMNResourceType_Q, CMNResourceId_Q, CMNCurrentPathType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNResourceType_Q
Structured Type	: CMNResourceType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNResourceType_02
Structured Type	: CMNResourceType
Derivation Path	:
Comments	:
Type Definition	
'0002'1 -- mac	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNResourceType_04
Structured Type	: CMNResourceType
Derivation Path	:
Comments	:
Type Definition	
'0004'I -- port	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNTime_Q
Structured Type	: CMNTime
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNTwosComplementType_Q
Structured Type	: CMNTwosComplementType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTTimeStampType_Q
Structured Type	: SMTTimeStampType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CMNVendorMIBType_Q
Structured Type	: CMNVendorMIBType
Derivation Path	:
Comments	:
Type Definition	
{	manufactureroui ?, vendoroctet ?, specificdata ANY }

SMT Definitions

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_Q
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_00
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0000'	-- connect

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_01
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0001'	-- disconnect

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_02
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0002'I	-- path_test

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_03
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0003'I	-- self_test

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_04
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0004'I	-- disable_a

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_05
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0005'I	disable_b

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_06
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0006'I	-- disable_m

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTActionInfoType_07
Structured Type	: SMTActionInfoType
Derivation Path	:
Comments	:
Type Definition	
'0007'I	-- ec7

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTAvailablePathsType_Q
Structured Type	: CMNAvailablePathsType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTBypassPresentType_Q
Structured Type	: CMNFlag
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCapabilitiesType_Q
Structured Type	: SMTCapabilitiesType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCapabilitiesType_00
Structured Type	: SMTCapabilitiesType
Derivation Path	:
Comments	:
Type Definition	
'000000000000000?1'B	-- holdavailable

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCapabilitiesType_01
Structured Type	: SMTCapabilitiesType
Derivation Path	:
Comments	:
Type Definition	
'0000000000000001?'B	-- cf_wrap_ab

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_Q
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_00
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0000'I	-- isolated

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_01
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0001'I	-- local_a

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_02
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0002'I	-- local_b

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_03
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0003'I	-- local_ab

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_04
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0004'I	-- local_s

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_05
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0005'I	--wrap_a

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_06
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0006'I	wrap_b

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_07
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0007'I	wrap_ab

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_08
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0008'I	-- wrap_s

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_09
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0009'I	-- c_wrap_b

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_10
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0010'I	-- c_wrap_b

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_11
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0011'I	-- c_wrap_s

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTCF_StateType_12
Structured Type	: SMTCF_StateType
Derivation Path	:
Comments	:
Type Definition	
'0012'I	-- thru

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConfigCapabilitiesType_Q
Structured Type	: SMTCapabilitiesType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConfigPolicyType_Q
Structured Type	: SMTConfigPolicyType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConfigPolicyType_00
Structured Type	: SMTConfigPolicyType
Derivation Path	:
Comments	:
Type Definition	
'00000000000000001'B -- configuration hold	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_Q
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_00
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????????1'B	-- rejectA_A

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_01
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????????1'B	-- rejectA_B

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_02
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????????1??'B	-- rejectA_S

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_03
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????1???'B	-- rejectA_M

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_04
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????1???'B	-- rejectB_A

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_05
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????????1????'B	-- rejectB_B

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_06
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'?????????1?????'B	-- rejectB_S

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_07
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????????1???????'B	-- rejectB_M

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_08
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'???????1???????'B	-- rejectS_A

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_09
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'?????1?????????'B	-- rejectS_B

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_10
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'?????1?????????'B	-- rejectS_S

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_11
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'????1????????????0'B	-- rejectS_M

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_12
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'???1?????????????'B	-- rejectM_A

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_13
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'?1?????????????'B	-- rejectM_B

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_14
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'?1?????????????'B	-- rejectM_S

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTConnectionPolicyType_15
Structured Type	: SMTConnectionPolicyType
Derivation Path	:
Comments	:
Constraint Value	
'1????????????????'B	-- rejectM_M

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_Q
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_00
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I	-- Out

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_01
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- In

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_02
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- Trace

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_03
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- Leave

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_04
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- Path_Test

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_05
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0005'I	-- Insert

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_06
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0006'I	-- Check

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTECMStateType_07
Structured Type	: SMTECMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0007'I	-- Deinsert

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHiVersionIdType_Q
Structured Type	: SMTHiVersionIdType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHoldConditionDataType_Q
Structured Type	: SMTHoldConditionDataType
Derivation Path	:
Comments	:
Type Definition	
{	conditionstate CMNFlag_Q, holdcondition SMTHoldStateType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHoldStateType_Q
Structured Type	: SMTHoldStateType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHoldStateType_00
Structured Type	: SMTHoldStateType
Derivation Path	:
Comments	:
Type Definition	
'0000'I -- not holding	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHoldStateType_01
Structured Type	: SMTHoldStateType
Derivation Path	:
Comments	:
Type Definition	
'1'I -- holding on primary	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTHoldStateType_02
Structured Type	: SMTHoldStateType
Derivation Path	:
Comments	:
Type Definition	
'2'I -- holding on secondary	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTLoVersionIdType_Q
Structured Type	: SMTLoVersionIdType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTMac_CtType_Q
Structured Type	: SMTMac_CtType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTManufacturerDataType_Q
Structured Type	: SMTManufacturerDataType
Derivation Path	:
Comments	:
Type Definition	
{ manufactureroui OUI_REF, manufacturerdata ANY }	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTMaster_CtType_Q
Structured Type	: SMTMaster_CtType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTMIBVersionIdType_Q
Structured Type	: SMTMIBVersionIdType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTNonMaster_CtType_Q
Structured Type	: SMTNonMaster_CtType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTOpVersionIdType_Q
Structured Type	: SMTOpVersionIdType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTPeerWrapConditionDataType_Q
Structured Type	: SMTPeerWrapConditionDataType
Derivation Path	:
Comments	:
Type Definition	
{ conditionstate CMNFlag_Q, peerwrapcondition SMTCF_StateType_Q } }	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTPeerWrapConditionType_Q
Structured Type	: SMTPeerWrapConditionType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTPeerWrapFlagType_Q
Structured Type	: SMTPeerWrapFlagType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTRemoteDisconnectFlagType_Q
Structured Type	: SMTRemoteDisconnectFlagType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTSetCountType_Q
Structured Type	: SMTSetCountType
Derivation Path	:
Comments	:
Type Definition	
{ count CMNCounter_Q, settimestamp CMNTimeStampType_Q }	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStationIdentifierType_Q
Structured Type	: SMTStationIdentifierType
Derivation Path	:
Comments	:
Type Definition	
{ implementeroctet IMPLEMENT_OCTET, longaddress CMNLongAddressType_Q }	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStatusType_Q
Structured Type	: SMTStatusType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStatusType_00
Structured Type	: SMTStatusType
Derivation Path	:
Comments	:
Constraint Value	
'0000'l	-- concatenated

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStatusType_01
Structured Type	: SMTStatusType
Derivation Path	:
Comments	:
Constraint Value	
'0001'l	-- separated

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStatusType_02
Structured Type	: SMTStatusType
Derivation Path	:
Comments	:
Constraint Value	
'0002'l-- thru	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTStatRptPolicyType_Q
Structured Type	: SMTStatRptPolicyType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTT_NotifyType_Q
Structured Type	: SMTStatusType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTTimeStampType_Q
Structured Type	: SMTTimeStampType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTTrace_MaxExpirationType_Q
Structured Type	: SMTTrace_MaxExpirationType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTTransitionTimeStampType_Q
Structured Type	: SMTTransitionTimeStampType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTUserDataTypes_Q
Structured Type	: SMTUserDataTypes
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTVersionType_Q
Structured Type	: SMTVersionType
Derivation Path	:
Comments	:
Constraint Value	
?	

MAC Definitions

ASN.1 Type Constraint Declaration	
Constraint Name	: MACAvailablePathsType_Q
Structured Type	: MACAvailablePathsType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACBridgeType_Q
Structured Type	: MACBridgeType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACBridgeType_00
Structured Type	: MACBridgeType
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000001'B	-- Transparent Bridging Active

ASN.1 Type Constraint Declaration	
Constraint Name	: MACBridgeType_01
Structured Type	: MACBridgeType
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000010'B	-- Source Routing Active

ASN.1 Type Constraint Declaration	
Constraint Name	: MACBridgeType_02
Structured Type	: MACBridgeType
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000100'B	-- Source Routing Transparent Active}

ASN.1 Type Constraint Declaration	
Constraint Name	: MACCopied_CtType_Q
Structured Type	: MACCopied_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACCurrentPathType_Q
Structured Type	: MACCurrentPathType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDA_FlagType_Q
Structured Type	: MACDA_FlagType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDownstreamNbrType_Q
Structured Type	: MACDownstreamNbrType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDownstreamPORTType_Q
Structured Type	: MACDownstreamPORTType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupAddressTest_Q
Structured Type	: MACDupAddressTestType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupAddressTest_00
Structured Type	: MACDupAddressTestType
Derivation Path	:
Comments	:
Constraint Value	
{ '0000' none	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupAddressTest_01
Structured Type	: MACDupAddressTestType
Derivation Path	:
Comments	:
Constraint Value	
'0001' -- pass	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupAddressTest_02
Structured Type	: MACDupAddressTestType
Derivation Path	:
Comments	:
Constraint Value	
'0002'	-- fail

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupConditionType_Q
Structured Type	: MACDupConditionType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupConditionType_00
Structured Type	: MACDupConditionType
Derivation Path	:
Comments	:
Type Definition	
'00000000000000001'B	-- DA Flag (my dup)

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDupConditionType_01
Structured Type	: MACDupConditionType
Derivation Path	:
Comments	:
Type Definition	
'00000000000000010'B	-- UNDA Flag (una dup)

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDuplicateAddressDataType_Q
Structured Type	: MACDuplicateAddressDataType
Derivation Path	:
Comments	:
Constraint Value	
{	conditionstate CMNFlag_Q, duplicateaddressstype MACDuplicateAddressType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACDuplicateAddressType_Q
Structured Type	: MACDuplicateAddressType
Derivation Path	:
Comments	:
Type Definition	
{	dupcondition MACDupConditionType_Q, fddilong CMNLongAddressType_Q, fddiunalong CMNLongAddressType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACError_CtType_Q
Structured Type	: MACError_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACFrame_CtType_Q
Structured Type	: MACFrame_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorDataType_Q
Structured Type	:	MACFrameErrorDataType
Derivation Path	:	
Comments	:	
Type Definition		
{	conditionstate	CMNFlag_Q,
	framect	CMNCounter_Q,
	errorct	CMNCounter_Q,
	lostct	CMNCounger_Q,
	frameerrorratio	MACFrameErrorRatioType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorRatioType_Q
Structured Type	:	MACFrameErrorRatioType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorThresholdType_Q
Structured Type	:	MACFrameErrorThresholdType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFS_Functions_Q
Structured Type	:	MACFS_Functions
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration	
Constraint Name	: MACFS_Functions_00
Structured Type	: MACFS_Functions
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000001'B	-- fs-repeating

ASN.1 Type Constraint Declaration	
Constraint Name	: MACFS_Functions_01
Structured Type	: MACFS_Functions
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000010'B	-- fs-setting

ASN.1 Type Constraint Declaration	
Constraint Name	: MACFS_Functions_02
Structured Type	: MACFS_Functions
Derivation Path	:
Comments	:
Constraint Value	
'00000000000000100'B	-- fs-clearing

ASN.1 Type Constraint Declaration	
Constraint Name	: MACHWPresentType_Q
Structured Type	: MACHWPresentType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACLate_CtType_Q
Structured Type	: MACLate_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACLost_CtType_Q
Structured Type	: MACLost_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACUnitdataAvailableType_Q
Structured Type	: MACUnitdataAvailableType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACMAUnitdataEnableType_Q
Structured Type	: MACMAUnitdataEnableType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNAConditionType_Q
Structured Type	: MACNAConditionType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNAConditionType_00
Structured Type	: MACNAConditionType
Derivation Path	:
Comments	:
Type Definition	
'00000001'B	-- una change

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNAConditionType_01
Structured Type	: MACNAConditionType
Derivation Path	:
Comments	:
Type Definition	
'00000010'B	-- dna change

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNAConditionType_02
Structured Type	: MACNAConditionType
Derivation Path	:
Comments	:
Type Definition	
'00000011'B	-- una and dna change

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNeighborChangeDataType_Q
Structured Type	: MACNeighborChangeDataType
Derivation Path	:
Comments	:
Type Definition	
{	multipleoccurrence CMNFlag_Q, neighborchangetype MACNeighborChangeType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNeighborChangeType_Q
Structured Type	:	MACNeighborChangeType
Derivation Path	:	
Comments	:	
Type Definition		
{	nacondition	MACNAConditionType_Q,
	olduna	CMNLongAddressType_Q,
	newuna	CMNLongAddressType_Q,
	olddna	CMNLongAddressType_Q,
	newdna	CMNLongAddressType_Q,
	currentpath	CMNCurrentPathType_Q,
	smtaddress	CMNLongAddressType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopied_CtType_Q
Structured Type	:	MACNotCopied_CtType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedFlagType_Q
Structured Type	:	MACNotCopiedFlagType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedDataType_Q
Structured Type	:	MACNotCopiedDataType
Derivation Path	:	
Comments	:	
Type Definition		
{	conditionstate	CMNFlag_Q,
	notcopiedct	CMNCounter_Q,
	copiedct	CMNCounter_Q,
	notcopiedratio	MACNotCopiedRatioType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNotCopiedRatioType_Q
Structured Type	: MACNotCopiedRatioType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACNotCopiedThresholdType_Q
Structured Type	: MACNotCopiedThresholdType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACPathChangeDataType_Q
Structured Type	: MACPathChangeDataType
Derivation Path	:
Comments	:
Constraint Value	
{	multipleoccurrence CMNFlag_Q, pathchangetype MACPathChangeType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACPathChangeType_Q
Structured Type	: MACPathChangeType
Derivation Path	:
Comments	:
Constraint Value	
{	availablepath CMNAvailablePathsType_Q, currentpath CMNCurrentPathType_Q, requestedpath MACRequestedPathsType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRequestedPathsType_Q
Structured Type	: MACRequestedPathsType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRingOp_CtType_Q
Structured Type	: MACRingOp_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_Q
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_00
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I -- Isolated	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_01
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- Non_Op

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_02
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- Ring_Op

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_03
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- Detect

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_04
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- Non_Op_Dup

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_05
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'5'I	-- Ring_Op_Dup

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_06
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0006'I	-- Directed

ASN.1 Type Constraint Declaration	
Constraint Name	: MACRMTStateType_07
Structured Type	: MACRMTStateType
Derivation Path	:
Comments	:
Constraint Value	
'0007'I	-- Trace

ASN.1 Type Constraint Declaration	
Constraint Name	: MACShortAddressType_Q
Structured Type	: MACShortAddressType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACSMTAddressType_Q
Structured Type	: MACSMTAddressType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_MaxCapabilityType_Q
Structured Type	: MACT_MaxCapabilityType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri0Type_Q
Structured Type	: MACT_Pri0Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri1Type_Q
Structured Type	: MACT_Pri1Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri2Type_Q
Structured Type	: MACT_Pri2Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri3Type_Q
Structured Type	: MACT_Pri3Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri4Type_Q
Structured Type	: MACT_Pri4Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri5Type_Q
Structured Type	: MACT_Pri5Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACT_Pri6Type_Q
Structured Type	: MACT_Pri6Type
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTMaxType_Q
Structured Type	: MACTMaxType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTNegType_Q
Structured Type	: CMNTNegType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACToken_CtType_Q
Structured Type	: MACToken_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTransmit_CtType_Q
Structured Type	: MACTransmit_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACReqType_Q
Structured Type	: MACReqType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTVXCapabilityType_Q
Structured Type	: MACTVXCapabilityType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACExpired_CtType_Q
Structured Type	: MACExpired_CtType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTvxValueType_Q
Structured Type	: MACTvxValueType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACUNDA_FlagType_Q
Structured Type	: MACUNDA_FlagType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: MACUpstreamNbrType_Q
Structured Type	: MACUpstreamNbrType
Derivation Path	:
Comments	:
Constraint Value	
?	

PATH Definitions

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHIndexType_Q
Structured Type	: PATHIndexType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHIndexType_01
Structured Type	: PATHIndexType
Derivation Path	:
Comments	:
Type Definition	
'1' -- primary	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHIndexType_02
Structured Type	: PATHIndexType
Derivation Path	:
Comments	:
Type Definition	
'2' -- secondary	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHMaxT_ReqType_Q
Structured Type	: PATHMaxT_ReqType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHRingLatencyType_Q
Structured Type	: PATHRingLatencyType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHSbaAvailableType_Q
Structured Type	: PATHSbaAvailableType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHSbaPayloadType_Q
Structured Type	: PATHSbaPayloadType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHSbaOverheadType_Q
Structured Type	: PATHSbaOverheadType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHHT_MaxLowerBoundType_Q
Structured Type	: PATHHT_MaxLowerBoundType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHT_RmodeType_Q
Structured Type	: PATHT_RmodeType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTraceStatusType_Q
Structured Type	: PATHTraceStatusType
Derivation Path	:
Comments	:
Type Definition	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTraceStatusType_00
Structured Type	: PATHTraceStatusType
Derivation Path	:
Comments	:
Type Definition	
'00000000000000001'B -- trace initiated	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTraceStatusType_01
Structured Type	: PATHTraceStatusType
Derivation Path	:
Comments	:
Type Definition	
'0000000000000001?'B -- trace propagated	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTraceStatusType_02
Structured Type	: PATHTraceStatusType
Derivation Path	:
Comments	:
Type Definition	
'0000000000000001??'B -- trace terminated	

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTraceStatusType_03
Structured Type	: PATHTraceStatusType
Derivation Path	:
Comments	:
Type Definition	
'0000000000001???'B	-- trace timeout

ASN.1 Type Constraint Declaration	
Constraint Name	: PATHTVXLowerBoundType_Q
Structured Type	: PATHTVXLowerBoundType
Derivation Path	:
Comments	:
Type Definition	
?	

PORT Definitions

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_Q
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_00
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I	-- signal PC_Maint

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_01
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- signal PC_Enable

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_02
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- signal PC_Disable

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_03
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- signal PC_Start

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTActionType_04
Structured Type	: PORTActionType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- signal PC_Stop

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectionPoliciesType_Q
Structured Type	: PORTConnectPoliciesType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectionPoliciesType_00
Structured Type	: PORTConnectPoliciesType
Derivation Path	:
Comments	:
Constraint Value	
'00000001'B	-- pc-mac-lct

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectionPoliciesType_01
Structured Type	: PORTConnectPoliciesType
Derivation Path	:
Comments	:
Constraint Value	
'00000010'B	-- pc-mac-loop

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectStateType_Q
Structured Type	: PORTConnectStateType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectStateType_00
Structured Type	: PORTConnectStateType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I	-- disabled

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectStateType_01
Structured Type	: PORTConnectStateType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- connecting

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectStateType_02
Structured Type	: PORTConnectStateType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- standby

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTConnectStateType_03
Structured Type	: PORTConnectStateType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- active

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTEBErrorDataType_Q
Structured Type	: PORTEBErrorDataType
Derivation Path	:
Comments	:
Constraint Value	
{	conditionstate CMNFlag_Q, eberrorcount CMNCounter_Q}

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLerDataType_Q
Structured Type	: PORTLerDataType
Derivation Path	:
Comments	:
Constraint Value	
{	conditionstate CMNFlag_Q, lertype PORTLerType_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLerExponentType_Q
Structured Type	: PORTLerExponentType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLerType_Q
Structured Type	: PORTLerType
Derivation Path	:
Comments	:
Constraint Value	
{	lercutoff PORTLerExponentType_Q, leralarm PORTLerExponentType_Q, lerestimate PORTLerExponentType_Q, lerrejecttype CMNCounter_Q, lercct CMNCounter_Q}

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_Q
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_00
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
0000'i	-- quiet

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_01
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- idle

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_02
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- master

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_03
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- halt

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_04
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- receive = active, transmit-PDR

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_05
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0005'l	-- receive = unknown

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTLineStateType_06
Structured Type	: PORTLineStateType
Derivation Path	:
Comments	:
Constraint Value	
'0006'l	-- receive = noise

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTMACIndicatedType_Q
Structured Type	: PORTMACIndicatedType
Derivation Path	:
Comments	:
Constraint Value	
{ tval9 CMNFlag_Q, rval9 CMNFlag_Q }	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPathChangeDataType_Q
Structured Type	: PORTPathChangeDataType
Derivation Path	:
Comments	:
Constraint Value	
{ multipleoccurrence CMNFlag_Q, pathchangetype PORTPathChangeType_Q }	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPathChangeType_Q
Structured Type	:	PORTPathChangeType
Derivation Path	:	
Comments	:	
Constraint Value		
{	availablepaths	CMNAvailablePathsType_Q,
	currentpath	CMNCurrentPathType_Q,
	requestedpaths	PORTRequestedPathsType_Q,
	mytype	CMNPortType_Q,
	neighbortype	CMNPortType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPCMStateType_Q
Structured Type	:	PORTPCMStateType
Derivation Path	:	
Comments	:	
Constraint Value		
?		

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPCMStateType_00
Structured Type	:	PORTPCMStateType
Derivation Path	:	
Comments	:	
Constraint Value		
'0000'	-- Break	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPCMStateType_01
Structured Type	:	PORTPCMStateType
Derivation Path	:	
Comments	:	
Constraint Value		
'0001'	-- Break	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_02
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- Trace

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_03
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- Connect

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_04
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- Next

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_05
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0005'I	-- Signal

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_06
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0006'I	-- Join

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_07
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'007'I	-- Verify

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_08
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0008'I	-- Active

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPCMStateType_09
Structured Type	: PORTPCMStateType
Derivation Path	:
Comments	:
Constraint Value	
'0009'I	-- Maint

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPC_WithholdType_Q
Structured Type	: PORTPC_WithholdType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPC_WithholdType_00
Structured Type	: PORTPC_WithholdType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I	-- none

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPC_WithholdType_01
Structured Type	: PORTPC_WithholdType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- m-m

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPC_WithholdType_02
Structured Type	: PORTPC_WithholdType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- otherincompatible

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPC_WithholdType_03
Structured Type	: PORTPC_WithholdType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- pathnotavailable

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_Q
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_00
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0000'I	-- multimode

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_01
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0001'I	-- single mode1

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_02
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0002'I	-- single mode2

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_03
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0003'I	-- sonet

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_04
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0004'I	-- low cost fiber

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_05
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0005'I	-- twisted-pair

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_06
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0006'I	-- unknown

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTPMDClassType_07
Structured Type	: PORTPMDClassType
Derivation Path	:
Comments	:
Constraint Value	
'0007'I	-- unspecified

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTRequestedPathsType_Q
Structured Type	: PORTRequestedPathsType
Derivation Path	:
Comments	:
Constraint Value	
{	none CMNPermittedPaths_Q,
tree	CMNPermittedPaths_Q,
peer	CMNPermittedPaths_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: PORTUndesiredConnectionDataType_Q
Structured Type	: PORTUndesiredConnectionDataType
Derivation Path	:
Comments	:
Constraint Value	
{	multipleoccurrence CMNFlag_Q,
undesiredconnectiontype	PORTUndesiredConnectionType_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTUndesiredConnectionType_Q
Structured Type	:	PORTUndesiredConnectionType
Derivation Path	:	
Comments	:	
Constraint Value		
{	porttype	CMNPortType_Q,
	connectstate	PORTConnectStateType_Q.
	pcneighbor	CMNPortType_Q
	pcwithhold	PORTPC_WithholdType_Q }

9.3.1.7 ASN.1 Type Constraint for SMT InfoField

9.3.1.7.1 NIF Info Field Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	NIF_TST_DATA
Structured Type	:	NIF_Info
Derivation Path	:	
Comments	:	General form of NIF Info Field Parameters
Constraint Value		
{	UNA	UNA_UNKNOWN,
	SD	StationDescriptor_01,
	SS	StationState_01,
	MAC_FS	MACFrameStatusFunctions_01 }

ASN.1 Type Constraint Declaration			
Constraint Name		:	NIF_TST_DATA01
Structured Type		:	NIF_Info
Derivation Path		:	NIF_TST_DATA
Comments		:	
Constraint Value			
REPLACE	UNA	BY	UNA_TESTER,
REPLACE	SD	BY	StationDescriptor_Q,
REPLACE	SS	BY	StationState_Q,
REPLACE	MAC_FS	BY	MACFrameStatusFunctions_01

ASN.1 Type Constraint Declaration			
Constraint Name		:	NIF_TST_DATA02
Structured Type		:	NIF_Info
Derivation Path		:	NIF_TST_DATA01
Comments		:	
Constraint Value			
REPLACE	UNA	BY	UNA_UNKNOWN

ASN.1 Type Constraint Declaration			
Constraint Name	:	NIF_TST_DATA03	
Structured Type	:	NIF_Info	
Derivation Path	:	NIF_TST_DATA01	
Comments	:		
Constraint Value			
REPLACE	UNA	BY	UNA_IUT

ASN.1 Type Constraint Declaration			
Constraint Name	:	NIF_TST_DATA04	
Structured Type	:	NIF_Info	
Derivation Path	:	NIF_TST_DATA01	
Comments	:		
Constraint Value			
REPLACE	UNA	BY	UNA_TESTER2

9.3.1.7.2 SIF Info Field Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	SIF_CONF_DATA
Structured Type	:	SIFConf_Res
Derivation Path	:	
Comments	:	
Constraint Value		
{	msgtimestamp	MsgTimeStamp_Q,
	stationdescriptor	StationDescriptor_Q,
	smtsupportedversions	SMTSupportedVersions_73,
	stationstatus	StationStatus_Q,
	stationpolicies	StationPolicies_Q,
	pathlatency	PathLatency_02,
	macneighbors	MACNeighbors_Q,
	pathdescriptor	PathDescriptor_Q,
	smtsetcount	SMTSetCount_Q
		}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SIFOper_DATA
Structured Type	:	SIFOper_Res
Derivation Path	:	
Comments	:	
Constraint Value		
{	msgtimestamp	MsgTimeStamp_Q,
	macstatus	MACStatus_Q,
	portlemstatus	PortLEMStatus_Q,
	macframecount	MACFrameCount_Q,
	macframenotcount	MACFrameNotCount_Q,
	macpriorityvalues	MACPriorityValue_Q,
	portebstatus	PortEBStatus_Q,
	manufacturerfield	ManufacturerField_Q,
	userfield	UserField_Q,
	smtsetcount	SMTSetCount_Q }

9.3.1.7.3 NO ECHO InfoField Type Constraint is defined!!

9.3.1.7.4 RAF InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	RequestAllocation_00
Structured Type	:	SBARequest_Info
Derivation Path	:	
Comments	:	
Constraint Value		
{	pathtype	PATHIndex_01,
	sbapayload	SBAPayloadRequest_Q,
	sbaoverhead	SBAOverheadRequest_Q,
	currentsbapayload	PATHSbaPayload_Q,
	currentsbaoverhead	PATHSbaOverhead_Q,
	allocationaddress	SBAAllocationAddress_TESTER,
	catagory	SBACatagory_Q,
	maxtneg	MaximumT_Neg_Q,
	minsbasegment	MinimumSBASegment_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	RequestResponse_Q
Structured Type	:	SBARequest_Response
Derivation Path	:	
Comments	:	Allocation is successfully granted
Constraint Value		
{	reasoncode	ReasonCode_03,
	pathtype	PATHIndex_Q,
	currentsbapayload	PATHSbaPayload_Q,
	currentsbaoverhead	PATHSbaOverhead_Q,
	allocationaddress	SBAAllocationAddress_Q,
	catagory	SBACatagory_Q,
	sbaallocatable	SBAAllocatable_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	RequestResponse_00
Structured Type	:	SBARequest_Response
Derivation Path	:	
Comments	:	NULL SBA bandwidth
Constraint Value		
{	reasoncode	ReasonCode_0D,
	pathtype	PATHIndex_01,
	currentsbapayload	PATHSbaPayload_MAX,
	currentsbaoverhead	PATHSbaOverhead_MAX,
	allocationaddress	SBAAllocationAddress_IUT,
	catagory	SBACatagory_Q,
	sbaallocatable	SBAAllocatable_00 }

ASN.1 Type Constraint Declaration		
Constraint Name	:	RequestResponse_01
Structured Type	:	SBARequest_Response
Derivation Path	:	
Comments	:	Allocation is denied for some reasons
Constraint Value		
{	reasoncode	ReasonCode_Q,
	pathtype	PATHIndex_Q,
	currentsbapayload	PATHSbaPayload_Q,
	currentsbaoverhead	PATHSbaOverhead_00,
	allocationaddress	SBAAllocationAddress_Q,
	catagory	SBACatagory_Q,
	sbaallocatable	SBAAllocatable_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ReportResponse_Q
Structured Type	:	SBAReport_Response
Derivation Path	:	
Comments	:	
Constraint Value		
{	pathtype currentsbapayload currentsbaoverhead pathtype currentsbapayload currentsbaoverhead	PATHIndex_Q, PATHSbaPayload_Q, PATHSbaOverhead_Q, PATHIndex_Q, PATHSbaPayload_Q, PATHSbaOverhead_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ChangeRequest_Q
Structured Type	:	SBACChange_Info
Derivation Path	:	
Comments	:	
Constraint Value		
{	pathtype newsbapayload newsbaoverhead catagory	PATHIndex, PATHSbaPayload_Q, PATHSbaOverhead_Q, SBACatagory_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	ChangeResponse_Q
Structured Type	:	SBACChange_Response
Derivation Path	:	
Comments	:	
Constraint Value		
{	pathtype currentsbapayload currentsbaoverhead catagory	PATHIndex_Q, PATHSbaPayloadRequest_Q, PATHSbaOverheadPequest_Q, SBACatagory_Q }

9.3.1.7.5 RDF InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration	
Constraint Name	: RDF_IUT_DATA
Structured Type	: RDF_Info
Derivation Path	:
Comments	: General form of RDF
Constraint Value	
{	ReasonCode ReasonCode_01, SMTSupportedVersion SMTSupportedVersions_G1, RejectedFrameBeginning RejectedFrame_G1 }

ASN.1 Type Constraint Declaration	
Constraint Name	: RDF_IUT_DATA01
Structured Type	: RDF_Info
Derivation Path	: RDF_IUT_DATA
Comments	: Reason Code is 'frame class not supported.'
Constraint Value	
OMIT	RejectedFrameBeginning

ASN.1 Type Constraint Declaration	
Constraint Name	: RDF_IUT_DATA02
Structured Type	: RDF_Info
Derivation Path	: RDF_IUT_DATA01
Comments	: Reason code is 'frame version not supported.'
Constraint Value	
REPLACE	ReasonCode BY ReasonCode_02

ASN.1 Type Constraint Declaration	
Constraint Name	: RDF_IUT_DATA03
Structured Type	: RDF_Info
Derivation Path	: RDF_IUT_DATA01
Comments	: Reason code is 'success.'
Constraint Value	
REPLACE	ReasonCode BY ReasonCode_03
OMIT	SMTSupportedVersion

ASN.1 Type Constraint Declaration			
Constraint Name		: RDF_IUT_DATA04	
Structured Type		: RDF_Info	
Derivation Path		: RDF_IUT_DATA01	
Comments		: Reason code is 'bad set count.'	
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode_04

ASN.1 Type Constraint Declaration			
Constraint Name		: RDF_IUT_DATA05	
Structured Type		: RDF_Info	
Derivation Path		: RDF_IUT_DATA01	
Comments		: Reason code is 'illegal operation.'	
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode_05

ASN.1 Type Constraint Declaration			
Constraint Name	: RDF_IUT_DATA06		
Structured Type	: RDF_Info		
Derivation Path	: RDF_IUT_DATA01		
Comments	: Reason code is 'no parameter.'		
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode_06

ASN.1 Type Constraint Declaration			
Constraint Name	: RDF_IUT_DATA08		
Structured Type	: RDF_Info		
Derivation Path	: RDF_IUT_DATA01		
Comments	: Reason code is 'out of range.'		
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode 08

ASN.1 Type Constraint Declaration			
Constraint Name	: RDF_IUT_DATA09		
Structured Type	: RDF_Info		
Derivation Path	: RDF_IUT_DATA01		
Comments	: Reason code is 'not authorized.'		
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode 09

ASN.1 Type Constraint Declaration			
Constraint Name		: RDF_IUT_DATA0A	
Structured Type		: RDF_Info	
Derivation Path		: RDF_IUT_DATA01	
Comments		: Reason code is 'length error.'	
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode_0A

ASN.1 Type Constraint Declaration			
Constraint Name		: RDF_IUT_DATA0B	
Structured Type		: RDF_Info	
Derivation Path		: RDF_IUT_DATA01	
Comments		: Reason code is 'frame too long.'	
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode_0B

ASN.1 Type Constraint Declaration			
Constraint Name	: RDF_IUT_DATA0D		
Structured Type	: RDF_Info		
Derivation Path	: RDF_IUT_DATA01		
Comments	: Reason code is 'sba denied.'		
Constraint Value			
REPLACE	ReasonCode	BY	ReasonCode 0D

9.3.1.7.6 ESF InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration			
Constraint Name		: ESF_DATA	
Structured Type		: ESF_Info	
Derivation Path		:	
Comments		:	
Constraint Value			
{	ESF_ID OTHER	ESFID_Q, OTHER_Q	}

9.3.1.7.7 SRF InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	SRF_DATA
Structured Type	:	SRF_Info
Derivation Path	:	
Comments	:	
Constraint Value		
{	TimeStamp	SMTTimeStamp_Q,
	Transition_TimeStamp	SMTTransitionTimeStamp_Q,
	EventCondition	TBD }

9.3.1.7.8 PMF InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	PMFGet_Response_BASE
Structured Type	:	PMFGetResponse_INFO
Derivation Path	:	
Comments	:	
Constraint Value		
{	reasoncode	ReasonCode_Q,
	timestamp	SMTTimeStamp_Q,
	setcount	SMTSetCount_Q,
	lastsetstationid	SMTLastSetStationID_Q,
	getresponseinfo?	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PMF_IUT_Get_Res_01
Structured Type	:	PMFGetResponse_INFO
Derivation Path	:	PMFGet_Response_BASE
Comments	:	fddiSMTStationId
Constraint Value		
REPLACE	reasoncode	BY ReasonCode_03,
REPLACE	getresponseinfoBY	SMTStationId_01

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_02	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		: fddiSMTOpVersionId	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	SMTOpVersionId_01

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_03	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		:	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	SMTHiVersionId_01

ASN.1 Type Constraint Declaration			
Constraint Name	: PMF_IUT_Get_Res_04		
Structured Type	: PMFGetResponse_INFO		
Derivation Path	: PMFGet_Response_BASE		
Comments	:		
Constraint Value			
REPLACE	getresponseinfo	BY	SMTLoVersionId_01

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_05	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		:	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	MACDownstreamNbr_01

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_06	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		:	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	MACOldDownstreamNbr_01

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_08.5	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		:	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	ValidMultiple_Pmf_00

ASN.1 Type Constraint Declaration			
Constraint Name		: PMF_IUT_Get_Res_09.5	
Structured Type		: PMFGetResponse_INFO	
Derivation Path		: PMFGet_Response_BASE	
Comments		:	
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfo	BY	ValidMultipleGrp_Pmf_00

ASN.1 Type Constraint Declaration			
Constraint Name	: PMF_IUT_Get_Res_0A.5		
Structured Type	: PMFGetResponse_INFO		
Derivation Path	: PMFGet_Response_BASE		
Comments	:		
Constraint Value			
REPLACE	reasoncode	BY	ReasonCode_03,
REPLACE	getresponseinfoBY		InvalidMultipleGrp_Pmf_00

ASN.1 Type Constraint Declaration		
Constraint Name	:	PMFSetRequest_Q
Structured Type	:	PMFSetRequest_INFO
Derivation Path	:	
Comments	:	
Constraint Value		
{	authorization	Authorization_Q,
	setcount	SMTSetCount_Q,
	setrequestinfo	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PMFSetResponse_Q
Structured Type	:	PMFSetResponse_INFO
Derivation Path	:	
Comments	:	
Constraint Value		

9.3.1.7.9 ERROR InfoField Type Constraint Declaration

ASN.1 Type Constraint Declaration		
Constraint Name	:	
Structured Type	:	
Derivation Path	:	
Comments	:	
Constraint Value		

ASN.1 Type Constraint Declaration		
Constraint Name	:	
Structured Type	:	
Derivation Path	:	
Comments	:	
Constraint Value		

9.3.2 ASN.1 PDU Constraint Declarations

9.3.2.1 NIF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	NIF_TST_Req
PDU Type	:	NIF_Frame
Derivation Path	:	
Comments	:	General NIF Request Frame for tester.
Constraint Value		
{	SD	JK,
	FC	?
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'01'H,
	Frame_Type	'02'H,
	Version_ID	'0001'H,
	Transaction_ID	'00000010'H,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	'0000'H,
	InfoField_Length	'0028'H,
	Info	NIF_TST_DATA,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	_,
	FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_TST_Req_01	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Req	
Comments		: Valid NIF Request Frame	
Constraint Value			
REPLACE	FC	BY	‘4F’H

ASN.1 PDU Constraint Declaration				
Constraint Name		: NIF_TST_Req_02		
PDU Type		: NIF_Frame		
Derivation Path		: NIF_TST_Req_01		
Comments		: Invalid Frame Class		
Constraint Value				
REPLACE	Frame_Class	BY	‘10’H,	-- invalid frame class
REPLACE	Transaction_ID	BY	‘00000011’H	

ASN.1 PDU Constraint Declaration				
Constraint Name		: NIF_TST_Req_03		
PDU Type		: NIF_Frame		
Derivation Path		: NIF_TST_Req		
Comments		: To see if the IUT can respond to a NIF Request frame with FC= '41'H.		
Constraint Value				
REPLACE	FC	BY	'41'H,	
REPLACE	Transaction_ID	BY	'00000012'H	

ASN.1 PDU Constraint Declaration				
Constraint Name		: InvalidVersion_01		
PDU Type		: ERROR_Frame		
Derivation Path		: NIF_TST_Req_01		
Comments		: Invalid Version_ID.		
Constraint Value				
REPLACE	Version_ID	BY	'0002'H,	
REPLACE	Transaction_ID	BY	'00000013'H	

ASN.1 PDU Constraint Declaration				
Constraint Name		: NIF_TST_Req_05		
PDU Type		: NIF_Frame		
Derivation Path		: NIF_TST_Req_01		
Comments		: Invalid Version_ID.		
Constraint Value				
REPLACE	Frame_Type	BY	'0004'H,	
REPLACE	Transaction_ID	BY	'00000014'H	

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_TST_Req_06	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Req_01	
Comments		: Tester changes its address	
Constraint Value			
REPLACE	SA	BY	TESTER_ADDRESS2,
REPLACE	Transaction_ID	BY	‘00000015’H

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_TST_Ann_01	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Req	
Comments		: Valid NIF Announcement Frame	
Constraint Value			
REPLACE	FC	BY	‘4F’H,
REPLACE	DA	BY	Broadcast,
REPLACE	Frame_Type	BY	‘01’H,
REPLACE	Transaction_ID	BY	‘00000016’H

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_TST_Ann_02	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Ann_01	
Comments		: acknowledged frame of NIF_TST_Ann_01 from the IUT	
Constraint Value			
REPLACE	FS_A	BY	SET,
REPLACE	FS_C	BY	SET

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Req_01	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Req	
Comments		:	
Constraint Value			
REPLACE	FC	BY	'4F'H
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Transaction_ID	BY	?,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS
REPLACE	Info	BY	NIF_TST_DATA02

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Req_02	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_IUT_Req_01	
Comments		:	
Constraint Value			
REPLACE	Info	BY	NIF_TST_DATA01

ASN.1 PDU Constraint Declaration			
Constraint Name	: NIF_IUT_Req_03		
PDU Type	: NIF_Frame		
Derivation Path	: NIF_IUT_Req_02		
Comments	: To see if the IUT can generate a NIF frame with FC = '41'H.		
Constraint Value			
REPLACE	FC	BY	'41'H

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Req_04	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_IUT_Req_03	
Comments		:	
Constraint Value			
REPLACE	Info	BY	NIF_TST_DATA01

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Ann01	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_IUT_Req01	
Comments		:	
Constraint Value			
REPLACE	DA	BY	Broadcast,
REPLACE	Frame_Type	BY	'01'H
REPLACE	Info	BY	NIF_TST_DATA01

ASN.1 PDU Constraint Declaration			
Constraint Name	: NIF_TST_Res_01		
PDU Type	: NIF_Frame		
Derivation Path	: NIF_IUT_Req_01		
Comments	:		
Constraint Value			
REPLACE	DA	BY	IUT_ADDRESS,
REPLACE	SA	BY	TESTER_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	'0000'H,
REPLACE	Station_ID2	BY	TESTER_ADDRESS
REPLACE	Info	BY	NIF_TST_DATA03

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_TST_Res_02	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_TST_Res_01	
Comments		:	
Constraint Value			
REPLACE	FC	BY	'41'F

ASN.1 PDU Constraint Declaration			
Constraint Name	: NIF_IUT_Res_01		
PDU Type	: NIF_Frame		
Derivation Path	: NIF_TST_Req_01		
Comments	:		
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS,
REPLACE	Info	BY	NIF_TST_DATA01,
REPLACE	FS_A	BY	SET,
REPLACE	FS_C	BY	SET

ASN.1 PDU Constraint Declaration				
Constraint Name		: NIF_IUT_Res_02		
PDU Type		: NIF_Frame		
Derivation Path		: NIF_IUT_Res_01		
Comments		:		
Constraint Value				
REPLACE	Frame_Class	BY	'10'H	--invalid frame class

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Res_03	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_IUT_Res_01	
Comments		:	
Constraint Value			
REPLACE	Info	BY	NIF_TST_DATA

ASN.1 PDU Constraint Declaration			
Constraint Name		: NIF_IUT_Res_04	
PDU Type		: NIF_Frame	
Derivation Path		: NIF_IUT_Res_01	
Comments		: Response to the changed tester address	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS2
REPLACE	Info	BY	NIF_TST_DATA04

9.3.2.2 SIF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	SIF_CONF_Req_Q
PDU Type	:	SIF_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	?,
	DA	?,
	SA	?,
	Frame_Class	'02'H,
	Frame_Type	'02'H,
	Version_ID	'0001'H,
	Transaction_ID	?,
	Station_ID1	?,
	Station_ID2	?,
	PAD	PAD_2,
	InfoField_Length	'0000'H,
	sifrequest	-,
	FCS	?,
	ED	T,
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_CONF_Req_IUT	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_CONF_Req_Q	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Station_ID2	BY	IUT_ADDRESS

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_CONF_Req_01	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_CONF_Req_Q	
Comments		:	
Constraint Value			
REPLACE	FC	BY	'4F'H,
REPLACE	DA	BY	IUT_ADDRESS,
REPLACE	SA	BY	TESTER_ADDRESS,
REPLACE	Transaction_ID	BY	'00000021'H,
REPLACE	Station_ID1	BY	'0000'H,
REPLACE	Station_ID2	BY	TESTER_ADDRESS

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_CONF_Req_02	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_CONF_Req_Q	
Comments		: To see if the IUT responses to FC = '41'H	
Constraint Value			
REPLACE	FC	BY	'41'H,
REPLACE	Transaction_ID	BY	'00000022'H

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_CONF_Res_01	
PDU Type		: SIF_Frame	
Derivation Path		:	
Comments		:	
Constraint Value			
REPLACE	FC	BY	‘41’H,
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Transaction_ID	BY	‘00000021’H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS
REPLACE	InfoField_Length	BY	“..”H,
REPLACE	sifresponse	by	SIF_CONF_DATA

ASN.1 PDU Constraint Declaration				
Constraint Name		: SIF_CONF_Res_02		
PDU Type		: SIF_Frame		
Derivation Path		: SIF_CONF_Res_01		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000022'H	

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_OPER_Req_01	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_CONF_Req_01	
Comments		:	
Constraint Value			
REPLACE	FrameType	BY	‘03’H,
REPLACE	Transaction_ID	BY	‘00000023’H

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_OPER_Req_02	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_OPER_Req_01	
Comments		: To see if the IUT responses to FC = '41'H	
Constraint Value			
REPLACE	FC	BY	'41'H,
REPLACE	Transaction_ID	BY	'00000024'H

ASN.1 PDU Constraint Declaration				
Constraint Name		: SIF_OPER_Res_01		
PDU Type		: SIF_Frame		
Derivation Path		: SIF_CONF_Res_01		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000023'H,	
REPLACE	Station_ID1	BY	?,	
REPLACE	Station_ID2	BY	IUT_ADDRESS	
REPLACE	InfoField_Length	BY	".."H,	
REPLACE	sifresponse	by	SIF_OPER_DATA	

ASN.1 PDU Constraint Declaration			
Constraint Name		: SIF_OPER_Res_02	
PDU Type		: SIF_Frame	
Derivation Path		: SIF_OPER_Res_01	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	'00000024'H

9.3.2.3 ECHO Frame PDU Constraint Declaration

ASN.1 PDU Constraint Declaration	
Constraint Name	: ECF_Request
PDU Type	: ECF_Frame
Derivation Path	:
Comments	:
Constraint Value	
{	
SD	JK,
FC	?,
DA	IUT_ADDRESS,
SA	TESTER_ADDRESS,
Frame_Class	'04'H,
Frame_Type	'02'H,
Version_ID	'0001'H,
Transaction_ID	'000000031'H,
Station_ID1	'0000'H,
Station_ID2	TESTER_ADDRESS,
PAD	PAD_2,
InfoField_Length	?,
EchoData	?,
FCS	?
ED	T
FS_E	RESET,
FS_A	RESET,
FS_C	RESET,
FS_2	-,
FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: ECF_TST_Req_01	
PDU Type		: ECF_Frame	
Derivation Path		: ECF_Request	
Comments		: maximum ECHO data, 4454 octets	
Constraint Value			
REPLACE	InfoField_Length	BY	?,
REPLACE	EchoData	BY	ECHO_MAX

ASN.1 PDU Constraint Declaration			
Constraint Name	: ECF_TST_Req_02		
PDU Type	: ECF_Frame		
Derivation Path	: ECF_TST_Req_01		
Comments	: NULL ECHO data		
Constraint Value			
REPLACE	Transaction_ID	BY	'00000032'H,
REPLACE	InfoField_Length	BY	?,
REPLACE	EchoData	BY	ECHO_MIN

ASN.1 PDU Constraint Declaration			
Constraint Name	: ECF_TST_Req_03		
PDU Type	: ECF_Frame		
Derivation Path	: ECF_TST_Req_01		
Comments	: maximum InfoField size defined by SMT		
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000033’H,
REPLACE	InfoField_Length	BY	?,
REPLACE	EchoData	BY	ECHO_SMTMAX

ASN.1 PDU Constraint Declaration			
Constraint Name		: ECF_TST_Req_04	
PDU Type		: ECF_Frame	
Derivation Path		: ECF_TST_Req_01	
Comments		: exceeding maximum size defined by SMT	
Constraint Value			
REPLACE	Transaction_ID	BY	'00000034'H,
REPLACE	InfoField_Length	BY	?,
REPLACE	EchoData	BY	ECHO_INVALID

ASN.1 PDU Constraint Declaration			
Constraint Name		: ECF_IUT_Res_01	
PDU Type		: ECF_Frame	
Derivation Path		: ECF_TST_Req_01	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS

ASN.1 PDU Constraint Declaration			
Constraint Name		: ECF_IUT_Res_02	
PDU Type		: ECF_Frame	
Derivation Path		: ECF_IUT_Res_01	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	'00000032'H,
REPLACE	InfoField_Length	BY	?,
REPLACE	EchoData	BY	ECHO_MIN
REPLACE	Station_ID2	BY	IUT_ADDRESS

ASN.1 PDU Constraint Declaration			
Constraint Name		: ECF_IUT_Res_03	
PDU Type		: ECF_Frame	
Derivation Path		: ECF_TST_Req_03	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS

9.3.2.4 RAF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration	
Constraint Name	: SBA_ALOC_Request00
PDU Type	: SBA_Frame
Derivation Path	:
Comments	: Tester is the SBA allocator
Constraint Value	
<pre> { SD JK, FC '41'H, DA IUT_ADDRESS, SA TESTER_ADDRESS, Frame_Class '05'H, Frame_Type '02'H, Version_ID '0002'H, Transaction_ID '00000041'H, Station_ID1 '0000'H, Station_ID2 TESTER_ADDRESS, PAD PAD_2, InfoField_Length '0068'H, resourcetype ResourceType_00, sbacommmand SBACommand_Request, requestallocation RequestAllocation_Q, FCS ?, ED T, FS_E RESET, FS_A RESET, FS_C RESET, FS_2 -, FS_T T } </pre>	

ASN.1 PDU Constraint Declaration	
Constraint Name	: SBA_ALOC_Request01
PDU Type	: SBA_Frame
Derivation Path	: SBA_ALOC_Reques00
Comments	: IUT is the SBA allocator
Constraint Value	
REPLACE DA	BY TESTER_ADDRESS,
REPLACE SA	BY IUT_ADDRESS,
REPLACE Transaction_ID	BY ?,
REPLACE Station_ID1	BY ?,
REPLACE Station_ID2	BY IUT_ADDRESS
REPLACE requestallocation	BY RequestAllocation_01

ASN.1 PDU Constraint Declaration		
Constraint Name	:	SBA_REP_Request01
PDU Type	:	SBA_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'41'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'05'H,
	Frame_Type	'02'H,
	Version_ID	'0002'H,
	Transaction_ID	'00000042'H,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	'00XX'H,
	resourcetype	ResouceType_00,
	sbacommand	SBACommand_Report,
	reportallocation	NULL,
	FCS	?,
	ED	T,
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

ASN.1 PDU Constraint Declaration		
Constraint Name	:	SBA_CHG_Request01
PDU Type	:	SBA_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'41'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'05'H,
	Frame_Type	'02'H,
	Version_ID	'0002'H,
	Transaction_ID	'00000043'H,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	'0038'H,
	resourcetype	ResourceType_00,
	sbacommmand	SBACommnad_03,
	changeallocation	ChangeRequest_Q,
	FCS	?,
	ED	T,
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: SBA_ALOC_Response00	
PDU Type		: SBA_Frame	
Derivation Path		: SBA_ALOC_Request00	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS,
REPLACE	InfoField_Length	BY	'0058'H,
REPLACE	requestresponse	BY	RequestResponse_Q

ASN.1 PDU Constraint Declaration			
Constraint Name		: SBA_REP_Response	
PDU Type		: SBA_Frame	
Derivation Path		: SBA_REQ_Response	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS,
REPLACE	InfoField_Length	BY	'0034'H..'00B0'H,
REPLACE	reportresponse	BY	ReportResponse_Q

ASN.1 PDU Constraint Declaration			
Constraint Name		: SBA_CHG_Response	
PDU Type		: SBA_Frame	
Derivation Path		:	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS,
REPLACE	InfoField_Length	BY	'003C'H,
REPLACE	changeresponse	BY	ChangeResponse_Q

9.3.2.5 ESF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	ESF_Request00
PDU Type	:	ESF_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'41'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'05'H,
	Frame_Type	'02'H,
	Version_ID	'0002'H,
	Transaction_ID	'00000051'H,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	Info	ESF_DATA,
	FCS	?,
	ED	T,
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	~,
	FS_T	T }

9.3.2.6 RDF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration			
Constraint Name	: RDF_IUT_01		
PDU Type	: RDF_Frame		
Derivation Path	:		
Comments	: frame class not supported		
Constraint Value			
{	SD	JK,	
	FC	'41'H,	
	DA	TESTER_ADDRESS,	
	SA	IUT_ADDRESS,	
	Frame_Class	'06'H,	
	Frame_Type	'03'H,	
	Version_ID	'0002'H,	
	Transaction_ID	?,	
	Station_ID1	?,	-- implementer octets, PIXIT item
	Station_ID2	IUT_ADDRESS,	
	PAD	PAD_2,	
	InfoField_Length	?,	
	Info	RDF_DATA01,	
	ED	T,	
	FS_E	RESET,	
	FS_A	RESET,	
	FS_C	RESET,	
	FS_2	~,	
	FS_T	T }	

ASN.1 PDU Constraint Declaration				
Constraint Name		: RDF_IUT_02		
PDU Type		: RDF_Frame		
Derivation Path		:		
Comments		: frame version not supported		
Constraint Value				
REPLACE	Info	BY	RDF_IUT_DATA02	

ASN.1 PDU Constraint Declaration			
Constraint Name	:	RDF_IUT_03	
PDU Type	:	RDF_Frame	
Derivation Path	:		
Comments	:	success	
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA03

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_04
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	bad set count
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA04

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_05
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	illegal operation
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA05

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_06
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	no parameter
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA06

ASN.1 PDU Constraint Declaration			
Constraint Name	:	RDF_IUT_08	
PDU Type	:	RDF_Frame	
Derivation Path	:		
Comments	:	out of range	
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA08

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_09
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	not authorized
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA09

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_0A
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	length error
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA0A

ASN.1 PDU Constraint Declaration			
Constraint Name		:	RDF_IUT_0B
PDU Type		:	RDF_Frame
Derivation Path		:	
Comments		:	frame too long
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA0B

ASN.1 PDU Constraint Declaration			
Constraint Name	:	RDF_IUT_0D	
PDU Type	:	RDF_Frame	
Derivation Path	:		
Comments	:	sba denied	
Constraint Value			
REPLACE	Info	BY	RDF_IUT_DATA0D

9.3.2.7 SRF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	SRF_TST_Ann
PDU Type	:	SRF_Frame
Derivation Path	:	
Comments	:	NEED WORK!!
Constraint Value		
{	SD	JK,
	FC	'41'H,
	DA	SMT_SRF_DA,
	SA	TESTER_ADDRESS,
	Frame_Class	'07'H,
	Frame_Type	'01'H,
	Version_ID	'0002'H,
	Transaction_ID	'00000070'H,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	Info	SRF_DATA,
	FCS	?,
	ED	T,
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	~,
	FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: SRF_TST_Ann01	
PDU Type		: SRF_Frame	
Derivation Path		: SRF_TST_Ann	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000071’H,
REPLACE	InfoField_Length	BY	?,
REPLACE	Info	BY	SRF_DATA

ASN.1 PDU Constraint Declaration				
Constraint Name		: SRF_TST_Ann02		
PDU Type		: SRF_Frame		
Derivation Path		: SRF_TST_Ann		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000072'H,	
REPLACE	InfoField_Length	BY	?,	
REPLACE	Info	BY	SRF_DATA	

ASN.1 PDU Constraint Declaration			
Constraint Name		:	SRF_TST_Ann03
PDU Type		:	SRF_Frame
Derivation Path		:	SRF_TST_Ann
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	'00000073'H,
REPLACE	InfoField_Length	BY	?,
REPLACE	Info	BY	SRF_DATA

ASN.1 PDU Constraint Declaration			
Constraint Name	:	SRF_TST_Ann	
PDU Type	:	SRF_Frame	
Derivation Path	:		
Comments	:		
Constraint Value			
REPLACE	Transaction_ID	BY	'00000074'H,
REPLACE	InfoField_Length	BY	?,
REPLACE	Info	BY	SRF_DATA

ASN.1 PDU Constraint Declaration			
Constraint Name		: SRF_IUT_Ann	
PDU Type		: SRF_Frame	
Derivation Path		: SRF_TST_Ann	
Comments		:	
Constraint Value			
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Transaction_ID	BY	?,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS,
REPLACE	InfoField_Length	BY	?,
REPLACE	Info	BY	SRF_DATA

9.3.2.8 PMF PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	PMFGet_Request_TESTER
PDU Type	:	PMFGetRequest_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'4F'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'08'H,
	Frame_Type	'02'H,
	Version_ID	'0002'H,
	Transaction_ID	?,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	getrequest	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	?,
	FS_T	T }

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_01		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		: get fddiSMTStatiionId parameter value		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000080'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	getrequest	BY	SMTStationId_PmfReq	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_02		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000081'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	getrequest	BY	SMTOpVersionId_PmfReq	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_03		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000082'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	getrequest	BY	SMTHiVersionId_PmfReq	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_04		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000083'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	getrequest	BY	SMTLoVersionId_PmfReq	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_05		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		:		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000084'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	getrequest	BY	MACDownstreamNbr_PmfReq	

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_06	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_TESTER	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000085’H,
REPLACE	InfoField_Length	BY	‘0004’H,
REPLACE	getrequest	BY	MACOldDownstreamNbr_PmfReq

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_08.5	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_TESTER	
Comments		: A valid Multiple Group attribute (fddiSMTStationId and fddiSMTOpVersionId)	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000087’H,
REPLACE	InfoField_Length	BY	‘0008’H,
REPLACE	getrequest	BY	ValidMultiple_PmfGet

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_09.5		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		: Invalid PMF Get Request frame with multiple attributes (mixed resource index of zero and non-zero).		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000088'H,	
REPLACE	InfoField_Length	BY	'000C'H,	
REPLACE	getrequest	BY	InvalidMultiple_PmfGet	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Request_0A.5		
PDU Type		: PMFGetRequest_Frame		
Derivation Path		: PMFGet_Request_TESTER		
Comments		: Invalid group attribute of PMF Get Request (mixed resource index of zero and non-zero)		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000089'H,	
REPLACE	InfoField_Length	BY	'000C'H,	
REPLACE	getrequest	BY	InvalidMultipleGrp_PmfGet	

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_IUT	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_TESTER	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_07	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_IUT	
Comments		: A valid single attribute (fddiSMTStationId)	
Constraint Value			
REPLACE	InfoField_Length	BY	‘0004’H,
REPLACE	getrequest	BY	SMTStationId_PmfReq

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_08	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_IUT	
Comments		: A valid Multiple attribute	
Constraint Value			
REPLACE	InfoField_Length	BY	‘0008’H,
REPLACE	getrequest	BY	ValidMultiple_PmfGet

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_09	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_IUT	
Comments		: A valid Multiple Group attribute	
Constraint Value			
REPLACE	InfoField_Length	BY	'0008'H,
REPLACE	getrequest	BY	ValidMultipleGrp_PmfGet

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Request_11	
PDU Type		: PMFGetRequest_Frame	
Derivation Path		: PMFGet_Request_01	
Comments		: To see if the IUT implements the FC = '4F'H	
Constraint Value			
REPLACE	FC	BY	'4F'H,
REPLACE	Transaction_ID	BY	'00000080'H

ASN.1 PDU Constraint Declaration		
Constraint Name	:	PMFGet_Response
PDU Type	:	PMFGetResponse_Frame
Derivation Path	:	
Comments	:	Generic format
Constraint Value		
{	SD	JK,
	FC	'4F'H,
	DA	TESTER_ADDRESS,
	SA	IUT_ADDRESS,
	Frame_Class	'08'H,
	Frame_Type	'03'H,
	Version_ID	'0002'H,
	Transaction_ID	?,
	Station_ID1	?,
	Station_ID2	IUT_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	getresponse	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_01	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response	
Comments		: fddiSMTStationId	
Constraint Value			
REPLACE	Transaction_ID	BY	'00000080'H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_01

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_02	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000080’H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_02

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_03	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000081’H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_03

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_04	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000082’H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_04

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_05	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response_01	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000083’H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_05

ASN.1 PDU Constraint Declaration			
Constraint Name		: PMFGet_Response_06	
PDU Type		: PMFGetResponse_Frame	
Derivation Path		: PMFGet_Response	
Comments		:	
Constraint Value			
REPLACE	Transaction_ID	BY	‘00000084’H,
REPLACE	getresponse	BY	PMF_IUT_Get_Res_06

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Response_07		
PDU Type		: PMFGetResponse_Frame		
Derivation Path		: PMFGet_Response		
Comments		:		
Constraint Value				
REPLACE	InfoField_Length	BY	'1C'..'38'H,	
REPLACE	InfoField_Length	BY	'0018'..'0034'H,	
REPLACE	getresponse	BY	PMF_IUT_Get_Res_07	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Response_08.5		
PDU Type		: PMFGetResponse_Frame		
Derivation Path		: PMFGet_Response		
Comments		: multiple group attributes (fddiSMTStationId and fddiSMTOpVersionId)		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000087'H,	
REPLACE	getresponse	BY	PMF_IUT_Get_Res_08.5	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Response_09.5		
PDU Type		: PMFGetResponse_Frame		
Derivation Path		: PMFGet_Response		
Comments		: Error Response of PMFGet Request frame (resource index of zero and non-zero: SMTStationId and fddiMACFrameStatusFunctions)		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000088'H,	
REPLACE	getresponse	BY	PMF_IUT_Get_Res_09.5	

ASN.1 PDU Constraint Declaration				
Constraint Name		: PMFGet_Response_0A.5		
PDU Type		: PMFGetResponse_Frame		
Derivation Path		: PMFGet_Response		
Comments		: invalid multiple group attributes of resource index of zero and non-zero within a single frame (fddiSMTStationId_Group and fddiMACCapabilities_Group).		
Constraint Value				
REPLACE	Transaction_ID	BY	'00000089'H,	
REPLACE	getresponse	BY	PMF_IUT_Get_Res_0A.5	

ASN.1 PDU Constraint Declaration		
Constraint Name	:	PMFSet_Request
PDU Type	:	PMFSetRequest_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'4F'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'09'H,
	Frame_Type	'02'H,
	Version_ID	'0002'H,
	Transaction_ID	?,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	setrequest	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

ASN.1 PDU Constraint Declaration		
Constraint Name	:	PMFSet_Response
PDU Type	:	PMFSetResponse_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'4F'H,
	DA	TESTER_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	'09'H,
	Frame_Type	'03'H,
	Version_ID	'0002'H,
	Transaction_ID	?,
	Station_ID1	?,
	Station_ID2	IUT_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	setresponse	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

9.3.2.9 ERROR PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	ERROR_BASE
PDU Type	:	ERROR_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'4F'H,
	DA	IUT_ADDRESS,
	SA	TESTER_ADDRESS,
	Frame_Class	?,
	Frame_Type	?,
	Version_ID	?,
	Transaction_ID	?,
	Station_ID1	'0000'H,
	Station_ID2	TESTER_ADDRESS,
	PAD	PAD_2,
	InfoField_Length	?,
	Info	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	~,
	FS_T	T }

ASN.1 PDU Constraint Declaration				
Constraint Name		: invalid_Request_01		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Invalid_FrameClass		
Constraint Value				
REPLACE	Frame_Class	BY	'00'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0002'H,	
REPLACE	Transaction_ID	BY	'00000091'H,	
REPLACE	InfoField_Length	BY	'0000'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_02		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Invalid_FrameType		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'00'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000092'H,	
REPLACE	InfoField_Length	BY	'0000'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_03		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Invalid_Version		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000093'H,	
REPLACE	InfoField_Length	BY	'0000'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_04		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Short_InfoField		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000094'H,	
REPLACE	InfoField_Length	BY	'0004'H,	
REPLACE	Info	BY	ValidMultiple_Pmf_00	

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_05		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: long_InfoField		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000095'H,	
REPLACE	InfoField_Length	BY	'0008'H,	
REPLACE	Info	BY	SMTStationId_01	

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_06		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Invalid version ID for NIF		
Constraint Value				
REPLACE	Frame_Class	BY	'01'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000096'H,	
REPLACE	InfoField_Length	BY	'0028'H,	
REPLACE	Info	BY	NIF_TST_DATA	

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Request_07		
PDU Type		: ERROR_Frame		
Derivation Path		: ERROR_BASE		
Comments		: Invalid version ID for SIF configuration		
Constraint Value				
REPLACE	Frame_Class	BY	'02'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000097'H,	
REPLACE	InfoField_Length	BY	'0000'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration			
Constraint Name		: Invalid_Request_08	
PDU Type		: ERROR_Frame	
Derivation Path		: ERROR_BASE	
Comments		: Invalid version ID for SIF configuration	
Constraint Value			
REPLACE	Frame_Class	BY	‘03’H,
REPLACE	Frame_Type	BY	‘02’H,
REPLACE	Version_ID	BY	‘0002’H
REPLACE	Transaction_ID	BY	‘00000098’H,
REPLACE	InfoField_Length	BY	‘0000’H,
OMIT	Info		

ASN.1 PDU Constraint Declaration			
Constraint Name		: Invalid_Request_09	
PDU Type		: ERROR_Frame	
Derivation Path		: ERROR_BASE	
Comments		: Invalid version ID for SIF operation	
Constraint Value			
REPLACE	Frame_Class	BY	‘03’H,
REPLACE	Frame_Type	BY	‘02’H,
REPLACE	Version_ID	BY	‘0002’H
REPLACE	Transaction_ID	BY	‘00000099’H,
REPLACE	InfoField_Length	BY	‘0000’H,
OMIT	Info		

ASN.1 PDU Constraint Declaration			
Constraint Name		: ERR_Response	
PDU Type		: ERROR_Frame	
Derivation Path		: ERROR_BASE	
Comments		:	
Constraint Value			
REPLACE	DA	BY	TESTER_ADDRESS,
REPLACE	SA	BY	IUT_ADDRESS,
REPLACE	Frame_Type	BY	'03'H,
REPLACE	Station_ID1	BY	?,
REPLACE	Station_ID2	BY	IUT_ADDRESS

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_01		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		: Invalid Frame Class Response		
Constraint Value				
REPLACE	Frame_Class	BY	'00'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000091'H,	
REPLACE	InfoField_Length	BY	'00'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_02		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		: Invalid Frame Type		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'00'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000092'H,	
REPLACE	InfoField_Length	BY	'00'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_03		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		: Invalid Version ID		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000093'H,	
REPLACE	InfoField_Length	BY	'00'H,	
OMIT	Info			

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_04		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		: Shorter InfoField Length		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Version_ID	BY	'0002'H	
REPLACE	Transaction_ID	BY	'00000094'H,	
REPLACE	InfoField_Length	BY	'04'H,	
REPLACE	Info	BY	PMF_IUT_Get_Res_08.5	

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_05		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		: Longer InfoField Length		
Constraint Value				
REPLACE	Frame_Class	BY	'08'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000095'H,	
REPLACE	InfoField_Length	BY	'08'H,	
REPLACE	Info	BY	PMF_IUT_Get_Res_01	

ASN.1 PDU Constraint Declaration				
Constraint Name		: Invalid_Response_06		
PDU Type		: ERROR_Frame		
Derivation Path		: ERR_Response		
Comments		:		
Constraint Value				
REPLACE	Frame_Class	BY	'01'H,	
REPLACE	Frame_Type	BY	'02'H,	
REPLACE	Version_ID	BY	'0000'H	
REPLACE	Transaction_ID	BY	'00000095'H	

ASN.1 PDU Constraint Declaration			
Constraint Name		: Invalid_Response_06	
PDU Type		: ERROR_Frame	
Derivation Path		: ERR_Response	
Comments		:	
Constraint Value			
REPLACE	Frame_Class	BY	'01'H,
REPLACE	Version_ID	BY	'0002'H
REPLACE	Transaction_ID	BY	'00000096'H

ASN.1 PDU Constraint Declaration			
Constraint Name	: Invalid_Response_07		
PDU Type	: ERROR_Frame		
Derivation Path	: ERR_Response		
Comments	:		
Constraint Value			
REPLACE	Frame_Class	BY	'02'H,
REPLACE	Frame_Type	BY	'02'H,
REPLACE	Version_ID	BY	'0002'H
REPLACE	Transaction_ID	BY	'00000097'H

ASN.1 PDU Constraint Declaration			
Constraint Name	: Invalid_Response_08		
PDU Type	: ERROR_Frame		
Derivation Path	: ERR_Response		
Comments	:		
Constraint Value			
REPLACE	Frame_Class	BY	'03'H,
REPLACE	Version_ID	BY	'0002'H
REPLACE	Transaction_ID	BY	'00000098'H

9.3.2.10 Synchronous Frame PDU Constraint Declaration

ASN.1 PDU Constraint Declaration		
Constraint Name	:	SYNC_Frame00
PDU Type	:	SYNC_Frame
Derivation Path	:	
Comments	:	
Constraint Value		
{	SD	JK,
	FC	'D0'H,
	DA	TESTER_ADDRESS,
	SA	IUT_ADDRESS,
	InfoField	?,
	FCS	?
	ED	T
	FS_E	RESET,
	FS_A	RESET,
	FS_C	RESET,
	FS_2	-,
	FS_T	T }

9.4 Dynamic Parts

9.4.1 Frame Processing Test Cases

Test Case Dynamic Behavior					
Test Case Name		: Unsupported_FrameClass			
Group		: FDDI/FBM/ERROR/response/			
Purpose		: Verify that the IUT should respond with a RDF with 'Reason: frame class not supported' when a received Request frame's Frame Class is invalid.			
Default		:			
Comment		: SMT 8.1.3.1			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_01		(1)
2		!ERROR_Frame			(2)
3		START_TIMER30	Invalid_Response_01 RDF_IUT_01	FAIL PASS	(3) (4)
4		?ERROR_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0	FAIL	(5)	
8		?TIMEOUT TIMER30			
Detailed Comments:					
(1) Operational Ring.					
(2) Tester sends an ERROR Frame Class Request frame to the IUT.					
(3) IUT responded to an invalid Frame Class frame, thus IUT failed the test.					
(4) IUT responded with RDF with Reason:FrameClassNotSupported.					
(5) The test timer is now expired and the tester has not received a RDF frame from the IUT. The IUT failed this test.					

Test Case Dynamic Behavior					
Test Case Name : Unsupported_FrameType Group : FDDI/FBM/ERROR/response/ Purpose : Verify that the IUT does not respond when the received frame type is undefined or not defined within the scope of the received frame class. Default : Comment : SMT 8.1.3.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_02		(1)
2		!ERROR_Frame			(2)
3		START TIMER30	Invalid_Response_02	FAIL	(3)
4		?ERROR_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30	PASS	(4)	
Detailed Comments: (1) Operational Ring. (2) Tester sends an ERROR Frame with invalid Frame Type to the IUT. (3) IUT responded to an invalid Frame Type frame, thus IUT failed the test. (4) The test timer is now expired and the tester has not received a Response frame from the IUT. Thus it is assumed that IUT discarded the tester's Request frame.					

Test Case Dynamic Behavior					
Test Case Name : Invalid_Version1 Group : FDDI/FBM/ERROR/response/ Purpose : Verify that the IUT has implemented Version ID correctly. Default : Comment : SMT 8.1.3.3					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	Invalid_Request_03		(1)
2		!ERROR_Frame			(2)
3		START TIMER30	Invalid-Response_03 RDF_IUT_Res03	FAIL PASS	(3) (4)
4		?ERROR_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L1			
8		?TIMEOUT TIMER30	FAIL	(5)	
Detailed Comments: (1) Operational Ring. (1) Tester sends ERROR Request frame with invalid version id ('0000'H). (2) Tester received the ERROR Response frame from the IUT. The IUT failed the test. (3) Tester received a RDF Response frame with 'Reason: frame version not supported,' the IUT passed the test. (4) The tester timer expired and the did not received a Response frame from the IUT. The IUT failed the test.					

Test Case Dynamic Behavior					
Test Case Name : InfoField_Test_01					
Group : FDDI/FBM/ERROR/response/					
Purpose : Purpose of this test is to see how the IUT processes an invalid InfoField length by the implementer's option.					
Default :					
Comment : SMT 8.1.3.4. None of the IUT will fail on this test.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	Invalid_Request_04	PASS	(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_04 RDF_IUT_Res03		
4		?ERROR_Frame			(2)
5		?RDF_Frame			(3)
6		?OTHERWISE			
7		GOTO L1			
8		?TIMEOUT TIMER30			(4)
Detailed Comments:					
(1) Operational Ring.					
(1) Tester sends ERROR Request frame with InfoField length is shorter than the remaining INFO field.					
(2) Tester received the ERROR Response frame from the IUT. The IUT failed the test.					
(3) Tester received a RDF Response frame with 'Reason: length error,' the IUT passed the test.					
(4) The tester timer expired and the tester did not received the Response frame from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : InfoField_Test_02					
Group : FDDI/FBM/ERROR/response/					
Purpose : Purpose of this test is to see how the IUT processes an invalid InfoField length by the implementer's option.					
Default :					
Comment : SMT 8.1.3.4. None of the IUT will fail in this test.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	Invalid_Request_05	PASS	(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_05 RDF_IUT_Res03		
4		?ERROR_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L1			
8		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends ERROR Request frame with InfoField length is longer than the remaining INFO field. (2) Tester received the ERROR Response frame from the IUT. (3) Tester received a RDF Response frame with 'Reason: length error.' (4) The tester timer expired and the tester did not received Response frame from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : StationID_Test Group : FDDI/MIB/PMF/GET/response/ Purpose : Verify that IUT operates with the same value from MIB attribute fddiSMTStationIdand the StationID field from the PDU. Default : Comment : SMT 7.1.2.4.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	PMFGet_Request_01	PASS	(1)
2		!PMFGetRequest_Frame			
3		START TIMER30	PMFGet_Response_01		
4		?PMFGetResponse_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends PMF Get Request frame with StaionID parameter. (2) Tester receives a PMF Get Response frame from the IUT which matches its SMTStationId from the MIB and its Station ID field. (3) The tester timer is now expired and no PMF Get Response frame is received.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test01 Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT's value of the Version_ID field and that of the SMTOpversionID are the same except ECF, NIF, and SIF. Default : Comment : SMT 7.1.2.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	PMFGet_Request_02	PASS	(1)
2		!PMFGetRequest_Frame			
3		START TIMER30	PMFGet_Resonse_02		
4		?PMFGetResponse_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends PMF Get Request frame with SMTOpVersionId parameter. (2) Tester receives a PMF Get Response frame from the IUT which has the same values for both SMTOpversionId and Version_ID field. (3) The tester timer is now expired and no PMF Get Response frame is received.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test02 Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the value of IUT's SMTHiVersionId is '0002'H for this standard. Default : Comment : SMT 7.1.2.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	PMFGet_Request_03	PASS	(1)
2		!PMFGetRequest_Frame			
3		START TIMER30	PMFGet_Response_03		
4		?PMFGetResponse_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30			
FAIL (3)					
Detailed Comments: (1) Operational Ring. (1) Tester sends PMF Get Request frame with SMTHiVersionId parameter. (2) Tester receives a PMF Get Response frame with SMTHiVersionId = '0002'H. (3) The tester timer is now expired and no PMF Get Response frame is received.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test03 Group : FDDI/MIB/PMF/GET/response/ Purpose : Verify that the value of IUT's SMTLoVersionId is '0001'H for this standard. Default : Comment : SMT 7.1.2.2. This guarantees backward compatibility with SMT 6.2.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	PMFGet_Request_04	PASS	(1)
2		!PMFGetRequest_Frame			
3		START TIMER30	PMFGet_Response_04		
4		?PMFGetResponse_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends PMF Get Request frame with SMTLoVersionId parameter. (2) Tester receives a PMF Get Response frame with SMTOpversionId = '0001'H. (3) The tester timer is now expired and the tester has not received the PMF Get Request frame from the IUT, thus the IUT failed the test.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test04 Group : FDDI/MIB/NIF/response/ Purpose : Verify that the Version_ID of the NIF is a constant value of '0001'H. Default : Comment : SMT 7.2.1.1					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_06		(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_06 RDF_IUT_02	FAIL PASS	(2) (3)
4		?NIF_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0			
8		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends NIF Request frame with Version_ID = '0002'H. (2) Tester receives a NIF Response frame. (3) Tester receives a RDF with 'Reason: frame version not supported.' (4) The tester timer is now expired and did not receive any response from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test05 Group : FDDI/MIB/SIF/CONF/response/ Purpose : Verify that the Version_ID of the SIF Configuration is a constant value of '0001'H. Default : Comment : SMT 7.1.2.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_07		(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_07 RDF_IUT_02	FAIL PASS	(2) (3)
4		?SIF_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0			
8		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends SIF Configuration Request frame with Version_ID = '0002'H. (2) Tester receives a SIF Configuration Response frame. (3) Tester receives a RDF with 'Reason: frame version not supported.' (4) The tester timer is now expired and did not receive any response from the IUT.					

Test Case Dynamic Behavior					
Test Case Name		: VersionID_Test06			
Group		: FDDI/MIB/SIF/OPER/response/			
Purpose		: Verify that the Version_ID of the SIF Operation is a constant value of '0001'H.			
Default		:			
Comment		: SMT 7.1.2.2			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_06		(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_06 RDF_IUT_02	FAIL PASS FAIL	(2) (3) (3)
4		?SIF_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0			
	?TIMEOUT TIMER30				
Detailed Comments: (1) Operational Ring. (1) Tester sends SIF Operation Request frame with Version_ID = '0002'H. (2) Tester receives a SIF Operation Response frame. (3) Tester receives a RDF with 'Reason: frame version not supported.' (4) The tester timer is now expired and did not receive any response from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : VersionID_Test08 Group : FDDI/MIB/ECF/response/ Purpose : Verify that the Version ID of the ECF is a constant value of '0001'H. Default : Comment : SMT 7.1.2.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_09		(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_09 RDF_IUT_02	FAIL PASS	(2) (3)
4		?ECF_Frame			
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0			
	?TIMEOUT TIMER30		FAIL	(3)	
Detailed Comments: (1) Operational Ring. (1) Tester sends ECF Request frame with Version_ID = '0002'H. (2) Tester receives a ECF Response frame. (3) Tester receives a RDF with 'Reason: frame version not supported.' (4) The tester timer is now expired and did not receive any response from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : NIF_Version_ID Group : FDDI/MIB/NIF/response/ Purpose : Verify that the IUT does not response to the Version_ID = '0002'H. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	Invalid_Request_06		(1)
2		!ERROR_Frame			
3		START TIMER30	Invalid_Response_06 RDF_IUT_02	FAIL	(2)
4		?PMFGetResponse_Frame			(3)
5		?RDF_Frame			
6		?OTHERWISE			
7		GOTO L0			(3)
		?TIMEOUT TIMER30			
Detailed Comments: (1) Operational Ring. (1) Tester sends NIF Request frame with Version_ID = '0002'H. (2) Tester receives a NIF Response frame. (3) Tester receives a RDF with 'Reason: frame version not supported.' (4) The tester timer is now expired and did not receive any response from the IUT.					

9.4.2 Neighbor Information Frame Test Cases

Test Case Dynamic Behavior					
Test Case Name : NIF_Announce1					
Group : FDDI/FBM/NIF/					
Purpose : Verify that the IUT has the capability of generating and transmitting an optional NIF Announcement frame correctly.					
Default :					
Comment : This is an optional test for the IUTs which implement NIF Announcement.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	NIF_IUT_Ann_01		(1)
2		<IUT!NIF_Frame>			(2)
3		START OPR_TIMER	NIF_IUT_Ann_01	PASS	(3)
4		?NIF_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT OPR_TIMER			
				FAIL	(4)
Detailed Comments:					
(1) Operational Ring					
(2) Forcing IUT to send NIF Announcement Frame by an IUT operator.					
(3) Tester receives NIF Announcement Frame from the IUT, thus the IUT passed the test.					
(4) The test timer is now expired and the tester has not received a NIF Announcement frame from the IUT thus fails the test.					

Test Case Dynamic Behavior					
Test Case Name : NIF_Request1 Group : FDDI/FBM/NIF/ Purpose : To verify that the IUT generates and transmits a NIF Request frame periodically when Timer TNN expires. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1		+INIT_RING			(1)
2		START TIMER60			
3	L0	?NIF_Frame	NIF_IUT_Req_01		(2)
4		START TIMER30			
5	L1	?NIF_Frame	NIF_IUT_Req_01	PASS	(3)
6		?OTHERWISE			
7		GOTO L1			
8		?TIMEOUT TIMER30		FAIL	(4)
9		?OTHERWISE			
10		GOTO L0			
11		?TIMEOUT TIMER60		FAIL	(5)
Detailed Comments: (1) Power up the IUT and wait. (2) Tester received the first NIF Request frame from the IUT. At this point the IUT should reset its TNN timer and will send an another NIF Request frame upon the expiration of TNN. (3) Tester received a second NIF Request frame from the IUT. The IUT passed NIF Request test. (4) Tester does not received second NIF Request frame from the IUT and test timer TNN expired. The IUT failed this test. (5) The test timer expired and tester has not received any NIF Request frame from the IUT.					

Test Case Dynamic Behavior					
Test Case Name : NIF_Response1 Group : FDDI/FBM/NIF/ Purpose : To verify that the IUT generates and transmits a NIF Response frame when it receives a NIF Request Frame. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1		+RING_OP			(1)
2		!NIF_Frame	NIF_TST_Req_01		(2)
3		START TIMER30			
4	L0	?NIF_Frame	NIF_IUT_Res_01	PASS	(3)
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30		FAIL	(4)
Detailed Comments: (1) Ring is operational. (2) Tester sends a NIF Request frame to the IUT. (3) Tester received a NIF Response frame from the IUT. The IUT passed the test. (4) Tester does not received a NIF Response frame from the IUT and test timer TNN expired. The IUT failed this test.					

Test Case Dynamic Behavior					
Test Case Name : InValid_UNA Group : FDDI/FBM/NIF/ Purpose : Verify that the IUT invalids Upstream Neighbor Address upon the expiration of timer T_NN_OUT. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	NIF_TST_Req_01		(1)
2		!NIF_Frame			
3		START TIMER30	NIF_IUT_Req_03	(3)	
4		?NIF_Frame			NIF_TST_Res_01
5		!NIF_Frame		(4)	
6		START TIMER228			NIF_IUT_Req_01
7		?TIMEOUT TIMER228	NIF_IUT_Req_03		
8		?NIF_Frame		PASS	(5)
	?NIF_Frame	FAIL			
	?OTHERWISE			FAIL	
	GOTO L0				
	?TIMEOUT TIMER30				
Detailed Comments: (1) Tester transmits a NIF Announcement frame. (2) Tester received a first NIF Request frame with UNA = TESTER_ADDRESS from the IUT. (3) Tester waits until timer T_NN_OUT expires. (4) Tester receives a NIF Request frame from the IUT with UNA = 'UnknownSMTAddress'. (5) Tester received a NIF Request frame from the IUT with UNA = TESTER_ADDRESS.					

Test Case Dynamic Behavior					
Test Case Name : Valid_DNA Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT has a valid fddiMACDownstreamNbr. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	NIF_TST_Req_01	PASS	(1)
2		!NIF_Frame			
3		START TIMER30	NIF_IUT_Res_01 PMF_Request_05		
4		?NIF_Frame			
5		!PMFGetRequest_Frame	PMF_Response_05		(4)
6		START TIMER30			
7		?PMFGetResponse_Frame			
8		?OTHERWISE			
9		GOTO L0			
		?TIMEOUT TIMER30		FAIL	
		?TIMEOUT TIMER30		FAIL	
Detailed Comments: (1) Tester transmits a NIF Announcement frame. (2) Tester received a first NIF Request frame from the IUT. (3) Tester transmits a PMF Get Request frame with fddiMACDdownstreamNbr parameter to the IUT. (4) Tester receives a PMF Get Response frame from the IUT.					

Test Case Dynamic Behavior						
Test Case Name		: Invalid_DNA				
Group		: FDDI/FBM/PMF/GET/response/				
Purpose		: Verify that the IUT has a invalid its fddiMACDownstreamNbr when T_NN_OUT timer expires.				
Default		:				
Comment		:				
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments	
1	L0	+RING_OP	NIF_TST_Req_01		(1)	
2		!NIF_Frame				
3		START TIMER228	NIF_IUT_Res_01		(2)	
4		?NIF_Frame				
5		GOTO L0				
6		?OTHERWISE				
7		GOTO L0				
8		?TIMEOUT TIMER228				(3)
9	L1	!PMFGetRequest_Frame	PMF_Request_05	(4)		
10		START TIMER30	PMF_Response_06		(5)	
11		?PMFGetResponse_Frame				
12		?OTHERWISE				
13		GOTO L1				
14		?TIMEOUT TIMER30	FAIL			
Detailed Comments:						
(1) Tester transmits a NIF Request frame.						
(2) Tester received a NIF Response frame from the IUT.						
(3) Tester strips all frames until TIMER288 expires. The IUT should invalidate its current DNA.						
(4) Tester transmits a PMF Get Request frame with fddiMACDdownstreamNbr parameter to the IUT.						
(5) Tester receives a PMF Get Response frame from the IUT with DNA='unknown_address'.						

Test Case Dynamic Behavior					
Test Case Name : Old_UNA Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT invalidates its fddiMACUpstreamNbr when timer T_NN_OUT expires and stores fddiMACUpstreamNbr to fddiMACOldUpstreamNbr. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	NIF_TST_Req_01		(1)
2		!NIF_Frame			
3		START TIMER228	NIF_IUT_Res_01		(2)
4		?NIF_Frame			
5		GOTO L0			
6	L1	?OTHERWISE	PMF_Request_06	PASS	(3)
7		GOTO L0			
8		?TIMEOUT TIMER228	PMF_Response_07		(5)
9		!PMFGetRequest_Frame			
10		START TIMER30			
11		?PMFGetResponse_Frame			
12		?OTHERWISE			
13		GOTO L1			
14		?TIMEOUT TIMER30		FAIL	
Detailed Comments: (1) Tester transmits a NIF Request frame. (2) Tester received a NIF Response frame from the IUT. (3) Tester strips all frames until TIMER228 expires. The IUT should invalidate its current UNA. (4) Tester transmits a PMF Get Request frame with fddiMACOldUpstreamNbr parameter to the IUT. (5) Tester receives a PMF Get Response frame from the IUT with OldUNA='TESTER_ADDRESS'.					

Test Case Dynamic Behavior						
Test Case Name		: Old_DNA				
Group		: FDDI/FBM/PMF/GET/response/				
Purpose		: Verify that the IUT has a invalid its fddiMACDownstreamNbr when T_NN_OUT timer expires and stores to fddiOldDownsteamNbr.				
Default		:				
Comment		:				
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments	
1	L0	+RING_OP	NIF_TST_Req_01		(1)	
2		!NIF_Frame				
3		START TIMER228	NIF_IUT_Res_01		(2)	
4		?NIF_Frame				
5		GOTO L0				
6		?OTHERWISE				
7		GOTO L0				
8		?TIMEOUT TIMER228				(3)
9	L1	!PMFGetRequest_Frame	PMF_Request_07	(4)		
10		START TIMER30	PMF_Response_08		(5)	
11		?PMFGetResponse_Frame				
12		?OTHERWISE				
13		GOTO L1				
14		?TIMEOUT TIMER30				
					FAIL	
Detailed Comments:						
(1) Tester transmits a NIF Request frame.						
(2) Tester received a NIF Response frame from the IUT.						
(3) Tester strips all frames until timer TNNOUT expires. The IUT should invalidate its current DNA.						
(4) Tester transmits a PMF Get Request frame with fddiMACOldDdownstreamNbr parameter to the IUT.						
(5) Tester receives a PMF Get Response frame from the IUT with OldDNA='TESTER_ADDRESS'.						

9.4.3 Status Information Frame Test Cases

Test Case Dynamic Behavior					
Test Case Name : SIFC_Request1 Group : FDDI/FBM/SIF/CONF/request/ Purpose : Verify that the IUT has the capability of generating and transmitting an SIF Configuration Request frame. Default : Comment : This test only applies to the IUTs which SIF Configuration Request frame is implemented.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SIF_CONF_Req_IUT	PASS	(1)
2		<IUT!SIF_Frame>			
3		START OPR_TIMER	SIF_CONF_Req_IUT		
4		?SIF_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER			
				FAIL	(3)
Detailed Comments: (1) Forcing the IUT to send a SIF Configuration Request frame. (2) Tester received the SIF Configuration Request frame from the IUT. (3) Tester has not received the SIF Configuration Request from the IUT and tester timer has expired thus the IUT fails the test.					

Test Case Dynamic Behavior					
Test Case Name : SIFC_Resp1 Group : FDDI/FBM/SIF/CONF/response/ Purpose : Verify that the IUT has the capability of processing and responding to the SIF Configuration Request frame by transmitting an SIF Configuration Response Frame. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SIF_CONF_Req_01	PASS	(1)
2		!SIF_Frame			
3		START TIMER30	SIF_CONF_Res_01		(2)
4		?SIF_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30	FAIL	(3)	
Detailed Comments: (1) Tester transmits a SIF Configuration Request frame. (2) Tester received the SIF Configuration Response frame from the IUT. (4) Tester has not received the SIF Configuration Response frame from the IUT and tester timer has expired.					

Test Case Dynamic Behavior					
Test Case Name : SIFC_Resp2					
Group : FDDI/FBM/SIF/CONF/response/					
Purpose : Verify that the IUT has the capability of processing and responding to the SIF Configuration Request frame with FC = '41'H.					
Default :					
Comment : To see if the IUT is capable of recognize SIF with FC = '41'H					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SIF_CONF_Req_02	PASS	(1)
2		!SIF_Frame			
3		START TIMER30	SIF_CONF_Res_02		(2)
4		?SIF_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30			FAIL
Detailed Comments:					
(1) Tester transmits a SIF Configuration Request frame.					
(2) Tester received the SIF Configuration Response frame from the IUT.					
(4) Tester has not received the SIF Configuration Response frame from the IUT and tester timer has expired.					

Test Case Dynamic Behavior					
Test Case Name : SIFO_Request1					
Group : FDDI/FBM/SIF/OPER/response/					
Purpose : Verify that the IUT has the capability of generating and transmitting an SIF Operation Request frame.					
Default :					
Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SIF_OPER_Req_IUT	PASS	(1)
2		<IUT!SIF_Frame>			
3		START OPR_TIMER	SIF_OPER_Req_IUT		
4		?SIF_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER			
Detailed Comments:					
(1) Forcing the IUT to send a SIF OperationRequest frame.					
(2) Tester received the SIF Operation Request frame from the IUT.					
(3) Tester has not received the SIF Operation Request from the IUT and tester timer has expired thus the IUT failed the test.					

Test Case Dynamic Behavior					
Test Case Name : SIF_Oper_Response1 Group : FDDI/FBM/SIF/OPER/response/ Purpose : Verify that the IUT has the capability of processing and responding to the SIF Operation Request frame by transmitting an SIF Operation Response Frame. Default : Comment :					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L2	+RING_OP	SIF_OPER_Req_01		(1)
2		!SIF_Frame			
3		START TIMER30			
4	L1	?SIF_Frame	SIF_OPER_Res_01	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30		FAIL	(3)
Detailed Comments: (1) Tester transmits a SIF Operation Request frame. (2) Tester received the SIF Operation Response frame from the IUT thus the IUT has passed this test. (3) Tester has not received the SIF Operation Response from the IUT and tester timer has expired thus the IUT failed the test.					

Test Case Dynamic Behavior					
Test Case Name : SIF_Oper_Response2 Group : FDDI/FBM/SIF/OPER/response/ Purpose : Verify that the IUT has the capability of processing and responding to the SIF Operation Request frame with FC = '41'H. Default : Comment : To see if the IUT is capable of recognizing SIF with FC = '41'H					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SIF_OPER_Req_02		(1)
2		!SIF_Frame			
3		START TIMER30			
4	L1	?SIF_Frame	SIF_OPER_Res_02	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30		FAIL	(3)
Detailed Comments: (1) Tester transmits a SIF Operation Request frame. (2) Tester received the SIF Operation Response frame from the IUT. (3) Tester has not received the SIF Operation Response frame from the IUT and tester timer has expired.					

9.4.4 ECHO Test Cases

Test Case Dynamic Behavior					
Test Case Name : ECHO_Request1 Group : FDDI/FBM/ECHO/request/ Purpose : Verify that the IUT does not transmit an ECF Request frame exceeding the maximum ECF frame length as specified. Default : Comment : Although this is an optional test for IUTs which implement ECHO Request, the IUT will not forced to exceed the limit of implementation or exceed the frame validity criteria.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	ECHO_VALID		(1)
2		<IUT!ECF_Frame>			
3		START OPR_TIMER	ECHO_VALID	PASS	(2)
4		?ECF_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT OPR_TIMER			
			FAIL	(3)	
Detailed Comments: (1) Forcing the IUT to send a valid ECHO Request frame. (2) Tester receives a valid ECHO Request frame from the IUT. (3) The tester timer expired and the tester does not received a valid ECHO frame thus the IUT fails the test.					

Test Case Dynamic Behavior					
Test Case Name		: ECHO_Receive1			
Group		: FDDI/FBM/ECHO/response/			
Purpose		: Verify that the IUT is capable to receive maximum length of ECHO Request frame and respond with ECHO Response frame.			
Default		:			
Comment		: SMT 7.1.2.5, maximum size of echo data is 4 454 octets			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	ECHO_MAX		(1)
2		!ECF_Frame			
3		START TIMER30	ECF_IUT_MAX	PASS	(2)
4		?ECF_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT TIMER30			
Detailed Comments:					
(1) The tester transmits a ECF Request frame with maximum echo data length to the IUT.					
(2) The tester receives a ECF Response frame from the IUT, thus the IUT passes the test.					
(3) The tester timer has been expired and the tester does not received any ECF frame from the IUT, thus the IUT failed the test.					

Test Case Dynamic Behavior					
Test Case Name		: ECHO_Receive2			
Group		: FDDI/FBM/ECHO/response/			
Purpose		: Verify that the IUT does not process an ECF Request frame exceeding the maximum ECF frame length as specified.			
Default		:			
Comment		: SMT 7.1.2.5.			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	ECHO_INVALID		(1)
2		!ECF_Frame			
3		START TIMER30	ECHO_INVALID ECHO_IUT_MAX	FAIL PASS PASS FAIL	(2) (3) (4) (5)
4		?ECF_Frame			
5		?ECF_Frame			
6		?RDF_Frame			
7		?OTHERWISE			
8		GOTO L0			
9		?TIMEOUT TIMER30			
Detailed Comments: (1) Tester transmits a ECF Request frame exceeding maximum ECF frame length to the IUT. (2) Tester receives a untruncated ECF Response frame from the IUT. (3) Tester receives a truncated ECF Response frame from the IUT as an implementer's option. (4) Tester receives a RDF frame from the IUT with 'Reason:LengthError'. (5) The tester timer has been expired and the tester does not received any ECF frame from the IUT.					

9.4.5 Resource Allocation Frame Test Cases (Optional)

Test Case Dynamic Behavior					
Test Case Name : SBA_REQ_Req1 Group : FDDI/FBM/RAF/ALLOC/request/ Purpose : To verify that the IUT does not initiate synchronous transmission before receiving an allocation of synchronous bandwidth from the allocator. Default : Comment : SMT 7.2.4.1. This is an optional test for the IUTs which implement dynamic allocation of SBA. Tester is an allocator.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	SBA_ALOC_Request00	FAIL	(1)
2		<IUT!SBA_Frame>			
3		OPR_TIMER			
4		?SBA_Frame	SBA_ALOC_Request00	FAIL	(2)
5		!SBA_Frame	SBA_ALOC_Response00		
6		START TIMER30	SYNC_Frame00		
7		?SYNC_Frame		PASS	(4)
8		?OTHERWISE			
9		GOTO L0			
		?TIMEOUT TIMER30		PASS	
		?TIMEOUT OPR_TIMER		FAIL	(5)
Detailed Comments: (1) Force IUT to transmit SBA Resource Allocation Request Frame with SBA Command Value of RequestAllocation (X'0001'). (2) Tester sends SBA Resource Allocation Response frame with no allocatable bandwidth. (3) The IUT ignored the allocator (Tester), and transmits synchronous frame thus failed the test. (4) The IUT does not send any Synchronous Frame thus passed the test. (5) The Tester did not received any SBA Request frame from the IUT thus the IUT fails the test.					

Test Case Dynamic Behavior					
Test Case Name : SBA_REQ_Resp1					
Group : FDDI/FBM/RAF/ALLOC/response/					
Purpose : To verify that the IUT generates RAF Response (Request Allocation) with Destination Address = (Tester Address) and SBA Command = X'0001' when it receives an RAF Request (Request Allocation) from the tester.					
Default :					
Comment : SMT 7.2.4.2. IUT is the allocator					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SBA_ALOC_Request01	PASS	(1)
2		!SBA_Frame			
3		START TIMER30	SBA_ALOC_Response01		
4		?SBA_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30			
		FAIL	(3)		
Detailed Comments: (1) The tester transmits SBA Resource Allocation Request, Request Frame with SBA Command Value of Request Allocation (X'0001'). (2) The tester received SBA Resource Allocation Request Response Frame from the IUT, thus the IUT has passed the test. (3) The tester has not received SBA Resource Allocation Request Response Frame from the IUT and test timer has expired, thus the IUT has failed the test.					

Test Case Dynamic Behavior					
Test Case Name : SBA_REP_Req1 Group : FDDI/FBM/RAF/REPORT/request/ Purpose : To verify that the IUT generates RAF Request (Report Allocation)with Destination Address = (Tester Address) and SBA Command = X'0002'. Default : Comment : SMT 7.2.4.1					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SBA_REP_Request1	PASS	(1)
2		<IUT!SBA_Frame>			
3		START OPR_TIMER	SBA_REP_Request1		
4		?SBA_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER			
Detailed Comments: (1) Forcing the IUT to transmit SBA Resource Allocation Report Request Frame with SBA Command Value of Report Allocation (X'0002'). (2) The tester received SBA Resource Allocation Report Response Frame from the IUT, thus the IUT has passed the test. (3) The tester has not received SBA Resource Allocation Report Response Frame from the IUT and test timer has expired, thus the IUT has failed the TEST.					

Test Case Dynamic Behavior					
Test Case Name : SBA_REP_Resp1					
Group : FDDI/FBM/RAF/REPORT/response/					
Purpose : To verify that the IUT generates RAF Response (Report Allocation) with Destination Address = (Tester Address) and SBA Command = X'0002' when it receives an RAF Request (Report Allocation) from the tester. The IUT's current allocation for non_local data paths is also included in the InfoField.					
Default :					
Comment : SMT 7.2.4.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SBA_REP_Request01	PASS	(1)
2		!SBA_Frame			
3		START TIMER30	SBA_REP_Response01		
4		?SBA_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30			
			FAIL	(3)	
Detailed Comments:					
(1) The tester transmits SBA Resource Allocation Report Request Frame with SBA Command Value of Report Allocation (X'0002').					
(2) The tester received SBA Resource Allocation Report Response Frame from the IUT, thus the IUT has passed the test.					
(3) The tester has not received SBA Resource Allocation Report Response Frame from the IUT and test timer has expired, thus the IUT has failed the test.					

Test Case Dynamic Behavior					
Test Case Name : SBA_CHG_Req1					
Group : FDDI/FBM/RAF/CHANGE/request/					
Purpose : To verify that the IUT generates RAF Request (Change Allocation) with Destination Address = (Tester Address) and SBA Command = X'0003'.					
Default :					
Comment : SMT 7.2.4.1					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SBA_CHG_Request01	PASS	(1)
2		<IUT!SBA_Frame>			
3		START OPR_TIMER	SBA_CHG_Request01		
4		?SBA_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER			
				FAIL	(3)
Detailed Comments:					
(1) Forcing the IUT to transmit SBA Resource Allocation Change Request Frame with SBA Command Value of Change Allocation (X'0003').					
(2) The tester received SBA Resource Allocation Change Request Frame from the IUT, thus the IUT has passed the test.					
(3) The tester has not received SBA Resource Allocation Change Request Frame from the IUT and test timer has expired, thus the IUT has failed the test.					

Test Case Dynamic Behavior					
Test Case Name : SBA_CHG_Resp1 Group : FDDI/FBM/RAF/CHANGE/response/ Purpose : To verify that the IUT generates RAF Response (Change Allocation) with Destination Address = (Tester Address) and SBA Command = 'X'0003' when it receives an RAF Request (Change Allocation) from the tester. Default : Comment : SMT 7.2.4.2					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	SBA_CHG_Request01	PASS	(1)
2		!SBA_Frame			
3		START TIMER30	SBA_CHG_Response00		
4		?SBA_Frame			
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30			
Detailed Comments: (1) The tester transmits SBA Resource Allocation Change Request Frame with SBA Command Value of Change Allocation ('X'0003'). (2) The tester received SBA Resource Allocation Change Response Frame from the IUT, thus the IUT has passed the test. (3) The tester has not received SBA Resource Allocation Change Response Frame from the IUT and test timer has expired, thus the IUT has failed the test.					

9.4.6 Extended Service Frame Test Cases (Optional)

Test Case Dynamic Behavior					
Test Case Name : ESF_Request1					
Group : FDDI/FBM/ESF/request/					
Purpose : Verify that the IUT has the capability of transmitting an optional ESF Request frame as specified.					
Default :					
Comment : SMT 7.2.6. This is an optional test for the IUT implementing ESF					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L0	+RING_OP	ESF_Request	PASS	(1)
2		<IUT!ESF_Frame>			
3		START OPR_TIMER	ESF_Request		
4		?ESF_Frame			
5		?OTHERWISE			
6		GOTO L0			
7		?TIMEOUT OPR_TIMER			
Detailed Comments: (1) The IUT transmits ESF request frame to the IUT. (2) The tester has received a ESF Request frame from the IUT, thus the IUT has passed the test. (3) The tester timer has been expired and the tester has not received a ESF Request frame from the IUT, thus IUT fails the test.					

9.4.7 Status Report Frame Test Cases

Test Case Dynamic Behavior					
Test Case Name : SRF_announce					
Group : FDDI/FBM/SRF/announce/					
Purpose : Verify that the IUT generates a correct SRF announcement frame with universally assigned multicast address (SMT_SRF_DA). Conditions are inserted or deinserted within T_Limit to observe the behavior of the IUT. The IUT should not report more than more than one SRF frame within the T_Limit.					
Default :					
Comment : SMT 7.2.7					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1 L2	+RING_OP			
2		<IUT!SRF_Frame>	SRF_Announce		(1)
3		?SRF_Frame	SRF_Announce		(2)
4		<IUT!ERR_FrameS>	Undesirable1		(3)
5		START TIMER2			
6		?SRF_FrameS	SRF_Announce	FAIL	(4)
7		?TIMEOUT TIMER2			
8		?SRF_Frame	SRF_Announce	PASS	(5)
9		?OTHERWISE			
10		GOTO L2			
11		?OTHERWISE			
12		GOTO L1			
Detailed Comments:					
(1) Force the IUT to send SRF announcement frame.					
(2) Tester received a SRF frame from the IUT.					
(3) An IUT operator inject erroneous conditions to exceed the IUT's specific error threshold conditions.					
(4) If the IUT sends more than one SRF frame within 2 seconds, the IUT fails this test.					
(5) The IUT sends only 1 frame within 2 seconds (T_Limit). Thus the IUT passed the test.					

9.4.8 Parameter Management Frame Test Cases

Test Case Dynamic Behavior					
Test Case Name		: SingleAttribute_TX			
Group		: FDDI/FBM/PMF/GET/request/			
Purpose		: Verify that the IUT has a capability of generating and transmitting an optional PMF Request frame with a single attribute.			
Default		:			
Comment		: SMT 7.1.3, and 7.2.8.1. This is an optional test for IUTs which implement PMF Get Request.			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	PMFGet_Request_07	PASS	(1)
2		<IUT!PMFGetRequest_Frame>			
3		START OPR_TIMER			
4		?PMFGetRequest_Frame	PMFGet_Request_07	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER		FAIL	(3)
Detailed Comments:					
(1) Forcing the IUT to send a PMF Get Request frame.					
(2) Tester has received a PMF Get Request frame from the IUT, thus the IUT has passed this test.					
(3) The tester timer is now expired and the tester has not received the PMF Get Request frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name		: MultipleAttribute_TX			
Group		: FDDI/FBM/PMF/GET/request/			
Purpose		: Verify that the IUT has a capability of generating and transmitting an optional PMF Request frame with multiple attributes.			
Default		:			
Comment		: SMT 7.1.3, and 7.2.8.1. This is an optional test for IUTs which implement PMF Get Request.			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP	PMFGet_Request_08		(1)
2		<IUT!PMFGetRequest_Frame>			
3		START OPR_TIMER			
4		?PMFGetRequest_Frame	PMFGet_Request_08	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER		FAIL	(3)
Detailed Comments: (1) Forcing the IUT to send a PMF Get Request frame. (2) Tester has received a PMF Get Request frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Request frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name : MultipleGroupAttributes_TX Group : FDDI/FBM/PMF/GET/request/ Purpose : Verify that the IUT has a capability of generating and transmitting an optional PMF Request frame with multiple group attributes. Default : Comment : SMT 7.1.3, and 7.2.8.1. This is an optional test for IUTs which implement PMF Get Request.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP			
2		<IUT!PMFGetRequest_Frame>	PMFGet_Request_09		(1)
3		START OPR_TIMER			
4		?PMFGetRequest_Frame	PMFGet_Request_09	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER		FAIL	(3)
Detailed Comments: (1) Forcing the IUT to send a PMF Get Request frame. (2) Tester has received a PMF Get Request frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Request frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name : SingleAttribute_RX Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT has a capability of generating and transmitting a PMF Response frame when it receives PMF Get Request frame with a single attribute. Default : Comment : SMT 7.1.3, and 7.2.8.2.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP			
2		!PMFGetRequest_Frame	PMFGet_Request_01		(1)
3		START OPR_TIMER			
4		?PMFGetResponse_Frame	PMFGet_Response_01	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT OPR_TIMER		FAIL	(3)
Detailed Comments: (1) Tester sends a PMF Get Request frame to the IUT with a single attribute. (2) Tester has received a PMF Get Response frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Response frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name : MultipleAttribute_RX Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT has a capability of generating and transmitting a PMF Response frame when it receives PMF Get Request frame with multiple attributes. Default : Comment : SMT 7.1.3, and 7.2.8.2.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP			
2		!PMFGetRequest_Frame	PMFGet_Request_08.5		(1)
3		START TIMER30			
4		?PMFGetResponse_Frame	PMFGet_Response_08.5	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30		FAIL	(3)
Detailed Comments: (1) Tester sends a PMF Get Request frame. (2) Tester has received a PMF Get Response frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Request frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name : MultipleGroupAttributes_RX Group : FDDI/FBM/PMF/GET/response/ Purpose : Verify that the IUT has a capability of generating and transmitting a PMF Response frame when it receives PMF Get Request frame with multiple group attributes. Default : Comment : SMT 7.1.3, and 7.2.8.2.					
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP			
2		<IUT!PMFGetRequest_Frame>	PMFGet_Request_09.5		(1)
3		START TIMER30			
4		?PMFGetRequest_Frame	PMFGet_Response_09.5	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30		FAIL	(3)
Detailed Comments: (1) Tester sends a PMF Get Request frame. (2) Tester has received a PMF Get Response frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Response frame from the IUT, thus the IUT failed test.					

Test Case Dynamic Behavior					
Test Case Name		: InvalidMultipleGroupAttributes_RX			
Group		: FDDI/FBM/PMF/GET/response/			
Purpose		: Verify that the IUT generates and transmits either a PMF Response frame with reasoncode = 'no parameter' when it receives a PMF Get Request frame with resource index of zero and non-zero attributes within a single frame.			
Default		:			
Comment		: SMT 7.1.3, and 7.2.8.2.			
Nr	Label	Behavior Description	Constraints Ref	Verdict	Comments
1	L1	+RING_OP			
2		!PMFGetRequest_Frame	PMFGet_Request_0A.5		(1)
3		START TIMER30			
4		?PMFGetResponse_Frame	PMFGet_Response_0A.5	PASS	(2)
5		?OTHERWISE			
6		GOTO L1			
7		?TIMEOUT TIMER30		FAIL	(3)
Detailed Comments: (1) Tester sends a PMF Get Request frame. (2) Tester has received a PMF Get Response frame from the IUT, thus the IUT has passed this test. (3) The tester timer is now expired and the tester has not received the PMF Get Response frame from the IUT, thus the IUT failed test.					

10 Management Information Base (MIB) - Abstract Test Suite

10.1 Test Suite Overview

10.1.1 Test Suite Structure

Test Suite Structure			
Suite Name : FDDI_MIB Standards ref. : ISO/IEC 9314-6:1998 PICS proforma ref. : ISO/IEC 9314-13:1997 PIXIT proforma ref. : Annex B of this standard. PICS/PIXIT use : Test case selection and test suite parameters. Test Method(s) : Remote Single Layer Method Comments :			
Test Group Reference	Selection Ref.	Test Group Objective	Page
FDDI_MIB/MIBGroups		Test elements of a MIB attribute group.	827
FDDI_MIB/SMT		Test SMT attributes.	827
FDDI_MIB/MAC		Test MAC attributes.	845
FDDI_MIB/PATH		Test PATH attributes.	875
FDDI_MIB/PORT		Test PORT attributes.	878
FDDI_MIB/ACTIONS_NOTIFICATIONS		Test actions and notifications.	888

10.1.2 Test Case Index

Test Case Index				
Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/MIBGroups	fddiMIBAttrGrps		Verify elements of an SMT, MAC, PATH or PORT attribute group contained in the IUT Management Information Base.	827
FDDI_MIB/SMT	fddiSMTStationId		Compare the fddiSMTStationId to the Station ID of the IUT's frame.	827
FDDI_MIB/SMT	fddiSMTManufacturer-Data		Verify manufacturer data contained in the IUT Management Information Base.	828
FDDI_MIB/SMT	fddiSMTMIBVersionId		Verify MIB Version ID of the IUT.	828
FDDI_MIB/SMT	fddiSMTUserData		Verify that the SMTUserData attribute of the IUT can be modified using a PMF Set protocol.	829
FDDI_MIB/SMT	fddiSMTMac_Ct		Verify number of MACs in the IUT.	829
FDDI_MIB/SMT	fddiSMTNonMaster_Ct		Verify number of A, B, and S ports in the IUT.	830
FDDI_MIB/SMT	fddiSMTMaster_Ct		Verify number of M ports in the IUT.	830
FDDI_MIB/SMT	fddiSMTAvailablePaths		Verify available paths in the IUT.	831
FDDI_MIB/SMT	fddiSMTConfig-Capabilities		Verify configuration capabilities of the IUT.	831
FDDI_MIB/SMT	fddiSMTConnection-Policy		Verify that fddiSMTConnectionPolicy attribute can be modified using PMF Set protocol.	832
FDDI_MIB/SMT	fddiSMTT_Notify		Verify that fddiSMTT_Notify attribute can be modified using PMF Set protocol.	833
FDDI_MIB/SMT	fddiSMTStatRptPolicy		Verify that fddiSMTStatRptPolicy attribute can be modified using PMF Set protocol.	833
FDDI_MIB/SMT	fddiSMTTrace_Max-Expiration		Verify that fddiSMTTrace_MaxExpiration attribute can be modified using PMF Set protocol.	834

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/SMT	fddiSMTCF_State_T		Check the CF_State of a SM-DAS inThru configuration.	835
FDDI_MIB/SMT	fddiSMTCF_State_CWA		Check the CF_State of a SM-DAS in c_wrap_a configuration.	836
FDDI_MIB/SMT	fddiSMTCF_State_CWB		Check the CF_State of a SM-DAS in c_wrap_b configuration.	836
FDDI_MIB/SMT	fddiSMTCF_State_WS		Check the CF_State of a SM-DAS in wrap_s configuration.	837
FDDI_MIB/SMT	fddiSMTCF_State_WAB		Check the CF_State of a DM-DAS in wrap_ab configuration.	837
FDDI_MIB/SMT	fddiSMTHoldState_Prm		Check the initial value of the HoldState. If the initial value is "not_holding" and the Hold function is implemented, interrupt the link exiting from the Tester A port, so that the input to the IUT B port is dark. Verify that now "holding_prm" is the value of the HoldState.	838
FDDI_MIB/SMT	fddiSMTHoldState_Sec		Check the initial value of the HoldState. If the initial value is "not_holding" and the Hold function is implemented, interrupt the link exiting from the Tester B port, so that the input to the IUT A port is dark. Verify that now "holding_sec" is the value of the HoldState.	839
FDDI_MIB/SMT	fddiSMTStationStatus_T		Check the current status of the primary and secondary paths within the IUT in the Thru configuration.	840

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/SMT	fddiSMTStation-Status_S1		Check the current status of the primary and secondary paths within the IUT in the wrap_a configuration.	841
FDDI_MIB/SMT	fddiSMTStation-Status_S2		Check the current status of the primary and secondary paths within the IUT in the wrap_b configuration.	842
FDDI_MIB/SMT	fddiSMTStation-Status_C		Check the current status of the primary and secondary paths within the IUT in the c_wrap_a configuration.	843
FDDI_MIB/SMT	fddiSMTPeerWrap-Flag_DAS		Check the value of PeerWrapFlag for different configurations.	844
FDDI_MIB/SMT	fddiSMTPeerWrap-Flag_SAS		Check the value of PeerWrapFlag for different configurations.	845
FDDI_MIB/MAC	fddiMACBridge-Functions		Verify the bridge type of the IUT.	845
FDDI_MIB/MAC	fddiMACT_Max-Capability		Verify the maximum T_Max value of an IUT's MAC.	846
FDDI_MIB/MAC	fddiMACTVXCapa-bility		Verify the maximum TVX time value of an IUT's MAC.	846
FDDI_MIB/MAC	fddiMACAvailable-Paths		Verify paths available for an IUT's MAC.	847
FDDI_MIB/MAC	fddiMACCurrentPath		Verify the path into which an IUT's MAC is currently inserted.	847
FDDI_MIB/MAC	fddiMACUpstreamNbr		To compare fddiMACUpstreamNbr with a known upstream neighbor address.	848
FDDI_MIB/MAC	fddiMACDownstream-Nbr		To compare fddiMACDownstreamNbr with a known downstream neighbor address.	849
FDDI_MIB/MAC	fddiMACOldUpstream-Nbr		Verify the previous known upstream neighbor of the IUT.	850
FDDI_MIB/MAC	fddiMACOldDown-streamNbr		Verify the previous known downstream neighbor of the IUT.	851
FDDI_MIB/MAC	fddiMACDupAddress-Test1		Verify the MACDupAddressTest of the IUT when there is no duplicate address on the ring.	852
FDDI_MIB/MAC	fddiMACDupAddress-Test2		Verify the MACDupAddressTest of the IUT when there is a duplicate address on the ring.	853

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/MAC	fddiMACRequested-paths		Verify that the fddiMACRequestPaths attribute of the IUT can be modified using the PMF Set protocol.	854
FDDI-MIB/MAC	fddiMACDownstream-PORTType		Verify the exit port of an IUT MAC.	854
FDDI_MIB/MAC	fddiMACIndex		Verify the MACIndex attribute of the IUT.	855
FDDI_MIB/MAC	fddiMACSMTAddr		To compare fddiMACSMTAddress to the source address of the frame received.	855
FDDI_MIB/MAC	fddiMACLongGrp-Address		Verify the MAC long group address used by the IUT.	856
FDDI_MIB/MAC	fddiMACShortGrp-Address		Verify the MAC short group address used by the IUT.	856
FDDI_MIB/MAC	fddiMACT_Req		Verify the T_Req value passed to the IUT MAC.	857
FDDI_MIB/MAC	fddiMACT_Neg		Verify the T_Neg value of the IUT.	857
FDDI_MIB/MAC	fddiMACT_Max		Verify the T_Max value passed to the IUT MAC.	858
FDDI_MIB/MAC	fddiMACTvxValue		Verify the TvxValue passed to the IUT MAC.	858
FDDI_MIB/MAC	fddiMACT_Pri0		Verify the T_Pri0 value of the IUT MAC.	859
FDDI_MIB/MAC	fddiMACT_Pri1		Verify the T_Pri1 value of the IUT MAC.	859
FDDI_MIB/MAC	fddiMACT_Pri2		Verify the T_Pri2 value of the IUT MAC.	860
FDDI_MIB/MAC	fddiMACT_Pri3		Verify the T_Pri3 value of the IUT MAC.	860
FDDI_MIB/MAC	fddiMACT_Pri4		Verify the T_Pri4 value of the IUT MAC.	861
FDDI_MIB/MAC	fddiMACT_Pri5		Verify the T_Pri5 value of the IUT MAC.	861

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/MAC	fddiMACT_Pri6		Verify the T_Pri6 value of the IUT MAC.	862
FDDI_MIB/MAC	fddiMACFrame_Ct		Verify a count of the number of frames received by the IUT MAC.	863
FDDI_MIB/MAC	fddiMACCopied_Ct		Verify a count of the number of frames addressed to and successfully copied into the IUT receive buffers by the IUT MAC.	864
FDDI_MIB/MAC	fddiMACTransmit_Ct		Verify a count of the number frames transmitted by the IUT MAC.	865
FDDI_MIB/MAC	fddiMACToken_Ct		Verify a count of the number of tokens received by the IUT MAC.	866
FDDI_MIB/MAC	fddiMACError_Ct		Verify a count of the number of frames that were detected in error by the IUT MAC that had not been detected in error by another MAC.	867
FDDI_MIB/MAC	fddiMACLost_Ct		Verify a count of the number of instances that the IUT MAC detected a format error during frame reception such that the frame was stripped.	868
FDDI_MIB/MAC	fddiMACTvxExpired_Ct		Check a count of the number of times that TVX has expired.	869
FDDI_MIB/MAC	fddiMACLate_Ct		Check a count of the number TRT expirations since the IUT MAC was reset or a token was received.	870
FDDI_MIB/MAC	fddiMACRMTState		Check the current state of the IUT RMT state machine.	871
FDDI_MIB/MAC	fddiMACDA_Flag		Check the current RMT Duplicate Address flag (DA_Flag) of the IUT.	871
FDDI_MIB/MAC	fddiMACUNDA_Flag1		Check the current UNDA_Flag of the IUT when there is no duplicate address on the ring.	872
FDDI_MIB/MAC	fddiMACUNDA_Flag2		Check the current UNDA_Flag of the IUT when there is a duplicate address on the ring.	872

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/MAC	fddiMACFrameError-Flag		Check the current frame error flag of the IUT.	873
FDDI_MIB/MAC	fddiMACMA_Unitdata-Available		Check the current MAC_Available flag of the IUT.	873
FDDI_MIB/MAC	fddiMACHardware-Present		Check the presence of underlying hardware support for the IUT MAC object.	874
FDDI_MIB/MAC	fddiMACMA_Unitdata-Enable		Check the current MA_UNITDATA_Enable flag of the IUT.	874
FDDI_MIB/PATH	fddiPATHIndex		Check the current PATHIndex of the IUT.	875
FDDI_MIB/PATH	fddiPATHRingLatency		Check the current accumulated latency of the ring associated with the current IUT path.	875
FDDI_MIB/PATH	fddiPATHT_Rmode		Verify that the duration of restricted dialog on a path can be modified using PMF Set protocol.	876
FDDI_MIB/PATH	fddiPATHTVXLower-Bound		Check the current PATHTVXLowerBound of the IUT.	876
FDDI_MIB/PATH	fddiPATHT_MaxLower-Bound		Check the current PATHT_MaxLowerBound of the IUT.	877
FDDI_MIB/PATH	fddiPATHMaxT_Req		Check the current PATHMaxT_Req of the IUT.	877
FDDI_MIB/PORT	fddiPORTMyType		Verify the port type of the IUT.	878
FDDI_MIB/PORT	fddiPORTNeighborType		Verify the neighbor port type of the IUT.	878
FDDI_MIB/PORT	fddiPORTCurrentPath		To check a current path of a port.	879
FDDI_MIB/PORT	fddiPORTRequested-Paths_A		Check the requested paths of the IUT port A.	879
FDDI_MIB/PORT	fddiPORTRequested-Paths_B1		Check the requested paths of IUT port B.	880
FDDI_MIB/PORT	fddiPORTRequested-Paths_B2		Check the requested paths of IUT port B.	880
FDDI_MIB/PORT	fddiPORTRequested-Paths_S		Check the requested paths of IUT port S.	881

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/PORT	FddiPORTRequested-Paths_M		Check the requested paths of IUT port M.	881
FDDI_MIB/PORT	FddiPORTMAC-Placement		To check a MAC whose transmit path exits the station via a known port.	882
FDDI_MIB/PORT	fddiPORTAvailablePaths		Check the available paths of IUT port A (or port B).	882
FDDI_MIB/PORT	fddiPORTMAC-Loop_Time		Verify that the value of MAC Local Loop time, T_Next(9), can be modified using the PMF Set protocol.	883
FDDI_MIB/PORT	fddiPORTPMDClass		To check the PMD type of a port.	883
FDDI_MIB/PORT	fddiPORTIndex		Check the index for PORT object instances of the IUT.	884
FDDI_MIB/PORT	fddiPORTPC_LS		Check the current line state received by an IUT port.	884
FDDI_MIB/PORT	fddiPORTLer_Cutoff		Check the link error rate estimate, at which a link connection will be broken, of an IUT port.	885
FDDI_MIB/PORT	fddiPORTLer_Alarm		Check the link error rate estimate, at which a link connection will generate an alarm, of an IUT port.	885
FDDI_MIB/PORT	fddiPORTConnectState		Check the current connect state of an IUT port.	886
FDDI_MIB/PORT	fddiPORTPCMState		Check the current PCM state of an IUT port.	886
FDDI_MIB/PORT	fddiPORTPC_Withhold		Check the PC_Withhold value of an IUT port.	887
FDDI_MIB/PORT	fddiPORTHardware-Present		Check the presence of underlying hardware support for an IUT port object.	887
FDDI_MIB/- ACTIONS_NO- TIFICATIONS	fddiSMTStation-Action_DA		Verify that Disable_A action can be invoked using the PMF Set protocol.	888
FDDI_MIB/- ACTIONS_NO- TIFICATIONS	fddiSMTStation-Action_DB		Verify that Disable_B action can be invoked using the PMF Set protocol.	888

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Test Group Reference	Test Case Id	Selection Ref.	Description	Page
FDDI_MIB/- ACTIONS_- NOTIFICATIONS	FddiSMTHold- Condition_Prm		Check the initial value of the HoldState. If the initial value is "not_holding" and the Hold function is implemented, interrupt the link exiting from the Tester A port, so that the input to the IUT B port is dark. Verify that IUT enters the "holding_prm" state and transmits an SRF with the Hold condition asserted.	889
FDDI_MIB/- ACTIONS_- NOTIFICATIONS	fddiSMTHold- Condition_Sec		Check the initial value of the HoldState. If the initial value is "not_holding" and the Hold function is implemented, interrupt the link exiting from the Tester B port, so that the input to the IUT A port is dark. Verify that IUT enters the "holding_sec" state and transmits an SRF with the Hold condition asserted.	890
FDDI_MIB/- ACTIONS_- NOTIFICATIONS	fddiMACDuplicate- AddressCondition		Verify that MACDuplicateAddressCondition is active when either fddiMACDA_Flag or fddiMACUNDA_Flag is set.	891

10.2 Declaration Part

10.2.1 Simple Type Definitions

Simple Type Definitions		
Type Name	Type Definition	Comments
SYMBOL	BITSTRING[5]	

10.2.2 ASN.1 Type Definitions for General Parameters

ASN.1 Type Definition		
Type Name : UNA_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 UNA	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) -- fddiMACUpstreamNbr--}

ASN.1 Type Definition		
Type Name : StationDescriptor_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Node_Class --station = '00'H; concentrator = '01'H-- Mac_Ct NonMaster_Ct Master_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), --X'00'-X'FF'-- OCTETSTRING(SIZE(1)), --X'00'-X'02'-- OCTETSTRING(SIZE(1))} --X'00'-X'FF'--
-- When one or more Ports or MACs physically instantiated in the MIB are not physically present, -- the Mac_Ct, NonMaster_Ct, and Master_Ct will differ from the corresponding MIB attributes.		

ASN.1 Type Definition		
Type Name : StationState_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 Topology DuplAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), TopologyType, --1 octet-- DuplAddressType --1 octet-- }

ASN.1 Type Definition		
Type Name : MsgTimeStamp_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MsgTimeStamp }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..18446744073709551615) --8 octets--

ASN.1 Type Definition		
Type Name : StationPolicies_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ConfigPolicy ConnectionPolicy	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ConfigPolicyType, --2 octets-- ConnectionType --2 octets-- }

ASN.1 Type Definition		
Type Name : PathLatency_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PORTOutIndex PathLatencyRing1 PORTOutIndex PathLatencyRing2	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) }
-- This is the latency contribution of the Paths within the station. It is not a MIB attribute and is -- optional. The latency is given in octet units. The Port indices are those used to form the Path -- descriptor SMT Parameter, X'0008'.		

ASN.1 Type Definition		
Type Name : MACNeighbors_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiMACIndex-- MAC_Index --as in the PathDescriptor SMT_Parameter X'0008'-- UNA --fddiMACUpstreamNbr-- DNA fddiMACDownstreamNbr--	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), }

ASN.1 Type Definition		
Type Name : PathDescriptor_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type OCTETSTRING(SIZE(2)), Parameter_Length OCTETSTRING(SIZE(2)), --***Port Records***-- MIB_Index OCTETSTRING(SIZE(2)), --value of fddiPORTIndex-- PortType OCTETSTRING(SIZE(1)), --A='00'H; B='01'H; S='02'H; M='03'H-- ConnectState OCTETSTRING(SIZE(1)), --Disabled='00'H; Connecting='01'H; Stanby='02'H; Active='03'H-- RemotePORTType OCTETSTRING(SIZE(1)), --A='00'H; B='01'H; S='02'H; M='03'H; Unknown='04'H-- RemoteMAC OCTETSTRING(SIZE(1)), --Non present='00'H; Remote MAC indicated='01'H-- ConResourceIndex OCTETSTRING(SIZE(2)), --X'0001'-X'FFFF'-- --Index(connection) of Port or MAC on Path-- --***MAC Records***-- MAC_Addr OCTETSTRING(SIZE(6)), ConResourceIndex OCTETSTRING(SIZE(2)) --X'0001'-X'FFFF'-- --Index(connection) of Port or MAC-- }	

ASN.1 Type Definition		
Type Name : MACStatus_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type OCTETSTRING(SIZE(2)), Parameter_Length OCTETSTRING(SIZE(2)), MIB_Index OCTETSTRING(SIZE(2)), --value of fddiMACIndex-- MAC_Index OCTETSTRING(SIZE(2)), --as in PathDescriptor X'0008'-- T_Req OCTETSTRING(SIZE(4)), T_Neg OCTETSTRING(SIZE(4)), T_Max OCTETSTRING(SIZE(4)), TVXValue OCTETSTRING(SIZE(4)), T_Min OCTETSTRING(SIZE(4)), --these timers are TimerTwosComplement-- SBA INTEGER(0..4294967295), --4 octets-- Frame_Ct INTEGER(0..4294967295), Error_Ct INTEGER(0..4294967295), Lost_Ct INTEGER(0..4294967295) }	

ASN.1 Type Definition		
Type Name : PortLEMStatus_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiPORTIndex-- PORT_Index --as in PathDescriptor X'0008'-- PAD1 Ler_Cutoff Ler_Alarm Ler_Estimate Lem_Reject_Ct Lem_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), --X'0001'-X'FFFF'-- OCTETSTRING(SIZE(1)), INTEGER(0..255), --1 octet-- INTEGER(0..255), INTEGER(0..255), INTEGER(0..4294967295), --4 octets-- INTEGER(0..4294967295) }

ASN.1 Type Definition		
Type Name : MACFrameCounters_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiMACIndex-- MAC_Index --as in PathDescriptor X'0008'-- Copied_Ct Transmit_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..4294967295), --4 octets-- INTEGER(0..4294967295) }

ASN.1 Type Definition		
Type Name : MACFrameNotCopiedCount_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiMACIndex-- MAC_Index --as in PathDescriptor X'0008'-- NotCopied_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACPriorityValues_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiMACIndex-- MAC_Index --as in PathDescriptor X'0008'-- T_Pri0 T_Pri1 T_Pri2 T_Pri3 T_Pri4 T_Pri5 T_Pri6 --these timers are TimerTwosComplement-- }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4))

ASN.1 Type Definition		
Type Name : PortEBStatus_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MIB_Index --value of fddiPORTIndex-- PORT_Index --as in PathDescriptor X'0008'-- EbError_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : ManufacturerField_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length manuf_OUI manuf_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(29)) }

ASN.1 Type Definition		
Type Name : UserField_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length user_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(32), }

ASN.1 Type Definition		
Type Name : ECHOData_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD echo_data	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(..)) DEFAULT NULL, ECH_DATA(length:INTEGER) }

ASN.1 Type Definition		
Type Name : ReasonCode_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length reason	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4))
	--FrameClassNotSupported = '00000001'H--	
	--FrameVersionNotSupported = '00000002'H--	
	--Success = '00000003'H--	
	--BadSetcount = '00000004'H--	
	--IllegalOperation = '00000005'H--	
	--NoParameter = '00000006'H--	
	--OutOfRange = '00000008'H--	
	--NotAuthorized = '00000009'H--	
	--LengthError = '0000000A'H--	
	--FrameTooLong = '0000000B'H--	
	--SBADenied = '0000000D'H--	}

ASN.1 Type Definition		
Type Name : RejectedFrameBeginning_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 RejectedFrameBeginning	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(..)) }

ASN.1 Type Definition		
Type Name : SMTSupportedVersions_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 numVersions indexOpVersion Version_1 Version_2	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)) }

ASN.1 Type Definition		
Type Name : ResourceType_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ResourceType --synchronous bandwidth--	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBACommand_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaCommand --RequestAllocation = '00000001'H-- --ReportAllocation = '00000002'H-- --ChangeAllocation = '00000003'H--	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) } }

ASN.1 Type Definition		
Type Name : SBAPayloadRequest_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaRequest	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBAOverheadRequest_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaOverheadReq	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : SBAAallocationAddress_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 SbaAllocationAddr	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : SBACategory_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Category	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : MaximumT_Neg_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MaxTneg	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : MinimumSBASegmentSize_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MinSegment	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) DEFAULT '00000001'H }

ASN.1 Type Definition		
Type Name : SBAAAllocatable_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SbaAllocatable	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)) }

ASN.1 Type Definition		
Type Name : Authorization_GENERAL		
Comments : General parameter. This parameter is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Authorization	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(..)) }

ASN.1 Type Definition		
Type Name : ESFID_GENERAL		
Comments : General parameter.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 ESF_ID	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

10.2.3 ASN.1 Type Definitions for MIB Attributes

ASN.1 Type Definition		
Type Name : MIBGrp		
Comments : MIB attribute groups.		
Type Definition		
CHOICE	{smtstationidgrp smtstationconfiggrp smtstatusgrp smtmiboperationgrp maccapabilitiesgrp macconfiggrp macaddressgrp macoperationgrp maccountersgrp macframeerrorconditiongrp macnotcopiedconditiongrp macstatusgrp pathconfiggrp portconfiggrp portoperationgrp porterrorctrsgp portlergrp portstatusgrp }	SMTGrp, SMTGrp, SMTGrp, SMTGrp, MACGrp, MACGrp, MACGrp, MACGrp, MACGrp, MACGrp, MACGrp OPTIONAL, MACGrp, PATHGrp, PORTGrp, PORTGrp, PORTGrp, PORTGrp, PORTGrp, PORTGrp

10.2.3.1 ASN.1 Type Definitions for SMT Attributes

ASN.1 Type Definition		
Type Name : SMTGrp		
Comments : SMT attribute group.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Parameter_Value	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ANY --SMT attribute group-- }

10.2.3.1.1 SMT Station ID Group Attributes

ASN.1 Type Definition		
Type Name : SMTStationIdGrp		
Comments : SMT attribute group.		
Type Definition		
SET	{stationid opversionid hiversionid loversionid manufacturerdata userdata mibversionid	SMTStationId, SMTOpVersionId, SMTHiVersionId, SMTLoVersionId, SMTManufacturerData OPTIONAL, SMTUserData, SMTMIBVersionId }

ASN.1 Type Definition		
Type Name : SMTStationId		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ImplementerOctet Station_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), }

ASN.1 Type Definition		
Type Name : SMTOpVersionId		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 OpVersionId	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER (0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTHiVersionId		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 HiVersionId	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER (0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTLoVersionId		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 LoVersionId	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTManufacturerData		
Comments : SMT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI ManufacturerData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(29)) }

ASN.1 Type Definition		
Type Name : SMTUserData		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length UserData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(32)) }

ASN.1 Type Definition		
Type Name : SMTMIBVersionId		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 MIBVersionId	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

10.2.3.1.2 SMT Station Configuration Group Attributes

ASN.1 Type Definition		
Type Name : SMTStationConfigGrp		
Comments : SMT attribute group.		
Type Definition		
SET	{macct nonmasterct masterct availablepaths configcapabilities configpolicy connectionpolicy tnotify statrptpolicy tracemaxexpiration portindexes macindexes bypasspresent	SMTMac_Ct, SMTNonMaster_Ct, SMTMaster_Ct, SMTAvailablePaths, SMTConfigCapabilities, SMTConfigPolicy, SMTConnectionPolicy, SMTT_Notify, SMTStatRptPolicy, SMTTrace_MaxExpiration, SMTPORTIndexes, SMTMACIndexes, SMTBypassPresent }

ASN.1 Type Definition		
Type Name : SMTMac_Ct		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 MAC_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octets-- }

ASN.1 Type Definition		
Type Name : SMTNonMaster_Ct		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 NonMaster_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octet-- }

ASN.1 Type Definition		
Type Name : SMTMaster_Ct		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 Master_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octet-- }

ASN.1 Type Definition		
Type Name : SMTAvailablePaths		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 AvailablePaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), AvailablePathsType --1 octet-- }

ASN.1 Type Definition		
Type Name : SMTConfigCapabilities		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 ConfigCapabilities	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), Capabilities --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTConfigPolicy		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 ConfigPolicy	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ConfigPolicyType --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTConnectionPolicy		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 ConnectionPolicy	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), Connection --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTT_Notify		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 T_NotifyType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTStatRptPolicy		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 StatRptPolicy	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN DEFAULT TRUE }

ASN.1 Type Definition		
Type Name : SMTTrace_MaxExpiration		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length TraceMaxExpiration	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : SMTPORTIndexes		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PORTIndexes	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), Indexes}

ASN.1 Type Definition		
Type Name : SMTMACIndexes		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MACIndexes	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), Indexes}

ASN.1 Type Definition		
Type Name : SMTBypassPresent		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 BypassPresent	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN }

10.2.3.1.3 SMT Status Group Attributes

ASN.1 Type Definition		
Type Name : SMTStatus_Group		
Comments : SMT attribute group.		
Type Definition		
SET	{ecmstate cfstate holdstate remotedisconnectflag stationstatus peerwrapflag	SMTECMState, SMTCF_State, SMTHoldState OPTIONAL, SMTRemoteDisconnectFlag, SMTStationStatus, SMTPeerWrapFlag }

ASN.1 Type Definition		
Type Name : SMTECMState		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 ECMStateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ECMState --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTCF_State		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 CF_StateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), CF_State --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTHoldState		
Comments : SMT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 HoldStateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), HoldState --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTRemoteDisconnectFlag		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 RemoteDisconnectFlag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : SMTStationStatus		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 StationStatus	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), Status --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTPeerWrapFlag		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 PeerWrapFlag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN }

10.2.3.1.4 SMT MIB Operation Group Attributes

ASN.1 Type Definition		
Type Name : SMTMIBOperationGrp		
Comments : SMT attribute group.		
Type Definition		
SET	{timestamp transitiontimestamp setcount lastsetstationid	SMTTimeStamp, SMTTransitionTimeStamp, SMTSetCount OPTIONAL, SMTLastSetStationId OPTIONAL }

ASN.1 Type Definition		
Type Name : SMTTimeStamp		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length TimeStamp	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..18446744073709551615) --8 octets-- }

ASN.1 Type Definition		
Type Name : SMTTransitionTimeStamp		
Comments : SMT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length TransitionTimeStamp	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..18446744073709551615) --8 octets-- }

ASN.1 Type Definition		
Type Name : SMTSetCount		
Comments : SMT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Count SetTimeStamp	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), INTEGER(0..4294967295), --4 octets-- INTEGER(0..18446744073709551615) --8 octets-- }

ASN.1 Type Definition		
Type Name : SMTLastSetStationId		
Comments : SMT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ImplementerOctet LastSetStation_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : SMTVendorAttrib		
Comments : SMT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.2 ASN.1 Type Definitions for MAC Attributes

ASN.1 Type Definition		
Type Name : MACGrp		
Comments : MAC attribute group.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Parameter_Value	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), ANY --MAC attribute group-- }

10.2.3.2.1 MAC Capabilities Group Attributes

ASN.1 Type Definition		
Type Name : MACCapabilitiesGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{framestatusfunctions bridgefunctions tmaxcapability tvxcapability	MACFrameStatusFunctions, MACBridgeFunctions OPTIONAL, MACT_MaxCapability, MACTVXCapability }

ASN.1 Type Definition		
Type Name : MACFrameStatusFunctions		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 FrameStatusFunctions	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), FS_Functions --2 octets-- }

ASN.1 Type Definition		
Type Name : MACBridgeFunctions		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 BridgeFunctions	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)) OPTIONAL, BridgeType OPTIONAL --2 octets-- }

ASN.1 Type Definition		
Type Name : MACT_MaxCapability		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_MaxCapability }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement--

ASN.1 Type Definition		
Type Name : MACTVXCapability		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index TVXCapability	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

10.2.3.2.2 MAC Configuration Group Attributes

ASN.1 Type Definition		
Type Name : MACConfigGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{availablepaths currentpath upstreamnbr downstreamnbr oldupstreamnbr olddownstreamnbr dupaddresstest requestedpaths downstreamporttype macindex	MACAvailablePaths, MACCurrentPath, MACUpstreamNbr MACDownstreamNbr, MACOldUpstreamNbr, MACOldDownstreamNbr, MACDupAddressTest, MACRequestedPaths, MACDownstreamPORTType, MACIndex }

ASN.1 Type Definition		
Type Name : MACAvailablePaths		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 AvailablePaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), AvailablePathsType --1 octet-- }

ASN.1 Type Definition		
Type Name : MACCurrentPath		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 CurrentPath	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), CurrentPathType --2 octets-- }

ASN.1 Type Definition		
Type Name : MACUpstreamNbr		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 UpstreamNbr_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACDownstreamNbr		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 DownstreamNbr_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACOldUpstreamNbr		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 OldUpstreamNbr_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACOldDownstreamNbr		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 OldDownstreamNbr_Address	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACDupAddressTest		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 DupAddressTestType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), DupAddressTest --2 octets-- }

ASN.1 Type Definition		
Type Name : MACRequestedPaths		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 RequestedPaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), PermittedPaths --1 octet-- }

ASN.1 Type Definition		
Type Name : MACDownstreamPORTType		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 DownstreamPORTType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PortTypeType --2 octets-- }

ASN.1 Type Definition		
Type Name : MACIndex		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 MACIndx	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

10.2.3.2.3 MAC Address Group Attributes

ASN.1 Type Definition		
Type Name : MACAddressGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{smtaddress longgrpaddress shortgrpaddress	MACSMTAddress, MACLongGrpAddress OPTIONAL, MACShortGrpAddress OPTIONAL }

ASN.1 Type Definition		
Type Name : MACSMTAddress		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 SMTAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACLongGrpAddress		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index LongGrpAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), LongAddressSet }

ASN.1 Type Definition		
Type Name : MACShortGrpAddress		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index ShortGrpAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), ShortAddressSet }

10.2.3.2.4 MAC Operation Group Attributes

ASN.1 Type Definition		
Type Name : MACOperationGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{treq tneg tmax tvxvalue tpri0 tpri1 tpri2 tpri3 tpri4 tpri5 tpri6	MACT_Req, MACT_Neg, MACT_Max, MACTvxValue, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL, MACT_Pri OPTIONAL } }

ASN.1 Type Definition		
Type Name : MACT_Req		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_ReqType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- } }

ASN.1 Type Definition		
Type Name : MACT_Neg		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_NegType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- } }

ASN.1 Type Definition		
Type Name : MACT_Max Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_MaxType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

ASN.1 Type Definition		
Type Name : MACTvxValue Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index TvxValueType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

ASN.1 Type Definition		
Type Name : MACT_Pri Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_PriType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

10.2.3.2.5 MAC Counters Group Attributes

ASN.1 Type Definition		
Type Name : MACCounters_Group		
Comments : MAC attribute group.		
Type Definition		
SET	{framect copiedct transmitct tokenct errorct lostct tvxexpiredct notcopiedct latect ringopct	MACFrame_Ct, MACCopied_Ct, MACTransmit_Ct, MACToken_Ct OPTIONAL, MACError_Ct, MACLost_Ct, MACTvxExpired_Ct OPTIONAL, MACNotCopied_Ct OPTIONAL, MACLate_Ct OPTIONAL, MACRingOp_Ct OPTIONAL }

ASN.1 Type Definition		
Type Name : MACFrame_Ct		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Frame_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACCopied_Ct		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Copied_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACTransmit_Ct		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Transmit_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACToken_Ct		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Token_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACError_Ct		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Error_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACLost_Ct		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Lost_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACTvxExpired_Ct		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index TvxExpired_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACNotCopied_Ct		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index NotCopied_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACLate_Ct		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Late_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : MACRingOp_Ct		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index RingOp_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

10.2.3.2.6 MAC Frame Error Condition Group Attributes

ASN.1 Type Definition		
Type Name : MACFrameErrorConditionGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{frameerrorthreshold frameerrorratio	MACFrameErrorThreshold, MACFrameErrorRatio }

ASN.1 Type Definition		
Type Name : MACFrameErrorThreshold		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 FrameErrorThreshold	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : MACFrameErrorRatio		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 FrameErrorRatio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

10.2.3.2.7 MAC Not Copied Condition Group Attributes

ASN.1 Type Definition		
Type Name : MACNotCopiedConditionGrp		
Comments : MAC attribute group. This group is optional.		
Type Definition		
SET	{macnotcopiedthreshold macnotcopiedratio	MACNotCopiedThreshold OPTIONAL, MACNotCopiedRatio OPTIONAL }

ASN.1 Type Definition		
Type Name : MACNotCopiedThreshold		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 NotCopiedThreshold	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : MACNotCopiedRatio		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD NotCopiedRatio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

10.2.3.2.8 MAC Status Group Attributes

ASN.1 Type Definition		
Type Name : MACStatusGrp		
Comments : MAC attribute group.		
Type Definition		
SET	{rmtstate daflag undaflag frameerrorflag notcopiedflag unitdataavailable hardwarepresent maunitdataenable	MACRMTState, MACDA_Flag, MACUNDA_Flag, MACFrameErrorFlag, MACNotCopiedFlag OPTIONAL MACMA_UnitDataAvailable, MACHardwarePresent, MACMA_UnitdataEnable }

ASN.1 Type Definition		
Type Name : MACRMTState		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 RMTStateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), RMTState --2 octets-- }

ASN.1 Type Definition		
Type Name : MACDA_Flag		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 DA_Flag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : MACUNDA_Flag		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 UNDA_Flag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : MACFrameErrorFlag		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 FrameErrorFlag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACNotCopiedFlag		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 NotCopiedFlag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN DEFAULT FALSE }

ASN.1 Type Definition		
Type Name : MACMA_UnitdataAvailable		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MA_UnitdataAvailable	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : MACHardwarePresent		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 HWPpresent	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), Present --2 octets-- }

ASN.1 Type Definition		
Type Name : MACMA_UnitdataEnable		
Comments : MAC attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MA_UnitdataEnable	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN DEFAULT TRUE }

ASN.1 Type Definition		
Type Name : MACVendorAttrib		
Comments : MAC attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.3 ASN.1 Type Definitions for PATH Attributes

ASN.1 Type Definition		
Type Name : PATHGrp		
Comments : PATH attribute group.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Parameter_Value	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), ANY --PATH attribute group--

ASN.1 Type Definition		
Type Name : PATHConfigGrp		
Comments : PATH attribute group.		
Type Definition		
SET	{index ringlatency tracestatus sbapayload sbaoverhead configuration trmode sbaavailable tvxlowerbound tmaxlowerbound maxtreq	PATHIndex, PATHRingLatency OPTIONAL, PATHTraceStatus OPTIONAL, PATHSbaPayload OPTIONAL, PATHSbaOverhead OPTIONAL, PATHConfiguration, PATHT_Rmode OPTIONAL, PATHSbaAvailable OPTIONAL, PATHTVXLowerBound, PATHT_MaxLowerBound, PATHMaxT_Req }

ASN.1 Type Definition		
Type Name : PATHIndex		
Comments : PATH attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 Index --Primary(1); Secondary(2); Local(3..255)--	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : PATHRingLatency		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index RingLatency	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PATHTraceStatus		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 TraceStatusType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), TraceStatus --2 octets-- }

ASN.1 Type Definition		
Type Name : PATHSbaPayload		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index SbaPayload	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PATHSbaOverhead		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index SbaOverhead	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PATHConfiguration		
Comments : PATH attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Configuration	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), PathConfig }

ASN.1 Type Definition		
Type Name : PATHT_Rmode		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_RmodeType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PATHSbaAvailable		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index SbaAvailable	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PATHTVXLowerBound		
Comments : PATH attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index TVXLowerBound	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

ASN.1 Type Definition		
Type Name : PATHTT_MaxLowerBound		
Comments : PATH attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index T_MaxLowerBound }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement--

ASN.1 Type Definition		
Type Name : PATHMaxT_Req		
Comments : PATH attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index MaxT_Req }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(4)) --TimerTwosComplement-- }

ASN.1 Type Definition		
Type Name : PATHVendorAttrib		
Comments : PATH attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.4 ASN.1 Type Definitions for PORT Attributes

ASN.1 Type Definition		
Type Name : PORTGrp		
Comments : PORT attribute group.		
Type Definition		
SEQUENCE	{ Parameter_Type Parameter_Length Resource_Index Parameter_Value }	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), ANY --PORT attribute group--}

10.2.3.4.1 PORT Configuration Group Attributes

ASN.1 Type Definition		
Type Name : PORTConfigGrp		
Comments : PORT attribute group.		
Type Definition		
SET	{mytype neighbortype connectionpolicies macindicated currentpath requestedpath macplacement availablepath maclooptime pmdclass connectioncapabilities index	PORTMyType, PORTNeighborType, PORTConnectionPolicies, PORTMACIndicated, PORTCurrentPath, PORTRequestedPaths, PORTMACPlacement, PORTAvailablePaths, PORTMACLoop_Time OPTIONAL, PORTPMDClass, PORTConnectionCapabilities, PORTIndex }

ASN.1 Type Definition		
Type Name : PORTMyType		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 MyType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PortTypeType --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTNeighborType		
Comments : PORT attribute		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 NeighborType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PortTypeType --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTConnectionPolicies		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConnectionPoliciesType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), ConnectionPolicies --1 octet-- }

ASN.1 Type Definition		
Type Name : PORTMACIndicated		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 T_Val9 R_Val9	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)) BOOLEAN, BOOLEAN }

ASN.1 Type Definition		
Type Name : PORTCurrentPath		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 CurrentPath	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), CurrentPathType --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTRequestedPaths		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index RequestedPaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), RequestedPathsType --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTMACPlacement		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 MACPlacement	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTAvailablePaths		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 AvailablePaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), AvailablePathsType --1 octet-- }

ASN.1 Type Definition		
Type Name : PORTMACLoop_Time		
Comments : PORT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index MACLoopTime	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTPMDClass		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PMDClassType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PMDClass --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTConnectionCapabilities		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConnectionCapabilities	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), ConnectionPolicies --1 octet-- }

ASN.1 Type Definition		
Type Name : PORTIndex		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PortIndx	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2 octets-- }

10.2.3.4.2 PORT Operation Group Attributes

ASN.1 Type Definition		
Type Name : PORTOperationGrp		
Comments : PORT attribute group.		
Type Definition		
SET	{maintls bsflag pcls	PORTMaint_LS OPTIONAL, PORTBS_Flag, PORTPC_LS OPTIONAL }

ASN.1 Type Definition		
Type Name : PORTMaint_LS		
Comments : PORT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 Maint_LS	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), LineState --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTBS_Flag		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 BS_Flag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : PORTPC_LS		
Comments : PORT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PC_LS	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), LineState --2 octets-- }

10.2.3.4.3 PORT Error Counters Group Attributes

ASN.1 Type Definition		
Type Name : PORTErrCtrsGrp		
Comments : PORT attribute group.		
Type Definition		
SET	{eberrorct lctfailct	PORTEBError_Ct OPTIONAL, PORTLCTFail_Ct }

ASN.1 Type Definition		
Type Name : PORTEBError_Ct		
Comments : PORT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index EBError_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTLCTFail_Ct Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index LCTFail_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

10.2.3.4.4 PORT LER Group Attributes

ASN.1 Type Definition		
Type Name : PORTLerGrp Comments : PORT attribute group.		
Type Definition		
SET	{lerestimate lemrejectct lemct lercutoff leralarm	PORTLer_Estimate, PORTLem_Reject_Ct, PORTLem_Ct, PORTLer_Cutoff, PORTLer_Alarm }

ASN.1 Type Definition		
Type Name : PORTLer_Estimate Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 Ler_Estimate	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octet-- }

ASN.1 Type Definition		
Type Name : PORTLem_Reject_Ct Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Lem_Reject_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTLem_Ct Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index Lem_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTLer_Cutoff Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 Ler_Cutoff	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octet-- }

ASN.1 Type Definition		
Type Name : PORTLer_Alarm Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 Ler_Alarm	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), INTEGER(0..255) --1 octet-- }

10.2.3.4.5 PORT Status Group Attributes

ASN.1 Type Definition		
Type Name : PORTStatusGrp Comments : PORT attribute group.		
Type Definition		
SET	{connectstate pcmstate pcwithhold lerflag hardwarepresent	PORTConnectState, PORTPCMState, PORTPC_Withhold, PORTLerFlag, PORTHardwarePresent }

ASN.1 Type Definition		
Type Name : PORTConnectState		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 ConnectStateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), ConnectState --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTPCMState		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PCMStateType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PCMState --2 octet-- }

ASN.1 Type Definition		
Type Name : PORTPC_Withhold		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PC_WithholdType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), PC_Withhold --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTLerFlag		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 LerFlag	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN }

ASN.1 Type Definition		
Type Name : PORTHardwarePresent		
Comments : PORT attribute.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 HWPresent	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), Present --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTVendorAttrib		
Comments : PORT attribute. This attribute is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.5 ASN.1 Type Definitions for Actions and Notifications

10.2.3.5.1 Actions

ASN.1 Type Definition		
Type Name : SMTStationAction		
Comments : SMT action.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD2 SMTAction	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), ActionInfo --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTVendorAction		
Comments : SMT action. This action is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

ASN.1 Type Definition		
Type Name : MACVendorAction		
Comments : MAC action. This action is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

ASN.1 Type Definition		
Type Name : PATHVendorAction		
Comments : PATH action. This action is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

ASN.1 Type Definition		
Type Name : PORTAction		
Comments : PORT action.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD2 PortAction	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), ActionType --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTVendorAction		
Comments : PORT action. This action is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.5.2 Notifications

ASN.1 Type Definition		
Type Name : SMTHoldCondition		
Comments : SMT notification. This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 ConditionState PAD2 HoldCondition	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(2)), HoldState --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTPeerWrapCondition		
Comments : SMT notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PAD3 ConditionState PAD2 PeerWrapCondition	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(2)), CF_State --2 octets-- }

ASN.1 Type Definition		
Type Name : SMTVendorNotification		
Comments : SMT notification. This notation is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length SMTVendor	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), VendorType }

ASN.1 Type Definition		
Type Name : MACDuplicateAddressCondition		
Comments : MAC notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConditionState PAD2 DupCondition LongAddress UNALong	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(2)), DupConditionType, --2 octets-- OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)) }

ASN.1 Type Definition		
Type Name : MACFrameErrorCondition		
Comments : MAC notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConditionState Frame_Ct Error_Ct Lost_Ct PAD2 FrameErrorRatio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, INTEGER(0..4294967295), --4 octets-- INTEGER(0..4294967295), INTEGER(0..4294967295), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2octets--}

ASN.1 Type Definition		
Type Name : MACNotCopiedCondition		
Comments : MAC notification. This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConditionState NotCopied_Ct Copied_Ct PAD2 NotCopiedRatio	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, INTEGER(0..4294967295), --4 octets-- INTEGER(0..4294967295), OCTETSTRING(SIZE(2)), INTEGER(0..65535) --2octets--}

ASN.1 Type Definition		
Type Name : MACNeighborChangeEvent		
Comments : MAC notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MultipleOccurrence PAD3 NACondition Old_UNA New_UNA Old_DNA New_DNA CurrentPath SMTAddress	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(3)), NAConditionType, --1 octet-- OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), CurrentPathType, --2 octets-- OCTETSTRING(SIZE(6)), }

ASN.1 Type Definition		
Type Name : MACPathChangeEvent		
Comments : MAC notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MultipleOccurrence PAD1 AvailablePaths CurrentPath PAD3 RequestedPaths	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(1)), AvailablePathsType, --1 octet-- CurrentPathType, --2 octets-- OCTETSTRING(SIZE(3)), PermittedPaths --1 octet-- }

ASN.1 Type Definition		
Type Name : MACVendorNotification		
Comments : MAC notification. This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length MACVendor	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), VendorType }

ASN.1 Type Definition		
Type Name : PATHVendorNotification		
Comments : PATH notification. This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PATHVendor	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), VendorType }

ASN.1 Type Definition		
Type Name : PORTLerCondition		
Comments : PORT notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConditionState PAD1 Ler_Cutoff Ler_Alarm Ler_Estimate Ler_Reject_Ct Ler_Ct	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(1)), INTEGER(0..255), --1 octet-- INTEGER(0..255), INTEGER(0..255), INTEGER(0..4294967295), --4 octets-- INTEGER(0..4294967295) }

ASN.1 Type Definition		
Type Name : PORTUndesiredConnectionAttemptEvent		
Comments : PORT notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MultipleOccurrence PortType ConnectStateType PC_Neighbor PC_WithholdType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, PortTypeType, --2 octets-- ConnectState, --2 octets-- PortTypeType, PC_Withhold --2 octets-- }

ASN.1 Type Definition		
Type Name : PORTEBErrorCondition		
Comments : PORT notification. This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 ConditionState EBErrorCount	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, INTEGER(0..4294967295) --4 octets-- }

ASN.1 Type Definition		
Type Name : PORTPathChangeEvent		
Comments : PORT notification.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length Resource_Index PAD3 MultipleOccurrence PAD1 AvailablePaths CurrentPath RequestedPaths MyType NeighborType	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(3)), BOOLEAN, OCTETSTRING(SIZE(1)), AvailablePathsType, --1 octet-- CurrentPathType, --2 octets-- RequestedPathsType, --4 octets-- PortTypeType, --2 octet-- PortTypeType }

ASN.1 Type Definition		
Type Name : PORTVendorNotification		
Comments : PORT notification This notification is optional.		
Type Definition		
SEQUENCE	{Parameter_Type Parameter_Length PORTVendor	OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), VendorType }

10.2.3.6 ASN.1 Common Type Definitions

ASN.1 Type Definition		
Type Name : ActionInfo		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{connect(0), disconnect(1), path_test(2), self_test(3), disable_a(4), disable_b(5), disable_m(6) }	

ASN.1 Type Definition		
Type Name : ActionType		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{mainport(0), enableport(1), disableport(2), startport(3), stopport(4)	-- signal PC_Maint -- signal PC_Enable -- signal PC_Disable -- signal PC_Start -- signal PC_Stop }

ASN.1 Type Definition		
Type Name : AvailablePathsType		
Comments : Common type definition.		
Type Definition		
[8] IMPLICIT BITSTRING {primary(0), secondary(1), local(2)} --(SIZE(8))--		

ASN.1 Type Definition	
Type Name : BridgeType Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {tb(0), --Transparent Bridging Active-- sr(1), --Source Routing Active-- srt(2) --Source Routing Transparent Active-- } --(SIZE(16))--	

ASN.1 Type Definition	
Type Name : Capabilities Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {holdavailable(0), cf_wrap_ab(1) } (SIZE(16))--	

ASN.1 Type Definition	
Type Name : CF_State Comments : Common type definition.	
Type Definition	
ENUMERATED {isolated(0), local_a(1), local_b(2), local_ab(3), local_s(4), wrap_a(5), wrap_b(6), wrap_ab(7), wrap_s(8), c_wrap_a(9), c_wrap_b(10), c_wrap_s(11), thru(12) }	

ASN.1 Type Definition	
Type Name : ConfigPolicyType Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {configurationhold(0) } --(SIZE(16))--	

ASN.1 Type Definition	
Type Name :	Connection
Comments :	Common type definition.
Type Definition	
[16] IMPLICIT BITSTRING {rejectA_A(0), rejectA_B(1), rejectA_S(2), rejectA_M(3), rejectB_A(4), rejectB_B(5), rejectB_S(6), rejectB_M(7), rejectS_A(8), rejectS_B(9), rejectS_S(10), rejectS_M(11), rejectM_A(12), rejectM_B(13), rejectM_S(14), rejectM_M(15) } --(SIZE(16))-- -- Note that bit 15, reject M-M, is always set and cannot be cleared --	

ASN.1 Type Definition	
Type Name :	ConnectionType
Comments :	Common type definition.
Type Definition	
[16] IMPLICIT BITSTRING {rejectA_A(0), rejectB_B(1), rejectS_S(2), rejectA_M(3), rejectB_M(4), rejectA_S(5), rejectB_S(6), rejectA_B(7), rejectB_A(8), rejectS_A(9), rejectS_B(10), rejectS_M(11), rejectM_A(12), rejectM_B(13), rejectM_S(14), rejectM_M(15) } --(SIZE(16))-- -- Note that bit 15, reject M-M, is always set and cannot be cleared --	

ASN.1 Type Definition	
Type Name : ConnectionPolicies Comments : Common type definition.	
Type Definition	
[8] IMPLICIT BITSTRING {pc_mac_lct(0), pc_mac_loop(1)} --(SIZE(8))--	

ASN.1 Type Definition	
Type Name : ConnectState Comments : Common type definition.	
Type Definition	
ENUMERATED	{disabled(0), connecting(1), standby(2), active(3) }

ASN.1 Type Definition	
Type Name : CurrentPathType Comments : Common type definition.	
Type Definition	
ENUMERATED	{isolated(0), local(1), secondary(2), primary(3), concatenated(4), thru(5) }

ASN.1 Type Definition	
Type Name : DupAddressTest Comments : Common type definition.	
Type Definition	
ENUMERATED	{none(0), pass(1), fail(2) }

ASN.1 Type Definition	
Type Name : DuplAddressType Comments : Common type definition.	
Type Definition	
[8] IMPLICIT BITSTRING {MyDuplicate(0), MyUNADuplicate(1)} --value of fddiMACDA_Flag for this MAC-- --value of fddiMACUNDA_Flag for this MAC--} --(SIZE(8))--	

ASN.1 Type Definition	
Type Name : DupConditionType Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {mydup(0), unadup(1)} --DA_Flag-- --UNDA_Flag-- } --(SIZE(16))--	

ASN.1 Type Definition	
Type Name : ECMState Comments : Common type definition.	
Type Definition	
ENUMERATED {ec0(0), --Out-- ec1(1), --In-- ec2(2), --Trace-- ec3(3), --Leave-- ec4(4), --Path_Test-- ec5(5), --Insert-- ec6(6), --Check-- ec7(7) --Deinsert-- }	

ASN.1 Type Definition	
Type Name : FS_Functions Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {fs_repeating(0), fs_setting(1), fs_clearing(2) } --(SIZE(16))--	

ASN.1 Type Definition		
Type Name : HoldState		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{not_holding(0), holding_prm(1), holding_sec(2)}	-- holding on primary-- -- holding on secondary-- }

ASN.1 Type Definition		
Type Name : Indexes		
Comments : Common type definition.		
Type Definition		
SET OF	{ ResourceId	INTEGER(0..65535) --2 octets-- }

ASN.1 Type Definition		
Type Name : LineState		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{qls(0), ils(1), mls(2), hls(3), pdr(4), lsu(5), nls(6)}	-- quiet-- -- idle-- -- master-- -- halt-- -- receive = active, transmit = PDR-- -- receive = unknown-- -- receive = noise-- }

ASN.1 Type Definition		
Type Name : LongAddressSet		
Comments : Common type definition.		
Type Definition		
SET OF	{LongAddressType	OCTETSTRING(SIZE(6))}

ASN.1 Type Definition		
Type Name : NAConditionType		
Comments : Common type definition.		
Type Definition		
[8] IMPLICIT BITSTRING	{unachange(0), dnachange(1) }	--(SIZE(8))--

ASN.1 Type Definition		
Type Name : PathConfig		
Comments : Common type definition.		
Type Definition		
SEQUENCE OF	{ResourceTagType	ResourceTag}

ASN.1 Type Definition		
Type Name : PCMState		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{pc0(0), pc1(1), pc2(2), pc3(3), pc4(4), pc5(5), pc6(6), pc7(7), pc8(8), pc9(9)}	-- Off-- -- Break-- -- Trace-- -- Connect-- -- Next-- -- Signal-- -- Join-- -- Verify-- -- Active-- -- Maint--}

ASN.1 Type Definition		
Type Name : PC_Withhold		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{none(0), m_m(1), otherincompatible(2), pathnotavailable(3)}	

ASN.1 Type Definition		
Type Name : PermittedPaths		
Comments : Common type definition.		
Type Definition		
[8] IMPLICIT BITSTRING {local(0), secondary_alterate(1), primary_alterate(2), concatenate_alterate(3), secondary_preferred(4), primary_preferred(5), concatenated_preferred(6), thru(7) } --(SIZE(8))--		

ASN.1 Type Definition	
Type Name : PMDClass	
Comments : Common type definition.	
Type Definition	
ENUMERATED	{multimode(0), single_mode1(1), single_mode2(2), sonet(3), low_cost_fiber(4), twisted_pair(5), unknown(6), unspecified(7) }

ASN.1 Type Definition	
Type Name : PortTypeType	
Comments : Common type definition.	
Type Definition	
ENUMERATED	{a(0), b(1), s(2), m(3), none(4) }

ASN.1 Type Definition	
Type Name : Present	
Comments : Common type definition.	
Type Definition	
ENUMERATED	{notpresent(0), present(1) }

ASN.1 Type Definition	
Type Name : RequestedPathsType	
Comments : Common type definition.	
Type Definition	
SEQUENCE	{none PermittedPaths, tree PermittedPaths, peer PermittedPaths }

ASN.1 Type Definition		
Type Name : ResourceTag		
Comments : Common type definition.		
Type Definition		
SEQUENCE	{resource_type resource_index current_path	ResourceType, --2 octets-- INTEGER(0..65535), --2 octets-- CurrentPathType --2 octets-- }

ASN.1 Type Definition		
Type Name : ResourceType		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{mac(2), port(4) --2 octets-- }	

ASN.1 Type Definition		
Type Name : RMTState		
Comments : Common type definition.		
Type Definition		
ENUMERATED	{rm0(0), rm1(1), rm2(2), rm3(3), rm4(4), rm5(5), rm6(6), rm7(7)	-- Isolated-- -- Non_Op-- -- Ring_Op-- -- Detect-- -- Non_Op_Dup-- -- Ring_Op_Dup-- -- Directed-- -- Trace-- }

ASN.1 Type Definition		
Type Name : ShortAddressSet		
Comments : Common type definition.		
Type Definition		
SET OF	{ShortAddressType	OCTETSTRING(SIZE(2))}

ASN.1 Type Definition		
Type Name : SpecificData		
Comments : Common type definition.		
Type Definition		
SET	{Data ANY }	--The syntax for the data is defined by the vendor identified by the manufacturerOUI--

ASN.1 Type Definition	
Type Name : Status	
Comments : Common type definition.	
Type Definition	
ENUMERATED	{concatenated(0), separated(1), thru(2) }

ASN.1 Type Definition	
Type Name : TopologyType	
Comments : Common type definition.	
Type Definition	
[8] IMPLICIT BITSTRING {PeerWrap(0), UnattachedConcentrator(1), TwistedRing_AA(2), TwistedRing_BB(3), RootedStation(4), StatusReporting(5), --fddiSMTStatRptPolicy-- SynchronousService(6) --fddiPATHSbaOverhead--} --(SIZE(8))--	

ASN.1 Type Definition	
Type Name : TraceStatus	
Comments : Common type definition.	
Type Definition	
[16] IMPLICIT BITSTRING {traceinitiated(0), tracepropagated(1), traceterminated(2), tracetimeout(3) } --(SIZE(16))--	

ASN.1 Type Definition	
Type Name : VendorType	
Comments : Common type definition.	
Type Definition	
SET OF	{VendorMIBType VMTType }

ASN.1 Type Definition		
Type Name : VMType		
Comments : Common type definition.		
Type Definition		
SEQUENCE	{ManufacturerOUI VendorOctet VendorData	OCTETSTRING(SIZE(3)), OCTETSTRING(SIZE(1)), SpecificData }

10.2.3.7 SMT Information Field Type Definitions

10.2.3.7.1 NIF InfoField Type Definition

ASN.1 Type Definition		
Type Name : NIF_Info		
Comments : NIF information field.		
Type Definition		
SET	{upstreamneighboraddress stationdescriptor stationstate macframestatusfunctions	UNA_GENERAL, StationDescriptor_GENERAL, StationState_GENERAL, MACFrameStatusFunctions }

10.2.3.7.2 SRF InfoField Type Definition

ASN.1 Type Definition		
Type Name : SRF_Info		
Comments : SRF information field.		
Type Definition		
SET	{timestamp transitiontimestamp eventcondition	SMTTimeStamp, SMTTransitionTimeStamp, ANY --notifications-- }

10.2.3.7.3 PMF InfoField Type Definition

ASN.1 Type Definition		
Type Name : PMFRequest_Info		
Comments : PMF request information field.		
Type Definition		
SET	{authorization setcount targetattribute --an attribute to be modified or an action to be invoked. One attribute permitted per PMF set request.--}	Authorization_GENERAL OPTIONAL, SMTSetCount OPTIONAL, ANY

ASN.1 Type Definition		
Type Name : PMFResponse_Info		
Comments : PMF response information field.		
Type Definition		
SET	{reasoncode timestamp setcount --Included if PMF Set protocol is implemented-- lastsetstationid --Included if PMF Set protocol is implemented-- requestedinfo	ReasonCode_GENERAL, SMTTimeStamp, SMTSetCount OPTIONAL, SMTLastSetStationId OPTIONAL, ANY --requested parameter(s)-- }

10.2.4 Test Suite Operation Definition

Test Suite Operation Definition	
Operation Name	: ECH_DATA(length: INTEGER)
Result Type	: OCTETSTRING
Comments	:
Description	
ECH_DATA is an operator defined any length characters. For example: ECH_DATA(5) = “sgGer” ECH_DATA(21) = “Any Length Characters”	

Test Suite Operation Definition	
Operation Name	: TIME(Value: INTEGER)
Result Type	: INTEGER
Comments	:
Description	
TIME(Value) specifies octet units of 80 nanoseconds as an integer value where Value must be in milliseconds.	
For example:	
TIME(2ms) = (2x10E6) / 80 = 25,000	
TIME(3ms) = (3x10E6) / 80 = 37,500	

Test Suite Operation Definition	
Operation Name	: TTC(TIME(Value))
Result Type	: INTEGER
Comments	:
Description	
This operator will convert the integer TIME(Value) into two's complement format.	

Test Suite Operation Definition	
Operation Name	: USR_DATA(Length: INTEGER)
Result Type	: OCTETSTRING
Comments	:
Description	
USR_DATA(Length) is an ASCII string of "Length" octets in length. For example: USR_DATA(5) = ASCII string of 5 octets in length. USR_DATA(10) = ASCII string of 10 octets in length. USR_DATA(32) = ASCII string of 32 octets in length.	

10.2.5 Test Suite Parameter Declarations

Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
AvailablePaths_IUT	AvailablePathsType	PIXIT 5.1	Path types that are available in the IUT.
BridgeType_IUT	BridgeType	PIXIT 11	Bridge types present in the IUT.
Capabilities_IUT	Capabilities	PIXIT 7 & 8	Configuration capabilities that are supported by the IUT.
Connection_IUT	Connection	PIXIT 9	Connection policies in the IUT.
IUT_ADDRESS	OCTETSTRING	PIXIT 1.1	48-bit address assigned to IUT. MSB on the left.
TESTER_ADDRESS	OCTETSTRING	PIXIT 1.2	48-bit address assigned to the tester. MSB on the left.
OTHER_ADDRESS	OCTETSTRING	PIXIT 1.3	48-bit address assigned to a station other than IUT and tester. MSB on the left.
MANUF_OUI	OCTETSTRING	PIXIT 3.1	Manufacturer OUI, the three octet Organizationally Unique Identifier (OUI) assigned by IEEE.
MANUF_DATA	OCTETSTRING	PIXIT 3.2	32 octets of manufacturer data.
IUT_MACs	INTEGER	PIXIT 4.1.1	Number of MACs in the IUT (station or concentrator). This number includes MAC instances that are not supported by underlying hardware.
IUT_NonMasters	INTEGER	PIXIT 4.1.2	Number of A, B, and S ports in the IUT (station or concentrator). This number includes port instances that are not supported by underlying hardware.
IUT_Masters	INTEGER	PIXIT 4.1.3	Number of M ports in the IUT if IUT is a concentrator. This number includes port instances that are not supported by underlying hardware.
D_Max	INTEGER	PIXIT 2.5	Maximum ring latency that IUT supports (in milliseconds).
IUT_T_Max	INTEGER	PIXIT 2.6.1	Maximum Token-Rotation-Timer (TRT) of the IUT (in milliseconds).
TSTR_T_Max	INTEGER	PIXIT 2.6.2	Maximum TRT of the tester (in milliseconds).
IUT_TvxValue	INTEGER	PIXIT 2.7.1	Maximum Valid-Transmission-Timer (TVX) of the IUT (in milliseconds).
TSTR_TvxValue	INTEGER	PIXIT 2.7.2	Maximum TVX of the tester (in milliseconds).
Trace_Max	INTEGER	PIXIT 2.2	Maximum propagation time for a Trace on an FDDI topology (in seconds).

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Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
T_Limit	INTEGER	PIXIT 2.3	The rate-limiting interval for the Status Report protocol (in seconds). The interval between successive iterations of the Neighbor Notification protocol (in seconds).
T_Notify	INTEGER	PIXIT 2.1	
T_NN_Out	INTEGER	PIXIT 2.4	
P_CurrentPath	CurrentPathType	PIXIT 6.2	The maximum interval between successive NIF receptions from the upstream and downstream neighbors to maintain neighbor information validity (in seconds).
P_Indx	INTEGER	PIXIT 2.8	Port Current Path. Path(s) into which this port is currently inserted.
PORT_Indx	INTEGER	PIXIT 2.8	Port Index. An index used to refer to an instance of a port Resource ID.
M_Indx	INTEGER	PIXIT 2.9	Port Index. An index used to refer to all instances of a port object.
M_Indx1	INTEGER	PIXIT 2.9	MAC Index. An index used to refer to an instance of a MAC Resource ID.
MAC_Indx	INTEGER	PIXIT 2.9	MAC Index. An index used to refer to the first instance of a MAC Resource ID.
PMD_Type	PMDClass	PIXIT 10	Type of PMD entity associated with a port.
MACAvailPaths	AvailablePathsType	PIXIT 5.2	Path types that are available in an IUT MAC.
MACCurrPath	CurrentPathType	PIXIT 6.1	Path type into which an IUT MAC is currently inserted.
LONG_GRP_ADD	OCTETSTRING	PIXIT 12.1	48-Bit long group address of an IUT MAC.
SHORT_GRP_ADD	OCTETSTRING	PIXIT 12.2	16-bit short group address of an IUT MAC.
T_Pri0	INTEGER	PIXIT 13.1	T_Pri0 value that IUT supports (in milliseconds).
T_Pri1	INTEGER	PIXIT 13.2	T_Pri1 value that IUT supports (in milliseconds).
T_Pri2	INTEGER	PIXIT 13.3	T_Pri2 value that IUT supports (in milliseconds).
T_Pri3	INTEGER	PIXIT 13.4	T_Pri3 value that IUT supports (in milliseconds).
T_Pri4	INTEGER	PIXIT 13.5	T_Pri4 value that IUT supports (in milliseconds).
T_Pri5	INTEGER	PIXIT 13.6	T_Pri5 value that IUT supports (in milliseconds).
T_Pri6	INTEGER	PIXIT 13.7	T_Pri6 value that IUT supports (in milliseconds).
T_Rmode	INTEGER	PIXIT 14	Time for which a restricted dialogue may persist on the ring (in milliseconds).
T_Next9	INTEGER	PIXIT 15	Time for MAC Local Loop to prevent deadlock (in milliseconds).

10.2.6 Test Suite Constant Declarations

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
JK	SYMBOL[2]	'1100010001'B	Start Delimiter
TT	SYMBOL[2]	'0110101101'B	End Delimiter
T	SYMBOL	'01101'B	T Symbol
I	SYMBOL	'11111'B	Idle symbol
SET	SYMBOL	'11001'B	SET Symbol
RESET	SYMBOL	'00111'B	RESET Symbol
PAD_1	OCTETSTRING	'00'H	
PAD_2	OCTETSTRING[2]	'0000'H	
PAD_3	OCTETSTRING[3]	'000000'H	
SMT_Directed_Beacon_DA	OCTETSTRING[6]	'800143008000'H	MSB Representation
SMT_SRF_DA	OCTETSTRING[6]	'800143008008'H	MSB Representation
All_FDDIConcentratorMACs	OCTETSTRING[6]	'800143008004'H	MSB Representation
SMT_SBA_DA	OCTETSTRING[6]	'80014300800C'H	MSB Representation
SMT_Unknown_Address	OCTETSTRING[6]	'00001F000000'H	MSB Representation
Broadcast	OCTETSTRING[6]	'FFFFFFFFFFFF'H	MSB Representation
LLC_DATA	OCTETSTRING[6]	'0123456789ABCDEF'H	

10.2.7 Test Suite Variable Declarations

Test Suite Variable Declarations			
Variable Name	Type	Value	Comments
NN_Transaction_ID	OCTETSTRING		Current Transaction_ID used by the Neighbor Notification protocol.
New_SetCount	OCTETSTRING		New SetCount used by the IUT (fddiSMTSetCount).
FRM_CT1	INTEGER(0..4294967295)		Initial Frame_Ct received by an IUT MAC.
FRM_CT2	INTEGER(0..4294967295)		Final Frame_Ct received by an IUT MAC.
CP_CT1	INTEGER(0..4294967295)		Initial Copied_Ct of an IUT MAC.
CP_CT2	INTEGER(0..4294967295)		Final Copied_Ct of an IUT MAC.
XMIT_CT1	INTEGER(0..4294967295)		Initial Transmit_Ct of an IUT MAC.
XMIT_CT2	INTEGER(0..4294967295)		Final Transmit_Ct of an IUT MAC.
TK_CT1	INTEGER(0..4294967295)		Initial Token_Ct of an IUT MAC.
TK_CT2	INTEGER(0..4294967295)		Final Token_Ct of an IUT MAC.
BAD_FCS	OCTETSTRING[8]		A bad Frame Check Sequence (FCS) generated by the tester for testing Error_Ct purpose.
ER_CT1	INTEGER(0..4294967295)		Initial Error_Ct of an IUT MAC.
ER_CT2	INTEGER(0..4294967295)		Final Error_Ct of an IUT MAC.
LST_CT1	INTEGER(0..4294967295)		Initial Lost_Ct of an IUT MAC.
LST_CT2	INTEGER(0..4294967295)		Final Lost_Ct of an IUT MAC.
TE_CT1	INTEGER(0..4294967295)		Initial TxvExpired_Ct.
TE_CT2	INTEGER(0..4294967295)		Final TxvExpired_Ct.
LT_CT1	INTEGER(0..4294967295)		Initial Late_Ct of an IUT MAC.
LT_CT2	INTEGER(0..4294967295)		Final Late_Ct of an IUT MAC.
R_Latency	INTEGER(0..4294967295)		Current accumulated latency of the ring associated with the current IUT path (fddiPATHRingLatency).

Test Case Variable Declarations			
Variable Name	Type	Value	Comments
NUM1	INTEGER(0..4294967295)		Number of frames received from the IUT.
NUM2	INTEGER(0..4294967295)		Number of frames copied into the IUT.
NUM3	INTEGER(0..4294967295)		Number of frames transmitted by the IUT.
NUM4	INTEGER(0..4294967295)		Number of tokens received by the IUT.
NUM5	INTEGER(0..4294967295)		Number of frames having bad FCS received by the IUT.
NUM6	INTEGER(0..4294967295)		Number of frames having invalid symbol received by the IUT.
Detailed Comments:			

10.2.8 Timer Declarations

Timer Declarations			
Timer Name	Duration	Unit	Comments
Timer_30	30	sec	Maximum time for a station to respond to a request.
Timer_60	60	sec	Time for waiting to receive a NIF request frame from the IUT.
Timer_TNN	T_Notify	sec	Timer, Neighbor Notification.
Trace_Max	7	sec	Maximum propagation time for a Trace on an FDDI topology.
Timer_TSR	T_Limit	sec	Timer, Status Report.
Timer_TVU	T_NN_Out	sec	Timer, Valid Upstream Neighbor.
Timer_TVD	T_NN_Out	sec	Timer, Valid Downstream Neighbor.

10.2.9 ASN.1 PDU Type Definition**10.2.9.1 NIF PDU Type Definition**

ASN.1 PDU Type Definition		
PDU Name	:	NIF_Frame
PCO Type	:	
Comments	:	Neighbor Information Frame (NIF).
Type Definition		
SEQUENCE	{SD	SYMBOL(SIZE(2)),
	FC	OCTETSTRING(SIZE(1)),
	DA	OCTETSTRING(SIZE(6)),
	SA	OCTETSTRING(SIZE(6)),
	Frame_Class	OCTETSTRING(SIZE(1)),
	Frame_Type	OCTETSTRING(SIZE(1)),
	Version_ID	OCTETSTRING(SIZE(2)),
	Transaction_ID	OCTETSTRING(SIZE(4)),
	Station_ID1	OCTETSTRING(SIZE(2)),
	Station_ID2	OCTETSTRING(SIZE(6)),
	PAD	OCTETSTRING(SIZE(2)),
	InfoField_Length	OCTETSTRING(SIZE(2)),
	Info	NIF_Info,
	FCS	OCTETSTRING(SIZE(4)),
	ED	SYMBOL(SIZE(1)),
	FS_E	SYMBOL(SIZE(1)),
	FS_A	SYMBOL(SIZE(1)),
	FS_C	SYMBOL(SIZE(1)),
	FS_2	SYMBOL(SIZE(0..4)) OPTIONAL,
	FS_T	SYMBOL(SIZE(1)) }

10.2.9.2 SRF PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name	:	SRF_Frame
PCO Type	:	
Comments	:	Status Report Frame (SRF).
Type Definition		
SEQUENCE	{SD	SYMBOL(SIZE(2)),
	FC	OCTETSTRING(SIZE(1)),
	DA	OCTETSTRING(SIZE(6)),
	SA	OCTETSTRING(SIZE(6)),
	Frame_Class	OCTETSTRING(SIZE(1)),
	Frame_Type	OCTETSTRING(SIZE(1)),
	Version_ID	OCTETSTRING(SIZE(2)),
	Transaction_ID	OCTETSTRING(SIZE(4)),
	Station_ID1	OCTETSTRING(SIZE(2)),
	Station_ID2	OCTETSTRING(SIZE(6)),
	PAD	OCTETSTRING(SIZE(2)),
	InfoField_Length	OCTETSTRING(SIZE(2)),
	Info	SRF_Info,
	FCS	OCTETSTRING(SIZE(4)),
	ED	SYMBOL(SIZE(1)),
	FS_E	SYMBOL(SIZE(1)),
	FS_A	SYMBOL(SIZE(1)),
	FS_C	SYMBOL(SIZE(1)),
	FS_2	SYMBOL(SIZE(0..4)) OPTIONAL,
	FS_T	SYMBOL(SIZE(1)) }

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10.2.9.3 PMF PDU Type Definition

ASN.1 PDU Type Definition	
PDU Name	: PMF_Frame1
PCO Type	:
Comments	: Parameter Management Frame (PMF) get request.
Type Definition	
SEQUENCE	<pre> {SD SYMBOL(SIZE(2)), FC OCTETSTRING(SIZE(1)), --NSA = '4F'H; SMT_Info = '41'H-- DA OCTETSTRING(SIZE(6)), SA OCTETSTRING(SIZE(6)), Frame_Class OCTETSTRING(SIZE(1)), Frame_Type OCTETSTRING(SIZE(1)), Version_ID OCTETSTRING(SIZE(2)), Transaction_ID OCTETSTRING(SIZE(4)), Station_ID1 OCTETSTRING(SIZE(2)), Station_ID2 OCTETSTRING(SIZE(6)), PAD OCTETSTRING(SIZE(2)), InfoField_Length OCTETSTRING(SIZE(2)), getrequest ANY, --an attribute, attribute group, multiple attributes or groups-- FCS OCTETSTRING(SIZE(4)), ED SYMBOL(SIZE(1)), FS_E SYMBOL(SIZE(1)), FS_A SYMBOL(SIZE(1)), FS_C SYMBOL(SIZE(1)), FS_2 SYMBOL(SIZE(0..4)) OPTIONAL, FS_T SYMBOL(SIZE(1)) }</pre>

ASN.1 PDU Type Definition		
PDU Name	:	PMF_Frame2
PCO Type	:	
Comments	:	Parameter Management Frame (PMF) get response.
Type Definition		
SEQUENCE	{SD	SYMBOL(SIZE(2)),
	FC	OCTETSTRING(SIZE(1)),
	DA	OCTETSTRING(SIZE(6)),
	SA	OCTETSTRING(SIZE(6)),
	Frame_Class	OCTETSTRING(SIZE(1)),
	Frame_Type	OCTETSTRING(SIZE(1)),
	Version_ID	OCTETSTRING(SIZE(2)),
	Transaction_ID	OCTETSTRING(SIZE(4)),
	Station_ID1	OCTETSTRING(SIZE(2)),
	Station_ID2	OCTETSTRING(SIZE(6)),
	PAD	OCTETSTRING(SIZE(2)),
	InfoField_Length	OCTETSTRING(SIZE(2)),
	getresponse	PMFResponse_Info,
	FCS	OCTETSTRING(SIZE(4)),
	ED	SYMBOL(SIZE(1)),
	FS_E	SYMBOL(SIZE(1)),
	FS_A	SYMBOL(SIZE(1)),
	FS_C	SYMBOL(SIZE(1)),
	FS_2	SYMBOL(SIZE(0..4)) OPTIONAL,
	FS_T	SYMBOL(SIZE(1))
	}	

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ASN.1 PDU Type Definition		
PDU Name	:	PMF_Frame3
PCO Type	:	
Comments	:	Parameter Management Frame (PMF) set request.
Type Definition		
SEQUENCE	{SD	SYMBOL(SIZE(2)),
	FC	OCTETSTRING(SIZE(1)),
	--NSA = '4F'H; SMT_Info = '41'H--	
	DA	OCTETSTRING(SIZE(6)),
	SA	OCTETSTRING(SIZE(6)),
	Frame_Class	OCTETSTRING(SIZE(1)),
	Frame_Type	OCTETSTRING(SIZE(1)),
	Version_ID	OCTETSTRING(SIZE(2)),
	Transaction_ID	OCTETSTRING(SIZE(4)),
	Station_ID1	OCTETSTRING(SIZE(2)),
	Station_ID2	OCTETSTRING(SIZE(6)),
	PAD	OCTETSTRING(SIZE(2)),
	InfoField_Length	OCTETSTRING(SIZE(2)),
	setrequest	PMFRequest_Info,
	FCS	OCTETSTRING(SIZE(4)),
	ED	SYMBOL(SIZE(1)),
	FS_E	SYMBOL(SIZE(1)),
	FS_A	SYMBOL(SIZE(1)),
	FS_C	SYMBOL(SIZE(1)),
	FS_2	SYMBOL(SIZE(0..4)) OPTIONAL,
	FS_T	SYMBOL(SIZE(1))
	}	

ASN.1 PDU Type Definition		
PDU Name	:	PMF_Frame4
PCO Type	:	
Comments	:	Parameter Management Frame (PMF) set response.
Type Definition		
SEQUENCE	{SD FC DA SA Frame_Class Frame_Type Version_ID Transaction_ID Station_ID1 Station_ID2 PAD InfoField_Length setresponse FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(4)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(2)), OCTETSTRING(SIZE(2)), PMFResponse_Info, OCTETSTRING(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)) OPTIONAL, SYMBOL(SIZE(1))

10.2.9.4 LLC PDU Type Definition

ASN.1 PDU Type Definition		
PDU Name	: LLC_Frame	
PCO Type	:	
Comments	: Logical Link Control frame (LLC).	
Type Definition		
SEQUENCE	{SD FC DA SA Info FCS ED FS_E FS_A FS_C FS_2 FS_T }	SYMBOL(SIZE(2)), OCTETSTRING(SIZE(1)), OCTETSTRING(SIZE(6)), OCTETSTRING(SIZE(6)), OCTETSTRING[8], --LLC information-- OCTETSTRING(SIZE(4)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(1)), SYMBOL(SIZE(0..4)) OPTIONAL, SYMBOL(SIZE(1))

10.2.9.5 Idle PDU Type Definition

PDU Type Definition		
PDU Name : ILS_FRM PCO Type : Comments : A frame contains idle symbols only.		
Field Name	Field Type	Comments
ILS	SYMBOL[8]	Idle line state symbols.

10.3 Constraint Parts

10.3.1 ASN.1 Type Constraint Declaration for General Parameters

ASN.1 Type Constraint Declaration		
Constraint Name : UNA_UNKNOWN Structured Type : UNA_GENERAL Derivation Path : Comments : General parameter.		
Constraint Value		
{	Parameter_Type '0001'H, Parameter_Length '0008'H, PAD PAD_2, UNA SMT_Unknown_Address	}

ASN.1 Type Constraint Declaration		
Constraint Name : UNA_IUT Structured Type : UNA_GENERAL Derivation Path : UNA_UNKNOWN Comments : General parameter.		
Constraint Value		
REPLACE	UNA BY	IUT_ADDRESS

ASN.1 Type Constraint Declaration		
Constraint Name : UNA_TSTR Structured Type : UNA_GENERAL Derivation Path : UNA_UNKNOWN Comments : General parameter.		
Constraint Value		
REPLACE	UNA BY	TESTER_ADDRESS

ASN.1 Type Constraint Declaration		
Constraint Name	:	StationDescriptor_Q
Structured Type	:	StationDescriptor_GENERAL
Derivation Path	:	
Comments	:	General parameter.
Constraint Value		
{	Parameter_Type	'0002'H,
	Parameter_Length	'0004'H,
	Node_Class	?,
	Mac_Ct	?,
	NonMaster_Ct	?,
	Master_Ct	? }

ASN.1 Type Constraint Declaration				
Constraint Name : StationDescriptor_IUT				
Structured Type : StationDescriptor_GENERAL				
Derivation Path : StationDescriptor_Q				
Comments : General parameter.				
Constraint Value				
REPLACE	Node_Class	BY	'00'H, --IUT is a station--	
REPLACE	Mac_Ct	BY	IUT_MACs,	
REPLACE	NonMaster_Ct	BY	IUT_NonMasters,	
REPLACE	Mac_Ct	BY	IUT_Masters	

ASN.1 Type Constraint Declaration				
Constraint Name		: StationDescriptor_TSTR		
Structured Type		: StationDescriptor_GENERAL		
Derivation Path		: StationDescriptor_Q		
Comments		: General parameter.		
Constraint Value				
REPLACE	Node_Class	BY	'00'H, --Tester is a station--	

ASN.1 Type Constraint Declaration		
Constraint Name	: StationState_Q	
Structured Type	: StationState_GENERAL	
Derivation Path	:	
Comments	: General parameter.	
Constraint Value		
{	Parameter_Type	‘0003’H,
	Parameter_Length	‘0004’H,
	PAD	PAD_2,
	Topology	Topology_Q,
	DuplAddress	DuplAddress_Q }

ASN.1 Type Constraint Declaration				
Constraint Name : StationState_TSTR				
Structured Type : StationState_GENERAL				
Derivation Path : StationState_Q				
Comments : General parameter.				
Constraint Value				
REPLACE	Topology	BY	Topology_05,	
REPLACE	DuplAddress	BY	DuplAddress_R	

ASN.1 Type Constraint Declaration				
Constraint Name : StationState_Dup				
Structured Type : StationState_GENERAL				
Derivation Path : StationState_Q				
Comments : General parameter.				
Constraint Value				
REPLACE	Topology	BY	Topology_05,	
REPLACE	DuplAddress	BY	DuplAddress_S	

ASN.1 Type Constraint Declaration		
Constraint Name	:	ReasonCode_Q
Structured Type	:	ReasonCode_GENERAL
Derivation Path	:	
Comments	:	General parameter.
Constraint Value		
{	Parameter_Type	'0012'H,
	Parameter_Length	'0004'H,
	reason	? }

ASN.1 Type Constraint Declaration				
Constraint Name : ReasonCode_03				
Structured Type : ReasonCode_GENERAL				
Derivation Path : Reason_Code_Q				
Comments : General parameter.				
Constraint Value				
REPLACE	reason	BY	'00000003'H	--success--

ASN.1 Type Constraint Declaration		
Constraint Name	:	Authorization_Req
Structured Type	:	Authorization_GENERAL
Derivation Path	:	
Comments	:	General parameter. This parameter is optional.
Constraint Value		
{	Parameter_Type	‘0021’H,
	Parameter_Length	OMIT,
	Authorization	OMIT }

10.3.2 ASN.1 Type Constraint for MIB Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	: MIBGrp_Req	
Structured Type	: MIBGrp	
Derivation Path	:	
Comments	: MIB attribute groups.	
Constraint Value		
{	smtstationidgrp	SMTGrp1_Req,
	smtstationconfiggrp	SMTGrp2_Req,
	smtstatusgrp	SMTGrp3_Req,
	smtmiboperationgrp	SMTGrp4_Req,
	maccapabilitiesgrp	MACGrp1_Req,
	macconfiggrp	MACGrp2_Req,
	macaddressgrp	MACGrp3_Req,
	macoperationgrp	MACGrp4_Req,
	maccountersgrp	MACGrp5_Req,
	macframeerrorconditiongrp	MACGrp6_Req,
	macnotcopiedconditiongrp	MACGrp7_Req, --optional--
	macstatusgrp	MACGrp8_Req,
	pathconfiggrp	PATHGrp_Req,
	portconfiggrp	PORTGrp1_Req,
	portoperationgrp	PORTGrp2_Req,
	porterrorctrsgrp	PORTGrp3_Req,
	portlergrp	PORTGrp4_Req,
	portstatusgrp	PORTGrp5_Req }

ASN.1 Type Constraint Declaration		
Constraint Name	: MIBGrp_Resp	
Structured Type	: MIBGrp	
Derivation Path	:	
Comments	: MIB attribute groups.	
Constraint Value		
{	smtstationidgrp smtstationconfiggrp smtstatusgrp smtmiboperationgrp maccapabilitiesgrp macconfiggrp macaddressgrp macoperationgrp maccountersgrp macframeerrorconditiongrp macnotcopiedconditiongrp macstatusgrp pathconfiggrp portconfiggrp portoperationgrp porterrorctrsgrp portlergrp portstatusgrp	SMTGrp1_Resp, SMTGrp2_Resp, SMTGrp3_Resp SMTGrp4_Resp, MACGrp1_Resp, MACGrp2_Resp, MACGrp3_Resp, MACGrp4_Resp, MACGrp5_Resp, MACGrp6_Resp, MACGrp7_Resp, --optional-- MACGrp8_Resp, PATHGrp_Resp PORTGrp1_Resp, PORTGrp2_Resp, PORTGrp3_Resp, PORTGrp4_Resp, PORTGrp5_Resp }

10.3.2.1 ASN.1 Type Constraint for SMT Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTGrp1_Req
Structured Type	:	SMTGrp
Derivation Path	:	
Comments	:	fddiSMTStationIdGrp.
Constraint Value		
{	Parameter_Type	'100A'H,
	Parameter_Length	OMIT,
	Parameter_Value	OMIT }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTGrp2_Req		
Structured Type	: SMTGrp		
Derivation Path	: SMTGrp1_Req		
Comments	: fddiSMTStationConfigGrp.		
Constraint Value			
REPLACE	Parameter_Type	BY	‘1014’H

ASN.1 Type Constraint Declaration			
Constraint Name : SMTGrp3_Req			
Structured Type : SMTGrp			
Derivation Path : SMTGrp1_Req			
Comments : fddiSMTStatusGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘1028’H

ASN.1 Type Constraint Declaration			
Constraint Name : SMTGrp4_Req			
Structured Type : SMTGrp			
Derivation Path : SMTGrp1_Req			
Comments : fddiSMTMIBOperationGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘1032’H

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTGrp1_Resp	
Structured Type	:	SMTGrp	
Derivation Path	:		
Comments	:	fddiSMTStationIdGrp.	
Constraint Value			
{	Parameter_Type	'100A'H,	
	Parameter_Length	?,	
	Parameter_Value	SMTStationIdGrp_Resp }	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTGrp2_Resp
Structured Type	:	SMTGrp
Derivation Path	:	
Comments	:	fddiSMTStationConfigGrp.
Constraint Value		
{	Parameter_Type	‘1014’H,
	Parameter_Length	?,
	Parameter_Value	SMTStationConfigGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTGrp3_Resp
Structured Type	:	SMTGrp
Derivation Path	:	
Comments	:	fddiSMTStatusGrp.
Constraint Value		
{	Parameter_Type	‘1028’H,
	Parameter_Length	?,
	Parameter_Value	SMTStatusGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTGrp4_Resp
Structured Type	:	SMTGrp
Derivation Path	:	
Comments	:	fddiSMTMIBOperationGrp.
Constraint Value		
{	Parameter_Type	'1032'H,
	Parameter_Length	?,
	Parameter_Value	SMTMIBOperationGrp_Resp }

10.3.2.1.1 SMT Station ID Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: SMTStationIdGrp_Resp	
Structured Type	: SMTStationIdGrp	
Derivation Path	:	
Comments	: SMT attribute group.	
Constraint Value		
{	stationid	SMTStationId_Resp,
	opversionid	SMTOpVersionId_Resp,
	hiversionid	SMTHiVersionId_Resp,
	loversionid	SMTLoVersionId_Resp,
	manufacturerdata	SMTManufacturerData_Resp, -- optional--
	userdata	SMTUserData_Resp,
	mibversionid	SMTMIBVersionId_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationId_Req
Structured Type	:	SMTStationId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘100B’H,
	Parameter_Length	‘0008’H,
	ImplementerOctet	OMIT,
	Station_Address	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationId_Resp
Structured Type	:	SMTStationId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘100B’H,
	Parameter_Length	‘0008’H,
	ImplementerOctet	‘0000’H,
	Station_Address	IUT_ADDRESS }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTOpVersionId_Resp
Structured Type	:	SMTOpVersionId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘100D’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	OpVersionId	‘0002’H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHiVersionId_Resp
Structured Type	:	SMTHiVersionId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘100E’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	HiVersionId	‘0002’H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTLoVersionId_Resp
Structured Type	:	SMTLoVersionId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘100F’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	LoVersionId	‘0001’H }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTManufacturerData_Req
Structured Type	:	SMTManufacturerData
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘1010’H,
	Parameter_Length	‘0020’H,
	ManufacturerOUI	OMIT,
	ManufacturerData	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTManufacturerData_Resp
Structured Type	:	SMTManufacturerData
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'1010'H,
	Parameter_Length	'0020'H,
	ManufacturerOUI	*,
	ManufacturerData	* }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTManufacturerData_IUT	
Structured Type		: SMTManufacturerData	
Derivation Path		: SMTManufacturerData_Resp	
Comments		: SMT attribute. This attribute is optional.	
Constraint Value			
REPLACE	ManufacturerOUI	BY	MANUF_OUI,
REPLACE	ManufacturerData	BY	MANUF_DATA }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTUserData_Req
Structured Type	:	SMTUserData
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1011’H,
	Parameter_Length	‘0020’H,
	UserData	OMIT
	--an ASCII string of 32 octets in length--	
		}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTUserData_Resp
Structured Type	:	SMTUserData
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'1011'H,
	Parameter_Length	'0020'H,
	UserData	? }

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTUserData_IUT	
Structured Type	:	SMTUserData	
Derivation Path	:	SMTUserData_Resp	
Comments	:	SMT attribute.	
Constraint Value			
REPLACE	UserData	BY	USR_DATA(32)
--an ASCII string of 32 octets in length--			

ASN.1 Type Constraint Declaration		
Constraint Name : SMTMIBVersionId_Req		
Structured Type : SMTMIBVersionId		
Derivation Path :		
Comments : SMT attribute.		
Constraint Value		
{	Parameter_Type	‘1012’H,
	Parameter_Length	‘0004’H,
	PAD2	OMIT,
	MIBVersionId	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMIBVersionId_Resp
Structured Type	:	SMTMIBVersionId
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1012’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	MIBVersionId	? }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTMIBVersionId_IUT		
Structured Type	: SMTMIBVersionId		
Derivation Path	: SMTMIBVersionId_Resp		
Comments	: SMT attribute.		
Constraint Value			
REPLACE	MIBVersionId	BY	‘0001’H }

10.3.2.1.2 SMT Station Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: SMTStationConfigGrp_Resp	
Structured Type	: SMTStationConfigGrp	
Derivation Path	:	
Comments	: SMT attribute group.	
Constraint Value		
{	macct	SMTMac_Ct_Resp,
	nonmasterct	SMTNonMaster_Ct_Resp,
	masterct	SMTMaster_Ct_Resp,
	availablepaths	SMTAvailablePaths_Resp,
	configcapabilities	SMTConfigCapabilities_Resp,
	configpolicy	SMTConfigPolicy_Resp,
	connectionpolicy	SMTConnectionPolicy_Resp,
	tnotify	SMTT_Notify_Resp,
	statrtpolicy	SMTStatRptPolicy_Resp,
	tracemaxexpiration	SMTTrace_MaxExpiration_Resp,
	portindexes	SMTPORTIndexes_Resp,
	macindexes	SMTMACIndexes_Resp,
	bypasspresent	SMTBypassPresent_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMac_Ct_Req
Structured Type	:	SMTMac_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1015’H,
	Parameter_Length	‘0004’H,
	PAD3	OMIT,
	MAC_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMac_Ct_Resp
Structured Type	:	SMTMac_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1015’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	MAC_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTMac_Ct_IUT			
Structured Type : SMTMac_Ct			
Derivation Path : SMTMac_Ct_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	MAC_Ct	BY	IUT_MACs

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTNonMaster_Ct_Req
Structured Type	:	SMTNonMaster_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1016’H,
	Parameter_Length	‘0004’H,
	PAD3	OMIT,
	NonMaster_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTNonMaster_Ct_Resp
Structured Type	:	SMTNonMaster_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1016’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	NonMaster_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTNonMaster_Ct_IUT	
Structured Type		: SMTNonMaster_Ct	
Derivation Path		: SMTNonMaster_Ct_Resp	
Comments		: SMT attribute.	
Constraint Value			
REPLACE	NonMaster_Ct	BY	IUT_NonMasters

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMaster_Ct_Req
Structured Type	:	SMTMaster_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'1017'H,
	Parameter_Length	'0004'H,
	PAD3	OMIT,
	Master_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTMaster_Ct_Resp
Structured Type	:	SMTMaster_Ct
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1017’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	Master_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTMaster_Ct_IUT			
Structured Type : SMTMaster_Ct			
Derivation Path : SMTMaster_Ct_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	Master_Ct	BY	IUT_Masters

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTAvailablePaths_Req
Structured Type	:	SMTAvailablePaths
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1018’H,
	Parameter_Length	‘0004’H,
	PAD3	OMIT,
	AvailablePaths	OMIT }

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ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTAvailablePaths_Resp
Structured Type	:	SMTAvailablePaths
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1018’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	AvailablePaths	AvailablePaths_Q }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTAvailablePaths_IUT		
Structured Type	: SMTAvailablePaths		
Derivation Path	: SMTAvailablePaths_Resp		
Comments	: SMT attribute.		
Constraint Value			
REPLACE	AvailablePaths	BY	AvailablePaths_IUT

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConfigCapabilities_Req
Structured Type	:	SMTConfigCapabilities
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'1019'H,
	Parameter_Length	'0004'H,
	PAD2	OMIT,
	ConfigCapabilities	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConfigCapabilities_Resp
Structured Type	:	SMTConfigCapabilities
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'1019'H,
	Parameter_Length	'0004'H,
	PAD2	PAD_2,
	ConfigCapabilities	Capabilities_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTConfigCapabilities_IUT			
Structured Type : SMTConfigCapabilities			
Derivation Path : SMTConfigCapabilities_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	ConfigCapabilities	BY	Capabilities_IUT

ASN.1 Type Constraint Declaration				
Constraint Name : SMTConfigCapabilities_IUT1				
Structured Type : SMTConfigCapabilities				
Derivation Path : SMTConfigcapabilities_Resp				
Comments : SMT attribute.				
Constraint Value				
REPLACE	ConfigCapabilities	BY	Capabilities_H	

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTConfigCapabilities_IUT2		
Structured Type		: SMTConfigCapabilities		
Derivation Path		: SMTConfigcapabilities_Resp		
Comments		: SMT attribute.		
Constraint Value				
REPLACE	ConfigCapabilities	BY	Capabilities_W	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConfigPolicy_Resp
Structured Type	:	SMTConfigPolicy
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101A’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	ConfigPolicy	ConfigPolicy_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConnectionPolicy_Req
Structured Type	:	SMTConnectionPolicy
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101B’H,
	Parameter_Length	‘0004’H,
	PAD2	OMIT,
	ConnectionPolicy	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTConnectionPolicy_Resp
Structured Type	:	SMTConnectionPolicy
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101B’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	ConnectionPolicy	Connection_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: SMTConnectionPolicy_IUT	
Structured Type		: SMTConnectionPolicy	
Derivation Path		: SMTConnectionPolicy_Resp	
Comments		: SMT attribute.	
Constraint Value			
REPLACE	ConnectionPolicy	BY	Connection_IUT

ASN.1 Type Constraint Declaration			
Constraint Name : SMTConnectionPolicy_Test			
Structured Type : SMTConnectionPolicy			
Derivation Path : SMTConnectionPolicy_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	ConnectionPolicy	BY	Connection_Test

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTT_Notify_Req
Structured Type	:	SMTT_Notify
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101D’H,
	Parameter_Length	‘0004’H,
	PAD2	OMIT,
	T_NotifyType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTT_Notify_Resp
Structured Type	:	SMTT_Notify
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101D’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	T_NotifyType	T_Notify }

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTT_Notify_Test
Structured Type	: SMTT_Notify
Derivation Path	: SMTT_Notify_Resp
Comments	: SMT attribute.
Constraint Value	
REPLACE	T_NotifyType BY '0014'H
--Assume 20 seconds is the desired T_Notify requested by Tester's PMF set request frame. Note: Any desired T_Notify within a range of 2 seconds to 30 seconds is acceptable.--	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatRptPolicy_Req
Structured Type	:	SMTStatRptPolicy
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101E’H,
	Parameter_Length	‘0004’H,
	PAD3	OMIT,
	StatRptPolicy	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStatRptPolicy_Resp
Structured Type	:	SMTStatRptPolicy
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘101E’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	StatRptPolicy	TRUE }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTStatRptPolicy_Test		
Structured Type	: SMTStatRptPolicy		
Derivation Path	: SMTStatRptPolicy_Resp		
Comments	: SMT attribute.		
Constraint Value			
REPLACE	StatRptPolicy	BY	FALSE

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTTrace_MaxExpiration_Req
Structured Type	:	SMTTrace_MaxExpiration
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'101F'H,
	Parameter_Length	"0004"H,
	Trace_MaxExpiration	OMIT }

ASN.1 Type Constraint Declaration	
Constraint Name	: SMTTrace_MaxExpiration_Resp
Structured Type	: SMTTrace_MaxExpiration
Derivation Path	:
Comments	: SMT attribute.
Constraint Value	
{	Parameter_Type '101F'H, Parameter_Length '0004'H, Trace_MaxExpiration ? }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTTrace_MaxExpiration_IUT		
Structured Type	: SMTTrace_MaxExpiration		
Derivation Path	: SMTTrace_MaxExpiration_Resp		
Comments	: SMT attribute.		
Constraint Value			
REPLACE	Trace_MaxExpiration	BY	TIME(Trace_Max)

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTTrace_MaxExpiration_Test	
Structured Type	:	SMTTrace_MaxExpiration	
Derivation Path	:	SMTTrace_MaxExpiration_Resp	
Comments	:	SMT attribute.	
Constraint Value			
REPLACE	Trace_MaxExpiration	BY	TIME(7500)
--Assume 7.5 seconds is the desired Trace_Max requested by tester's PMF set request frame.--			
--Note: Any desired Trace_max >=6.001773 seconds is acceptable.--			

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPORTIndexes_Resp
Structured Type	:	SMTPORTIndexes
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1020’H,
	Parameter_Length	‘0004’H,
	PORTIndexes	SMTPORTIndx }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTMACIndexes_Resp			
Structured Type : SMTMACIndexes			
Derivation Path :			
Comments : SMT attribute.			
Constraint Value			
{	Parameter_Type	'1021'H,	
	Parameter_Length	'0004'H,	
	MACIndexes	SMTMACIndx	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTBypassPresent_Resp
Structured Type	:	SMTBypassPresent
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1022’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	BypassPresent	? }

10.3.2.1.3 SMT Status Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: SMTStatusGrp_Resp	
Structured Type	: SMTStatusGrp	
Derivation Path	:	
Comments	: SMT attributegroup.	
Constraint Value		
{	ecmstate	SMTECMState_Resp,
	cfstate	SMTCF_State_Resp,
	holdstate	SMTHoldState_Resp, --optional--
	remotedisconnectflag	SMTRemoteDisconnectFlag_Resp,
	stationstatus	SMTStationStatus_Resp,
	peerwrapflag	SMTPeerWrapFlag_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTECMState_Resp
Structured Type	:	SMTECMState
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1029’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	ECMStateType	ECMState_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTCF_State_Req
Structured Type	:	SMTCF_State
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘102A’H,
	Parameter_Length	‘0004’H,
	PAD2	OMIT,
	CF_StateType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTCF_State_Resp
Structured Type	:	SMTCF_State
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘102A’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	CF_StateType	CF_State_Q }

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTCF_State_Thru		
Structured Type		: SMTCF_State		
Derivation Path		: SMTCF_State_Resp		
Comments		: SMT attribute.		
Constraint Value				
REPLACE	CF_StateType	BY	CF_State_Thru	

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTCF_State_Cwrpa		
Structured Type		: SMTCF_State		
Derivation Path		: SMTCF_State_Resp		
Comments		: SMT attribute.		
Constraint Value				
REPLACE	CF_StateType	BY	CF_State_Cwrpa	

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTCF_State_Cwrpb		
Structured Type		: SMTCF_State		
Derivation Path		: SMTCF_State_Resp		
Comments		: SMT attribute.		
Constraint Value				
REPLACE	CF_StateType	BY	CF_State_Cwrpb	

ASN.1 Type Constraint Declaration			
Constraint Name : SMTCF_State_Wrps			
Structured Type : SMTCF_State			
Derivation Path : SMTCF_State_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	CF_StateType	BY	CF_State_Wrps

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTCF_State_Wrpab		
Structured Type		: SMTCF_State		
Derivation Path		: SMTCF_State_Resp		
Comments		: SMT attribute.		
Constraint Value				
REPLACE	CF_StateType	BY	CF_State_Wrpab	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHoldState_Req
Structured Type	:	SMTHoldState
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘102B’H,
	Parameter_Length	‘0004’H,
	PAD2	OMIT,
	HoldStateType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHoldState_Resp
Structured Type	:	SMTHoldState
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘102B’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	HoldStateType	HoldState_NH
	--not_holding; default and initial value--}	

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTHoldState_HP		
Structured Type	: SMTHoldState		
Derivation Path	: SMTHoldState_Resp		
Comments	: SMT attribute. This attribute is optional.		
Constraint Value			
REPLACE	HoldStateType	BY	HoldState_HP
--holding_prm--			

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTHoldState_HS		
Structured Type	: SMTHoldState		
Derivation Path	: SMTHoldState_Resp		
Comments	: SMT attribute. This attribute is optional.		
Constraint Value			
REPLACE	HoldStateType	BY	HoldState_HS
--holding_sec--			

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTRemoteDisconnectFlag_Resp
Structured Type	:	SMTRemoteDisconnectFlag
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'102C'H,
	Parameter_Length	'0004'H,
	PAD3	PAD_3,
	RemoteDisconnectFlag	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationStatus_Req
Structured Type	:	SMTStationStatus
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	'102D'H,
	Parameter_Length	'0004'H,
	PAD2	OMIT,
	StationStatus	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationStatus_Resp
Structured Type	:	SMTStationStatus
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘102D’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	StationStatus	Status_Q }

ASN.1 Type Constraint Declaration				
Constraint Name	: SMTStationStatus_T			
Structured Type	: SMTStationStatus			
Derivation Path	: SMTStationStatus_Resp			
Comments	: SMT attribute.			
Constraint Value				
REPLACE	stationstatus	BY	Status_T	--thru--

ASN.1 Type Constraint Declaration				
Constraint Name	:	SMTStationStatus_S		
Structured Type	:	SMTStationStatus		
Derivation Path	:	SMTStationStatus_Resp		
Comments	:	SMT attribute.		
Constraint Value				
REPLACE	stationstatus	BY	Status_S	--separated--

ASN.1 Type Constraint Declaration				
Constraint Name	: SMTStationStatus_C			
Structured Type	: SMTStationStatus			
Derivation Path	: SMTStationStatus_Resp			
Comments	: SMT attribute.			
Constraint Value				
REPLACE	stationstatus	BY	Status_C	--concatenated--

ASN.1 Type Constraint Declaration		
Constraint Name : SMTPeerWrapFlag_Req		
Structured Type : SMTPeerWrapFlag		
Derivation Path :		
Comments : SMT attribute.		
Constraint Value		
{	Parameter_Type	‘102E’H,
	Parameter_Length	‘0004’H,
	PAD3	OMIT,
	PeerWrapFlag	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPeerWrapFlag_Resp
Structured Type	:	SMTPeerWrapFlag
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘102E’H,
	Parameter_Length	‘0004’H,
	PAD3	PAD_3,
	PeerWrapFlag	? }

ASN.1 Type Constraint Declaration				
Constraint Name : SMTPeerWrapFlag_S				
Structured Type : SMTPeerWrapFlag				
Derivation Path : SMTPeerWrapFalg_Resp				
Comments : SMT attribute.				
Constraint Value				
REPLACE	PeerWrapFlag	BY	TRUE	}

ASN.1 Type Constraint Declaration			
Constraint Name : SMTPeerWrapFlag_C			
Structured Type : SMTPeerWrapFlag			
Derivation Path : SMTPeerWrapFalg_Resp			
Comments : SMT attribute.			
Constraint Value			
REPLACE	PeerWrapFlag	BY	FALSE }

10.3.2.1.4 SMT MIB Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTMIBOperationGrp_Resp	
Structured Type	:	SMTMIBOperationGrp	
Derivation Path	:		
Comments	:	SMT attribute group.	
Constraint Value			
{	timestamp	SMTTimeStamp_Resp,	
	transitiontimestamp	SMTTransitionTimeStamp_Resp,	
	setcount	SMTSetCount_Resp,	-- optional--
	lastsetstationid	SMTLastSetStationId_Resp	-- optional-- }

ASN.1 Type Constraint Declaration			
Constraint Name	:	SMTTimeStamp_Resp	
Structured Type	:	SMTTimeStamp	
Derivation Path	:		
Comments	:	SMT attribute.	
Constraint Value			
{	Parameter_Type		'1033'H,
	Parameter_Length		'0008'H,
	TimeStamp	?	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTTransitionTimeStamp_Resp
Structured Type	:	SMTTransitionTimeStamp
Derivation Path	:	
Comments	:	SMT attribute.
Constraint Value		
{	Parameter_Type	‘1034’H,
	Parameter_Length	‘0008’H,
	TransitionTimeStamp ?	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTSetCount_Req
Structured Type	:	SMTSetCount
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘1035’H,
	Parameter_Length	OMIT,
	Count	OMIT,
	SetTimeStamp	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTSetCount_Resp
Structured Type	:	SMTSetCount
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘1035’H,
	Parameter_Length	?,
	Count	*,
	SetTimeStamp	* }

ASN.1 Type Constraint Declaration			
Constraint Name	: SMTSetCount_New		
Structured Type	: SMTSetCount		
Derivation Path	: SMTSetCount_Resp		
Comments	: SMT attribute. This attribute is carried in PMF set response frame if the PMF Set protocol is implemented.		
Constraint Value			
REPLACE	Count	BY	New_SetCount,
REPLACE	SetTimeStamp	BY	?

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTLastSetStationId_Resp
Structured Type	:	SMTLastSetStationId
Derivation Path	:	
Comments	:	SMT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'1036'H,
	Parameter_Length	?,
	ImplementerOctet	*,
	LastSetStation_Address*	}

ASN.1 Type Constraint Declaration			
Constraint Name : SMTLastSetStationId_IUT			
Structured Type : SMTLastSetStationId			
Derivation Path : SMTLastSetStationId_Resp			
Comments : SMT attribute. This attribute is carried in PMF set response frame if the PMF Set protocol is implemented.			
Constraint Value			
REPLACE	ImplementerOctet	BY	?,
REPLACE	LastSetStation_Address	BY	IUT_ADDRESS

10.3.2.2 ASN.1 Type Constraint for MAC Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp1_Req
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACCapabilitiesGrp.
Constraint Value		
{	Parameter_Type	‘200A’H,
	Parameter_Length	OMIT,
	Resource_Index	OMIT,
	Parameter_Value	OMIT }

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp2_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACConfigGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘2014’H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp3_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACAddressGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘2028’H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp4_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACOperationGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘2032’H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp5_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACCountersGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘2046’H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp6_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACFrameErrorConditionGrp			
Constraint Value			
REPLACE	Parameter_Type	BY	'205A'H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp7_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACNotCopiedConditionGrp. This attribute group is optional.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘2064’H

ASN.1 Type Constraint Declaration			
Constraint Name : MACGrp8_Req			
Structured Type : MACGrp			
Derivation Path : MACGrp1_Req			
Comments : fddiMACStatusGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	‘206E’H

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp1_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACCapabilitiesGrp.
Constraint Value		
{	Parameter_Type	‘200A’H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACCapabilitiesGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp2_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACConfigGrp.
Constraint Value		
{	Parameter_Type	‘2014’H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACConfigGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp3_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACAddressGrp.
Constraint Value		
{	Parameter_Type	‘2028’H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACAddressGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp4_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACOperationGrp.
Constraint Value		
{	Parameter_Type	‘2032’H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACOperationGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp5_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACCountersGrp.
Constraint Value		
{	Parameter_Type	‘2046’H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACCountersGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp6_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACFrameErrorConditionGrp.
Constraint Value		
{	Parameter_Type	'205A'H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACFrameErrorConditionGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp7_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACNotCopiedConditionGrp. This attribute group is optional.
Constraint Value		
{	Parameter_Type	'2064'H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACNotCopiedConditionGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACGrp8_Resp
Structured Type	:	MACGrp
Derivation Path	:	
Comments	:	fddiMACStatusGrp.
Constraint Value		
{	Parameter_Type	'206E'H,
	Parameter_Length	?
	Resource_Index	?
	Parameter_Value	MACStatusGrp_Resp }

10.3.2.2.1 MAC Capabilities Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: MACCapabilitiesGrp_Resp	
Structured Type	: MACCapabilitiesGrp	
Derivation Path	:	
Comments	: MAC attribute group.	
Constraint Value		
{	framestatusfunctions	MACFrameStatusFunctions_Resp,
	bridgefunctions	MACBridgeFunctions_Resp, --optional--
	tmaxcapability	MACT_MaxCapability_Resp,
	tvxcapability	MACTVXCapability_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameStatusFunctions_Resp
Structured Type	:	MACFrameStatusFunctions
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘200B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	FrameStatusFunctions	FS_Functions_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACBridgeFunction_Req
Structured Type	:	MACBridgeFunctions
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'200C'H,
	Parameter_Length	?,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	BridgeFunctions	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACBridgeFunctions_Resp
Structured Type	:	MACBridgeFunctions
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘200C’H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	PAD_2,
	BridgeFunctions	BridgeType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : MACBridgeFunction_IUT			
Structured Type : MACBridgeFunctions			
Derivation Path : MACBridgeFunction_Resp			
Comments : MAC attribute. This attribute is optional.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	BridgeFunctions	BY	BridgeType_IUT

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_MaxCapability_Req
Structured Type	:	MACT_MaxCapability
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'200D'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	T_MaxCapability	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_MaxCapability_Resp
Structured Type	:	MACT_MaxCapability
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'200D'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	T_MaxCapability	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACT_MaxCapability_IUT	
Structured Type		: MACT_MaxCapability	
Derivation Path		: MACT_MaxCapability_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	T_MaxCapability	BY	INT_TO_HEX(TTC(TIME(IUT_T_Max)), 8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTVXCapability_Req
Structured Type	:	MACTVXCapability
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘200E’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	TVXCapability	OMIT }

ASN.1 Type Constraint Declaration			
Constraint Name : MACTVXCapability_Resp			
Structured Type : MACTVXCapability			
Derivation Path :			
Comments : MAC attribute.			
Constraint Value			
{	Parameter_Type	'200E'H,	
	Parameter_Length	'0008'H,	
	Resource_Index	?,	
	TVXCapability	? }	

ASN.1 Type Constraint Declaration			
Constraint Name : MACTVXCapability_IUT			
Structured Type : MACTVXCapability			
Derivation Path : MACTVXCapability_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	TVXCapability	BY	INT_TO_HEX(TTC(TIME(IUT_TVX_Value)), 8)

10.3.2.2.2 MAC Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACConfigGrp_Resp
Structured Type	:	MACConfigGroup
Derivation Path	:	
Comments	:	MAC attribute group.
Constraint Value		
{	availablepaths	MACAvailablePaths_Resp,
	currentpath	MACCurrentPath_Resp,
	upstreamnbr	MACUpstreamNbr_Resp,
	downstreamnbr	MACDownstreamNbr_Resp,
	oldupstreamnbr	MACOldUpstreamNbr_Resp,
	olddownstreamnbr	MACOldDownstreamNbr_Resp,
	dupaddresstest	MACDupAddressTest_Resp,
	requestedpaths	MACRequestedPaths_Resp,
	downstreamporttype	MACDownstreamPORTType_Resp,
	macindex	MACIndex_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACAvailablePaths_Req
Structured Type	:	MACAvailablePaths
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2016’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	PAD3	OMIT,
	AvailablePaths	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACAvailablePaths_Resp	
Structured Type	: MACAvailablePaths	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	‘2016’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	AvailablePaths	AvailablePaths_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : MACAvailablePaths_IUT Structured Type : MACAvailablePaths Derivation Path : Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	AvailablePaths	BY	MACAvailablePaths

ASN.1 Type Constraint Declaration			
Constraint Name : MACCurrentPath_Req Structured Type : MACCurrentPath Derivation Path : Comments : MAC attribute.			
Constraint Value			
{	Parameter_Type	'2017'H,	
	Parameter_Length	'0008'H,	
	Resource_Index	M_Indx,	
	PAD2	OMIT,	
	CurrentPath	OMIT }	

ASN.1 Type Constraint Declaration			
Constraint Name : MACCurrentPath_Resp Structured Type : MACCurrentPath Derivation Path : Comments : MAC attribute.			
Constraint Value			
{	Parameter_Type	'2017'H,	
	Parameter_Length	'0008'H,	
	Resource_Index	?,	
	PAD2	PAD_2,	
	CurrentPath	CurrentPathType_Q }	

ASN.1 Type Constraint Declaration			
Constraint Name : MACCurrentPath_IUT Structured Type : MACCurrentPath Derivation Path : MACCurrentPath_Resp Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	CurrentPath	BY	MACCurrPath

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUpstreamNbr_Req
Structured Type	:	MACUpstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2018’H,
	Parameter_Length	‘000C’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	UpstreamNbr_Address	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUpstreamNbr_Resp
Structured Type	:	MACUpstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2018’H,
	Parameter_Length	‘000C’H,
	Resource_Index	?,
	PAD2	PAD_2,
	UpstreamNbr_Address	? }

ASN.1 Type Constraint Declaration				
Constraint Name		: MACUpstreamNbr_TSTR		
Structured Type		: MACUpstreamNbr		
Derivation Path		: MACUpstreamNbr_Resp		
Comments		: MAC attribute.		
Constraint Value				
REPLACE	Resource_Index	BY	M_Indx,	
REPLACE	UpstreamNbr_Address	BY	TESTER_ADDRESS	

ASN.1 Type Constraint Declaration				
Constraint Name		: MACUpstreamNbr_UNK		
Structured Type		: MACUpstreamNbr		
Derivation Path		: MACUpstreamNbr_TSTR		
Comments		: MAC attribute.		
Constraint Value				
REPLACE	UpstreamNbr_Address	BY	SMT_Unknown_Address	

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamNbr_Req
Structured Type	:	MACDownstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2019’H,
	Parameter_Length	‘000C’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	DownstreamNbr_Address	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamNbr_Resp
Structured Type	:	MACDownstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2019’H,
	Parameter_Length	‘000C’H,
	Resource_Index	?,
	PAD2	PAD_2,
	DownstreamNbr_Address	? }

ASN.1 Type Constraint Declaration				
Constraint Name : MACDownstreamNbr_TSTR				
Structured Type : MACDownstreamNbr				
Derivation Path : MACDownstreamNbr_Resp				
Comments : MAC attribute.				
Constraint Value				
REPLACE	Resource_Index	BY	M_Indx	
REPLACE	DownstreamNbr_Address	BY	TESTER_ADDRESS	

ASN.1 Type Constraint Declaration				
Constraint Name		: MACDownstreamNbr_UNK		
Structured Type		: MACDownstreamNbr		
Derivation Path		: MACDownstreamNbr_TSTR		
Comments		: MAC attribute.		
Constraint Value				
REPLACE	DownstreamNbr_Address	BY	SMT_Unknown_Address	

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldUpstreamNbr_Req
Structured Type	:	MACOldUpstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘201A’H,
	Parameter_Length	‘000C’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	OldUpstreamNbr_Address	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldUpstreamNbr_Resp
Structured Type	:	MACOldUpstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘201A’H,
	Parameter_Length	‘000C’H,
	Resource_Index	?,
	PAD2	PAD_2,
	OldUpstreamNbr_Address	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACOldUpstreamNbr_IUT			
Structured Type : MACOldUpstreamNbr			
Derivation Path : MACOldUpstreamNbr_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	OldUpstreamNbr_Address	BY	TESTER_ADDRESS

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldDownstreamNbr_Req
Structured Type	:	MACOldDownstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘201B’H,
	Parameter_Length	‘000C’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	OldDownstreamNbr_Address	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACOldDownstreamNbr_Resp
Structured Type	:	MACOldDownstreamNbr
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘201B’H,
	Parameter_Length	‘000C’H,
	Resource_Index	?,
	PAD2	PAD_2,
	OldDownstreamNbr_Address	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACOldDownstreamNbr_IUT			
Structured Type : MACOldDownstreamNbr			
Derivation Path : MACOldDownstreamNbr_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	OldDownstreamNbr_Address	BY	TESTER_ADDRESS

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDupAddressTest_Req
Structured Type	:	MACDupAddressTest
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'201D'H,
	Parameter_Length	'0004'H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	DupAddressTestType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACDupAddressTest_Resp	
Structured Type	: MACDupAddressTest	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	‘201D’H,
	Parameter_Length	‘0004’H,
	Resource_Index	?,
	PAD2	PAD_2,
	DupAddressTestType	DupAddressTest_Q }

ASN.1 Type Constraint Declaration				
Constraint Name		: MACDupAddressTest_IUT1		
Structured Type		: MACDupAddressTest		
Derivation Path		: MACDupAddressTest_Resp		
Comments		: MAC attribute.		
Constraint Value				
REPLACE	Resource_Index	BY	M_Indx,	
REPLACE	DupAddressTestType	BY	DupAdressTest_P	

ASN.1 Type Constraint Declaration			
Constraint Name : MACDupAddressTest_IUT2			
Structured Type : MACDupAddressTest			
Derivation Path : MACDupAddressTest_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	DupAddressTestType	BY	DupAdressTest_F

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRequestedPaths_Req
Structured Type	:	MACRequestedPaths
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2020’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	PAD3	OMIT,
	RequestedPaths	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRequestedPaths_Resp
Structured Type	:	MACRequestedPaths
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2020'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	RequestedPaths	PermittedPaths_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACRequestedPaths_IUT1	
Structured Type		: MACRequestedPaths	
Derivation Path		: MACRequestedPaths_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	RequestedPaths	BY	PermittedPaths_MAC1

ASN.1 Type Constraint Declaration			
Constraint Name		: MACRequestedPaths_IUT2	
Structured Type		: MACRequestedPaths	
Derivation Path		: MACRequestedPaths_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	RequestedPaths	BY	PermittedPaths_MAC2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamPORTType_Req
Structured Type	:	MACDownstreamPORTType
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2021'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	DownstreamPORTType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDownstreamPORTType_Resp
Structured Type	:	MACDownstreamPORTType
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2021'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	DownstreamPORTType	PortType_Q
		}

ASN.1 Type Constraint Declaration			
Constraint Name : MACDownstreamPORTType_IUT			
Structured Type : MACDownstreamPORTType			
Derivation Path : MACDownstreamPORTType_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	DownstreamPORTType	BY	PortType_B

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACIndex_Req0
Structured Type	:	MACIndex
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2022’H,
	Parameter_Length	‘0008’H,
	Resource_Index	‘00000000’H,
	PAD2	OMIT,
	MACIndx	OMIT }

ASN.1 Type Constraint Declaration			
Constraint Name : MACIndex_Req1			
Structured Type : MACIndex			
Derivation Path : MACIndex_Req0			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	'00000001'H

ASN.1 Type Constraint Declaration		
Constraint Name	: MACIndex_Resp	
Structured Type	: MACIndex	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	‘2022’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	MACIndx	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACIndex_0	
Structured Type		: MACIndex	
Derivation Path		: MACIndex_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	‘00000000’H
REPLACE	MACIndx	BY	MAC_Indx

ASN.1 Type Constraint Declaration			
Constraint Name		: MACIndex_1	
Structured Type		: MACIndex	
Derivation Path		: MACIndex_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	‘00000001’H
REPLACE	MACIndx	BY	M_Indx1

10.3.2.2.3 MAC Address Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	: MACAddressGrp_Resp		
Structured Type	: MACAddressGrp		
Derivation Path	:		
Comments	: MAC attribute group.		
Constraint Value			
{	smtaddress	MACSMTAddress_Resp,	
	longgrpaddress	MACLongGrpAddress_Resp,	--optional--
	shortgrpaddress	MACShortGrpAddress_Resp	--optional-- }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACSMTAddress_Req
Structured Type	:	MACSMTAddress
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2029’H,
	Parameter_Length	‘000C’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	SMTAddresss	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACSMTAddress_Resp
Structured Type	:	MACSMTAddress
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2029’H,
	Parameter_Length	‘000C’H,
	Resource_Index	?,
	PAD2	PAD_2,
	SMTAddresss	IUT_ADDRESS }

ASN.1 Type Constraint Declaration			
Constraint Name : MACSMTAddress_IUT			
Structured Type : MACSMTAddress			
Derivation Path : MACSMTAddress_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLongGrpAddress_Req
Structured Type	:	MACLongGrpAddress
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'202C'H,
	Parameter_Length	OMIT,
	Resource_Index	M_Indnx,
	LongGrpAddress	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLongGrpAddress_Resp
Structured Type	:	MACLongGrpAddress
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'202C'H,
	Parameter_Length	?,
	Resource_Index	?,
	LongGrpAddress	LongAddressSet_S }

ASN.1 Type Constraint Declaration			
Constraint Name : MACLongGrpAddress_IUT			
Structured Type : MACLongGrpAddress			
Derivation Path : MACLongGrpAddress_Resp			
Comments : MAC attribute. This attribute is optional.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	LongGrpAddress	BY	LongAddressSet_IUT

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACShortGrpAddress_Req
Structured Type	:	MACShortGrpAddress
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘202D’H,
	Parameter_Length	OMIT,
	Resource_Index	M_Indx,
	ShortGrpAddress	OMIT }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACShortGrpAddress_Resp
Structured Type	: MACShortGrpAddress
Derivation Path	:
Comments	: MAC attribute. This attribute is optional.
Constraint Value	
{	Parameter_Type "202D'H, Parameter_Length ?, Resource_Index ?, ShortGrpAddress ShortAddressSet_S }

ASN.1 Type Constraint Declaration			
Constraint Name : MACShortGrpAddress_IUT			
Structured Type : MACShortGrpAddress			
Derivation Path : MACShortGrpAddress_Resp			
Comments : MAC attribute. This attribute is optional.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	ShortGrpAddress	BY	ShortAddressSet_IUT

10.3.2.2.4 MAC Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: MACOperationGrp_Resp	
Structured Type	: MACOperationGrp	
Derivation Path	:	
Comments	: MAC attribute group.	
Constraint Value		
{	treq tneg tmax tvxvalue tpri0 tpri1 tpri2 tpri3 tpri4 tpri5 tpri6 MACT_Req_Resp, MACT_Neg_Resp, MACT_Max_Resp, MACTvxValue_Resp, MACT_Pri0_Resp, MACT_Pri1_Resp, MACT_Pri2_Resp, MACT_Pri3_Resp, MACT_Pri4_Resp, MACT_Pri5_Resp, MACT_Pri6_Resp --optional-- --optional-- --optional-- --optional-- --optional-- --optional-- --optional-- --optional-- --optional-- --optional-- --optional--	}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Req_Req
Structured Type	:	MACT_Req
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2033’H
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_ReqType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACT_Req_Resp	
Structured Type	: MACT_Req	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	'2033'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	T_ReqType	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACT_Req_IUT			
Structured Type : MACT_Req			
Derivation Path : MACT_Req_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	T_ReqType	BY	INT_TO_HEX(HIGHER_T_BID, 8)
--Refer to “INIT_BID” test step in the RMT ATS for HIGHER_T_BID value--			

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Neg_Req
Structured Type	:	MACT_Neg
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2034’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_NegType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Neg_Resp
Structured Type	:	MACT_Neg
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2034’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	T_NegType	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACT_Neg_IUT	
Structured Type		: MACT_Neg	
Derivation Path		: MACT_Neg_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	T_NegType	BY	INT_TO_HEX(HIGHER_T_BID,8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Max_Req
Structured Type	:	MACT_Max
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2035’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Index,
	T_MaxType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Max_Resp
Structured Type	:	MACT_Max
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2035’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	T_MaxType	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACT_Max_IUT			
Structured Type : MACT_Max			
Derivation Path : MACT_Max_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	T_NegType	BY	INT_TO_HEX(TTC(TIME(TSTR_T_Max)),8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxValue_Req
Structured Type	:	MACTvxValue
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2036’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	TvxValueType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxValue_Resp
Structured Type	:	MACTvxValue
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2036’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	TvxValueType	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACTvxValue_IUT	
Structured Type		: MACTvxValue	
Derivation Path		: MACTvxValue_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	T_NegType	BY	INT_TO_HEX(TTC(TIME(TSTR_TvxValue)),8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri0_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2038'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri0_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2038'H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri0_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘2038’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri0)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri1_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘2039’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri1_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2039'H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri1_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘2039’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri1)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri2_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203A’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri2_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'203A'H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri2_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'203A'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri2)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri3_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri3_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203B’H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri3_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri3)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri4_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203C’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACT_Pri4_Resp	
Structured Type	: MACT_Pri	
Derivation Path	:	
Comments	: +MAC attribute. This attribute is optional.	
Constraint Value		
{	Parameter_Type	‘203C’H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri4_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203C’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri4)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri5_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri5_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'203D'H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACT_Pri5_IUT	
Structured Type	: MACT_Pri	
Derivation Path	:	
Comments	: MAC attribute. This attribute is optional.	
Constraint Value		
{	Parameter_Type	‘203D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Idx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri5)), 8) }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri6_Req
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘203E’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	T_PriType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri6_Resp
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'203E'H,
	Parameter_Length	?,
	Resource_Index	?,
	T_PriType	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACT_Pri6_IUT
Structured Type	:	MACT_Pri
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'203E'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	T_PriType	INT_TO_HEX(TTC(TIME(T_Pri6)), 8) }

10.3.2.2.5 MAC Counters Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name : MACCountersGrp_Resp			
Structured Type : MACCountersGrp			
Derivation Path :			
Comments : MAC attribute group.			
Constraint Value			
{	framect	MACFrame_Ct_Resp,	
	copiedct	MACCopied_Ct_Resp,	
	transmitct	MACTransmit_Ct_Resp,	
	tokenct	MACToken_Ct_Resp,	--optional--
	errorct	MACError_Ct_Resp,	
	lostct	MACLost_Ct_Resp,	
	tvxexpiredct	MACTvxExpired_Ct_Resp,	--optional--
	notcopiedct	MACNotCopied_Ct_Resp,	--optional--
	latect	MACLate_Ct_Resp,	--optional--
	ringopct	MACRingOp_Ct_Resp	--optional-- }

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ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrame_Ct_Req
Structured Type	:	MACFrame_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2047’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Frame_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrame_Ct_Resp
Structured Type	:	MACFrame_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2047'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	Frame_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACFrame_Ct_IUT1			
Structured Type : MACFrame_Ct			
Derivation Path : MACFrame_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Frame_Ct	BY	FRM_CT1

ASN.1 Type Constraint Declaration			
Constraint Name : MACFrame_Ct_IUT2			
Structured Type : MACFrame_Ct			
Derivation Path : MACFrame_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Frame_Ct	BY	FRM_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACCopied_Ct_Req
Structured Type	:	MACCopied_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2048’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Copied_Ct	OMIT }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACCopied_Ct_Resp
Structured Type	: MACCopied_Ct
Derivation Path	:
Comments	: MAC attribute.
Constraint Value	
{	Parameter_Type '2048'H, Parameter_Length '0008'H, Resource_Index ?, Copied_Ct ? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACCopied_Ct_IUT1			
Structured Type : MACCopied_Ct			
Derivation Path : MACCopied_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Copied_Ct	BY	CP_CT1

ASN.1 Type Constraint Declaration			
Constraint Name		: MACCopied_Ct_IUT2	
Structured Type		: MACCopied_Ct	
Derivation Path		: MACCopied_Ct_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Copied_Ct	BY	CP_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTransmit_Ct_Req
Structured Type	:	MACTransmit_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2049'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	Transmit_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTransmit_Ct_Resp
Structured Type	:	MACTransmit_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2049'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	Transmit_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACTransmit_Ct_IUT1			
Structured Type : MACTransmit_Ct			
Derivation Path : MACTransmit_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Transmit_Ct	BY	XMIT_CT1

ASN.1 Type Constraint Declaration			
Constraint Name : MACTransmit_Ct_IUT2			
Structured Type : MACTransmit_Ct			
Derivation Path : MACTransmit_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Transmit_Ct	BY	XMIT_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACToken_Ct_Req
Structured Type	:	MACToken_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘204A’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Token_Ct	OMIT }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACToken_Ct_Resp
Structured Type	: MACToken_Ct
Derivation Path	:
Comments	: MAC attribute. This attribute is optional.
Constraint Value	
{	Parameter_Type '204A'H,
	Parameter_Length ?,
	Resource_Index ?,
	Token_Ct * }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACToken_Ct_IUT1
Structured Type	:	MACToken_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'204A'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	Token_Ct	TK_CT1 }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACToken_Ct_IUT2	
Structured Type		: MACToken_Ct	
Derivation Path		: MACToken_Ct_IUT1	
Comments		: MAC attribute. This attribute is optional.	
Constraint Value			
REPLACE	Token_Ct	BY	TK_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACError_Ct_Req
Structured Type	:	MACError_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2051'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	Error_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACError_Ct_Resp
Structured Type	:	MACError_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2051'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	Error_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACError_Ct_IUT1			
Structured Type : MACError_Ct			
Derivation Path : MACError_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Error_Ct	BY	ER_CT1

ASN.1 Type Constraint Declaration			
Constraint Name : MACError_Ct_IUT2			
Structured Type : MACError_Ct			
Derivation Path : MACError_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Error_Ct	BY	ER_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLost_Ct_Req
Structured Type	:	MACLost_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2052’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Lost_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLost_Ct_Resp
Structured Type	:	MACLost_Ct
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2052'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	Lost_Ct	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACLost_Ct_IUT1			
Structured Type : MACLost_Ct			
Derivation Path : MACLost_Ct_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Lost_Ct	BY	LST_CT1

ASN.1 Type Constraint Declaration			
Constraint Name		: MACLost_Ct_IUT2	
Structured Type		: MACLost_Ct	
Derivation Path		: MACLost_Ct_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	Lost_Ct	BY	LST_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxExpired_Ct_Req
Structured Type	:	MACTvxExpired_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2053'H,
	Parameter_Length	'0008'H,
	Resource_Index	M_Indx,
	TvxExpired_Ct	OMIT }

ASN.1 Type Constraint Declaration	
Constraint Name	: MACTvxExpired_Ct_Resp
Structured Type	: MACTvxExpired_Ct
Derivation Path	:
Comments	: MAC attribute. This attribute is optional.
Constraint Value	
{	Parameter_Type '2053'H,
	Parameter_Length ?,
	Resource_Index ?,
	TvxExpired_Ct * }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACTvxExpired_Ct_IUT1
Structured Type	:	MACTvxExpired_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘2053’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	TvxExpired_Ct	TE_CT1 }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACTvxExpired_Ct_IUT2	
Structured Type		: MACTvxExpired_Ct	
Derivation Path		: MACTvxExpired_Ct_IUT1	
Comments		: MAC attribute. This attribute is optional.	
Constraint Value			
REPLACE	TvxExpired_Ct	BY	TE_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopied_Ct_Resp
Structured Type	:	MACNotCopied_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2054'H,
	Parameter_Length	?,
	Resource_Index	?,
	NotCopied_Ct	* }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACLate_Ct_Req	
Structured Type	: MACLate_Ct	
Derivation Path	:	
Comments	: MAC attribute. This attribute is optional.	
Constraint Value		
{	Parameter_Type	‘2055’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Late_Ct	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACLate_Ct_Resp
Structured Type	:	MACLate_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2055'H,
	Parameter_Length	?,
	Resource_Index	?,
	Late_Ct	* }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACLate_Ct_IUT1	
Structured Type	: MACLate_Ct	
Derivation Path	:	
Comments	: MAC attribute. This attribute is optional.	
Constraint Value		
{	Parameter_Type	‘2055’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	Late_Ct	LT_CT1 }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACLate_Ct_IUT2	
Structured Type		: MACLate_Ct	
Derivation Path		: MACLate_Ct_IUT1	
Comments		: MAC attribute. This attribute is optional.	
Constraint Value			
REPLACE	Late_Ct	BY	LT_CT2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRingOp_Ct_Resp
Structured Type	:	MACRingOp_Ct
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2056'H,
	Parameter_Length	?,
	Resource_Index	?,
	RingOp_Ct	* }

10.3.2.2.6 MAC Frame Error Condition Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: MACFrameErrorConditionGrp_Resp	
Structured Type	: MACFrameErrorConditionGrp	
Derivation Path	:	
Comments	: MAC attribute group.	
Constraint Value		
{	frameerrorthreshold	MACFrameErrorThreshold_Resp,
	frameerrorratio	MACFrameErrorRatio_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorThreshold_Resp
Structured Type	:	MACFrameErrorThreshold
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘205F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	FrameErrorThreshold	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorRatio_Resp
Structured Type	:	MACFrameErrorRatio
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2060'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	FrameErrorRatio	? }

10.3.2.2.7 MAC Not Copied Condition Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	:	MACNotCopiedConditionGrp_Resp	
Structured Type	:	MACNotCopiedConditionGrp	
Derivation Path	:		
Comments	:	MAC attribute group.	
Constraint Value			
{	notcopiedthreshold	MACNotCopiedThreshold_Resp,	--optional--
	notcopiedratio	MACNotCopiedRatio_Resp	--optional-- }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedThreshold_Resp
Structured Type	:	MACNotCopiedThreshold
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2067'H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	*,
	NotCopiedThreshold	*
		}

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedRatio_Resp
Structured Type	:	MACNotCopiedRatio
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2069'H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	*,
	NotCopiedRatio	* }

10.3.2.2.8 MAC Status Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: MACStatusGrp_Resp	
Structured Type	: MACStatusGrp	
Derivation Path	:	
Comments	: MAC attribute group.	
Constraint Value		
{	rmtstate daflag undaflag frameerrorflag notcopiedflag unitdataavailable hardwarepresent maunitdataavailable	MACRMTState_Resp, MACDA_Flag_Resp, MACUNDA_Flag_Resp, MACFrameErrorFlag_Resp, MACNotCopiedFlag_Resp, --optional-- MACUnitDataAvailable_Resp, MACHardwarePresent_Resp, MACMA_UnitdataEnable_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACRMTState_Req
Structured Type	:	MACRMTState
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘206F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD2	OMIT,
	RMTStateType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACRMTState_Resp	
Structured Type	: MACRMTState	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	‘206F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	RMTStateType	RMTState_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACRMTState_IUT	
Structured Type		: MACRMTState	
Derivation Path		: MACRMTState_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	RMTStateType	BY	RMTState_2

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDA_Flag_Req
Structured Type	:	MACDA_Flag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2070’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD3	OMIT,
	DA_Flag	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDA_Flag_Resp
Structured Type	:	MACDA_Flag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2070'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	DA_Flag	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACDA_Flag_IUT	
Structured Type		: MACDA_Flag	
Derivation Path		: MACDA_Flag_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	DA_Flag	BY	FALSE

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUNDA_Flag_Req
Structured Type	:	MACUNDA_Flag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2071’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD3	OMIT,
	UNDA_Flag	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACUNDA_Flag_Resp
Structured Type	:	MACUNDA_Flag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2071’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	UNDA_Flag	? }

ASN.1 Type Constraint Declaration			
Constraint Name : MACUNDA_Flag_IUT1			
Structured Type : MACUNDA_Flag			
Derivation Path : MACUNDA_Flag_Resp			
Comments : MAC attribute.			
Constraint Value			
REPLACE	UNDA_Flag	BY	FALSE

ASN.1 Type Constraint Declaration			
Constraint Name	: MACUNDA_Flag_IUT2		
Structured Type	: MACUNDA_Flag		
Derivation Path	: MACUNDA_Flag_Resp		
Comments	: MAC attribute.		
Constraint Value			
REPLACE	UNDA_Flag	BY	TRUE

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorFlag_Req
Structured Type	:	MACFrameErrorFlag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2072’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD3	OMIT,
	FrameErrorfFag	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACFrameErrorFlag_Resp
Structured Type	:	MACFrameErrorFlag
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2072’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	FrameErrorfFag	FALSE }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACNotCopiedFlag_Resp
Structured Type	:	MACNotCopiedFlag
Derivation Path	:	
Comments	:	MAC attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'2073'H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD3	*,
	NotCopiedFlag	* }

ASN.1 Type Constraint Declaration		
Constraint Name	: MACMA_UnitdataAvailable_Req	
Structured Type	: MACMA_UnitdataAvailable	
Derivation Path	:	
Comments	: MAC attribute.	
Constraint Value		
{	Parameter_Type	‘2074’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD3	OMIT,
	MA_UnitdataAvailable	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACMA_UnitdataAvailable_Resp
Structured Type	:	MACMA_UnitdataAvailable
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2074’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	MA_UnitdataAvailable	? }

ASN.1 Type Constraint Declaration			
Constraint Name	: MACMA_UnitdataAvailable_IUT		
Structured Type	: MACMA_UnitdataAvailable		
Derivation Path	: MACMA_UnitdataAvailable_Resp		
Comments	: MAC attribute.		
Constraint Value			
REPLACE	MA_UnitdataAvailable	BY	TRUE

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACHardwarePresent_Req
Structured Type	:	MACHardwarePresent
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2075’H,
	Parameter_Length	‘0008’H,
	Resource_Index	M_Indx,
	PAD2	OMIT,
	HWPpresent	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACHardwarePresent_Resp
Structured Type	:	MACHardwarePresent
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	'2075'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	HWPpresent	Present_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: MACHardwarePresent_IUT	
Structured Type		: MACHardwarePresent	
Derivation Path		: MACHardwarePresent_Resp	
Comments		: MAC attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	M_Indx,
REPLACE	HWPpresent	BY	Present_1

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACMA_UnitdataEnable_Req
Structured Type	:	MACMA_UnitdataEnable
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2076’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD3	OMIT,
	MA_UnitdataEnable	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACMA_UnitdataEnable_Resp
Structured Type	:	MACMA_UnitdataEnable
Derivation Path	:	
Comments	:	MAC attribute.
Constraint Value		
{	Parameter_Type	‘2076’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	MA_UnitdataEnable	TRUE --default value--}

10.3.2.3 ASN.1 Type Constraint for PATH Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHGrp_Req
Structured Type	:	PATHGrp
Derivation Path	:	
Comments	:	fddiPATHConfigGrp.
Constraint Value		
{	Parameter_Type	'320A'H,
	Parameter_Length	OMIT,
	Resource_Index	OMIT,
	Parameter_Value	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHGrp_Resp
Structured Type	:	PATHGrp
Derivation Path	:	
Comments	:	fddiPATHConfigGrp.
Constraint Value		
{	Parameter_Type	'320A'H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PATHConfigGrp_Resp }

ASN.1 Type Constraint Declaration			
Constraint Name : PATHConfigGrp_Resp			
Structured Type : PATHConfigGrp			
Derivation Path :			
Comments : PATH attribute group.			
Constraint Value			
{	index	PATHIndex_Resp,	
	ringlatency	PATHRingLatency_Resp,	--optional--
	tracestatus	PATHTraceStatus_Resp,	--optional--
	sbapayload	PATHSbaPayload_Resp,	--optional--
	sbaoverhead	PATHSbaOverhead_Resp,	--optional--
	configuration	PATHConfiguration_Resp,	
	trmode	PATHT_Rmode_Resp,	--optional--
	sbaavailable	PATHSbaAvailable_Resp,	--optional--
	tvxlowerbound	PATHTVXLowerBound_Resp,	
	tmaxlowerbound	PATHT_MaxLowerBound_Resp,	
	maxtreq	PATHMaxT_Req_Resp }	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHIndex_Req
Structured Type	:	PATHIndex
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘320B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	PAD2	OMIT,
	Index	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHIndex_Resp
Structured Type	:	PATHIndex
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘320B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	Index	? }

ASN.1 Type Constraint Declaration				
Constraint Name : PATHIndex_IUT Structured Type : PATHIndex Derivation Path : Comments : PATH attribute.				
Constraint Value				
REPLACE	Index	BY	'0001'H	--primary--

ASN.1 Type Constraint Declaration				
Constraint Name : PATHRingLatency_Req Structured Type : PATHRingLatency Derivation Path : Comments : PATH attribute. This attribute is optional.				
Constraint Value				
{	Parameter_Type		'320D'H,	
	Parameter_Length		'0008'H,	
	Resource_Index		OMIT,	
	RingLatency		OMIT	}

ASN.1 Type Constraint Declaration				
Constraint Name : PATHRingLatency_Resp Structured Type : PATHRingLatency Derivation Path : Comments : PATH attribute. This attribute is optional.				
Constraint Value				
{	Parameter_Type		'320D'H,	
	Parameter_Length		?,	
	Resource_Index		?,	
	RingLatency		*	}

ASN.1 Type Constraint Declaration				
Constraint Name : PATHRingLatency_IUT Structured Type : PATHRingLatency Derivation Path : PATHRingLatency_Resp Comments : PATH attribute. This attribute is optional.				
Constraint Value				
REPLACE	RingLatency	BY	R_Latency	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHTraceStatus_Resp
Structured Type	:	PATHTraceStatus
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘320E’H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	PAD_2,
	TraceStatusType	TraceStatus_S }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaPayload_Resp
Structured Type	:	PATHSbaPayload
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'320F'H,
	Parameter_Length	?,
	Resource_Index	?,
	SbaPayload	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaOverhead_Resp
Structured Type	:	PATHSbaOverhead
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'3210'H,
	Parameter_Length	?,
	Resource_Index	?,
	SbaOverhead	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHConfiguration_Resp
Structured Type	:	PATHConfiguration
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘3212’H,
	Parameter_Length	?,
	Resource_Index	?,
	Configuration	PathConfig_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_Rmode_Req
Structured Type	:	PATHT_Rmode
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘3213’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	T_RmodeType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_Rmode_Resp
Structured Type	:	PATHT_Rmode
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘3213’H,
	Parameter_Length	?,
	Resource_Index	?,
	T_RmodeType	* }

ASN.1 Type Constraint Declaration			
Constraint Name	: PATHT_Rmode_IUT1		
Structured Type	: PATHT_Rmode		
Derivation Path	:		
Comments	: PATH attribute. This attribute is optional.		
Constraint Value			
REPLACE	Resource_Index	BY	‘0008’H,
REPLACE	T_RmodeType	BY	TIME(T_Rmode)

ASN.1 Type Constraint Declaration			
Constraint Name : PATHT_Rmode_IUT2			
Structured Type : PATHT_Rmode			
Derivation Path :			
Comments : PATH attribute. This attribute is optional.			
Constraint Value			
REPLACE	Resource_Index	BY	'0008'H,
REPLACE	T_RmodeType	BY	TIME(2000)
--Assume 2 seconds is the desired T_Rmode requested by the tester's PMF set request frame.--			
--Note: Any desired T_Rmode within a range of zero second to 343.597 seconds is acceptable--			

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHSbaAvailable_Resp
Structured Type	:	PATHSbaAvailable
Derivation Path	:	
Comments	:	PATH attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'3214'H,
	Parameter_Length	?,
	Resource_Index	?
	SbaAvailable	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHTVXLowerBound_Req
Structured Type	:	PATHTVXLowerBound
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	'3215'H,
	Parameter_Length	'0008'H,
	Resource_Index	OMIT,
	TVXLowerBound	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHTVXLowerBound_Resp
Structured Type	:	PATHTVXLowerBound
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	'3215'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	TVXLowerBound	? }

ASN.1 Type Constraint Declaration			
Constraint Name	: PATHTVXLowerBound_IUT		
Structured Type	: PATHTVXLowerBound		
Derivation Path	: PATHTVXLowerBound_Resp		
Comments	: PATH attribute.		
Constraint Value			
REPLACE	TVXLowerBound	BY	INT_TO_HEX(TTC(TIME(2500)), 8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_MaxLowerBound_Req
Structured Type	:	PATHT_MaxLowerBound
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘3216’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	T_MaxLowerBound	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHT_MaxLowerBound_Resp
Structured Type	:	PATHT_MaxLowerBound
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘3216’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	T_MaxLowerBound	? }

ASN.1 Type Constraint Declaration			
Constraint Name : PATHT_MaxLowerBound_IUT			
Structured Type : PATHT_MaxLowerBound			
Derivation Path : PATHT_MaxLowerBound_Resp			
Comments : PATH attribute.			
Constraint Value			
REPLACE	T_MaxLowerBound	BY	INT_TO_HEX(TTC(TIME(165)), 8)

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHMaxT_Req_Req
Structured Type	:	PATHMaxT_Req
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	‘3217’H,
	Parameter_Length	‘0008’H,
	Resource_Index	OMIT,
	MaxT_Req	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PATHMaxT_Req_Resp
Structured Type	:	PATHMaxT_Req
Derivation Path	:	
Comments	:	PATH attribute.
Constraint Value		
{	Parameter_Type	'3217'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	MaxT_Req	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: PATHMaxT_Req_IUT	
Structured Type		: PATHMaxT_Req	
Derivation Path		: PATHMaxT_Req_Resp	
Comments		: PATH attribute.	
Constraint Value			
REPLACE	MaxT_Req	BY	INT_TO_HEX(TTC(TIME(165)), 8)

10.3.2.4 ASN.1 Type Constraint for PORT Attributes

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp1_Req
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTConfigGrp.
Constraint Value		
{	Parameter_Type	'400A'H,
	Parameter_Length	OMIT,
	Resource_Index	OMIT,
	Parameter_Value	OMIT }

ASN.1 Type Constraint Declaration				
Constraint Name		: PORTGrp2_Req		
Structured Type		: PORTGrp		
Derivation Path		: PORTGrp1_resp		
Comments		: fddiPORTOperationGrp.		
Constraint Value				
REPLACE	Parameter_Type	BY	'401E'H	

ASN.1 Type Constraint Declaration			
Constraint Name : PORTGrp3_Req			
Structured Type : PORTGrp			
Derivation Path : PORTGrp1_Resp			
Comments : fddiPORTErrorsCtrsGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	'4028'H

ASN.1 Type Constraint Declaration			
Constraint Name : PORTGrp4_Req			
Structured Type : PORTGrp			
Derivation Path : PORTGrp1_Resp			
Comments : fddiPORTLerGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	'4032'H

ASN.1 Type Constraint Declaration			
Constraint Name : PORTGrp5_Req			
Structured Type : PORTGrp			
Derivation Path : PORTGrp1_Resp			
Comments : fddiPORTStatusGrp.			
Constraint Value			
REPLACE	Parameter_Type	BY	'403C'H

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp1_Resp
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTConfigGrp.
Constraint Value		
{	Parameter_Type	'400A'H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PORTConfigGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp2_Resp
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTOperationGrp.
Constraint Value		
{	Parameter_Type	‘401E’H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PORTOperationGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp3_Resp
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTErrorsGrp.
Constraint Value		
{	Parameter_Type	'4028'H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PORTErrorsGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp4_Resp
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTLerGrp.
Constraint Value		
{	Parameter_Type	'4032'H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PORTLerGrp_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTGrp5_Resp
Structured Type	:	PORTGrp
Derivation Path	:	
Comments	:	fddiPORTStatusGrp.
Constraint Value		
{	Parameter_Type	‘403C’H,
	Parameter_Length	?,
	Resource_Index	?,
	Parameter_Value	PORTStatusGrp_Resp }

10.3.2.4.1 PORT Configuration Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConfigGrp_Resp
Structured Type	:	PORTConfigGrp
Derivation Path	:	
Comments	:	PORT attribute group.
Constraint Value		
{	mytype	PORTMyType_Resp,
	neighbortype	PORTNeighborType_Resp,
	connectionpolicies	PORTConnectionPolicies_Resp,
	macindicated	PORTMACIndicated_Resp,
	currentpath	PORTCurrentPath_Resp,
	requestedpath	PORTRequestedPaths_Resp,
	macplacement	PORTMACPlacement_Resp,
	availablepath	PORTAvailablePaths_Resp,
	maclooptime	PORTMACLoop_Time_Resp, -- optional--
	pmdclass	PORTPMDClass_Resp,
	connectioncapabilities	PORTConnectionCapabilities_Resp,
	index	PORTIndex_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMyType_Req
Structured Type	:	PORTMyType
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'400C'H,
	Parameter_Length	'0008'H,
	Resource_Index	P Indx, --Index of port A--
	PAD2	OMIT,
	MyType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTMyType_Resp	
Structured Type	: PORTMyType	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	'400C'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	MyType	PortType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTMyType_IUT			
Structured Type : PORTMyType			
Derivation Path : PORTMyType_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	MyType	BY	PortType_A

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTNeighborType_Req
Structured Type	:	PORTNeighborType
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘400D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx, --Index of port A--
	PAD2	OMIT,
	NeighborType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTNeighborType_Resp
Structured Type	:	PORTNeighborType
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'400D'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	NeighborType	PortType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTNeighborType_IUT			
Structured Type : PORTNeighborType			
Derivation Path : PORTNeighborType_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	NeighborType	BY	PortType_B

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectionPolicies_Resp
Structured Type	:	PORTConnectionPolicies
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘400E’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	ConnectionPoliciesType	ConnectionPolicies_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTMACIndicated_Resp	
Structured Type	: PORTMACIndicated	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘400F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	T_Val9	?,
	R_Val9	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTCurrentPath_Req
Structured Type	:	PORTCurrentPath
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4010'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx,
	PAD2	OMIT,
	CurrentPath	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTCurrentPath_Resp
Structured Type	:	PORTCurrentPath
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4010'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	CurrentPath	CurrentPathType_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTCurrentPath_IUT	
Structured Type		: PORTCurrentPath	
Derivation Path		: PORTCurrentPath_Resp	
Comments		: PORT attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	CurrentPath	BY	P_CurrentPath

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTRequestedPaths_Req
Structured Type	:	PORTRequestedPaths
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4011'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx, --use appropriate index for the requested port--
	PAD2	OMIT,
	RequestedPaths	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTRequestedPaths_Resp
Structured Type	:	PORTRequestedPaths
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘4011’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	RequestedPaths	RequestedPaths_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTRequestedPaths_A Structured Type : PORTRequestedPaths Derivation Path : PORTRequestedPaths_Resp Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port A--
REPLACE	RequestedPaths	BY	RequestedPaths_A

ASN.1 Type Constraint Declaration			
Constraint Name : PORTRequestedPaths_B1 Structured Type : PORTRequestedPaths Derivation Path : PORTRequestedPaths_Resp Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port B--
REPLACE	RequestedPaths	BY	RequestedPaths_B1

ASN.1 Type Constraint Declaration			
Constraint Name : PORTRequestedPaths_B2 Structured Type : PORTRequestedPaths Derivation Path : PORTRequestedPaths_Resp Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port B--
REPLACE	RequestedPaths	BY	RequestedPaths_B2

ASN.1 Type Constraint Declaration			
Constraint Name : PORTRequestedPaths_S Structured Type : PORTRequestedPaths Derivation Path : PORTRequestedPaths_Resp Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port S--
REPLACE	RequestedPaths	BY	RequestedPaths_S

ASN.1 Type Constraint Declaration			
Constraint Name : PORTRequestedPaths_M Structured Type : PORTRequestedPaths Derivation Path : PORTRequestedPaths_Resp Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port M--
REPLACE	RequestedPaths	BY	RequestedPaths_M

ASN.1 Type Constraint Declaration			
Constraint Name : PORTMACPlacement_Req Structured Type : PORTMACPlacement Derivation Path : Comments : PORT attribute.			
Constraint Value			
{	Parameter_Type	'4012'H,	
	Parameter_Length	'0008'H,	
	Resource_Index	P_Indx, --Index of port B (exit port)--	
	PAD2	OMIT,	
	MACPlacement	OMIT	}

ASN.1 Type Constraint Declaration			
Constraint Name : PORTMACPlacement_Resp Structured Type : PORTMACPlacement Derivation Path : Comments : PORT attribute.			
Constraint Value			
{	Parameter_Type	'4012'H,	
	Parameter_Length	'0008'H,	
	Resource_Index	?,	
	PAD2	PAD_2,	
	MACPlacement	?	}

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTMACPlacement_IUT	
Structured Type		: PORTMACPlacement	
Derivation Path		: PORTMACPlacement_Resp	
Comments		: PORT attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port B (exit port)--
REPLACE	MACPlacement	BY	M_Indx

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTAvailablePaths_Req
Structured Type	:	PORTAvailablePaths
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘4013’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx, --Index of port A (or port B)--
	PAD3	OMIT,
	AvailablePaths	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTAvailablePaths_Resp
Structured Type	:	PORTAvailablePaths
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4013'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	AvailablePaths	AvailablePaths_Q }

ASN.1 Type Constraint Declaration			
Constraint Name	: PORTAvailablePaths_IUT		
Structured Type	: PORTAvailablePaths		
Derivation Path	: PORTAvailablePaths_Resp		
Comments	: PORT attribute.		
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx, --Index of port A (or port B)--
REPLACE	AvailablePaths	BY	AvailablePaths_PS

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACLoop_Time_Req
Structured Type	:	PORTMACLoop_Time
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4015'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx, --assume index of port A--
	MACLoop_Time	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACLoop_Time_Resp
Structured Type	:	PORTMACLoop_Time
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4015'H,
	Parameter_Length	?,
	Resource_Index	?,
	MACLoop_Time	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMACLoop_Time_IUT1
Structured Type	:	PORTMACLoop_Time
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4015'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx,
	MACLoop_Time	TIME(T_Next9) }

ASN.1 Type Constraint Declaration			
Constraint Name	: PORTMACLoop_Time_IUT2		
Structured Type	: PORTMACLoop_Time		
Derivation Path	: PORTMACLoop_Time_IUT1		
Comments	: PORT attribute. This attribute is optional.		
Constraint Value			
REPLACE	MACLoop_Time	BY	TIME(210)
--Assume 210 milliseconds is the desired T_Next(9) requested by tester's PMF set request frame.--			
--Note: Any desired T_Next(9) >= 200ms is acceptable.--			

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTPMDClass_Req	
Structured Type	: PORTPMDClass	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘4016’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx,
	PAD2	OMIT,
	PMDClassType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTPMDClass_Resp	
Structured Type	: PORTPMDClass	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	'4016'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	PMDClassType	PMDClass_Q }

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTPMDClass_IUT	
Structured Type		: PORTPMDClass	
Derivation Path		: PORTPMDClass_Resp	
Comments		: PORT attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	PMDClassType	BY	PMD_Type

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectionCapabilities_Resp
Structured Type	:	PORTConnectionCapabilities
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4017'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	ConnectionCapabilities	ConnectionPolicies_Q }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTIndex_Req	
Structured Type	: PORTIndex	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘401D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	‘00000000’H,
	PAD2	OMIT,
	PortIndx	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTIndex_Resp
Structured Type	:	PORTIndex
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'401D'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD2	PAD_2,
	PortIndx	? }

ASN.1 Type Constraint Declaration			
Constraint Name		: PORTIndex_IUT	
Structured Type		: PORTIndex	
Derivation Path		: PORTIndex_Resp	
Comments		: PORT attribute.	
Constraint Value			
REPLACE	Resource_Index	BY	'00000000'H,
REPLACE	PortIndex	BY	PORT_Indx

10.3.2.4.2 PORT Operation Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTOperationGrp_Resp
Structured Type	:	PORTOperationGrp
Derivation Path	:	
Comments	:	PORT attribute group.
Constraint Value		
{	maintls	PORTMaint_LS_Resp, --optional--
	bsflag	PORTBS_Flag_Resp,
	pcls	PORTPC_LS_Resp --optional (OP)-- }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTMaint_LS_Resp
Structured Type	:	PORTMaint_LS
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘401F’H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	*,
	Maint_LS	LineState_S }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTBS_Flag_Resp	
Structured Type	: PORTBS_Flag	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	'4021'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	BS_Flag	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_LS_Req
Structured Type	:	PORTPC_LS
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4022'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx, --assume index of port A--
	PAD2	OMIT,
	PC_LS	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_LS_Resp
Structured Type	:	PORTPC_LS
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	‘4022’H,
	Parameter_Length	?,
	Resource_Index	?,
	PAD2	*,
	PC_LS	LIneState_S }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_LS_IUT
Structured Type	:	PORTPC_LS
Derivation Path	:	PORTPC_LS_Resp
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4022'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx,
	PAD2	PAD_2,
	PC_LS	LIneState_Pdr }

10.3.2.4.3 PORT Error Counters Group Attributes Constraints

ASN.1 Type Constraint Declaration			
Constraint Name	: PORTErrCtrsGrp_Resp		
Structured Type	: PORTErrCtrsGrp		
Derivation Path	:		
Comments	: PORT attribute group.		
Constraint Value			
{	eberrorct	PORTEBError_Ct_Resp,	--optional (OP)--
	lctfailct	PORTLCTFail_Ct_Resp}	

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTEBError_Ct_Resp
Structured Type	:	PORTEBError_Ct
Derivation Path	:	
Comments	:	PORT attribute. This attribute is optional.
Constraint Value		
{	Parameter_Type	'4029'H,
	Parameter_Length	?,
	Resource_Index	?,
	EBError_Ct	* }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLCTFail_Ct_Resp
Structured Type	:	PORTLCTFail_Ct
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘402A’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	LCTFail_Ct	? }

10.3.2.4.4 PORT LER Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerGrp_Resp
Structured Type	:	PORTLerGrp
Derivation Path	:	
Comments	:	POR attribute group.
Constraint Value		
{	lerestimate	PORTLer_Estimate_Resp,
	lemrejectct	PORTLem_Reject_Ct_Resp,
	lemct	PORTLem_Ct_Resp,
	lercutoff	PORTLer_Cutoff_Resp,
	leralarm	PORTLer_Alarm_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTLer_Estimate_Resp	
Structured Type	: PORTLer_Estimate	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	'4033'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	Ler_Estimate	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLem_Reject_Ct_Resp
Structured Type	:	PORTLem_Reject_Ct
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4034'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	Lem_Reject_Ct	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLem_Ct_Resp
Structured Type	:	PORTLem_Ct
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘4035’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	Lem_Ct	? }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Cutoff_Req
Structured Type	:	PORTLer_Cutoff
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'403A'H,
	Parameter_Length	'0008'H,
	Resource_Index	P_Indx, --assume index of port A--
	PAD3	OMIT,
	Ler_Cutoff	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTLer_Cutoff_Resp	
Structured Type	: PORTLer_Cutoff	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘403A’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD3	PAD_3,
	Ler_Cutoff	? }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTLer_Cutoff_IUT			
Structured Type : PORTLer_Cutoff			
Derivation Path : PORTLer_Cutoff_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	Ler_Cutoff	BY	'07'H --default value--

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Alarm_Req
Structured Type	:	PORTLer_Alarm
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘403B’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Idx, --assume index of port A--
	PAD3	OMIT,
	Ler_Alarm	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLer_Alarm_Resp
Structured Type	:	PORTLer_Alarm
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'403B'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	Ler_Alarm	? }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTLer_Alarm_IUT			
Structured Type : PORTLer_Alarm			
Derivation Path : PORTLer_Alarm_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	Ler_Alarm	BY	'08'H --default value--

10.3.2.4.5 PORT Status Group Attributes Constraints

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTStatusGrp_Resp	
Structured Type	: PORTStatusGrp	
Derivation Path	:	
Comments	: PORT attribute group.	
Constraint Value		
{	connectionstate	PORTConnectState_Resp,
	pcmstate	PORTPCMState_Resp,
	pcwithhold	PORTPC_Withhold_Resp,
	lerflag	PORTLerFlag_Resp,
	hardwarepresent	PORTHardwarePresent_Resp }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTConnectState_Req
Structured Type	:	PORTConnectState
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘403D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx, --assume index of port A--
	PAD2	OMIT,
	ConnectStateType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTConnectState_Resp	
Structured Type	: PORTConnectState	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘403D’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	ConnectStateType	ConnectState_Q }

ASN.1 Type Constraint Declaration				
Constraint Name		: PORTConnectState_IUT		
Structured Type		: PORTConnectState		
Derivation Path		: PORTConnectState_Resp		
Comments		: PORT attribute.		
Constraint Value				
REPLACE	Resource_Index	BY	P_Indx,	
REPLACE	ConnectStateType	BY	ConnectState_A }	

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTPCMState_Req	
Structured Type	: PORTPCMState	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘403E’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx, --assume index of port A--
	PAD2	OMIT,
	PCMStateType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTPCMState_Resp	
Structured Type	: PORTPCMState	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘403E’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	PCMStateType	PCMState_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTPCMState_IUT			
Structured Type : PORTPCMState			
Derivation Path : PORTPCMState_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	PCMStateType	BY	PCMState_A }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTPC_Withhold_Req
Structured Type	:	PORTPC_Withhold
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘403F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Idx, --assume index of port A--
	PAD2	OMIT,
	PC_WithholdType	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTPC_Withhold_Resp	
Structured Type	: PORTPC_Withhold	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘403F’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	PC_WithholdType	PC_Withhold_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTPC_Withhold_IUT			
Structured Type : PORTPC_Withhold			
Derivation Path : PORTPC_Withhold_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	PC_WithholdType	BY	PC_Withhold_N

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTLerFlag_Resp
Structured Type	:	PORTLerFlag
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	'4040'H,
	Parameter_Length	'0008'H,
	Resource_Index	?,
	PAD3	PAD_3,
	LerFlag	? }

ASN.1 Type Constraint Declaration		
Constraint Name	: PORTHardwarePresent_Req	
Structured Type	: PORTHardwarePresent	
Derivation Path	:	
Comments	: PORT attribute.	
Constraint Value		
{	Parameter_Type	‘4041’H,
	Parameter_Length	‘0008’H,
	Resource_Index	P_Indx,
	PAD2	OMIT,
	HWPpresent	OMIT }

ASN.1 Type Constraint Declaration		
Constraint Name	:	PORTHardwarePresent_Resp
Structured Type	:	PORTHardwarePresent
Derivation Path	:	
Comments	:	PORT attribute.
Constraint Value		
{	Parameter_Type	‘4041’H,
	Parameter_Length	‘0008’H,
	Resource_Index	?,
	PAD2	PAD_2,
	HWPpresent	Present_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : PORTHardwarePresent_IUT			
Structured Type : PORTHardwarePresent			
Derivation Path : PORTHardwarePresent_Resp			
Comments : PORT attribute.			
Constraint Value			
REPLACE	Resource_Index	BY	P_Indx,
REPLACE	HWPpresent	BY	Present_1

10.3.2.5 ASN.1 Type Constraint for Actions and Notifications

10.3.2.5.1 Actions

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTStationAction_Q
Structured Type	:	SMTStationAction
Derivation Path	:	
Comments	:	SMT action.
Constraint Value		
{	Parameter_Type	‘103C’H,
	Parameter_Length	‘0004’H,
	PAD2	PAD_2,
	SMTAction	ActionInfo_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTStationAction_DisableA			
Structured Type : SMTStationAction			
Derivation Path : SMTStationAction_Q			
Comments : SMT action.			
Constraint Value			
REPLACE	SMTAction	BY	ActionInfo_DisA

ASN.1 Type Constraint Declaration				
Constraint Name : SMTStationAction_DisableB				
Structured Type : SMTStationAction				
Derivation Path : SMTStationAction_Q				
Comments : SMT action.				
Constraint Value				
REPLACE	SMTAction	BY	ActionInfo_DisB	

10.3.2.5.2 Notifications

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTHoldCondition_Q
Structured Type	:	SMTHoldCondition
Derivation Path	:	
Comments	:	SMT notification.
Constraint Value		
{	Parameter_Type	‘1047’H,
	Parameter_Length	‘0008’H,
	PAD3	PAD_3,
	ConditionState	?,
	PAD2	PAD_2,
	HoldCondition	HoldState_Q }

ASN.1 Type Constraint Declaration				
Constraint Name : SMTHoldCondition_HP				
Structured Type : SMTHoldCondition				
Derivation Path : SMTHoldCondition_Q				
Comments : SMT notification				
Constraint Value				
REPLACE	ConditionState	BY	TRUE,	
REPLACE	HoldCondition	BY	HoldState_HP	

ASN.1 Type Constraint Declaration				
Constraint Name		: SMTHoldCondition_HS		
Structured Type		: SMTHoldCondition		
Derivation Path		: SMTHoldCondition_HP		
Comments		: SMT notification.		
Constraint Value				
REPLACE	HoldCondition	BY	HoldState_HS	

ASN.1 Type Constraint Declaration		
Constraint Name	:	SMTPPeerWrapCondition_Q
Structured Type	:	SMTPPeerWrapCondition
Derivation Path	:	
Comments	:	SMT notification.
Constraint Value		
{	Parameter_Type	‘1048’H,
	Parameter_Length	‘0008’H,
	PAD3	PAD_3,
	ConditionState	?,
	PAD2	PAD_2,
	PeerWrapCondition	CF_State_Q }

ASN.1 Type Constraint Declaration			
Constraint Name : SMTPeerWrapCondition_CWB			
Structured Type : SMTPeerWrapCondition			
Derivation Path : SMTPeerWrapCondition_Q			
Comments : SMT notification.			
Constraint Value			
REPLACE	ConditionState	BY	TRUE,
REPLACE	PeerWrapCondition	BY	CF_State_Cwrpb

ASN.1 Type Constraint Declaration			
Constraint Name : SMTPeerWrapCondition_CWA			
Structured Type : SMTPeerWrapCondition			
Derivation Path : SMTPeerWrapCondition_Q			
Comments : SMT notification.			
Constraint Value			
REPLACE	ConditionState	BY	TRUE,
REPLACE	PeerWrapCondition	BY	CF_State_Cwrpa

ASN.1 Type Constraint Declaration		
Constraint Name	:	MACDuplicateAddressCondition_UNDA
Structured Type	:	MACDuplicateAddressCondition
Derivation Path	:	
Comments	:	MAC notification.
Constraint Value		
{	Parameter_Type	‘208C’H,
	Parameter_Length	‘0018’H,
	Resource_Index	M_Indx,
	PAD3	PAD_3,
	ConditionState	TRUE,
	PAD2	PAD_2,
	DupCondition	DupCondition_UNDA,
	LongAddress	TESTER_ADDRESS,
	UNALong	? }

10.3.2.6 Common Type Constraint Definitions

ASN.1 Type Constraint Declaration	
Constraint Name	: ActionInfo_Q
Structured Type	: ActionInfo
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: ActionInfo_DisA
Structured Type	: ActionInfo
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0004'H --disable_a--	

ASN.1 Type Constraint Declaration	
Constraint Name	: ActionInfo_DisB
Structured Type	: ActionInfo
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0005'H --disable_b--	

ASN.1 Type Constraint Declaration	
Constraint Name	: AvailablePaths_Q
Structured Type	: AvailablePathsType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000???'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: AvailablePaths_PS
Structured Type	: AvailablePathsType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000011'B --primary and secondary paths--	

ASN.1 Type Constraint Declaration	
Constraint Name	: BridgeType_Q
Structured Type	: BridgeType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000000000000??'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: Capabilities_Q
Structured Type	: Capabilities
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000000000000??'B --Refer to PIXIT 7& 8--	

ASN.1 Type Constraint Declaration	
Constraint Name	: Capabilities_H
Structured Type	: Capabilities
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000000000000001'B --holdavailable--	

ASN.1 Type Constraint Declaration	
Constraint Name	: Capabilities_W
Structured Type	: Capabilities
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000000000000010'B --cf_wrap_ab--	

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Q
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Thru
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'000C'H	--Thru--

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Cwrpa
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0009'H	--c_wrap_a--

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Cwrpb
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'000A'H	--c_wrap_b--

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Wrps
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0008'H	--wrap_s--

ASN.1 Type Constraint Declaration	
Constraint Name	: CF_State_Wrpab
Structured Type	: CF_State
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0007'H	--wrap_ab--

ASN.1 Type Constraint Declaration	
Constraint Name	: ConfigPolicy_Q
Structured Type	: ConfigPolicyType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000000000000000?'B --Refer to PIXIT 7--	

ASN.1 Type Constraint Declaration	
Constraint Name	: Connection_Q
Structured Type	: Connection
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'1?????????????????'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: Connection_Test
Structured Type	: Connection
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'1000001101100101'B --Assume that rejectA-A, rejectA-S, rejectB-B, rejectB-S, rejectS-A, rejectS-B and rejectM-M is the desired connection policy -- --requested by tester's PMF set request frame. Note: Enter your own desired connectionpolicy value as you please.--	

ASN.1 Type Constraint Declaration	
Constraint Name	: ConnectionPolicies_Q
Structured Type	: ConnectPolicies
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'000000??'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: ConnectState_Q
Structured Type	: ConnectState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: ConnectState_A
Structured Type	: ConnectState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0003'H --active--	

ASN.1 Type Constraint Declaration	
Constraint Name	: CurrentPath_Q
Structured Type	: CurrentPathType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: DupAddressTest_Q
Structured Type	: DupAddressTest
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: DupAddressTest_P
Structured Type	: DupAddressTest
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0001'H --pass--	

ASN.1 Type Constraint Declaration	
Constraint Name	: DupAddressTest_F
Structured Type	: DupAddressTest
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0002'H --fail--	

ASN.1 Type Constraint Declaration	
Constraint Name	: DupCondition_UNDA
Structured Type	: DupConditionType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000000000000010'H --UNDA_Flag--	

ASN.1 Type Constraint Declaration	
Constraint Name	: DuplAddress_Q
Structured Type	: DuplAddressType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'000000??'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: DuplAddress_R
Structured Type	: DuplAddressType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000000'B --no duplicate address on the ring--	

ASN.1 Type Constraint Declaration	
Constraint Name	: DuplAddress_S
Structured Type	: DuplAddressType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000001'B --MyDuplicate bit SET--	

ASN.1 Type Constraint Declaration	
Constraint Name	: ECMState_Q
Structured Type	: ECMState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: FS_Functions_Q
Structured Type	: FS_Functions
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000000000000000???'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: HoldState_Q
Structured Type	: HoldState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: HoldState_HP
Structured Type	: HoldState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0001'H --holding_prm--	

ASN.1 Type Constraint Declaration	
Constraint Name	: HoldState_HS
Structured Type	: HoldState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0002'H --holding_sec--	

ASN.1 Type Constraint Declaration	
Constraint Name	: HoldState_NH
Structured Type	: HoldState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000'H --not holding--	

ASN.1 Type Constraint Declaration	
Constraint Name	: LineState_S
Structured Type	: LineState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
*	

ASN.1 Type Constraint Declaration	
Constraint Name	: LineState_Pdr
Structured Type	: LineState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0004'H --pdr (active)--	

ASN.1 Type Constraint Declaration	
Constraint Name	: LongAddressSet_S
Structured Type	: LongAddressSet
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{ LongAddressType * }	

ASN.1 Type Constraint Declaration	
Constraint Name	: LongAddressSet_IUT
Structured Type	: LongAddressSet
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{ LongAddressType LONG_GRP_ADD }	

ASN.1 Type Constraint Declaration	
Constraint Name	: PathConfig_Q
Structured Type	: PathConfig
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{ResourceTagType ResourceTag_Q }	

ASN.1 Type Constraint Declaration	
Constraint Name	: PCMState_Q
Structured Type	: PCMState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PCMState_A
Structured Type	: PCMState
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0008'H	--active--

ASN.1 Type Constraint Declaration	
Constraint Name	: PC_Withhold_Q
Structured Type	: PC_Withhold
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PC_Withhold_N
Structured Type	: PC_Withhold
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000'H -	-none--

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_Q
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'????????'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_MAC1
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000111'B	--default value of MAC permitted paths--

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_MAC2
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000100'B --primary-alternate--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_L
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000001'B --local--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_TA
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00011001'B --local, concatenated-alternate and secondary-preferred--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_TB
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00101001'B --local, concatenated-alternate and primary-preferred--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_TM
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000111'B --local, secondary-alternate and primary-alternate--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_PA
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'10011001'B --local, concatenated-alternate, secondary-preferred and thru--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_PB1
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'11100001'B --local, primary-preferred, concatenated-preferred and thru--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_PB2
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'10101001'B --local, concatenated-alternate, primary-preferred and thru--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_PS
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00101001'B --local, concatenated-alternate and primary-preferred--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PermittedPaths_PM
Structured Type	: PermittedPaths
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'00000000'B	

ASN.1 Type Constraint Declaration	
Constraint Name	: PMDClass_Q
Structured Type	: PMDClass
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PortType_Q
Structured Type	: PortTypeType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: PortType_A
Structured Type	: PortTypeType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0000'H --port A--	

ASN.1 Type Constraint Declaration	
Constraint Name	: PortType_B
Structured Type	: PortTypeType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0001'H --port B--	

ASN.1 Type Constraint Declaration	
Constraint Name	: Present_Q
Structured Type	: Present
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
?	

ASN.1 Type Constraint Declaration	
Constraint Name	: Present_1
Structured Type	: Present
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
'0001'H -	-Present--

ASN.1 Type Constraint Declaration	
Constraint Name	: RequestedPaths_Q
Structured Type	: RequestedPathsType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{	none PermittedPaths_Q, tree PermittedPaths_Q, peer PermittedPaths_Q }

ASN.1 Type Constraint Declaration	
Constraint Name	: RequestedPaths_A
Structured Type	: RequestedPathsType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{	none PermittedPaths_L, tree PermittedPaths_TA, peer PermittedPaths_PA }

ASN.1 Type Constraint Declaration	
Constraint Name	: RequestedPaths_B1
Structured Type	: RequestedPathsType
Derivation Path	:
Comments	: Common type constraint definition.
Constraint Value	
{	none PermittedPaths_L, tree PermittedPaths_TB, peer PermittedPaths_PB1 }