SIF-020-1998

(SIF Document #SIF-TS-9710-076)

SIF APPROVED DOCUMENT

WORK GROUP:Testing

TITLE: Suitable Abstract Test Suite for Testing the IS-IS Protocol (ISO 10589)

DATE: October 1998

EDITOR: Name: Armin "Chip" Current
Voice: 603-679-1097
email: acurrent@telcordia.com

ABSTRACT: This document provides a reference to a freely available Abstract Test Suite (ATS) which has been determined to be sufficient for testing certain functions of the IS-IS Protocol in the OSI reference model.

This document has received the approval of the SONET Interoperability Forum (SIF).

This document is intended to confirm that the Abstract Test Suite (ATS) developed by Telcordia Technologies is sufficient for the analysis of the Level 1 point to point role of the Intermediate System to Intermediate System (IS-IS) protocol as outlined in ISO 10589 and its approved defect reports. For the convience of the SIF membership, the IS-IS ATS has been attached to this SIF document.

Telcordia Technologies

Performance from Experience

ABSTRACT TEST SUITE
OCTOBER 1998

Intermediate System to Intermediate System Protocol Abstract Test Suite

Copyright © 1998 Telcordia Technologies.

All rights reserved.

I

Test Suite Overview

Test Suite Structure

Suite Name : ISIS
Standards Ref :
PICS Ref :
PIXIT Ref :
Test Method(s) :
Comments :

Detailed Comments :

Test Case Index

Continued on next page

Continued from previous page

Test Case Index

Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
SDF/PtPt/InvalidBeh/Accept/	PtPtDecode_Inv_AI_4			83
SIF/L1LSP/ValidBeh/Sending/LSPGen/	PeriodLSPGen_1			84
SIF/L1LSP/ValidBeh/Sending/LSPGen/	PeriodLSPGen_2			84
SIF/L1LSP/ValidBeh/Sending/LSPGen/	EventDrivenL1LSPGen_1			85
SIF/L1LSP/ValidBeh/Sending/LSPGen/	EventDrivenL1LSPGen_2			86
SIF/L1LSP/ValidBeh/Sending/LSPGen/	EventDrivenL1LSPGen_3			87
SIF/L1LSP/ValidBeh/Sending/LSPGen/	EventDrivenL1LSPGen_4			88
SIF/L1LSP/ValidBeh/Sending/LSPGen/	EventDrivenL1LSPGen_5			89
SIF/L1LSP/ValidBeh/Sending/SequenceNumber/	L1SN_1			90
SIF/L1LSP/ValidBeh/Sending/SequenceNumber/	L1SN_2			91
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysNonExistLSP			92
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysNewerLSP_1			93
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysNewerLSP_2			94
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysSameLSP_1			95
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysSameLSP_2			96
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysOlderLSP_1			97
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OtherSysOlderLSP_2			98
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OwnOlderLSP			99
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OwnSameLSP			100
SIF/L1LSP/ValidBeh/Recv/ZRLT/	ZRLT_OwnNewerLSP			101
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysNonExistLSP_1			102
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysNonExistLSP_2			102
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysNewerLSP_1			103
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysNewerLSP_2			104
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysSameLSP_1			105
SIF/L1LSP/ValidBeh/Recv/NZRLT/	NZRLT_OtherSysSameLSP_2			106

Continued on next page

Continued from previous page

Test Case Index

Detailed Comments :

Test Step Index

Detailed Comments :

II

Declarations Part

Simple Type Definitions		
Type Name	**Type Definition**	**Comments**
Checksum	OCTETSTRING[2]	Checksum
CirType	BITSTRING[2]	Circuit Type, 0− reserved, 1 L1 only, 2 L2 only, 3 L1L2
IdCode	OCTETSTRING[1]	
Entire_PDU_Len	INTEGER(0..65535)	Entire PDU Length
ID_Len	INTEGER	1 − 8. corresponding ID length 0 6 octet ID length 255 Null ID field (zero length)
LanMACAddress	OCTETSTRING[6]	LAN MAC Addresses
Len_Ind	INTEGER(0..255)	
MAA	INTEGER	# of permitted area addresses. derived from system management para "MaximumAreaAddress
NetAddr	OCTETSTRING[1..8]	Network address
NPD	OCTETSTRING[1]	network protocol discriminator
ParCode	OCTETSTRING[1]	parameter code for VLFs
PDUCode	BITSTRING[5]	PDU types, 17 for PtPtIIH, 00100 for ISH
PDU_Len	INTEGER(0..65535)	
Time	INTEGER(0..65535)	
Verid	OCTETSTRING[1]	version ID
Detailed Comments :		

Structured Type Definition		
Type Name : ESISFixPart		
Comments : ESIS PDU Common Part		
Element Name	**Type Definition**	**Comments**
NLPID	OCTETSTRING[1]	Network layer protocol ID, 1 octet, must be ISO 9542 (1000 0010)
ISH_PDU_Len	INTEGER	length of entire ISH PDU, 1−254, 255 is reserved
VPIdE_ESIS	OCTETSTRING[1]	version of ISO9542 (0000 0001)
R8	OCTETSTRING[1]	reserved, transmitted as zero
R3	BITSTRING[3]	reserved, transmitted as zero
PDU_Type	PDUCode	00100 for ISH PDU
HoldingTime	Time	
Checksum	Checksum	
Detailed Comments :		

Structured Type Definition		
Type Name : ISISComPart **Comments :** ISIS PDU Common Part		
Element Name	**Type Definition**	**Comments**
NPD	NPD	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	Len_Ind	Length of fixed header in octets
VPIdE	Verid	Version ID extension ('01'O)
ID_Len	ID_Len	Length of ID field of NSAP and NETs
R3	BITSTRING[3]	reserved 3 bits. transmitted as zeros
PDUType	PDUCode	PDU code, 17 for PtPtIIH
Version	Verid	'01'O
MAA	INTEGER	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Definition		
Type Name : LSPEntry **Comments :** LSP Entry		
Element Name	**Type Definition**	**Comments**
RemainLifetime	Time	Remaining lifetime, 2 octets
LSPId	LSPId	LSP ID, coonsists of SourceID, Pseudonode ID and LSP number
SN	INTEGER	Sequence number
Checksum	Checksum	Checksum
Detailed Comments :		

Structured Type Definition		
Type Name : LSPId **Comments :** The system ID of the source of the LS PDU		
Element Name	**Type Definition**	**Comments**
SourceID	OCTETSTRING[1]	source system ID with ID length
PseudonodeID	OCTETSTRING[1]	Pseudonode ID
LSPNum	INTEGER	LSP number
Detailed Comments :		

Structured Type Definition		
Type Name : NETpar		
Comments : Network Entity Title parameter defined in ISO9542, ES/IS routing protocol		
Element Name	**Type Definition**	**Comments**
NET_Len	INTEGER	Length of the NET
NET	OCTETSTRING	Network Entity Title
Detailed Comments :		

Structured Type Definition		
Type Name : SNP_SourID		
Comments : The system ID extended with zero circuit type of the IS generating this Sequence Numbers PDU		
Element Name	**Type Definition**	**Comments**
SourID	NetAddr	
CirID	OCTETSTRING[1]	
Detailed Comments :		

ASN.1 Type Definition

Type Name : AAs

Comments : Area Addresses

Type Definition

```
SEQUENCE {
        code ParCode,   -- '01') for area Addresses
        length Len_Ind,
        value SET OF
            SEQUENCE {
                aL Len_Ind,   -- Address Length
                aA OCTET STRING  -- Area Addresses (SIZE(AL ... AL)
                }
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : AInfo

Comments : Authentication Information

Type Definition

```
SEQUENCE {
        code   ParCode,
        length   Len_Ind,
        value    SEQUENCE{
                    aType    OCTET STRING (SIZE(1)),
                    aValue   OCTET STRING OPTIONAL}
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : ESNbs

Comments : End system neighbors to htis system, used in LSPs

Type Definition

```
SEQUENCE {
        code    ParCode,            -- '03'O for ES neighbors
        length  Len_Ind,
        value   SEQUENCE OF SEQUENCE {
                    mxs MxItems,    -- the four metrics
                    nbs   SET OF NetAddr    -- Neighbor Ids
                }
    }
```

Detailed Comments :

ASN.1 Type Definition

Type Name : GOpar

Comments : The General Option part in ISH defined in section 7.4 , ISO/IEC9642

Type Definition

```
SET OF SEQUENCE{
            code  OCTET STRING (1),
            length  OCTET STRING(1),
            value OCTET STRING   -- SIZE(Length)
}
```

Detailed Comments : cod code options are: security, QOS, priority, address mark, SNPA mask and suggested ES configuration timer.

ASN.1 Type Definition

Type Name : ISNbs

Comments : IS Neighbors to this system

Type Definition

```
SEQUENCE{
        code        ParCode,    -- '02'O for IS neighbors
        length      Len_Ind,
        value       SEQUENCE {
                        vFlag       VFlag,
                        nbs         SET OF
                                    SEQUENCE {
                                        mxs    MxItems,    -- the four metrics
                                        nId    NId      -- Neighbor Id, length is length of NId + 1 octets
                                    }
                    }
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : JOpar

Comments : The Joint Option part

Type Definition

```
SET OF SET {
        aAs         AAs   OPTIONAL,          -- Area Addresses
        iSNbs       ISNbs OPTIONAL,         -- IS Neighbors, used in LSPs
        eSNbs       ESNbs   OPTIONAL ,      -- ES Neighbors
        pDIS        PDIS    OPTIONAL,       -- Partition DIS
        pNbs        PNbs OPTIONAL,          -- Prefix neighbors, used in L2 LSP
        lanISNbs    LanISNbs  OPTIONAL,     -- IS Neighbors on the Lan
        padding     Padding  OPTIONAL,      -- Padding
        lSPEntries  LSPEntries OPTIONAL,    -- LSP Entries
        aInfo       AInfo OPTIONAL          --  Authentication Infomation
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : LSPEntries

Comments : LSP Entries, used in CSNPs and PSNPs

Type Definition

```
SEQUENCE {
        code        ParCode,   -- '11' for LSP entries
        length      Len_Ind,
        value       SET OF SEQUENCE{
                        rLT     Time,
                        lspId   LSPSysId,
                        sN      INTEGER,
                        cSUM    Checksum
                    }
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : LSPSysId

Comments :

Type Definition

```
SEQUENCE{
        sId   NetAddr ,
        pId   OCTET STRING(1) ,
        LSPn  INTEGER
 }
```

Detailed Comments :

ASN.1 Type Definition

Type Name : LanISNbs

Comments : IS Neighbors on this LAN, used in LanIIHs

Type Definition

```
SEQUENCE{
        code     ParCode,   −−'06'O  for LAN IS neighbors
        length    Len_Ind ,
        value    SET OF LanMACAddress  −− Size ( 6 for each LAN address)
       }
```

Detailed Comments :

ASN.1 Type Definition

Type Name : MxItem

Comments : Metrix Items

Type Definition

```
SEQUENCE {
          S    SUInd,      −− Supported/Unsupported indicator
          IE   MxType,     −− Metric type: Internal/External
          Value  INTEGER(0..63)  −− Metrix value
}
```

Detailed Comments :

ASN.1 Type Definition

Type Name : MxItems

Comments : a suite of Metric Items, used in ISNbs, ESNbs and PNbs

Type Definition

```
SEQUENCE {
              DefaultMx      MxItem,
              DelayMx        MxItem,
              ExpenseMx      MxItem,
              ErrorMx        MxItem
        }
```

Detailed Comments :

ASN.1 Type Definition

Type Name : MxType

Comments : Metric Type

Type Definition

```
BIT STRING (SIZE(1))   −− InternalMx ('0'B), externalMx ('1'B)
```

Detailed Comments :

ASN.1 Type Definition
Type Name : NId
Comments : Neigbor System ID + 1 octet (0 for IS, no zero for designated IS)
Type Definition

SEQUENCE {
sId OCTET STRING (1..8),
add_to_sId OCTET STRING (SIZE(1))
}

Detailed Comments :

ASN.1 Type Definition
Type Name : OpGen
Comments : The general format of parameters in the option part
Type Definition
SEQUENCE{ code OCTET STRING(SIZE(1)), length OCTET STRING(SIZE(1)), value OCTET STRING −− SIZE (Length ... Length) }
Detailed Comments :

ASN.1 Type Definition
Type Name : Padding
Comments : padding
Type Definition

SEQUENCE{
code OCTET STRING(1),
length INTEGER(0..255),
value OCTET STRING −− SIZE(Length)
}

Detailed Comments :

ASN.1 Type Definition
Type Name : PDIS
Comments : Partition Designated L2 IS, used in L2 LSPs
Type Definition
OpGen −− ParCode = (Partition DIS which is 4)
Detailed Comments :

ASN.1 Type Definition
Type Name : PNbs
Comments : prefix neighbors to this system, used in level 2 LSPs
Type Definition

SEQUENCE {
Code ParCode, −− '05'O for Prefix Neighbors
Length Len_Ind,
Value SEQUENCE {
mxs MxItems, −− the four matrics
subvalue SET OF SEQUENCE {
prefix_len INTEGER(0.. 255),
prefix OCTET STRING
}
}
}

Detailed Comments :

ASN.1 Type Definition
Type Name : SUInd
Comments : Supported/unsupported indicator
Type Definition
BIT STRING (SIZE(1)) −− Unsupport ('0'B), supported ('1'B)
Detailed Comments :

ASN.1 Type Definition
Type Name : VFlag
Comments : Virtual flag defined in LSPs. When set to 0, this indicates the link is really a Level 2 path to repair an area partion. Level 1 IS should always report it as 0.
Type Definition
IdCode −− real path to repair ('0'O), virtual path to repair ('1'O)
Detailed Comments :

Test Suite Operation Definition	
Operation Name	: TSO_Config(operation:IA5String)
Result Type	: IA5String
Comments	:
Description	
/* The user should response to what the IA5String requests*/	
Detailed Comments	:

Test Suite Operation Definition	
Operation Name	: GetHeaderLen
Result Type	: Len_Ind
Comments	: 14+ID_Length
Description	
Detailed Comments	: This funciton is used to get the value of the Length_Indication field in ISIS PDUs. It returns an integer with value of (14+ID_Length). The ID_length field shall take the following values: (1) An integer between 1 and 8, indicating an ID field of the corresponding length. (2) The value zero indicates a 6 octet ID field length. (3) The value 255 indicates a null ID field.

Test Suite Operation Definition	
Operation Name	: GetL1LSPChecksum
Result Type	: Checksum
Comments	:
Description	
Detailed Comments	: calculate the checksum field for L1LSP. The checksum is computed over all fields in the LSP which appear after the Remaining Lifetime field.

Test Suite Operation Definition	
Operation Name	: GetWrongL1LSPChecksum
Result Type	: Checksum
Comments	:
Description	
Detailed Comments	: calculate the checksum field for L1LSP. The checksum is computed over all fields in the LSP which appear after the Remaining Lifetime field. Then add 1 to it to make an incorrect checksum

Test Suite Operation Definition	
Operation Name	: SentPDULen(msg:PDU)
Result Type	: Entire_PDU_Len
Comments	: entire ISIS PDU length including header
Description	
Detailed Comments	: Calculate the length of entire PDU to be sent out

Test Suite Operation Definition	
Operation Name	: RCVPDULen(msg:PDU)
Result Type	: INTEGER
Comments	: Calculate the received msg length
Description	
Detailed Comments	:

Test Suite Operation Definition	
Operation Name	: padValue(i:INTEGER)
Result Type	: OCTETSTRING
Comments	: Generate a OCTET STRING with length of i.
Description	
Detailed Comments	:

Test Suite Parameter Declarations			
Parameter Name	**Type**	**PICS/PIXIT Ref**	**Comments**
AreaAddress1	OCTETSTRING	PIXIT	Enter the IUT's first area address
AreaAddress2	OCTETSTRING	PIXIT	Enter the IUT's 2nd area address i
AreaAddress3	OCTETSTRING	PIXIT	Enter the IUT's 3rd area address i
AreaAddressLength	INTEGER	PIXIT	Enter the Address Length
CSNPIntvl	INTEGER	PIXIT	Enter the CSNP Interval in unit of second
HoldingTime	INTEGER	PIXIT	Enter the HoldingTime, which is 10* iSISHelloTimer
IUT_NetAddr	OCTETSTRING	PIXIT	Enter the IUT's Network Address
IUTPassword	OCTETSTRING	PIXIT	Enter the password of the circuit between MOT and IUT (Less than 254 octet long)
IUTPasswordLength	INTEGER	PIXIT	Enter the length of the password
InvalidAreaAddress1	OCTETSTRING	PIXIT	Enter the 1st areaAddress that is not in the IUT's manualAreaAddresses attribute.
InvalidAreaAddress2	OCTETSTRING	PIXIT	Enter the 2nd areaAddress that is not in the IUT's manualAreaAddresses attribute.
InvalidAreaAddress3	OCTETSTRING	PIXIT	Enter the 3rd areaAddress that is not in the IUT's manualAreaAddresses attribute.
InvalidPassword	OCTETSTRING	PIXIT	Enter an password which differs from the IUTPassword but with the same length of IUTPassword
iSISHelloTimer	INTEGER	PIXIT	Enter the period of the iSIS Hello Timer
MaxAA	INTEGER	PIXIT	Enter the value of Maximum Area Addresses, (default is 3)
MaxLSPGenIntvl	INTEGER	PIXIT	Enter the Maximum LSP Genration Interval in unit of second.
MOT_SId	OCTETSTRING	PIXIT	Enter the System ID of the MOT
MinLSPGenIntvl	INTEGER	PIXIT	Enter the Minimum LSP Generation Interval in unit of second.
MinLSPTransInterval	INTEGER	PIXIT	Enter the minimum LSP transmission interval.
maxsize	INTEGER	PIXIT	Enter maxsize which is the maximum if dataLinkBlocksize, originatingL1LSPBufferSize and originatingL2LSPBufferSize

Continued on next page

Continued from previous page

Test Suite Parameter Declarations			
Parameter Name	**Type**	**PICS/PIXIT Ref**	**Comments**
NET_Len	INTEGER	PIXIT	Enter the length of Network Entity Title of the tester for sending ISH to the IUT
SysA_SId	OCTETSTRING	PIXIT	Enter a system ID which is differ from that of the IUT and that of the MOT
SysC_SId	OCTETSTRING	PIXIT	Enter a system ID which is differ from that of the IUT, the MOT , the SysA and SysB
SysB_SId	OCTETSTRING	PIXIT	Enter a system ID which is differ from that of the IUT, the MOT and the SysA
PSNPInterval	INTEGER	PIXIT	Enter the Partial sequence number PDU interval in unit of second.
nonMaxAA	INTEGER	PIXIT	Enter a value that is not equal to the MAA.
Tester_NET	OCTETSTRING	PIXIT	Enter the NET of the tester
Detailed Comments :			

Test Suite Constant Declarations			
Constant Name	**Type**	**Value**	**Comments**
AAsValueLen_1	INTEGER	1+AreaAddressLength	length field in Area Address field with only 1 area address
AAsValueLen_3	INTEGER	3+3*AreaAddressLength	Length field in Area Address field with 3 area addresses
CHECKSUM	Checksum	'0000'O	Choose to be ignored
Default_ID_Len	ID_Len	6	
IIH_PtPt_Header_Len	INTEGER	20	length of fixed header in PtPt IIH, assuming SOURCE ID is 6 bytes in length (Ethernet address).
ISISHoldingMultiplier	INTEGER	10	defined in Table 2
L1CSNPDU	PDUCode	'11000'B	24 for L1 CSNP
L1LSP_Header_Len	INTEGER	27	len. of fixed header in L1LSP, assuming source ID is 6 bytes in length
L1LSPPDU	PDUCode	'10010'B	PDU type for L1LSP PDU
L1L2	CirType	'11'B	
L1Only	CirType	'01'B	'01'B for L1 Only IS
L2Only	CirType	'10'B	'10'B for L2 Only IS
L1PSNP_Header_Len	INTEGER	17	assuming source ID is 6 byte long
L1pSNP	PDUCode	'11010'B	26 for pSNP
ShortHoldingTime	INTEGER	1*iSISHelloTimer	seconds
MaxAge	INTEGER	1200	20min, defined in 7.3.21
padding	OCTETSTRING	'10'O	Parcode for padding
padValueLen_PtPt_Base	INTEGER	maxsize−20	pad PtPtIIH to be longer than (maxsize−1)
ptPtIIHPDU	PDUCode	'10001'B	PDU type for PtPtIIH
R3	BITSTRING	'000'B	
R8	OCTETSTRING	'01'O	
Version	Verid	'01'O	version field in ISIS PDUs
VPIdE	Verid	'01'O	version/protocol Id extension
VPIdE_ESIS	Verid	'01'O	
ZeroAgeLifetime	INTEGER	60	1min, defined in 7.3.21
areaAddressCode	OCTETSTRING	'01'O	Parcode for areaAddress
iso9542	NPD	'82'O	(1000 0010'B)
iso10589	NPD	'83'O	(1000 0011'B)
maxJitter	INTEGER	(1/4)*iSISHelloTimer	25% of iSISHelloTimer
Detailed Comments :			

Test Suite Variable Declarations			
Variable Name	**Type**	**Value**	**Comments**
A0	INTEGER		variable for readtimer
A1	INTEGER		variable for readtimer
LSPnumber1	INTEGER		
LSPnumber2	INTEGER		
SN1	INTEGER		sequence number
SN2	INTEGER		sequence number
SeqNum	INTEGER		
RLT	Time		Remaining LifeTime
pl	PDU_Len		
ReportedCsum	Checksum		
tempATT	BITSTRING		
tempISISComPart	ISISComPart		
tempISType	BITSTRING		
tempLSPDBOL	BITSTRING		
tempLSPEntry	LSPEntry		
tempPR	BITSTRING		
tempVLFs	JOpar		
event	IA5String		
Detailed Comments :			

Test Case Variable Declarations			
Variable Name	**Type**	**Value**	**Comments**
TCV_msg	IA5String		
ExternalDomainAttribute	BOOLEAN	FALSE	
Detailed Comments :			

PCO Declarations			
PCO Name	**PCO Type**	**Role**	**Comments**
A	ISIS_SAP	LT	Primary Test Point
B	ISIS_SAP	LT	Secondary Test Point
Detailed Comments :			

Timer Declarations			
Timer Name	**Duration**	**Unit**	**Comments**
iiCSNPInterval	CSNPIntvl	s	
MaxAgePlusZeroAgeLifetime	MaxAge+ZeroAgeLifetime	s	LSP deleted after this value
MinLSPTI	2*MinLSPTransInterval	s	sec. 7.3.15.5
PSNPIntvl	PSNPInterval	s	
helloTime	iSISHelloTimer	s	
holdingTime	ISISHoldingMultiplier*iSISHelloTimer	s	
maxLSPGI	MaxLSPGenIntvl	s	
Detailed Comments :			

PDU Type Definition		
PDU Name : ISH **PCO Type :** ISIS_SAP **Comments :** IS Hello PDU		
Field Name	**Field Type**	**Comments**
ESISFixPart	ESISFixPart	ES to IS PDU common part
NETpar	NETpar	Network Entity Title parameters
Ops	GOpar	General Option part
Detailed Comments : Reference: Section 7 in ISO/IEC 9542		

PDU Type Definition		
PDU Name : L1CSNP **PCO Type :** ISIS_SAP **Comments :** Level 1 complete sequence number PDUs		
Field Name	**Field Type**	**Comments**
ISISComPart	ISISComPart	ISIS PDU Common Part
L1CSNP_Len	PDU_Len	L1CSNP Length
CSNP_SourID	SNP_SourID	Source System ID + zero circuit ID
Start_LSP_ID	LSPId	LSP ID of first LSP (ID Len+2)
End_LSP_ID	LSPId	LSP ID of last LSP (ID Len+2)
VLFs	JOpar	Variable length fields
Detailed Comments :		

PDU Type Definition		
PDU Name : L1LSP **PCO Type :** ISIS_SAP **Comments :** Level 1 Link state PDU		
Field Name	**Field Type**	**Comments**
ISISComPart	ISISComPart	ISIS PDU Common Part
L1LSPDU_Len	PDU_Len	L1LSPDU length
LSPEntry	LSPEntry	
PartitionRepair	BITSTRING[1]	partion repair options
ATT	BITSTRING[4]	metrics options
LSPDBOL	BITSTRING[1]	LSP database overload indicator
ISType	BITSTRING[2]	
VLFs	JOpar	variable length fields, joint option part
Detailed Comments :		

PDU Type Definition		
PDU Name : L1PSNP **PCO Type :** ISIS_SAP **Comments :** Level 1 Partial sequnce number PDU		
Field Name	**Field Type**	**Comments**
ISISComPart	ISISComPart	ISIS PDU Common Part
L1PSNP_Len	PDU_Len	L1PSNP Length
PSNP_SourID	SNP_SourID	
VLFs	JOpar	
Detailed Comments :		

PDU Type Definition		
PDU Name : PtPtIIH **PCO Type :** ISIS_SAP **Comments :** PtPtIIH PDU		
Field Name	**Field Type**	**Comments**
ISISComPart	ISISComPart	ISIS PDU Common Part
R6	BITSTRING[6]	reserved 6 bits, transmitted as zeros
CircuitType	CirType	Circuit Type, can be L1, L2 or L1L2
SourceID	NetAddr	Source System ID − Network address
HT	Time	Holding time
IIH_PDU_LEN	PDU_Len	
LCID	BITSTRING[8]	Local circuit ID
VLFs	JOpar	
Detailed Comments :		

III

Constraints Part

Structured Type Constraint Declaration		
Constraint Name : ESISFixPart_Base		
Structured Type : ESISFixPart		
Derivation Path :		
Comments : Derivation base template constrain for ESISComPart		
Element Name	**Element Value**	**Comments**
NLPID	iso9542	
ISH_PDU_Len	30	assuming NET is 20 bytes, no VLFs
VPIdE_ESIS	’01’O	version/protocol ID extension
R8	’00’O	
R3	’000’B	
PDU_Type	’00100’B	ISH PDU
HoldingTime	HoldingTime	
Checksum	CHECKSUM	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_L1CSNP_ByIUT		
Structured Type : ISISComPart		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	?	Length of fixed header in octets
VPIdE	?	Version ID extension (’01’O)
ID_Len	?	Length of ID field of NSAP and NETs,
R3	?	reserved 3 bits. transmitted as zeros
PDUType	’11000’B	PDU code,
Version	?	’01’O
MAA	?	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_L1CSNP_Send		
Structured Type : ISISComPart		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	35	Length of fixed header for L1CSNP
VPIdE	VPIdE	Version ID extension (’01’O)
ID_Len	Default_ID_Len	Length of ID field of NSAP and NETs,
R3	R3	reserved 3 bits. transmitted as zeros
PDUType	’11000’B	PDU code, 24 for L1CSNP
Version	Version	’01’O
MAA	MaxAA	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_L1LSP_Base		
Structured Type : ISISComPart		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	L1LSP_Header_Len	Length of fixed header in octets
VPIdE	VPIdE	Version ID extension (’01’O)
ID_Len	Default_ID_Len	Length of ID field of NSAP and NETs,
R3	R3	reserved 3 bits. transmitted as zeros
PDUType	L1LSPPDU	PDU code,
Version	Version	’01’O
MAA	MaxAA	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_L1LSP_Otherwise		
Structured Type : ISISComPart		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	?	Length of fixed header in octets
VPIdE	?	Version ID extension ('01'O)
ID_Len	?	Length of ID field of NSAP and NETs,
R3	?	reserved 3 bits. transmitted as zeros
PDUType	L1LSPPDU	PDU code,
Version	?	'01'O
MAA	?	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_PSNP_Base		
Structured Type : ISISComPart		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	L1PSNP_Header_Len	Length of fixed header in octets
VPIdE	VPIdE	Version ID extension ('01'O)
ID_Len	Default_ID_Len	Length of ID field of NSAP and NETs
R3	R3	reserved 3 bits. transmitted as zeros
PDUType	L1pSNP	PDU code, 26 for L1PSNP
Version	Version	'01'O
MAA	MaxAA	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration

Constraint Name : ISISComPart_PtPtIIH_Base
Structured Type : ISISComPart
Derivation Path :
Comments : Derivation base template for ISISComPart in PtPtIIH

Element Name	Element Value	Comments
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	IIH_PtPt_Header_Len	Length of fixed header in octets
VPIdE	VPIdE	Version ID extension (’01’O)
ID_Len	Default_ID_Len	Length of ID field of NSAP and NETs,
R3	R3	reserved 3 bits. transmitted as zeros
PDUType	ptPtIIHPDU	PDU code, 17 for PtPtIIH
Version	Version	’01’O
MAA	MaxAA	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.

Detailed Comments :

Structured Type Constraint Declaration

Constraint Name : ISISComPart_PtPtIIH_Inv_IDL(IDLen:INTEGER)
Structured Type : ISISComPart
Derivation Path : ISISComPart_PtPtIIH_Base.
Comments : Derivation base template for ISISComPart in PtPtIIH

Element Name	Element Value	Comments
ID_Len	IDLen	Length of ID field of NSAP and NETs,

Detailed Comments :

Structured Type Constraint Declaration

Constraint Name : ISISComPart_PtPtIIH_MAA0
Structured Type : ISISComPart
Derivation Path : ISISComPart_PtPtIIH_Base.
Comments : Derivation base template for ISISComPart in PtPtIIH

Element Name	Element Value	Comments
MAA	0	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.

Detailed Comments :

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_PtPtIIH_Inv_MAA(value:INTEGER)		
Structured Type : ISISComPart		
Derivation Path : ISISComPart_PtPtIIH_Base.		
Comments : Derivation base template for ISISComPart in PtPtIIH		
Element Name	**Element Value**	**Comments**
MAA	value	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_PtPtIIH_Otherwise		
Structured Type : ISISComPart		
Derivation Path :		
Comments : Derivation base template for ISISComPart in PtPtIIH		
Element Name	**Element Value**	**Comments**
NPD	iso10589	Network protocol discriminator, 1000 0011 for ISO 10589
Header_Len	?	Length of fixed header in octets
VPIdE	?	Version ID extension (’01’O)
ID_Len	?	Length of ID field of NSAP and NETs,
R3	?	reserved 3 bits. transmitted as zeros
PDUType	ptPtIIHPDU	PDU code, 17 for PtPtIIH
Version	?	’01’O
MAA	?	# of permitted area addresses, 1 − 254 for corresponding #s. zero means 3 AAs.
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : ISISComPart_PtPtIIH_Send_IDL0		
Structured Type : ISISComPart		
Derivation Path : ISISComPart_PtPtIIH_Base.		
Comments : Derivation base template for ISISComPart in sending a PtPtIIH		
Element Name	**Element Value**	**Comments**
ID_Len	0	Length of ID field of NSAP and NETs,
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : IUT_SNP_SourID		
Structured Type : SNP_SourID		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
SourID	IUT_NetAddr	
CirID	'00'O	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT(sn:INTEGER;lspnum:INTEGER)		
Structured Type : LSPEntry		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
RemainLifetime	MaxAge	Remaining lifetime, 2 octets
LSPId	LSPId_MOT(lspnum)	LSP ID, coonsists of SourceID, Pseudonode ID and LSP number
SN	sn	Sequence number
Checksum	GetL1LSPChecksum()	Checksum
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_1		
Structured Type : LSPEntry		
Derivation Path :		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 1		
Element Name	**Element Value**	**Comments**
RemainLifetime	MaxAge	
LSPId	LSPId_MOT_1	
SN	1	Sequence number
Checksum	GetL1LSPChecksum()	Checksum
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_NZRLT_1		
Structured Type : LSPEntry		
Derivation Path : LSPEntry_MOT_ZRLT_1.		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 1		
Element Name	**Element Value**	**Comments**
RemainLifetime	MaxAge	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_NZRLT_2		
Structured Type : LSPEntry		
Derivation Path : LSPEntry_MOT_ZRLT_1.		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 2		
Element Name	**Element Value**	**Comments**
RemainLifetime	MaxAge	Sequence number
SN	2	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_ZRLT_1		
Structured Type : LSPEntry		
Derivation Path :		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 1		
Element Name	**Element Value**	**Comments**
RemainLifetime	0	
LSPId	LSPId_MOT_1	
SN	1	Sequence number
Checksum	GetL1LSPChecksum()	Checksum
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_ZRLT_2		
Structured Type : LSPEntry		
Derivation Path : LSPEntry_MOT_ZRLT_1.		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 2		
Element Name	**Element Value**	**Comments**
SN	2	Sequence number
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_MOT_MaxSN		
Structured Type : LSPEntry		
Derivation Path : LSPEntry_MOT_1.		
Comments : Link state entry for link between MOT and IUT with Sequence number set to 1		
Element Name	**Element Value**	**Comments**
SN	4294967295	MaxSequenceNumber, 2**32 −1
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPEntry_NZRLT_WrongCsum(sn:INTEGER;checksum:Checksum)		
Structured Type : LSPEntry		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
RemainLifetime	MaxAge	
LSPId	LSPId_MOT_1	LSPNum=1, SId=MOT_SId
SN	sn	
Checksum	checksum	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPId_MOT(lspnum:INTEGER)		
Structured Type : LSPId		
Derivation Path :		
Comments : LSP ID with MOT as System ID, pssedonde ID is set to 0 and LSP number is 1.		
Element Name	**Element Value**	**Comments**
SourceID	MOT_SId	
PseudonodeID	’00’O	
LSPNum	lspnum	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : LSPId_MOT_1		
Structured Type : LSPId		
Derivation Path :		
Comments : LSP ID with MOT as System ID, pssedonde ID is set to 0 and LSP number is 1.		
Element Name	**Element Value**	**Comments**
SourceID	MOT_SId	
PseudonodeID	'00'O	
LSPNum	1	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : MOT_SNP_SourID		
Structured Type : SNP_SourID		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
SourID	MOT_SId	
CirID	'00'O	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : NETpar_Base		
Structured Type : NETpar		
Derivation Path :		
Comments : Derivation base template constrain for NETpar		
Element Name	**Element Value**	**Comments**
NET_Len	NET_Len	
NET	Tester_NET	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : SNP_MOT_SId		
Structured Type : SNP_SourID		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
SourID	MOT_SId	
CirID	'00'O	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : lspid_ByMOT_LSP(lspnum:INTEGER)		
Structured Type : LSPId		
Derivation Path :		
Comments :		
Element Name	**Element Value**	**Comments**
SourceID	MOT_SId	source system ID
PseudonodeID	'00'O	Pseudonode ID
LSPNum	lspnum	LSP number
Detailed Comments :		

ASN.1 Type Constraint Declaration
Constraint Name : AAs_Base
ASN1 Type : AAs
Derivation Path :
Comments : Area Addres basic template for sending PtPtIIH from MOT to IUT
Constraint Value

```
{
        code        areaAddressCode,
        length      AAsValueLen_3,
        value{
                { aL   AreaAddressLength,
                  aA   AreaAddress1  },

                { aL    AreaAddressLength,
                  aA    AreaAddress2   },

                { aL    AreaAddressLength,
                  aA    AreaAddress3}
            }


}
```

Detailed Comments : Area Addresses are set locally by the IS management. This template contains 3 area addresses that are configured in the IUTs manualAreaAddresses attribute.

ASN.1 Type Constraint Declaration

Constraint Name : AAs_Invalid
ASN1 Type : AAs
Derivation Path :
Comments : Area Addres basic template for sending PtPtIIH from MOT to IUT

Constraint Value

```
{
        code        areaAddressCode,
        length      AAsValueLen_3,
        value{
                {   aL   AreaAddressLength,
                    aA   InvalidAreaAddress1  },

                {    aL     AreaAddressLength,
                     aA     InvalidAreaAddress2   },

                {   aL      AreaAddressLength,
                    aA      InvalidAreaAddress3}
              }


}
```

Detailed Comments : Area Addresses are set locally by the IS management. This template contains 3 area addresses that are configured in the IUTs manualAreaAddresses attribute.

ASN.1 Type Constraint Declaration

Constraint Name : AInfo_IUTPasswd
ASN1 Type : AInfo
Derivation Path :
Comments :

Constraint Value

```
{

        code    '12'O ,       -- 10 for Authentication Info.
        length    IUTPasswordLength+1,   -- input as PIXIT
        value    {

                    aType   '01'O,
                    aValue    IUTPassword

                }




}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : ISNbs_IUTNid_PtPt
ASN1 Type : ISNbs
Derivation Path :
Comments : IUT as an IS neighbor to other IS system

Constraint Value

```
{
        code      '02'O,
        length    12,        -- 1 + multiple of ( IDlength +5), the ID Length  is 6
        value   {
                vFlag   '00'O ,
                nbs     { {
                        mxs   mxs_0,
                        nId   {
                                sId   IUT_NetAddr,   -- IUT's System ID
                                add_to_sId   '00'O
                            }                        -- Neighbor ID:  IUT System ID followed by 1 octet of 0s
                        }
                    }

            }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : ISNbs_MOTNid_PtPt
ASN1 Type : ISNbs
Derivation Path :
Comments : MOT as the IS neighbor to the IUT

Constraint Value

```
{
        code      '02'O,
        length    12,        -- 1 + multiple of ( IDlength +5), the ID Length  is 6
        value   {
                vFlag   '00'O ,
                nbs     { {
                        mxs   mxs_0,
                        nId   {
                                sId   MOT_SId,   -- MOT's System ID
                                add_to_sId   '00'O
                            }                    -- MOT network ID followed by 1 octet of 0s
                        }
                    }

            }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_CSNP_MOT(Csum:Checksum)

ASN1 Type : JOpar

Derivation Path :

Comments : This CSNP contains one LSP entry with LSPNum = 1 and Seq. num = 1. Checksum is the value in the reported LSP

Constraint Value

```
{
  {
    lSPEntries  {
                  code    '11'O ,   -- for CSNP
                  length   16,
                  value  {
                           {
                             rLT    MaxAge,
                             lspId
                                 {  sId   MOT_SId,
                                    pId   '00'O,
                                    LSPn   1  },
                            sN      1,
                            cSUM     Csum

                             }

                           }

                }
    }

}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_CSNP_MOT_SN2(Csum:Checksum)
ASN1 Type : JOpar
Derivation Path :
Comments : This CSNP contains one LSP entry with LSPNum = 1 and Seq. num = 2. Checksum is the value in the reported LSP

Constraint Value

```
{
  {
    lSPEntries  {
                  code    '11'O ,   -- for CSNP
                  length   16,
                  value  {
                           {
                             rLT    MaxAge,
                             lspId
                                 {  sId   MOT_SId,
                                    pId   '00'O,
                                    LSPn   1  },
                            sN     2,
                            cSUM     Csum

                             }

                          }

                }
    }

}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_IUTNID_PtPt
ASN1 Type : JOpar
Derivation Path :
Comments : Joint option part constaint for LSP PDU

Constraint Value

```
{

    {
       iSNbs    ISNbs_IUTNid_PtPt
     }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration	
Constraint Name	: JOpar_MOTNID_PtPt
ASN1 Type	: JOpar
Derivation Path	:
Comments	: Joint option part constaint for LSP PDU

Constraint Value

```
{

    {
        iSNbs    ISNbs_MOTNid_PtPt
     }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration	
Constraint Name	: JOpar_L1LSP_GenBy_OtherSys
ASN1 Type	: JOpar
Derivation Path	:
Comments	:

Constraint Value

```
{
  {
     iSNbs      ISNbs_IUTNid_PtPt

  }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_L1PSNP_IUTtoMOT(sn:INTEGER; lspn:INTEGER)
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
    {
     lSPEntries   {
                      code    '11'O,
                      length     ?,
                      value   { {
                                  rLT    ?,
                                  lspId   {
                                            sId   MOT_SId,
                                            pId  ?,
                                            LSPn  lspn
                                           },
                                  sN    sn,
                                  cSUM   ? }
                                }
                    } ,
       aInfo      ?
    }


}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_L1PSNP_MOTtoIUT(sn:INTEGER; lspn:INTEGER; Csum:Checksum;rlt:Time)
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
    {
     lSPEntries   {
                      code    '11'O,
                      length     16,
                      value   { {
                                  rLT    rlt,
                                  lspId   {
                                            sId   MOT_SId,
                                            pId  '00'O,
                                            LSPn  lspn
                                           },
                                  sN    sn,
                                  cSUM   Csum}
                                }
                    }

    }


}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_L1PSNP_IUT_SN(sn:INTEGER; lspn:INTEGER)
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
    {
     lSPEntries   {
                      code    '11'O,
                      length     ?,
                      value   { {
                                  rLT    ?,
                                  lspId   {
                                            sId   IUT_NetAddr,
                                            pId  ?,
                                            LSPn  lspn
                                           },
                                  sN    sn,
                                  cSUM   ? }
                                }
                    } ,
       aInfo       ?
    }


}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Recv_Padding
ASN1 Type : JOpar
Derivation Path :
Comments : constraint for padding

Constraint Value

```
{
        {
            aAs             *,
            padding       {
                            code    '10'O,
                            length   ?,
                            value     ?
                           },
             aInfo        *
         }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Recv_AI
ASN1 Type : JOpar
Derivation Path :
Comments : constraint for padding

Constraint Value

```
{
        {
             aAs            *,
             padding        *,
              aInfo         {
                              code   '12'O,
                              length  *,
                              value    {
                                         aType  '01'O,
                                         aValue   IUTPassword }
                            }

          }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Non_AI
ASN1 Type : JOpar
Derivation Path :
Comments : constraint for padding

Constraint Value

```
{
        {
             aAs            *,
             padding        *,
              aInfo         –

          }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Send_AI
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
   {
      aAs           AAs_Base,
      padding       Padding_PtPt_Send_Base,
      aInfo         AInfo_IUTPasswd
   }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Send_Base
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
   {
      aAs           AAs_Base,
      padding       Padding_PtPt_Send_Base
   }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Send_Inv_AAs
ASN1 Type : JOpar
Derivation Path : JOpar_PtPtIIH_Send_Base.
Comments :

Constraint Value

```
{
   {
      aAs      AAs_Invalid
    }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Send_Inv_AIType
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
   {
      aAs           AAs_Base,
      padding       Padding_PtPt_Send_Base,
      aInfo       {
                        code   '12'O,
                        length  IUTPasswordLength,
                        value   {
                                  aType  '10'O,              -- Invalid  AI type. It is 1 for password
                                  aValue   IUTPassword }
                  }
   }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : JOpar_PtPtIIH_Send_Inv_Passwd
ASN1 Type : JOpar
Derivation Path :
Comments :

Constraint Value

```
{
   {
      aAs           AAs_Base,
      padding       Padding_PtPt_Send_Base,
      aInfo       {
                        code   '12'O,
                        length  IUTPasswordLength,
                        value   {
                                  aType  '01'O,
                                  aValue   InvalidPassword }
                  }
   }
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : mxs_0
ASN1 Type : MxItems
Derivation Path :
Comments : choose default matrix

Constraint Value

```
{
    DefaultMx    {
                    S           '0'B,
                    IE          '0'B,
                    Value         ?
                  },
      DelayMx   {
                    S           '1'B,
                    IE           '0'B,
                     Value      ?
                 },
       ExpenseMx  {
                     S          '1'B,
                      IE        ?,
                      Value      ?
                     },
       ErrorMx      {
                      S         '1'B,
                     IE         ?,
                      Value     ?
                 }


}
```

Detailed Comments :

ASN.1 Type Constraint Declaration

Constraint Name : Padding_Base
ASN1 Type : OpGen
Derivation Path :
Comments : Constraint for padding

Constraint Value

```
{
    code    padding,    -- code is 8 for padding
    length  ?,
    value    ?
}
```

Detailed Comments :

ASN.1 Type Constraint Declaration	
Constraint Name	: Padding_PtPt_Send_Base
ASN1 Type	: Padding
Derivation Path	:
Comments	:

Constraint Value

```
{
        code   padding,
         length      padValueLen_PtPt_Base,    −− from  test suit constant
         value       padValue(padValueLen_PtPt_Base)
}
```

Detailed Comments :

PDU Constraint Declaration		
Constraint Name : ISH_Base		
PDU Type : ISH		
Derivation Path :		
Comments : Derivation base templete constraint for ISH PDU		
Field Name	**Field Value**	**Comments**
ESISFixPart	ESISFixPart_Base	
NETpar	NETpar_Base	
Ops	OMIT	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1CSNP_ByIUT_Base		
PDU Type : L1CSNP		
Derivation Path :		
Comments : Level 1 complete sequence number PDUs		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1CSNP_ByIUT	ISIS PDU Common Part
L1CSNP_Len	?	L1CSNP Length
CSNP_SourID	IUT_SNP_SourID	Source System ID + zero circuit ID
Start_LSP_ID	?	LSP ID of first LSP (ID Len+2)
End_LSP_ID	?	LSP ID of last LSP (ID Len+2)
VLFs	?	Variable length fields
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1CSNP_Send_SN1(start_lspnum:INTEGER; end_lspnum:INTEGER; Csum:Checksum)		
PDU Type : L1CSNP		
Derivation Path :		
Comments : SN =1.		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1CSNP_Send	length = 8
L1CSNP_Len	50	length = 2
CSNP_SourID	SNP_MOT_SId	length = 6 (ID len +1)
Start_LSP_ID	lspid_ByMOT_LSP(start_lspnum)	length = 8 (ID len+2)
End_LSP_ID	lspid_ByMOT_LSP(end_lspnum)	length = 8 (ID len +2)
VLFs	JOpar_CSNP_MOT(Csum)	Variable length fields 18 octets
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1CSNP_Send_SN2(start_lspnum:INTEGER; end_lspnum:INTEGER; Csum:Checksum)		
PDU Type : L1CSNP		
Derivation Path : L1CSNP_Send_SN1.		
Comments : SN =1.		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_CSNP_MOT_SN2(Csum)	Variable length fields 18 octets
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Base		
PDU Type : L1LSP		
Derivation Path :		
Comments :		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Base	
L1LSPDU_Len	?	L1LSPDU length
LSPEntry	?	
PartitionRepair	?	partion repair options
ATT	?	metrics options
LSPDBOL	?	LSP database overload indicator
ISType	?	
VLFs	?	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_GenByMOT(sn:INTEGER;lspnum:INTEGER)		
PDU Type : L1LSP		
Derivation Path :		
Comments : Level 1 Link state PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Base	
L1LSPDU_Len	41	Header + VLFs (27+ 14) in this case
LSPEntry	LSPEntry_MOT(sn,lspnum)	link state entry for link between SysA and IUT sn and lspnum as variables
PartitionRepair	'0'B	partion repair options
ATT	'0001'B	metrics options
LSPDBOL	'0'B	LSP database overload indicator
ISType	'01'B	
VLFs	JOpar_L1LSP_GenBy_OtherSys	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_GenByOtherSys_NZRLT_1		
PDU Type : L1LSP		
Derivation Path : L1LSP_GenByOtherSys_ZRLT_1.		
Comments : This is to emulate an LSP generated by a system other than the IUT (RemainingLifeTime is set to MaxAge)		
Field Name	**Field Value**	**Comments**
LSPEntry	LSPEntry_MOT_NZRLT_1	link state entry for link between MOT and IUT with SN = 1.
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_GenByOtherSys_NZRLT_2		
PDU Type : L1LSP		
Derivation Path : L1LSP_GenByOtherSys_ZRLT_1.		
Comments :		
Field Name	**Field Value**	**Comments**
LSPEntry	LSPEntry_MOT_NZRLT_2	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_GenByOtherSys_ZRLT_1		
PDU Type : L1LSP		
Derivation Path :		
Comments : This is to emulate an LSP generated by a system other than the IUT (RemainingLifeTime is set to 0)		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Base	
L1LSPDU_Len	41	Header + VLFs (27+ 14) in this case
LSPEntry	LSPEntry_MOT_ZRLT_1	link state entry for link between MOT and IUT with SN = 1.
PartitionRepair	’0’B	partion repair options
ATT	’0001’B	metrics options
LSPDBOL	’0’B	LSP database overload indicator
ISType	’01’B	
VLFs	JOpar_L1LSP_GenBy_OtherSys	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_GenByOtherSys_ZRLT_2		
PDU Type : L1LSP		
Derivation Path : L1LSP_GenByOtherSys_ZRLT_1.		
Comments : This is to emulate an LSP generated by a system other than the IUT (RemainingLifeTime is set to 0)		
Field Name	**Field Value**	**Comments**
LSPEntry	LSPEntry_MOT_ZRLT_2	link state entry for link between MOT and IUT with SN = 2.
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Otherwise		
PDU Type : L1LSP		
Derivation Path :		
Comments : Level 1 Link state PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Otherwise	ISIS PDU Common Part
L1LSPDU_Len	?	L1LSPDU length
LSPEntry	?	
PartitionRepair	?	partion repair options
ATT	?	metrics options
LSPDBOL	?	LSP database overload indicator
ISType	?	
VLFs	?	variable length fields, joint option part
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Send_Base (PduLen:PDU_Len; TempLSPEntry:LSPEntry;TempVLFs:JOpar)		
PDU Type : L1LSP		
Derivation Path :		
Comments :		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Base	
L1LSPDU_Len	PduLen	L1LSPDU length
LSPEntry	TempLSPEntry	link state entry for link between MOT and IUT with SN = 1.
PartitionRepair	’0’B	partion repair options
ATT	’0001’B	metrics options
LSPDBOL	’0’B	LSP database overload indicator
ISType	’01’B	
VLFs	TempVLFs	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Send_maxSN(PduLen:PDU_Len;TempVLFs:JOpar)		
PDU Type : L1LSP		
Derivation Path : L1LSP_Send_Base.		
Comments : Level 1 Link state PDU		
Field Name	**Field Value**	**Comments**
L1LSPDU_Len	PduLen	L1LSPDU length
LSPEntry	LSPEntry_MOT_MaxSN	
VLFs	TempVLFs	variable length fields, joint option part
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Template(TempISISComPart:ISISComPart;PduLen:PDU_Len;TempLSPEntry:LSPEntry;TempPR:BITSTRING;TempATT:BITSTRING; TempLSPDBOL:BITSTRING;TempISType:BITSTRING;TempVLFs:JOpar)		
PDU Type : L1LSP		
Derivation Path :		
Comments :		
Field Name	**Field Value**	**Comments**
ISISComPart	TempISISComPart	
L1LSPDU_Len	PduLen	L1LSPDU length
LSPEntry	TempLSPEntry	
PartitionRepair	TempPR	partion repair options
ATT	TempATT	metrics options
LSPDBOL	TempLSPDBOL	LSP database overload indicator
ISType	TempISType	
VLFs	TempVLFs	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_IUTNID_PtPt		
PDU Type : L1LSP		
Derivation Path : L1LSP_Base.		
Comments : Point to point L1LSP with MOT as the IS Neighbor		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_IUTNID_PtPt	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_MOTNID_PtPt		
PDU Type : L1LSP		
Derivation Path : L1LSP_Base.		
Comments : Point to point L1LSP with MOT as the IS Neighbor		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_MOTNID_PtPt	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1LSP_Send_WrongCsum(sn:INTEGER; checksum:Checksum)		
PDU Type : L1LSP		
Derivation Path :		
Comments : Level 1 Link state PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_L1LSP_Base	
L1LSPDU_Len	41	Header + VLFs (27+ 14) in this case
LSPEntry	LSPEntry_NZRLT_WrongCsum(sn, checksum)	link state entry for link between MOT and IUT with SN = 1.
PartitionRepair	'0'B	partion repair options
ATT	'0001'B	metrics options
LSPDBOL	'0'B	LSP database overload indicator
ISType	'01'B	
VLFs	JOpar_L1LSP_GenBy_OtherSys	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1PSNP_IUTtoMOT(sn:INTEGER; lspn:INTEGER)		
PDU Type : L1PSNP		
Derivation Path :		
Comments : Level 1 Partial sequnce number PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PSNP_Base	ISIS PDU Common Part
L1PSNP_Len	?	entire length
PSNP_SourID	IUT_SNP_SourID	IUT's SystemID + '00'O
VLFs	JOpar_L1PSNP_IUTtoMOT(sn, lspn)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : L1PSNP_MOTtoIUT(sn:INTEGER;lspn:INTEGER;Csum:Checksum; rlt:Time)		
PDU Type : L1PSNP		
Derivation Path :		
Comments : Level 1 Partial sequnce number PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PSNP_Base	ISIS PDU Common Part
L1PSNP_Len	35	entire length: 17 (header)+18(VLF)=35
PSNP_SourID	MOT_SNP_SourID	MOT_SysID
VLFs	JOpar_L1PSNP_MOTtoIUT(sn,lspn,Csum,rlt)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Recv_Pad		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Recv_Base.		
Comments :		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Recv_Padding	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Recv_Base		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1Only	Circuit Type, can be L1, L2 or L1L2
SourceID	IUT_NetAddr	Source System ID − Network address
HT	HoldingTime	Holding time
IIH_PDU_LEN	?	
LCID	?	Local circuit ID
VLFs	?	
Detailed Comments :		

PDU Constraint Declaration

Constraint Name : PtPtIIH_Recv_AI
PDU Type : PtPtIIH
Derivation Path : PtPtIIH_Recv_Base.
Comments : authentication constaint for PtPtIIH

Field Name	Field Value	Comments
VLFs	JOpar_PtPtIIH_Recv_AI	

Detailed Comments :

PDU Constraint Declaration

Constraint Name : PtPtIIH_Send_Base
PDU Type : PtPtIIH
Derivation Path :
Comments : derivation base template constaint to transmit a PtPtIIH PDU

Field Name	Field Value	Comments
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1Only	Circuit Type, can be L1, L2 or L1L2
SourceID	MOT_SId	
HT	HoldingTime	Holding time
IIH_PDU_LEN	SentPDULen(PtPtIIH)	The length of PDU including header
LCID	’00000001’B	Default Local circuit ID
VLFs	JOpar_PtPtIIH_Send_Base	

Detailed Comments :

PDU Constraint Declaration

Constraint Name : PtPtIIH_Send_CT_L1Only
PDU Type : PtPtIIH
Derivation Path :
Comments : derivation base template constaint to transmit a PtPtIIH PDU

Field Name	Field Value	Comments
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1Only	Circuit Type, can be L1, L2 or L1L2
SourceID	MOT_SId	
HT	HoldingTime	Holding time
IIH_PDU_LEN	SentPDULen(PtPtIIH)	The length of PDU including header
LCID	’00000001’B	Default Local circuit ID
VLFs	JOpar_PtPtIIH_Send_Base	

Detailed Comments :

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_CT_L2Only		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : derivation base template constaint to transmit a PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L2Only	Circuit Type, can be L1, L2 or L1L2
SourceID	MOT_SId	
HT	HoldingTime	Holding time
IIH_PDU_LEN	SentPDULen(PtPtIIH)	The length of PDU including header
LCID	’00000001’B	Default Local circuit ID
VLFs	JOpar_PtPtIIH_Send_Base	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_CT_L1L2		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : derivation base template constaint to transmit a PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1L2	Circuit Type, can be L1, L2 or L1L2
SourceID	MOT_SId	
HT	HoldingTime	Holding time
IIH_PDU_LEN	SentPDULen(PtPtIIH)	The length of PDU including header
LCID	’00000001’B	Default Local circuit ID
VLFs	JOpar_PtPtIIH_Send_Base	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_Inv_AAs		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments :		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Send_Inv_AAs	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_Inv_AIType		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments :		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Send_Inv_AIType	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_Inv_IDL(IDLen:INTEGER)		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments : PTPTIIH with invalid ID Length		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Inv_IDL(IDLen)	
CircuitType	L1L2	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_Inv_MAA(value:INTEGER)		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments : PTPTIIH with invalid ID Length		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Inv_MAA(value)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_Inv_Passwd		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments :		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Send_Inv_Passwd	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_SHT_CT_L1Only		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_CT_L1Only.		
Comments :		
Field Name	**Field Value**	**Comments**
HT	ShortHoldingTime	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_SHT_CT_L2Only		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_CT_L2Only.		
Comments :		
Field Name	**Field Value**	**Comments**
HT	ShortHoldingTime	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_SHT_CT_L1L2		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_CT_L1L2.		
Comments :		
Field Name	**Field Value**	**Comments**
HT	ShortHoldingTime	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Recv_Non_AI		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Recv_Base.		
Comments : constaint for NULL AI		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Non_AI	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_IDL0		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Send_IDL0	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1Only	Circuit Type, can be L1, L2 or L1L2
SourceID	MOT_SId	Source System ID − Network address
HT	HoldingTime	Holding time
IIH_PDU_LEN	SentPDULen(PtPtIIH)	
LCID	’00000001’B	Local circuit ID
VLFs	JOpar_PtPtIIH_Send_Base	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_ShortHoldTime		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments : PtPtIIH with short holiding time (1 seconds)		
Field Name	**Field Value**	**Comments**
HT	ShortHoldingTime	Holding time
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Otherwise		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Otherwise	ISIS PDU Common Part
R6	?	reserved 6 bits, transmitted as zeros
CircuitType	?	Circuit Type, can be L1, L2 or L1L2
SourceID	?	Source System ID − Network address
HT	?	Holding time
IIH_PDU_LEN	?	
LCID	?	Local circuit ID
VLFs	?	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_MAA0		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_MAA0	ISIS PDU Common Part
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Send_AI		
PDU Type : PtPtIIH		
Derivation Path : PtPtIIH_Send_Base.		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
VLFs	JOpar_PtPtIIH_Send_AI	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Recv_CT_L1Only		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1Only	Circuit Type, can be L1, L2 or L1L2
SourceID	IUT_NetAddr	Source System ID − Network address
HT	?	Holding time
IIH_PDU_LEN	?	
LCID	?	Local circuit ID
VLFs	?	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : PtPtIIH_Recv_CT_L1L2		
PDU Type : PtPtIIH		
Derivation Path :		
Comments : PtPtIIH PDU		
Field Name	**Field Value**	**Comments**
ISISComPart	ISISComPart_PtPtIIH_Base	ISIS PDU Common Part
R6	’000000’B	reserved 6 bits, transmitted as zeros
CircuitType	L1L2	Circuit Type, can be L1, L2 or L1L2
SourceID	IUT_NetAddr	Source System ID − Network address
HT	?	Holding time
IIH_PDU_LEN	?	
LCID	?	Local circuit ID
VLFs	?	
Detailed Comments :		

IV

Dynamic Part

Test Case Dynamic Behaviour					
Test Case Name : SendingIIHWhenFirstEnableCircuit					
Group : SDF/PtPt/ValidBeh/Sending/					
Purpose : Test if the IUT is able to transmit an IIH PDU when it first receives an ISH PDU					
Configuration :					
Default :					
Comments : Reference 8.2.3					
Nr	**Label**	**Behaviour Description**	**Constraints Ref**	**Verdict**	**Comments**
1		START holdingTime			
2		A!ISH	ISH_Base		
3		START helloTime			
4		A?PtPtIIH	PtPtIIH_Recv_Base	P	succeed in sending the first IIH.
5		?TIMEOUT helloTime		F	
6		?TIMEOUT holdingTime		F	
Detailed Comments : check the received PDU is an IIH PDU by looking into its header					

Test Case Dynamic Behaviour					
Test Case Name : PaddingthePtPtIIH					
Group : SDF/PtPt/ValidBeh/Sending/					
Purpose : Test if the IUT is able to pad the first IIH PDU to at least (maxsize − 1) octets					
Configuration :					
Default :					
Comments : Reference 8.2.3					
Nr	**Label**	**Behaviour Description**	**Constraints Ref**	**Verdict**	**Comments**
1		START holdingTime			
2		?TIMEOUT holdingTime			
3		A!ISH START helloTime	ISH_Base		
4		A?PtPtIIH[PtPtIIH.IIH_PDU_LEN>= (maxsize−1)]	PtPtIIH_Recv_Pad	P	
5		?TIMEOUT helloTime		F	
Detailed Comments : The IIH shall be constructed and transmitted as follows: (1) The circuit type field shall be set to table 4. In this test plan, it is set to level 1 only. (2) The local circuit ID field shall be set to an assigned unique value. (3) the first PtPtIIH PDU shall be padded to at least (maxsize−1) octets where maxsize is the max. of dataLinkBlockSize, originatingL1LSPBufferSize and originatingL2LSPBufferSize. (4) include Authentication Info if the circuitTransmitPassword is non−null. But it is not cared in this test case. The (maxsize−1) should be set so that without padding, the PtPtIIH is shorter than(maxsize −1)					

Test Case Dynamic Behaviour

Test Case Name : iSISHelloTimerExpire
Group : SDF/PtPt/ValidBeh/Sending/
Purpose : Test if the IUT is able to transmit an IIH PDU when the iSISHelloTimer is expired.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A!ISH	ISH_Base		
2		START holdingTime			
3		A ? PtPtIIH READTIMER holdingTime(A0)	PtPtIIH_Recv_Base		read the arrival time of the 1st hello
4		START helloTime			
5		A ? PtPtIIH READTIMER holdingTime(A1)	PtPtIIH_Recv_Base		read the arrival time of the 2nd hello
6		[(A1−A0) <= (iSISHelloTimer−maxJitter)]		F	Hello transmission interval is less than the (iSISHelloTimer − the time jitter)
7		[(A1−A0) >= (iSISHelloTimer−maxJitter)]		P	hello is transmitted with the jittered iSISHelloTimer
8		?TIMEOUT helloTime		F	fail to receive the 2nd hello
9		?TIMEOUT holdingTime		I	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : AIExist
Group : SDF/PtPt/ValidBeh/Sending/
Purpose : When the value of the circuitTransmissionPassword for the circuit is non−null, test if the IUT is able to include the correct Authentication Information field (Authentication Type = 'Password', Authentication Value = value of circuitTransmissionPassword) in the transmitted IIH PDU
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[event="Authentication type = Password && circuitTransmissionPassword=IUTpassword"]			
2		START holdingTime			
3		A ! ISH	ISH_Base		
4		START helloTime			
5	L10	A ? PtPtIIH	PtPtIIH_Recv_AI	P	succeed in sending IIH with AI info,
6		A ? PtPtIIH	PtPtIIH_Recv_Base	F	fail in including the AI info,
7		A?OTHERWISE			
8		GOTO L10			
9		?TIMEOUT helloTime		I	
10		?TIMEOUT holdingTime		I	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ValidIIHEncoding
Group : SDF/PtPt/ValidBeh/Sending/
Purpose : Test if the IUT is able to generate and transmit a valid PtPt IIH PDU
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A!ISH	ISH_Base		
2		START helloTime			
3	L10	A ? PtPtIIH[(PtPtIIH.HT>0)AND(RCVPDULen(PtPtIIH)=PtPtIIH.IIH_PDU_LEN)]	PtPtIIH_Recv_Base	P	
4		A?OTHERWISE		F	
5		GOTO L10			
6		?TIMEOUT helloTime		I	

Detailed Comments : Test that the IUT is able to encode a valid PtPt IIH with correct Network Protocol Discrimnator, length of fixed header, valid version ID extension, Length of ID fields, PDU type for PtPtIIH, Version, Max. number of Area Addresses, Circuit Type, IUT Addr, HoldingTime and IIH PDU length.

Test Case Dynamic Behaviour

Test Case Name : Att_ExternalDomain_False
Group : SDF/PtPt/ValidBeh/Recv/Decode/
Purpose : Test that the IUT will accept a PtPtIIH PDU when it is received on the circuit with the attribute of External Domain set to False, Sec. 8.2.4.1 in ISO/IEC 10589
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_Base		
2		START helloTime			
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
5		A?OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		F	
8		?TIMEOUT helloTime		F	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : Att_ExternalDomain_True
Group : SDF/PtPt/ValidBeh/Recv/Decode/
Purpose : Test that the IUT will discard a PtPtIIH PDU when it is received on the circuit with the attribute of External Domain set to TRUE (ISO/IEC 10589 Sec.8.2.4.1
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[ExternalDomainAttribute = TRUE]			
2		A ! PtPtIIH	PtPtIIH_Send_Base		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
5		A?OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ValidIDLen
Group : SDF/PtPt/ValidBeh/Recv/Decode/
Purpose : When the IUT's routingDomainIDLength is 6, test if the IUT is able to accept a PtPtIIH PDU with the ID Length field set to the value 0 which indicates a 6 octet ID field .
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_IDL0		ID Length =0
2		START maxLSPGI			
3	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
4		A?OTHERWISE			
5		GOTO L10			
6		?TIMEOUT maxLSPGI		F	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ValidCircuitType1
Group : SDF/PtPt/ValidBeh/Recv/Decode/
Purpose : When the iSType is Level 1, test if the IUT is able to accept a PtPtIIH PDU with the circuit type field set to value 1.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_ShortHoldTime		
2		START helloTime			
3	L10	A ? PtPtIIH	PtPtIIH_Otherwise		
4		GOTO L10			
5		?TIMEOUT helloTime			
6		A ! PtPtIIH	PtPtIIH_Send_CT_L1Only		
7		START maxLSPGI			
8	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
9		A ? L1LSP	L1LSP_Otherwise	F	
10		A ? OTHERWISE			
11		GOTO L20			
12		?TIMEOUT maxLSPGI		I	

Detailed Comments : Should we put 3 area addresses in the contraint of PtPtIIH_Send_*?This part is copied from the reference 7.16

Test Case Dynamic Behaviour

Test Case Name : Decode_Valid_AI

Group : SDF/PtPt/ValidBeh/Recv/Decode/

Purpose : If the circuitTransmission Password or the circuitReceivePassword of the IUT is non−null, the PtPt IIH PDU contains the Authentication Information field with the Authentication Type being 'Cleartext Password', and the Autehntication Value matches the circuitTransmissonPassword or circuitReceivePassword, test if the IUT is able to accept the PtPtIIH PDU

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_AI		
2		START helloTime			
3	L10	A ? PtPtIIH	PtPtIIH_Otherwise		
4		GOTO L10			
5		?TIMEOUT helloTime			
6		A ! PtPtIIH	PtPtIIH_Send_AI		
7		START maxLSPGI			
8	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
9		A ? L1LSP	L1LSP_Otherwise	F	
10		A ? OTHERWISE			
11		GOTO L20			
12		?TIMEOUT maxLSPGI		I	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyAUS_1

Group : SDF/PtPt/ValidBeh/Recv/Proc/

Purpose : Test if the IUT will propagate an L1LSP containing the source ID field of the received IIH PDU in its Intermediate System Neighbors field over the receiving circuit where it receives a PtPt IIH PDU with the value 'Level 1 Only' in the circuit type field and the IUT's adjacency usage is 'None' and it's iSType is 'L1 IS'

Configuration :

Default :

Comments : PtPt L1 Only Adjacency usage status with circuit type of L1

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ DeleteL1AdjL1Only			
2		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 Only		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		START MinLSPTI			
6	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
7		+ DeleteL1AdjL1Only			
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT MinLSPTI		F	
11		+ DeleteL1AdjL1Only			
12		A?OTHERWISE			
13		GOTO L10			
14		?TIMEOUT maxLSPGI		F	
15		+ DeleteL1AdjL1Only			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyAUS_2

Group : SDF/PtPt/ValidBeh/Recv/Proc/

Purpose : Test if the IUT will propagate an L1LSP containing the source ID field of the received IIH PDU in its Intermediate System Neighbors field over the receiving circuit where it receives a PtPt IIH PDU with the value 'Level 1 and L2' in the circuit type field and the IUT's adjacency usage is 'None' and it's iSType is 'L1 IS'

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ DeleteL1AdjL1L2			
2		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 L2		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		START MinLSPTI			
6	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
7		+ DeleteL1AdjL1L2			
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT MinLSPTI		F	
11		+ DeleteL1AdjL1L2			
12		A?OTHERWISE			
13		GOTO L10			
14		?TIMEOUT maxLSPGI		F	
15		+ DeleteL1AdjL1L2			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyAUS_3

Group : SDF/PtPt/ValidBeh/Recv/Proc/

Purpose : Test if the IUT will retain the adjacencyUsage to 'Level ' where it receives a PtPt IIH PDU with the value 'Level 1 Only' in the circuit type field and the IUT's adjacency usage is 'level 1' and it's iSType is 'L1 IS'

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ CreateL1AdjL1Only			
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1Only		
3		START helloTime			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		START MinLSPTI			
6	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
7		+ DeleteL1AdjL1Only			
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT MinLSPTI		F	
11		+ DeleteL1AdjL1Only			
12		A?OTHERWISE			
13		GOTO L10			
14		?TIMEOUT helloTime		F	
15		+ DeleteL1AdjL1Only			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyAUS_4

Group : SDF/PtPt/ValidBeh/Recv/Proc/

Purpose : Test if the IUT will retain the adjacencyUsage to 'Level 1' where it receives a PtPt IIH PDU with the value 'Level 1 and L2' in the circuit type field and the IUT's adjacency usage is 'level 1' and it's iSType is 'L1 IS'

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ CreateL1AdjL1L2			
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1L2		
3		START helloTime			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		START MinLSPTI			
6	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
7		+ DeleteL1AdjL1L2			
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT MinLSPTI		F	
11		+ DeleteL1AdjL1L2			
12		A?OTHERWISE			
13		GOTO L10			
14		?TIMEOUT helloTime		F	
15		+ DeleteL1AdjL1L2			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyNoneAU_1
Group : SDF/PtPt/ValidBeh/Recv/Proc/
Purpose : Test if the IUT will send a PtPt IIH PDU to the tester where it receives a PtPt IIH PDU with the value 'Level 1 Only' in the circuit type field and the IUT's adjacency usage is 'None' and its iSType is 'L1 IS'.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ DeleteL1AdjL1Only			so that the adjacency is not in adjacencyState" up"
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1Only		
3		START helloTime			
4	L10	A ? PtPtIIH	PtPtIIH_Recv_CT_L1Only	P	
5		+ DeleteL1AdjL1Only			
6		A?OTHERWISE			
7		GOTO L10			
8		?TIMEOUT helloTime		F	
9		+ DeleteL1AdjL1Only			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyNoneAU_2
Group : SDF/PtPt/ValidBeh/Recv/Proc/
Purpose : Test if the IUT will send a PtPt IIH PDU to the tester where it receives a PtPt IIH PDU with the value 'Level 1 and 2' in the circuit type field and the IUT's adjacency usage is 'None' and its iSType is 'L1 IS'.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ DeleteL1AdjL1L2			so that the adjacency is not in adjacencyState" up"
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1L2		
3		START helloTime			
4	L10	A ? PtPtIIH	PtPtIIH_Recv_CT_L1L2	P	
5		+ DeleteL1AdjL1L2			
6		A?OTHERWISE			
7		GOTO L10			
8		?TIMEOUT helloTime		F	
9		+ DeleteL1AdjL1L2			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyHoldTime_1

Group : SDF/PtPt/ValidBeh/Recv/Proc/

Purpose : Test if the IUT will set the holdingTimer to the value of the HoldingTime field from the IIH PDU where it receives a PtPt IIH PDU with the value 'Level 1 only' in the circuit type field and the IUT's adjacency usage is 'None' and it's iSType is 'L1 IS' and the adjacency will be purged if the neighbor is not heard from after that time.

Configuration :

Default :

Comments : Set holdingTimer for received IIH PDUs

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ DeleteL1AdjL1Only			
2		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 Only		holdingTimer is set equal to HelloTimer
3		START helloTime			
4	L10	A ? PtPtIIH	PtPtIIH_Recv_Base		
5		GOTO L10			
6		?TIMEOUT helloTime			adjacency should be purged by now
7		START helloTime			
8	L20	A ? PtPtIIH	PtPtIIH_Recv_CT_L1Only	F	
9		A?OTHERWISE			
10		GOTO L20			
11		?TIMEOUT helloTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtL1OnlyHoldTime_2
Group : SDF/PtPt/ValidBeh/Recv/Proc/
Purpose : Test if the IUT will set the holdingTimer to the value of the HoldingTime field from the IIH PDU where it receives a PtPt IIH PDU with the value 'Level 1 only' in the circuit type field and the IUT's adjacency usage is 'L 1' and it's iSType is 'L1 IS'. And the adjacency will be purged if the neighbor is not heard from after that time.
Configuration :
Default :
Comments : Set holdingTimer for received IIH PDUs

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ CreateL1AdjL1Only			
2		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 Only		holdingTimer is set equal to HelloTimer
3		START helloTime			
4	L10	A ? PtPtIIH	PtPtIIH_Recv_Base		
5		GOTO L10			
6		?TIMEOUT helloTime			adjacency should be purged by now
7		START helloTime			
8	L20	A ? PtPtIIH	PtPtIIH_Recv_CT_L1Only	F	
9		A?OTHERWISE			
10		GOTO L20			
11		?TIMEOUT helloTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtAccept_Inv_ED
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : Test if the IUT is able to discard the PtPt IIH PDU when it is received over the circuit whose externalDomain attribute is set to 'True'
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[ExternalDomainAttribute=TRUE]			
2		A ! PtPtIIH	PtPtIIH_Send_Base		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_Otherwise	F	
5		A?OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_IDL
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : If the IUT's routingDomainIDLength is 6, test if the IUT is able to discard a PtPt IIH PDU where the ID length is not set to 6, for instance, 1.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_Inv_IDL(1)		Invalid value for IDLength −− 1
2		START holdingTime			
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		P	
8		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_MAA_1
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : Test if the IUT is able to discard the PtPt IIH PDU with the Maximum Area Addresses field set to the value 255.
Configuration :
Default :
Comments : Maximum Area Addresses takes the value between 1 to 254. Value of zero is treated as 3.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_Inv_MAA(255)		Invalid value for MaxAreaAddress −− 255
2		START holdingTime			
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		P	
8		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_MAA_2
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : Test if the IUT is able to discard the PtPt IIH PDU with the Maximum Area Address field set to a value other than maximumAreaAddresses when the IUT does not only support the value 3 for maximumAreaAddresses
Configuration :
Default :
Comments : Maximum Area Addresses takes the value between 1 to 254. Value of zero is treated as 3.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[MaxAA<>3]			
2		A ! PtPtIIH	PtPtIIH_Send_Inv_MAA(nonMaxAA)		Invalid value for MAA
3		START holdingTime			
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT maxLSPGI		P	
9		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_AAs
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : Test if the IUT is able to discard the PtPt IIH PDU that have no area addresses in common with the IUT's manualAreaAddreesses attribute.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_Inv_AAs		Invalid values for area addresses
2		START holdingTime			
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		P	
8		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_AI_1

Group : SDF/PtPt/InvalidBeh/Accept/

Purpose : If the circuitTransmitPassword or the circuitReceivePassword of the IUT is non−null, and the received PtPt IIH PDU does not contain the Authentication Information field, test if the IUT is able to discard the PtPt IIH PDU.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[event="circuitTransmitPassword&& circuitReceivePassword = IUTPassword"]			
2		A ! PtPtIIH	PtPtIIH_Send_Base		No AI info. included in the PtPt IIH
3		START holdingTime			
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT maxLSPGI		P	
9		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_AI_2

Group : SDF/PtPt/InvalidBeh/Accept/

Purpose : If the circuitTransmitPassword or the circuitReceivePassword of the IUT is non−null, and the received PtPt IIH PDU contain the Authentication Information field with Authetication Type being not 'Password', test if the IUT is able to discard the PtPt IIH PDU.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[event="circuitTransmitPassword&& circuitReceivePassword = IUTPassword"]			
2		A ! PtPtIIH	PtPtIIH_Send_Inv_AIType		wrong AI type
3		START holdingTime			
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT maxLSPGI		P	
9		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_AI_3
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : If the circuitTransmitPassword or the circuitReceivePassword of the IUT is non−null, and the received PtPt IIH PDU does not match the password, test if the IUT is able to discard the PtPt IIH PDU.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[event="circuitTransmitPassword&& circuitReceivePassword = IUTPassword"]			
2		A ! PtPtIIH	PtPtIIH_Send_Inv_Passwd		
3		START holdingTime			
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT maxLSPGI		P	
9		?TIMEOUT holdingTime		P	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PtPtDecode_Inv_AI_4
Group : SDF/PtPt/InvalidBeh/Accept/
Purpose : If the circuitTransmitPassword or the circuitReceivePassword of the IUT is null, and the received PtPt IIH PDU contains the Authentication Information field, test if the IUT is able to accept the PtPt IIH PDU.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[event="circuitTransmitPassword&& circuitReceivePassword = NULL"]			
2		A ! PtPtIIH	PtPtIIH_Send_AI		
3		START holdingTime			
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	P	
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT maxLSPGI		F	
9		?TIMEOUT holdingTime		F	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PeriodLSPGen_1
Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/
Purpose : Test that the IUT re−generates each LSP at interval of at most maximumLSPGenerationInterval.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ? L1LSP	L1LSP_Base		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_Base	P	
5		A?OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		F	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : PeriodLSPGen_2
Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/
Purpose : Test that the IUT has a hold−down timer (minimumLSPGenerationInterval) on the generation of each individual LSP.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP READTIMER maxLSPGI(A0)	L1LSP_Base		
4	L20	A ? L1LSP READTIMER maxLSPGI(A1)	L1LSP_Base		
5		[(A1−A0)>((3/4)*MinLSPGenIntvl)]		P	hold timer is greater than the jittered timer MinLSPGenIntvl (25%jitter)
6		[(A1−A0)<((3/4)*MinLSPGenIntvl)]		F	hold timer is less than the jittered timer MinLSPGenIntvl (25%jitter)
7		A?OTHERWISE			
8		GOTO L20			
9		A?OTHERWISE			
10		GOTO L10			
11		?TIMEOUT maxLSPGI		I	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : EventDrivenL1LSPGen_1

Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/

Purpose : Test that the IUT will regenerate changed LSP(s) with a new sequence number without resetting the timer maximumLSPGenerationInterval when a Circuit Down event occurs.

Configuration :

Default :

Comments : This test case requires the operator to manually generate a CircuitDown event within the maximumLSPGenerationInterval.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A0)	L1LSP_Base		
4		[event="CircuitDownManuallyGenerated"]			
5	L20	A ? L1LSP(SN2:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A1)	L1LSP_Base		
6		[(SN2<>SN1) AND (A1>A0)]		P	
7		A?OTHERWISE			
8		GOTO L20			
9		?TIMEOUT maxLSPGI		F	
10		A?OTHERWISE			
11		GOTO L10			

Detailed Comments : Sec.7.3.6

Test Case Dynamic Behaviour

Test Case Name : EventDrivenL1LSPGen_2

Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/

Purpose : Test that the IUT will regenerate changed LSP(s) with a new sequence number without resetting the timer maximumLSPGenerationInterval when a change in Circuit Metric occurs.

Configuration :

Default :

Comments : This test case requires to change the L1 default metric to a new L1 default metric within the maximumLSPGenerationInterval.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A0)	L1LSP_Base		
4		[event= "newL1defaultMetric"]			
5	L20	A ? L1LSP(SN2:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A1)	L1LSP_Base		
6		[(SN2<>SN1) AND (A1>A0)]		P	
7		A?OTHERWISE			
8		GOTO L20			
9		?TIMEOUT maxLSPGI		F	
10		A?OTHERWISE			
11		GOTO L10			

Detailed Comments : Sec.7.3.6

Test Case Dynamic Behaviour

Test Case Name : EventDrivenL1LSPGen_4

Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/

Purpose : Test that the IUT will regenerate changed LSP(s) with a new sequence number without resetting the timer maximumLSPGenerationInterval when a change in ManualAreaAddress occurs.

Configuration :

Default :

Comments : This test case requires the operator to change the ManualAreaAddress within the maximumLSPGenerationInterval.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A0)	L1LSP_Base		
4		[event="changeInManualAreaAddress"]			
5	L20	A ? L1LSP(SN2:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A1)	L1LSP_Base		
6		[(SN2<>SN1) AND (A1>A0)]		P	
7		A?OTHERWISE			
8		GOTO L20			
9		?TIMEOUT maxLSPGI		F	
10		A?OTHERWISE			
11		GOTO L10			

Detailed Comments : Sec.7.3.6

Test Case Dynamic Behaviour

Test Case Name : EventDrivenL1LSPGen_5

Group : SIF/L1LSP/ValidBeh/Sending/LSPGen/

Purpose : Test that the IUT will regenerate changed LSP(s) with a new sequence number without resetting the timer maximumLSPGenerationInterval when a change in SystemID occurs.

Configuration :

Default :

Comments : This test case requires the operator to change the SystemID within the maximumLSPGenerationInterval.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A0)	L1LSP_Base		
4		[event="changeInSystemID"]			
5	L20	A ? L1LSP(SN2:=L1LSP.LSPEntry.SN) READTIMER maxLSPGI(A1)	L1LSP_Base		
6		[(SN2<>SN1) AND (A1>A0)]		P	
7		A?OTHERWISE			
8		GOTO L20			
9		?TIMEOUT maxLSPGI		F	
10		A?OTHERWISE			
11		GOTO L10			

Detailed Comments : Sec.7.3.6

Test Case Dynamic Behaviour

Test Case Name : L1SN_1

Group : SIF/L1LSP/ValidBeh/Sending/SequenceNumber/

Purpose : Test if the L1 IUT is able to disable its network entity for a period of at least MaxAge+ZeroAgeLifetime, in order to be sure that any version of this LSP with the high sequence number have expired when the sequence number is already equal to (SequenceModulus −1).

Configuration :

Default :

Comments : LSP number is set to 1 in L1LSP_Send_* PDUs

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(tempVLFs:=L1LSP.VLFs, pl:=L1LSP.L1LSPDU_Len)	L1LSP_MOTNID_PtPt		
4		A ! L1LSP	L1LSP_Send_maxSN(pl,tempVLFs)		
5		START MaxAgePlusZeroAgeLifetime			
6	L11	A ? L1LSP	L1LSP_Base	F	IUT failed to disable its network entity
7		A ? OTHERWISE			
8		GOTO L11			
9		?TIMEOUT MaxAgePlusZeroAgeLifetime		P	
10		A ? OTHERWISE			
11		GOTO L10			
12		?TIMEOUT maxLSPGI		I	

Detailed Comments : Sec. 7.3.16.1

Test Case Dynamic Behaviour

Test Case Name : L1SN_2

Group : SIF/L1LSP/ValidBeh/Sending/SequenceNumber/

Purpose : Test if the L1 IUT will start again with sequence number 1, after it disables its network entity for a period of at least MaxAge+ZeroAgeLifetime, in order to be sure that any version of this LSP with the high sequence number have expired when the sequence number is already equal to (SequenceModulus −1). Sec. 7.3.16.1

Configuration :

Default :

Comments : LSP number is set to 1 in L1LSP_Send_* PDUs

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP(tempVLFs:=L1LSP.VLFs, pl:=L1LSP.L1LSPDU_Len)	L1LSP_MOTNID_PtPt		
4		A ! L1LSP	L1LSP_Send_maxSN(pl,tempVLFs)		
5		START MaxAgePlusZeroAgeLifetime			
6	L11	A ? L1LSP	L1LSP_Base	I	IUT failed to disable its network entity
7		?TIMEOUT MaxAgePlusZeroAgeLifetime			
8		START maxLSPGI			
9	L12	A ? L1LSP(SeqNum:=L1LSP.LSPEntry.SN)	L1LSP_Base		
10		[SeqNum=1]		P	
11		+ MOTPtPtAdjDel			
12		[SeqNum<>1]		F	
13		+ MOTPtPtAdjDel			
14		A ? OTHERWISE			
15		GOTO L12			
16		?TIMEOUT maxLSPGI		I	
17		A ? OTHERWISE			
18		GOTO L11			
19		A ? OTHERWISE			
20		GOTO L10			
21		?TIMEOUT maxLSPGI		I	

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysNonExistLSP

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by system S and no LSP from S is in memory, that IUT will send an acknowledgement of the LSP on circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		new LSP from MOT
3		START PSNPIntvl			
4	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	P	IUT should acknowledge with the same Seq. Number and LSP number)
5		?TIMEOUT PSNPIntvl		F	
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysNewerLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by other system S and is newer than the one in the database (i.e.higher sequence number), the IUT will set SRMflag for that LSP for all circuit, except the circuit it was received upon. In other words, the IUT will send that LSP on all circuits other than that which it received the LSP.

Configuration :

Default :

Comments : This requirement needs to be tested using concurrent TTCN to monitor more than one circuit.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_2		send newer LSP that has higher sequence number and zero remaining Lifetime.
6		START maxLSPGI			
7	L10	B ? L1LSP(SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
8		[(SN1 =3) AND (LSPnumber1=1)]		P	IUT generate new LSP with next higher sequence number (3) but same LSPnumber on other circuit
9		?TIMEOUT maxLSPGI		F	
10		B ? OTHERWISE			
11		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysNewerLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining life time LSP is generated by other system S and is newer than the one in the database (i.e. higher sequence number), the IUT will clear SSN flag for that LSP for all circuit. In other words, the IUT will not send acknowledge for that LSP on all circuit

Configuration :

Default :

Comments : This requirement need to be tested using concurrent TTCN to monitor more than one circuits. For the time being, we only test if the IUT does not send acknowledge on the circuit between MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_2		send newer LSP that has higher sequence number and zero remaining Lifetime.
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(2,1)	F	IUT should not acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysSameLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by other system and is same as the one in the database (same seq. number, remaining Lifetimes both zero), the IUT will clear SRMflag for the circuit on which the LSP was received . In other words, no corresponding LSP is propagated on the circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		resend the same LSP with zero remaining life time
6		START maxLSPGI			
7	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
8		?TIMEOUT maxLSPGI		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysSameLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining life time LSP is generated by other system and is same as the one in the database (i.e. same Sequence number, remaining Lifetimes both zero), the IUT will set SSNflag for that LSP on Circuit C, if C is a non−broadcast circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		LSP number is 1 SN is 1
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		resend the same LSP with zero remaining life time
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	P	IUT should acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		F	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysOlderLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by other system S and is older than the one in the database (i.e. smaller sequence number), the IUT will set SRMflag for that LSP for circuit C. In other words, the IUT will send that LSP on circuit C

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send LSP with SN=2, LSPNum=1 and RemainingLifetime=MaxAge .
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		send an older LSP with SN =1 and Remaining Lifetime is zero
6		START maxLSPGI			
7	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
8		[(SN1 =2) AND (LSPnumber1=1)]		P	IUT generate new LSP with next higher sequence number (2) but same LSPnumber
9		?TIMEOUT maxLSPGI		F	
10		A ? OTHERWISE			
11		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OtherSysOlderLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining life time LSP is generated by other system S and is older than the one in the database (i.e. higher sequence number), the IUT will set clear SSN flag for that LSP for circuit C. In other words, the IUT will not send acknowledge for that LSP on circuit C

Configuration :

Default :

Comments : Here circuit C is the circuit between MOT and IUT

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send LSP with SN=2, LSPNum=1 and RemainingLifetime=MaxAge.
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_ZRLT_1		send an older LSP with SN =1 and Remaining Lifetime is zero
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	F	IUT should not acknowledge with SN =1 and LSP number = 1
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OwnOlderLSP

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining LSP is generated by itself and is older than the one in the database, the IUT should change the sequence number of the unexpired LSP in its memory and set SRMflag on all circuit.

Configuration :

Default :

Comments : To test the SRMflag setting on all circuits requires concurrent TTCN. Here we only check the setting on the circuit that links MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP (tempISISComPart:=L1LSP.ISISComPart, pl:=L1LSP.L1LSPDU_Len, tempLSPEntry:=L1LSP.LSPEntry,tempPR:= L1LSP.PartitionRepair, tempATT:=L1LSP.ATT, tempLSPDBOL:=L1LSP.LSPDBOL, tempISType:=L1LSP.ISType, tempVLFs:=L1LSP.VLFs, SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
4		(tempLSPEntry.RemainLifetime:=0)			change remaining life time to zero
5		(tempLSPEntry.SN:=tempLSPEntry.SN−1)			make the sequence number smaller
6		A ! L1LSP	L1LSP_Template(tempISISComPart,pl, tempLSPEntry, tempPR,tempATT,tempLSPDBOL,tempISType,tempVLFs)		send LSP with older sequence number and zero remaining life time.
7		START maxLSPGI			
8	L20	A ? L1LSP (SN2:=L1LSP.LSPEntry.SN, LSPnumber2:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
9		[(SN2=SN1+1) AND (LSPnumber1=LSPnumber2)]		P	IUT should increase its LSP's sequence number and send to all circuits .
10		?TIMEOUT maxLSPGI		F	
11		+ MOTPtPtAdjDel			
12		A ? OTHERWISE			
13		GOTO L20			
14		?TIMEOUT maxLSPGI		I	
15		+ MOTPtPtAdjDel			
16		A ? OTHERWISE			
17		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OwnSameLSP

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by itself and is same as the one in the database, the IUT should change the sequence number of the unexpired LSP in its memory and set SRMflag on all circuit.

Configuration :

Default :

Comments : To test the SRMflag setting on all circuits requires concurrent TTCN. Here we only check the setting on the circuit that links MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP (tempISISComPart:=L1LSP.ISISComPart, pl:=L1LSP.L1LSPDU_Len, tempLSPEntry:=L1LSP.LSPEntry,tempPR:= L1LSP.PartitionRepair, tempATT:=L1LSP.ATT, tempLSPDBOL:=L1LSP.LSPDBOL, tempISType:=L1LSP.ISType, tempVLFs:=L1LSP.VLFs, SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
4		(tempLSPEntry.RemainLifetime:=0)			change remaining life time to zero
5		A ! L1LSP	L1LSP_Template(tempISISComPart,pl, tempLSPEntry, tempPR,tempATT,tempLSPDBOL,tempISType,tempVLFs)		send LSP with same sequence number and zero remaining life time.
6		START maxLSPGI			
7	L20	A ? L1LSP (SN2:=L1LSP.LSPEntry.SN, LSPnumber2:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
8		[(SN2=SN1+1) AND (LSPnumber1=LSPnumber2)]		P	IUT should increase its LSP's sequence number
9		?TIMEOUT maxLSPGI		F	
10		+ MOTPtPtAdjDel			
11		A ? OTHERWISE			
12		GOTO L20			
13		?TIMEOUT maxLSPGI		I	
14		+ MOTPtPtAdjDel			
15		A ? OTHERWISE			
16		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZRLT_OwnNewerLSP

Group : SIF/L1LSP/ValidBeh/Recv/ZRLT/

Purpose : Test if the received zero remaining LSP is generated by itself and is newer than the one in the database, the IUT should change the sequence number to the next higher than the new received and set SRMflag on all circuit.

Configuration :

Default :

Comments : To test the SRMflag setting on all circuits requires concurrent TTCN. Here we only check the setting on the circuit that links MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP (tempISISComPart:=L1LSP.ISISComPart, pl:=L1LSP.L1LSPDU_Len, tempLSPEntry:=L1LSP.LSPEntry,tempPR:= L1LSP.PartitionRepair, tempATT:=L1LSP.ATT, tempLSPDBOL:=L1LSP.LSPDBOL, tempISType:=L1LSP.ISType, tempVLFs:=L1LSP.VLFs, SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
4		(tempLSPEntry.RemainLifetime:=0)			change remaining life time to zero
5		(tempLSPEntry.SN:=tempLSPEntry.SN+1)			make SN higher
6		A ! L1LSP	L1LSP_Template(tempISISComPart,pl, tempLSPEntry, tempPR,tempATT,tempLSPDBOL,tempISType,tempVLFs)		send LSP with greater sequence number and zero remaining life time.
7		START maxLSPGI			
8	L20	A ? L1LSP (SN2:=L1LSP.LSPEntry.SN, LSPnumber2:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
9		[(SN2=SN1+2) AND (LSPnumber1=LSPnumber2)]		P	IUT should genreate its LSP with SN set to next number greater than the new one received
10		?TIMEOUT maxLSPGI		F	
11		+ MOTPtPtAdjDel			
12		A ? OTHERWISE			
13		GOTO L20			
14		?TIMEOUT maxLSPGI		I	
15		+ MOTPtPtAdjDel			
16		A ? OTHERWISE			
17		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysNonExistLSP_1
Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/
Purpose : Test if the received non zero remaining lifetime LSP is generated by system S and no LSP from S is in memory, that IUT will send an acknowledgement of the LSP on circuit C.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		new LSP from MOT, SN=1, LSPNum=1
3		START PSNPIntvl			
4	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	P	IUT should acknowledge with the same Seq. Number and LSP number)
5		?TIMEOUT PSNPIntvl		F	
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysNonExistLSP_2
Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/
Purpose : Test if the received non zero remaining lifetime LSP is generated by system S and no LSP from S is in memory, the IUT will clear SRMflag for C .
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		new LSP from MOT, SN=1, LSPNum=1
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	IUT should clear SNNflag for the circuit
5		?TIMEOUT maxLSPGI		P	
6		A ? OTHERWISE			
7		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysNewerLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received non zero remaining lifetime LSP is generated by other system S and is newer than the one in the database (i.e.higher sequence number), the IUT will clear SRMflag for that LSP for circuit C .

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send newer LSP that has higher sequence number and non zero remaining Lifetime.
6		START maxLSPGI			
7	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	SRMflag should be cleared for circuit between MOT and IUT
8		?TIMEOUT maxLSPGI		P	
9		A ? OTHERWISE			
10		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysNewerLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received nonzero remaining life time LSP is generated by other system S and is newer than the one in the database (i.e. higher sequence number), the IUT will set SSN flag for that LSP for the circuit on which the LSP is received, assuming the circuit is not a broadcast circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send newer LSP that has higher sequence number and nonzero remaining Lifetime.
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(2,1)	P	IUT should acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		F	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysSameLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received nonzero remaining lifetime LSP is generated by other system and is same as the one in the database (same seq. number, remaining Lifetimes both zero), the IUT will clear SRMflag for the circuit on which the LSP was received .

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		send nonzero remaining Lifetime LSP to IUT
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		resend the same LSP
6		START maxLSPGI			
7	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	should clear SRMflag
8		?TIMEOUT maxLSPGI		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysSameLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received non zero remaining life time LSP is generated by other system and is same as the one in the database (i.e. same Sequence number, remaining Lifetimes both zero), the IUT will set SSNflag for that LSP on Circuit C, if C is a non−broadcast circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		resend the same LSP with non zero remaining life time
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	P	IUT should acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		F	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysOlderLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received zero remaining lifetime LSP is generated by other system S and is older than the one in the database (i.e. smaller sequence number), the IUT will set SRMflag for that LSP for circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send LSP with SN=2, LSPNum=1 and RemainingLifetime=MaxAge .
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		send an older LSP with SN =1
6		START maxLSPGI			
7	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
8		[(SN1 =2) AND (LSPnumber1=1)]		P	IUT will generate new LSP with next higher sequence number (2) but same LSPnumber
9		?TIMEOUT maxLSPGI		F	
10		+ MOTPtPtAdjDel			
11		A ? OTHERWISE			
12		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OtherSysOlderLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : Test if the received zero remaining life time LSP is generated by other system S and is older than the one in the database (i.e. higher sequence number), the IUT will clear SSN flag for that LSP for circuit C. In other words, the IUT will not send acknowledge for that LSP on circuit C

Configuration :

Default :

Comments : Here circuit C is the circuit between MOT and IUT

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_2		send LSP with SN=2, LSPNum=1 and RemainingLifetime=MaxAge.
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		send an older LSP with SN =1
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	F	IUT should not acknowledge with SN =1 and LSP number = 1
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OwnSameLSP_1

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : When the IUT receives a LSP which is generated by itself and is the same as the one stored, test that the IUT will acknowledge it as described in 7.3.17

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP (tempISISComPart:=L1LSP.ISISComPart, pl:=L1LSP.L1LSPDU_Len, tempLSPEntry:=L1LSP.LSPEntry,tempPR:= L1LSP.PartitionRepair, tempATT:=L1LSP.ATT, tempLSPDBOL:=L1LSP.LSPDBOL, tempISType:=L1LSP.ISType, tempVLFs:=L1LSP.VLFs, SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
4		A ! L1LSP	L1LSP_Template(tempISISComPart,pl, tempLSPEntry, tempPR,tempATT,tempLSPDBOL,tempISType,tempVLFs)		send the received L1LSP back to the IUT
5		START PSNPIntvl			
6	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(SN1,LSPnumber1)	P	IUT should acknowledge with the same Seq. Number and LSPNum
7		?TIMEOUT PSNPIntvl		F	
8		+ MOTPtPtAdjDel			
9		A ? OTHERWISE			
10		GOTO L20			
11		?TIMEOUT maxLSPGI		I	
12		+ MOTPtPtAdjDel			
13		A ? OTHERWISE			
14		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : NZRLT_OwnSameLSP_2

Group : SIF/L1LSP/ValidBeh/Recv/NZRLT/

Purpose : When the IUT receives a LSP which is generated by itself and is the same as the one stored, test that the IUT will clear the SRMflag for that circuit for the received LSP

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START maxLSPGI			
3	L10	A ? L1LSP (tempISISComPart:=L1LSP.ISISComPart, pl:=L1LSP.L1LSPDU_Len, tempLSPEntry:=L1LSP.LSPEntry,tempPR:= L1LSP.PartitionRepair, tempATT:=L1LSP.ATT, tempLSPDBOL:=L1LSP.LSPDBOL, tempISType:=L1LSP.ISType, tempVLFs:=L1LSP.VLFs, SN1:=L1LSP.LSPEntry.SN, LSPnumber1:=L1LSP.LSPEntry.LSPId.LSPNum)	L1LSP_MOTNID_PtPt		
4		A ! L1LSP	L1LSP_Template(tempISISComPart,pl, tempLSPEntry, tempPR,tempATT,tempLSPDBOL,tempISType,tempVLFs)		send the received L1LSP back to the IUT
5		START maxLSPGI			
6	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	F	IUT should clear the SRMflag for that circuit for that LSP.
7		?TIMEOUT maxLSPGI		P	
8		+ MOTPtPtAdjDel			
9		A ? OTHERWISE			
10		GOTO L20			
11		?TIMEOUT maxLSPGI		I	
12		+ MOTPtPtAdjDel			
13		A ? OTHERWISE			
14		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : WrongCsum_1

Group : SIF/L1LSP/InvalidBeh/BadCSum/

Purpose : Test if the IUT receives an LSP with an incorrect LSP Checksum , it will treat the LSP as though its Remaining Lifetime had expired. That is the IUT will set SRMflag for that LSP for all circuit.

Configuration :

Default :

Comments : This requirement needs to be tested using concurrent TTCN to monitor more than one circuit.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_Send_WrongCsum(2,'0001'O)		wrong checksum (0001), MaxAge and SN=2
6		START maxLSPGI			
7	L10	B ? L1LSP(SN1:=L1LSP.LSPEntry.SN,RLT:=L1LSP.LSPEntry.RemainLifetime)	L1LSP_MOTNID_PtPt		
8		[(SN1 =2)AND(RLT =0)]		P	IUT propagates new LSP with same sequence number (2), but zero remaining lifetime
9		?TIMEOUT maxLSPGI		F	
10		+ MOTPtPtAdjDel			
11		B ? OTHERWISE			
12		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : WrongCsum_2

Group : SIF/L1LSP/InvalidBeh/BadCSum/

Purpose : Test if the IUT receives an LSP with an incorrect LSP Checksum , it will treat the LSP as though its Remaining Lifetime had expired. That is the IUT will clear SSNflag for all circuits for that LSP.

Configuration :

Default :

Comments : This requirement needs to be tested using concurrent TTCN to monitor more than one circuits. For the time being, we only test if the IUT send LSP on the circuit between MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_Send_WrongCsum(2,'0001'O)		wrong checksum '0001'O, MaxAge and SN=2
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(2,1)	F	IUT should not acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZeroCsum_1

Group : SIF/L1LSP/InvalidBeh/BadCSum/

Purpose : Test if the IUT receives an LSP with a zero LSP Checksum , it will treat the LSP as though its Remaining Lifetime had expired. That is the IUT will set SRMflag for that LSP for all circuit.

Configuration :

Default :

Comments : This requirement needs to be tested using concurrent TTCN to monitor more than one circuit.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_Send_WrongCsum(2,'0000'O)		zero checksum, MaxAge and SN=2
6		START maxLSPGI			
7	L10	B ? L1LSP(SN1:=L1LSP.LSPEntry.SN,RLT:=L1LSP.LSPEntry.RemainLifetime)	L1LSP_MOTNID_PtPt		
8		[(SN1 =2)AND(RLT=0)]		P	IUT propagates new LSP with same sequence number (2), but zero remaining lifetime
9		?TIMEOUT maxLSPGI		F	
10		+ MOTPtPtAdjDel			
11		B? OTHERWISE			
12		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : ZeroCsum_2

Group : SIF/L1LSP/InvalidBeh/BadCSum/

Purpose : Test if the IUT receives an LSP with a zero LSP Checksum , it will treat the LSP as though its Remaining Lifetime had expired. That is the IUT will clear SSNflag for all circuits for that LSP.

Configuration :

Default :

Comments : This requirement needs to be tested using concurrent TTCN to monitor more than one circuit. For the time being, we only test if the IUT send LSP on the circuit between MOT and IUT.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		START MinLSPTI			
4		?TIMEOUT MinLSPTI			wait a hold down time
5		A ! L1LSP	L1LSP_Send_WrongCsum(2,'0000'O)		zero checksum '0001'O, MaxAge and SN=2
6		START PSNPIntvl			
7	L20	A ? L1PSNP	L1PSNP_IUTtoMOT(2,1)	F	IUT should not acknowledge with the same Seq. Number and LSP number)
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L20			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_PtPt_Initiation
Group : SIF/L1CSNP_PtPt/Sending/
Purpose : Test that the IUT will transmit a CSNP on PtPt circuit at initiation.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		START CSNPInterval			
3	L10	A ? L1CSNP	L1CSNP_ByIUT_Base	P	
4		+ MOTPtPtAdjDel			
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT CSNPInterval		F	
8		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportOlderLSP_1
Group : SIF/L1CSNP_PtPt/Recv/
Purpose : Test that if the reported value in the L1CSNP is older than the database value, the IUT will set SMRflag for the circuit C.
Configuration :
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		LSP number is 1 SN is 2, remaing lifetime is MaxAge
3		A!L1CSNP	L1CSNP_Send_SN1(1,1,ReportedCsum)		an older L1CSNP with SN =1, LSPNum =1
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_MOTNID_PtPt		
6		[SN1=2]		P	propagate stored LSP
7		+ MOTPtPtAdjDel			
8		?TIMEOUT maxLSPGI		F	
9		+ MOTPtPtAdjDel			
10		A ? OTHERWISE			
11		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportOlderLSP_2

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported value in the L1CSNP is older than the database value, the IUT will clear SSNflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		LSP number is 1 SN is 2, remaing lifetime is MaxAge
3		A!L1CSNP	L1CSNP_Send_SN1(1,1,ReportedCsum)		an older L1CSNP with SN =1, LSPNum =1
4		START PSNPIntvl			
5	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	F	should not acknowledge
6		+ MOTPtPtAdjDel			
7		?TIMEOUT PSNPIntvl		P	
8		+ MOTPtPtAdjDel			
9		A ? OTHERWISE			
10		GOTO L10			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportSameLSP

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported value in the L1CSNP is same as the one in the database, the IUT will clear SMRflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		LSP number is 1 SN is 2, remaing lifetime is MaxAge
3		A!L1CSNP	L1CSNP_Send_SN2(1,1,ReportedCsum)		L1CSNP with SN =2, LSPNum =1, same as in database
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_MOTNID_PtPt		
6		[SN1=2]		F	fail to clear SRMflag
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		P	
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportNewerLSP_1

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported value in the L1CSNP is newer than the database value, the IUT will clear SMRflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		A!L1CSNP	L1CSNP_Send_SN2(1,1,ReportedCsum)		newer L1CSNP with SN =2, LSPNum =1
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	fail to clear SRMflag
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L10			
9		?TIMEOUT maxLSPGI		P	
10		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportNewerLSP_2

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported value in the L1CSNP is newer than the database value, the IUT will set SSNflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_1		LSP number is 1 SN is 1, remaing lifetime is MaxAge
3		A!L1CSNP	L1CSNP_Send_SN2(1,1,ReportedCsum)		newer L1CSNP with SN =2, LSPNum =1
4		START PSNPIntvl			
5	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	P	acknowledge LSP entry SN=1 LSPnum=1
6		A ? OTHERWISE			
7		GOTO L10			
8		+ MOTPtPtAdjDel			
9		?TIMEOUT PSNPIntvl		F	fail to set SSNflag
10		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportNonExistLSP_1

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported LSP in the L1CSNP is not yet in the database value, the IUT will not set SMRflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		(ReportedCsum:='5555'O)			Randomly choose a nonzero reportedCsum in L1CSNP
3		A!L1CSNP	L1CSNP_Send_SN1(1,1,ReportedCsum)		reports LSP of SN=1 LSPNum =1
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_IUTNID_PtPt		L1LSP with IUT as the Neighbor of the MOT
6		[SN1=0]		F	should not send LSP with SN = 0
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		P	
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNP_ReportNonExistLSP_2

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the reported LSPs in the L1CSNP does not exist in the database, the IUT will set SSNflag for the circuit C.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		(ReportedCsum:='5555'O)			Randomly choose a nonzero reportedCsum in L1CSNP
3		A!L1CSNP	L1CSNP_Send_SN1(1,1,ReportedCsum)		L1CSNP with SN =1, LSPNum =1
4		START PSNPIntvl			
5	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(0,1)	P	acknowledge LSP entry SN=0 LSPnum=1
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L10			
9		?TIMEOUT PSNPIntvl		F	fail to set SSNflag
10		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1CSNPCoverage

Group : SIF/L1CSNP_PtPt/Recv/

Purpose : Test that if the received Sequence Numbers PDU is a Complete Sequence Numbers PDU, set SRMflags for C for all LSPs in the database with non zero remaining lifetime and non zero sequence number with LSPIDs whthin the range specified for the CSNP by the Start LSPID and End LSPID fields, which were not mentioned in the CSNP.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP	L1LSP_GenByMOT(2,1)		sn=2, lspnum=1
3		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByMOT(1,2)		sn=1, lspnum=2
4		A ! L1CSNP	L1CSNP_Send_SN1(1,2,ReportedCsum)		StartLSPnum=1 EndLSPNum=2 Sn =1
5		START maxLSPGI			
6	L10	A ? L1LSP	L1LSP_GenByMOT(2,1)	P	
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		F	
11		+ MOTPtPtAdjDel			

Detailed Comments : L1LSP_GenByMOT(2,1) is in IUT's database and is covered by the start_LSPnum and end_LSPnum. It should be propagated on the ciruit C.

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportOlderLSP_1

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will propagate the stored L1LSP over the receiving circuit where an LSP entry reported in the received L1PSNP is older than an entry in the IUT's level 1 LSP database

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		SN=2, sent by MOT
3		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,ReportedCsum,MaxAge)		
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_MOTNID_PtPt		
6		[SN1=2]		P	propagate stored LSP. number
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		F	
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportOlderLSP_2

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will not acknowledge the received the LSP over the receiving circuit where an LSP entry reported in the received L1PSNP is older than an entry in the IUT's level 1 LSP database.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		SN=2, sent by MOT
3		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,ReportedCsum,MaxAge)		SN=1, LSPnum=1
4		START PSNPIntvl			
5	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(1,1)	F	should not acknowledge
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L10			
9		?TIMEOUT PSNPIntvl		P	
10		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportSameLSP

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will not propagate the stored L1LSP over the receiving circuit where an LSP entry reported in the received L1PSNP is same as the entry in the IUT's level 1 LSP database if C is a non broadcast circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		SN=2, LPSnum =1 sent by MOT
3		A ! L1PSNP	L1PSNP_MOTtoIUT(2,1,ReportedCsum,MaxAge)		acknowledge LSP of SN=2 LSPnum =1
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_MOTNID_PtPt		
6		[SN1=2]		F	should not propagate stored LSP. number
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		P	
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNewerLSP_1

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will clear SRMflag for the circuit where an LSP entry reported in the received L1PSNP is newer than an entry in the IUT's level 1 LSP database if the circuit is a non broacdcast circuit.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_1		SN=1, sent by MOT
3		A ! L1PSNP	L1PSNP_MOTtoIUT(2,1,ReportedCsum,MaxAge)		report newer LSP, SN =2
4		START maxLSPGI			
5	L10	A ? L1LSP	L1LSP_MOTNID_PtPt	F	fail to clear SRMflag
6		+ MOTPtPtAdjDel			
7		A ? OTHERWISE			
8		GOTO L10			
9		?TIMEOUT maxLSPGI		P	
10		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNewerLSP_2

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will acknowledge the received the LSP over the receiving circuit where an LSP entry reported in the received L1PSNP is newer than an entry in the IUT's level 1 LSP database.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1LSP(ReportedCsum:=L1LSP.LSPEntry.Checksum)	L1LSP_GenByOtherSys_NZRLT_2		SN=2, LSPnum=1 sent by MOT, to be stored in IUT
3		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,ReportedCsum,MaxAge)		report an older LSP to clear the SSNflag first
4		A ! L1PSNP	L1PSNP_MOTtoIUT(3,1,ReportedCsum,MaxAge)		report newer LSP, SN=3, LSPnum=1
5		START PSNPIntvl			
6	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(2,1)	P	acknowledge LSP entry SN=2 LSPnum=1
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT PSNPIntvl		F	fail to set SSNflag
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNonExitLSP_1

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will set SSNflag for the circuit on which an LSP entry reported in the received L1PSNP does not exist in the IUT's level 1 LSP database. The remaining lifetime, checksum and sequence number of the entry in the received L1PSNP are not zero.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,'5555'O,MaxAge)		report a non−exist LSP, randomly choose 5555H as Csum.
3		START PSNPIntvl			
4	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(0,1)	P	acknowledge LSP entry SN=0 LSPnum=1
5		+ MOTPtPtAdjDel			
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT PSNPIntvl		F	fail to set SSNflag
9		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNonExitLSP_2

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test if the IUT will not set SRMflag for the circuit on which an LSP entry reported in the received L1PSNP does not exist in the IUT's level 1 LSP database.

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		(ReportedCsum:='5555'O)			randomly choose a value for checksum
3		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,ReportedCsum,MaxAge)		report a non−exist LSP
4		START maxLSPGI			
5	L10	A ? L1LSP(SN1:=L1LSP.LSPEntry.SN)	L1LSP_IUTNID_PtPt		L1LSP with IUT as the Neighbor of the MOT
6		[SN1=0]		F	should not send LSP with SN = 0
7		+ MOTPtPtAdjDel			
8		A ? OTHERWISE			
9		GOTO L10			
10		?TIMEOUT maxLSPGI		P	
11		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNonExitLSP_3

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test that the IUT will not set SSNflag for the circuit on which an LSP entry reported in the received L1PSNP does not exist in the IUT's level 1 LSP database, if the remaining lifetime is zero but checksum and sequence number are not zero in the received L1PSNP .

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,'5555'O,0)		report a non−exist LSP, randomly choose 5555H as Csum. RLT=0
3		START PSNPIntvl			
4	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(0,1)	F	
5		+ MOTPtPtAdjDel			
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNonExitLSP_4

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test that the IUT will not set SSNflag for the circuit on which an LSP entry reported in the received L1PSNP does not exist in the IUT's level 1 LSP database, if the checksum is zero but the remaining lifetime and the sequence number are not zero in the received L1PSNP .

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1PSNP	L1PSNP_MOTtoIUT(1,1,'0000'O,MaxAge)		report a non−exist LSP, Csum=0, RLT=MaxAgr, SN=1, LSPnum=1
3		START PSNPIntvl			
4	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(0,1)	F	
5		+ MOTPtPtAdjDel			
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			

Detailed Comments :

Test Case Dynamic Behaviour

Test Case Name : L1PSNP_ReportNonExitLSP_5

Group : SIF/L1PSNP_PtPt/Recv/

Purpose : Test that the IUT will not set SSNflag for the circuit on which an LSP entry reported in the received L1PSNP does not exist in the IUT's level 1 LSP database, if the sequence number is zero but the remaining lifetime and the checksum are not zero in the received L1PSNP .

Configuration :

Default :

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ MOTPtPtAdjUp			
2		A ! L1PSNP	L1PSNP_MOTtoIUT(0,1,'5555'O,MaxAge)		report a non−exist LSP, SN=0, LSPnum=1 Csum=5555, RLT=MaxAgr
3		START PSNPIntvl			
4	L10	A ? L1PSNP	L1PSNP_IUTtoMOT(0,1)	F	
5		+ MOTPtPtAdjDel			
6		A ? OTHERWISE			
7		GOTO L10			
8		?TIMEOUT PSNPIntvl		P	
9		+ MOTPtPtAdjDel			

Detailed Comments :

Test Step Dynamic Behaviour

Test Step Name : CreateL1AdjL1Only
Group : SDF/PtPt/PREAMPLE/
Objective : create an L1 up adjacency
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START helloTime			
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1Only		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		F	
8		?TIMEOUT helloTime			
9		START helloTime			
10		A ! PtPtIIH	PtPtIIH_Send_CT_L1Only		
11		GOTO L10			

Detailed Comments :

Test Step Dynamic Behaviour

Test Step Name : CreateL1AdjL1L2
Group : SDF/PtPt/PREAMPLE/
Objective : create an L1L2 up adjacency
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START helloTime			
2		A ! PtPtIIH	PtPtIIH_Send_CT_L1L2		
3		START maxLSPGI			
4	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
5		A ? OTHERWISE			
6		GOTO L10			
7		?TIMEOUT maxLSPGI		F	
8		?TIMEOUT helloTime			
9		START helloTime			
10		A ! PtPtIIH	PtPtIIH_Send_CT_L1L2		
11		GOTO L10			

Detailed Comments :

Test Step Dynamic Behaviour

Test Step Name : MOTPtPtAdjUp
Group : SDF/PtPt/PREAMPLE/
Objective : create an up adjacency between the MOT and the IUT
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! ISH START helloTime	ISH_Base		
2	L00	A ? PtPtIIH	PtPtIIH_Recv_Base		
3		A ! PtPtIIH	PtPtIIH_Send_Base		
4		START maxLSPGI			
5		?TIMEOUT maxLSPGI		I	
6	L10	A?L1LSP	L1LSP_MOTNID_PtPt		
7		A?OTHERWISE			
8		GOTO L10			
9		?TIMEOUT helloTime			
10		A?OTHERWISE			
11		GOTO L00			

Detailed Comments : MOT sends ISH to IUT, the IUT responds an IIH,

Test Step Dynamic Behaviour

Test Step Name : DeleteL1AdjL1Only
Group : SDF/PtPt/POSTAMBLE/
Objective : delete an up adjacency by sending a IIH with short holding time (1 sec.) so that after the short holding time, the adjacency will be purged from the adjacency database. Sec.8.4.2.5.2 of ISO/IEC 10589
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 Only		circuit type is 1 in the PtPtIIH
2		START helloTime			
3	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
4		GOTO L10			
5		?TIMEOUT helloTime			
6		START helloTime			
7	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT helloTime		P	

Detailed Comments :

Test Step Dynamic Behaviour

Test Step Name : DeleteL1AdjL1L2
Group : SDF/PtPt/POSTAMBLE/
Objective : delete an up adjacency by sending a IIH with short holding time (1 sec.) so that after the short holding time, the adjacency will be purged from the adjacency database. Sec.8.4.2.5.2 of ISO/IEC 10589
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_Send_SHT_CT_L1 L2		circuit type is 1 in the PtPtIIH
2		START helloTime			
3	L10	A ? L1LSP	L1LSP_MOTNID_PtPt		
4		GOTO L10			
5		?TIMEOUT helloTime			
6		START helloTime			
7	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT helloTime		P	

Detailed Comments :

Test Step Dynamic Behaviour

Test Step Name : MOTPtPtAdjDel
Group : SDF/PtPt/POSTAMBLE/
Objective : Delete MOT as an up adjacency to IUT
Default :
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		A ! PtPtIIH	PtPtIIH_ShortHoldTime		
2		START helloTime			
3	L10	A ? PtPtIIH	PtPtIIH_Recv_Base		
4		GOTO L10			
5		?TIMEOUT helloTime			
6		START maxLSPGI			
7	L20	A ? L1LSP	L1LSP_MOTNID_PtPt	F	
8		A?OTHERWISE			
9		GOTO L20			
10		?TIMEOUT maxLSPGI		P	

Detailed Comments :