Ascend Broadband Access Enterprise MIB

Ascend Communications, Inc.

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Ascend Communications Broadband Access Enterprise MIB Definitions

```
-- Sahara Enterprise MIB release 3.0.0.0
--
-- ******************************************************
```

System Information Mib

```
-- ******************************************************
--
-- oasis sysInfo

OASIS-SYSINFO-MIB DEFINITIONS ::= BEGIN

IMPORTS
       ifIndex, DisplayString FROM RFC1213-MIB
       OBJECT-TYPE                      FROM SNMPv2-SMI
       DateAndTime                      FROM HOST-RESOURCES-MIB
       enterprises, TimeTicks, Counter  FROM RFC1155-SMI;

-- Sahara Networks private enterprises MIB extensions
cascade   OBJECT IDENTIFIER ::= { enterprises  277 }
SAharanet OBJECT IDENTIFIER ::= { enterprises 1677 }


-- oasis MIB group
SA           OBJECT IDENTIFIER ::= { saharanet 1 }
SAProducts   OBJECT IDENTIFIER ::= { sa 1 }
SAHardware   OBJECT IDENTIFIER ::= { sa 2 }
SASystem     OBJECT IDENTIFIER ::= { sa 3 }
SAPods       OBJECT IDENTIFIER ::= { sa 4 }
SAProtocolAccelerator OBJECT IDENTIFIER ::= { sa 5 }
SAConn       OBJECT IDENTIFIER ::= { sa 6 }
SADiag       OBJECT IDENTIFIER ::= { sa 7 }
SAProvisioning OBJECT IDENTIFIER ::= { sa 8 }
SAManagementAccess OBJECT IDENTIFIER ::= { sa 9 }
SAUser       OBJECT IDENTIFIER ::= { sa 10 }
SASignalling OBJECT IDENTIFIER ::= { sa 11 }
SAVoice      OBJECT IDENTIFIER ::= { sa 12 }
SASysStats   OBJECT IDENTIFIER ::= { sa 13 }

SACommsStats OBJECT IDENTIFIER ::= { saSysStats 1 }
SAMemStats   OBJECT IDENTIFIER ::= { saSysStats 2 }
SASCCSStats  OBJECT IDENTIFIER ::= { saSysStats 3 }

SA100      OBJECT IDENTIFIER ::= { saProducts 1 }
SA600      OBJECT IDENTIFIER ::= { saProducts 6 }
SA1200     OBJECT IDENTIFIER ::= { saProducts 12 }

SASysInfo    OBJECT IDENTIFIER ::= { saSystem 1 }
```

```
SAIfExt      OBJECT IDENTIFIER ::= { saSystem 2 }
SARedundancy OBJECT IDENTIFIER ::= { saSystem 3 }
SATiming     OBJECT IDENTIFIER ::= { saSystem 4 }
SASysHw      OBJECT IDENTIFIER ::= { saSystem 5 }

SAPhyExt    OBJECT IDENTIFIER ::= { saPods 1 }
SAAtmExt    OBJECT IDENTIFIER ::= { saPods 2 }
SAVideoPod  OBJECT IDENTIFIER ::= { saPods 3 }

SANLI       OBJECT IDENTIFIER ::= { saProtocolAccelerator 1 }

SACesProv   OBJECT IDENTIFIER ::= { saProvisioning 1 }
SAImaProv   OBJECT IDENTIFIER ::= { saProvisioning 2 }
SARvxProv   OBJECT IDENTIFIER ::= { saProvisioning 3 }

SASecurity  OBJECT IDENTIFIER ::= { saUser 1 }

SAVTS       OBJECT IDENTIFIER ::= { saVoice 1 }


--****************************************************************
```

global system variables

```
--
-- non-tabular data
--****************************************************************

saSysDateAndTime OBJECT-TYPE
       SYNTAX  DateAndTime
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Current Date and Time"
       ::= { saSysInfo 1 }

saSysSwRev OBJECT-TYPE
       SYNTAX  DisplayString
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Current Software Revision"
       ::= { saSysInfo 2 }

saSysCfgCntrl OBJECT-TYPE
       SYNTAX  INTEGER {
              none(1),
              write(2),
              read(3),
              sync(4)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "configuration file control"
       ::= { saSysInfo 3 }

saSysType OBJECT-TYPE
       SYNTAX  INTEGER {
              unknown(0),
              sa100(1),
              sa600(2),
              sa1200(3)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "defines type of system"
       ::= { saSysInfo 4 }

saSysAlarm OBJECT-TYPE
       SYNTAX  INTEGER {
              none(1),
              minor(2),
              major(3),
              critical(4)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "defines alarm state of system"
       ::= { saSysInfo 5 }

saSysLeds OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Current State of System LEDs:
              Bit   Value    Meaning
              0       1     Power LED on
              1       2     Run LED on
              2       4     SW Status LED on
              3       8     Critical Alarm LED on
              4      16     Major Alarm LED on
              5      32     Minor Alarm LED on"
       ::= { saSysInfo 6 }
```

```
saSnmpClrCnts OBJECT-TYPE
       SYNTAX  INTEGER {
              clear(1)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "setting this variable clears all SNMP counts"
       ::= { saSysInfo 7 }

saSnmpInErrors OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Count of input SNMP PDU's with un-supported type"
       ::= { saSysInfo 8 }


--  saSubSysType is intended to qualify the saSysType object above. For
--  the SA-100 rack, saSubSysType specifies the 2 possible Switch Fabric
--  capacities (310m and 1200m). For other rack types, the use of
--  saSubSysType is TBD. Although TBD, best guess (on 2/97) is that this
--  object will continue to specify SF capacities. Therefore, the
--  enumerations below show the SF capacities of the other rack types.
--
--    Old SA-100     310 mbit of SF capacity (in house use only).
--    New SA-100     1200mbit of SF capacity.
--    Other Racks    SF capacities :
--                      1200 for SA-600 mesh
--                      3100 for SA-600 homing
--                      2000 for SA-1200 mesh
--                      6800 for SA-1200 homing

saSubSysType OBJECT-TYPE
       SYNTAX  INTEGER {
              unknown(1),
              sf-310-r1(2),
              sf-310-r2(3),
              sf-1200-r3(4),
              sf-1200-mesh-only-r2(5),
              sf-1200-r2(6),
              sf-3100-r3(7),
              sf-2000-r2(8),
              sf-6800-r2(9),
              limited-bw-r1(10),
              low-cost-r4(11)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Used as a qualifier for saSysType"
       ::= { saSysInfo 9 }


--*******************************
-- saSysCfgCntrlTable
--
-- saSysCfgCntrl in a table form
--*******************************

saSysNvCfgCntrlTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaSysNvCfgCntrlEntry
       MAX-ACCESS  not-accessible
       STATUS   mandatory
       DESCRIPTION
              "saSysCfgCntrl in a useful (table) format"
       ::= {  saSysInfo 10 }

saSysNvCfgCntrlEntry OBJECT-TYPE
       SYNTAX  SaSysNvCfgCntrlEntry
       MAX-ACCESS  not-accessible
       STATUS   mandatory
       DESCRIPTION
              "Only 1 entry ever expected in this table - for SCM"
       INDEX   { saBrdNum }
::= { saSysNvCfgCntrlTable 1 }

SaSysNvCfgCntrlEntry ::= SEQUENCE {
       saSysNvCfgCntrl   INTEGER,
       saSysNvCfgStatus  INTEGER
       }

saSysNvCfgCntrl OBJECT-TYPE
       SYNTAX  INTEGER {
              none(1),
              write(2),
              read(3),
              sync(4)
              }
       MAX-ACCESS  read-write
       STATUS   mandatory
       DESCRIPTION
              "NV commands - must match those in saSysCfgCntrl"
       ::= { saSysNvCfgCntrlEntry 1 }
```

```
saSysNvCfgStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                write-started(2),
                write-complete(3),
                read-started(4),
                read-complete(5),
                sync-started(6),
                sync-complete(7)
                }
        MAX-ACCESS  read-write
        STATUS   mandatory
        DESCRIPTION
                "NV command status"
        ::= { saSysNvCfgCntrlEntry 2 }


-- Redundancy Information

saSysPriScm OBJECT-TYPE
        SYNTAX  INTEGER {
                not-present(1),
                active(2),
                standby(3),
                failed(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Specifies the state of the primary SCM. Changing
                 the value can cause a redundancy switch."
        ::= { saRedundancy 1 }

saSysSecScm OBJECT-TYPE
        SYNTAX  INTEGER {
                not-present(1),
                active(2),
                standby(3),
                failed(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Specifies the state of the secondary SCM. Changing
                 the value can cause a redundancy switch."
        ::= { saRedundancy 2 }
```

```
--*****************************************************************
```

System Timing

```
--
-- defines managed variables associated with system timing
--*****************************************************************

saSysPClkStat OBJECT-TYPE
       SYNTAX  INTEGER {
              no-cfg(1),
              active(2),
              standby(3),
              failed(4)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "current state of primary timing reference"
       ::= { saTiming 1 }

saSysSClkStat OBJECT-TYPE
       SYNTAX  INTEGER {
              no-cfg(1),
              active(2),
              standby(3),
              failed(4)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "current state of secondary timing reference"
       ::= { saTiming 2 }

saSysPClkSrc OBJECT-TYPE
       SYNTAX  INTEGER {
              internal(1),
              external(2),
              recovered(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies timing source for primary clock"
       ::= { saTiming 3 }

saSysSClkSrc OBJECT-TYPE
       SYNTAX  INTEGER {
              internal(1),
              external(2),
              recovered(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies timing source for primary clock"
       ::= { saTiming 4 }

saSysPClkBrd OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies the board for the primary clock"
       ::= { saTiming 5 }

saSysPClkPod OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies the pod for the primary primary clock"
       ::= { saTiming 6 }

saSysPClkPort OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies the port for the primary clock"
       ::= { saTiming 7 }

saSysSClkBrd OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "specifies the board for the secondary clock"
       ::= { saTiming 8 }
```

```
saSysSClkPod OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "specifies the pod for the secondary primary clock"
        ::= { saTiming 9 }

saSysSClkPort OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "specifies the port for the secondary clock"
        ::= { saTiming 10 }

saSysClkSel OBJECT-TYPE
        SYNTAX  INTEGER {
                primary(1),
                secondary(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Selects Primary or Secondary Timing Bus"
        ::= { saTiming 11 }

saSysClkAutoRevert OBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "specifies whether the system will auto-revert"
        ::= { saTiming 12 }

saSysClkRevertTime OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "specifies time to auto-revert in seconds"
        ::= { saTiming 13 }
```

```
--****************************************************************
```

ifMapTable

```
--
-- defines the relationship between physical ports on the system
-- and ifIndex Numbers from the ifTable
--****************************************************************

ifMapTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF IfMapEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A list of interface entries.  The number of
                 entries is given by the value of ifNumber."
        ::= {  saIfExt 1 }

ifMapEntry OBJECT-TYPE
        SYNTAX  IfMapEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An interface entry containing objects at the
                 subnetwork layer and below for a particular
                 interface."
        INDEX   { ifIndex }
        ::= { ifMapTable 1 }

ifMapEntry ::=
        SEQUENCE {
                ifBrdNum
                    INTEGER,
                ifPodNum
                    INTEGER,
                ifPortNum
                    INTEGER,
                saIfType
                    INTEGER,
                saIfAlarm
                    INTEGER,
                saIfInfo
                    DisplayString,
                saIfName
                    DisplayString,
                saIfClearCounts
                    INTEGER,
                ifLinkUpDownTrapEnable
                    INTEGER,
```

```
                saIfAtmCellHwy
                    INTEGER,
                saIfAtmPortNum
                    INTEGER,
                saIfDomain
                    INTEGER
                }

ifBrdNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Number"
        ::= { ifMapEntry 1 }

ifPodNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Number"
        ::= { ifMapEntry 2 }

ifPortNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port Number - 0 if not a physical port"
        ::= { ifMapEntry 3 }

saIfType OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(1),
                sonetLineLite(2),
                sonetPathLite(3),
                sonetLinePlus(4),
                sonetPathPlus(5),
                atmSFPort(6),
                ds3(7),
                e3(8),
                ds1(9),
                e1(10),
                fracDs1(11),
                ce-iwf(12),
                fr-iwf(13),
                ethernet(14),
                ima(15),
                atm25(16),
                nli-group(17),
                atmLogical(18),
                direct-group(19),
                ip(20),
                protacc-host(21),
                rvxPort(22),
                vcs-iwf(24),
                frame-relay-uni(25)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "port type as defined"
        ::= { ifMapEntry 4 }

saIfAlarm OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                minor(2),
                major(3),
                critical(4)
                 }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface Alarm State"
        ::= { ifMapEntry 5 }

saIfInfo OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Circuit ID for this Interface"
        ::= { ifMapEntry 6 }

saIfName OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "User Name for this Interface"
        ::= { ifMapEntry 7 }
```

```
saIfClearCounts OBJECT-TYPE
        SYNTAX  INTEGER {
                no(1),
                yes(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "setting this variables clears all counts"
        ::= { ifMapEntry 8 }

ifLinkUpDownTrapEnable  OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled(1),
                disabled(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Indicates whether linkUp/linkDown traps
                 should be generated for this interface."
        ::= { ifMapEntry 9 }

saIfAtmCellHwy  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "For atmSFPort interfaces, the Cell Highway
                 associated with the interface."
        ::= { ifMapEntry 10 }

saIfAtmPortNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "For atmSFPort interfaces, the Port Number
                 associated with the interface."
        ::= { ifMapEntry 11 }

saIfDomain  OBJECT-TYPE
        SYNTAX  INTEGER {
                ipod1(1),
                ipod2(2),
                xpod(3),
                protocolAccelerator(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Owner/Manager of interface."
        ::= { ifMapEntry 12 }


--****************************************************************
```

saIfParentTable

```
--
-- defines the relationship between an interface and its parents
--****************************************************************

saIfParentTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaIfParentEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about the relationship between
                 logical interfaces arranged in a protocol stack.
                 Parent nodes are closer to the physical layer
                 than Children nodes."
        ::= {  saIfExt 2 }

saIfParentEntry OBJECT-TYPE
        SYNTAX  SaIfParentEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about the relationship between
                 logical interfaces arranged in a protocol stack."
        INDEX   { ifIndex, saParentIfIndex }
        ::= { saIfParentTable 1 }

saIfParentEntry ::=
        SEQUENCE {
                saParentIfIndex
                    INTEGER,
                saParentStackStatus
                    INTEGER
                }
```

```
saParentIfIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ifIndex of Parent interface"
        ::= { saIfParentEntry 1 }

saParentStackStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "status of stack"
        ::= { saIfParentEntry 2 }


--****************************************************************
```

saIfChildTable

```
--
-- defines the relationship between an interface and its children
--****************************************************************

saIfChildTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaIfChildEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about the relationship between
                 logical interfaces arranged in a protocol stack.
                 Parent nodes are closer to the physical layer
                 than Children nodes."
        ::= {  saIfExt 3 }

saIfChildEntry OBJECT-TYPE
        SYNTAX  SaIfChildEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about the relationship between
                 logical interfaces arranged in a protocol stack."
        INDEX   { ifIndex, saChildIfIndex }
        ::= { saIfChildTable 1 }

saIfChildEntry ::=
        SEQUENCE {
                saChildIfIndex
                    INTEGER,
                saChildStackStatus
                    INTEGER
                }

saChildIfIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ifIndex of Child interface"
        ::= { saIfChildEntry 1 }

saChildStackStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "status of stack"
        ::= { saIfChildEntry 2 }


--****************************************************************
```

saBrdTable

```
--
-- provides board level information about the oasis system
--****************************************************************

saBrdTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaBrdEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Board Level Information about the current state
                 of the OASIS system"
        ::= { saHardware 2 }
```

```
saBrdEntry OBJECT-TYPE
        SYNTAX  SaBrdEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                ""
        INDEX   { saBrdNum }
        ::= { saBrdTable 1 }

saBrdEntry ::=
        SEQUENCE {
                saBrdNum
                    INTEGER,
                saBrdType
                    INTEGER,
                saBrdAdminStatus
                    INTEGER,
                saBrdOperStatus
                    INTEGER,
                saBrdBootRev
                    DisplayString,
                saBrdLeds
                    INTEGER,
                saBrdSelfTestResult
                    INTEGER,
                saBrdAssemblyNumber
                    DisplayString,
                saBrdSerialNumber
                    Counter,
                saBrdBomRevision
                    DisplayString,
                saBrdCfgRevision
                    DisplayString,
                saBrdCleiCode
                    DisplayString,
                saBrdCustCode
                    DisplayString,
                saBrdManufDate
                    DateAndTime,
                saBrdWarrantyDate
                    DateAndTime,
                saBrdProcUtil
                    INTEGER,
                saBrdProcDram
                    INTEGER,
                saBrdSarDram
                    INTEGER,
                saBrdPcType
                    INTEGER,
                saBrdAlarm
                    INTEGER,
                saBrdLastChange
                    TimeTicks,
                saBrdRevSeverity
                    INTEGER,
                saBrdRevStatus
                    INTEGER
                }

saBrdNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Number"
        ::= { saBrdEntry 1 }

saBrdType OBJECT-TYPE
        SYNTAX  INTEGER {
                no-cfg(1),        -- no information available
                unavail(2),       -- double height card in slot below
                icm(3)            -- ICM/SCM card
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Type"
        ::= { saBrdEntry 2 }

saBrdAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3),
                reboot(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "State configured by system administrator"
        ::= { saBrdEntry 3 }
```

```
saBrdOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                boot(1),
                ok(2),
                out-of-service(3),
                cfg-mismatch(4),
                out-of-slot(5)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Operational Status of Board"
        ::= { saBrdEntry  4 }

saBrdBootRev OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Boot revision of board"
        ::= { saBrdEntry  5 }

saBrdLeds OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current State of Board LEDs:
                Bit   Value    Meaning
                0       1     Power LED on
                1       2     Run LED on
                2       4     SW Status LED on
                3       8     Critical Alarm LED on
                4      16     Major Alarm LED on
                5      32     Minor Alarm LED on"
        ::= { saBrdEntry  6 }

saBrdSelfTestResult OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Self Test Results"
        ::= { saBrdEntry  7 }

saBrdAssemblyNumber OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Assembly Number"
        ::= { saBrdEntry 8 }

saBrdSerialNumber OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Serial Number"
        ::= { saBrdEntry 9 }

saBrdBomRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board BOM Revision"
        ::= { saBrdEntry 10 }

saBrdCfgRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Configuration Revision"
        ::= { saBrdEntry 11 }

saBrdCleiCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board CLEI Code"
        ::= { saBrdEntry 12 }

saBrdCustCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Board Customer Code"
        ::= { saBrdEntry 13 }
```

```
saBrdManufDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Manufacturing Date"
        ::= { saBrdEntry 14 }

saBrdWarrantyDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Board Warranty Date"
        ::= { saBrdEntry 15 }

saBrdProcUtil OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Percentage of CPU bandwidth currently being used"
        ::= { saBrdEntry 16 }

saBrdProcDram OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPU DRAM Size in bytes"
        ::= { saBrdEntry 17 }

saBrdSarDram OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SAR DRAM Size in bytes"
        ::= { saBrdEntry 18 }
```

```
saBrdPcType OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                unknown(2),
                serial(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PCMCIA Card Type"
        ::= { saBrdEntry 19 }

saBrdAlarm OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                minor(2),
                major(3),
                critical(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Alarm State of Board"
        ::= { saBrdEntry 20 }

saBrdLastChange OBJECT-TYPE
        SYNTAX  TimeTicks
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time since board last changed OperStatus"
        ::= { saBrdEntry 21 }

saBrdRevSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                info(1),
                minor(2),
                major(3),
                critical(4),
                default(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Severity Level for Board Revision MisMatch"
        ::= { saBrdEntry 22 }
```

```
saBrdRevStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                error(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Status of Software Support for Board Revision"
        ::= { saBrdEntry 23 }


--*****************************************************************
```

oasisTaskStatTable

```
--
-- provides statistics on every task of every board in the OASIS system
--*****************************************************************

saTaskStatTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaTaskStatEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The Oasis Task Statistics table."
        ::= { saHardware 3 }

saTaskStatEntry OBJECT-TYPE
        SYNTAX  SaTaskStatEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the Oasis Task Statistics Table."
        INDEX   { saBrdNum,
                saTaskStatTaskId }
        ::= { saTaskStatTable 1 }

saTaskStatEntry ::=
        SEQUENCE {
                saTaskStatTaskId        INTEGER,
                saTaskStatPriority      INTEGER,
                saTaskStatName          DisplayString,
                saTaskStatInstantPer    INTEGER,
                saTaskStatAccumPer      INTEGER,
                saTaskStatInstantTenth  INTEGER,
                saTaskStatAccumTenth    INTEGER
                }

saTaskStatTaskId OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Task Id"
        ::= { saTaskStatEntry 1 }

saTaskStatPriority OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Task Priority"
        ::= { saTaskStatEntry 2 }

saTaskStatName OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Task Name"
        ::= { saTaskStatEntry 3 }

saTaskStatInstantPer OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Instantaneous percentage of CPU utilization"
        ::= { saTaskStatEntry 4 }

saTaskStatAccumPer OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Accumulated percentage of CPU utilization"
        ::= { saTaskStatEntry 5 }

saTaskStatInstantTenth OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Instantaneous tenths percentage of CPU utilization"
        ::= { saTaskStatEntry 6 }
```

```
saTaskStatAccumTenth OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Accumulated tenths percentage of CPU utilization"
        ::= { saTaskStatEntry 7 }


--*****************************************************************
```

oasisPodTable

```
--
-- provides information for each installed POD
--*****************************************************************

saPodTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaPodEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The Pod Information table."
        ::= { saHardware 4 }

saPodEntry OBJECT-TYPE
        SYNTAX  SaPodEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the Oasis Pod Information Table."
        INDEX   { saBrdNum,
                saPodNum }
        ::= { saPodTable 1 }

saPodEntry ::=
        SEQUENCE {
                saPodNum
                    INTEGER,
                saPodType
                    INTEGER,
                saPodNumPorts
                    INTEGER,
                saPodDescription
                    DisplayString,
                saPodAdminStatus
                    INTEGER,
                saPodOperStatus
                    INTEGER,
                saPodAssemblyNumber
                    DisplayString,
                saPodSerialNumber
                    Counter,
                saPodBomRevision
                    DisplayString,
                saPodCfgRevision
                    DisplayString,
                saPodCleiCode
                    DisplayString,
                saPodCustCode
                    DisplayString,
                saPodManufDate
                    DateAndTime,
                saPodWarrantyDate
                    DateAndTime,
                saPodSoftwareRev
                    DisplayString,
                saPodBistResult
                    INTEGER,
                saPodLastChange
                    TimeTicks,
                saPodAlarm
                    INTEGER,
                saPodRevSeverity
                    INTEGER,
                saPodRevStatus
                    INTEGER,
                saPodSecSoftwareRev
                    DisplayString,
                saPodPostResult
                    INTEGER
                }

saPodNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Number"
        ::= { saPodEntry 1 }

saPodType OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(1),
                ipod-oc3-stm1-cell(2),
                xpod-oc3-stm1-cell(3),
                ipod-ds3-cell(4),
```

```
        xpod-ds3-cell(5),
        ipod-e3-cell(6),
        xpod-e3-cell(7),
        ipod-ds1-cell(8),
        xpod-ds1-cell(9),
        ipod-e1-cell(10),
        xpod-e1-cell(11),
        ipod-10-100-enet(12),
        ipod-ds1-circuit(13),
        ipod-e1-circuit(14),
        ipod-ds1-ima-cell(15),
        ipod-e1-ima-cell(16),
        ipod-ds1-frame(17),
        ipod-e1-frame(18),
        xpod-ds1-ima-cell(19),
        xpod-e1-ima-cell(20),
        ipod-atm25-cell(21),
        ipod-rvx-frame(22),
        ipod-ds1-voice(23),
        ipod-e1-voice(24),
        xpod-ds1-csu-cell(25),
        xpod-e1-csu-cell(26),
        xpod-ds1-circuit(27),
        xpod-e1-circuit(28),
        xpod-oc3-ts-cell(29),
        ipod-serial-circuit(30),
        expod-ds1-ima-cell(31),
        expod-e1-ima-cell(32),
        expod-ds1-csu-ima-cell(33),
        expod-e1-csu-ima-cell(34),
        eipod-ds1-ima-cell(35),
        eipod-e1-ima-cell(36),
        eipod-ds1-csu-ima-cell(37),
        eipod-e1-csu-ima-cell(38),
        ipod-serial-frame(39)
        }
MAX-ACCESS  read-only
STATUS  current
DESCRIPTION
        "Pod Type"
::= { saPodEntry 2 }
```

```
saPodNumPorts OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Number of Physical Ports on Pod"
        ::= { saPodEntry 3 }

saPodDescription OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Description"
        ::= { saPodEntry 4 }

saPodAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Administrative Status"
        ::= { saPodEntry 5 }

saPodOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Operational Status"
        ::= { saPodEntry 6 }

saPodAssemblyNumber OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Assembly Number"
        ::= { saPodEntry 7 }
```

```
saPodSerialNumber OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Serial number"
        ::= { saPodEntry 8 }

saPodBomRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod BOM Revision"
        ::= { saPodEntry 9 }

saPodCfgRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Configuration Revision"
        ::= { saPodEntry 10 }

saPodCleiCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod CLEI Code"
        ::= { saPodEntry 11 }

saPodCustCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Pod Customer Code"
        ::= { saPodEntry 12 }

saPodManufDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Manufacturing Date"
        ::= { saPodEntry 13 }

saPodWarrantyDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Warranty Date"
        ::= { saPodEntry 14 }

saPodSoftwareRev OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Software Revision"
        ::= { saPodEntry 15 }

saPodBistResult OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                testing(2),
                fault(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pod Self Test Result"
        ::= { saPodEntry 16 }

saPodLastChange OBJECT-TYPE
        SYNTAX  TimeTicks
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time since last state change"
        ::= { saPodEntry 17 }

saPodAlarm OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                minor(2),
                major(3),
                critical(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Alarm State of Pod"
        ::= { saPodEntry 18 }
```

```
saPodRevSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                info(1),
                minor(2),
                major(3),
                critical(4),
                default(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Current Alarm State of Pod"
        ::= { saPodEntry 19 }

saPodRevStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                error(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Alarm State of Pod"
        ::= { saPodEntry 20 }

saPodSecSoftwareRev OBJECT-TYPE
        SYNTAX      DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Software revision for the secondary pod file,
                 if applicable"
        ::= { saPodEntry 21 }

saPodPostResult OBJECT-TYPE
        SYNTAX  INTEGER {
                 pass(1),
                 fail(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Power on self test result"
        ::= { saPodEntry 22 }
```

```
--**********************************************************************
```

oasisPortTable

```
--
-- provides information for each port on each POD
--**********************************************************************

saPortTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The Port Information table."
        ::= { saHardware 5 }

saPortEntry OBJECT-TYPE
        SYNTAX  SaPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the Oasis Port Information Table."
        INDEX   { saBrdNum,
                saPodNum,
                saPortNum }
        ::= { saPortTable 1 }

saPortEntry ::=
        SEQUENCE {
                saPortNum
                    INTEGER,
                saPortIfIndex
                    INTEGER,
                saPortLeds
                    INTEGER,
                saPortServiceMask
                    INTEGER,
                saPortValidTimingSrc
                    INTEGER
                }

saPortNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port Number"
        ::= { saPortEntry 1 }
```

```
saPortIfIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ifIndex Number"
        ::= { saPortEntry 2 }

saPortLeds OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port LED Image"
        ::= { saPortEntry 3 }

saPortServiceMask OBJECT-TYPE
        SYNTAX  INTEGER {
                uni(1),
                ces(2),
                usf(4),
                ima(8),
                nls(16),
                vcs(32)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "bit-mask of service types supported
                 by this port"
        ::= { saPortEntry 4 }

saPortValidTimingSrc OBJECT-TYPE
        SYNTAX  INTEGER {
                no(1),
                yes(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Indicates whether the port is a valid source for system
                 timing"
        ::= { saPortEntry 5 }
```

```
--*****************************************************************
```

saCpodTable

```
--
-- Provides information for each installed CPOD
--*****************************************************************

saCpodTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCpodEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The CPOD Information table."
        ::= { saHardware 6 }

saCpodEntry OBJECT-TYPE
        SYNTAX  SaCpodEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the Oasis CPOD Information Table."
        INDEX   { saBrdNum }
        ::= { saCpodTable 1 }

saCpodEntry ::=
        SEQUENCE {
                saCpodType
                    INTEGER,
                saCpodHwRev
                    INTEGER,
                saCpodAssemblyNumber
                    DisplayString,
                saCpodSerialNumber
                    Counter,
                saCpodBomRevision
                    DisplayString,
                saCpodCfgRevision
                    DisplayString,
                saCpodCleiCode
                    DisplayString,
                saCpodCustCode
                    DisplayString,
                saCpodManufDate
                    DateAndTime,
                saCpodWarrantyDate
                    DateAndTime,
                saCpodAlarm
                    INTEGER,
```

```
                saCpodRevSeverity
                    INTEGER,
                saCpodRevStatus
                    INTEGER
                }

saCpodType OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(0),
                cpod-e100(1),
                cpod-200-1(2),
                cpod-200-2(3),
                cpod-150(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Type"
        ::= { saCpodEntry 1 }

saCpodHwRev OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Hardware Revision"
        ::= { saCpodEntry 2 }

saCpodAssemblyNumber OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Assembly Number"
        ::= { saCpodEntry 3 }

saCpodSerialNumber OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Serial number"
        ::= { saCpodEntry 4 }

saCpodBomRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD BOM Revision"
        ::= { saCpodEntry 5 }

saCpodCfgRevision OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Configuration Revision"
        ::= { saCpodEntry 6 }

saCpodCleiCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD CLEI Code"
        ::= { saCpodEntry 7 }

saCpodCustCode OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "CPOD Customer Code"
        ::= { saCpodEntry 8 }

saCpodManufDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Manufacturing Date"
        ::= { saCpodEntry 9 }

saCpodWarrantyDate OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "CPOD Warranty Date"
        ::= { saCpodEntry 10 }

saCpodAlarm OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(0),
                none(1),
```

```
                minor(2),
                major(3),
                critical(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Alarm State of CPOD"
        ::= { saCpodEntry 11 }

saCpodRevSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                info(1),
                minor(2),
                major(3),
                critical(4),
                default(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Current Alarm State of CPOD"
        ::= { saCpodEntry 12 }

saCpodRevStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                error(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Alarm State of CPOD"
        ::= { saCpodEntry 13 }




--*****************************************************************
```

saPldTable

```
--
-- Provides information for each PLD
--*****************************************************************

saPldTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaPldEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The PLD Information table."
        ::= { saHardware 7 }

saPldEntry OBJECT-TYPE
        SYNTAX  SaPldEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the Oasis PLD Information Table."
        INDEX   { saBrdNum, saPldChainNum, saPldNum }
        ::= { saPldTable 1 }

saPldEntry ::=
        SEQUENCE {
                saPldChainNum
                    INTEGER,
                saPldNum
                    INTEGER,
                saPldDevId
                    INTEGER,
                saPldChecksum
                    INTEGER,
                saPldUes
                    INTEGER
                }

saPldChainNum OBJECT-TYPE
        SYNTAX  INTEGER {
                i960(1),
                protacc(2),
                ipod1(3),
                ipod2(4),
                xpod(5),
                cpod(6)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ISP Chain"
        ::= { saPldEntry 1 }

saPldNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "Pld Number"
        ::= { saPldEntry 2 }


saPldDevId OBJECT-TYPE
        SYNTAX  INTEGER {
                pld-1016(1),
                pld-1016E(11),
                pld-1024(2),
                pld-1024E(12),
                pld-1032(3),
                pld-1032E(13),
                pld-1048(4),
                pld-1048C(5),
                pld-1048E(14),
                pld-2032(21),
                pld-2064(18),
                pld-2096(19),
                pld-2128(20),
                pld-3192(33),
                pld-3256(34),
                pld-6192(50)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ISP Chain"
        ::= { saPldEntry 3 }

saPldChecksum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ISP Chain"
        ::= { saPldEntry 4 }

saPldUes OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ISP Chain"
        ::= { saPldEntry 5 }

   END
```

```
-- ******************************************************
```

Phy Extensions MIB

```
-- ******************************************************


-- oasis Pod Info

OASIS-PHYEXT-MIB DEFINITIONS ::= BEGIN

IMPORTS
        ifIndex, DisplayString            FROM RFC1213-MIB
        dsx3IntervalIndex, dsx3IntervalNumberFROM RFC1407-MIB
        sonetLineIntervalNumber,
        sonetPathIntervalNumberFROM SONET-MIB
        Counter                           FROM RFC1155-SMI
        SaPhyExt                          FROM OASIS-SYSINFO-MIB
        OBJECT-TYPE                       FROM SNMPv2-SMI;

-- oasis MIB group

SASonetLineExt    OBJECT IDENTIFIER ::= { saPhyExt 1 }
SASonetPathExt    OBJECT IDENTIFIER ::= { saPhyExt 2 }
SADsx3Ext         OBJECT IDENTIFIER ::= { saPhyExt 3 }
SADsx1Ext         OBJECT IDENTIFIER ::= { saPhyExt 4 }
SAEnetExt         OBJECT IDENTIFIER ::= { saPhyExt 5 }
SADs0BundleExt    OBJECT IDENTIFIER ::= { saPhyExt 6 }
SACesExt          OBJECT IDENTIFIER ::= { saPhyExt 7 }

saSonetLineExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSonetLineExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for SONET Line/Section interface"
        ::= { saSonetLineExt 1 }

saSonetLineExtEntry OBJECT-TYPE
        SYNTAX  SaSonetLineExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Line/Section interface
                 containing additional objects
                 not contained in the standard mibs."
        INDEX   { ifIndex }
        ::= { saSonetLineExtTable 1 }
```

```
saSonetLineExtEntry ::=
        SEQUENCE {
                saSonetLineExtLaser
                    INTEGER,
                saSonetLineExtTxClkSrc
                    INTEGER,
                saSonetLineExtLpbk
                    INTEGER,
                saSonetLineExtDiags
                    INTEGER,
                saSonetLineExtSectAlarm
                    INTEGER,
                saSonetLineExtLineAlarm
                    INTEGER,
                saSonetLineExtSdhType
                    INTEGER,
                saSonetLineExtTxSectTraceEnable
                    INTEGER,
                saSonetLineExtTxSectionTrace
                    DisplayString,
                saSonetLineExtRxSectionTrace
                    DisplayString,
                saSonetLineExtCurLineFC
                    Counter,
                saSonetLineExtCurLineFarEndFC
                    Counter,
                saSonetLineExtMaxIntervals
                    INTEGER,
                saSonetLineExtLOSSeverity
                    INTEGER,
                saSonetLineExtLOFSeverity
                    INTEGER,
                saSonetLineExtLAISSeverity
                    INTEGER,
                saSonetLineExtLRDISeverity
                    INTEGER
                }

saSonetLineExtLaser OBJECT-TYPE
        SYNTAX  INTEGER {
                off(1),
                on(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Laser On/Off"
        ::= { saSonetLineExtEntry 1 }

saSonetLineExtTxClkSrc OBJECT-TYPE
        SYNTAX  INTEGER {
                loopTiming(1),   -- recovered receive clock
                localTiming(2),  -- local oscillator
                systemTiming(3) -- from some other line/port, sys ref, etc.
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Transmit Clock Source"
        ::= { saSonetLineExtEntry 2 }

saSonetLineExtLpbk  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                line(2),
                intSection(3),
                intPath(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Loopbacks"
        ::= { saSonetLineExtEntry 3 }

saSonetLineExtDiags  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                txDigitalLOS(2),
                txLineAIS(3),
                txLineRDI(4),
                txFrameBitErr(5),
                txSectBipErr(6),
                txLineBipErr(7)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Diagnostics "
        ::= { saSonetLineExtEntry 4 }

saSonetLineExtSectAlarm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "SONET Section Alarms:
                Bit    Value      Meaning
                 0       1        No Section Alarm
                 1       2        LOS
                 2       4        LOF"
        ::= { saSonetLineExtEntry 5 }

saSonetLineExtLineAlarm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SONET Line Alarms:
                Bit    Value      Meaning
                 0       1        No Line Defect
                 1       2        Line AIS
                 2       4        Line RDI"
        ::= { saSonetLineExtEntry 6 }

saSonetLineExtSdhType  OBJECT-TYPE
        SYNTAX  INTEGER {
                sonet(1),
                sdh(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET or SDH"
        ::= { saSonetLineExtEntry 7 }

saSonetLineExtTxSectTraceEnable  OBJECT-TYPE
        SYNTAX  INTEGER {
                enable(1),
                disable(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Enable Transmit Section Trace"
        ::= { saSonetLineExtEntry 8 }

saSonetLineExtTxSectionTrace  OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Transmit Section Trace"
        ::= { saSonetLineExtEntry 9 }

saSonetLineExtRxSectionTrace  OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SONET Received Section Trace"
        ::= { saSonetLineExtEntry 10 }

saSonetLineExtCurLineFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Line Failure Count"
        ::= { saSonetLineExtEntry 11 }

saSonetLineExtCurLineFarEndFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Far-End Line Failure Count"
        ::= { saSonetLineExtEntry 12 }

saSonetLineExtMaxIntervals OBJECT-TYPE
        SYNTAX  INTEGER (4..96)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Maximum number of intervals for interval table"
                DEFVAL   { 32 }
        ::= { saSonetLineExtEntry 13 }

saSonetLineExtLOSSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "LOS Alarm Severity Level"
        ::= { saSonetLineExtEntry 14 }
```

```
saSonetLineExtLOFSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "LOF Alarm Severity Level"
        ::= { saSonetLineExtEntry 15 }

saSonetLineExtLAISSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Line AIS Alarm Severity Level"
        ::= { saSonetLineExtEntry 16 }

saSonetLineExtLRDISeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Line RDI Alarm Severity Level"
        ::= { saSonetLineExtEntry 17 }


-- SONET Section/Line Total Counts

saSonetLineExtTotalTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSonetLineExtTotalEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Total Count variables needed for SONET
                 Line/Section interface"
        ::= { saSonetLineExt 2 }

saSonetLineExtTotalEntry OBJECT-TYPE
        SYNTAX  SaSonetLineExtTotalEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Line/Section interface
                 containing total count objects
                 not contained in the standard mibs."
        INDEX   { ifIndex }
        ::= { saSonetLineExtTotalTable 1 }

saSonetLineExtTotalEntry ::=
        SEQUENCE {
                saSonetLineExtTotSectCV
                    Counter,
                saSonetLineExtTotSectES
                    Counter,
                saSonetLineExtTotSectSES
                    Counter,
                saSonetLineExtTotSectSEFS
                    Counter,
                saSonetLineExtTotLineCV
                    Counter,
                saSonetLineExtTotLineES
                    Counter,
                saSonetLineExtTotLineSES
                    Counter,
                saSonetLineExtTotLineUAS
                    Counter,
                saSonetLineExtTotLineFC
                    Counter,
                saSonetLineExtTotLineFeCV
                    Counter,
                saSonetLineExtTotLineFeES
                    Counter,
                saSonetLineExtTotLineFeSES
                    Counter,
                saSonetLineExtTotLineFeUAS
                    Counter,
                saSonetLineExtTotLineFeFC
                    Counter
                }

saSonetLineExtTotSectCV  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "Total Section Code Violations (Sect BIP) Count"
        ::= { saSonetLineExtTotalEntry 1 }

saSonetLineExtTotSectES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Section Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 2 }

saSonetLineExtTotSectSES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Section Severely Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 3 }

saSonetLineExtTotSectSEFS  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Severely Errored Framing Seconds Count"
        ::= { saSonetLineExtTotalEntry 4 }

saSonetLineExtTotLineCV  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Line Code Violations (Line BIP24) Count"
        ::= { saSonetLineExtTotalEntry 5 }

saSonetLineExtTotLineES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Line Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 6 }

saSonetLineExtTotLineSES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Line Severely Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 7 }

saSonetLineExtTotLineUAS  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Line Unavailable Seconds Count"
        ::= { saSonetLineExtTotalEntry 8 }

saSonetLineExtTotLineFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Line Failure Count"
        ::= { saSonetLineExtTotalEntry 9 }

saSonetLineExtTotLineFeCV  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Line Code Violation (Line FEBE) Count"
        ::= { saSonetLineExtTotalEntry 10 }

saSonetLineExtTotLineFeES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Line Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 11 }

saSonetLineExtTotLineFeSES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Line Severely Errored Seconds Count"
        ::= { saSonetLineExtTotalEntry 12 }

saSonetLineExtTotLineFeUAS  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "Total Far-End Line Unavailable Seconds Count"
        ::= { saSonetLineExtTotalEntry 13 }

saSonetLineExtTotLineFeFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Line Failure Count"
        ::= { saSonetLineExtTotalEntry 14 }


-- SONET Line Interval Extension Table

saSonetLineExtIntTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSonetLineExtIntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for SONET Line/Section
                 Interval table"
        ::= { saSonetLineExt 3 }

saSonetLineExtIntEntry OBJECT-TYPE
        SYNTAX  SaSonetLineExtIntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Line/Section interface
                 containing additional objects
                 not contained in the standard interval table."
        INDEX   { ifIndex, sonetLineIntervalNumber }
        ::= { saSonetLineExtIntTable 1 }

saSonetLineExtIntEntry ::=
        SEQUENCE {
                saSonetLineExtIntLineFC
                    Counter,
                saSonetLineExtIntLineFarEndFC
                    Counter
                }

saSonetLineExtIntLineFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval Line Failure Count"
        ::= { saSonetLineExtIntEntry 1 }

saSonetLineExtIntLineFarEndFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval Far-End Line Failure Count"
        ::= { saSonetLineExtIntEntry 2 }

-- SONET Path Extension table

saSonetPathExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSonetPathExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for SONET Path interface"
        ::= { saSonetPathExt 1 }

saSonetPathExtEntry OBJECT-TYPE
        SYNTAX  SaSonetPathExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Path interface containing
                 additional objects not contained in the standard mibs."
        INDEX   { ifIndex }
        ::= { saSonetPathExtTable 1 }

saSonetPathExtEntry ::=
        SEQUENCE {
                saSonetPathExtDiags
                    INTEGER,
                saSonetPathExtPathAlarm
                    INTEGER,
                saSonetPathExtPathLabel
                    INTEGER,
                saSonetPathExtTxPathTraceEnable
                    INTEGER,
                saSonetPathExtTxPathTrace
                    DisplayString,
                saSonetPathExtRxPathTrace
                    DisplayString,
                saSonetPathExtCurPathFC
                    Counter,
                saSonetPathExtCurPathFarEndFC
                    Counter,
```

```
                saSonetPathExtLOPSeverity
                    INTEGER,
                saSonetPathExtPAISSeverity
                    INTEGER,
                saSonetPathExtPRDISeverity
                    INTEGER,
                saSonetPathExtPUneqSeverity
                    INTEGER,
                saSonetPathExtPSLMSeverity
                    INTEGER,
                saSonetPathExtValidIntervals
                    INTEGER,
                saSonetPathExtMaxIntervals
                    INTEGER
                }

saSonetPathExtDiags OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                txPathAIS(2),
                txPathRDI(3),
                txPathBipErr(4),
                txHcsBitErr(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Path diagnostics"
        ::= { saSonetPathExtEntry 1 }

saSonetPathExtPathAlarm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SONET Path Alarms
                Bit    Value      Meaning
                 0       1        No Path Alarm
                 1       2        LOP
                 2       4        Path AIS
                 3       8        Path RDI
                 4      16        Path Unequipped
                 5      32        Signal Label Mismatch "
        ::= { saSonetPathExtEntry 2 }

saSonetPathExtPathLabel  OBJECT-TYPE
        SYNTAX  INTEGER {
                unequipped(1),
                atm(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Path Label"
                DEFVAL   { atm }
        ::= { saSonetPathExtEntry 3 }

saSonetPathExtTxPathTraceEnable  OBJECT-TYPE
        SYNTAX  INTEGER {
                enable(1),
                disable(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Enable Transmit Path Trace"
        ::= { saSonetPathExtEntry 4 }

saSonetPathExtTxPathTrace  OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "SONET Transmit Path Trace"
        ::= { saSonetPathExtEntry 5 }

saSonetPathExtRxPathTrace  OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SONET Received Path Trace"
        ::= { saSonetPathExtEntry 6 }

saSonetPathExtCurPathFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Path Failure Count"
        ::= { saSonetPathExtEntry 7 }
```

```
saSonetPathExtCurPathFarEndFC  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Current Far-End Path Failure Count"
       ::= { saSonetPathExtEntry 8 }

saSonetPathExtLOPSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Loss Of Pointer Alarm Severity Level"
       ::= { saSonetPathExtEntry 9 }

saSonetPathExtPAISSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Path AIS Alarm Severity Level"
       ::= { saSonetPathExtEntry 10 }

saSonetPathExtPRDISeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Path RDI Severity Level"
       ::= { saSonetPathExtEntry 11 }

saSonetPathExtPUneqSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Path Unequipped Alarm Severity Level"
       ::= { saSonetPathExtEntry 12 }

saSonetPathExtPSLMSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Path Label Mismatch Alarm Severity Level"
       ::= { saSonetPathExtEntry 13 }

saSonetPathExtValidIntervals  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Number of valid intervals"
       ::= { saSonetPathExtEntry 14 }

saSonetPathExtMaxIntervals OBJECT-TYPE
       SYNTAX  INTEGER (4..96)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Maximum number of intervals for interval table"
              DEFVAL   { 32 }
       ::= { saSonetPathExtEntry 15 }


-- SONET Path Total Counts

saSonetPathExtTotalTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaSonetPathExtTotalEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "Total Count variables needed for SONET Path interface"
       ::= { saSonetPathExt 2 }
```

```
saSonetPathExtTotalEntry OBJECT-TYPE
        SYNTAX  SaSonetPathExtTotalEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Path interface containing total
                 count objects not contained in the standard mibs."
        INDEX   { ifIndex }
        ::= { saSonetPathExtTotalTable 1 }

saSonetPathExtTotalEntry ::=
        SEQUENCE {
                saSonetPathExtTotPathCV
                    Counter,
                saSonetPathExtTotPathES
                    Counter,
                saSonetPathExtTotPathSES
                    Counter,
                saSonetPathExtTotPathUAS
                    Counter,
                saSonetPathExtTotPathFC
                    Counter,
                saSonetPathExtTotPathFeCV
                    Counter,
                saSonetPathExtTotPathFeES
                    Counter,
                saSonetPathExtTotPathFeSES
                    Counter,
                saSonetPathExtTotPathFeUAS
                    Counter,
                saSonetPathExtTotPathFeFC
                    Counter
                }

saSonetPathExtTotPathCV  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Path Code Violation (Path BIP8) Count"
        ::= { saSonetPathExtTotalEntry 1 }

saSonetPathExtTotPathES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Path Errored Seconds Count"
        ::= { saSonetPathExtTotalEntry 2 }

saSonetPathExtTotPathSES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Path Severely Errored Seconds Count"
        ::= { saSonetPathExtTotalEntry 3 }

saSonetPathExtTotPathUAS  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Path Unavailable Seconds Count"
        ::= { saSonetPathExtTotalEntry 4 }

saSonetPathExtTotPathFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Path Failure Count"
        ::= { saSonetPathExtTotalEntry 5 }

saSonetPathExtTotPathFeCV  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Path Code Violation (Path FEBE) Count"
        ::= { saSonetPathExtTotalEntry 6 }

saSonetPathExtTotPathFeES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Path Errored Seconds Count"
        ::= { saSonetPathExtTotalEntry 7 }
```

```
saSonetPathExtTotPathFeSES  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Path Severely Errored Seconds Count"
        ::= { saSonetPathExtTotalEntry 8 }

saSonetPathExtTotPathFeUAS  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Path Unavailable Seconds Count"
        ::= { saSonetPathExtTotalEntry 9 }

saSonetPathExtTotPathFeFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total Far-End Path Failure Count"
        ::= { saSonetPathExtTotalEntry 10 }


-- SONET Path Interval Extension Table

saSonetPathExtIntTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSonetPathExtIntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for SONET Path Interval table"
        ::= { saSonetPathExt 3 }

saSonetPathExtIntEntry OBJECT-TYPE
        SYNTAX  SaSonetPathExtIntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SONET Path interface containing
                 additional objects not contained in the
                 standard interval table."
        INDEX   { ifIndex, sonetPathIntervalNumber }
        ::= { saSonetPathExtIntTable 1 }

saSonetPathExtIntEntry ::=
        SEQUENCE {
                saSonetPathExtIntPathFC
                    Counter,
                saSonetPathExtIntPathFarEndFC
                    Counter
                }

saSonetPathExtIntPathFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval Path Failure Count"
        ::= { saSonetPathExtIntEntry 1 }

saSonetPathExtIntPathFarEndFC  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval Far-End Path Failure Count"
        ::= { saSonetPathExtIntEntry 2 }


-- the DS3/E3 Configuration

saDsx3Table OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaDsx3Entry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for Ds3/E3 table"
        ::= { saDsx3Ext 1 }

saDsx3Entry OBJECT-TYPE
        SYNTAX  SaDsx3Entry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for Ds3/E3 interface containing additional objects
                 not contained in the standard table."
        INDEX   { ifIndex }
        ::= { saDsx3Table 1 }
```

```
saDsx3Entry ::=
        SEQUENCE
                {
                saDsx3LBO
                    INTEGER,
                saDsx3Framing
                    INTEGER,
                saDsx3LineCoding
                    INTEGER,
                saDsx3TxClock
                    INTEGER,
                saDsx3MaxIntervals
                    INTEGER,
                saDsx3ValidIntervals
                    INTEGER,
                saDsx3Lpbk
                    INTEGER,
                saDsx3Diag
                    INTEGER,
                saDsx3Status
                    INTEGER,
                saDsx3Alarm
                    INTEGER,
                saDsx3TotalFramErrs
                    Counter,
                saDsx3LOSSeverity
                    INTEGER,
                saDsx3LOFSeverity
                    INTEGER,
                saDsx3AISSeverity
                    INTEGER,
                saDsx3YelSeverity
                    INTEGER,
                saDsx3CurrentE3G832BIP8
                    Counter,
                saDsx3CurrentE3G832FEBE
                    Counter,
                saDsx3TotalE3G832BIP8
                    Counter,
                saDsx3TotalE3G832FEBE
                    Counter,
                saDsx3E3G832TxTraceEnable
                    INTEGER,
                saDsx3E3G832TxTrace
                    DisplayString,
                saDsx3E3G832RxTrace
                    DisplayString,
                saDsx3FeacLoopProcessing
                    INTEGER,
                saDsx3RcvFeac
                    INTEGER,
                saDsx3TxFeac
                    INTEGER,
                saDsx3SendFeacLoop
                    INTEGER,
                saDsx3InFeacLoop
                    INTEGER,
                saE3Diag
                    INTEGER
                }

saDsx3LBO  OBJECT-TYPE
        SYNTAX  INTEGER {
                under225ft(1),
                over225ft(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Line Build Out"
        ::= { saDsx3Entry 1 }

saDsx3Framing  OBJECT-TYPE
        SYNTAX  INTEGER {
                ds3-Cbit(1),
                ds3-M23(2),
                e3-G751(3),
                e3-G832(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "DS3/E3 Framing"
        ::= { saDsx3Entry 3 }

saDsx3LineCoding  OBJECT-TYPE
        SYNTAX  INTEGER {
                b3zs(1),
                hdb3(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Line Coding"
        ::= { saDsx3Entry 4 }
```

```
saDsx3TxClock  OBJECT-TYPE
       SYNTAX  INTEGER {
               loopTiming(1),  -- recovered receive clock
               systemTiming(2) -- from some other line/port, sys ref, etc.
               }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Transmit Clock Source"
       ::= { saDsx3Entry 5 }

saDsx3MaxIntervals  OBJECT-TYPE
       SYNTAX  INTEGER (4..96)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Max number of intervals stored"
       DEFVAL   { 32 }
       ::= { saDsx3Entry 6 }

saDsx3ValidIntervals  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
               "Number of valid intervals"
       ::= { saDsx3Entry 7 }

saDsx3Lpbk  OBJECT-TYPE
       SYNTAX  INTEGER {
               none(1),
               line(2),
               diagnostic(3),
               payload(4)
               }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "DS3/E3 Loopbacks"
       ::= { saDsx3Entry 8 }

saDsx3Diag  OBJECT-TYPE
       SYNTAX  INTEGER {
               none(1),
               txLOS(2),
               txAIS(3),
               txFERF(4),
               txIdle(5),
               txLCV(6),
               txPbitErrs(7),
               txCbitErrs(8),
               txMbitErrs(9),
               txFbitErrs(10),
               txFEBE(11)
               }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "DS3/E3 Diagnostics"
       ::= { saDsx3Entry 9 }

saDsx3Status  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
               "DS3/E3 Defects:
               Bit    Value      Meaning
                0       1        No Alarm
                1       2        LOS
                2       4        LOF
                3       8        AIS
                4      16        Yellow"
       ::= { saDsx3Entry 10 }

saDsx3Alarm  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
               "DS3/E3 Alarms:
               Bit    Value      Meaning
                0       1        No Alarm
                1       2        LOS
                2       4        LOF
                3       8        AIS
                4      16        Yellow"
       ::= { saDsx3Entry 11 }

saDsx3TotalFramErrs  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
               "DS3/E3 Framing Errors"
       ::= { saDsx3Entry 12 }
```

```
saDsx3LOSSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "DS3/E3 LOS Alarm Severity Level"
       ::= { saDsx3Entry 13 }

saDsx3LOFSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "DS3/E3 LOF Alarm Severity Level"
       ::= { saDsx3Entry 14 }

saDsx3AISSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "DS3/E3 AIS Alarm Severity Level"
       ::= { saDsx3Entry 15 }

saDsx3YelSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "DS3/E3 Yellow Alarm Severity Level"
       ::= { saDsx3Entry 16 }
```

```
saDsx3CurrentE3G832BIP8  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "E3 G.832 Current Interval BIP8 Error Count"
       ::= { saDsx3Entry 17 }

saDsx3CurrentE3G832FEBE  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "E3 G.832 Current Interval FEBE Error Count"
       ::= { saDsx3Entry 18 }

saDsx3TotalE3G832BIP8  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "E3 G.832 Total BIP8 Error Count"
       ::= { saDsx3Entry 19 }

saDsx3TotalE3G832FEBE  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "E3 G.832 Total FEBE Error Count"
       ::= { saDsx3Entry 20 }

saDsx3E3G832TxTraceEnable  OBJECT-TYPE
       SYNTAX  INTEGER {
              enable(1),
              disable(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "E3 G.832 Trail Trace Enable"
       ::= { saDsx3Entry 21 }

saDsx3E3G832TxTrace  OBJECT-TYPE
       SYNTAX  DisplayString(SIZE(0..40))
       MAX-ACCESS  read-write
       STATUS  current
```

```
        DESCRIPTION
                "E3 G.832 Transmit Trail Trace"
        ::= { saDsx3Entry 22 }

saDsx3E3G832RxTrace  OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "E3 G.832 Receive Trail Trace"
        ::= { saDsx3Entry 23 }

saDsx3FeacLoopProcessing  OBJECT-TYPE
        SYNTAX  INTEGER {
                enable(1),
                disable(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Enables/Disables processing of receive and
                 transmit loopback codes"
        ::= { saDsx3Entry 24 }

saDsx3RcvFeac  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                ds3LOS(2),
                ds3OOF(3),
                ds3AIS(4),
                ds3Idle(5),
                ds3EqFailSA(6),
                ds3EqFailNSA(7),
                cmnEqFailNSA(8),
                lpbkAct(9),
                lpbkDeact(10),
                ds3Line(11),
                unknown(12)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "FEAC code currently being received"
        ::= { saDsx3Entry 25 }

saDsx3TxFeac  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                ds3LOS(2),
                ds3OOF(3),
                ds3AIS(4),
                ds3Idle(5)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "FEAC code currently being transmitted"
        ::= { saDsx3Entry 26 }

saDsx3SendFeacLoop  OBJECT-TYPE
        SYNTAX  INTEGER {
                activate(1),
                deactivate(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Sends activate/deactivate remote loopback codes"
        ::= { saDsx3Entry 27 }

saDsx3InFeacLoop  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                ds3LineLoop(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Status indicating loopback controlled by remote DS3 FEAC"
        ::= { saDsx3Entry 28 }

saE3Diag  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                txAIS(3),
                txFERF(4),
                txLCV(6),
                txFbitErrs(10),
                txFEBE(11)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "E3 Diagnostics"
        ::= { saDsx3Entry 29 }
```

```
-- DS3/E3 Interval Extension Table

saDsx3IntTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaDsx3IntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for DS3/E3 Interval table"
        ::= { saDsx3Ext 2 }

saDsx3IntEntry OBJECT-TYPE
        SYNTAX  SaDsx3IntEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for DS3/E3 interface containing additional objects
                 not contained in the standard interval table."
        INDEX   { dsx3IntervalIndex, dsx3IntervalNumber }
        ::= { saDsx3IntTable 1 }

saDsx3IntEntry ::=
        SEQUENCE {
                saDsx3IntE3G832BIP8
                    Counter,
                saDsx3IntE3G832FEBE
                    Counter
                }

saDsx3IntE3G832BIP8  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval E3 G.832 BIP8 Count"
        ::= { saDsx3IntEntry 1 }

saDsx3IntE3G832FEBE  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interval E3 G.832 FEBE Event Count"
        ::= { saDsx3IntEntry 2 }
```

```
-- DS1 extension table

saDsx1AddTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaDsx1AddEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional configurables for DS1."
        ::= { saDsx1Ext 1 }

saDsx1AddEntry OBJECT-TYPE
        SYNTAX  SaDsx1AddEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry containing DS1 configurable objects."
        INDEX   { ifIndex }
        ::= { saDsx1AddTable 1 }

saDsx1AddEntry ::=
        SEQUENCE {
                saDsx1LineLength
                    INTEGER,
                saDsx1TxClkSrc
                    INTEGER,
                saDsx1Status
                    INTEGER,
                saDsx1Alarm
                    INTEGER,
                saDsx1MaxIntervals
                    INTEGER,
                saDsx1Diags
                    INTEGER,
                saDsx1LOSSeverity
                    INTEGER,
                saDsx1LOFSeverity
                    INTEGER,
                saDsx1AISSeverity
                    INTEGER,
                saDsx1YelSeverity
                    INTEGER,
                saDsx1TS16AISSeverity
                    INTEGER,
                saDsx1TS16LOMFSeverity
                    INTEGER,
                saDsx1CRCLOMFSeverity
                    INTEGER,
                saDsx1ImaLink
```

```
                INTEGER,
            saDsx1RxAttenuation
                INTEGER,
            saDsx1Range
                INTEGER,
            saDsx1Loopback
                INTEGER,
            saDsx1NLoopDetection
                INTEGER,
            saDsx1PulseMultiplier
                INTEGER,
            saDsx1RxGainBoost
                INTEGER,
            saDsx1Impedance
                INTEGER,
            saDsx1Format
                INTEGER,
            saDsx1TimeSlotMask
                INTEGER,
            saDsx1DynamicBandwidth
                INTEGER,
            saDsx1ClockMode
                INTEGER,
            saDsx1Signaling
                INTEGER,
            saDsx1FdlMode
                INTEGER
            }

saDsx1LineLength OBJECT-TYPE
       SYNTAX INTEGER {
              len0To110Ft(1),
              len110To220Ft(2),
              len220To330Ft(3),
              len330To440Ft(4),
              len440To550Ft(5),
              len550To660Ft(6),
              ohm75(7),
              ohm120(8)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Line Length"
       DEFVAL { len0To110Ft }
       ::= { saDsx1AddEntry 1 }

saDsx1TxClkSrc OBJECT-TYPE
       SYNTAX INTEGER {
              loop(1),
              system(2),
              local(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Transmit Clock Source"
       DEFVAL { loop }
       ::= { saDsx1AddEntry 2 }

saDsx1Status  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
       "DS1/El Status' not included in RFC1406:
              Bit    Value      Meaning
               7     128        Loss of CRC MF Alignment"
       ::= { saDsx1AddEntry 3 }

saDsx1Alarm  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "DS1/El Alarms:
              Bit    Value      Meaning
               0       1        No Alarm
               1       2        Yellow Alarm
               2       4        AIS
               3       8        LOF
               4      16        Loss of Signal
               5      32        E1 TS16 AIS
               6      64        TS16 LOMF (Loss of Sig MF)
               7     128        Loss of CRC MF Alignment
               8     192        QRSS Detected
               9     208        Network Loopback Detected"

       ::= { saDsx1AddEntry 4 }

saDsx1MaxIntervals  OBJECT-TYPE
       SYNTAX  INTEGER (4..96)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
```

```
                "Max number of intervals stored"
        DEFVAL   { 32 }
        ::= { saDsx1AddEntry 5 }

saDsx1Diags  OBJECT-TYPE
        SYNTAX INTEGER {
                none(1),
                txYellow(2),
                txAIS(3),
                txE1FasError(4),
                txE1TS16AIS(5),
                txE1MASerror(6),
                 txQRSS(7)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Diagnostics"
        DEFVAL   { none }
        ::= { saDsx1AddEntry 6 }

saDsx1LOSSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "DS1/E1 LOS Alarm Severity Level"
        ::= { saDsx1AddEntry 7 }

saDsx1LOFSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "DS1/E1 LOF Alarm Severity Level"
        ::= { saDsx1AddEntry 8 }

saDsx1AISSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "DS1/E1 AIS Alarm Severity Level"
        ::= { saDsx1AddEntry 9 }

saDsx1YelSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "DS1/E1 Yellow Alarm Severity Level"
        ::= { saDsx1AddEntry 10 }

saDsx1TS16AISSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "E1 TS16 AIS Alarm Severity Level"
        ::= { saDsx1AddEntry 11 }

saDsx1TS16LOMFSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "E1 TS16 LOMF Alarm Severity Level"
        ::= { saDsx1AddEntry 12 }
```

```
saDsx1CRCLOMFSeverity  OBJECT-TYPE
       SYNTAX  INTEGER {
              minor(1),
              major(2),
              critical(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "E1 Loss of CRC Multiframe Alignment Alarm Severity Level"
       ::= { saDsx1AddEntry 13 }

saDsx1ImaLink  OBJECT-TYPE
       SYNTAX  INTEGER {
              true(1),
              false(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Indicates if the link is available for IMA"
       ::= { saDsx1AddEntry 14 }

saDsx1RxAttenuation  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Receive Attenuation Level (multiples of 2.9 dB)"
       ::= { saDsx1AddEntry 15 }

saDsx1Range  OBJECT-TYPE
       SYNTAX  INTEGER {
              shortHaul(1),
              longHaul(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Specifies the range of the line length"
       ::= { saDsx1AddEntry 16 }

saDsx1Loopback OBJECT-TYPE
       SYNTAX  INTEGER {
              none(1),
              payload(2),
              line(3),
              local(4),
              analog(5),
              network(6),
              other(7)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Specifies the Loopback Configuration"
       ::= { saDsx1AddEntry 17 }

saDsx1NLoopDetection OBJECT-TYPE
       SYNTAX  INTEGER {
              enabled(1),
              disabled(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Enable/Disable Network Loopback Detection"
       ::= { saDsx1AddEntry 18 }

saDsx1PulseMultiplier OBJECT-TYPE
       SYNTAX  INTEGER {
              x0(1),
              x1(2),
              x2(3),
              x3(4),
              x4(5)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Pulse Multiplier in -7.5dB(LH) or +0.6dB(SH) Increments"
       ::= { saDsx1AddEntry 19 }

saDsx1RxGainBoost OBJECT-TYPE
       SYNTAX  INTEGER {
              enabled(1),
              disabled(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Boost Receive Gain (only applicable in 'Long Haul')"
       ::= { saDsx1AddEntry 20 }
```

```
saDsx1Impedance OBJECT-TYPE
        SYNTAX  INTEGER {
                ohm-75(1),
                ohm-120(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Line Impedance (European Interface Only)"
        ::= { saDsx1AddEntry 21 }

saDsx1Format OBJECT-TYPE
        SYNTAX  INTEGER {
                unstructured(1),
                structured(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Defines format of DS1 port"
        ::= { saDsx1AddEntry 22 }

saDsx1TimeSlotMask OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Mask of all currently allocated time slots"
        ::= { saDsx1AddEntry 23 }

saDsx1DynamicBandwidth OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled(1),
                disabled(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Dynamic Bandwidth Allocation"
        ::= { saDsx1AddEntry 24 }

saDsx1ClockMode OBJECT-TYPE
        SYNTAX  INTEGER {
                synchronous(1),
                srts(2),
                adaptive(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Define if DSx/Ex service clocking mode. This
                 maps into transmit clock source of CBR interface."
        ::= { saDsx1AddEntry 25 }

saDsx1Signaling OBJECT-TYPE
        SYNTAX  INTEGER {
                transport(1),
                terminate(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Specifies whether signaling should be
                 transported across network, or terminated."
        ::= { saDsx1AddEntry 26 }

saDsx1FdlMode OBJECT-TYPE
        SYNTAX INTEGER {
                none(1),
                att(2),
                ansi(3),
                sprint(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Specifies the appropriate FDL mode"
        DEFVAL { none }
        ::= { saDsx1AddEntry 27 }




-- Ethernet

saEnetTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaEnetEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for Ethernet management"
        ::= { saEnetExt 1 }

saEnetEntry OBJECT-TYPE
        SYNTAX  SaEnetEntry
        MAX-ACCESS  not-accessible
```

```
        STATUS  current
        DESCRIPTION
                "Entry for Ethernet interface "
        INDEX   { ifIndex }
        ::= { saEnetTable 2 }

saEnetEntry ::=
        SEQUENCE
                {
                saEnetRate
                    INTEGER,
                saEnetFormat
                    INTEGER,
                saEnetStatus
                    INTEGER,
                saEnetAlarm
                    INTEGER,
                saEnetRxPkts
                    Counter,
                saEnetTxPkts
                    Counter,
                saEnetMissedFrms
                    Counter,
                saEnetOverflowCount
                    Counter,
                saEnetBridgeGroupNum
                    INTEGER,
                saEnetLinkFailSeverity
                    INTEGER
                }

saEnetRate  OBJECT-TYPE
        SYNTAX  INTEGER {
                rate-10Mbps(1),
                rate-100Mbps(2),
                full-dup-10M(3),
                full-dup-100M(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                `"Ethernet Bit Rate"
        ::= { saEnetEntry 1 }

saEnetFormat  OBJECT-TYPE
        SYNTAX  INTEGER {
                ethernet(1)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Ethernet Format"
        ::= { saEnetEntry 2 }

saEnetStatus  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Ethernet Defects:
                Bit    Value      Meaning
                 0       1        No Alarm
                 1       2        Link Fail"
        ::= { saEnetEntry 3 }

saEnetAlarm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Ethernet Alarms:
                Bit    Value      Meaning
                 0       1        No Alarm
                 1       2        Link Fail"
        ::= { saEnetEntry 4 }

saEnetRxPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Recieve Packets"
        ::= { saEnetEntry 5 }

saEnetTxPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Transmit Packets"
        ::= { saEnetEntry 6 }

saEnetMissedFrms  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
```

```
        DESCRIPTION
                "Missed Frames Count"
        ::= { saEnetEntry 7 }

saEnetOverflowCount  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Overflow Count"
        ::= { saEnetEntry 8 }

saEnetBridgeGroupNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Bridge Group that this port is associated with"
        ::= { saEnetEntry 9 }

saEnetLinkFailSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Link Fail Alarm Severity Level"
        ::= { saEnetEntry 10 }


-- Sahara DS0 bundle table

saDs0BundleTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaDs0BundleEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "DS0 Bundle table"
        ::= { saDs0BundleExt 1 }

saDs0BundleEntry OBJECT-TYPE
        SYNTAX  SaDs0BundleEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for DS0 bundle interface"
        INDEX   { ifIndex }
        ::= { saDs0BundleTable 1 }

saDs0BundleEntry ::=
        SEQUENCE
                {
                saDs0BundleTimeslots
                    Counter
                }

saDs0BundleTimeslots OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bit map for DS0s used; rightmost bit is timeslot 1"
        ::= { saDs0BundleEntry 1 }


-- Sahara CES Extension table

saCesTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCesEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "CES Extension table"
        ::= { saCesExt 1 }

saCesEntry OBJECT-TYPE
        SYNTAX  SaCesEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for CES interface"
        INDEX   { ifIndex }
        ::= { saCesTable 1 }

saCesEntry ::=
        SEQUENCE
                {
                saCesCdvRxT
                    INTEGER,
                saCesRxCondDataCode
                    INTEGER,
                saCesRxCondSigCode
                    INTEGER,
```

```
            saCesTxCondDataCode
                INTEGER,
            saCesTxCondSigCode
                INTEGER,
            saCesIncorrectSNP
                Counter,
            saCesTxCells
                Counter,
            saCesRxOamCells
                Counter,
            saCesRxOamCellsDropped
                Counter,
            saCesTxSuppressedCells
                Counter,
            saCesTxConditionedCells
                Counter,
            saCesDynamicBandwidth
                INTEGER,
            saCesTxControl
                INTEGER,
            saCesTxControlSource
                INTEGER,
            saCesPtrParity
                INTEGER,
            saCesNumOffHookChannels
                INTEGER
            }

saCesCdvRxT OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The maximum cell arrival jitter in 1 usec increments that
               the reassembly process will tolerate in the cell stream
               without producing errors on the CBR service interface."
       ::= { saCesEntry 1 }

saCesRxCondDataCode OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The data conditioning code to send to the PHY
               during periods of underflow conditions"
       ::= { saCesEntry 2 }

saCesRxCondSigCode OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The signaling conditioning code to send to the PHY
               during periods of underflow conditions"
       ::= { saCesEntry 3}

saCesTxCondDataCode OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The data conditioning code to send to the ATM network
               during PHY failure conditions"
       ::= { saCesEntry 4 }

saCesTxCondSigCode OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The signaling conditioning code to send to the ATM network
               during PHY failure conditions"
       ::= { saCesEntry 5 }

saCesIncorrectSNP OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "The number of uncorrectable SNP"
       ::= { saCesEntry 6 }

saCesTxCells OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "The number of cells transmitted"
       ::= { saCesEntry 7 }

saCesRxOamCells OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
```

```
                "The number of received OAM cells"
        ::= { saCesEntry 8 }


saCesRxOamCellsDropped OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of received OAM cells dropped"
        ::= { saCesEntry 9 }

saCesTxSuppressedCells OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of transmitted suppressed cells"
        ::= { saCesEntry 10 }

saCesTxConditionedCells OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of transmitted conditioned cells"
        ::= { saCesEntry 11 }

saCesDynamicBandwidth OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled(1),
                disabled(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Dynamic Bandwidth Allocation"
        ::= { saCesEntry 12 }

saCesTxControl OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled(1),
                disabled(2),
                dynamic(3)
                     }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IWF Transmit Control"
        ::= { saCesEntry 13 }


saCesTxControlSource OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IWF Transmit Control Source"
        ::= { saCesEntry 14 }

saCesPtrParity OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled(1),
                disabled(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IWF Structure Pointer Parity Checking"
        ::= { saCesEntry 15 }

saCesNumOffHookChannels OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The Number of 'off-hook' Channels"
        ::= { saCesEntry 16 }


END
```

```
-- ******************************************************
```

ATM Connections MIB

```
-- ******************************************************


sa-CONNECTION-MIB DEFINITIONS ::= BEGIN

IMPORTS
       ifIndex, DisplayStringFROM RFC1213-MIB
       OBJECT-TYPE           FROM SNMPv2-SMI
       saConn, saBrdNumFROM OASIS-SYSINFO-MIB
       Counter               FROM RFC1155-SMI;

saConnMIBObjects  OBJECT IDENTIFIER ::= {saConn 1}


--=====================================================================
```

ATM Connection table

```
--
-- A connection is identified by Source and Destination:
-- { ifIndex, VPI, VCI }
--=====================================================================

saAtmCrossCnctTable  OBJECT-TYPE
       SYNTAX      SEQUENCE OF SaAtmCrossCnctEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " ATM Conn table "
       ::= { saConnMIBObjects 1}

saAtmCrossCnctEntry  OBJECT-TYPE
       SYNTAX      SaAtmCrossCnctEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " "
       INDEX { saAtmCrossCnctSrcIfIndex,
                saAtmCrossCnctSrcVpi,
                saAtmCrossCnctSrcVci,
                saAtmCrossCnctDestIfIndex,
                saAtmCrossCnctDestVpi,
                saAtmCrossCnctDestVci
              }
       ::= { saAtmCrossCnctTable 1}

SaAtmCrossCnctEntry          ::= SEQUENCE
       {
       SaAtmCrossCnctSrcIfIndex             INTEGER,
       SaAtmCrossCnctSrcVpi                 INTEGER,
       SaAtmCrossCnctSrcVci                 INTEGER,

       SaAtmCrossCnctDestIfIndex            INTEGER,
       SaAtmCrossCnctDestVpi                INTEGER,
       SaAtmCrossCnctDestVci                INTEGER,

       SaAtmCrossCnctAdminStatus            INTEGER,
       SaAtmCrossCnctOperStatus             INTEGER,

       SaAtmCrossCnctState                  INTEGER,
       SaAtmCrossCnctRowInfo                INTEGER,

       SaAtmCrossCnctName                   DisplayString,

       SaAtmCrossCnctType                   INTEGER,
       SaAtmCrossCnctServiceCategory        INTEGER,
       SaAtmCrossCnctServiceRate            INTEGER,
       SaAtmCrossCnctCongestAction          INTEGER,
       SaAtmCrossCnctBufferSize             INTEGER,

       SaAtmCrossCnctTaggingOption          INTEGER,

       SaAtmCrossCnctFwdPcrClp0             Counter,
       SaAtmCrossCnctFwdPcrClp01            Counter,
       SaAtmCrossCnctFwdScrClp0             Counter,
       SaAtmCrossCnctFwdScrClp01            Counter,
       SaAtmCrossCnctFwdMbsClp0             Counter,
       SaAtmCrossCnctFwdMbsClp01            Counter,
       SaAtmCrossCnctFwdCdvt                Counter,

       SaAtmCrossCnctBwdPcrClp0             Counter,
       SaAtmCrossCnctBwdPcrClp01            Counter,
       SaAtmCrossCnctBwdScrClp0             Counter,
       SaAtmCrossCnctBwdScrClp01            Counter,
       SaAtmCrossCnctBwdMbsClp0             Counter,
       SaAtmCrossCnctBwdMbsClp01            Counter,
       SaAtmCrossCnctBwdCdvt                Counter,

       SaAtmCrossCnctFwdFbr                 Counter,
       SaAtmCrossCnctFwdVbr                 Counter,
       SaAtmCrossCnctBwdFbr                 Counter,
       SaAtmCrossCnctBwdVbr                 Counter,
```

```
        SaAtmCrossCnctUpcEnable             INTEGER,
        SaAtmCrossCnctCause                 INTEGER,

        SaAtmCrossCnctRowStatus             INTEGER,
        SaAtmCrossCnctProvType              INTEGER,
        SaAtmCrossCnctUserRate              Counter,
        SaAtmCrossCnctURateStatus           INTEGER,
        SaAtmCrossCnctVcmHandle             INTEGER,

        SaAtmCrossCnctSrcPortIfIndex        INTEGER,
        SaAtmCrossCnctDestPortIfIndex       INTEGER

--      saAtmCrossCnctSetSegmentEndpoint    INTEGER,
--      saAtmCrossCnctAalType               INTEGER,
--      saAtmCrossCnctAal5CpcsTxSduSize     INTEGER,
--      saAtmCrossCnctAal5CpcsRxSduSize     INTEGER,
--      saAtmCrossCnctAal5EncapsType        INTEGER
        }

saAtmCrossCnctSrcIfIndex     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Source Interface Index; this is the value of ifIndex
                 for this side of the connection"
        ::= { saAtmCrossCnctEntry 1}

SaAtmCrossCnctSrcVpi     OBJECT-TYPE
        SYNTAX      INTEGER  (0..4095)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Source VPI"
        ::= { saAtmCrossCnctEntry 2}

SaAtmCrossCnctSrcVci     OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Source VCI"
        ::= { saAtmCrossCnctEntry 3}

SaAtmCrossCnctDestIfIndex   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination Interface Index; this is the value of ifIndex
                 for this side of the connection"
        ::= { saAtmCrossCnctEntry 4}

SaAtmCrossCnctDestVpi     OBJECT-TYPE
        SYNTAX     INTEGER (0..4095)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination VPI "
        ::= { saAtmCrossCnctEntry 5}

SaAtmCrossCnctDestVci     OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination VCI "
        ::= { saAtmCrossCnctEntry 6}

saAtmCrossCnctAdminStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                " Administrative Status "
        ::= { saAtmCrossCnctEntry 7}

saAtmCrossCnctOperStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " operational Status"
        ::= { saAtmCrossCnctEntry 8}

saAtmCrossCnctState   OBJECT-TYPE
        SYNTAX     INTEGER {
                notInSrv(0),
                up(1),
                port-fail(2),
```

```
                add-pend(3),
                disc-pend(4),
                holding(5),
                disc-bad(6),
                down(7),
                add-bad(8),
                bad-Vpvc(9)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Connection state"
        ::= { saAtmCrossCnctEntry 9}


--
-- Deprecated saAtmCrossCnctPvcmState - Entry 10
--


-- NOTE: RowInfo's "submitted" and "del-submit"
--       must be left in for backwards compatibility.

SaAtmCrossCnctRowInfo   OBJECT-TYPE
        SYNTAX     INTEGER  {
                not-inservice(2),
                submitted(10),
                modify(11),
                add(12),
                delete(14),
                modify-pend(16),
                add-pend(17),
                del-pend(18),
                del-submit(19),
                del-complete(20),
                add-mod-complete(21)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Internal status for the PVC Manager "
        ::= { saAtmCrossCnctEntry 11}

saAtmCrossCnctName       OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Connection Name"
        ::= {saAtmCrossCnctEntry  12}

SaAtmCrossCnctType   OBJECT-TYPE
        SYNTAX     INTEGER {
                vc(1),
                vp(2)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Connection Type (Future)"
        ::= { saAtmCrossCnctEntry 13}

SaAtmCrossCnctServiceCategory   OBJECT-TYPE
        SYNTAX     INTEGER {
                cbr-1(1),
                rt-vbr1(2),
                rt-vbr2(3),
                rt-vbr3(4),
                nrt-vbr1(5),
                nrt-vbr2(6),
                nrt-vbr3(7),
                ubr1(8),
                ubr2(9)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Service Category"
        ::= { saAtmCrossCnctEntry 14}

SaAtmCrossCnctServiceRate   OBJECT-TYPE
        SYNTAX     INTEGER {
                rate-64Kb(1),
                rate-384Kb(2),
                rate-1536Kb(3),
                rate-1Mb(4),
                rate-2Mb(5),
                rate-5Mb(6),
                rate-10Mb(7),
                rate-40Mb(8),
                rate-50Mb(9),
                rate-100Mb(10),
                rate-150Mb(11),
                user-defined(12)
                }
        MAX-ACCESS read-write
```

```
        STATUS     current
        DESCRIPTION
                "Service Rate"
        ::= { saAtmCrossCnctEntry  15}

saAtmCrossCnctTaggingOption   OBJECT-TYPE
        SYNTAX     INTEGER {
                not-appl(1),
                yes(2),
                no(3)
                }

        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Tagging Option, Depending on the Service Category
                 chosen Tagging option may or may not be applicable"
        ::= { saAtmCrossCnctEntry  16}

SaAtmCrossCnctCongestAction  OBJECT-TYPE
        SYNTAX     INTEGER {
                none(1),
                setEFCI(2),
                earlyPacketDiscard(3),
                dropCLP1(4),
                setEFCIandEPD(5),
                setEFCIandCLP1(6)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Action taken"
        ::= { saAtmCrossCnctEntry 17}

saAtmCrossCnctBufferSize  OBJECT-TYPE
        SYNTAX     INTEGER {
                shallow(1),
                medium(2),
                high(3)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Buffer size allocated for this connection"
        ::= { saAtmCrossCnctEntry 18}

saAtmCrossCnctFwdPcrClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Peak Cell Rate for CLP0 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 19}

SaAtmCrossCnctFwdPcrClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Peak Cell Rate for the aggregate CLP0+1
                 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 20}

SaAtmCrossCnctFwdScrClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Sustained Cell Rate for CLP0 cell flow in
                 Cells per Second"
        ::= { saAtmCrossCnctEntry 21}

SaAtmCrossCnctFwdScrClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Sustained Cell Rate for the aggregate CLP0+1
                 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 22}

SaAtmCrossCnctFwdMbsClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Maximum Burst Size for CLP0 cell flow in cells"
        ::= { saAtmCrossCnctEntry 23}

SaAtmCrossCnctFwdMbsClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
```

```
                "Maximum Burst Size for the aggregate CLP0+1
                 cell flow in cells"
        ::= { saAtmCrossCnctEntry 24}

SaAtmCrossCnctFwdCdvt   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Cell Delay Variation in units of time"
        ::= { saAtmCrossCnctEntry 25}

saAtmCrossCnctBwdPcrClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Peak Cell Rate for CLP0 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 26}

SaAtmCrossCnctBwdPcrClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Peak Cell Rate for the aggregate CLP0+1
                 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 27}

SaAtmCrossCnctBwdScrClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Sustained Cell Rate for CLP0 cell flow
                 in Cells per Second"
        ::= { saAtmCrossCnctEntry 28}

SaAtmCrossCnctBwdScrClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Sustained Cell Rate for the aggregate CLP0+1
                 cell flow in Cells per Second"
        ::= { saAtmCrossCnctEntry 29}

SaAtmCrossCnctBwdMbsClp0   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Maximum Burst Size for CLP0 cell flow in cells"
        ::= { saAtmCrossCnctEntry 30}

SaAtmCrossCnctBwdMbsClp01   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Maximum Burst Size for the aggregate CLP0+1
                 cell flow in cells"
        ::= { saAtmCrossCnctEntry 31}

SaAtmCrossCnctBwdCdvt   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Cell Delay Variation in units of micro-seconds"
        ::= { saAtmCrossCnctEntry 32}

saAtmCrossCnctFwdFbr   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Amount of forward fixed bandwidth used"
        ::= { saAtmCrossCnctEntry 33}

SaAtmCrossCnctFwdVbr   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Amount of forward variable bandwidth used"
        ::= { saAtmCrossCnctEntry 34}

SaAtmCrossCnctBwdFbr   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Amount of backward fixed bandwidth used"
        ::= { saAtmCrossCnctEntry 35}
```

```
SaAtmCrossCnctBwdVbr   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Amount of backward variable bandwidth used"
        ::= { saAtmCrossCnctEntry 36}

SaAtmCrossCnctUpcEnable   OBJECT-TYPE
        SYNTAX     INTEGER {
                off(1),
                on(2)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "When enabled non-conforming cells are tagged or
                 discarded, when disabled policing is in monitor mode only"
        ::= { saAtmCrossCnctEntry  37}

saAtmCrossCnctCause   OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                desc-OOR-vcm(1),
                cnctID-bad(2),
                no-bw-Src(3),
                no-bw-Dst(4),
                no-bfrs-Src(5),
                no-bfrs-Dst(6),

                vpvcUsed-Src(7),
                vpvcUsed-Dst(8),

                noPort-Src(9),
                noPort-Dst(10),
                prtNotRdySrc(11),
                prtNotRdyDst(12),
                portBad-Src(13),
                portBad-Dst(14),

                vci-OOR-Src(15),
                vci-OOR-Dst(16),
                vpi-OOR-Src(17),
                vpi-OOR-Dst(18),
                vpi-Rsvd-Src(19),
                vpi-Rsvd-Dst(20),
                pvp-OOR-Src(21),
                pvp-OOR-Dst(22),
                type-OOR-Src(23),
                type-OOR-Dst(24),

                bfrsFail-Src(25),
                bfrsFail-Dst(26),

                hwFail-Src(27),
                hwFail-Dst(28),

                rowFail-Src(29),
                rowFail-Dst(30),

                clrNoPortSrc(31),
                clrNoPortDst(32),

                clrRwFailSrc(33),
                clrRwFailDst(34),

                clear-ok(35),

                rate-OOR(36),
                desc-OOR(37),
                urateOOR(38),

                vpvc-ok(39),

                pre-empt(40),
                brd-oslt(41),

                max-cause(42)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Detailed information on the cause of failure -
                 further describes connection state "
        ::= { saAtmCrossCnctEntry 38}

saAtmCrossCnctRowStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                create(1),
                created(2),
                delete(3),
                create-vc(4),
                create-vp(5),
                create-inited(6)
                }
```

```
        MAX-ACCESS read-create
        STATUS     current
        DESCRIPTION
                " Used to create a cross connect row using SNMP
                 'set' command "
        ::= { saAtmCrossCnctEntry 39}

saAtmCrossCnctProvType   OBJECT-TYPE
        SYNTAX     INTEGER {
                uni-uni(1),
                uni-ces(2),
                uni-nls(3),
                uni-usf(4),
                uni-vcs(5)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                " States the service types being cross-connected "
        ::= { saAtmCrossCnctEntry 40}

saAtmCrossCnctUserRate   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                " User entered rate in units of bits/second "
        ::= { saAtmCrossCnctEntry 41}

saAtmCrossCnctURateStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(1),
                bad(2),
                process(3)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                " Results of processing user entered rate "
        ::= { saAtmCrossCnctEntry 42}

saAtmCrossCnctVcmHandle   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " ID returned from VCM "
        ::= { saAtmCrossCnctEntry 43 }

SaAtmCrossCnctSrcPortIfIndex     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Source Interface Index; this is the value of ifIndex
                 for this side of the connection"
        ::= { saAtmCrossCnctEntry 44}

SaAtmCrossCnctDestPortIfIndex     OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Source VPI"
        ::= { saAtmCrossCnctEntry 45}

--
-- The following items are to be discussed.
--
--   saAtmCrossCnctSetSegmentEndpoint     OBJECT-TYPE
--       SYNTAX  INTEGER
--       MAX-ACCESS  read-write
--       STATUS  current
--       DESCRIPTION
--       "Setting this value to 1 sets the UPC chip
--       to be an endpoint for the ATM layer managed
--       cells on this connection. Resetting this value to 0 makes
--       the module an intermediate point. "
--       ::= {  saAtmCrossCnctEntry  33 }
--
--
--    saAtmCrossCnctAalType    OBJECT-TYPE
--        SYNTAX     INTEGER {
--                                aal1(1),
--                                aal34(2),
--                                aal5(3),
--                                other(4),
--                                unknown(5)
--                               }
--        MAX-ACCESS read-write
--        STATUS     current
--        DESCRIPTION
--        "The type of AAL used on this VCC.
--        Other(4) may be user-defined
--        AAL type.  The unknown type indicates that
--        the AAL type cannot be determined."
```

```
--        ::= { saAtmCrossCnctEntry 34 }
--
--
--    saAtmCrossCnctAal5CpcsTxSduSize   OBJECT-TYPE
--        SYNTAX      INTEGER (1..65535)
--        MAX-ACCESS  read-write
--        STATUS      current
--        DESCRIPTION
--        "The maximum AAL5 CPCS SDU size in octets that is
--        supported on the transmit direction of this connection"
--        DEFVAL { 9188 }
--        ::= { saAtmCrossCnctEntry 35 }
--
--    saAtmCrossCnctAal5CpcsRxSduSize   OBJECT-TYPE
--        SYNTAX       INTEGER (1..65535)
--        MAX-ACCESS   read-write
--        STATUS       current
--        DESCRIPTION
--        "The maximum AAL5 CPCS SDU size in octets that is
--        supported on the transmit direction of this connection"
--        DEFVAL { 9188 }
--        ::= { saAtmCrossCnctEntry 36 }
--
--    saAtmCrossCnctAal5EncapsType  OBJECT-TYPE
--        SYNTAX   INTEGER {
--                    vcMultiplexRoutedProtocol(1),
--                    vcMultiplexBridgedProtocol8023(2),
--                    vcMultiplexBridgedProtocol8025(3),
--                    vcMultiplexBridgedProtocol8026(4),
--                    vcMultiplexLANemulation8023(5),
--                    vcMultiplexLANemulation8025(6),
--                    llcEncapsulation(7),
--                    multiprotocolFrameRelaySscs(8),
--                    other(9),
--                    unknown(10)
--                    }
--        MAX-ACCESS   read-write
--        STATUS       current
--        DESCRIPTION
--        "The type of data encapsulation used over
--        the AAL5 SSCS layer. The definitions reference
--        RFC 1483 Multiprotocol Encapsulation
--        over ATM AAL5 and to the ATM Forum
--        LAN Emulation specification."
--        DEFVAL { llcEncapsulation }
--        ::= { saAtmCrossCnctEntry 37 }
--
```

```
--=================================================================
-- ATM Cell Highway Statistics Table
--
-- This Table contains Stats info per ATM Cell Highway.
-- A Cell Highway Carries Aggregate traffic from one or several ATM Ports
-- to the switch fabric.
--
-- Modified 02/10/98 SCP
--
-- Added objects needed for BCON<->SCON init sequence
--=================================================================

saCellHwyStatsTable     OBJECT-TYPE
       SYNTAX      SEQUENCE OF SaCellHwyStatsEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              "ATM Cell Highway Statistics Table"
       ::= { saConnMIBObjects 2}

saCellHwyStatsEntry   OBJECT-TYPE
       SYNTAX     SaCellHwyStatsEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
              " "
       INDEX {
              saBrdNum,
              saCellHwy
              }
       ::= { saCellHwyStatsTable 1}

saCellHwyStatsEntry          ::= SEQUENCE {

       SaCellHwy                           INTEGER,
       SaCellHwyRtRevNum                   INTEGER,
       SaCellHwyRtRamSize                  INTEGER,
       SaCellHwyStatsCongThreshold         INTEGER,
       SaCellHwyStatsNumEmptyBuffers       INTEGER,
       SaCellHwyStatsFrBuffCongState       INTEGER,

       SaCellHwyStatsMaxFbr                INTEGER,
       SaCellHwyStatsMaxVbr                INTEGER,
       SaCellHwyStatsFbrAvail              INTEGER,
       SaCellHwyStatsVbrAvail              INTEGER,

       SaCellHwyStatsVbrToLoad             INTEGER,
       SaCellHwyStatsBwCacEnable           INTEGER,
```

```
        SaCellHwyStatsMarkedCellFromSF       Counter,
        SaCellHwyStatsMarkedCellToSF         Counter,
        SaCellHwStatsAtmIfIndex              INTEGER,
        SaCellHwyStatsUpcRevNum              INTEGER,
--
--      The following items are needed by SCON during
--      init so the "vpVcRangeFile" and the
--      "priqBfrAllocFile" can be properly validated
--      and processed
--

        SaCellHwyStatsMuxPres                INTEGER,
        SaCellHwyStatsUpcPres                INTEGER,
        SaCellHwyStatsUpcRamSize             INTEGER,
        SaCellHwyStatsRtVpBits               INTEGER,
--
--      DIST ONLY
--
--      SCON will do "sets" on these as data becomes
--      available during the init sequence
--
        SaCellHwyStatsVpBits                 INTEGER,
        SaCellHwyStatsVcBits                 INTEGER,
--
--      More 187 stats
--
        SaCellHwyBpFailures                  INTEGER,
        SaCellHwyWchdgFailures               INTEGER
        }

saCellHwy         OBJECT-TYPE
        SYNTAX      INTEGER {
                protAccel(1),
                xpod(2),
                ipod1-1(3),
                ipod1-2(4),
                ipod2-1(5),
                ipod2-2(6)
                 }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell Highway: carries aggregate
                 traffic from one or several ATM Ports"
        ::= { saCellHwyStatsEntry 1}

SaCellHwyRtRevNum                  OBJECT-TYPE
        SYNTAX     INTEGER  {
                wac-187-a(0),
                wac-187-b(1),
                unknown(128)
                 }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Router Device Revision Number"
        ::= { saCellHwyStatsEntry 2}

SaCellHwyRtRamSize                 OBJECT-TYPE
        SYNTAX   INTEGER {
                channels-1k(0),
                channels-2k(1),
                channels-4k(2)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Router Device RAM Size"
        ::= { saCellHwyStatsEntry 3}

saCellHwyStatsCongThreshold        OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Device congestion threshold"
        ::= { saCellHwyStatsEntry 4}

SaCellHwyStatsNumEmptyBuffers      OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of empty cell buffers"
        ::= { saCellHwyStatsEntry 5}

saCellHwyStatsFrBuffCongState      OBJECT-TYPE
        SYNTAX   INTEGER {
                not-congested(0),
                congested(1)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Free Buffer Pool Congested State"
        ::= { saCellHwyStatsEntry 6}
```

```
saCellHwyStatsMaxFbr                OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Max FBR for this cell highway"
        ::= {saCellHwyStatsEntry 7}

SACellHwyStatsMaxVbr                OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Max VBR for this cell highway"
        ::= {saCellHwyStatsEntry 8}

SACellHwyStatsFbrAvail              OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Current FBR loading for this cell highway"
        ::= {saCellHwyStatsEntry 9}

SACellHwyStatsVbrAvail              OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Current VBR loading for this cell highway"
        ::= {saCellHwyStatsEntry 10}

SACellHwyStatsVbrToLoad             OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Percent of VBR component of connection to apply
                 against FBR load"
        ::= {saCellHwyStatsEntry 11}



SACellHwyStatsBwCacEnable           OBJECT-TYPE
        SYNTAX     INTEGER {
                enable(1),
                disable(2),
                not-set(3)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Bandwidth CAC is enabled or disabled"
        ::= {saCellHwyStatsEntry 12}

SACellHwyStatsMarkedCellFromSF      OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of Marked Cells Received from the Switch Fabric"
        ::= {saCellHwyStatsEntry 13}

SACellHwyStatsMarkedCellToSF        OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of Marked Cells Transmitted to the Switch Fabric"
        ::= {saCellHwyStatsEntry 14}

SACellHwStatsAtmIfIndex             OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "ATM port associated with this Cell Highway"
        ::= {saCellHwyStatsEntry 15}

SaCellHwyStatsUpcRevNum            OBJECT-TYPE
        SYNTAX     INTEGER  {
                wac-186-a(0),
                wac-186-b(1),
                unknown(128)
                 }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " UPC Device Revision Number"
        ::= { saCellHwyStatsEntry 16}

SACellHwyStatsMuxPres                OBJECT-TYPE
        SYNTAX     INTEGER {
                mux-not-present(0),
                mux-present(1)
```

```
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Flag to indicate if cell-mux (WAC-185) exists
                 on this Cell Highway"
        ::= {saCellHwyStatsEntry 17}

SACellHwyStatsUpcPres                OBJECT-TYPE
        SYNTAX     INTEGER {
                upc-not-present(0),
                upc-present(1)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Flag to indicate if upc (WAC-186) exists on
                 this Cell Highway"
        ::= {saCellHwyStatsEntry 18}

SACellHwyStatsUpcRamSize             OBJECT-TYPE
        SYNTAX     INTEGER {
                channels-1k(0),
                channels-4k(1)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Amount of upc ram available (WAC 186)"
        ::= {saCellHwyStatsEntry 19}

SACellHwyStatsRtVpBits               OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "# VP bits specified by POD"
        ::= {saCellHwyStatsEntry 20}

SaCellHwyStatsVpBits                 OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Number of valid VPI bits for this cell hiway."
        ::= {saCellHwyStatsEntry 21}

SaCellHwyStatsVcBits                 OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Number of valid VCI bits for this cell hiway"
        ::= {saCellHwyStatsEntry 22}

SaCellHwyBpFailures                  OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of times WAC-187 ignored backpressure"
        ::= {saCellHwyStatsEntry 23}

SaCellHwyWchdgFailures               OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of times WAC-187 watchdog timed out"
        ::= {saCellHwyStatsEntry 24}



--=========================================================================
-- ATM Priority-Queues Statistics Table
--
-- This Table contains Statistical Info on Priority Queues per
-- cell Highway.
-- The following queue priorities are currently supported:
-- High-Priority, Multicast and three Proportional-Bandwidth
-- Priority queues: A,B, and C.
--
--=========================================================================

saPriQueuesStatsTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaPriQueuesStatsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM Port Priority Queues Statistics Table "
        ::= { saConnMIBObjects 3}

saPriQueuesStatsEntry   OBJECT-TYPE
        SYNTAX      SaPriQueuesStatsEntry
        MAX-ACCESS  not-accessible
```

```
        STATUS      current
        DESCRIPTION
                " "
        INDEX {
                saBrdNum,
                saPriCellHwy,
                saPriQueuePri
                }
        ::= { saPriQueuesStatsTable 1}

saPriQueuesStatsEntry          ::= SEQUENCE
        {
        SaPriCellHwy                        INTEGER,
        SaPriQueuePri                       INTEGER,
        SaPriQueuesMaxQSize                 INTEGER,
        SaPriQueuesCongThresh               INTEGER,
        SaPriQueuesCurrQDepth               INTEGER,
        SaPriQueuesCongState                INTEGER,
        SaPriQueuesOverSubQSize             INTEGER,
        SaPriQueuesRemainQSize              INTEGER,
        SaPriQueuesCOverSubQSize            INTEGER,
        SaPriQueuesCRemainQSize             INTEGER,
--
--      (Note: Although the following data is available
--      per "cell hiway", it currently is applied (by BCON)
--      per ICM)
--
        SaPriQueuesPercentAlloc               INTEGER,
        SaPriQueuesPercentThreshold           INTEGER,
        SaPriQueuesPercentOverSubscribe       INTEGER
        }

SAPriCellHwy                    OBJECT-TYPE
        SYNTAX      INTEGER {
                protAccel(1),
                xpod(2),
                ipod1-1(3),
                ipod1-2(4),
                ipod2-1(5),
                ipod2-2(6)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell Highway: carries aggregate traffic
                 from one or several ATM Ports"
        ::= { saPriQueuesStatsEntry 1}

saPriQueuePri                   OBJECT-TYPE
        SYNTAX      INTEGER {
                high-priority(0),
                multicast(1),
                prop-bw-a(2),
                prop-bw-b(3),
                prop-bw-c(4),
                reserved(5),
                oam-rcv(6)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Queue Priority"
        ::= { saPriQueuesStatsEntry 2}

saPriQueuesMaxQSize             OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Max Queue Size. Cells are dropped when queue level
                 reaches this limit"
        ::= { saPriQueuesStatsEntry 3}

SAPriQueuesCongThresh            OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Congestion Threshold for this priority, after which
                 Congestion Management Actions are taken"
        ::= { saPriQueuesStatsEntry 4}

SAPriQueuesCurrQDepth            OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Current Queue Depth"
        ::= { saPriQueuesStatsEntry 5}

SAPriQueuesCongState             OBJECT-TYPE
        SYNTAX      INTEGER {
                not-congested(0),
                congested(1)
                }
        MAX-ACCESS  read-only
```

```
        STATUS      current
        DESCRIPTION
                "Queue Congested State"
        ::= { saPriQueuesStatsEntry 6}

SAPriQueuesOverSubQSize          OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Max Q size including cell bfr
                 over-subscription (from device drivers)"
        ::= { saPriQueuesStatsEntry 7}

SAPriQueuesRemainQSize           OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "If this goes to zero, new connections
                 (of this pri) rejected (from device drivers)"
        ::= { saPriQueuesStatsEntry 8}

SAPriQueuesCOverSubQSize         OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Max Q size including cell bfr over-subscription
                 (from CAC)"
        ::= { saPriQueuesStatsEntry 9}

SAPriQueuesCRemainQSize          OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "If this goes to zero, new connections
                 (of this pri) rejected (from CAC)"
        ::= { saPriQueuesStatsEntry 10}

SaPriQueuesPercentAlloc         OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percent of the available cells to allocate
                 to this priority Q. Note: The sum of this value
                 for all rows within a cell hiway must not exceed 100%"
        ::= {saPriQueuesStatsEntry 11}

SaPriQueuesPercentThreshold     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percentage of the allocated cell count for
                 this Q that will be used to indicate congestion."
        ::= {saPriQueuesStatsEntry 12}

SaPriQueuesPercentOverSubscribe OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percentage of the allocated cell count
                 for this Q that will be allowed to be oversubscribed."
        ::= {saPriQueuesStatsEntry 13}
```

```
--=====================================================================
-- ATM Connection Routing Statistics Table
--
-- This Table contains Routing-related Statistical
-- information per VCL/VPL.
--=====================================================================

saRoutingStatsTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaRoutingStatsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "ATM Connection Routing Statistics Table"
        ::= { saConnMIBObjects 4}

saRoutingStatsEntry   OBJECT-TYPE
        SYNTAX     SaRoutingStatsEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX { ifIndex,
                saRoutingVpi,
                saRoutingVci
                }
        ::= { saRoutingStatsTable 1}

saRoutingStatsEntry          ::= SEQUENCE
        {
        SaRoutingVpi                INTEGER,
        SaRoutingVci                INTEGER,

        SaRoutingCellsIn            Counter,
        SaRoutingRunnCellsIn        Counter,
        SaRoutingBasCellsIn         Counter,


        SaRoutingCellsDropped       Counter,
        SaRoutingRunnCellsDropped   Counter,
        SaRoutingBasCellsDropped    Counter,

        SaRoutingCellsCongested     Counter,
        SaRoutingRunnCellsCongested Counter,
        SaRoutingBasCellsCongested  Counter,

        SaRoutingTxCells            Counter,

        SaRoutingMaxQSize           INTEGER,
        SaRoutingCongThresh         INTEGER,
        SaRoutingCurrQDepth         INTEGER,
        SaRoutingCongState          INTEGER,
        SaRoutingCongAction         INTEGER,
        SaRoutingQueueId            INTEGER,
        SaRoutingTags07             INTEGER,
        SaRoutingTags89             INTEGER,
        SaRoutingNewVPI             INTEGER,
        SaRoutingNewVCI             INTEGER,
        SaRoutingClearCounts        INTEGER,
        SaRoutingSetMarkedCellCnt   INTEGER,
        SaRoutingSFLevel0Link       INTEGER,
        SaRoutingSFLevel1Link       INTEGER,
        SaRoutingDummy              INTEGER
        }

saRoutingVpi   OBJECT-TYPE
        SYNTAX     INTEGER (0..4095)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Virtual Path Identifier "
        ::= { saRoutingStatsEntry 1}

SaRoutingVci   OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Virtual Connection Identifier"
        ::= { saRoutingStatsEntry 2}

SaRoutingCellsIn    OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Total Count of received cells"
        ::= { saRoutingStatsEntry 3}

SaRoutingRunnCellsIn    OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Running Count of received cells"
        ::= { saRoutingStatsEntry 4}
```

```
SaRoutingBasCellsIn    OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of total cells when a clear was done"
        ::= { saRoutingStatsEntry 5}

saRoutingCellsDropped   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of Dropped cells due to congestion or invalid
                 connection identifiers"
        ::= { saRoutingStatsEntry 6}

SaRoutingRunnCellsDropped   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Running count of Dropped cells due to congestion
                 or invalid connection identifiers"
        ::= { saRoutingStatsEntry 7}

SaRoutingBasCellsDropped   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of total cells when a clear was done"
        ::= { saRoutingStatsEntry 8}

SaRoutingCellsCongested     OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of cells for which EFCI bit was set
                 due to congestion"
        ::= { saRoutingStatsEntry 9}

SaRoutingRunnCellsCongested     OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Running count of cells for which EFCI
                 bit was set due to congestion"
        ::= { saRoutingStatsEntry 10}

SaRoutingBasCellsCongested     OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of total cells when a clear was done"
        ::= { saRoutingStatsEntry 11}

saRoutingTxCells    OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of cells transmitted"
        ::= { saRoutingStatsEntry 12}

saRoutingMaxQSize   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Maximum Queue Depth for this VC. Cells are dropped
                 when queue level reaches this limit"
        ::= { saRoutingStatsEntry 13}

SaRoutingCongThresh OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Congestion Threshold for this connection, after which
                 Congestion Management Actions are taken"
        ::= { saRoutingStatsEntry 14}

SaRoutingCurrQDepth OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Current queue level for this connection"
        ::= { saRoutingStatsEntry 15}
```

```
SaRoutingCongState  OBJECT-TYPE
        SYNTAX     INTEGER {
                not-congested(0),
                congested(1)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Congestion State: when queue level exceeds the congestion
                 threshold, congestion-state is declared. It is only
                 cleared when the queue level drops below 75% of
                 cong threshold."
        ::= { saRoutingStatsEntry 16}

SARoutingCongAction  OBJECT-TYPE
        SYNTAX     INTEGER {
                none(1),
                drop-clp1(2),
                aal5-epd(3),
                efci-mark(4)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Action taken when either the VC, the Priority
                 or the Device is in the congested state"
        ::= { saRoutingStatsEntry 17}

SARoutingQueueId  OBJECT-TYPE
        SYNTAX     INTEGER {
                high-priority(0),
                multicast(1),
                prop-bw-a(2),
                prop-bw-b(3),
                prop-bw-c(4),
                reserved(5),
                oam-rcv(6)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Queue ID this VC is assigned to"
        ::= { saRoutingStatsEntry 18}

SaRoutingTags07    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                ""
        ::= { saRoutingStatsEntry 19}

SaRoutingTags89    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Tag prepended to cells for routing through
                 the switching fabric"
        ::= { saRoutingStatsEntry 20}

SaRoutingNewVPI OBJECT-TYPE
        SYNTAX     INTEGER (0..4095)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "New translated value for VPI"
        ::= { saRoutingStatsEntry 21}

SaRoutingNewVCI     OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " New translated value for VPI"
        ::= { saRoutingStatsEntry 22}

saRoutingClearCounts  OBJECT-TYPE
        SYNTAX     INTEGER {
                normal(1),
                reset(2)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Setting this objects to reset, resets all
                 the running count for Routing and UPC Tables"
        ::= { saRoutingStatsEntry 23}

SARoutingSetMarkedCellCnt   OBJECT-TYPE
        SYNTAX     INTEGER {
                enable(1),
                disable(2)
                }
        MAX-ACCESS read-write
        STATUS     current
```

```
        DESCRIPTION
                " Enables/Disables Marked cell counts. "
        ::= { saRoutingStatsEntry 24}

SARoutingSFLevel0Link   OBJECT-TYPE
        SYNTAX     INTEGER (0..7)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " First stage Switch Fabric output link -Level0- "
        ::= { saRoutingStatsEntry 25}

SARoutingSFLevel1Link   OBJECT-TYPE
        SYNTAX     INTEGER (0..7)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Second stage Switch Fabric output link -Level1- "
        ::= { saRoutingStatsEntry 26}

SARoutingDummy OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                " Dummy Var "
        ::= {saRoutingStatsEntry 27}









--=====================================================================
-- ATM Connection UPC Statistics Table
--
-- This Table contains UPC Statistical information per VCL/VPL.
--=====================================================================

saUPCStatsTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaUPCStatsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM Connection UPC Statistics Table "
        ::= { saConnMIBObjects 5}
```

```
SaUPCStatsEntry   OBJECT-TYPE
        SYNTAX     SaUPCStatsEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX { ifIndex,
                saUPCVpi,
                saUPCVci
                }
        ::= { saUPCStatsTable 1}

SaUPCStatsEntry          ::= SEQUENCE
        {
        SaUPCVpi                        INTEGER,
        SaUPCVci                        INTEGER,
        SaUPCStatsTotalCellsIn          Counter,
        SaUPCStatsRunnCellsIn           Counter,
        SaUPCStatsBasCellsIn            Counter,

        SaUPCStatsClp0CellsIn           Counter,
        SaUPCStatsRunnClp0CellsIn       Counter,
        SaUPCStatsBasClp0CellsIn        Counter,

        SaUPCStatsGCRA0Mode             INTEGER,
        SaUPCStatsGCRA1Mode             INTEGER,
        SaUPCStatsGCRA1Flow             INTEGER,

        SaUPCStatsGCRA0Incr             INTEGER,
        SaUPCStatsGCRA0Limit            INTEGER,
        SaUPCStatsGCRA1Incr             INTEGER,
        SaUPCStatsGCRA1Limit            INTEGER,

        SaUPCStatsGCRA0TagOrDrop        Counter,
        SaUPCStatsGCRA0RunnTagOrDrop    Counter,
        SaUPCStatsGCRA0BasTagOrDrop     Counter,

        SaUPCStatsGCRA1TagOrDrop        Counter,
        SaUPCStatsGCRA1RunnTagOrDrop    Counter,
        SaUPCStatsGCRA1BasTagOrDrop     Counter,


        SaUPCStatsChannelStatus         INTEGER,

        SaUPCStatsDummy                 INTEGER
        }
```

```
SaUPCVpi   OBJECT-TYPE
        SYNTAX     INTEGER (0..4095)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Virtual Path Identifier "
        ::= { saUPCStatsEntry 1}

SaUPCVci   OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Virtual Connection Identifier"
        ::= { saUPCStatsEntry 2}

SaUPCStatsTotalCellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Total number of received cells"
        ::= { saUPCStatsEntry 3}

saUPCStatsRunnCellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Running count of received cells"
        ::= { saUPCStatsEntry 4}

saUPCStatsBasCellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of total cells when a clear was done"
        ::= { saUPCStatsEntry 5}

SaUPCStatsClp0CellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of CLP0 cells received"
        ::= { saUPCStatsEntry 6}

SaUPCStatsRunnClp0CellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Running count of CLP0 cells received"
        ::= { saUPCStatsEntry 7}

SaUPCStatsBasClp0CellsIn   OBJECT-TYPE
        SYNTAX     Counter
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Count of total cells when a clear was done"
        ::= { saUPCStatsEntry 8}

SaUPCStatsGCRA0Mode    OBJECT-TYPE
        SYNTAX     INTEGER {
                disabled(1),
                monitor(2),
                tag(3),
                drop(4)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " GCRA Mode: Disabled, monitor-only(do not police),
                 police-and-tag( Police and Tag non-compliant cells )
                 police-and-drop(Police and discard non-compliant cells)"
        ::= { saUPCStatsEntry 9}

SaUPCStatsGCRA1Mode     OBJECT-TYPE
        SYNTAX     INTEGER {
                disabled(1),
                monitor(2),
                tag(3),
                drop(4)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " GCRA Mode: Disabled, monitor-only(do not police),
                 police-and-tag( Police and Tag non-compliant cells )
                 police-and-drop(Police and discard non-compliant cells)"
        ::= { saUPCStatsEntry 10}
```

```
SaUPCStatsGCRA1Flow    OBJECT-TYPE
       SYNTAX     INTEGER {
              clp0(0),
              clp01(1)
              }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " Specifies whether GCRA1 is programmed to operate on
               CLP0 or CLP0+1 cell flow"
       ::= { saUPCStatsEntry 11}

SaUPCStatsGCRA0Incr   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " GCRA Increment Parameter:  GCRA(I,L)"
       ::= { saUPCStatsEntry 12}

SaUPCStatsGCRA0Limit   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " GCRA Increment Parameter:  GCRA(I,L)"
       ::= { saUPCStatsEntry 13}

SaUPCStatsGCRA1Incr   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " GCRA Increment Parameter:  GCRA(I,L)"
       ::= { saUPCStatsEntry 14}

SaUPCStatsGCRA1Limit   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " GCRA Limit Parameter:  GCRA(I,L)"
       ::= { saUPCStatsEntry 15}

SaUPCStatsGCRA0TagOrDrop    OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " Number of cells that did not conform to GCRA0"
       ::= { saUPCStatsEntry 16}

SAUPCStatsGCRA0RunnTagOrDrop    OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " Running count of cells that did not conform to GCRA0"
       ::= { saUPCStatsEntry 17}

saUPCStatsGCRA0BasTagOrDrop    OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              " Count of total cells when a clear was done"
       ::= { saUPCStatsEntry 18}

SaUPCStatsGCRA1TagOrDrop     OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of cells that did not conform to GCRA1 "
       ::= { saUPCStatsEntry 19}

SAUPCStatsGCRA1RunnTagOrDrop     OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Running count of cells that did not conform to GCRA1 "
       ::= { saUPCStatsEntry 20}

SAUPCStatsGCRA1BasTagOrDrop     OBJECT-TYPE
       SYNTAX     Counter
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Count of total cells when a clear was done"
       ::= { saUPCStatsEntry 21}

SaUPCStatsChannelStatus    OBJECT-TYPE
       SYNTAX     INTEGER  {
              active(1),
              not-active(2)
```

```
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Channel Status; set to not-active if no cell
                 has been received in the last 20 seconds"
        ::= { saUPCStatsEntry 22}

SaUPCStatsDummy OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Dummy Var "
        ::= {saUPCStatsEntry 23}




--=====================================================================
--  ATM Port Stats table
--
-- This Table contains information per ATM port.
--=====================================================================

SaAtmPortStatsTable    OBJECT-TYPE
        SYNTAX     SEQUENCE OF SaAtmPortStatsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM Port Statistics Table "
        ::= { saConnMIBObjects 6}

SaAtmPortStatsEntry   OBJECT-TYPE
        SYNTAX     SaAtmPortStatsEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX   { ifIndex }
        ::= { saAtmPortStatsTable 1}

SaAtmPortStatsEntry          ::= SEQUENCE
        {
        SaAtmPortStatsNodeNum               INTEGER,
        SaAtmPortStatsModuleNum             INTEGER,
        SaAtmPortStatsAtmIfIndex            INTEGER,

        SaAtmPortStatsAtmVpBits             INTEGER,
        SaAtmPortStatsAtmVcBits             INTEGER,
        SaAtmPortStatsStartResVp            INTEGER,
        SaAtmPortStatsEndResVp              INTEGER,

        SaAtmPortStatsMaxFbw                INTEGER,
        SaAtmPortStatsMaxVbw                INTEGER,
        SaAtmPortStatsFwdFbwAvail           INTEGER,
        SaAtmPortStatsFwdVbwAvail           INTEGER,
        SaAtmPortStatsBwdFbwAvail           INTEGER,
        SaAtmPortStatsBwdVbwAvail           INTEGER,

        SaAtmPortStatsVbwToLoad             INTEGER,

        SaAtmPortStatsBwCacEnable           INTEGER,

        SaAtmPortStatsNumActiveConn         INTEGER,
        SaAtmPortStatsLastInvalidVpiVci     INTEGER,

        SaAtmPortStatsPortPOST              INTEGER,

        SaAtmPortStatsCellHway              INTEGER,
        SaAtmPortStatsCellHwayPort          INTEGER,
        SaAtmPortStatsNumActiveVps          INTEGER,
        SaAtmPortStatsCmBits                INTEGER,
        SaAtmPortStatsNumActiveVcs          INTEGER,
        SaAtmPortStatsVpRngFlg              INTEGER,
        SaAtmPortStatsNewMaxFbw             INTEGER
        }

SaAtmPortStatsNodeNum   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Node Number on which this ATM interface exists"
        ::= {saAtmPortStatsEntry 1}

SaAtmPortStatsModuleNum   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Module (Board) Number on which this ATM interface exists"
        ::= {saAtmPortStatsEntry 2}
```

```
SaAtmPortStatsAtmIfIndex   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Logical Port Number"
       ::= {saAtmPortStatsEntry 3}

SaAtmPortStatsAtmVpBits   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of valid VPI bits"
       ::= {saAtmPortStatsEntry 4}

SaAtmPortStatsAtmVcBits   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of valid VCI bits"
       ::= {saAtmPortStatsEntry 5}

SaAtmPortStatsStartResVp   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Start of reserved VP block (0 if no VPs reserved)"
       ::= {saAtmPortStatsEntry 6}

SaAtmPortStatsEndResVp   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "End of reserved VP block (0 if no VPs reserved)"
       ::= {saAtmPortStatsEntry 7}

SaAtmPortStatsMaxFbw OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Max Fixed Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 8}

SaAtmPortStatsMaxVbw OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Max Variable Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 9}

SaAtmPortStatsFwdFbwAvail OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Current available
               Forward Fixed Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 10}

SaAtmPortStatsFwdVbwAvail OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Current available
               Forward Variable Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 11}

SaAtmPortStatsBwdFbwAvail OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Current available
               Backward Fixed Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 12}

SaAtmPortStatsBwdVbwAvail OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "CAC parameter: Current available
               Backward Variable Bandwidth for this ATM port"
       ::= {saAtmPortStatsEntry 13}

SaAtmPortStatsVbwToLoad OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
```

```
        DESCRIPTION
                "Percent of VBW component of connection
                 to apply against FBW load"
        ::= {saAtmPortStatsEntry 14}

SaAtmPortStatsBwCacEnable OBJECT-TYPE
        SYNTAX     INTEGER {
                enable(1),
                disable(2),
                not-set(3)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Bandwidth CAC is enabled or disabled"
        ::= {saAtmPortStatsEntry 15}

SaAtmPortStatsNumActiveConn    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Number of VP + VC connections on this port"
        ::= { saAtmPortStatsEntry  16}

SaAtmPortStatsLastInvalidVpiVci  OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                " A 32-bit HEX value Containing: GFC(4), VPI(8), VCI(16)
                 PTI(3), CLP(1) fields of the last cell received
                 with Invalid VPI/VCI"
        ::= { saAtmPortStatsEntry  17}

SaAtmPortStatsPortPOST OBJECT-TYPE
        SYNTAX     INTEGER {
                pass(1),
                fail(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Results of port Power On Self Test"
        ::= {saAtmPortStatsEntry 18}

SaAtmPortStatsCellHway    OBJECT-TYPE
        SYNTAX     INTEGER {
                sar(1),
                xpod(2),
                ipod1-1(3),
                ipod1-2(4),
                ipod2-1(5),
                ipod2-2(6)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Cell Hway ID for this ATM port"
        ::= { saAtmPortStatsEntry  19}

SaAtmPortStatsCellHwayPort    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Port ID for this Cell Hiway (cell mux)"
        ::= { saAtmPortStatsEntry  20}

SaAtmPortStatsNumActiveVps    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Number of VP connections on this port"
        ::= { saAtmPortStatsEntry  21}

SaAtmPortStatsCmBits          OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Cell Mux bits - for internal use "
        ::= { saAtmPortStatsEntry  22}

SaAtmPortStatsNumActiveVcs    OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Number of VC connections on this port"
        ::= { saAtmPortStatsEntry  23}
```

```
SaAtmPortStatsVpRngFlg        OBJECT-TYPE
       SYNTAX     INTEGER {
              vp-ranges-off(0),
              vp-ranges-on(1)
              }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Flag indicating whether or not VP ranges are to
               be specified for this port"
       ::= {saAtmPortStatsEntry 24}

SaAtmPortStatsNewMaxFbw OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Used to update maximum available bandwidth for port"
       ::= {saAtmPortStatsEntry 25}


--=========================================================================
-- ATM conn table "ping"
-- This simple object is "set" by the UI when the connTable changes
--=========================================================================

saConnTableChange OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Signals a change within Connection Table MIB"
       ::= { saConnMIBObjects 8 }

saConnTableState  OBJECT-TYPE
       SYNTAX     INTEGER {
              no-change(1),
              change(2),
              processing(3),
              pending(4)
              }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Conn Table Processing State"
       ::= { saConnMIBObjects 9 }
```

```
--=========================================================================
-- ATM Per VC buffer allocation settings
--   Currently read only. Used to show the contents of a file which
--   is downloaded to the ICM. It contains the cell buffer allocation
--   and congestion threshold used for each VC. Exact values are dependant
--   upon the Service Category and (rough) allocation selection (high,
--   medium, shallow).
--=========================================================================

SaAtmPerVcBfrTable  OBJECT-TYPE
       SYNTAX      SEQUENCE OF SaAtmPerVcBfrEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " ATM Per VC buffer allocation table "
       ::= { saConnMIBObjects 11 }

SaAtmPerVcBfrEntry  OBJECT-TYPE
       SYNTAX      SaAtmPerVcBfrEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " "
       INDEX { saAtmVcBfrSelection }
       ::= { saAtmPerVcBfrTable 1}

SaAtmPerVcBfrEntry          ::= SEQUENCE
       {
       SaAtmVcBfrSelection         INTEGER,

       SaAtmVcBfrCbrAlloc          INTEGER,
       SaAtmVcBfrCbrCong           INTEGER,

       SaAtmVcBfrVbrAlloc          INTEGER,
       SaAtmVcBfrVbrCong           INTEGER,

       SaAtmVcBfrVbrNrtAlloc       INTEGER,
       SaAtmVcBfrVbrNrtCong        INTEGER,

       SaAtmVcBfrUbrAlloc          INTEGER,
       SaAtmVcBfrUbrCong           INTEGER
       }

SaAtmVcBfrSelection  OBJECT-TYPE
       SYNTAX     INTEGER {
              shallow(1),
              medium(2),
              high(3)
```

```
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Cell buffer depth selected for this connection"
        ::= { saAtmPerVcBfrEntry 1}

SaAtmVcBfrCbrAlloc      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of cell buffers allocated for CBR VCs"
        ::= { saAtmPerVcBfrEntry 2}

SaAtmVcBfrCbrCong      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell buffer threshold for CBR VCs"
        ::= { saAtmPerVcBfrEntry 3}

SaAtmVcBfrVbrAlloc      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of cell buffers allocated for VBR VCs"
        ::= { saAtmPerVcBfrEntry 4}

SaAtmVcBfrVbrCong      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell buffer threshold for VBR VCs"
        ::= { saAtmPerVcBfrEntry 5}

SaAtmVcBfrVbrNrtAlloc      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of cell buffers allocated for VBR nrt VCs"
        ::= { saAtmPerVcBfrEntry 6}

SaAtmVcBfrVbrNrtCong      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell buffer threshold for VBR nrt VCs"
        ::= { saAtmPerVcBfrEntry 7}

SaAtmVcBfrUbrAlloc      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of cell buffers allocated for UBR VCs"
        ::= { saAtmPerVcBfrEntry 8}

SaAtmVcBfrUbrCong      OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Cell buffer threshold for UBR VCs"
        ::= { saAtmPerVcBfrEntry 9}



--=========================================================================
--
-- ATM Connection Management "tuning" file status
--
-- This Table contains results of attempting to process the "tuning"
-- files. This is done once at power up. This is the current list of
-- the 'tuning' files as of 4/21/97 :
--
--  vpvc.cdt   Program the VCI and VPI limits as well as setting
--             the range of reserved PVPs.
--
--  priq.cdt   Program the cell buffer distribution, congestion thresh-
--             old, and overbooking of the 4 priority queues.
--
--  vcbfr.cdt  Program the per VC cell buffer allocation based on
--             the connection type and user selected buffer depth.
--
--  cac.cdt    Program the per port and per switch fabric bandwidth
--             limits.
--
--=========================================================================
```

```
SaAtmTuningFilesTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaAtmTuningFilesEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Results of processing ATM 'tuning' parameters files"
        ::= { saConnMIBObjects 12 }

SaAtmTuningFilesEntry   OBJECT-TYPE
        SYNTAX      SaAtmTuningFilesEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " "
        INDEX {
                saBrdNum,
                saAtmFileNum
                }
        ::= { saAtmTuningFilesTable 1}

SaAtmTuningFilesEntry     ::= SEQUENCE {

        SaAtmFileNum                    INTEGER,
        SaAtmFileStat                   INTEGER,
        SaAtmFileName                   DisplayString
                }

SaAtmFileNum       OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Number of ATM Connection Mgt File"
        ::= {saAtmTuningFilesEntry  1 }

SaAtmFileStat     OBJECT-TYPE
        SYNTAX      INTEGER {
                ok(1),
                missing(2),
                fail(3),
                no-match(4)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Status of ATM Connection Mgt File"
        ::= { saAtmTuningFilesEntry 2 }

SaAtmFileName       OBJECT-TYPE
        SYNTAX     DisplayString(SIZE(0..40))
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Name of ATM Connection Mgt File"
        ::= {saAtmTuningFilesEntry  3 }




--=====================================================================
--
--                VCM (Virtual Connection Manager) Table
--
-- This table contains information which is communicated to the individual
-- slots in an ICM. The ICMs use each row to set up one-half of a
-- x-connect.  The indexes for the VCM row describing the other
-- half of the x-connect are contained in each row (as "Other" objects).
--
-- Special case: cross-connects in and out of the same ATM port
-- with the same VPI/VCI will have its "directional" object set
-- to "uni" and will only have one VCM row.
--
--=====================================================================

SaAtmVcmTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaAtmVcmEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Contains central and distributed x-cnct objects"
        ::= { saConnMIBObjects 13 }

SaAtmVcmEntry   OBJECT-TYPE
        SYNTAX      SaAtmVcmEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " "
        INDEX {
                saAtmVcmBrdNum,
                saAtmVcmAtmPort,
                saAtmVcmVpi,
                saAtmVcmVci
                }
        ::= { saAtmVcmTable 1}
```

```
saAtmVcmEntry     ::= SEQUENCE {
--
-- Indexes
--
        saAtmVcmBrdNum          INTEGER,
        saAtmVcmAtmPort         INTEGER,
        saAtmVcmVpi             INTEGER,
        saAtmVcmVci             INTEGER,
--
-- Central Objects
--
        saAtmVcmIfIndex         INTEGER,
        saAtmVcmRootIfIndex     INTEGER,
        saAtmVcmOtherIfIndex    INTEGER,
        saAtmVcmOtherVcmRow     INTEGER,
        saAtmVcmDirectional     INTEGER,

        saAtmVcmCnctMgrId       INTEGER,
        saAtmVcmCnctMgrHandle   INTEGER,

        saAtmVcmSfPath          OCTET STRING,
        saAtmVcmFbw             INTEGER,
        saAtmVcmVbw             INTEGER,
        saAtmVcmRowInfo         INTEGER,
        saAtmVcmBwPri           INTEGER,
--
-- Mostly Distributed Objects
--
        saAtmVcmTrafType        INTEGER,
        saAtmVcmCnctType        INTEGER,
        saAtmVcmNumBfrs         INTEGER,
        saAtmVcmCongThrsh       INTEGER,
        saAtmVcmCongAct         INTEGER,
        saAtmVcmSfTag0          INTEGER,
        saAtmVcmSfTag1          INTEGER,

        saAtmVcmOtherCmBits     INTEGER,
        saAtmVcmOtherVpi        INTEGER,
        saAtmVcmOtherVci        INTEGER,

        saAtmVcmPcrClp0         Counter,
        saAtmVcmPcrClp01        Counter,
        saAtmVcmScrClp0         Counter,
        saAtmVcmScrClp01        Counter,
        saAtmVcmMbsClp0         Counter,
        saAtmVcmMbsClp01        Counter,
        saAtmVcmCdvt            Counter,
        saAtmVcmUpcEnable       INTEGER,
        saAtmVcmAdminSt         INTEGER,
        saAtmVcmOperSt          INTEGER
        }

SaAtmVcmBrdNum          OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Board (slot) number index "
        ::= { saAtmVcmEntry 1 }

SaAtmVcmAtmPort         OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " ATM port index. Used internally by cnction mgt system "
        ::= { saAtmVcmEntry 2 }

SaAtmVcmVpi             OBJECT-TYPE
        SYNTAX             INTEGER  (0..4095)
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
                " VPI for this slot and ATM port "
        ::= { saAtmVcmEntry 3 }

SaAtmVcmVci             OBJECT-TYPE
        SYNTAX             INTEGER (0..65535)
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
                " VCI for this slot and ATM port "
        ::= { saAtmVcmEntry 4 }

SaAtmVcmIfIndex         OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Ifindex for this half of the x-cnct "
        ::= { saAtmVcmEntry 5 }

SaAtmVcmRootIfIndex     OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
```

```
        STATUS            current
        DESCRIPTION
                " Root Ifindex for this half of the x-cnct "
        ::= { saAtmVcmEntry 6 }

SaAtmVcmOtherIfIndex   OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
               " ATM Ifindex for the other half of the x-cnct "
        ::= { saAtmVcmEntry 7 }

SaAtmVcmOtherVcmRow    OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
               " MIB row pointer to other VCM
                table entry (only if bi-directional) "
        ::= { saAtmVcmEntry 8 }

SaAtmVcmDirectional    OBJECT-TYPE
        SYNTAX      INTEGER {
                bi-for(1),
                bi-bck(2),
                bi-for-loop(3),
                bi-bck-loop(4),
                uni-loop(5),
                true-uni(6)
                }
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
               " Bi for full-duplex, Uni for half-duplex
                (or lpbk connections) "
        ::= { saAtmVcmEntry 9 }

SaAtmVcmCnctMgrId      OBJECT-TYPE
        SYNTAX      INTEGER {
                pvcm(1),
                sccs(2),
                bvcm(3),
                max-id(4)
                }
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
                " ID of Cnction Mgr that initiated this x-cnct "
        ::= { saAtmVcmEntry 10 }

SaAtmVcmCnctMgrHandle  OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
                " ID of connection supplied by Cnction Mgr "
        ::= { saAtmVcmEntry 11 }

SaAtmVcmSfPath      OBJECT-TYPE
        SYNTAX            OCTET STRING (SIZE(4))
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Describes connections path thru the switch fabric "
        ::= { saAtmVcmEntry 12 }

SaAtmVcmFbw            OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Fixed bandwidth component "
        ::= { saAtmVcmEntry 13 }

SaAtmVcmVbw            OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Variable bandwidth component "
        ::= { saAtmVcmEntry 14 }

SaAtmVcmRowInfo   OBJECT-TYPE
        SYNTAX     INTEGER  {
                in-service(1),
                resources-reserved(2),
                vpvc-reserved(3),
                vpvc-reserved-uni(4)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Internal status for VCM "
        ::= { saAtmVcmEntry 15 }
```

```
SaAtmVcmBwPri     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Bandwidth priority "
        ::= { saAtmVcmEntry 16 }

SaAtmVcmTrafType       OBJECT-TYPE
        SYNTAX      INTEGER {
                cbr-1(1),
                rt-vbr1(2),
                rt-vbr2(3),
                rt-vbr3(4),
                nrt-vbr1(5),
                nrt-vbr2(6),
                nrt-vbr3(7),
                ubr1(8),
                ubr2(9)
                }
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Traffic Type (CBR, etc.) "
        ::= { saAtmVcmEntry 17 }

SaAtmVcmCnctType       OBJECT-TYPE
        SYNTAX      INTEGER {
                vc(1),
                vp(2)
                }
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Connection Type VP or VC "
        ::= { saAtmVcmEntry 18 }

SaAtmVcmNumBfrs        OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Max number of cell buffers allowed for this x-cnct "
        ::= { saAtmVcmEntry 19 }

SaAtmVcmCongThrsh      OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Number of cell buffers used before
                 congestion action taken "
        ::= { saAtmVcmEntry 20 }

SaAtmVcmCongAct        OBJECT-TYPE
        SYNTAX      INTEGER {
                none(1),
                setEFCI(2),
                earlyPacketDiscard(3),
                dropCLP1(4),
                setEFCIandEPD(5),
                setEFCIandCLP1(6)
                }
        MAX-ACCESS         read-only
        STATUS             current
        DESCRIPTION
                " Congestion Action (EFCI, etc.) "
        ::= { saAtmVcmEntry 21 }

SaAtmVcmSfTag0          OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Level 0 internal routing tag used by hardware "
        ::= { saAtmVcmEntry 22 }

SaAtmVcmSfTag1      OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Level 1 internal routing tag used by hardware "
        ::= { saAtmVcmEntry 23 }

SaAtmVcmOtherCmBits    OBJECT-TYPE
        SYNTAX            INTEGER
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " Cell Mux bits for other ATM port "
        ::= { saAtmVcmEntry 24 }

SaAtmVcmOtherVpi       OBJECT-TYPE
        SYNTAX            INTEGER  (0..4095)
        MAX-ACCESS        read-only
```

```
        STATUS            current
        DESCRIPTION
                " VPI index for the other half of this x-cnct "
        ::= { saAtmVcmEntry 25 }

SaAtmVcmOtherVci       OBJECT-TYPE
        SYNTAX            INTEGER (0..65535)
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " VCI index for the other half of this x-cnct "
        ::= { saAtmVcmEntry 26 }

SaAtmVcmPcrClp0        OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Peak Cell Rate for CLP0 cell flow in cells/sec"
        ::= { saAtmVcmEntry 27 }

SaAtmVcmPcrClp01       OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Peak Cell Rate for the aggregate CLP0+1
                 cell flow in Cells per Second"
        ::= { saAtmVcmEntry 28 }

SaAtmVcmScrClp0        OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Sustained Cell Rate for CLP0 cell flow in cells/sec"
        ::= { saAtmVcmEntry 29 }

SaAtmVcmScrClp01       OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Sustained Cell Rate for aggregate
                 CLP0+1 cell flow in cells/sec"
        ::= { saAtmVcmEntry 30 }

SaAtmVcmMbsClp0        OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Maximum Burst Size for CLP0 cell flow in cells"
        ::= { saAtmVcmEntry 31 }

SaAtmVcmMbsClp01       OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Maximum Burst Size for the aggregate
                 CLP0+1 cell flow in cells"
        ::= { saAtmVcmEntry 32 }

SaAtmVcmCdvt           OBJECT-TYPE
        SYNTAX            Counter
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                "Cell Delay Variation in units of micro-seconds"
        ::= { saAtmVcmEntry 33 }

SaAtmVcmUpcEnable      OBJECT-TYPE
        SYNTAX      INTEGER {
                off(1),
                on(2)
                }
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
                " When enabled non-conforming cells are tagged
                 or discarded, when disabled policing is in
                 monitor mode only"
        ::= { saAtmVcmEntry 34 }

saAtmVcmAdminSt         OBJECT-TYPE
        SYNTAX      INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
                " Administrative Status "
        ::= { saAtmVcmEntry 35 }
```

```
saAtmVcmOperSt          OBJECT-TYPE
       SYNTAX      INTEGER {
              up(1),
              down(2),
              upFail-bfrs(3),
              upFail-hw(4),
              dnFail-hw(5),
              unknown(6)
              }
       MAX-ACCESS        read-only
       STATUS            current
       DESCRIPTION
              " Operational Status "
       ::= { saAtmVcmEntry 36 }




--=====================================================================
--  ATM Cell-Hiway Vp/Vc Config table
--
-- This Table contains Vp/Vc configuration information per ATM cell hiway.
--
-- The information in this table is stored in NV_DB and is intended
-- to replace the info in the system "tuning" file "vpvc.cdt".
--
-- Configured per cell-hiway.
--
-- SCP 02/19/98
--=====================================================================

saAtmCellHwyVpVcCfgTable    OBJECT-TYPE
       SYNTAX     SEQUENCE OF SaAtmCellHwyVpVcCfgEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " ATM Cell Hiway Vp/Vc Configuration Table "
       ::= { saConnMIBObjects 14}

SaAtmCellHwyVpVcCfgEntry   OBJECT-TYPE
       SYNTAX     SaAtmCellHwyVpVcCfgEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
              " "
       INDEX   {
              saBrdNum,
              saCellHwy
              }
       ::= { saAtmCellHwyVpVcCfgTable 1}

SaAtmCellHwyVpVcCfgEntry          ::= SEQUENCE
       {
       SaAtmCellHwyVpVcCfgVpBits             INTEGER,
       SaAtmCellHwyVpVcCfgVcBits             INTEGER,
       SaAtmCellHwyVpVcCfgRngFlg             INTEGER,

       SaAtmCellHwyVpVcCfgAtmIndex           INTEGER,
       SaAtmCellHwyVpVcCfgMinVpBits          INTEGER,
       SaAtmCellHwyVpVcCfgMaxVpBits          INTEGER,
       SaAtmCellHwyVpVcCfgTotBits            INTEGER,

       SaAtmCellHwyVpVcCfgCause              INTEGER,
       SaAtmCellHwyVpVcCfgModified           INTEGER,
       SaAtmCellHwyVpVcCfgUpdate             INTEGER
       }

SaAtmCellHwyVpVcCfgVpBits       OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Number of valid VPI bits for this cell hiway"
       ::= {saAtmCellHwyVpVcCfgEntry 1}

SaAtmCellHwyVpVcCfgVcBits       OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Number of valid VCI bits for this cell hiway"
       ::= {saAtmCellHwyVpVcCfgEntry 2}

SaAtmCellHwyVpVcCfgRngFlg       OBJECT-TYPE
       SYNTAX     INTEGER {
              vp-ranges-off(0),
              vp-ranges-on(1)
              }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Flag indicating whether or not VP ranges are
               to be specified for any port on this cell hiway
               (will effect VP/VC bits)"
       ::= {saAtmCellHwyVpVcCfgEntry 3}
```

```
SaAtmCellHwyVpVcCfgMinVpBits    OBJECT-TYPE
        SYNTAX     INTEGER {
                vp-from-pod(0)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Min # VP bits on this cell hiway"
        ::= {saAtmCellHwyVpVcCfgEntry 4}

SaAtmCellHwyVpVcCfgMaxVpBits    OBJECT-TYPE
        SYNTAX     INTEGER {
                vp-from-pod(0)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Max # VP bits on this cell hiway"
        ::= {saAtmCellHwyVpVcCfgEntry 5}

SaAtmCellHwyVpVcCfgTotBits      OBJECT-TYPE
        SYNTAX     INTEGER {
                vp-from-pod(0)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Total # VP/VC bits available on this cell hiway"
        ::= {saAtmCellHwyVpVcCfgEntry 6}

SaAtmCellHwyVpVcCfgAtmIndex     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Index to atmPorts"
        ::= {saAtmCellHwyVpVcCfgEntry 7}

SaAtmCellHwyVpVcCfgCause        OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                vp-bits-invalid(1),
                vc-bits-invalid(2),
                vp-and-vc-bits-invalid(3),
                port-unavailable(4)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Results of processing config row.
                 Note that multiple codes may be set
                 simultaneously via logical 'OR'ing and
                 thus all possible values are NOT represented in the enum"
        ::= {saAtmCellHwyVpVcCfgEntry 8}

SaAtmCellHwyVpVcCfgModified     OBJECT-TYPE
        SYNTAX     INTEGER {
                applied(0),
                applied-pend(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by SCON to indicate that a config parameter
                 has been changed from what is currently being
                 used by the system"
        ::= {saAtmCellHwyVpVcCfgEntry 9}

SaAtmCellHwyVpVcCfgUpdate       OBJECT-TYPE
        SYNTAX     INTEGER {
                no-update(0),
                update(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by UI to indicate parameter update"
        ::= {saAtmCellHwyVpVcCfgEntry 10}




--=============================================================================
--  ATM Port Vp/Vc Config table
--
-- This Table contains Vp/Vc configuration information per ATM port.
--
-- The information in this table is stored in NV_DB and is intended
-- to replace the info in the system "tuning" file "vpvc.cdt".
--
-- Configured per port.
--
-- SCP 01/29/98
--=============================================================================
```

```
saAtmPortVpVcCfgTable    OBJECT-TYPE
        SYNTAX     SEQUENCE OF SaAtmPortVpVcCfgEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM Port Vp/Vc Configuration Table "
        ::= { saConnMIBObjects 15}

SaAtmPortVpVcCfgEntry   OBJECT-TYPE
        SYNTAX     SaAtmPortVpVcCfgEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX   {
                ifIndex
                }
        ::= { saAtmPortVpVcCfgTable 1}

SaAtmPortVpVcCfgEntry          ::= SEQUENCE
        {
        SaAtmPortVpVcCfgStartResVp         INTEGER,
        SaAtmPortVpVcCfgEndResVp           INTEGER,

        SaAtmPortVpVcCfgAtmIndex           INTEGER,
        SaAtmPortVpVcCfgCause              INTEGER,
        SaAtmPortVpVcCfgModified           INTEGER,
        SaAtmPortVpVcCfgUpdate             INTEGER
        }

SaAtmPortVpVcCfgStartResVp   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Start of reserved VP block (0 if no VPs reserved)"
        ::= {saAtmPortVpVcCfgEntry 1}

SaAtmPortVpVcCfgEndResVp     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "End of reserved VP block (0 if no VPs reserved)"
        ::= {saAtmPortVpVcCfgEntry 2}

SaAtmPortVpVcCfgAtmIndex     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Index to atmPorts"
        ::= {saAtmPortVpVcCfgEntry 3}

SaAtmPortVpVcCfgCause        OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                vp-start-invalid(1),
                vp-end-invalid(2),
                vp-start-gt-end(4),
                vp-ranges-disabled(8),
                port-unavailable(16)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Results of processing config row.
                 Note that multiple codes may be set simultaneously via
                 logical 'OR'ing and thus all possible values
                 are NOT represented in the enum"
        ::= {saAtmPortVpVcCfgEntry 4}

SaAtmPortVpVcCfgModified     OBJECT-TYPE
        SYNTAX     INTEGER {
                applied(0),
                applied-pend(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by SCON to indicate that a config parameter
                 has been changed from what is currently being
                 used by the system"
        ::= {saAtmPortVpVcCfgEntry 5}

SaAtmPortVpVcCfgUpdate       OBJECT-TYPE
        SYNTAX     INTEGER {
                no-update(0),
                update(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by UI to indicate parameter update"
```

```
       ::= {saAtmPortVpVcCfgEntry 6}


--=====================================================================
--  ATM Port CAC Config table
--
-- This Table contains CAC configuration information per ATM port.
--
-- The information in this table is stored in NV_DB and is intended
-- to replace the info in the system "tuning" file "cac.cdt".
--
-- Configured per interface.
--
-- SCP 02/05/98
--=====================================================================

saAtmPortBwCacCfgTable    OBJECT-TYPE
       SYNTAX     SEQUENCE OF SaAtmPortBwCacCfgEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " ATM Port CAC Configuration Table "
       ::= { saConnMIBObjects 16}

SaAtmPortBwCacCfgEntry   OBJECT-TYPE
       SYNTAX     SaAtmPortBwCacCfgEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
              " "
       INDEX   {
              ifIndex
              }
       ::= { saAtmPortBwCacCfgTable 1}

SaAtmPortBwCacCfgEntry          ::= SEQUENCE
       {
       SaAtmPortBwCacCfgCacEnable          INTEGER,
       SaAtmPortBwCacCfgVbwPool            INTEGER,
       SaAtmPortBwCacCfgVbwToLoad          INTEGER,
       SaAtmPortBwCacCfgAtmIndex           INTEGER,
       SaAtmPortBwCacCfgCause              INTEGER,
       SaAtmPortBwCacCfgUpdate             INTEGER
       }

SaAtmPortBwCacCfgCacEnable   OBJECT-TYPE
       SYNTAX     INTEGER {
              enable(1),
              disable(2)
              }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Bandwidth CAC is enabled or disabled"
       ::= {saAtmPortBwCacCfgEntry 1}

SaAtmPortBwCacCfgVbwPool       OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Percent of bandwidth to reserve for variable load"
       ::= {saAtmPortBwCacCfgEntry 2}

SaAtmPortBwCacCfgVbwToLoad     OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Percent of VBW component of connection to
               apply against FBW load"
       ::= {saAtmPortBwCacCfgEntry 3}

SaAtmPortBwCacCfgAtmIndex       OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Index to atmPorts"
       ::= {saAtmPortBwCacCfgEntry 4}

SaAtmPortBwCacCfgCause         OBJECT-TYPE
       SYNTAX     INTEGER {
              ok(0),
              invalid-vbw-pool(1),
              invalid-vbw-to-load(2),
              port-unavailable(3)
              }
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
              "Results of processing config row.
               Note that multiple codes may be set simultaneously via
               logical 'OR'ing and thus all possible values
               are NOT represented in the enum"
       ::= {saAtmPortBwCacCfgEntry 5}
```

```
SaAtmPortBwCacCfgUpdate        OBJECT-TYPE
       SYNTAX     INTEGER {
                  no-update(0),
                  update(1)
                  }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
                  "Written by UI to indicate parameter update"
       ::= {saAtmPortBwCacCfgEntry 6}


--=====================================================================
--  ATM Cell-Highway Switch Fabric CAC Config Table
--
-- The information in this table contains Cell-Highway Switch Fabric
-- configuration information.  It is stored in a table (instead of
-- a collection of simple objects) due to system limitations
-- with simple-object manipulation.
--
-- This information is stored in NV_DB and is intended
-- to partially replace the info in the system "tuning" files.
--
-- Configured per system.  (only board # 1 valid)
--
-- SCP 01/30/98
--=====================================================================

SaAtmSfBwCacCfgTable    OBJECT-TYPE
       SYNTAX     SEQUENCE OF SaAtmSfBwCacCfgEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
                  " ATM Switch-Fabric CAC Configuration Table "
       ::= { saConnMIBObjects 17}

SaAtmSfBwCacCfgEntry   OBJECT-TYPE
       SYNTAX     SaAtmSfBwCacCfgEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
                  " "
       INDEX   {saBrdNum}
       ::= { saAtmSfBwCacCfgTable 1}
```

```
SaAtmSfBwCacCfgEntry          ::= SEQUENCE
       {
       SaAtmSfBwCacCfgCacEnable             INTEGER,
       SaAtmSfBwCacCfgVbwPool               INTEGER,
       SaAtmSfBwCacCfgVbwToLoad             INTEGER,
       SaAtmSfBwCacCfgCause                 INTEGER,
       SaAtmSfBwCacCfgModified              INTEGER,
       SaAtmSfBwCacCfgUpdate                INTEGER
       }

SaAtmSfBwCacCfgCacEnable OBJECT-TYPE
       SYNTAX  INTEGER {
               sf-enable(1),
               sf-disable(2)
               }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Cell highway Switch-fabric CAC enable/disable"
       ::= { saAtmSfBwCacCfgEntry 1 }

SaAtmSfBwCacCfgVbwPool     OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Cell highway Switch-fabric % variable bandwidth pool"
       ::= { saAtmSfBwCacCfgEntry 2 }

SaAtmSfBwCacCfgVbwToLoad  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Cell highway Switch-fabric % variable to load"
       ::= { saAtmSfBwCacCfgEntry 3 }

saAtmSfBwCacCfgCause      OBJECT-TYPE
       SYNTAX  INTEGER {
               ok(0),
               invalid-vbw-pool(1),
               invalid-vbw-to-load(2)
               }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
               "Cause value for Switch-fabric CAC configuration"
       ::= { saAtmSfBwCacCfgEntry 4 }
```

```
SaAtmSfBwCacCfgModified      OBJECT-TYPE
       SYNTAX     INTEGER {
                  applied(0),
                  applied-pend(1)
                  }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
                  "Written by SCON to indicate that a config parameter
                   has been changed from what is currently being
                   used by the system"
       ::= {saAtmSfBwCacCfgEntry 5}

SaAtmSfBwCacCfgUpdate        OBJECT-TYPE
       SYNTAX     INTEGER {
                  no-update(0),
                  update(1)
                  }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
                  "Written by UI to indicate parameter update"
       ::= {saAtmSfBwCacCfgEntry 6}




--=====================================================================
--  ATM per-VC buffer allocation table
--
-- This Table contains the MAX_PER_VC_Q_DEPTH and CONG_PER_VC_Q_DEPTH
-- configuration information for WAC-187 Channel-Control-Block entries.
--
-- This table specifies entries per Class-of-Service (CBR, VBR, NRT-VBR,
UBR)
-- and desired Q level (SHALLOW, MEDIUM, HIGH) for Q depth and
-- congestion threshold (in cells).
--
-- The information in this table is stored in NV_DB and is intended
-- to replace the info in the system "tuning" file "vcbfr.cdt".
--
-- Configured per-system.
--
-- SCP 01/30/98
--=====================================================================

saAtmVCBufferCfgTable    OBJECT-TYPE
       SYNTAX     SEQUENCE OF SaAtmVCBufferCfgEntry
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
              " ATM per-VC buffer allocation table "
       ::= { saConnMIBObjects 18}

SaAtmVCBufferCfgEntry   OBJECT-TYPE
       SYNTAX     SaAtmVCBufferCfgEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
              " "
       INDEX   {
              saPriQueuePri,
              saAtmVcBfrSelection
              }
       ::= { saAtmVCBufferCfgTable 1}

SaAtmVCBufferCfgEntry          ::= SEQUENCE
       {
       SaAtmVCBufferCfgDepth             INTEGER,
       SaAtmVCBufferCfgCong              INTEGER,
       SaAtmVCBufferCfgCause             INTEGER,
       SaAtmVCBufferCfgUpdate            INTEGER
       }

SaAtmVCBufferCfgDepth   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "The per-VC upper limit to the depth of the Q.
               (MAX_PER_VC_Q_DEPTH in WAC-187 CCB entry)"
       ::= {saAtmVCBufferCfgEntry 1}

SaAtmVCBufferCfgCong   OBJECT-TYPE
       SYNTAX     INTEGER
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "The per-VC queue depth above which
               the enabled congestion management
               actions are taken.  The congestion state
               is entered when the Q length
               exceeds this threshold, and the congestion
               state is exited when
```

```
                the Q length is 75% of this threshold or less."
        ::= {saAtmVCBufferCfgEntry 2}

SaAtmVCBufferCfgCause OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                depth-invalid(1),
                cong-invalid(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Results of processing VCBufferConfig row."
        ::= {saAtmVCBufferCfgEntry 3}

SaAtmVCBufferCfgUpdate OBJECT-TYPE
        SYNTAX     INTEGER {
                no-update(0),
                update(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by UI to indicate parameter update"
        ::= {saAtmVCBufferCfgEntry 4}



--=====================================================================
--  ATM priority Q table
--
-- This Table contains the configuration information for WAC-187
-- Priority-Control-Block entries.
--
-- This table specifies entries per Class-of-Service (CBR, MCAST,
-- VBR, NRT-VBR, UBR) for:
--      1).  % of available cells allocated to each queue.
--      2).  % of (1) for congestion threshold.
--      3).  % Q oversubscription allowed.
--
-- The information in this table is stored in NV_DB and is intended
-- to replace the info in the system "tuning" file "priq.cdt".
--
-- Configured per-ICM
--
-- SCP 01/30/98
--=====================================================================

saAtmPriQCfgTable    OBJECT-TYPE
        SYNTAX     SEQUENCE OF SaAtmPriQCfgEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM priority Q table "
        ::= { saConnMIBObjects 19}

SaAtmPriQCfgEntry   OBJECT-TYPE
        SYNTAX     SaAtmPriQCfgEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX   { saBrdNum, saPriQueuePri }
        ::= { saAtmPriQCfgTable 1}

SaAtmPriQCfgEntry          ::= SEQUENCE
        {
        SaAtmPriQCfgPercentAlloc                INTEGER,
        SaAtmPriQCfgPercentThreshold            INTEGER,
        SaAtmPriQCfgPercentOverSubscribe        INTEGER,
        SaAtmPriQCfgCause                       INTEGER,
        SaAtmPriQCfgModified                    INTEGER,
        SaAtmPriQCfgUpdate                      INTEGER
        }

SaAtmPriQCfgPercentAlloc   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percent of the available cells to allocate
                 to this priority Q. Note: The sum of this value
                 for all rows must not exceed 100%"
        ::= {saAtmPriQCfgEntry 1}

SaAtmPriQCfgPercentThreshold   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percentage of the allocated cell count for
                 this Q that will be used to indicate congestion."
        ::= {saAtmPriQCfgEntry 2}
```

```
SaAtmPriQCfgPercentOverSubscribe   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "The percentage of the allocated cell count for
                 this Q that will be allowed to be oversubscribed."
        ::= {saAtmPriQCfgEntry 3}

SaAtmPriQCfgCause OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                percent-allocation-invalid(1),
                percent-threshold-invalid(2),
                percent-ovsub-invalid(4),
                total-percent-allocation-invalid(8)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Results of processing Priority-Q configuration row."
        ::= {saAtmPriQCfgEntry 4}

SaAtmPriQCfgModified  OBJECT-TYPE
        SYNTAX     INTEGER {
                applied(0),
                applied-pend(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by SCON to indicate that a config parameter
                 has been changed from what is currently being
                 used by the system"
        ::= {saAtmPriQCfgEntry 5}

SaAtmPriQCfgUpdate OBJECT-TYPE
        SYNTAX     INTEGER {
                no-update(0),
                update(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by UI to indicate parameter update"
        ::= {saAtmPriQCfgEntry 6}
```

```
--=================================================================
--  ATM Port Basic Config table
--
-- This Table is used to pass info back-and-forth between SCON
-- and BCON during initialization.
--
-- The information in this table is NOT stored in NV_DB.
--
-- SCP 02/10/98
--=================================================================

saAtmPortBasicCfgTable    OBJECT-TYPE
        SYNTAX     SEQUENCE OF SaAtmPortBasicCfgEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                " ATM Port Basic Configuration Table "
        ::= { saConnMIBObjects 20}

SaAtmPortBasicCfgEntry   OBJECT-TYPE
        SYNTAX     SaAtmPortBasicCfgEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
                " "
        INDEX   {saBrdNum, saAtmVcmAtmPort}
        ::= { saAtmPortBasicCfgTable 1}

SaAtmPortBasicCfgEntry          ::= SEQUENCE
        {
--
--      CENT ONLY
--
--      This information is created by BCON and
--      used by SCON (in conjuction with info
--      in "saCellHwyStatsTable") to allow
--      validation and processing of the
--      "vpVcRangeFile" and "priqBfrAllocFile".
--
--      Once these databases are established, the
--      Vp/Vc info is sent back down to BCON via
--      "sets" to the distributed objects below
--      (along with appropriate items from
--      "saCellHwyStatsTable").
--
--      BCON knows when to look at the data when
--      the "saAtmPortBasicCfgValid" item is set.
```

```
        SaAtmPortBasicCfgIfIndex            INTEGER,
        SaAtmPortBasicCfgCellHwy            INTEGER,
        SaAtmPortBasicCfgCellHwyMuxPort     INTEGER,
        SaAtmPortBasicCfgPodType            INTEGER,
        SaAtmPortBasicCfgDebug1             INTEGER,
--
--      DIST ONLY
--
        SaAtmPortBasicCfgStartResVp         INTEGER,
        SaAtmPortBasicCfgEndResVp           INTEGER,
        SaAtmPortBasicCfgVpRngFlg           INTEGER,

        SaAtmPortBasicCfgValid              INTEGER
        }

SaAtmPortBasicCfgIfIndex        OBJECT-TYPE
        SYNTAX     INTEGER {
                unregistered(0)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "ifIndex (sah_if_index) associated with this entry"
        ::= {saAtmPortBasicCfgEntry 1}

SaAtmPortBasicCfgCellHwy        OBJECT-TYPE
        SYNTAX     INTEGER {
                protAccel(1),
                xpod(2),
                ipod1-1(3),
                ipod1-2(4),
                ipod2-1(5),
                ipod2-2(6)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Cell hiway for this ATM index"
        ::= {saAtmPortBasicCfgEntry 2}

SaAtmPortBasicCfgCellHwyMuxPort OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Cell-hiway Mux (WAC 185) port # for this ATM index
                 (Zero-based, no mux == 0)"
        ::= {saAtmPortBasicCfgEntry 3}

SaAtmPortBasicCfgPodType        OBJECT-TYPE
        SYNTAX     INTEGER {
                proto-acc(1),
                ces(2),
                other(3)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Pod type for this ATM index.  Currently, we only
                 care about SAR and CES pods"
        ::= {saAtmPortBasicCfgEntry 4}

SaAtmPortBasicCfgDebug1      OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "BCON debug info"
        ::= {saAtmPortBasicCfgEntry 5}

SaAtmPortBasicCfgStartResVp   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Start of reserved VP block (0 if no VPs reserved)"
        ::= {saAtmPortBasicCfgEntry 6}

SaAtmPortBasicCfgEndResVp     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "End of reserved VP block (0 if no VPs reserved)"
        ::= {saAtmPortBasicCfgEntry 7}

SaAtmPortBasicCfgVpRngFlg     OBJECT-TYPE
        SYNTAX     INTEGER {
                vp-ranges-off(0),
                vp-ranges-on(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Flag indicating whether or not VP ranges
                 are to be specified for this port"
```

```
        ::= {saAtmPortBasicCfgEntry 8}

SaAtmPortBasicCfgValid        OBJECT-TYPE
        SYNTAX     INTEGER {
                basic-cfg-invalid(0),
                basic-cfg-valid(1)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                "Written by UI to indicate parameter update"
        ::= {saAtmPortBasicCfgEntry 9}

END




-- ******************************************************
```

Provisioning MIB

```
-- ******************************************************

-- oasis Provisioning Info

OASIS-PROV-MIB DEFINITIONS ::= BEGIN

IMPORTS
        OBJECT-TYPE                        FROM SNMPv2-SMI
        saBrdNum, saPodNum, saCesProv      FROM OASIS-SYSINFO-MIB;


-- CES Provisioning Table
saCesProvTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCesProvEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "CES Provisioning Support Table"
        ::= { saCesProv 1 }

saCesProvEntry OBJECT-TYPE
        SYNTAX  SaCesProvEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "CES Provisioning Table Entry"
        INDEX   { saBrdNum,
                saPodNum }
        ::= { saCesProvTable 1 }

saCesProvEntry ::=
        SEQUENCE {
                saCesProvCmd
                    INTEGER,
                saCesProvPort
                    INTEGER,
                saCesProvIfIndex
                    INTEGER
                }

saCesProvCmd  OBJECT-TYPE
        SYNTAX  INTEGER {
                noop(1),
                add-ces-iwf(2),
                del-ces-iwf(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "CES Provisioning Command"
        ::= { saCesProvEntry 1 }

saCesProvPort  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "CES Port Number for command"
        ::= { saCesProvEntry 2 }

saCesProvIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "ifIndex of CES ds0bundle interface associated
                 with command:
                ` returned when command = Add,
                 must be supplied when command = Delete"
        ::= { saCesProvEntry 3 }

END
```

```
-- ******************************************************
```

ATM Extensions MIB

```
-- ******************************************************

-- oasis atm Pod Info

OASIS-ATMPOD-MIB DEFINITIONS ::= BEGIN

IMPORTS
        ifIndex FROM RFC1213-MIB
        Counter FROM RFC1155-SMI
        saAtmExtFROM OASIS-SYSINFO-MIB
        OBJECT-TYPEFROM SNMPv2-SMI;


-- oasis MIB group

SAAtmMibExt    OBJECT IDENTIFIER ::= { saAtmExt 1 }
SAAtmPlcpExt   OBJECT IDENTIFIER ::= { saAtmExt 2 }
SAAtmTcExt     OBJECT IDENTIFIER ::= { saAtmExt 3 }

-- ATM Cell info

saAtmMibExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaAtmMibExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional items needed for ATM interface"
        ::= { saAtmMibExt 1 }

saAtmMibExtEntry OBJECT-TYPE
        SYNTAX  SaAtmMibExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for ATM interface containing additional objects
                 not contained in the standard mibs."
        INDEX   { ifIndex }
        ::= { saAtmMibExtTable 1 }

saAtmMibExtEntry ::=
        SEQUENCE {
                saAtmCellSync
                    INTEGER,
                saAtmCellScramble
                    INTEGER,
                saAtmExtCorrHcsErrCount
                    Counter,
                saAtmExtUncorrHcsErrCount
                    Counter,
                saAtmExtRxCellCount
                    Counter,
                saAtmExtTxCellCount
                    Counter,
                saAtmExtIdleCellCount
                    Counter,
                saAtmExtIdleUnassignedCell
                    INTEGER,
                saAtmExtIlmiMode
                    INTEGER,
                saAtmExtShapingRate
                    INTEGER,
                saAsaAtmSapCandidate
                    INTEGER
                }

saAtmCellSync  OBJECT-TYPE
        SYNTAX  INTEGER {
                plcpFrame(1),
                hcsBased(2),
                notApplicable(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Cell Sync Method"
        ::= { saAtmMibExtEntry 1 }

saAtmCellScramble  OBJECT-TYPE
        SYNTAX  INTEGER {
                enable(1),
                disable(2),
                notApplicable(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Scrambling Enable/Disable"
```

```
        ::= { saAtmMibExtEntry 2 }

saAtmExtCorrHcsErrCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Correctable HCS Error Count"
        ::= { saAtmMibExtEntry 3 }

saAtmExtUncorrHcsErrCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Uncorrectable HCS Error Count"
        ::= { saAtmMibExtEntry 4 }

saAtmExtRxCellCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Receive Cell Count"
        ::= { saAtmMibExtEntry 5 }

saAtmExtTxCellCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Transmit Cell Count"
        ::= { saAtmMibExtEntry 6 }

saAtmExtIdleCellCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Receive Idle Cell Count"
        ::= { saAtmMibExtEntry 7 }

saAtmExtIdleUnassignedCell OBJECT-TYPE
        SYNTAX  INTEGER {
                idle(1),
                unassigned(2),
                notApplicable(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Idle/Unassigned Cell Definition"
        ::= { saAtmMibExtEntry 8 }

saAtmExtIlmiMode OBJECT-TYPE
        SYNTAX  INTEGER {
                dce(1),
                none(2)
                }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Administrative state for ILMI function
                 on this ATM port.  When enabled
                 on DCE ports, the port will actively
                 transmit polls and monitor responses
                 in order to determine the operational
                 status of the port. None will delete
                 the ILMI service"
        ::= { saAtmMibExtEntry 9 }

saAtmExtShapingRate OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Specifies the shaping rate
                 (in kbps - requires traffic shaping)"
        ::= { saAtmMibExtEntry 10 }

saAsaAtmSapCandidate OBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Yes, if this ATM interface is a candidate
                 for Signaling SAP.
                 No, otherwise."
        ::= { saAtmMibExtEntry 11 }
```

```
-- Items needed for PLCP

saAtmPlcpExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaAtmPlcpExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional PLCP items needed for ATM interface"
        ::= { saAtmPlcpExt 2 }

saAtmPlcpExtEntry OBJECT-TYPE
        SYNTAX  SaAtmPlcpExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for ATM PLCP interface."
        INDEX   { ifIndex }
        ::= { saAtmPlcpExtTable 1 }

saAtmPlcpExtEntry ::=
        SEQUENCE {
                saAtmPlcpStatus
                    INTEGER,
                saAtmPlcpAlarm
                    INTEGER,
                saAtmPlcpCvCount
                    Counter,
                saAtmPlcpES
                    Counter,
                saAtmPlcpSES
                    Counter,
                saAtmPlcpFerrCount
                    Counter,
                saAtmPlcpFebeCount
                    Counter,
                saAtmPlcpFeES
                    Counter,
                saAtmPlcpFeSES
                    Counter,
                saAtmPlcpFeUAS
                    Counter,
                saAtmPlcpLOFSeverity
                    INTEGER,
                saAtmPlcpYelSeverity
                    INTEGER
                }

saAtmPlcpStatus OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Status:
                    Bit    Value      Meaning
                    0       1        No Defects
                    1       2        PLCP LOF
                    2       4        PLCP Yellow"
        ::= { saAtmPlcpExtEntry 1 }

saAtmPlcpAlarm OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Alarms:
                    Bit    Value      Meaning
                    0       1        No Alarms
                    1       2        PLCP LOF
                    2       4        PLCP Yellow"
        ::= { saAtmPlcpExtEntry 2 }

saAtmPlcpCvCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Bip Error Count"
        ::= { saAtmPlcpExtEntry 3 }

saAtmPlcpES OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Errored Seconds"
        ::= { saAtmPlcpExtEntry 4 }

saAtmPlcpSES OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Severely Errored Seconds"
        ::= { saAtmPlcpExtEntry 5 }
```

```
saAtmPlcpFerrCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Framing Error Count"
        ::= { saAtmPlcpExtEntry 6 }

saAtmPlcpFebeCount OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP FEBE Count"
        ::= { saAtmPlcpExtEntry 7 }

saAtmPlcpFeES OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Far End Errored Seconds"
        ::= { saAtmPlcpExtEntry 8 }

saAtmPlcpFeSES OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Far End Severely Errored Seconds"
        ::= { saAtmPlcpExtEntry 9 }

saAtmPlcpFeUAS OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PLCP Far End Unavailable Seconds"
        ::= { saAtmPlcpExtEntry 10 }

saAtmPlcpLOFSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "PLCP LOF Alarm Severity Level"
        ::= { saAtmPlcpExtEntry 11 }

saAtmPlcpYelSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "PLCP Yellow Alarm Severity Level"
        ::= { saAtmPlcpExtEntry 12 }


-- Items needed for TC

saAtmTcExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaAtmTcExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Additional TC items needed for ATM interface"
        ::= { saAtmTcExt 3 }

saAtmTcExtEntry OBJECT-TYPE
        SYNTAX  SaAtmTcExtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for ATM TC interface."
        INDEX   { ifIndex }
        ::= { saAtmTcExtTable 1 }

saAtmTcExtEntry ::=
        SEQUENCE {
                saAtmTcStatus
                    INTEGER,
                saAtmTcAlarm
                    INTEGER,
                saAtmTcLOCDSeverity
                    INTEGER
                }
```

```
saAtmTcStatus OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "TC Status:
                    Bit    Value      Meaning
                    0       1        No Defects
                    1       2        Loss of Cell Delineation"
        ::= { saAtmTcExtEntry 1 }

saAtmTcAlarm OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "TC Status:
                    Bit    Value      Meaning
                    0       1        No Defects
                    1       2        Loss of Cell Delineation"
        ::= { saAtmTcExtEntry 2 }

saAtmTcLOCDSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Loss of Cell Delineation Alarm Severity Level"
        ::= { saAtmTcExtEntry 3 }


END
```

```
-- ******************************************************
```

Diagnostics MIB

```
-- ******************************************************


sa-DIAG-MIB DEFINITIONS ::= BEGIN

IMPORTS
--      ifIndex,
        DisplayStringFROM RFC1213-MIB
        OBJECT-TYPEFROM SNMPv2-SMI
        saDiag, saBrdNumFROM OASIS-SYSINFO-MIB
        Counter    FROM RFC1155-SMI;

saDiagMIBObjects  OBJECT IDENTIFIER ::= {saDiag 1}



--=====================================================================
```

Task Diagnostics Table

```
--=====================================================================

SaTaskDiagTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaTaskDiagEntry
        MAX-ACCESS      not-accessible
        STATUS          current
        DESCRIPTION
                "Task Diag Table "
        ::= { saDiagMIBObjects 1}

SaTaskDiagEntry   OBJECT-TYPE
        SYNTAX   SaTaskDiagEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
                " "
        INDEX { saBrdNum }
        ::= { saTaskDiagTable 1}

SaTaskDiagEntry          ::= SEQUENCE
        {
        SaTaskDiagPriority          INTEGER,
        SaTaskDiagPreemption        INTEGER,
        SaTaskDiagTestPattern       INTEGER,
        SaTaskDiagTestInterval      INTEGER,
```

```
        SaTaskDiagTimeToRun         INTEGER,
        SaTaskDiagApplyButton       INTEGER,
        SaTaskDiagDummy             INTEGER
        }

SaTaskDiagPriority   OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "New Priority"
        ::= {saTaskDiagEntry 1}

SaTaskDiagPreemption   OBJECT-TYPE
        SYNTAX  INTEGER {
                preemptable(1),
                non-preemptable(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Preemption Mode"
        ::= {saTaskDiagEntry 2}

SATaskDiagTestPattern   OBJECT-TYPE
        SYNTAX  INTEGER {
                steady(1),
                intermittent(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "steady: runs the task with new parameters
                 for the specified period
                 and then changes them back to the
                 default values when the test is over.
                 intermittent: runs the task with the
                 new parameters ON and OFF until
                 the test is over. Test period is set by
                 the saTaskDiagTimeToRun"
        ::= {saTaskDiagEntry 3}

SATaskDiagTestInterval   OBJECT-TYPE
        SYNTAX  INTEGER  (50..172800000)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Test Interval in milliseconds ; only
                 valid when saTaskDiagTestPattern is set
                 to intermittent mode"
        ::= {saTaskDiagEntry 4}

saTaskDiagTimeToRun   OBJECT-TYPE
        SYNTAX  INTEGER (10..172800000)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Time to Run in milliseconds. Minimum of 10"
        ::= {saTaskDiagEntry 5}

SaTaskDiagApplyButton   OBJECT-TYPE
        SYNTAX  INTEGER {
                done(1),
                apply(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Set to 'apply' for all parameters to take effect."
        ::= {saTaskDiagEntry 6}

SaTaskDiagDummy   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Dummy"
        ::= {saTaskDiagEntry 7}


--=====================================================
--
--     Cell highway Built-In-Self-Test Table
--
--  NOTE: in the future this may be also be
--        used for other types of diagnostics.
--
--=====================================================

SaBistDiagTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaBistDiagEntry
        MAX-ACCESS      not-accessible
        STATUS          current
        DESCRIPTION
                "Task Diag Table "
        ::= { saDiagMIBObjects 2}
```

```
SaBistDiagEntry   OBJECT-TYPE
        SYNTAX   SaBistDiagEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
                " "
        INDEX { saBrdNum, saBistDiagType }
        ::= { saBistDiagTable 1}

SaBistDiagEntry          ::= SEQUENCE
        {
        SaBistDiagType           INTEGER,
        SaBistDiagStartStop      INTEGER,
        SaBistDiagClrCnts        INTEGER,
        SaBistDiagDuration       INTEGER,
        SaBistDiagFrequency      INTEGER,
        SaBistDiagLpbkType       INTEGER,

        SaBistDiagTestState      INTEGER,
        SaBistDiagTestSummary    INTEGER,
        SaBistDiagTestClock      INTEGER,
        SaBistGoodCellCount      Counter,
        SaBistErrorCount         Counter,
        SaBistLastError          INTEGER
        }

--
-- Commmand section
--
SaBistDiagType          OBJECT-TYPE
        SYNTAX  INTEGER {
                pod1(1),
                pod2(2),
                xpod(3),
                proto-acc(4),
                system(5)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Specify BIST type"
        ::= { saBistDiagEntry 1 }

SaBistDiagStartStop     OBJECT-TYPE
        SYNTAX  INTEGER {
                start(1),
                stop(2),
                ready(3)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Start and stop the BIST"
        ::= { saBistDiagEntry 2 }

SaBistDiagClrCnts       OBJECT-TYPE
        SYNTAX  INTEGER {
                accum(1),
                clear(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Clear counts when test starts, or accumulate
                 from previous test"
        ::= { saBistDiagEntry 3 }

SaBistDiagDuration      OBJECT-TYPE
        SYNTAX  INTEGER (0..86400)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Specify duration of test in seconds (up to 24 hours)"
        ::= { saBistDiagEntry 4 }

SaBistDiagFrequency     OBJECT-TYPE
        SYNTAX  INTEGER {
                once-a-sec(1)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Specify frequency of the BIST"
        ::= { saBistDiagEntry 5 }

SaBistDiagLpbkType      OBJECT-TYPE
        SYNTAX  INTEGER {
                internal(1),
                external(2)
                }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Specify an internal or external loopback"
        ::= { saBistDiagEntry 6 }
```

```
--
-- Results section
--
SaBistDiagTestState     OBJECT-TYPE
        SYNTAX  INTEGER {
                pod1(1),
                pod2(2),
                xpod(3),
                proto-acc(4),
                system(5),
                not-running(6)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "State of BIST (current test, or not running)"
        ::= { saBistDiagEntry 7 }

SaBistDiagTestSummary   OBJECT-TYPE
        SYNTAX  INTEGER {
                illegal-test(1),
                pass(2),
                fail(3),
                na(4),
                unknown(5)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "BIST summary"
        ::= { saBistDiagEntry 8 }

SaBistDiagTestClock     OBJECT-TYPE
        SYNTAX  INTEGER (1..86400)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "How many seconds have elapsed since test started"
        ::= { saBistDiagEntry 9 }

SaBistGoodCellCount     OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of good cells received during test"
        ::= { saBistDiagEntry 10 }

SaBistErrorCount        OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of errors accumulated during test"
        ::= { saBistDiagEntry 11 }

SaBistLastError         OBJECT-TYPE
        SYNTAX  INTEGER {
                none(0),
                cell-not-rcvd(1),
                cell-bad(2),
                cell-read-err(3),
                extra-cell(4),
                cnct-fail(5),
                send-fail(6),
                no-buffer(7),
                no-tx-desc(8),
                size-mism(9),
                not-cfgd(10),
                not-ready(11),
                unknown(12),
                bad-mac-bus(13),
                mac-loop-err(14),
                line-one-failure(15),
                line-two-failure(16),
                line-three-failure(17),
                line-four-failure(18),
                pod-fail(19)
                }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Type of BIST error which last occurred"
        ::= { saBistDiagEntry 12 }


--=============================================================================
-- Task Table
--=============================================================================

SATaskTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaTaskEntry
        MAX-ACCESS      not-accessible
        STATUS          current
        DESCRIPTION
```

```
                "Task Table "
        ::= { saDiagMIBObjects 3}

SATaskEntry   OBJECT-TYPE
        SYNTAX   SaTaskEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
                " "
        INDEX { saBrdNum, saTaskId }
        ::= { saTaskTable 1}

SaTaskEntry          ::= SEQUENCE
        {
        SaTaskName                  DisplayString,
        SaTaskId                    INTEGER,
        SaTaskPriority              INTEGER,
        SaTaskInitStack             INTEGER,
        SaTaskStackSize             INTEGER,
        SaTaskStackHighWaterMark    INTEGER,
        SaTaskPercentUtil           INTEGER
        }

SaTaskName   OBJECT-TYPE
        SYNTAX  DisplayString (SIZE (0..255))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Task Name"
        ::= {saTaskEntry 1}

SaTaskId   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Task ID"
        ::= {saTaskEntry 2}

SATaskPriority   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Task ID"
        ::= {saTaskEntry 3}

SATaskInitStack   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Initial Stack Size"
        ::= {saTaskEntry 4}

SATaskStackSize   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Task Stack Size"
        ::= {saTaskEntry 5}

saTaskStackHighWaterMark   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Task Stack High Water Mark"
        ::= {saTaskEntry 6}

saTaskPercentUtil   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Percent measure on Stack Utilization"
        ::= {saTaskEntry 7}

END
```

```
-- ******************************************************
```

Trap Host MIB

```
-- ******************************************************


-- Oasis Trap Host Mib Info

OASIS-TRAPHOST-MIB DEFINITIONS ::= BEGIN

IMPORTS
       DisplayStringFROM RFC1213-MIB
       Counter               FROM RFC1155-SMI
       saSystem              FROM OASIS-SYSINFO-MIB
       DateAndTime           FROM HOST-RESOURCES-MIB
       OBJECT-TYPE, IpAddress FROM SNMPv2-SMI;

saTrap         OBJECT IDENTIFIER ::= { saSystem 7 }
saEventLog     OBJECT IDENTIFIER ::= { saSystem 8 }
saEventMib     OBJECT IDENTIFIER ::= { saSystem 9 }


--*****************************************************************
```

saTrapHostTbl

```
--
-- Table where the list of trap agents reside
--*****************************************************************

saTrapHostTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaTrapHostEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "The Trap Host Information Table."
       ::= { saTrap 1 }

saTrapHostEntry OBJECT-TYPE
       SYNTAX  SaTrapHostEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "A host entry in the Oasis Trap Host Information Table."
       INDEX   { saTrapHostIndex }
       ::= { saTrapHostTable 1 }

saTrapHostEntry ::=
       SEQUENCE {
              saTrapHostIndex
                  INTEGER,
              saTrapRowCreate
                  INTEGER,
              saTrapHostAddress
                  IpAddress,
              saTrapHostEnable
                  INTEGER,
              saTrapCommString
                  DisplayString,
              saSetCommString
                  DisplayString,
              saGetCommString
                  DisplayString
              }

saTrapHostIndex OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Trap Host Index"
       ::= { saTrapHostEntry 1 }

saTrapRowCreate OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-create
       STATUS  current
       DESCRIPTION
              "Trap Row Create Variable"
       ::= { saTrapHostEntry 2 }

saTrapHostAddress OBJECT-TYPE
       SYNTAX  IpAddress
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Trap Host IP Address"
       ::= { saTrapHostEntry 3 }

saTrapHostEnable OBJECT-TYPE
       SYNTAX  INTEGER {
              up(1),
              down(2)
              }
       MAX-ACCESS  read-write
```

```
        STATUS  current
        DESCRIPTION
                "Allows enabling or disabling sending traps to this host"
        ::= { saTrapHostEntry 4 }

saTrapCommString OBJECT-TYPE
        SYNTAX DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Trap Community String"
        ::= { saTrapHostEntry 5 }

saSetCommString OBJECT-TYPE
        SYNTAX DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Set Community String"
        ::= { saTrapHostEntry 6 }

saGetCommString OBJECT-TYPE
        SYNTAX DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Get Community String"
        ::= { saTrapHostEntry 7 }



--*********************************************************************
```

saEventLogTable

```
--
-- Table where the list of systems events reside
--*********************************************************************

saEventLogTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaEventLogEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The System Event Log Table."
        ::= { saEventLog 1 }

saEventLogEntry OBJECT-TYPE
        SYNTAX SaEventLogEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                " An entry in the Oasis Event Mib Log table"
        INDEX   { saEventLogIndex }
        ::= { saEventLogTable 1 }

saEventLogEntry ::=
        SEQUENCE {
                saEventLogIndex
                    INTEGER,
                saEventLogDateAndTime
                    DateAndTime,
                saEventLogType
                    INTEGER,
                saEventLogDescription
                    DisplayString,
                saEventLogSeverity
                    INTEGER
                }

saEventLogIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Event Mib Log Index"
        ::= { saEventLogEntry 1  }

saEventLogDateAndTime OBJECT-TYPE
        SYNTAX  DateAndTime
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Event Mib Log Date"
        ::= { saEventLogEntry 2  }

saEventLogType OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Event Mib Log Event Number"
        ::= { saEventLogEntry 3  }
```

```
saEventLogDescription OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Event Mib Log Entry Description"
        ::= { saEventLogEntry 4  }

saEventLogSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                debug(0),
                info(1),
                minAlrm(2),
                majAlrm(3),
                critAlrm(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Event Mib Log Severity Level"
        ::= { saEventLogEntry 5  }

-- event Table Control and Status

saMaxEvents OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Allows user to configure Max Number of saved events"
        ::= { saEventLog 2  }

saNumEvents OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Current Number of saved events"
        ::= { saEventLog 3  }

--*****************************************************************
```

saEventMibTable

```
--
-- Table where the list of systems events reside
--*****************************************************************
saEventMibTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaEventMibEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The System Event Mib Table."
        ::= { saEventMib 1 }

saEventMibEntry OBJECT-TYPE
        SYNTAX SaEventMibEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                " An entry in the Oasis Event Mib table"
        INDEX   { saEventMibType, saEventMibSubtype }
        ::= { saEventMibTable 1 }

saEventMibEntry ::=
        SEQUENCE {
                saEventMibType
                    INTEGER,
                saEventMibSubtype
                    INTEGER,
                saEventMibEventFilter
                    Counter,
                saEventMibSeverityFilter
                    Counter,
                saEventMibInstanceFilter
                    Counter
                }

saEventMibType OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Event Mib Index"
        ::= { saEventMibEntry 1  }

saEventMibSubtype OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Event Mib Event SubType"
        ::= { saEventMibEntry 2  }
```

```
saEventMibEventFilter OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This field is used to provide Event Filtering"
        ::= { saEventMibEntry 3  }

saEventMibSeverityFilter OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This field is used to provide Severity Filtering"
        ::= { saEventMibEntry  4 }

saEventMibInstanceFilter OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This field is used to provide Instance Filtering"
        ::= { saEventMibEntry 5  }


END




-- ******************************************************
```

Protocol Accelerator MIB

```
-- ******************************************************

-- oasis Protocol Accelerator Info

OASIS-PROTACC-MIB DEFINITIONS ::= BEGIN

IMPORTS
        DisplayStringFROM RFC1213-MIB
        Counter               FROM RFC1155-SMI
        saNLI, saBrdNumFROM OASIS-SYSINFO-MIB
        ifIndex               FROM RFC1213-MIB
        OBJECT-TYPE           FROM SNMPv2-SMI;
```

```
-- oasis MIB group

   saNliProtAccOBJECT IDENTIFIER ::= { saNLI 1 }
   saNliGroup      OBJECT IDENTIFIER ::= { saNLI 2 }
   saNliPort       OBJECT IDENTIFIER ::= { saNLI 3 }
   saNliTunnel     OBJECT IDENTIFIER ::= { saNLI 4 }
   saNliMAC        OBJECT IDENTIFIER ::= { saNLI 5 }
   saNliDescCfg    OBJECT IDENTIFIER ::= { saNLI 6 }
   saNliPoolCfg    OBJECT IDENTIFIER ::= { saNLI 7 }
   saNliDirect     OBJECT IDENTIFIER ::= { saNLI 8 }
   saPaTunnel      OBJECT IDENTIFIER ::= { saNLI 9 }
   saNliAdvCfg     OBJECT IDENTIFIER ::= { saNLI 10 }
   saNliMACView    OBJECT IDENTIFIER ::= { saNLI 11 }
   saNliSpanGrp    OBJECT IDENTIFIER ::= { saNLI 12 }
   saNliSpanPrt    OBJECT IDENTIFIER ::= { saNLI 13 }


-- Native Lan Interconnect Protocol Accelerator Table

saNliProtAccTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliProtAccEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Protocol Accelerator Table"
        ::= { saNliProtAcc 1 }

saNliProtAccEntry OBJECT-TYPE
        SYNTAX  SaNliProtAccEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Protocol Accelerator Table Entry"
        INDEX   { saBrdNum , saNliProtAccPciSlot }
        ::= { saNliProtAccTable 1 }

saNliProtAccEntry ::=
        SEQUENCE {
                saNliProtAccAdminStatus
                    INTEGER,
                saNliProtAccRcvCells
                    Counter,
                saNliProtAccXmtCells
                    Counter,
                saNliProtAccXmtBufUflowPkts
                    Counter,
                saNliProtAccXmtQOflowPkts
                    Counter,
```

```
                saNliProtAccRcvLenOflowPkts
                    Counter,
                saNliProtAccRcvBufUflowPkts
                    Counter,
                saNliProtAccRcvCrcErrPkts
                    Counter,
                saNliProtAccRcvReasmTOPkts
                    Counter,
                saNliProtAccRcvInactPkts
                    Counter,
                saNliProtAccRcvUndefPkts
                    Counter,
                saNliProtAccHUQOflow
                    Counter,
                saNliProtAccFwdErrPkts
                    Counter,
                saNliProtAccCamOflow
                    Counter,
                saNliProtAccBlockedPkts
                    Counter,
                saNliProtAccParm1
                    INTEGER,
                saNliProtAccParm2
                    INTEGER,
                saNliProtAccMicrocodeName
                    DisplayString,
                saNliProtAccMicrocodeRev
                    DisplayString,
                saNliProtAccStatus
                    INTEGER,
                saNliProtAccErrorCode
                    INTEGER,
                saNliProtAccHIQOflow
                    Counter,
                saNliProtAccVccMisdirect
                    Counter
                }

saNliProtAccAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                add-group(2),
                del-group(3),
                clear-counts(4),
                clear-all(5),
                add-advcfg(6),
                del-advcfg(7),
                save-advcfg(8)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Hot key to group row."
        ::= { saNliProtAccEntry 1 }

saNliProtAccRcvCells  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number cells received."
        ::= { saNliProtAccEntry 2 }

saNliProtAccXmtCells  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number cells transmitted."
        ::= { saNliProtAccEntry 3 }

saNliProtAccXmtBufUflowPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets not transmitted because no buffers
                 were available."
        ::= { saNliProtAccEntry 4 }

saNliProtAccXmtQOflowPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets dropped because transmitting VC queue
                 was full."
        ::= { saNliProtAccEntry 5 }

saNliProtAccRcvLenOflowPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received that were
                 larger than two buffers."
```

```
        ::= { saNliProtAccEntry 6 }

saNliProtAccRcvBufUflowPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received when no
                 buffers were available."
        ::= { saNliProtAccEntry 7 }

saNliProtAccRcvCrcErrPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets dropped due to a CRC error."
        ::= { saNliProtAccEntry 8 }

saNliProtAccRcvReasmTOPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets dropped due to a reassembly timeout."
        ::= { saNliProtAccEntry 9 }

saNliProtAccRcvInactPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received on an inactive VC."
        ::= { saNliProtAccEntry 10 }

saNliProtAccRcvUndefPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received on an undefined VC."
        ::= { saNliProtAccEntry 11 }

saNliProtAccHUQOflow  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets not forwarded to the host because
                 the queue was full."
        ::= { saNliProtAccEntry 12 }

saNliProtAccFwdErrPkts  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets dropped because a transmit
                 queue was full."
        ::= { saNliProtAccEntry 13 }

saNliProtAccCamOflow  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of times adding a MAC address failed
                 due to CAM overflow."
        ::= { saNliProtAccEntry 14 }

saNliProtAccHIQOflow  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of times the Host Indications Queue overflowed."
        ::= { saNliProtAccEntry 15 }

saNliProtAccVccMisdirect  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of times a packet received on a VC was forwarded
                 to another VC."
        ::= { saNliProtAccEntry 16 }

saNliProtAccParm1  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Specifies POD on group adds, interface
                 index on group deletes."
        ::= { saNliProtAccEntry 17 }
```

```
saNliProtAccParm2  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Specifies Port on group adds."
       ::= { saNliProtAccEntry 18 }

saNliProtAccMicrocodeName  OBJECT-TYPE
       SYNTAX  DisplayString(SIZE(0..40))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Name of the file containing the microcode image."
       ::= { saNliProtAccEntry 19 }

saNliProtAccPciSlot OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "PCI slot where the Protocol Accelerator is running."
       ::= { saNliProtAccEntry 20 }

saNliProtAccStatus  OBJECT-TYPE
       SYNTAX  INTEGER {
              normal(1),
              config-mismatch(2),
              group-add-failed(3),
              group-added(4),
              group-del-failed(5),
              group-deleted(6),
              advcfg-added(7),
              advcfg-add-failed(8),
              advcfg-deleted(9),
              advcfg-del-failed(10),
              advcfg-saved(11),
              advcfg-save-failed(12)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Contains any messages in response to sets made in
               this row."
       ::= { saNliProtAccEntry 21 }

saNliProtAccErrorCode  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Error code associated with the Status message."
       ::= { saNliProtAccEntry 22 }


saNliProtAccBlockedPkts  OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Number of times a packet was dropped in an attempt
               to transmit out a blocked port."
       ::= { saNliProtAccEntry 23 }

saNliProtAccMicrocodeRev  OBJECT-TYPE
       SYNTAX  DisplayString(SIZE(0..40))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Revision of the file containing the microcode image."
       ::= { saNliProtAccEntry 24 }



-- Native Lan Interconnect Group Table

saNliGroupTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaNliGroupEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "NLI Group Table"
       ::= { saNliGroup 1 }

saNliGroupEntry OBJECT-TYPE
       SYNTAX  SaNliGroupEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "NLI Group Table Entry"
       INDEX   { ifIndex }
       ::= { saNliGroupTable 1 }
```

```
saNliGroupEntry ::=
        SEQUENCE {
                saNliGroupName
                    DisplayString,
                saNliGroupXmtPackets
                    Counter,
                saNliGroupRcvPackets
                    Counter,
                saNliGroupPortAssociation
                    INTEGER,
                saNliGroupNumTunnels
                    INTEGER,
                saNliGroupDataBaseAge
                    INTEGER,
                saNliGroupBufferPool
                    INTEGER,
                saNliGroupIPAccess
                    INTEGER,
                saNliGroupSpanningTree
                    INTEGER,
                saNliGroupAdminStatus
                    INTEGER,
                saNliGroupOperStatus
                    INTEGER,
                saNliGroupId
                    INTEGER,
                saNliGroupNewInterfaceParm1
                    INTEGER,
                saNliGroupNewInterfaceParm2
                    INTEGER,
                saNliGroupNewInterfaceParm3
                    INTEGER,
                saNliGroupCreateNewInterface
                    INTEGER,
                saNliGroupStatus
                    INTEGER,
                saNliGroupErrorCode
                    INTEGER
                }

saNliGroupName  OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Group Name"
        ::= { saNliGroupEntry 1 }

saNliGroupXmtPackets  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets transmitted to ports by this group"
        ::= { saNliGroupEntry 2 }

saNliGroupRcvPackets  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received from ports by this group"
        ::= { saNliGroupEntry 3 }

saNliGroupPortAssociation  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bit mask of physical ports presently associated
                 with this group."
        ::= { saNliGroupEntry 4 }

saNliGroupDataBaseAge  OBJECT-TYPE
        SYNTAX  INTEGER(0..1023)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Default age of MAC addresses kept in forwarding table"
        ::= { saNliGroupEntry 5 }

saNliGroupIPAccess  OBJECT-TYPE
        SYNTAX  INTEGER {
                ip(1),
                no-ip(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Determines whether or not IP access is granted through
                this forwarding group."
        ::= { saNliGroupEntry 6 }

saNliGroupAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
```

```
                apply(2),
                clear-counts(3),
                clear-all(8),
                enable(4),
                disable(5),
                mac-cache-view-on(6),
                mac-cache-view-off(7)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Controls group state"
        ::= { saNliGroupEntry 7 }

saNliGroupOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                new(1),
                enabled(2),
                disabled(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Reports group status"
        ::= { saNliGroupEntry 8 }

saNliGroupId  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Group Identification number from BridgeMaker"
        ::= { saNliGroupEntry 9 }

saNliGroupNewInterfaceParm1  OBJECT-TYPE
        SYNTAX  INTEGER(0..255)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 1 for adding an interface.
                (VPI | POD | upperMAC)."
        ::= { saNliGroupEntry 10 }

saNliGroupNewInterfaceParm2  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 2 for adding an interface.
                (VCI | Port | lowerMAC)."
        ::= { saNliGroupEntry 11 }

saNliGroupNewInterfaceParm3  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 3 for adding an interface.
                (N/A | N/A | chanId)."
        ::= { saNliGroupEntry 12 }

saNliGroupCreateNewInterface  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                add-tunnel(2),
                del-tunnel(3),
                add-mac(6),
                del-mac(7)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Hot key to create a new interface row."
        ::= { saNliGroupEntry 13 }

saNliGroupStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                config-mismatch(2),
                group-register-failed(3),
                group-registered(4),
                add-tunnel-failed(5),
                added-tunnel(6),
                del-tunnel-failed(7),
                deleted-tunnel(8),
                add-mac-failed(9),
                added-mac(10),
                del-mac-failed(11),
                deleted-mac(12),
                port-assoc-failed(13),
                port-assoc-changed(14),
                db-age-change-failed(15),
                db-age-changed(16),
                change-ip-access-failed(17),
                changed-ip-access(18),
                group-enable-failed(19),
```

```
                group-enabled(20),
                group-disable-failed(21),
                group-disabled(22),
                change-span-failed(23),
                changed-span(24)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Contains any messages in response
                 to sets made in this row."
        ::= { saNliGroupEntry 14 }

saNliGroupErrorCode  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Error code associated with the Status message."
        ::= { saNliGroupEntry 15 }

saNliGroupNumTunnels  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of tunnels presently associated with this group."
        ::= { saNliGroupEntry 16 }

saNliGroupBufferPool   OBJECT-TYPE
        SYNTAX  INTEGER {
                mgmt(1),
                comms(2),
                pool-1(3),
                pool-2(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Selects which buffer pool this group draws from."
        ::= { saNliGroupEntry 17 }

saNliGroupSpanningTree  OBJECT-TYPE
        SYNTAX  INTEGER {
                active(1),
                inactive(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Determines whether or not Spanning Tree is run over
                this forwarding group."
        ::= { saNliGroupEntry 18 }



-- Native Lan Interconnect Port Table

saNliPortTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Port Table"
        ::= { saNliPort 1 }

saNliPortEntry OBJECT-TYPE
        SYNTAX  SaNliPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Port Table Entry"
        INDEX   { ifIndex, saNliPortIfIndex }
        ::= { saNliPortTable 1 }

saNliPortEntry ::=
        SEQUENCE {
                saNliPortId
                    INTEGER,
                saNliPortBIfIdx
                    INTEGER,
                saNliPortName
                    DisplayString,
                saNliPortPodNum
                    INTEGER,
                saNliPortPortNum
                    INTEGER,
                saNliPortLinkSpeed
                    INTEGER,
                saNliPortXmtPackets
                    Counter,
                saNliPortRcvPackets
                    Counter,
                saNliPortAdminStatus
                    INTEGER,
```

```
                saNliPortOperStatus
                    INTEGER,
                saNliPortStatus
                    INTEGER,
                saNliPortErrorCode
                    INTEGER
                }

saNliPortId  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port Identification number from BridgeMaker"
        ::= { saNliPortEntry 1 }

saNliPortBIfIdx  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "BridgeMaker interface identification number"
        ::= { saNliPortEntry 2 }

saNliPortName  OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Port Name"
        ::= { saNliPortEntry 3 }

saNliPortPodNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port POD position"
        ::= { saNliPortEntry 4 }

saNliPortPortNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port position on the POD"
        ::= { saNliPortEntry 5 }

saNliPortLinkSpeed  OBJECT-TYPE
        SYNTAX  INTEGER {
                speed-10M(1),
                speed-100M(2),
                autosense(3),
                full-dplx-10M(4),
                full-dplx-100M(5)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port speed"
        ::= { saNliPortEntry 6 }

saNliPortXmtPackets  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets transmitted on the port"
        ::= { saNliPortEntry 7 }

saNliPortRcvPackets  OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received on the port"
        ::= { saNliPortEntry 8 }

saNliPortAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                apply(2),
                clear-counts(3),
                block(4),
                unblock(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Controls port state"
        ::= { saNliPortEntry 9 }

saNliPortOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                new(1),
                blocked(2),
```

```
                unblocked(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Reports port status"
        ::= { saNliPortEntry 10 }

saNliPortStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                config-mismatch(2),
                port-configure-failed(3),
                port-configured(4),
                port-block-failed(5),
                port-blocked(6),
                port-unblock-failed(7),
                port-unblocked(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Contains any messages in response to sets made in
                 this row."
        ::= { saNliPortEntry 11 }

saNliPortErrorCode  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Error code associated with the Status message."
        ::= { saNliPortEntry 12 }

saNliPortIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Ethernet Port interface index."
        ::= { saNliPortEntry 13 }



-- Native Lan Interconnect Tunnel Table
saNliTunnelTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Tunnel Table"
        ::= { saNliTunnel 1 }

saNliTunnelEntry OBJECT-TYPE
        SYNTAX  SaNliTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Tunnel Table Entry"
        INDEX   { ifIndex, saNliTunnelVPI, saNliTunnelVCI }
        ::= { saNliTunnelTable 1 }

saNliTunnelEntry ::=
        SEQUENCE {
                saNliTunnelName
                    DisplayString,
                saNliTunnelSvcRate
                    INTEGER,
                saNliTunnelSvcUserDefRate
                    INTEGER,
                saNliTunnelSvcCat
                    INTEGER,
                saNliTunnelSvcCdvt
                    INTEGER,
                saNliTunnelType
                    INTEGER,
                saNliTunnelPID
                    INTEGER,
                saNliTunnelVbrAvgRate
                    INTEGER,
                saNliTunnelVbrMaxBurst
                    INTEGER,
                saNliTunnelAbrInitRate
                    INTEGER,
                saNliTunnelAbrMinRate
                    INTEGER,
                saNliTunnelAbrXrm
                    INTEGER,
                saNliTunnelAbrRIF
                    INTEGER,
                saNliTunnelAbrRDF
                    INTEGER,
                saNliTunnelAbrCDF
                    INTEGER,
                saNliTunnelAbrActivateOpt
                    INTEGER,
```

```
                saNliTunnelVPI
                    INTEGER,
                saNliTunnelVCI
                    INTEGER,
                saNliTunnelAdminStatus
                    INTEGER,
                saNliTunnelOperStatus
                    INTEGER,
                saNliTunnelStatus
                    INTEGER,
                saNliTunnelErrorCode
                    INTEGER
                }

saNliTunnelName  OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Name"
        ::= { saNliTunnelEntry 1 }

saNliTunnelSvcRate  OBJECT-TYPE
        SYNTAX  INTEGER {
                svcRate-100M(1),
                svcRate-45M(2),
                svcRate-34M(3),
                svcRate-10M(4),
                svcRate-2M(5),
                svcRate-1544K(6),
                svcRate-512K(7),
                svcRate-384K(8),
                svcRate-256K(9),
                svcRate-128K(10),
                svcRate-64K(11),
                svcRate-56K(12),
                user-defined(13)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Service Rate"
        ::= { saNliTunnelEntry 2}

saNliTunnelSvcUserDefRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel rate in bits per second for userDefined
                 service rates. This bit rate is used to calculate
                 a Peak Cell Rate."
        ::= { saNliTunnelEntry 3 }



--              abr(5)
saNliTunnelSvcCat  OBJECT-TYPE
        SYNTAX  INTEGER {
                cbr(1),
                rt-vbr(2),
                nrt-vbr(3),
                ubr(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Service Category"
        ::= { saNliTunnelEntry 4 }

saNliTunnelSvcCdvt  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Cell Delay Variance Tolerance (in cell times)"
        ::= { saNliTunnelEntry 5 }

saNliTunnelType  OBJECT-TYPE
        SYNTAX  INTEGER {
                static(1),
                aging(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel attributes. Cannot be reconfigured."
        ::= { saNliTunnelEntry 6 }

saNliTunnelPID  OBJECT-TYPE
        SYNTAX  INTEGER {
                pid-1(1),
                pid-7(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
```

```
        DESCRIPTION
                "PID1 means the ethernet CRC is preserved across the
                 network. PID7 means the CRC is regenerated locally.
                 Cannot be reconfigured."
        ::= { saNliTunnelEntry 7 }


saNliTunnelVPI  OBJECT-TYPE
        SYNTAX  INTEGER(0..255)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel VPI"
        ::= { saNliTunnelEntry 8 }

saNliTunnelVCI  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel VCI"
        ::= { saNliTunnelEntry 9 }

saNliTunnelAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                apply(2),
                block(3),
                unblock(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Controls tunnel state"
        ::= { saNliTunnelEntry 10 }

saNliTunnelOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                new(1),
                blocked(2),
                unblocked(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel Oper StatusReports tunnel status"
        ::= { saNliTunnelEntry 11 }

saNliTunnelStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                config-mismatch(2),
                tunnel-configure-failed(3),
                tunnel-configured(4),
                tunnel-block-failed(5),
                tunnel-blocked(6),
                tunnel-unblock-failed(7),
                tunnel-unblocked(8),
                tunnel-reconfigure-failed(9),
                tunnel-reconfigured(10)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Contains any messages in response to sets made in
                 this row."
        ::= { saNliTunnelEntry 12 }

saNliTunnelErrorCode  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Error code associated with the Status message."
        ::= { saNliTunnelEntry 13 }

saNliTunnelVbrAvgRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Sustained rate in bits per second for VBR tunnels."
        ::= { saNliTunnelEntry 14 }

saNliTunnelVbrMaxBurst  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Maximum burst size in bits for VBR tunnels. This amount
                 of data can be transmitted at the peak rate before
                 getting throttled to the the sustained rate."
        ::= { saNliTunnelEntry 15 }
```

```
saNliTunnelAbrInitRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Initial rate in bits per second for ABR tunnels."
        ::= { saNliTunnelEntry 16 }

saNliTunnelAbrXrm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saNliTunnelEntry 17 }

saNliTunnelAbrRIF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saNliTunnelEntry 18 }

saNliTunnelAbrRDF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saNliTunnelEntry 19 }

saNliTunnelAbrCDF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saNliTunnelEntry 20 }

saNliTunnelAbrActivateOpt  OBJECT-TYPE
        SYNTAX  INTEGER{
                on-first-xmt(1),
                on-enable(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saNliTunnelEntry 21 }

saNliTunnelAbrMinRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Minimum rate in bits per second for ABR tunnels."
        ::= { saNliTunnelEntry 22 }

-- Native Lan Interconnect MAC table
saNliMACTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliMACEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI MAC Table"
        ::= { saNliMAC 1 }

saNliMACEntry OBJECT-TYPE
        SYNTAX  SaNliMACEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI MAC Table Entry"
        INDEX   { ifIndex, saNliMACIndex1, saNliMACIndex2 }
        ::= { saNliMACTable 1 }

saNliMACEntry ::=
        SEQUENCE {
                saNliMACUpperAddr
                    INTEGER,
                saNliMACLowerAddr
                    INTEGER,
                saNliMACDestIfIndex
                    INTEGER,
                saNliMACDestVPI
                    INTEGER,
                saNliMACDestVCI
                    INTEGER,
                saNliMACEntryType
                    INTEGER,
                saNliMACDestChanId
                    INTEGER,
                saNliMACStatus
                    INTEGER
                }
```

```
saNliMACIndex1  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "First index derived from the MAC address."
        ::= { saNliMACEntry 1 }

saNliMACIndex2  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Second index derived from the MAC address."
        ::= { saNliMACEntry 2 }

saNliMACUpperAddr  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Upper 16 bits of the MAC address"
        ::= { saNliMACEntry 3 }

saNliMACLowerAddr  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Lower 32 bits of the MAC address"
        ::= { saNliMACEntry 4 }

saNliMACDestIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination Interface Index. Identifies an interface
                 port. Or, if it is equal to the parent Forwarding Group,
                 Interface Index, the saNliMACDestVPI and saNliMACDestVCI
                 are used to remember the destination through a power
                 cycle."
        ::= { saNliMACEntry 5 }

saNliMACDestVPI  OBJECT-TYPE
        SYNTAX  INTEGER(0..255)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination VPI is used in conjunction with
saNliMACDestVCI
                 to remember which tunnel to forward a given MAC address
                 through a power cycle."
        ::= { saNliMACEntry 6 }

saNliMACDestVCI  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination VCI is used in conjunction with
                 saNliMACDestVCI to remember which tunnel to
                 forward a given MAC address through a power cycle."
        ::= { saNliMACEntry 7 }

saNliMACEntryType  OBJECT-TYPE
        SYNTAX  INTEGER {
                static(1),
                dynamic(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Entry type. Static if it is not subject to aging."
        ::= { saNliMACEntry 8 }

saNliMACDestChanId  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "BridgeMaker channel Id of the associated tunnel or port"
        ::= { saNliMACEntry 9 }

saNliMACStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                pending(1),
                active(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Used to track non-volatile restore. Active means it is in
                 the BridgeMaker MAC cache."
        ::= { saNliMACEntry 10 }
```

```
-- Protocol Accelerator Descriptor Configuration table
saNliDescCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliDescCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Descriptor Configuration Table"
        ::= { saNliDescCfg 1 }

saNliDescCfgEntry OBJECT-TYPE
        SYNTAX  SaNliDescCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Descriptor Configuration Table Entry"
        INDEX   {
                saBrdNum,
                saNliDescCfgPciSlot,
                saNliDescCfgPodNum,
                saNliDescCfgPortNum
                }
        ::= { saNliDescCfgTable 1 }

saNliDescCfgEntry ::=
        SEQUENCE {
                saNliDescCfgGroupType
                    INTEGER,
                saNliDescCfgPool
                    INTEGER,
                saNliDescCfgRatio
                    INTEGER,
                saNliDescCfgBufsPerDesc
                    INTEGER,
                saNliDescCfgDescSize
                    INTEGER,
                saNliDescCfgSeedBufs
                    INTEGER,
                saNliDescCfgTotalDescs
                    INTEGER,
                saNliDescCfgOperStatus
                    INTEGER
                }

saNliDescCfgGroupType  OBJECT-TYPE
        SYNTAX  INTEGER {
                host(1),
                forwarding(2),
                direct(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Group type of which this descriptor can be a member."
        ::= { saNliDescCfgEntry 1 }

saNliDescCfgPool  OBJECT-TYPE
        SYNTAX  INTEGER  {
                mgmt(1),
                comms(2),
                pool1(3),
                pool2(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Index of the Pool Configuration Table entry used."
        ::= { saNliDescCfgEntry 2 }

saNliDescCfgRatio  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number contrasted with other users of the pool to
                 divide extra buffers."
        ::= { saNliDescCfgEntry 3 }

saNliDescCfgBufsPerDesc  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of buffers reserved per descriptor allocated."
        ::= { saNliDescCfgEntry 4 }

saNliDescCfgDescSize  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Size of each descriptor."
        ::= { saNliDescCfgEntry 5 }
```

```
saNliDescCfgSeedBufs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Minimum requested number of descriptors."
        ::= { saNliDescCfgEntry 6 }

saNliDescCfgTotalDescs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of descriptors allocated."
        ::= { saNliDescCfgEntry 7 }

saNliDescCfgOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                configured(1),
                new(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Status of the descriptor. Configured means that the
                 descriptor was used in BridgeMaker initialization.
                 New rows must be identified as such to prevent their
                 use until BridgeMaker is re-initialized."
        ::= { saNliDescCfgEntry 8 }

saNliDescCfgPciSlot  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator PCI slot which owns this descriptor."
        ::= { saNliDescCfgEntry 9 }

saNliDescCfgPodNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "POD number used with Port number to uniquely identify
                 this descriptor"
        ::= { saNliDescCfgEntry 10 }

saNliDescCfgPortNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port number used with POD number to uniquely identify
                 this descriptor"
        ::= { saNliDescCfgEntry 11 }

-- Protocol Accelerator Pool Configuration table
saNliPoolCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliPoolCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Pool Configuration Table"
        ::= { saNliPoolCfg 1 }

saNliPoolCfgEntry OBJECT-TYPE
        SYNTAX  SaNliPoolCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Pool Configuration Table Entry"
        INDEX   { saBrdNum, saNliPoolCfgPciSlot, saNliPoolCfgId }
        ::= { saNliPoolCfgTable 1 }

saNliPoolCfgEntry ::=
        SEQUENCE {
                saNliPoolCfgType
                    INTEGER,
                saNliPoolCfgBufSize
                    INTEGER,
                saNliPoolCfgTotalBufs
                    INTEGER
                }

saNliPoolCfgType  OBJECT-TYPE
        SYNTAX  INTEGER {
                reserved-0(1),
                reserved-1(2),
                reserved-2(3),
                reserved-3(4),
                shared(5),
                private-1(6),
                private-2(7),
                private-3(8)
                }
```

```
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pool type. Can set to shared to allow multiple users
                 or to private-x to allow only one descriptor to access
                 the pool."
        ::= { saNliPoolCfgEntry 1 }


saNliPoolCfgBufSize  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Size of the buffers allocated for this pool."
        ::= { saNliPoolCfgEntry 2 }

saNliPoolCfgTotalBufs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total number of buffers allocated for this pool."
        ::= { saNliPoolCfgEntry 3 }

saNliPoolCfgPciSlot  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator PCI slot which owns this pool."
        ::= { saNliPoolCfgEntry 4 }

saNliPoolCfgId  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Pool Id as in the Pool Configuration Table."
        ::= { saNliPoolCfgEntry 5 }

-- Protocol Accelerator Direct Group Table
saNliDirectTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliDirectEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Direct Group Table"
        ::= { saNliDirect 1 }

saNliDirectEntry OBJECT-TYPE
        SYNTAX  SaNliDirectEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Direct Group Table Entry"
        INDEX   { ifIndex }
        ::= { saNliDirectTable 1 }

saNliDirectEntry ::=
        SEQUENCE {
                saNliDirectName
                    DisplayString,
                saNliDirectDescPod
                    INTEGER,
                saNliDirectDescPort
                    INTEGER,
                saNliDirectOperStatus
                    INTEGER,
                saNliDirectGroupId
                    INTEGER
                }

saNliDirectName  OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Direct Group Name"
        ::= { saNliDirectEntry 1 }

saNliDirectDescPod  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "POD number used to index into the Protocol Accelerator
                 Descriptor Configuration Table."
        ::= { saNliDirectEntry 2 }

saNliDirectDescPort  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Port number used to index into the Protocol Accelerator
```

```
                Descriptor Configuration Table."
        ::= { saNliDirectEntry 3 }

saNliDirectOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                new(1),
                enabled(2),
                disabled(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Reports group status."
        ::= { saNliDirectEntry 4 }

saNliDirectGroupId  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Group Identification number from BridgeMaker."
        ::= { saNliDirectEntry 5 }


-- Protocol Accelerator Tunnel Table
saPaTunnelTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaPaTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Tunnel Table"
        ::= { saPaTunnel 1 }

saPaTunnelEntry OBJECT-TYPE
        SYNTAX  SaPaTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator Tunnel Table Entry"
        INDEX   { ifIndex, saPaTunnelVPI, saPaTunnelVCI }
        ::= { saPaTunnelTable 1 }

saPaTunnelEntry ::=
        SEQUENCE {
                saPaTunnelServiceClass
                    INTEGER,
                saPaTunnelPeakCPS
                    INTEGER,
                saPaTunnelAvgCPS
                    INTEGER,
                saPaTunnelInitCPS
                    INTEGER,
                saPaTunnelMinCPS
                    INTEGER,
                saPaTunnelCdvt
                    INTEGER,
                saPaTunnelType
                    INTEGER,
                saPaTunnelUuCpi
                    INTEGER,
                saPaTunnelMaxBurstSize
                    INTEGER,
                saPaTunnelXrm
                    INTEGER,
                saPaTunnelRIF
                    INTEGER,
                saPaTunnelRDF
                    INTEGER,
                saPaTunnelCDF
                    INTEGER,
                saPaTunnelActivateOpt
                    INTEGER,
                saPaTunnelVPI
                    INTEGER,
                saPaTunnelVCI
                    INTEGER,
                saPaTunnelPeakCellRate
                    INTEGER,
                saPaTunnelAvgCellRate
                    INTEGER,
                saPaTunnelInitCellRate
                    INTEGER,
                saPaTunnelMinCellRate
                    INTEGER,
                saPaTunnelChanId
                    INTEGER,
                saPaTunnelBIfIdx
                    INTEGER
                }

saPaTunnelPeakCPS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel peak rate in cells per second for which this tunnel
```

```
                is configured."
        ::= { saPaTunnelEntry 1 }

--              abr(5)
saPaTunnelServiceClass  OBJECT-TYPE
        SYNTAX  INTEGER {
                cbr(1),
                rt-vbr(2),
                nrt-vbr(3),
                ubr(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel service class."
        ::= { saPaTunnelEntry 2 }

saPaTunnelCdvt  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel cell delay variance tolerance for which
                this tunnel is configured."
        ::= { saPaTunnelEntry 3 }

saPaTunnelType  OBJECT-TYPE
        SYNTAX  INTEGER {
                static(1),
                aging(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel attributes."
        ::= { saPaTunnelEntry 4 }

saPaTunnelUuCpi  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel UU and CPI fields."
        ::= { saPaTunnelEntry 5 }

saPaTunnelVPI  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel VPI"
        ::= { saPaTunnelEntry 6 }

saPaTunnelVCI  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel VCI"
        ::= { saPaTunnelEntry 7 }

saPaTunnelPeakCellRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Peak cell rate in effect for the specified
                 service rate in TM 4.0 RATE format."
        ::= { saPaTunnelEntry 8 }

saPaTunnelChanIdOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel Identification number from BridgeMaker"
        ::= { saPaTunnelEntry 9 }

saPaTunnelBIfIdxOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "BridgeMaker interface identification number"
        ::= { saPaTunnelEntry 10 }

saPaTunnelAvgCPS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The average rate in cells per second for which this tunnel
                 is configured. Only applies to VBR tunnels."
        ::= { saPaTunnelEntry 11 }
```

```
saPaTunnelInitCPS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The initial rate in cells per second for which this tunnel
                 is configured. Only applies to ABR tunnels."
        ::= { saPaTunnelEntry 12 }


saPaTunnelMinCPS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The minimum usable rate in cells per second for which this
                 tunnel is configured. Only applies to ABR tunnels."
        ::= { saPaTunnelEntry 13 }

saPaTunnelAvgCellRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Average cell rate in effect for the specified service rate
                 in TM 4.0 RATE format. Only applies to VBR tunnels."
        ::= { saPaTunnelEntry 14 }

saPaTunnelInitCellRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Initial cell rate in effect for the specified service rate
                 in TM 4.0 RATE format. Only applies to ABR tunnels."
        ::= { saPaTunnelEntry 15 }

saPaTunnelMinCellRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Minimum cell rate in effect for the specified service rate
                 in TM 4.0 RATE format. Only applies to ABR tunnels."
        ::= { saPaTunnelEntry 16 }
```

```
saPaTunnelXrm  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Maximum number of cell times between RM cell transmission.
                 Applies only to ABR tunnels."
        ::= { saPaTunnelEntry 17 }

saPaTunnelRIF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Increase Factor determines how much the transmission
                 rate increases upon receipt of an RM cell. Applies only to
                 ABR tunnels."
        ::= { saPaTunnelEntry 18 }

saPaTunnelRDF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Decrease Factor determines how much the transmission
                 rate decreases upon receipt of an RM cell. Applies only to
                 ABR tunnels."
        ::= { saPaTunnelEntry 19 }

saPaTunnelCDF  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Cutoff Decrease Factor determines how much the
                 transmission rate decreases upon not receiving
                 backward RM cells. Applies only to ABR tunnels."
        ::= { saPaTunnelEntry 20 }

saPaTunnelMaxBurstSize  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Maximum burst size. Applies only to VBR tunnels."
        ::= { saPaTunnelEntry 21 }
```

```
saPaTunnelActivateOpt  OBJECT-TYPE
        SYNTAX  INTEGER{
                on-first-xmt(1),
                on-enable(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Determines when the first forward RM cell is sent."
        ::= { saPaTunnelEntry 22 }

-- NLI Advanced Configuration Table
saNliAdvCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliAdvCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Advanced Configuration Table"
        ::= { saNliAdvCfg 1 }

saNliAdvCfgEntry OBJECT-TYPE
        SYNTAX  SaNliAdvCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Advanced Configuration Table Entry"
        INDEX   { saBrdNum, saNliAdvCfgPciSlot, saNliAdvCfgPodNum,
saNliAdvCfgPortNum }
        ::= { saNliAdvCfgTable 1 }

saNliAdvCfgEntry ::=
        SEQUENCE {
                saNliAdvCfgPool
                    INTEGER,
                saNliAdvCfgWeight
                    INTEGER,
                saNliAdvCfgEntryStatus
                    INTEGER
                }

saNliAdvCfgPool  OBJECT-TYPE
        SYNTAX  INTEGER {
                pool-1(1),
                pool-2(2),
                mgmt(3),
                comms(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Group type of which this descriptor can be a member."
        ::= { saNliAdvCfgEntry 1 }

saNliAdvCfgPciSlot  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Protocol Accelerator PCI slot which owns this descriptor."
        ::= { saNliAdvCfgEntry 2 }

saNliAdvCfgPodNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "POD number used with Port number to uniquely identify
                 this descriptor"
        ::= { saNliAdvCfgEntry 3 }

saNliAdvCfgPortNum  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port number used with POD number to uniquely identify
                 this descriptor"
        ::= { saNliAdvCfgEntry 4 }

saNliAdvCfgWeight OBJECT-TYPE
        SYNTAX  INTEGER(1..100)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Within a given pool, the length of the queues for
                 this physical port relative to the other physical
                 ports which draw from this pool is proportional to
                 this number divided by the total of all weights
                 assigned to the ports drawing from this group."
        ::= { saNliAdvCfgEntry 5 }

saNliAdvCfgEntryStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                new(1),
                accepted(2),
                configured(3)
```

```
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Configured means that the entry reflects what is
                 actually in service. Accepted means that the entry
                 has been processed and deemed valid such that it
                 will go into service when the box is rebooted. New
                 means that the entry has not been processed or has
                 been rejected for some reason."
        ::= { saNliAdvCfgEntry 6 }


-- NLI MAC View Table
saNliMACViewTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliMACViewEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI MAC View Table"
        ::= { saNliMACView 1 }

saNliMACViewEntry OBJECT-TYPE
        SYNTAX  SaNliMACViewEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI MAC View Table Entry"
        INDEX   { ifIndex, saNliMACViewMacAddress }
        ::= { saNliMACViewTable 1 }

saNliMACViewEntry ::=
        SEQUENCE {
                saNliMACViewType
                    INTEGER,
                saNliMACViewDestSlot
                    INTEGER,
                saNliMACViewDestPod
                    INTEGER,
                saNliMACViewDestPort
                    INTEGER,
                saNliMACViewDestVPI
                    INTEGER,
                saNliMACViewDestVCI
                    INTEGER
                }

saNliMACViewTypeOBJECT-TYPE
        SYNTAX  INTEGER {
                static(1),
                dynamic(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Type of MAC cache entry."
        ::= { saNliMACViewEntry 1 }

saNliMACViewDestSlotOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination Slot onto which this MAC
                 address gets forwarded."
        ::= { saNliMACViewEntry 2 }

saNliMACViewDestPodOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination POD onto which this MAC
                 address gets forwarded."
        ::= { saNliMACViewEntry 3 }

saNliMACViewDestPort  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination Port onto which this MAC address
                 gets forwarded."
        ::= { saNliMACViewEntry 4 }

saNliMACViewDestVPI  OBJECT-TYPE
        SYNTAX  INTEGER(0..255)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination Tunnel VPI onto which this MAC
                 address gets forwarded."
        ::= { saNliMACViewEntry 5 }
```

```
saNliMACViewDestVCI  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination Tunnel VCI onto which this MAC
                 address gets forwarded."
        ::= { saNliMACViewEntry 6 }

saNliMACViewMacAddressOBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(6))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "MAC Address of this entry."
        ::= { saNliMACViewEntry 7 }

-- NLI Spanning Tree Bridge Group Table
saNliSpanGrpTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliSpanGrpEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Spanning Tree Bridge Group Table"
        ::= { saNliSpanGrp 1 }

saNliSpanGrpEntry OBJECT-TYPE
        SYNTAX  SaNliSpanGrpEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Spanning Tree Bridge Group Table Entry"
        INDEX   { ifIndex }
        ::= { saNliSpanGrpTable 1 }

saNliSpanGrpEntry ::=
        SEQUENCE {
                saNliSpanGrpBridgeMACAddr
                    OCTET STRING,
                saNliSpanGrpBridgePriority
                    OCTET STRING,
                saNliSpanGrpDesRoot
                    OCTET STRING,
                saNliSpanGrpRootPort
                    OCTET STRING,
                saNliSpanGrpRootPathCost
                    INTEGER,
                saNliSpanGrpTopoChangeSeen
                    INTEGER,
                saNliSpanGrpTopoChangeGen
                    INTEGER,
                saNliSpanGrpTopoChangeTime
                    INTEGER,
                saNliSpanGrpBridgeMaxAge
                    INTEGER,
                saNliSpanGrpBridgeHelloTime
                    INTEGER,
                saNliSpanGrpBridgeFwdDelay
                    INTEGER,
                saNliSpanGrpMaxAge
                    INTEGER,
                saNliSpanGrpHelloTime
                    INTEGER,
                saNliSpanGrpFwdDelay
                    INTEGER,
                saNliSpanGrpHoldTime
                    INTEGER
                }

saNliSpanGrpBridgeMACAddrOBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(6))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "MAC Address used as the six least significant bytes of
                 the Bridge Identifier."
        ::= { saNliSpanGrpEntry 1 }

saNliSpanGrpBridgePriorityOBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(2))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bridge priority used as the two most significant bytes
                 of the Bridge Identifier."
        ::= { saNliSpanGrpEntry 2 }

saNliSpanGrpDesRootOBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(8))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Bridge Identifier of the Root on the bridged LAN."
        ::= { saNliSpanGrpEntry 3 }
```

```
saNliSpanGrpRootPortOBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(2))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Port Identifier of the lowest cost path to the Root."
        ::= { saNliSpanGrpEntry 4 }

saNliSpanGrpRootPathCostOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Cost of the path to the Root via the Root Port."
        ::= { saNliSpanGrpEntry 5 }

saNliSpanGrpTopoChangeSeenOBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tells whether or not topology change is being reported."
        ::= { saNliSpanGrpEntry 6 }

saNliSpanGrpTopoChangeGenOBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tells whether or not topology change is being reported
                 downstream by the bridge."
        ::= { saNliSpanGrpEntry 7 }

saNliSpanGrpTopoChangeTimeOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time period for which topology changes are reported
                 following detection from upstream."
        ::= { saNliSpanGrpEntry 8 }

saNliSpanGrpBridgeMaxAgeOBJECT-TYPE
        SYNTAX  INTEGER(6..40)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Time period for which Configuration BPDUs are retained
                 when this bridge is or is attempting to become the Root."
        ::= { saNliSpanGrpEntry 9 }

saNliSpanGrpBridgeHelloTimeOBJECT-TYPE
        SYNTAX  INTEGER(1..10)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Time period between sending batches of Configuration BPDUs
                 when this bridge is or is attempting to become the Root."
        ::= { saNliSpanGrpEntry 10 }

saNliSpanGrpBridgeFwdDelayOBJECT-TYPE
        SYNTAX  INTEGER(4..30)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Duration of the Listening and Learning states as well as
                 the MAC cache aging time during topology changes."
        ::= { saNliSpanGrpEntry 11 }

saNliSpanGrpMaxAgeOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time period for which Configuration BPDUs are retained."
        ::= { saNliSpanGrpEntry 12 }

saNliSpanGrpHelloTimeOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time period between sending batches of Configuration
                 BPDUs."
        ::= { saNliSpanGrpEntry 13 }

saNliSpanGrpFwdDelayOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
```

```
        DESCRIPTION
                "Duration of the Listening and Learning states."
        ::= { saNliSpanGrpEntry 14 }

saNliSpanGrpHoldTimeOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time period between the transmission of
                 individual Configuration BPDUs in a batch."
        ::= { saNliSpanGrpEntry 15 }



-- NLI Spanning Tree Port Table
saNliSpanPrtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNliSpanPrtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Spanning Tree Port Table"
        ::= { saNliSpanPrt 1 }

saNliSpanPrtEntry OBJECT-TYPE
        SYNTAX  SaNliSpanPrtEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "NLI Spanning Tree Port Table Entry"
        INDEX   { ifIndex, saNliSpanPrtIfIndex }
        ::= { saNliSpanPrtTable 1 }

saNliSpanPrtEntry ::=
        SEQUENCE {
                saNliSpanPrtPriority
                    OCTET STRING,
                saNliSpanPrtPathCost
                    INTEGER,
                saNliSpanPrtPortState
                    INTEGER,
                saNliSpanPrtDesRoot
                    OCTET STRING,
                saNliSpanPrtDesCost
                    INTEGER,
                saNliSpanPrtDesBridge
                    OCTET STRING,
                saNliSpanPrtDesPort
                    OCTET STRING,
                saNliSpanPrtTopoChangeAck
                    INTEGER,
                saNliSpanPrtConfigPending
                    INTEGER
                }

saNliSpanPrtIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Spanning Tree Port interface index."
        ::= { saNliSpanPrtEntry 1 }

saNliSpanPrtPriority  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(1))
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Spanning Tree Port priority."
        ::= { saNliSpanPrtEntry 2 }

saNliSpanPrtPathCost  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The contribution of the path through this Port, when the
                 port is the Root Port, to the total cost of the path to
                 the Root for this Bridge."
        ::= { saNliSpanPrtEntry 3 }

saNliSpanPrtPortState  OBJECT-TYPE
        SYNTAX  INTEGER {
                disabled(1),
                listening(2),
                learning(3),
                forwarding(4),
                blocking(5)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The current state of this Port."
        ::= { saNliSpanPrtEntry 4 }
```

```
saNliSpanPrtDesRoot  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(8))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The Bridge Identifier of the Root reported by the
                 Designated Bridge on the LAN to which this Port
                 is attached."
        ::= { saNliSpanPrtEntry 5 }

saNliSpanPrtDesCost  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The cost of the path to the Root offered by this Port."
        ::= { saNliSpanPrtEntry 6 }

saNliSpanPrtDesBridge  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(8))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The Bridge Identifier of the Designated Bridge on the LAN
                 to which this Port is attached."
        ::= { saNliSpanPrtEntry 7 }

saNliSpanPrtDesPort  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(2))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The Port Identifier of the Designated Port of the
Designated
                 Bridge on the LAN to which this Port is attached."
        ::= { saNliSpanPrtEntry 8 }

saNliSpanPrtTopoChangeAck  OBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of the Topology Change Acknowledgement Flag in
                 Configuration BPDUs sent on this port."
        ::= { saNliSpanPrtEntry 9 }

saNliSpanPrtConfigPending  OBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Indicates whether this port is in the midst of
                 transmitting a batch of Configuration BPDUs."
        ::= { saNliSpanPrtEntry 10 }


END

-- ****************************************************
```

Managment Access MIB

```
-- ****************************************************


sa-MGMT-ACCS-MIB DEFINITIONS ::= BEGIN

IMPORTS
        DisplayStringFROM RFC1213-MIB
        IfIndex                 FROM RFC1213-MIB
        OBJECT-TYPE             FROM SNMPv2-SMI
        SaManagementAccess      FROM OASIS-SYSINFO-MIB
        IpAddress               FROM RFC1155-SMI;


-- groups in SA-MGMT-ACCS-MIB
SaManagementAccessPoint   OBJECT IDENTIFIER ::= {saManagementAccess 1}
saManAccessDirectIpni     OBJECT IDENTIFIER ::= {saManagementAccess 2}


--=====================================================================
```

Management Access Point IP Configuration Table

```
--
--=====================================================================

saMapIpConfigTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaMapIpConfigEntry
        MAX-ACCESS      not-accessible
        STATUS      current
```

```
        DESCRIPTION
                "Management Access Point IP Configuration Table"
        ::= { saManagementAccessPoint 1}

SaMapIpConfigEntry OBJECT-TYPE
        SYNTAX   SaMapIpConfigEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                " "
        INDEX { ifIndex }
        ::= { saMapIpConfigTable 1}

SaMapIpConfigEntry    ::= SEQUENCE
        {
        SaMapIPAddressIpAddress,
        saMapNetworkMaskIpAddress,
        SaMapDestIPAddressIpAddress,
        saMapAdminStatusINTEGER,
        saMapOperStatusINTEGER
        }

SaMapIPAddress   OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IP address for this Management Access Point"
        ::= {saMapIpConfigEntry 1}

SaMapNetworkMask   OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Network mask, if saMapInterfaceType is of
                 type broadcast(1); Not used otherwise."
        ::= {saMapIpConfigEntry 2}

SaMapDestIPAddress   OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IP address at the remote end of a point-to-point link,
                 if saMapInterfaceType is of type point-to-point(2);
                 Not used otherwise."
        ::= {saMapIpConfigEntry 3}

SaMapAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Management Access Point administration status"
        ::= {saMapIpConfigEntry 4}

SaMapOperStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Management Access Point operational status"
        ::= {saMapIpConfigEntry 5}


--=================================================================
-- IP Default Route Table
--
--=================================================================

saIpRouteTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaIpRouteEntry
        MAX-ACCESS      not-accessible
        STATUS      current
        DESCRIPTION
                "IP Route Configuration Table"
        ::= { saManagementAccessPoint 2}

SaIpRouteEntry OBJECT-TYPE
        SYNTAX   SaIpRouteEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                " "
        INDEX { saRouteDestAddress }
        ::= { saIpRouteTable 1}
```

```
SaIpRouteEntry    ::= SEQUENCE
        {
        saRouteAdminStatusINTEGER,
        saRouteOperStatusINTEGER,
        SaRouteDestAddressIpAddress,
        saRouteGtwyAddressIpAddress,
        SaRouteType INTEGER,
        saRouteRowStatusINTEGER
        }

saRouteAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                down(1),
                up(2),
                delete-route(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IP Route configuration administrative status"
        ::= {saIpRouteEntry 1}

saRouteOperStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                down(1),
                up(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "IP Route configuration operational status"
        ::= {saIpRouteEntry 2}

SaRouteDestAddress   OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination IP address of the route"
        ::= {saIpRouteEntry 3}

saRouteGtwyAddress   OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Gateway IP address of the route"
        ::= {saIpRouteEntry 4}

saRouteType   OBJECT-TYPE
        SYNTAX  INTEGER {
                direct-route(1),
                indirect-route(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Route type"
        ::= {saIpRouteEntry 5}

saRouteRowStatus   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-create
        STATUS  current
        DESCRIPTION
                "IP Route Configuration Table row creation variable"
        ::= {saIpRouteEntry 6}



--=============================================================================
-- Direct Management Access Point Creation Table
--
--=============================================================================

saMapDirectIpniTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaMapDirectIpniEntry
        MAX-ACCESS      not-accessible
        STATUS      current
        DESCRIPTION
                "Management Access Point Direct IPNI Creation Table"
        ::= { saManAccessDirectIpni 1}

SaMapDirectIpniEntry OBJECT-TYPE
        SYNTAX   SaMapDirectIpniEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Indexed by board number"
        INDEX { INTEGER }
        ::= { saMapDirectIpniTable 1}

SaMapDirectIpniEntry    ::= SEQUENCE
        {
        SaMapDirIpniAdminStatusINTEGER,
        SaMapDirIpniOperStatusINTEGER,
```

```
        saMapDirIpniProtAccIdINTEGER,
        saMapDirIpniType       INTEGER,
        saMapDirIpniIndex      INTEGER
        }

SaMapDirIpniAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                add-direct-ipni(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Add or delete a direct ipni"
        ::= {saMapDirectIpniEntry 1}

SaMapDirIpniOperStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                direct-ipni-added(2),
                operation-failed(3)
        }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Confirms the addition or deletion of a direct ipni"
        ::= {saMapDirectIpniEntry 2}

saMapDirIpniProtAccId   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Specifies the Protocol Accelerator
                 for each operation (read-only for now)"
        ::= {saMapDirectIpniEntry 3}

SaMapDirIpniType   OBJECT-TYPE
        SYNTAX  INTEGER {
                broadcast(1),
                point-to-point(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Interface type"
        ::= {saMapDirectIpniEntry 4}

SaMapDirIpniIndex   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "ifIndex of the newly created IPNI"
        ::= {saMapDirectIpniEntry 5}



--=====================================================================
-- Direct IPNI Configuration Table
--
--=====================================================================

SaMapIpniCfgTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaMapIpniCfgEntry
        MAX-ACCESS      not-accessible
        STATUS      current
        DESCRIPTION
                "Direct IPNI Configuration Table"
        ::= { saManAccessDirectIpni 2}

SaMapIpniCfgEntry OBJECT-TYPE
        SYNTAX   SaMapIpniCfgEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Indexed by board number"
        INDEX { ifIndex }
        ::= { saMapIpniCfgTable 1}

saMapIpniCfgEntry    ::= SEQUENCE
        {
        SaMapIpniCfgAdminStatusINTEGER,
        SaMapIpniCfgOperStatusINTEGER,
        saMapIpniCfgProtAccIdINTEGER,
        saMapIpniCfgIfTypeINTEGER,
        saMapIpniCfgDestVPIINTEGER,
        saMapIpniCfgDestVCIINTEGER
        }

SaMapIpniCfgAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                add-tunnel(2),
                delete-ipni(3)
                }
```

```
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Direct IPNI adminstrative status and tunnel operations"
        ::= {saMapIpniCfgEntry 1}

SaMapIpniCfgOperStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                ipni-new(1),
                no-operation(2),
                tunnel-added(3),
                operation-failed(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Direct IPNI operational status"
        ::= {saMapIpniCfgEntry 2}

saMapIpniCfgProtAccId   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Specifies the Protocol Accelerator
                 for each operation (read-only for now)"
        ::= {saMapIpniCfgEntry 3}

saMapIpniCfgIfType   OBJECT-TYPE
        SYNTAX  INTEGER {
                broadcast(1),
                point-to-point(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface type"
        ::= {saMapIpniCfgEntry 4}

saMapIpniCfgDestVPI   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination VPI"
        ::= {saMapIpniCfgEntry 5}

saMapIpniCfgDestVCI   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Destination VCI"
        ::= {saMapIpniCfgEntry 6}



--=========================================================================
-- Direct IPNI Tunnel Configuration Table
--
--=========================================================================

SaMapIpniTunnelTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF SaMapIpniTunnelEntry
        MAX-ACCESS      not-accessible
        STATUS      current
        DESCRIPTION
                "Direct IPNI Configuration Table"
        ::= { saManAccessDirectIpni 3}

SaMapIpniTunnelEntry OBJECT-TYPE
        SYNTAX   SaMapIpniTunnelEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Indexed by IPNI's ifIndex, VPI, VCI"
        INDEX { ifIndex, saMapIpniTunnelDestVPI, saMapIpniTunnelDestVCI }
        ::= { saMapIpniTunnelTable 1}

saMapIpniTunnelEntry    ::= SEQUENCE
        {
        saMapIpniTunnelDestVPIINTEGER,
        SaMapIpniTunnelDestVCIINTEGER,
        saMapTunnelProtAccIdINTEGER,
        saMapIpniTunnelSvcRateINTEGER,
        saMapIpniTunnelNameDisplayString,
        saMapIpniTunnelAdminStatusINTEGER,
        saMapIpniTunnelOperStatusINTEGER
        }

saMapIpniTunnelDestVPI  OBJECT-TYPE
        SYNTAX  INTEGER(0..255)
        MAX-ACCESS  read-only
        STATUS  current
```

```
        DESCRIPTION
                "Destination VPI"
        ::= { saMapIpniTunnelEntry 1 }

SaMapIpniTunnelDestVCI  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Destination VCI"
        ::= { saMapIpniTunnelEntry 2 }

saMapTunnelProtAccId   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Specifies the Protocol Accelerator for
                 each operation (read-only for now)"
        ::= {saMapIpniTunnelEntry 3}

saMapIpniTunnelSvcRate  OBJECT-TYPE
        SYNTAX  INTEGER {
                svcRate-64K(1),
                svcRate-128K(2),
                svcRate-256K(3),
                svcRate-512K(4),
                svcRate-1544K(5),
                svcRate-2048K(6)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IPNI Tunnel Service Rate"
        ::= { saMapIpniTunnelEntry 4}

saMapIpniTunnelName  OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IPNI Tunnel Name"
        ::= { saMapIpniTunnelEntry 5 }

saMapIpniTunnelAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3),
                delete-tunnel(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "IPNI Tunnel administration status"
        ::= {saMapIpniTunnelEntry 6}



SaMapIpniTunnelOperStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                testing(3),
                new(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "IPNI Tunnel operational status"
        ::= {saMapIpniTunnelEntry 7}


END




-- ******************************************************
```

System Hardware MIB

```
-- ******************************************************

-- oasis System Hardware MIB

OASIS-SYSHW-MIB DEFINITIONS ::= BEGIN

IMPORTS
        OBJECT-TYPE FROM SNMPv2-SMI
        SaSysHw     FROM OASIS-SYSINFO-MIB;

saPsu        OBJECT IDENTIFIER ::= { saSysHw 1 }
saFans       OBJECT IDENTIFIER ::= { saSysHw 2 }
saSums       OBJECT IDENTIFIER ::= { saSysHw 3 }
```

```
-- PSU Stats Table

saPsuTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaPsuEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Power Supply Stats"
        ::= { saPsu 1 }

saPsuEntry OBJECT-TYPE
        SYNTAX  SaPsuEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for PSU."
        INDEX   { saPsuNum }
        ::= { saPsuTable 1 }

saPsuEntry ::=
        SEQUENCE {
                saPsuNum
                    INTEGER,
                saPsuInSlot
                    INTEGER,
                saPsuType
                    INTEGER,
                saPsuOutVoltStatus
                    INTEGER,
                saPsuAlarmEnable
                    INTEGER,
                saPsuOutSlotSeverity
                    INTEGER,
                saPsuOutVoltFaultSeverity
                    INTEGER
                }

saPsuNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PSU number"
        ::= { saPsuEntry 1 }

saPsuInSlot OBJECT-TYPE
        SYNTAX  INTEGER {
                inSlot(1),    -- PSU in slot
                outSlot(2)    -- PSU out of slot
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PSU In/Out slot"
        ::= { saPsuEntry 2 }

saPsuType OBJECT-TYPE
        SYNTAX  INTEGER {
                ac(1),    -- AC PSU
                dc(2)     -- DC PSU
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PSU Type (AC or DC)"
        ::= { saPsuEntry 3 }

saPsuOutVoltStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),      -- PSU DC output voltage ok
                fault(2)    -- PSU DC output voltage fault
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PSU DC output status"
        ::= { saPsuEntry 5 }

saPsuAlarmEnable OBJECT-TYPE
        SYNTAX  INTEGER {
                enable(1),    -- PSU alarm reporting enabled
                disable(2)    -- PSU alarm reporting disabled
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "PSU alarm reporting enable/disable"
        ::= { saPsuEntry 6 }

saPsuOutSlotSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
```

```
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "PSU Out Of Slot Alarm Severity"
        ::= { saPsuEntry 7 }

saPsuOutVoltFaultSeverity OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Severity level of PSU Output Voltage Fault"
        ::= { saPsuEntry 9 }

-- Fan Status Table

saFanTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaFanEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Fan Stats"
        ::= { saFans 1 }

saFanEntry OBJECT-TYPE
        SYNTAX  SaFanEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for PSU."
        INDEX   { saFanNum }
        ::= { saFanTable 1 }

saFanEntry ::=
        SEQUENCE {
                saFanNum
                    INTEGER,
                saFanStatus
                    INTEGER
                }

saFanNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Fan number"
        ::= { saFanEntry 1 }

saFanStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                fault(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "current state of the fans"
        ::= { saFanEntry 2 }

-- System Utility Module (SUM) Table

saSumTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSumEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Power Supply Stats"
        ::= { saSums 1 }

saSumEntry OBJECT-TYPE
        SYNTAX  SaSumEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for SUM"
        INDEX   { saSumNum }
        ::= { saSumTable 1 }


saSumEntry ::=
        SEQUENCE {
                saSumNum
                    INTEGER,
                saSumInSlot
                    INTEGER,
                saSumType
                    INTEGER,
                saSumActive
```

```
                INTEGER
            }

saSumNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SUM number"
        ::= { saSumEntry 1 }

saSumInSlot OBJECT-TYPE
        SYNTAX  INTEGER {
                inSlot(1),     -- SUM in slot
                outSlot(2)     -- SUM out of slot
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SUM In/Out slot"
        ::= { saSumEntry 2 }

saSumType OBJECT-TYPE
        SYNTAX  INTEGER {
                sum100(1)      -- SUM100
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SUM Type"
        ::= { saSumEntry 3 }

saSumActive OBJECT-TYPE
        SYNTAX  INTEGER {
                active(1),     -- SUM active
                standby(2)     -- SUM in standby
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "SUM active/standby status"
        ::= { saSumEntry 4 }


END
```

```
-- ******************************************************
```

Trap MIB

```
-- ******************************************************


TRAP-MIB DEFINITIONS ::= BEGIN



--*******************************
SAHARA sa-100 TRAP mib
--*******************************


IMPORTS
        saharanet  FROM OASIS-SYSINFO-MIB
        TRAP-TYPE  FROM RFC-1215;

--  Events start at index 1



--*******************************
```

SYSTEM Events

```
-- Subtypes for SYSTEM
--*******************************

        sysStartup TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - system startup"
        ::= 65537

sysShutdown TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - System shutdown"
        ::= 65538

sysMemMonitor TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Code corruption"
        ::= 65539
```

```
sysNvStartRestore TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - non-volatile configuration restore started"
        ::= 65540

sysNvEndRestore TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event  - non-volatile configuration restore
completed"
        ::= 65541

sysNvStartBuild TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - non-volatile configuration save started"
        ::= 65542

sysNvEndBuild TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - non-volatile configuration save complete"
        ::= 65543

sysFlashInitFail TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Flash file init fail"
        ::= 65544

sysInitVolFail TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Flash file volume init fail"
        ::= 65545

sysMountVolFail TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Flash file system mount fail"
        ::= 65546

sysVolVerifyFail TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Flash file system volume verify fail"
        ::= 65547

sysChangeDirFail TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Flash file system change dir fail"
        ::= 65548

sysNvRestoreError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - non-volatile configuration restore failure"
        ::= 65549

sysNvBuildError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - non-volatile configuration save failure"
        ::= 65550

sysPsuInSlot TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saPsuNum}
        DESCRIPTION
                "System event - PSU In Slot"
        ::= 65551

sysPsuOutSlot TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saPsuNum}
        DESCRIPTION
                "System event - PSU Out Of Slot"
        ::= 65552

sysPsuOutVoltOk TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saPsuNum}
        DESCRIPTION
                "System event - PSU Output Voltage OK"
        ::= 65555

sysPsuOutVoltFault TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saPsuNum}
        DESCRIPTION
                "System event - PSU Output Voltage Fault"
        ::= 65556
```

```
sysBrdRevError TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - ICM Hardware Revision Error"
        ::= 65557

sysCpodRevError TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - CPOD Hardware Revision Error"
        ::= 65558

sysPodRevError TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "System event - XPOD/IPOD Hardware Revision Error"
        ::= 65559

sysBISTError TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saBistDiagType}
        DESCRIPTION
                "System event - Power on self test has failed"
        ::= 65560

sysEnetBISTError TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "System event - Ethernet BIST has failed"
        ::= 65561

sysPodIntsNotSupported TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - ICM does not support POD interrupts"
        ::= 65562

sysIcmChange TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - ICM Change"
        ::= 65563

sysPodChange TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "System event - POD Change"
        ::= 65564

sysCpodChange TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - CPOD Change"
        ::= 65565

sysIcmOutOfSlot TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - ICM Out Of Slot"
        ::= 65566

sysIcmInSlot TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - ICM In Slot"
        ::= 65567

sysUnexpectedCommsPoolSize TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - The buffers in the interboard
                 comms pool are an unexpected size"
        ::= 65568

sysIcmStartup TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "System event - An ICM has started up"
        ::= 65569

sysProtaccCfgErr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
```

```
                "System event - The Protocol Accelerator is
                 not configured properly"
        ::= 65570

sysWanIpRestoreErr TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "System event - Predefined Management Tunnel
                 configuration error"
        ::= 65571



--*******************************
```

CONTROL_CHANGE Events

```
-- Subtypes for CONTROL_CHANGE
--*******************************

ctlGoingActive TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Control Change event - System slot active"
        ::= 131073

ctlGoingStandby TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Control Change event - System slot standby"
        ::=  131074

ctlSemLinkUp TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES { ifIndex, saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "Control Change event - Link up"
        ::= 131075

ctlSemLinkDown TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES { ifIndex, saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "Control Change event - Link down"
        ::=  131076
```

```
--*******************************
```

FLASH_DRIVER Events

```
-- Subtypes for FLASH_DRIVER */
--*******************************

flshNormalOpError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Flash Driver event - Flash disk op error"
        ::= 196609

flshDiskVerifyError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Flash Driver event - Flash disk verify error"
        ::=  196610

--*******************************
```

BUS_ERROR Events

```
-- Subtypes for BUS_ERROR
--*******************************

busLocalBusAddrError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Bus Error event - Bus address error"
        ::= 262145

busPCIBusMasterAbort TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Bus Error event - PCI Master Abort"
        ::=  262146

busPCIBusTargetAbort TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Bus Error event - PCI Target Abort"
        ::= 262147

busPCIBusParityError TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Bus Error event - PCI Parity Error"
        ::=  262148
```

```
--*******************************
```

OAM_EVENT Events

```
--   BIDIRECTIONAL ALARM EVENTS
--*******************************

oamCountersClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Counters have been cleared for interface"
        ::= 327681

--*******************************
```

ATM LAYER Events

```
--*******************************

oamPlcpLofClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saAtmPlcpLOFSeverity
                }
        DESCRIPTION
                "OAM event - PLCP Loss of Frame Alarm Clear"
        ::= 327682

oamPlcpLofSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saAtmPlcpLOFSeverity
                }
        DESCRIPTION
                "OAM event - PLCP Loss of Frame Alarm Active"
        ::= 327683

oamPlcpYelClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saAtmPlcpYelSeverity
                }
        DESCRIPTION
                "OAM event - PLCP Yellow Alarm Clear"
        ::= 327684

oamPlcpYelSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saAtmPlcpYelSeverity
                }
        DESCRIPTION
                "OAM event - PLCP Yellow Alarm Active"
        ::= 327685

oamLcdClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saAtmTcLOCDSeverity
                }
        DESCRIPTION
                "OAM event - Loss of Cell Delineation Alarm Clear"
        ::= 327686

oamLcdSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
```

```
                saPortNum,
                ifIndex,
                saAtmTcLOCDSeverity
                }
        DESCRIPTION
                "OAM event - Loss of Cell Delineation Alarm Active"
        ::= 327687

--*******************************
```

DS1E1_EVENTS

```
--*******************************

oamDs1E1LosClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1LOSSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Loss of Signal Alarm Clear"
        ::= 327688

oamDs1E1LosSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1LOSSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Loss of Signal Alarm Active"
        ::= 327689

oamDs1E1AisClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1AISSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Alarm Indication Signal Alarm Clear"
        ::= 327690

oamDs1E1AisSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1AISSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Alarm Indication Signal Alarm Active"
        ::= 327691

oamDs1E1LofClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1LOFSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Loss of Frame Alarm Clear"
        ::= 327692

oamDs1E1LofSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1LOFSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Loss of Frame Alarm Active"
        ::= 327693
```

```
oamE1Ts16AisClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1TS16AISSeverity
                }
        DESCRIPTION
                "OAM event - E1 Timeslot 16 Alarm Indication
                 Signal Alarm Clear"
        ::= 327694

oamE1Ts16AisSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1TS16AISSeverity
                }
        DESCRIPTION
                "OAM event - E1 Timeslot 16 Alarm Indication
                 Signal Alarm Active"
        ::= 327695

oamDs1E1YelClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1YelSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Yellow Alarm Active"
        ::= 327696

oamDs1E1YelSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1YelSeverity
                }
        DESCRIPTION
                "OAM event - DS1/E1 Yellow Alarm Active"
        ::= 327697

oamE1LOMFClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1TS16LOMFSeverity
                }
        DESCRIPTION
                "OAM event - E1 Loss of Multiframe Alignment Alarm Clear"
        ::= 327698

oamE1LOMFSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1TS16LOMFSeverity
                }
        DESCRIPTION
                "OAM event - E1 Loss of Multiframe Alignment Alarm Active"
        ::= 327699

oamE1LOCRCMFClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
```

```
                saPortNum,
                ifIndex,
                saDsx1CRCLOMFSeverity
                }
        DESCRIPTION
                "OAM event - E1 Loss of CRC Multiframe Alignment
                 Alarm Clear"
        ::= 327700

oamE1LOCRCMFSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES
                {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx1CRCLOMFSeverity
                }
        DESCRIPTION
                "OAM event - E1 Loss of CRC Multiframe Alignment
                 Alarm Active"
        ::= 327701


--*******************************
```

DS3_EVENTS

```
--*******************************

oamDs3E3LosClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3LOSSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Loss of Signal Alarm Clear"
        ::= 327702

oamDs3E3LosSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3LOSSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Loss of Signal Alarm Active"
        ::= 327703

oamDs3E3AisClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3AISSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Alarm Indication Signal Alarm Clear"
        ::= 327704

oamDs3E3AisSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3AISSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Alarm Indication Signal Alarm Active"
        ::= 327705

oamDs3E3LofClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3LOFSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Loss of Frame Alarm Clear"
        ::= 327706
```

```
oamDs3E3LofSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3LOFSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Loss of Frame Alarm Active"
        ::= 327707

oamDs3E3YelClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3YelSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Yellow Alarm Clear"
        ::= 327708

oamDs3E3YelSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saDsx3YelSeverity
                }
        DESCRIPTION
                "OAM event - DS3/E3 Yellow Alarm Active"
        ::= 327709

--*******************************
```

ETHERNET Events

```
--*******************************

oamEnetLnkFailClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saEnetLinkFailSeverity
                }
        DESCRIPTION
                "OAM event - Ethernet Link Fail Alarm Clear"
        ::= 327710

oamEnetLnkFailSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saEnetLinkFailSeverity
                }
        DESCRIPTION
                "OAM event - Ethernet Link Fail Alarm Active"
        ::= 327711


--*******************************
```

OC3_EVENTS

```
--*******************************

   oamOc3SectLosClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLOSSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Loss of Signal Alarm Clear"
        ::= 327712

oamOc3SectLosSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
```

```
                saSonetLineExtLOSSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Loss of Signal Alarm Active"
        ::= 327713

oamOc3SectLofClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLOFSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Loss of Frame Alarm Clear"
        ::= 327714

oamOc3SectLofSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLOFSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Loss of Frame Alarm Active"
        ::= 327715

oamOc3LineAisClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLAISSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Line Alarm Indication Signal
                 (LAIS) Alarm Clear"
        ::= 327716

oamOc3LineAisSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLAISSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Line Alarm Indication
                 Signal (LAIS) Alarm Active"
        ::= 327717

oamOc3LineRdiClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLRDISeverity
                }
        DESCRIPTION
                "OAM event - OC3 Line Remote Defect Indication
                 (LRDI) Alarm Clear"
        ::= 327718

oamOc3LineRdiSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetLineExtLRDISeverity
                }
        DESCRIPTION
                "OAM event - OC3 Line Remote Defect Indication
                 (LRDI) Alarm Active"
        ::= 327719

oamOc3PathAisClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
```

```
                ifIndex,
                saSonetPathExtPAISSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Alarm Indication Signal
                 (PAIS) Alarm Clear"
        ::= 327720

oamOc3PathAisSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPAISSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Alarm Indication Signal
                 (PAIS) Alarm Active"
        ::= 327721

oamOc3PathLopClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtLOPSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Loss of Pointer (LOP) Alarm Clear"
        ::= 327722

oamOc3PathLopSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtLOPSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Loss of Pointer (LOP) Alarm Active"
        ::= 327723

oamOc3PathUneqClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPUneqSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Unequipped Alarm Clear"
        ::= 327724

oamOc3PathUneqSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPUneqSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Unequipped Alarm Active"
        ::= 327725

oamOc3PathPlmClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPSLMSeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Label Mismatch Alarm Clear"
        ::= 327726

oamOc3PathPlmSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPSLMSeverity
                }
```

```
        DESCRIPTION
                "OAM event - OC3 Path Label Mismatch Alarm Active"
        ::= 327727

oamOc3PathRdiClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPRDISeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Remote Defect Indication
                 (PRDI) Alarm Clear"
        ::= 327728

oamOc3PathRdiSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {
                saBrdNum,
                saPodNum,
                saPortNum,
                ifIndex,
                saSonetPathExtPRDISeverity
                }
        DESCRIPTION
                "OAM event - OC3 Path Remote Defect Indication
                 (PRDI) Alarm Active"
        ::= 327729

--*******************************
```

Universal Serial Frame Events

```
--*******************************
        oamUsfLosClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Loss of
                 Signal Alarm Clear"
        ::= 327730

oamUsfLosSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Loss
                 of Signal Alarm Set"
        ::= 327731

oamUsfLocClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Loss
                 of Clock Alarm Clear"
        ::= 327732

oamUsfLocSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Loss
                 of Clock Alarm Set"
        ::= 327733

oamUsfExFrErrClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Excessive
                 Frame Error Alarm Clear"
        ::= 327734

oamUsfExFrErrSet TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "OAM event - Universal Serial Frame Excessive
                 Frame Error Alarm Set"
        ::= 327735

--*******************************
```

POD_EVENT Events

```
-- Simple 1 way events
--*******************************

podReconfig TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Reconfiguration has occurred"
        ::=  393217
```

```
--******************************
-- Bidirectional events
--******************************

podAlarmRepEna TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Alarm Reporting Enabled on Interface"
        ::=  393218

podAlarmRepDis TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Alarm Reporting Disabled on Interface"
        ::=  393219

podLoopBackOff TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Loopback Deactivated on Interface"
        ::=  393220

podLoopBackOn TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Loopback Activated on Interface"
        ::=  393221

podDiagnosticOff TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Diagnostic Deactivated on Interface"
        ::=  393222

podDiagnosticOn TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - Diagnostic Activated on Interface"
        ::=  393223

podNot150Compat  TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "POD event - POD not compatible with CPOD150"
        ::=  393224

podDs3FeacNotSupported  TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "POD event - DS3 POD does not support FEAC"
        ::=  393225

ds3FeacLoopDeact TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - DS3 FEAC Loopback Deactivated"
        ::= 393226

ds3FeacLoopAct TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum, ifIndex}
        DESCRIPTION
                "POD event - DS3 FEAC Loopback Activated"
        ::= 393227

podCESBistNotSupported TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "POD event - CES POD does not support Interrupts"
        ::= 393228

podEnetExcBcst TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "POD event - Excessive bcsts, multicast rcv disabled"
        ::= 393229

podEnetExcHUQ TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "POD event - Excessive unknown dest, port rcv disabled"
        ::= 393230
```

```
podEnetRcvClr TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum, saPortNum}
        DESCRIPTION
                "POD event - Ethernet port congestion condition cleared"
        ::= 393231

podVoco TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Voco POD event - Error occurred."
        ::= 393232

podVocoExtra TRAP-TYPE
        ENTERPRISE saharanet
        DESCRIPTION
                "Voco POD event - Extra info."
        ::= 393233


--*******************************
```

BOOT_EVENT Events

```
-- Simple 1 way events
--*******************************

bootPodFileNotFound TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "Boot event - Unable to load pod file"
        ::=  458753

bootOasosFileNotFound TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - Unable to load oasos.bin file"
        ::=  458754

bootScmappFileNotFound TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - Unable to load scmapp.bin file"
        ::=  458755

bootInvalidPodType TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum, saPodNum}
        DESCRIPTION
                "Boot event - Pod file verify fail"
        ::=  458756

bootIcmOOS TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - ICM Out Of Service"
        ::=  458757

bootIcmNotMultiSlotCompatible TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - ICM not Multi-Slot Compatible"
        ::=  458758

bootCpodNotMultiSlotCompatible TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - CPOD not Multi-Slot Compatible"
        ::=  458759

bootIcmSarPostFail TRAP-TYPE
        ENTERPRISE saharanet
        VARIABLES {saBrdNum}
        DESCRIPTION
                "Boot event - ICM SAR POST Failed"
        ::=  458760


END
```

```
-- ******************************************************
```

RVX MIB

```
-- ******************************************************

RVX-FRAME-MIB DEFINITIONS ::= BEGIN

IMPORTS
       ifIndex                FROM RFC1213-MIB
       DisplayString          FROM RFC1213-MIB
       OBJECT-TYPE            FROM SNMPv2-SMI
       saBrdNum, saPodNum     FROM OASIS-SYSINFO-MIB
       SaRvxProv              FROM OASIS-SYSINFO-MIB
       `Counter               FROM RFC1155-SMI;

--*****************************************************************
--
--      Define where these tables reside in the hierarcy
--
--*****************************************************************
SaRvxPodTbl    OBJECT IDENTIFIER ::= { saRvxProv 1}
SaRvxSyncPortTblOBJECT IDENTIFIER ::= { saRvxProv 2}
SaFrmFwdCfgStatTblOBJECT IDENTIFIER ::= { saRvxProv 3}
saRvxTunnelTbl  OBJECT IDENTIFIER ::= { saRvxProv 4}

--*****************************************************************
-- saRvxPodTable
--
-- This table provides Serial Frame POD specific information not in
-- the SaPodTable
--*****************************************************************

saRvxPodTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaRvxPodTableEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "This table provides Serial Frame POD specific
               information not in the saPodTable."
       ::= { saRvxPodTbl 1}

saRvxPodTableEntry OBJECT-TYPE
       SYNTAX  SaRvxPodTableEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "Serial Frame POD specific entries not in saPodTable"
       INDEX   { saBrdNum, saPodNum }
       ::= { saRvxPodTable 1}

saRvxPodTableEntry ::=
       SEQUENCE {
              saRvxPostResult
                  INTEGER,
              saRvxRPCodeRev
                  DisplayString
              }

saRvxPostResult OBJECT-TYPE
       SYNTAX  INTEGER  {
              pass(1),
              fail(2),
              ramerror(3),
              sca3error(4)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Power on self test results enumerations"
       ::= { saRvxPodTableEntry 1 }

saRvxRPCodeRev OBJECT-TYPE
       SYNTAX DisplayString(SIZE(0..40))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              " Revision level of the embedded i960RP firmware"
       ::= { saRvxPodTableEntry 2 }

--*****************************************************************
```

saRvxSyncPortTable

```
--
-- This table contains the installed cable option, configured services
-- and the standard 1659 Sync Port Table Entries
--*****************************************************************
saRvxSyncPortTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaRvxSyncPortTableEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "This table contains the installed cable option,
               configured services and the standard 1659 Sync
               Port Table Entries"
       ::= { saRvxSyncPortTbl 2}
```

```
saRvxSyncPortTableEntry OBJECT-TYPE
        SYNTAX  SaRvxSyncPortTableEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Table entries to the Serial Frame POD sync port table"
        INDEX   { ifIndex}
        ::= { saRvxSyncPortTable 1}

saRvxSyncPortTableEntry ::=
        SEQUENCE {
                saRvxPortRole
                    INTEGER,
                saRvxServiceType
                    INTEGER,
                saRvxPortType
                    INTEGER,
                saRvxPortSpeed
                    INTEGER,
                saRvxRxTimingPhase
                    INTEGER,
                saRvxLosDetection
                    INTEGER,
                saRvxPortLoopBack
                    INTEGER,
                saRvxPortAlarmStatus
                    INTEGER,
                saRvxPortAlarmLOSSeverity
                    INTEGER,
                saRvxPortDefectStatus
                    INTEGER
                }

saRvxPortRole OBJECT-TYPE
        SYNTAX  INTEGER {
                dte(1),
                dce(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The role the device is playing that is using this port.
                 dte means the device is performing the role of
                 data terminal equipment.
                 dce means the device is performing the role of
                 data circuit-terminating equipment."
        ::= { saRvxSyncPortTableEntry 1 }

--              serviceIW(3),
--              networkIW(4),
--              svc(5)
saRvxServiceType OBJECT-TYPE
        SYNTAX  INTEGER {
                sdlcEncapsulation(1),
                hdlcEncapsulation(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The type of service available on the serial
                 frame interface port"
        ::= { saRvxSyncPortTableEntry 2 }

saRvxPortType OBJECT-TYPE
        SYNTAX  INTEGER {
                rs232(1),
                rs449(2),
                rs530(3),
                v35(4),
                x21(5),
                none(6),
                unknown(7)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The serial frame port hardware type"
        ::= { saRvxSyncPortTableEntry 3 }

--              portBPS-8192k(16)
saRvxPortSpeed OBJECT-TYPE
        SYNTAX  INTEGER {
                portBPS-2400(1),
                portBPS-4800(2),
                portBPS-9600(3),
                portBPS-19200(4),
                portBPS-38400(5),
                portBPS-64k(6),
                portBPS-128k(7),
                portBPS-256k(8),
                portBPS-384k(9),
                portBPS-512k(10),
                portBPS-768k(11),
                portBPS-1024k(12),
                portBPS-1536k(13),
```

```
                portBPS-2048k(14),
                portBPS-4096k(15)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The port input and output speed in bits per second"
        ::= { saRvxSyncPortTableEntry 4 }

saRvxRxTimingPhase OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                invert(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This indicates whether to invert or not invert
                 the phase of receive clocks. This option will most
                 often be used to correct cable length delays when
                 internal timing is used. It is used to ensure correct
                 clock and data phase"
        ::= { saRvxSyncPortTableEntry 5 }

saRvxLosDetection OBJECT-TYPE
        SYNTAX  INTEGER {
                dtr(1),
                rts(2),
                dtrORrts(3),
                dtrANDrts(4),
                dsr(5),
                cts(6),
                dsrORcts(7),
                dsrANDcts(8),
                none(9)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Configures the loss of signal detection
                 for the serial frame card. When configured,
                 a LOS alarm is generated when the signal is
                 not present on the serial interface."
        ::= { saRvxSyncPortTableEntry 6 }

saRvxPortLoopBack OBJECT-TYPE
        SYNTAX  INTEGER {
                local(1),
                line(2),
                none(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Configures the type of loopback set for the serial port"
        ::= { saRvxSyncPortTableEntry 7 }

saRvxPortAlarmStatus  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Serial Frame Port Alarms:
                 Bit    Value      Meaning
                 0       1        No Alarm
                 1       2        LOS"
        ::= { saRvxSyncPortTableEntry 8 }

saRvxPortAlarmLOSSeverity  OBJECT-TYPE
        SYNTAX  INTEGER {
                minor(1),
                major(2),
                critical(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Serial Frame Port Alarm Severity Level"
        ::= { saRvxSyncPortTableEntry 9 }

saRvxPortDefectStatus  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Serial Frame Port Defects:
                 Bit    Value      Meaning
                 0       1        No Alarm
                 1       2        LOS"
        ::= { saRvxSyncPortTableEntry 10 }
```

```
--*********************************************************************
```

saFrmFwdCfgStatTable

```
--
-- This table contains the configurables and status items for the
-- Frame Forward and Frame-ATM IWF
--*********************************************************************

saFrmFwdCfgStatTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaFrmFwdCfgStatEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "This table contains the configurables and status
                 items for the Frame Forward and Frame-ATM IWF"
        ::= { saFrmFwdCfgStatTbl 3}

saFrmFwdCfgStatEntry OBJECT-TYPE
        SYNTAX SaFrmFwdCfgStatEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Entries for the frame foward config and status table"
        INDEX { ifIndex }
        ::= { saFrmFwdCfgStatTable 1}

SaFrmFwdCfgStatEntry ::=
        SEQUENCE {
                saFrmFwdLatencyMode
                    INTEGER,
                saFrmFwdAtmTxLatency
                    INTEGER,
                saFrmFwdAtmRxLatency
                    INTEGER,
                saFrmFwdCrcLength
                    INTEGER,
                saFrmFwdMaxSize
                    INTEGER,
                saFrmFwdHeaderLength
                    INTEGER,
                saFrmFwdErrsPerMin
                    INTEGER,
                saFrmFwdTxFrames
                    Counter,
                saFrmFwdRxFrames
                    Counter,
                saFrmFwdTxBytes
                    Counter,
                saFrmFwdRxBytes
                    Counter,
                saFrmFwdProvCmd
                    INTEGER
                }

saFrmFwdLatencyMode OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                controlled(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Defines whether the system is configured to control
                 the transmission delay of a PDU into the ATM network"
        ::= { saFrmFwdCfgStatEntry 1}

saFrmFwdAtmTxLatencyOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum time between reception of the first byte
                 of a PDU from the local port to the transmission of
                 the first byte of the PDU to the ATM network"
        ::= { saFrmFwdCfgStatEntry 2}

saFrmFwdAtmRxLatency OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum time between reception of the first byte
                 of a PDU from the ATM network to the transmission of
                 the first byte of the PDU to the local port"
        ::= { saFrmFwdCfgStatEntry 3}

saFrmFwdCrcLength OBJECT-TYPE
        SYNTAX  INTEGER {
                crc16(1),
                crc32(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Defines the size of the CRC to 16 or 32"
        ::= { saFrmFwdCfgStatEntry 4}
```

```
saFrmFwdMaxSize OBJECT-TYPE
        SYNTAX  INTEGER {
                buf2k(1),
                buf4k(2),
                buf8k(3)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum frame size allowed on the serial frame
                 interface. This parameter is used to size buffers
                 within the system"
        ::= { saFrmFwdCfgStatEntry 5}

saFrmFwdHeaderLength OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This configures the length of the frame header"
        ::= { saFrmFwdCfgStatEntry 6}

saFrmFwdErrsPerMin OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Sets the threshold at which an alarm
                 is generated for frame errors per minute"
        ::= { saFrmFwdCfgStatEntry 7}

saFrmFwdTxFrames OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Counter which contains the total number of
                 valid frames transmitted out of the serial port"
        ::= { saFrmFwdCfgStatEntry 8}

saFrmFwdRxFrames OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Counter which contains the total number
                 of valid frames received from the serial port"
        ::= { saFrmFwdCfgStatEntry 9}

saFrmFwdTxBytes OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Counter which contains the total number
                 of bytes transmitted to the serial port"
        ::= { saFrmFwdCfgStatEntry 10}

saFrmFwdRxBytes OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Counter which contains the total number
                 of bytes received from the serial port"
        ::= { saFrmFwdCfgStatEntry 11}

saFrmFwdProvCmd OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                addIWF(2),
                modIWF(3),
                delIWF(4),
                conIWF(5),
                disIWF(6)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Command to configure the Serial
                 Frame Interworking Function"
        ::= { saFrmFwdCfgStatEntry 12}
```

```
--*********************************************************************
```

RVX Tunnel Table

```
-- This table contains the rvxTunnel row image of the paTunnel table
--*********************************************************************

saRvxTunnelTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaRvxTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Rvx Tunnel Table"
        ::= { saRvxTunnelTbl 4 }

saRvxTunnelEntry OBJECT-TYPE
        SYNTAX  SaRvxTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Rvx Tunnel Table Entry"
        INDEX   { ifIndex, saRvxTunnelVPI, saRvxTunnelVCI }
        ::= { saRvxTunnelTable 1 }

saRvxTunnelEntry ::=
        SEQUENCE {
                saRvxTunnelSvcRate
                    INTEGER,
                saRvxTunnelSvcCat
                    INTEGER,
                saRvxTunnelSvcCdvt
                    INTEGER,
                saRvxTunnelType
                    INTEGER,
                saRvxTunnelPID
                    INTEGER,
                saRvxTunnelVbrAvgRate
                    INTEGER,
                saRvxTunnelVbrMaxBurst
                    INTEGER,
                saRvxTunnelAbrInitRate
                    INTEGER,
                saRvxTunnelAbrMinRate
                    INTEGER,
                saRvxTunnelAbrXrm
                    INTEGER,
                saRvxTunnelAbrRIF
                    INTEGER,
                saRvxTunnelAbrRDF
                    INTEGER,
                saRvxTunnelAbrCDF
                    INTEGER,
                saRvxTunnelAbrActivateOpt
                    INTEGER,
                saRvxTunnelVPI
                    INTEGER,
                saRvxTunnelVCI
                    INTEGER,
                saRvxTunnelAdminStatus
                    INTEGER,
                saRvxTunnelOperStatus
                    INTEGER,
                saRvxServiceRate
                    INTEGER,
                saRvxUserRate
                    INTEGER
                }

saRvxTunnelSvcRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Service Rate"
        ::= { saRvxTunnelEntry 1}

saRvxTunnelSvcCat  OBJECT-TYPE
        SYNTAX  INTEGER {
                cbr(1),
                rt-vbr(2),
                nrt-vbr(3),
                ubr(4),
                abr(5)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Service Category"
        ::= { saRvxTunnelEntry 2 }

saRvxTunnelSvcCdvt  OBJECT-TYPE
        SYNTAX  INTEGER(0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel Cell Delay Variance Tolerance (in cell times)"
        ::= { saRvxTunnelEntry 3 }
```

```
saRvxTunnelType  OBJECT-TYPE
       SYNTAX  INTEGER {
              static(1),
              aging(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Tunnel attributes. Cannot be reconfigured."
       ::= { saRvxTunnelEntry 4 }

saRvxTunnelPID  OBJECT-TYPE
       SYNTAX  INTEGER {
              pid-1(1),
              pid-7(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "PID1 means the ethernet CRC is preserved across the
               network. PID7 means the CRC is regenerated locally.
               Cannot be reconfigured."
       ::= { saRvxTunnelEntry 5 }

saRvxTunnelVPI  OBJECT-TYPE
       SYNTAX  INTEGER(0..255)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Tunnel VPI"
       ::= { saRvxTunnelEntry 6 }

saRvxTunnelVCI  OBJECT-TYPE
       SYNTAX  INTEGER(0..65535)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Tunnel VCI"
       ::= { saRvxTunnelEntry 7 }

saRvxTunnelVbrAvgRate  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Sustained rate in bits per second for VBR tunnels."
       ::= { saRvxTunnelEntry 8 }

saRvxTunnelVbrMaxBurst  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Maximum burst size in bits for VBR tunnels. This amount
               of data can be transmitted at the peak rate before
               getting throttled to the the sustained rate."
       ::= { saRvxTunnelEntry 9 }

saRvxTunnelAbrInitRate  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Initial rate in bits per second for ABR tunnels."
       ::= { saRvxTunnelEntry 10 }

saRvxTunnelAbrXrm  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "???"
       ::= { saRvxTunnelEntry 11 }

saRvxTunnelAbrRIF  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "???"
       ::= { saRvxTunnelEntry 12 }

saRvxTunnelAbrRDF  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "???"
       ::= { saRvxTunnelEntry 13 }

saRvxTunnelAbrCDF  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
```

```
                "???"
        ::= { saRvxTunnelEntry 14 }

saRvxTunnelAbrActivateOpt  OBJECT-TYPE
        SYNTAX  INTEGER{
                on-first-xmt(1),
                on-enable(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "???"
        ::= { saRvxTunnelEntry 15 }

saRvxTunnelAbrMinRate  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Minimum rate in bits per second for ABR tunnels."
        ::= { saRvxTunnelEntry 16 }

saRvxTunnelAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER  {
                up(1),
                down(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Controls tunnel state"
        ::= { saRvxTunnelEntry 17 }

saRvxTunnelOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Tunnel Oper StatusReports tunnel status"
        ::= { saRvxTunnelEntry 18 }

saRvxServiceRate   OBJECT-TYPE
        SYNTAX INTEGER {
                rate-64Kb(1),
                rate-128k(2),
                rate-256k(3),
                rate-384Kb(4),
                rate-512k(5),
                rate-768k(6),
                rate-1024k(7),
                rate-1536Kb(8),
                rate-2048k(9),
                rate-4096k(10),
                rate-5Mb(11),
                rate-10Mb(12),
                rate-40Mb(13),
                user-defined(14)
                }
        MAX-ACCESS read-write
        STATUS     current
        DESCRIPTION
                   "Serial Frame Service Rate"
        ::= { saRvxTunnelEntry  19}

saRvxUserRate   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Serial Frame User-Defined Service Rate (BPS)"
        ::= { saRvxTunnelEntry  20}

END


-- ****************************************************
```

VTS MIB

```
-- ****************************************************


-- oasis Voice and Telephony Services Info

OASIS-MM-VTS-MIB DEFINITIONS ::= BEGIN

IMPORTS
        saVTS                   FROM OASIS-SYSINFO-MIB
        OBJECT-TYPE FROM SNMPv2-SMI;

-- oasis MIB group

        saVtsIWFCfg             OBJECT IDENTIFIER ::= { saVTS 1 }
        saVtsVpeCtrl            OBJECT IDENTIFIER ::= { saVTS 2 }
        saVtsNbIfCfg            OBJECT IDENTIFIER ::= { saVTS 3 }
        saVtsNbChanIWF          OBJECT IDENTIFIER ::= { saVTS 4 }
```

```
        saVtsNbChanStat       OBJECT IDENTIFIER ::= { saVTS 5 }
        saVtsVtgCfg           OBJECT IDENTIFIER ::= { saVTS 6 }
        saVtsVtgTunCfg        OBJECT IDENTIFIER ::= { saVTS 7 }
        saVtsConnV1           OBJECT IDENTIFIER ::= { saVTS 8 }


-- Voice and Telephony Services Interworking Function Configuration Table

saVtsIWFCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsIWFCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Interworking Function Configuration Table"
        ::= { saVtsIWFCfg 1 }

saVtsIWFCfgEntry OBJECT-TYPE
        SYNTAX  SaVtsIWFCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Interworking Function Configuration Table Entry"
        INDEX   { saVtsIWFCfgIfIndex }
        ::= { saVtsIWFCfgTable 1 }

saVtsIWFCfgEntry ::=
        SEQUENCE {
                saVtsIWFCfgWhatever
                    INTEGER
                }

saVtsIWFCfgIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the VTS Interworking function."
        ::= { saVtsIWFCfgEntry 1 }

saVtsIWFCfgWhatever  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "First object."
        ::= { saVtsIWFCfgEntry 2 }
```

```
-- Voice and Telephony Services Provisioning Engine Control Table

saVtsVpeCtrlTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsVpeCtrlEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Provisioning Engine Control Table"
        ::= { saVtsVpeCtrl 1 }

saVtsVpeCtrlEntry OBJECT-TYPE
        SYNTAX  SaVtsVpeCtrlEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Provisioning Engine Control Table Entry"
        INDEX   { saVtsVpeCtrlIfIndex }
        ::= { saVtsVpeCtrlTable 1 }

saVtsVpeCtrlEntry ::=
        SEQUENCE {
                saVtsVpeCtrlParm1
                    INTEGER,
                saVtsVpeCtrlParm2
                    INTEGER,
                saVtsVpeCtrlParm3
                    INTEGER,
                saVtsVpeCtrlParm4
                    INTEGER,
                saVtsVpeCtrlParm5
                    INTEGER,
                saVtsVpeCtrlCommand
                    INTEGER,
                saVtsVpeCtrlResponse
                    INTEGER
                }

saVtsVpeCtrlIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the VTS AAL5 Direct Group."
        ::= { saVtsVpeCtrlEntry 1 }

saVtsVpeCtrlParm1  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
```

```
        STATUS  current
        DESCRIPTION
                "Parameter 1 for VPE control commands."
        ::= { saVtsVpeCtrlEntry 2 }

saVtsVpeCtrlParm2  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 2 for VPE control commands."
        ::= { saVtsVpeCtrlEntry 3 }

saVtsVpeCtrlParm3  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 3 for VPE control commands."
        ::= { saVtsVpeCtrlEntry 4 }

saVtsVpeCtrlParm4  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 4 for VPE control commands."
        ::= { saVtsVpeCtrlEntry 5 }

saVtsVpeCtrlParm5  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Parameter 5 for VPE control commands."
        ::= { saVtsVpeCtrlEntry 6 }

saVtsVpeCtrlCommand  OBJECT-TYPE
        SYNTAX  INTEGER {
                no-operation(1),
                add-tunnel(2),
                del-tunnel(3),
                cfg-tunnel(4),
                add-vcs-iwf(5),
                del-nb-chan(6),
                cfg-nb-chan(7),
                idle-nb-chan(8),
                act-nb-chan(9),
                clear-counts(10),
                get-cid(11),
                check-cid(12)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Hot key for VPE control commands."
        ::= { saVtsVpeCtrlEntry 7 }

saVtsVpeCtrlResponse  OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                ready(2),
                unknown-cmd(3),
                ignored(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Response to the last VPE command."
        ::= { saVtsVpeCtrlEntry 8 }

-- Voice and Telephony Services Narrow Band Interface Configuration Table

saVtsNbIfCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsNbIfCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Interface Configuration Table"
        ::= { saVtsNbIfCfg 1 }

saVtsNbIfCfgEntry OBJECT-TYPE
        SYNTAX  SaVtsNbIfCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Interface Configuration Table Entry"
        INDEX   { saVtsNbIfCfgIfIndex }
        ::= { saVtsNbIfCfgTable 1 }

saVtsNbIfCfgEntry ::=
        SEQUENCE {
                saVtsNbIfCfgPCMLaw
                    INTEGER,
                saVtsNbIfCfgIfType
                    INTEGER,
```

```
                saVtsNbIfCfgMaxChans
                    INTEGER,
                saVtsNbIfCfgInfoMsgs
                    INTEGER,
                saVtsNbIfCfgRecovErrs
                    INTEGER,
                saVtsNbIfCfgRcvUndefPkts
                    INTEGER,
                saVtsNbIfCfgDspsEmptied
                    INTEGER,
                saVtsNbIfCfgDspsLeftFull
                    INTEGER
                }

saVtsNbIfCfgIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the TDM interface or
                 signalling entity."
        ::= { saVtsNbIfCfgEntry 1 }

saVtsNbIfCfgPCMLaw  OBJECT-TYPE
        SYNTAX  INTEGER {
                a-law(1),
                u-law(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "PCM coding scheme."
        ::= { saVtsNbIfCfgEntry 2 }

saVtsNbIfCfgIfType  OBJECT-TYPE
        SYNTAX  INTEGER {
                ds1(1),
                e1(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Physical interface under this narrow band interface."
        ::= { saVtsNbIfCfgEntry 3 }

saVtsNbIfCfgMaxChans  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of informational messages received from
                 the FRF.11 stack."
        ::= { saVtsNbIfCfgEntry 4 }

saVtsNbIfCfgInfoMsgs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of informational messages received from
                 the FRF.11 stack."
        ::= { saVtsNbIfCfgEntry 5 }

saVtsNbIfCfgRecovErrs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of recoverable errors reported by the
                 FRF.11 stack."
        ::= { saVtsNbIfCfgEntry 6 }

saVtsNbIfCfgRcvUndefPkts  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets received from the WAN bound for
                 unconfigured channels."
        ::= { saVtsNbIfCfgEntry 7 }

saVtsNbIfCfgDspsEmptied  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of of times the DSPs were processed until all were
                 empty. If this count is not rolling, the hardware is
                 abnormally busy."
        ::= { saVtsNbIfCfgEntry 8 }

saVtsNbIfCfgDspsLeftFull  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "Number of of times the DSPs still had information
                 to process when background processing had to be started.
                 It is normal for this to roll. A useful guage
                 of how busy the processor is can be obtained by
                 looking at the ratio of this value to the DspsEmptied
                 value"
        ::= { saVtsNbIfCfgEntry 9 }


-- Voice and Telephony Services Narrow Band Channel Configuration Table

saVtsNbChanIWFTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsNbChanIWFEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Channel Configuration Table"
        ::= { saVtsNbChanIWF 1 }

saVtsNbChanIWFEntry OBJECT-TYPE
        SYNTAX  SaVtsNbChanIWFEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Channel Configuration Table Entry"
        INDEX   { saVtsNbChanIWFIfIndex }
        ::= { saVtsNbChanIWFTable 1 }

saVtsNbChanIWFEntry ::=
        SEQUENCE {
                saVtsNbChanIWFOperStat
                    INTEGER,
                saVtsNbChanIWFOpMode
                    INTEGER,
                saVtsNbChanIWFCallType
                    INTEGER,
                saVtsNbChanIWFVoiceEnc
                    INTEGER,
                saVtsNbChanIWFVoiceEchoCan
                    INTEGER,
                saVtsNbChanIWFVoiceSilComp
                    INTEGER,
                saVtsNbChanIWFVoicePostFilt
                    INTEGER,
                saVtsNbChanIWFVoiceHPFilt
                    INTEGER,
                saVtsNbChanIWFVoiceVol
                    INTEGER,
                saVtsNbChanIWFDTMFVol
                    INTEGER,
                saVtsNbChanIWFFaxBypass
                    INTEGER,
                saVtsNbChanIWFFaxEnc
                    INTEGER,
                saVtsNbChanIWFMaxFax
                    INTEGER,
                saVtsNbChanIWFFaxVol
                    INTEGER,
                saVtsNbChanIWFRxData
                    INTEGER,
                saVtsNbChanIWFCasOpt
                    INTEGER,
                saVtsNbChanIWFRxCas
                    INTEGER,
                saVtsNbChanIWFTxCas
                    INTEGER,
                saVtsNbChanIWFDbaOpt
                    INTEGER,
                saVtsNbChanIWFNomJitDly
                    INTEGER,
                saVtsNbChanIWFMinJitDly
                    INTEGER,
                saVtsNbChanIWFMaxJitDly
                    INTEGER,
                saVtsNbChanIWFJitOptFact
                    INTEGER,
                saVtsNbChanIWFPackFactor
                    INTEGER,
                saVtsNbChanIWFMaxChans
                    INTEGER
                }

saVtsNbChanIWFIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of this channel inter-working function."
        ::= { saVtsNbChanIWFEntry 1 }

saVtsNbChanIWFOpMode  OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                coder-loopback(2),
                pcm-loopback(3),
                tone-injection(4)
```

```
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Operational mode of the channel."
        ::= { saVtsNbChanIWFEntry 2 }

saVtsNbChanIWFCallType  OBJECT-TYPE
        SYNTAX  INTEGER {
                voice(1),
                data(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Call type for which the channel is configured."
        ::= { saVtsNbChanIWFEntry 3 }

saVtsNbChanIWFVoiceEnc  OBJECT-TYPE
        SYNTAX  INTEGER {
                g711-A-law(1),
                g711-u-law(2),
                g726-16k(3),
                g726-24k(4),
                g726-32k(5),
                g726-40k(6),
                g727-16k(7),
                g727-24k-16k(8),
                g727-24k(9),
                g727-32k-16k(10),
                g727-32k-24k(11),
                g727-32k(12),
                g727-40k-16k(13),
                g727-40k-24k(14),
                g727-40k-32k(15),
                g723-low(16),
                g723-high(17),
                g729(18),
                g728(19)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Encoding algorithm used for voice compression."
        ::= { saVtsNbChanIWFEntry 4 }

saVtsNbChanIWFVoiceEchoCan  OBJECT-TYPE
        SYNTAX  INTEGER {
                on(1),
                off(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "State of the echo canceller for voice processing."
        ::= { saVtsNbChanIWFEntry 5 }

saVtsNbChanIWFVoiceSilComp  OBJECT-TYPE
        SYNTAX  INTEGER {
                on(1),
                off(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "State of the silence compressor for voice processing."
        ::= { saVtsNbChanIWFEntry 6 }

saVtsNbChanIWFVoicePostFilt  OBJECT-TYPE
        SYNTAX  INTEGER {
                on(1),
                off(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "State of the post-filter for voice processing.
                 This is only applicable for G.723 and G.729 compression."
        ::= { saVtsNbChanIWFEntry 7 }

saVtsNbChanIWFVoiceHPFilt  OBJECT-TYPE
        SYNTAX  INTEGER {
                on(1),
                off(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "State of the high-pass filter for voice processing.
                This is only applicable for G.723 and G.729 compression."
        ::= { saVtsNbChanIWFEntry 8 }
```

```
saVtsNbChanIWFVoiceVol  OBJECT-TYPE
       SYNTAX  INTEGER (-32..31)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Voice volume in dB. Use -32 to mute."
       ::= { saVtsNbChanIWFEntry 9 }

saVtsNbChanIWFDTMFVol  OBJECT-TYPE
       SYNTAX  INTEGER (-32..31)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "DTMF volume in dB. Use -32 to mute."
       ::= { saVtsNbChanIWFEntry 10 }

saVtsNbChanIWFFaxBypass  OBJECT-TYPE
       SYNTAX  INTEGER {
              fax-relay(1),
              fax-modem-bypass(2),
              none(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Setting this to fax-modem-bypass causes the detection
               of a modem or FAX to be handled by switching to an
               alternate voice coder. Setting this to fax-relay
               causes the detection of FAX
               calls to be handled by demodulating the FAX tones and
               transferring the binary data. Setting this to none
               causes no special action to be taken upon detection
               of FAX or modem."
       ::= { saVtsNbChanIWFEntry 11 }

saVtsNbChanIWFFaxEnc  OBJECT-TYPE
       SYNTAX  INTEGER {
              g711-A-law(1),
              g711-u-law(2),
              g726-32k(3),
              g726-40k(4)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Encoding algorithm used when FAX and modem bypass is
               active."
       ::= { saVtsNbChanIWFEntry 12 }

saVtsNbChanIWFMaxFax  OBJECT-TYPE
       SYNTAX  INTEGER {
              rate-2400(1),
              rate-4800(2),
              rate-7200(3),
              rate-9600(4),
              rate-12000(5),
              rate-14400(6)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Maximum allowable FAX tranmission rate."
       ::= { saVtsNbChanIWFEntry 13 }

saVtsNbChanIWFFaxVol  OBJECT-TYPE
       SYNTAX  INTEGER (-32..31)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "FAX volume in dB. Use -32 to mute."
       ::= { saVtsNbChanIWFEntry 14 }

saVtsNbChanIWFRxData  OBJECT-TYPE
       SYNTAX  INTEGER (0..255)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Pattern used to condition the narrow-band interface."
       ::= { saVtsNbChanIWFEntry 15 }

saVtsNbChanIWFCasOpt  OBJECT-TYPE
       SYNTAX  INTEGER {
              none(1),
              transport(2),
              condition(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "CAS transport options.
              none        - CAS bits not transported
              transport   - CAS bits transported
              condition   - CAS bits transported and
              conditioned when needed."
       ::= { saVtsNbChanIWFEntry 16 }
```

```
saVtsNbChanIWFRxCas  OBJECT-TYPE
        SYNTAX  INTEGER (0..15)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bitfield of CAS bits used to condition the local DS0:
                Bit 0 - A
                Bit 1 - B
                Bit 2 - C
                Bit 3 - D"
        ::= { saVtsNbChanIWFEntry 17 }

saVtsNbChanIWFTxCas  OBJECT-TYPE
        SYNTAX  INTEGER (0..15)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bitfield of CAS bits used to condition the remote DS0:
                Bit 0 - A
                Bit 1 - B
                Bit 2 - C
                Bit 3 - D"
        ::= { saVtsNbChanIWFEntry 18 }

saVtsNbChanIWFDbaOpt  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Bit field to choose control sources for
                 dynamic bandwidth allocation.
                 Bit 0 - signalling codes
                 Bit 1 - loss of signal
                 Bit 2 - packet loss"
        ::= { saVtsNbChanIWFEntry 19 }

saVtsNbChanIWFMinJitDly  OBJECT-TYPE
        SYNTAX  INTEGER (0..150)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Minimum jitter buffer in milliseconds."
        ::= { saVtsNbChanIWFEntry 20 }

saVtsNbChanIWFMaxJitDly  OBJECT-TYPE
        SYNTAX  INTEGER (0..150)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Maximum jitter buffer in milliseconds."
        ::= { saVtsNbChanIWFEntry 21 }

saVtsNbChanIWFJitOptFact  OBJECT-TYPE
        SYNTAX  INTEGER (0..12)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Jitter buffer tuning factor."
        ::= { saVtsNbChanIWFEntry 22 }

saVtsNbChanIWFPackFactor  OBJECT-TYPE
        SYNTAX  INTEGER (1..16)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Factor used to increase the amount of voice data collected
                 before a packet is dispatched. Set low for low latency."
        ::= { saVtsNbChanIWFEntry 23 }

saVtsNbChanIWFMaxChans  OBJECT-TYPE
        SYNTAX  INTEGER (1..32)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Maximum channels allowed on this IWF."
        ::= { saVtsNbChanIWFEntry 24 }

saVtsNbChanIWFOperStat  OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Present state of the IWF. If the IWF is down, all
                 member channels are idle. If the IWF is up, channels
                 may be active though that is not necessarily true."
        ::= { saVtsNbChanIWFEntry 25 }

saVtsNbChanIWFNomJitDly  OBJECT-TYPE
        SYNTAX  INTEGER (0..150)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Nominal jitter buffer delay in milliseconds. Setting this
```

```
                to 0 enables the settings for saVtsNbChanIWFMinJitDly,
                saVtsNbChanIWFMaxJitDly, and saVtsNbChanIWFJitOptFact.
                Otherwise, those values are ignored, and others are used
                to strive for this nominal delay."
        ::= { saVtsNbChanIWFEntry 26 }


-- Voice and Telephony Services Narrow Band Channel Status Table

saVtsNbChanStatTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsNbChanStatEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Channel Status Table"
        ::= { saVtsNbChanStat 1 }

saVtsNbChanStatEntry OBJECT-TYPE
        SYNTAX  SaVtsNbChanStatEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Narrow Band Channel Status Table Entry"
        INDEX   { saVtsNbChanStatIfIndex , saVtsNbChanStatTimeSlot }
        ::= { saVtsNbChanStatTable 1 }

saVtsNbChanStatEntry ::=
        SEQUENCE {
                saVtsNbChanStatConnStatus
                    INTEGER,
                saVtsNbChanStatIsAnchor
                    INTEGER,
                saVtsNbChanStatRcvCAS
                    INTEGER,
                saVtsNbChanStatXmtCAS
                    INTEGER,
                saVtsNbChanStatDefects
                    INTEGER,
                saVtsNbChanStatDigits
                    INTEGER,
                saVtsNbChanStatDialEnds
                    INTEGER,
                saVtsNbChanStatFaxStarts
                    INTEGER,
                saVtsNbChanStatFaxEnds
                    INTEGER
                }

saVtsNbChanStatIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the voice channel IWF."
        ::= { saVtsNbChanStatEntry 1 }

saVtsNbChanStatTimeSlot  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time slot of the TDM interface."
        ::= { saVtsNbChanStatEntry 2 }

saVtsNbChanStatConnStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                active(1),
                idle(2),
                fax-relay(3),
                bypass(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Status of the narrow-band connection."
        ::= { saVtsNbChanStatEntry 3 }

saVtsNbChanStatIsAnchor  OBJECT-TYPE
        SYNTAX  INTEGER {
                anchor(1),
                slave(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Anchor channel is one which is used to release data
                 from other channels. The anchor channel can only be
                 removed or idled after all other members in a sub-
                 channel MUX are removed or idled."
        ::= { saVtsNbChanStatEntry 4 }

saVtsNbChanStatRcvCAS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "Bitfield of CAS bits received from the DS0:
                Bit 0 - A
                Bit 1 - B
                Bit 2 - C
                Bit 3 - D"
        ::= { saVtsNbChanStatEntry 5 }

saVtsNbChanStatXmtCAS  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Bitfield of CAS bits transmitted to the DS0:
                Bit 0 - A
                Bit 1 - B
                Bit 2 - C
                Bit 3 - D"
        ::= { saVtsNbChanStatEntry 6 }

saVtsNbChanStatDefects  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Bitfield defects presently observed on the DS0:
                Bit 0 - jitter buffer underflow "
        ::= { saVtsNbChanStatEntry 7 }

saVtsNbChanStatDigits  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of touch tone key presses detected."
        ::= { saVtsNbChanStatEntry 8 }

saVtsNbChanStatDialEnds  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of dial sequence ends detected."
        ::= { saVtsNbChanStatEntry 9 }

saVtsNbChanStatFaxStarts  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of FAX call starts detected."
        ::= { saVtsNbChanStatEntry 10 }

saVtsNbChanStatFaxEnds  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of FAX call ends detected."
        ::= { saVtsNbChanStatEntry 11 }


-- Voice and Telephony Services Virtual Trunk Group Configuration Table

saVtsVtgCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsVtgCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Virtual Trunk Group Configuration Table"
        ::= { saVtsVtgCfg 1 }

saVtsVtgCfgEntry OBJECT-TYPE
        SYNTAX  SaVtsVtgCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Virtual Trunk Group Configuration Table Entry"
        INDEX   { saVtsVtgCfgIfIndex }
        ::= { saVtsVtgCfgTable 1 }

saVtsVtgCfgEntry ::=
        SEQUENCE {
--              saVtsVtgCfgRemoteAddr
--                  AtmAddr,
                saVtsVtgCfgAdminStatus
                    INTEGER,
                saVtsVtgCfgOperStatus
                    INTEGER,
                saVtsVtgCfgSigVcMode
                    INTEGER,
                saVtsVtgCfgSigVcDownTimeout
                    INTEGER,
                saVtsVtgCfgBaseVcProtoId
                    INTEGER,
                saVtsVtgCfgBaseVcMode
                    INTEGER,
```

```
                saVtsVtgCfgBaseVcDownTimeout
                    INTEGER
-- This is forward looking enough as is with out SVCs. As
-- trunking strategies for compressed voice become clearer,
-- objects similar to the VTOA MIB will be defined.
                }

saVtsVtgCfgIfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the VTS Virtual Trunk Group."
        ::= { saVtsVtgCfgEntry 1 }

--saVtsVtgCfgRemoteAddr  OBJECT-TYPE
--      SYNTAX        AtmAddr
--      MAX-ACCESS    read-write
--      STATUS        current
--      DESCRIPTION
--              "The ATM address supporting the corresponding far end
--               Trunking IWF process for this Virtual Trunk Group.
--               If no address is supplied, no attempts to
--               establish the active SVC are initiated."
--      ::= { saVtsVtgCfgEntry 2 }

saVtsVtgCfgAdminStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS    read-write
        STATUS        current
        DESCRIPTION
                "The desired administrative status of the Virtual
                 Trunk Group. The up and down states indicate
                 that the traffic flow is enabled or disabled
                 respectively across the Virtual Trunk Group."
        ::= { saVtsVtgCfgEntry 3 }

saVtsVtgCfgOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                unknown(3)
                }
        MAX-ACCESS    read-only
        STATUS        current
        DESCRIPTION
                "The operational status of the Virtual Trunk Group.
                 The up and down states indicate that the traffic flow is
                 enabled or disabled respectively across the Virtual
                 Trunk Group.
                 The unknown state indicates that the state of the
                 Virtual Trunk Group cannot be determined.
                 The state will be down or unknown if the
                 supporting ATM interfaces are down or unknown."
        ::= { saVtsVtgCfgEntry 4 }

saVtsVtgCfgSigVcMode  OBJECT-TYPE
        SYNTAX  INTEGER {
                none(1),
                pvc(2),
                svcAlwaysUp(3),
                svcOnDemand(4)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
          "The desired mode of the IWF-IWF signalling VC connection.
                 none (1) - This is the required setting for CAS
                 VTG's (which have no IWF-IWF signalling VC).

                 pvc (2) - The signalling VC will be set up separately
                 as a PVC via network administrative action.

                 svcAlwaysUp (3) - The signalling VC connection
                 must be established by the IWF via automatic SVC
                 establishment procedures.
                 This VC connection should be established at all times.

                 svcOnDemand (4) - The signalling VC connection should
                 only be established (via automatic SVC establishment
                 procedures) by this IWF when an incoming call (from
                 a narrowband interface) needs to be connected via
                 this Virtual Trunk Group. It may also be initiated
                 by the remote IWF, as necessary. Once this VC
                 connection is established, it should remain
                 connected until the condition of no narrowband
                 connections active on this virtual trunk group has
                 persisted for the interval specified by
                 'saVtsVtgCfgVcDownTimeout', at which time it
                 should itself be disconnected."
        ::= { saVtsVtgCfgEntry 5 }
```

```
saVtsVtgCfgSigVcDownTimeout  OBJECT-TYPE
        SYNTAX      INTEGER (1..86400)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
        "The amount of time that a signalling VC connection of
         'saVtsVtgCfgSigMode' svcOnDemand (4) should remain connected
         after the last narrowband connection using this virtual
         trunk group has been terminated before being itself
         disconnected."
          ::= { saVtsVtgCfgEntry 6 }

saVtsVtgCfgBaseVcProtoId  OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
        "Identifier used with the VTS IWF ifIndex to link to a
         prototype VTS trunk traffic descriptor in the 'saVtsVtgTun'
         table to be used for the base trunk on this VTG."
          ::= { saVtsVtgCfgEntry 7 }

saVtsVtgCfgBaseVcMode  OBJECT-TYPE
        SYNTAX  INTEGER {
        pvc(1),
        svcAlwaysUp(2),
        svcOnDemand(3)
        }
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
                "The desired mode of the base (first) voice VC connection.

                pvc (1) - The base voice VC will be set up separately as a
                PVC via network administrative action.

                svcAlwaysUp (2) - The base voice VC connection must
                be established by the IWF via automatic SVC
                establishment procedures.
                This VC connection should be established at all
                times.

                svcOnDemand (3) - The base voice VC connection should
                only be established (via automatic SVC establishment
                procedures) by this IWF when an incoming call (from
                a narrowband interface) needs to be connected via
                this Virtual Trunk Group. It may also be initiated
                by the remote IWF, as necessary. Once this VC
                connection is established, it should remain
                connected until the condition of no narrowband
                connections active on this virtual trunk group has
                persisted for the interval specified by
                'saVtsVtgCfgBaseVcDownTimeout', at which time it
                should itself be disconnected."
          ::= { saVtsVtgCfgEntry 8 }

saVtsVtgCfgBaseVcDownTimeout  OBJECT-TYPE
        SYNTAX      INTEGER (1..86400)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "The amount of time that a base voice VC connection of
                 'saVtsVtgCfgBaseVcMode' svcOnDemand (3) should remain
                 connected after the last narrowband connection using
                 this virtual trunk group has been terminated before
                 being itself disconnected."
          ::= { saVtsVtgCfgEntry 9 }

-- Voice and Telephony Services Virtual Trunk Group
-- Tunnel Configuration Table
saVtsVtgTunCfgTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsVtgTunCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Virtual Trunk Group Tunnel Configuration Table"
        ::= { saVtsVtgTunCfg 1 }

saVtsVtgTunCfgEntry OBJECT-TYPE
        SYNTAX  SaVtsVtgTunCfgEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Virtual Trunk Group Tunnel Configuration Table Entry"
        INDEX   { saVtsVtgTunCfgDgIdx,
                saVtsVtgTunCfgVPI,
                saVtsVtgTunCfgVCI }
        ::= { saVtsVtgTunCfgTable 1 }

saVtsVtgTunCfgEntry ::=
        SEQUENCE {
                saVtsVtgTunCfgType
                    INTEGER,
                saVtsVtgTunCfgTrafficClass
```

```
                INTEGER,
            saVtsVtgTunCfgPeakCPS
                INTEGER,
            saVtsVtgTunCfgAvgCPS
                INTEGER,
            saVtsVtgTunCfgCdvt
                INTEGER,
            saVtsVtgTunCfgMaxBurstSize
                INTEGER,
            saVtsVtgTunCfgXmtPkts
                INTEGER,
            saVtsVtgTunCfgRcvPkts
                INTEGER,
            saVtsVtgTunCfgXmtOctets
                INTEGER,
            saVtsVtgTunCfgRcvOctets
                INTEGER,
            saVtsVtgTunCfgXmtErrs
                INTEGER
            }

saVtsVtgTunCfgDgIdx  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Interface index of the tunnel's parent AAL."
       ::= { saVtsVtgTunCfgEntry 2 }

saVtsVtgTunCfgVPI  OBJECT-TYPE
       SYNTAX  INTEGER (0..255)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Virtual Path Identifier of the tunnel."
       ::= { saVtsVtgTunCfgEntry 3 }

saVtsVtgTunCfgVCI  OBJECT-TYPE
       SYNTAX  INTEGER (0..65535)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Virtual Channel Identifier of the tunnel."
       ::= { saVtsVtgTunCfgEntry 4 }

saVtsVtgTunCfgType  OBJECT-TYPE
       SYNTAX  INTEGER {
              sig(1),
              base(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Tunnel type.
               sig (1) -This VC is used for signalling between VTS
                            Interworking Functions.
               base (2) -This VC is the primary VC used to carry voice
                           traffic on this VTG."
       ::= { saVtsVtgTunCfgEntry 5 }

saVtsVtgTunCfgTrafficClass  OBJECT-TYPE
       SYNTAX  INTEGER {
              cbr(1),
              rt-vbr(2),
              nrt-vbr(3),
              `ubr(4)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "VTS Tunnel Service Category"
       ::= { saVtsVtgTunCfgEntry 6 }

saVtsVtgTunCfgPeakCPS  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "VTS Tunnel peak rate in cells per second for which this
               tunnel is configured."
       ::= { saVtsVtgTunCfgEntry 7 }

saVtsVtgTunCfgAvgCPS  OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The average rate in cells per second for which this VTS
               tunnel is configured. Only applies to VBR tunnels."
       ::= { saVtsVtgTunCfgEntry 8 }
```

```
saVtsVtgTunCfgCdvt  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Tunnel cell delay variance tolerance for which
                this VTS tunnel is configured."
        ::= { saVtsVtgTunCfgEntry 9 }

saVtsVtgTunCfgMaxBurstSize  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Maximum burst size. Applies only to VBR tunnels."
        ::= { saVtsVtgTunCfgEntry 10 }

saVtsVtgTunCfgXmtPkts  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of AAL5 packets transmitted on this VC."
        ::= { saVtsVtgTunCfgEntry 11 }

saVtsVtgTunCfgRcvPkts  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of AAL5 packets received on this VC."
        ::= { saVtsVtgTunCfgEntry 12 }

saVtsVtgTunCfgXmtOctets  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of octets transmitted on this VC."
        ::= { saVtsVtgTunCfgEntry 13 }

saVtsVtgTunCfgRcvOctets  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of octets received on this VC."
        ::= { saVtsVtgTunCfgEntry 14 }

saVtsVtgTunCfgXmtErrs  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of packets which failed to transmit on this VC due
                 to lack of resources."
        ::= { saVtsVtgTunCfgEntry 15 }


-- Voice and Telephony Services Connection Table Version 1

saVtsConnV1Table OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaVtsConnV1Entry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Connection Table Version 1"
        ::= { saVtsConnV1 1 }

saVtsConnV1Entry OBJECT-TYPE
        SYNTAX  SaVtsConnV1Entry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "VTS Connection Table Version 1 Entry"
        INDEX   { saVtsConnV1IfIndex , saVtsConnV1TimeSlot }
        ::= { saVtsConnV1Table 1 }

saVtsConnV1Entry ::=
        SEQUENCE {
                saVtsConnV1RxCID
                    INTEGER,
                saVtsConnV1TxCID
                    INTEGER
                }

saVtsConnV1IfIndex  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Interface index of the voice channel IWF."
        ::= { saVtsConnV1Entry 1 }
```

```
saVtsConnV1TimeSlot  OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Time slot of the TDM interface."
        ::= { saVtsConnV1Entry 2 }

saVtsConnV1RxCID  OBJECT-TYPE
        SYNTAX  INTEGER(0..31)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Local channel identifier used for this connection. This is
                 a number from 0 to 1 less than the number of channels that
                 can be handled by the card which depends on the version
                 in use."
        ::= { saVtsConnV1Entry 3 }

saVtsConnV1TxCID  OBJECT-TYPE
        SYNTAX  INTEGER(0..31)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Channel identifier used in packets transmitted from this
                 connection."
        ::= { saVtsConnV1Entry 4 }


END


-- ******************************************************
```

COMMSTATS MIB

```
-- ******************************************************

-- oasis Backplane Comms statistics MIB

OASIS-COMMSTAT-MIB DEFINITIONS ::= BEGIN

IMPORTS
        OBJECT-TYPE            FROM SNMPv2-SMI
        saCommsStats, saBrdNumFROM OASIS-SYSINFO-MIB;

saCommChan   OBJECT IDENTIFIER ::= { saCommsStats 1 }
saCommBuff   OBJECT IDENTIFIER ::= { saCommsStats 2 }
saCommUser   OBJECT IDENTIFIER ::= { saCommsStats 3 }

-- Backplane Comms Stats Table

saCommChanTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCommChanEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Backplane comms stats"
        ::= { saCommChan 1 }

saCommChanEntry OBJECT-TYPE
        SYNTAX  SaCommChanEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for comms stats"
        INDEX   { saBrdNum, saCommDstBrd }
        ::= { saCommChanTable 1 }

saCommChanEntry ::=
        SEQUENCE {
                saCommDstBrd
                    INTEGER,
                saCommStatus
                    INTEGER,
                saCommClrCnts
                    INTEGER,
                saCommInPkts
                    INTEGER,
                saCommRxAsData
                    INTEGER,
                saCommRxUnasData
                    INTEGER,
                saCommOutPkts
                    INTEGER,
                saCommTxAsData
                    INTEGER,
                saCommTxUnasData
                    INTEGER,
                saCommFailedTx
                    INTEGER,
                saCommTxDescFail
                    INTEGER,
                saCommTxNotReady
                    INTEGER,
                saCommNumCommsDown
```

```
                INTEGER,
            saCommWindowFull
                INTEGER,
            saCommRcvQfull
                INTEGER,
            saCommSendQfull
                INTEGER,
            saCommChanDelivers
                INTEGER,
            saCommDestErrors
                INTEGER,
            saCommDiscardsOOR
                INTEGER,
            saCommReasmReqds
                INTEGER,
            saCommReasmOKs
                INTEGER,
            saCommReasmFails
                INTEGER,
            saCommRcvNackOOR
                INTEGER,
            saCommRcvNackUnexp
                INTEGER,
            saCommAckTimeouts
                INTEGER,
            saCommNumKeepAlives
                INTEGER,
            saCommNumRetx
                INTEGER,
            saCommNumTxTestMsgs
                INTEGER,
            saCommNumRxTestMsgs
                INTEGER
            }

saCommDstBrd OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Destination Board Number"
       ::= { saCommChanEntry 1 }

saCommStatus OBJECT-TYPE
       SYNTAX  INTEGER {
              up(1),
              down(2)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Source Board Number"
       ::= { saCommChanEntry 2 }

saCommClrCnts OBJECT-TYPE
       SYNTAX  INTEGER {
              no(1),
              yes(2)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Clears stats"
       ::= { saCommChanEntry 3 }

saCommInPkts OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Total # of packets rcvd (data and control)"
       ::= { saCommChanEntry 4 }

saCommRxAsData OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Total assured data packets received"
       ::= { saCommChanEntry 5 }

saCommRxUnasData OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Total unassured data packets received"
       ::= { saCommChanEntry 6 }

saCommOutPkts OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Total packets sent (data and control)"
       ::= { saCommChanEntry 7 }
```

```
saCommTxAsData OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total assured data packets sent"
        ::= { saCommChanEntry 8 }

saCommTxUnasData OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Total unassured data packets sent"
        ::= { saCommChanEntry 9 }

saCommFailedTx OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of packets unable to send into packet subsystem"
        ::= { saCommChanEntry 10 }

saCommTxDescFail OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of packets unable to send due to tx descriptor failure"
        ::= { saCommChanEntry 11 }

saCommTxNotReady OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of packets unable to send due to comms not ready"
        ::= { saCommChanEntry 12 }

saCommNumCommsDown OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of times comms has gone down"
        ::= { saCommChanEntry 13 }

saCommWindowFull OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# time sliding window has become full"
        ::= { saCommChanEntry 14 }

saCommRcvQfull OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# times channel rcv queue full"
        ::= { saCommChanEntry 15 }

saCommSendQfull OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# times channel send queue full"
        ::= { saCommChanEntry 16 }

saCommChanDelivers OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# data packets successfully delivered to dest process"
        ::= { saCommChanEntry 17 }

saCommDestErrors OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# dest errors"
        ::= { saCommChanEntry 18 }

saCommDiscardsOOR OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# data packets discarded due to lack of resources"
        ::= { saCommChanEntry 19 }
```

```
saCommReasmReqds OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of fragments received that need reassembly"
        ::= { saCommChanEntry 20 }

saCommReasmOKs OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of user data successfully reassembled"
        ::= { saCommChanEntry 21 }

saCommReasmFails OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of failures in reassembly process"
        ::= { saCommChanEntry 22 }

saCommRcvNackOOR OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of NACKs received due to low resources at remote"
        ::= { saCommChanEntry 23 }

saCommRcvNackUnexp OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of NACKs received due to unexpected sequence number"
        ::= { saCommChanEntry 24 }

saCommAckTimeouts OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of acknowledgement timeouts"
        ::= { saCommChanEntry 25 }

saCommNumKeepAlives OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of keep alive messages sent"
        ::= { saCommChanEntry 26 }

saCommNumRetx OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of data packet retransmits"
        ::= { saCommChanEntry 27 }

saCommNumTxTestMsgs OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of test messages sent"
        ::= { saCommChanEntry 28 }

saCommNumRxTestMsgs OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of test messages received"
        ::= { saCommChanEntry 29 }


-- Comms Buffer Stat Table

saCommBuffTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCommBuffEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Buffer Pool Stat Table"
        ::= { saCommBuff 1 }

saCommBuffEntry OBJECT-TYPE
        SYNTAX  SaCommBuffEntry
        MAX-ACCESS  not-accessible
        STATUS  current
```

```
        DESCRIPTION
                "Entry for comms buffer pool stats"
        INDEX   { saBrdNum, saCommBufPoolNum }
        ::= { saCommBuffTable 1 }

saCommBuffEntry ::=
        SEQUENCE {
                saCommBufPoolNum
                    INTEGER,
                saCommBufSz
                    INTEGER,
                saCommBufNumOrigBufs
                    INTEGER,
                saCommBufNumFreeBufs
                    INTEGER,
                saCommBufNumGetMems
                    INTEGER,
                saCommBufNumRetMems
                    INTEGER,
                saCommBufNumFailGets
                    INTEGER,
                saCommBufLowWaterMark
                    INTEGER
        }

saCommBufPoolNum OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Buffer Pool Number"
        ::= { saCommBuffEntry 1 }

saCommBufSz OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Size of the buffers in this pool"
        ::= { saCommBuffEntry 2 }

saCommBufNumOrigBufs OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of buffer originally contained in this pool"
        ::= { saCommBuffEntry 3 }

saCommBufNumFreeBufs OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of free buffers currently in the pool"
        ::= { saCommBuffEntry 4 }

saCommBufNumGetMems OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of successful get buffer requests"
        ::= { saCommBuffEntry 5 }

saCommBufNumRetMems OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of successful return buffer requests"
        ::= { saCommBuffEntry 6 }

saCommBufNumFailGets OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of failed get buffer requests"
        ::= { saCommBuffEntry 7 }

saCommBufLowWaterMark OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The low water mark for this pool in number of buffers"
        ::= { saCommBuffEntry 8 }


-- Backplane comms user's stats table

saCommUserTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaCommUserEntry
        MAX-ACCESS  not-accessible
        STATUS  current
```

```
        DESCRIPTION
                "Backplane comms user stats"
        ::= { saCommUser 1 }

saCommUserEntry OBJECT-TYPE
        SYNTAX  SaCommUserEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Entry for comms stats"
        INDEX   { saBrdNum, saCommsUserPID }
        ::= { saCommUserTable 1 }

saCommUserEntry ::=
        SEQUENCE {
                saCommsUserPID
                    INTEGER,
                saCommsUserValid
                    INTEGER,
                saCommsUserDataType
                    INTEGER,
                saCommsUserSrvcWgt
                    INTEGER,
                saCommsUserMaxBufAllowed
                    INTEGER,
                saCommsUserCurrBuf
                    INTEGER,
                saCommsUserHighBuf
                    INTEGER,
                saCommsUserQdepth
                    INTEGER,
                saCommsUserClrCounts
                    INTEGER,
                saCommsUserDataSends
                    INTEGER,
                saCommsUserRejects
                    INTEGER,
                saCommsUserAccepts
                    INTEGER,
                saCommsUserCBNotInUse
                    INTEGER,
                saCommsUserFragsOK
                    INTEGER,
                saCommsUserFragsFails
                    INTEGER,
                saCommsUserFragsCreates
                    INTEGER
                }

saCommsUserPID OBJECT-TYPE
        SYNTAX  INTEGER {
                comms(1),
                comms-test(2),
                bsm(3),
                ssm(4),
                blm(5),
                slm(6),
                file-client(7),
                file-server(8),
                btm(9),
                stm(10),
                smm-cmd(11),
                smm-reply(12),
                bmm-cmd(13),
                bmm-reply(14),
                bem(15),
                sem(16),
                sccs(17),
                accs(18)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User PID"
        ::= { saCommUserEntry 1 }

saCommsUserValid OBJECT-TYPE
        SYNTAX  INTEGER {
                not-registered(1),
                registered(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Indicates whether or not user is registered"
        ::= { saCommUserEntry 2 }

saCommsUserDataType OBJECT-TYPE
        SYNTAX  INTEGER {
                assured(1),
                unassured(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's Data Transfer Type"
```

```
        ::= { saCommUserEntry 3 }

saCommsUserSrvcWgt OBJECT-TYPE
        SYNTAX  INTEGER {
                low(1),
                med(2),
                high(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's Service Weight"
        ::= { saCommUserEntry 4 }

saCommsUserMaxBufAllowed OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's Chosen Max buffer usage"
        ::= { saCommUserEntry 5 }

saCommsUserCurrBuf OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's Current buffer usage"
        ::= { saCommUserEntry 6 }



saCommsUserHighBuf OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's High-Water buffer usage"
        ::= { saCommUserEntry 7 }

saCommsUserQdepth OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "User's Current User Queue Depth"
        ::= { saCommUserEntry 8 }

saCommsUserClrCounts OBJECT-TYPE
        SYNTAX  INTEGER {
                no(1),
                yes(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Clear User Stats"
        ::= { saCommUserEntry 9 }

saCommsUserDataSends OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# user data submitted to comms module by a user"
        ::= { saCommUserEntry 10 }

saCommsUserRejects OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# data packets delivered but rejected by user"
        ::= { saCommUserEntry 11 }

saCommsUserAccepts OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                " data packets delivered successfully to user"
        ::= { saCommUserEntry 12 }

saCommsUserCBNotInUse OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# data packets rec'd when user not registered"
        ::= { saCommUserEntry 13 }

saCommsUserFragsOK OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "# user data needing fragmentation & succeeding"
        ::= { saCommUserEntry 14 }

saCommsUserFragsFails OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# user data needing fragmentation & failing"
        ::= { saCommUserEntry 15 }

saCommsUserFragsCreates OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "# of fragments generated by this user"
        ::= { saCommUserEntry 16 }


END
```

```
-- ******************************************************
```

MEMSTATS MIB

```
-- ******************************************************


-- oasis Memory statistics MIB

OASIS-MEMSTAT-MIB DEFINITIONS ::= BEGIN

IMPORTS
       OBJECT-TYPE
              FROM SNMPv2-SMI
       saMemStats, saBrdNum
              FROM OASIS-SYSINFO-MIB;

-- Memory Stats Table

saMemStatsTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaMemStatsEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "Memory Statistics Table"
       ::= { saMemStats 1 }

saMemStatsEntry OBJECT-TYPE
       SYNTAX  SaMemStatsEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "Entry for Task memory usage stats"
       INDEX   { saBrdNum, saMemTaskId }
       ::= { saMemStatsTable 1 }

saMemStatsEntry ::=
       SEQUENCE {
              saMemTaskId
                  INTEGER,
              saMemSize
                  INTEGER,
              saHiWaterMemSize
                  INTEGER
              }

saMemTaskId OBJECT-TYPE
       SYNTAX  INTEGER {
              bmm(1),
              smm(2)
              }
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Memory usage statistics Task ID"
       ::= { saMemStatsEntry 1 }

saMemSize OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Memory size"
       ::= { saMemStatsEntry 2 }

saHiWaterMemSize OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "High Water Memory size"
       ::= { saMemStatsEntry 3 }

END
```

```
-- ****************************************************
```

IMA MIB

```
-- ****************************************************


ATMF-IMA DEFINITIONS ::= BEGIN

IMPORTS
       enterprises                                  FROM RFC1155-SMI
       OBJECT-TYPE, MODULE-IDENTITY, Integer32      FROM SNMPv2-SMI
       TEXTUAL-CONVENTION, DateAndTime, RowStatusFROM SNMPv2-TC;

atmForum                    OBJECT IDENTIFIER ::= { enterprises 353 }
atmForumNetworkManagement   OBJECT IDENTIFIER ::= { atmForum 5 }
atmfIma OBJECT IDENTIFIER ::= { atmForumNetworkManagement 7 }

atmfImaMib   MODULE-IDENTITY
       LAST-UPDATED "9701092245Z"
       ORGANIZATION "ATM Forum"
       CONTACT-INFO "ATM Forum
       2570 West El Camino Real, Suite 304
       Mountain View, CA 94040-1313 USA
       Phone: +1 415-949-6700
       Fax:   +1 415-949-6705
       info@atmforum.com"
       DESCRIPTION
              "The MIB Module to describe an ATM Inverse
               Multiplexer interface."
       ::= { atmfIma 1 }


atmImaMibObjectsOBJECT IDENTIFIER ::= { atmfImaMib 1 }


-- This MIB consists of the IMA group subtree.
-- The IMA group subtree consists of the number of IMA groups and a
-- table of IMA groups.  Each entry in the table of IMA groups contains
-- information (configuration and status) specific to each group.

-- The following textual conventions are used when describing the ima mib
-- element's syntax

ImaIfIndex ::=TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "ifIndex"
       SYNTAX  Integer32

ImaId ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "IMA group ID"
       SYNTAX  INTEGER( 0..255 )

ImaLid ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "IMA group ID"
       SYNTAX  INTEGER( 0..31 )

Boolean ::=TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "Truth values"
       SYNTAX      INTEGER {
              true(1),
              false(2)
              }

Seconds ::=TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "Time in seconds"
       SYNTAX  Integer32

MilliSeconds ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "Time in milliseconds"
       SYNTAX  Integer32

ImaGroupState ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "State of the IMA group."
       SYNTAX  INTEGER {
              notConfigured(1),
              startUp(2),
              startUpAck(3),
              configAbortUnsupportedM(4),
              configAbortIncompatibleSymmetry(5),
              configAbortOther(6),
              insufficientLinks(7),
              blocked(8),
```

```
                operational(9)
                }

ImaGroupFailureStatus ::= TEXTUAL-CONVENTION
        STATUS  current
        DESCRIPTION
                "Failure reason of an IMA group."
        SYNTAX  INTEGER {
                noFailure(1), -- unit is up
                startUpNe(2),
                startUpFe(3),
                invalidMValueNe(4),
                invalidMValueFe(5),
                failedAssymetricNe(6),
                failedAssymetricFe(7),
                insufficientLinksNe(8),
                insufficientLinksFe(9),
                blockedNe(10),
                blockedFe(11),
                otherFailure(12)
                }

ImaGroupTxClkMode  ::= TEXTUAL-CONVENTION
        STATUS  current
        DESCRIPTION
                "Indicate the synchronization configuration of the
                IMA group.
                There are two possible configurations: the Common Transmit
                Clock (CTC) and the Independent Transmit Clock (ITC)
                configurations. The CTC configuration corresponds to
                the case when the transmit clock of all IMA
                links are derived from the
                Same source. The ITC configuration corresponds to the case
                where there is at least one IMA link whose transmit clock
                is derived from a source different than at least another
                link transmit clock."
        SYNTAX  INTEGER {
                ctc(1),
                itc(2)
                }

ImaGroupSymmetry ::= TEXTUAL-CONVENTION
        STATUS  current
        DESCRIPTION
                "The symmetry mode adjusted during the group start-up."
        SYNTAX  INTEGER {
                symmetricOperation(1),
                assymmetricOperation(2),
                assymmetricConfiguration(3)
                }

ImaFrameLength ::= TEXTUAL-CONVENTION
        STATUS  current
        DESCRIPTION
                "Length of the IMA frames."
        SYNTAX  INTEGER {
                m32(1),
                m64(2),
                m128(3),
                m256(4)
                }

ImaLinkState ::= TEXTUAL-CONVENTION
        STATUS     current
        DESCRIPTION
                "State of a link belonging to an IMA group."
        SYNTAX      INTEGER {
                notInGroup(1),
                unusableNoGivenReason(2),
                unusableFault(3),
                unusableMisconnected(4),
                unusableBlocked(5),
                unusableFailed(6),
                usable(7),
                active(8)
                }

ImaLinkFailureStatus ::= TEXTUAL-CONVENTION
        STATUS     current
        DESCRIPTION
                "Local failure status of a link belonging to an IMA group."
        SYNTAX      INTEGER {
                noFailure(1),
                imaLinkFailure(2),
                lifFailure(3),
                lodsFailure(4),
                misConnected(5),
                blocked(6),
                fault(7)
                }

ImaTestProcStatus ::= TEXTUAL-CONVENTION
        STATUS       current
        DESCRIPTION
                "States of the Test Pattern Procedure."
        SYNTAX      INTEGER {
```

```
                disabled(1),
                operating(2),
                linkfail(3)
                }

ImaGroupPhyType ::= TEXTUAL-CONVENTION
        STATUS  current
        DESCRIPTION
                "Physical interface type of the ima group."
        SYNTAX      INTEGER {
                ds1(1),
                e1(2)
                }


-- The IMA group subtree

imaGroupNumber OBJECT-TYPE
        SYNTAX     Integer32
        MAX-ACCESSread-only
        STATUS     current
        DESCRIPTION
                "The number of IMA groups configured on this system"
        ::= { atmImaMibObjects 1 }

-- The IMA group table contains configuration and status information
-- The following describes an individual IMA group entry in the table

imaGroupTableOBJECT-TYPE
        SYNTAX      SEQUENCE OF ImaGroupEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "The IMA group configuration table.
                 Contains an entry per each configured group"
        ::= { atmImaMibObjects 2 }

imaGroupEntryOBJECT-TYPE
        SYNTAX      ImaGroupEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "An entry into the IMA group table."
        INDEX       { imaGroupIndex }
        ::= { imaGroupTable 1 }

ImaGroupEntry ::= SEQUENCE {
                imaGroupIndex               Integer32,
                imaGroupRowStatus           RowStatus,
                imaGroupIfIndex             ImaIfIndex,
                imaGroupNeState             ImaGroupState,
                imaGroupFeState             ImaGroupState,
                imaGroupFailureStatus       ImaGroupFailureStatus,
                imaGroupSymmetry            ImaGroupSymmetry,
                imaGroupMinNumTxLinks       INTEGER,
                imaGroupMinNumRxLinks       INTEGER,
                imaGroupNeTxClkMode         ImaGroupTxClkMode,
                imaGroupFeTxClkMode         ImaGroupTxClkMode,
                imaGroupTxTimingRefLink     ImaIfIndex,
                imaGroupRxTimingRefLink     ImaIfIndex,
                imaGroupLastChange          DateAndTime,
                imaGroupTxImaId             ImaId,
                imaGroupRxImaId             ImaId,
                imaGroupTxFrameLength       ImaFrameLength,
                imaGroupRxFrameLength       ImaFrameLength,
                imaGroupDiffDelayMax        MilliSeconds,
                imaGroupLeastDelayLink      ImaIfIndex,
                imaGroupDiffDelayMaxObs     MilliSeconds,
                imaGroupAlphaValue          INTEGER,
                imaGroupBetaValue           INTEGER,
                imaGroupGammaValue          INTEGER,
                imaGroupRunningSecs         Seconds,
                imaGroupUnavailSecs         Seconds,
                imaGroupNeNumFailures       Integer32,
                imaGroupFeNumFailures       Integer32,
                imaGroupTxAvailCellRate     Integer32,
                imaGroupRxAvailCellRate     Integer32,
                imaGroupNumTxCfgLnks        Integer32,
                imaGroupNumRxCfgLnks        Integer32,
                imaGroupNumTxActLnks        Integer32,
                imaGroupNumRxActLnks        Integer32,
                imaGroupTestLinkIfIndex     ImaIfIndex,
                imaGroupTestPattern         Integer32,
                imaGroupTestProcStatus      ImaTestProcStatus,
                imaGroupPhyType             ImaGroupPhyType }

-- The following OBJECT-TYPES define all the elements in an IMA group
table entry

imaGroupIndexOBJECT-TYPE
        SYNTAX  Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "A unique value for the IMA group"
        ::= { imaGroupEntry 1 }
```

```
imaGroupRowStatusOBJECT-TYPE
        SYNTAX      RowStatus
        MAX-ACCESS   read-write
        STATUS      current
        DESCRIPTION
                "The imaGroupRowStatus object allows create
                 and delete operations on imaGroupTable entries.

                To create a new conceptual row (or instance) of the
                imaGroupTable, imaGroupRowStatus must be set to
                'createAndWait' or 'createAndGo.'  A successful
                set of the following objects must be
                performed before the row can transition to 'active' state:

                 imaGroupTxImaId
                 imaGroupMinNumTxLinks and
                 imaGroupMinNumRxLinks

                 To remove (delete) an imaGroupTable entry from
                 this table, set imaGroupRowStatus to 'destroy.'

                Setting the imaGroupRowStatus to 'active' has the effect of
                 activating the Group Startup Procedure.
                 The Group Startup Procedure
                 uses provisioned links that have imaLinkRowStatus
                 set to 'active' an imaLinkGroupIndex set the
                 imaGroupIndex in this conceptual row.

                 When the imaGroupRowStatus is not in
                 'active' state, the Group State
                 machine is in its 'Not Configured' state."
        ::= { imaGroupEntry 2 }

imaGroupIfIndexOBJECT-TYPE
        SYNTAX     ImaIfIndex
        MAX-ACCESSread-only
        STATUS      current
        DESCRIPTION
                "This object identifies the logical interface number
                 ('ifIndex') assigned to this IMA group, and is
                 used to identify corresponding rows in the
                 Interfaces MIB.
                 Note that re-initialization of the management agent
                 may cause a client's 'imaGroupIfIndex' to change."
        ::= { imaGroupEntry 3 }

imaGroupNeStateOBJECT-TYPE
        SYNTAX      ImaGroupState
        MAX-ACCESSread-only
        STATUS      current
        DESCRIPTION
                "The current operational state of the
                 near-end IMA Group State Machine."
        ::= { imaGroupEntry 4 }

imaGroupFeStateOBJECT-TYPE
        SYNTAX      ImaGroupState
        MAX-ACCESSread-only
        STATUS      current
        DESCRIPTION
                "The current operational state of the
                 far-end IMA Group State Machine."
        ::= { imaGroupEntry 5 }

imaGroupFailureStatus  OBJECT-TYPE
        SYNTAX     ImaGroupFailureStatus
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current failure status of the IMA group"
        ::= { imaGroupEntry 6 }

imaGroupSymmetry     OBJECT-TYPE
        SYNTAX     ImaGroupSymmetry
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Symmetry of the IMA group. The default
                 value is 'symmetric'. Currently only
                 support symmetric mode"
        ::= { imaGroupEntry 7 }

imaGroupMinNumTxLinks   OBJECT-TYPE
        SYNTAX      INTEGER( 1..32 )
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Minimum number of transmit links
                 required to be active to move the IMA
                 group into the up(2) state"
        ::= { imaGroupEntry 8 }

imaGroupMinNumRxLinks   OBJECT-TYPE
        SYNTAX      INTEGER( 1..32 )
```

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Minimum number of receive links
                 required to be active to move the IMA
                 group into the up(2) state"
        ::= { imaGroupEntry 9 }

imaGroupNeTxClkMode  OBJECT-TYPE
        SYNTAX     ImaGroupTxClkMode
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Synchronization mode used
                 by the local IMA group. Default value 'ctc'.
                 Currently only support ctc mode"
        ::= { imaGroupEntry 10 }

imaGroupFeTxClkMode  OBJECT-TYPE
        SYNTAX     ImaGroupTxClkMode
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Synchronization mode used by the remote IMA group"
        ::= { imaGroupEntry 11 }

imaGroupTxTimingRefLink OBJECT-TYPE
        SYNTAX      ImaIfIndex
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The LID of the transmit timing
                 reference link to be used by the near
                 end for IMA cell clock recovery from the ATM layer"
        ::= { imaGroupEntry 12 }

imaGroupRxTimingRefLink OBJECT-TYPE
        SYNTAX      ImaIfIndex
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The LID of the receive timing reference link to be
                 used by near end for IMA cell clock
                 recovery toward the ATM layer"
        ::= { imaGroupEntry 13 }

imaGroupLastChange   OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The time of day the IMA group last
                 changed operational state."
        ::= { imaGroupEntry 14 }

imaGroupTxImaId   OBJECT-TYPE
        SYNTAX      ImaId
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "The IMA ID currently in use by the local IMA function."
        ::= { imaGroupEntry 15 }

imaGroupRxImaId   OBJECT-TYPE
        SYNTAX      ImaId
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The IMA ID currently in use by the remote IMA function."
        ::= { imaGroupEntry 16 }

imaGroupTxFrameLength   OBJECT-TYPE
        SYNTAX     ImaFrameLength
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "The frame length to be used by the
                 IMA group in the transmit direction.
                 This value can only be set when the IMA
                 group oper status is startup(1).  The
                 default value is M128(128)."
        ::= { imaGroupEntry 17 }

imaGroupRxFrameLength   OBJECT-TYPE
        SYNTAX     ImaFrameLength
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The detected length of incoming IMA frames."
        ::= { imaGroupEntry 18 }

imaGroupDiffDelayMax  OBJECT-TYPE
        SYNTAX      MilliSeconds
        MAX-ACCESS  read-write
```

```
        STATUS      current
        DESCRIPTION
                "The maximum number of milliseconds of
                 delay differential among the links
                 that will be tolerated on this interface.
                 The default value is 25 mSec."
        ::= { imaGroupEntry 19 }

imaGroupLeastDelayLink  OBJECT-TYPE
        SYNTAX      ImaIfIndex
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The index of the link (in imaLinkTable),
                 belonging to this IMA group, which
                 has the smallest link propagation delay.
                 This value has meaning only if at
                 least 1 link is included in the IMA group."
        ::= { imaGroupEntry 20 }

imaGroupDiffDelayMaxObs  OBJECT-TYPE
        SYNTAX      MilliSeconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The latest max differential delay
                 (in milliseconds) observed among the
                 receive links that are currently available
                 in the IMA group."
        ::= { imaGroupEntry 21 }

imaGroupAlphaValue  OBJECT-TYPE
        SYNTAX      INTEGER( 1..2 )
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This indicates the ''alpha'' value used
                 to specify the number of consecutive
                 invalid ICP cells to be detected before
                 moving to the IMA HUNT state. The
                 default value is 2."
        ::= { imaGroupEntry 22 }

imaGroupBetaValue  OBJECT-TYPE
        SYNTAX      INTEGER( 1..5 )
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This indicates the ''beta'' value used to
                 specify the number of consecutive
                 errored ICP cells to be detected before
                 moving to the IMA HUNT state. The
                 default value is 2."
        ::= { imaGroupEntry 23 }

imaGroupGammaValue  OBJECT-TYPE
        SYNTAX      INTEGER( 1..5 )
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This indicates the ''gamma'' value used
                 to specify the number of consecutive
                 valid ICP cells to be detected before
                 moving to the IMA SYNC state from the
                 PRESYNC state. The default value is 1."
        ::= { imaGroupEntry 24 }

imaGroupRunningSecs  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The amount of time (in seconds) since
                 this IMA group has been in operation
                (up(2) or down(3))."
        ::= { imaGroupEntry 25 }

imaGroupUnavailSecs  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Count of 1 second intervals where
                 the group is unusable or not in service
                 (more than (N-P) links in UUS-IMA or UUS-FE)."
        ::= { imaGroupEntry 26 }

imaGroupNeNumFailures  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times the IMA group has moved
                 to a failure state since power-up or reboot."
        ::= { imaGroupEntry 27 }
```

```
imaGroupFeNumFailures  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times a far-end group failure
                 (Config-Abort-FE, Insufficient-Links-FE,
                 Blocked-FE) have been reported since power-up or reboot."
        ::= { imaGroupEntry 28 }

imaGroupTxAvailCellRate  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current cell rate (in cells per second)
                 provided by this IMA group,considering all the
                 transmit links in the Active state."
        ::= { imaGroupEntry 29 }

imaGroupRxAvailCellRate  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current cell rate (in cells per second)
                 provided by this IMA group, considering all
                 the receive links in the Active state."
        ::= { imaGroupEntry 30 }

-- imaGroupNumTxCfgLnks is used by a network operator to tell how many
-- links are configured for transmit in the IMA group.  The object
-- imaGroupAvailCellRate only indicates what cell rate is currently
-- available.  An available cell rate which is less than the desired rate
-- could mean that one or more links are inactive or not enough links
-- have been assigned to the group to obtain the desired cell rate.

imaGroupNumTxCfgLnks  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of links that are configured to
                 transmit in this IMA group."
        ::= { imaGroupEntry 31 }

-- imaGroupNumRxCfgLnks is used by a network operator to tell how many
-- links are configured for receive in the IMA group.

imaGroupNumRxCfgLnks  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of links that are configured to
                 receive in this IMA group."
        ::= { imaGroupEntry 32 }

-- imaGroupNumTxActLnks is used by a network operator to tell how many
-- links which are configured for transmit are also active.

imaGroupNumTxActLnks  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of links that are currently
                 active in this IMA group."
        ::= { imaGroupEntry 33 }

-- imaGroupNumRxActLnks is used by a network operator to tell how many
-- links which are configured for receive are also active.

imaGroupNumRxActLnks  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of links that are currently active
                 in this IMA group."
        ::= { imaGroupEntry 34 }

--
-- Test Pattern Procedure control objects. These objects are implemented
-- if the IMA implements the Test Pattern Procedure. In this case all
-- test pattern procedure related objects must be implemented.
-- Specifically these are
--
-- imaGroupTestLinkIfIndex
-- imaGroupTestPattern
-- imaGroupTestProcStatus
-- imaLinkTestProcStatus
-- imaLinkRxTestPattern
--
```

```
imaGroupTestLinkIfIndex  OBJECT-TYPE
        SYNTAX      ImaIfIndex
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This object is used to designate an interface as
                 the Test Link. A value of -1 specifies that the
                 implementation may choose the Test Link. In this case,
                 the implementation may also choose the
                 value of 'imaGroupTestPattern'.  Default value is -1"
        ::= { imaGroupEntry 35 }

imaGroupTestPattern  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "The value of this object is used to specify the test
                 pattern in an IMA group loopback operation.
                 A value in the range 0 to 255 designates a specific
                 pattern. A value of -1 specifies that the
                 implementation may choose the value.
                 In this case, the implementation may also choose the
                 value of 'imaGroupTestLinkIfIndex'.
                 The default value is -1."
        ::= { imaGroupEntry 36 }

imaGroupTestProcStatus  OBJECT-TYPE
        SYNTAX     ImaTestProcStatus
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This object is used to enable or disable
                 the Test Pattern Procedure,
                 and to note whether at least one link failed the test.

                 The test is started by setting operating(2) status.
                 If any link should fail the test, the
                 IMA will set the status to linkfail(3).
                 The linkfail(3) state will persist until either
                 the disabled(1) state is set or until no instance
                 of imaLinkTestProcStatus has the value linkfail(3).

                 Only the values disabled(1) and operating(2)
                 may be written. Writing the operating(2)
                 value will not cause clearing of the linkfail(3) state.
                 The default value is disabled(1)"
        ::= { imaGroupEntry 37 }

imaGroupPhyType  OBJECT-TYPE
        SYNTAX     ImaGroupPhyType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The physical link media type of the group.
                 A group cannot have mixed ds1 and
                 e1 physical interfaces"
        ::= { imaGroupEntry 38 }



--
-- The IMA Group - ifIndex Mapping Table
--

imaGroupMappingTable  OBJECT-TYPE
        SYNTAX     SEQUENCE OF ImaGroupMappingEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "A table mapping the 'ifIndex' values of 'imaGroupIfIndex'
                 to the 'imaGroupIndex' values of the corresponding
                 IMA group."
        ::= { atmImaMibObjects 3 }

imaGroupMappingEntry  OBJECT-TYPE
        SYNTAX  ImaGroupMappingEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Each row describes one ifIndex -> imaGroupIndex mapping."
        INDEX { imaGroupMappingIndex }
        ::= { imaGroupMappingTable 1 }

ImaGroupMappingEntry ::= SEQUENCE {
        imaGroupMappingIndexInteger32,
        imaGroupMappingIfIndexImaIfIndex }

imaGroupMappingIndex  OBJECT-TYPE
        SYNTAX     Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The imaGroupIndex of the IMA Group which implements
                 the specified interface."
        ::= { imaGroupMappingEntry 1 }
```

```
imaGroupMappingIfIndexOBJECT-TYPE
        SYNTAX     ImaIfIndex
        MAX-ACCESSread-only
        STATUS      current
        DESCRIPTION
                "This object identifies the logical interface number
                 ('ifIndex') assigned to this IMA group, and is used to
                 identify corresponding rows in the Interfaces MIB.

                 Note that re-initialization of the management agent
                 may cause a client's 'imaGroupIfIndex' to change."
        ::= { imaGroupMappingEntry 2 }




-- The IMA link configuration table
-- Each entry in the table contains information about a link
-- which could potentially be part of an IMA group

imaLinkTable  OBJECT-TYPE
        SYNTAX  SEQUENCE OF ImaLinkEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "The IMA link Configuration & status table.
                 Contains an entry per each IMA link"
        ::= { atmImaMibObjects 4 }

imaLinkEntry  OBJECT-TYPE
        SYNTAX      ImaLinkEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "An entry into the IMA link table."
        INDEX       { imaLinkIfIndex }
        ::= { imaLinkTable 1 }

ImaLinkEntry ::=    SEQUENCE {
                ImaLinkIfIndex            ImaIfIndex,
                imaLinkGroupIndex         Integer32,
                imaLinkRowStatus          RowStatus,
                imaLinkNeTxState          ImaLinkState,
                imaLinkNeRxState          ImaLinkState,
                imaLinkFeTxState          ImaLinkState,
                imaLinkFeRxState          ImaLinkState,
                imaLinkNeRxFailureStatus  ImaLinkFailureStatus,
                imaLinkFeRxFailureStatus  ImaLinkFailureStatus,
                imaLinkTxLid              ImaLid,
                imaLinkRxLid              ImaLid,
                imaLinkRelDelay           MilliSeconds,
                imaLinkImaViolations      Integer32,
                imaLinkOifAnomalies       Integer32,
                imaLinkNeSevErroredSec    Seconds,
                imaLinkFeSevErroredSec    Seconds,
                imaLinkNeUnavailSec       Seconds,
                imaLinkFeUnavailSec       Seconds,
                imaLinkNeTxUnusableSec    Seconds,
                imaLinkNeRxUnusableSec    Seconds,
                imaLinkFeTxUnusableSec    Seconds,
                imaLinkFeRxUnusableSec    Seconds,
                imaLinkNeTxNumFailures    Integer32,
                imaLinkNeRxNumFailures    Integer32,
                imaLinkFeTxNumFailures    Integer32,
                imaLinkFeRxNumFailures    Integer32,
                imaLinkTxStuffs           Integer32,
                imaLinkRxStuffs           Integer32,
                imaLinkRxTestPattern      INTEGER,
                imaLinkTestProcStatus     ImaTestProcStatus,
                imaLinkICPcellMon         Boolean,
                imaLinkICPcellPos         Integer32 }

-- The following OBJECT-TYPES define all the elements in an IMA link table
entry

imaLinkIfIndex  OBJECT-TYPE
        SYNTAX     ImaIfIndex
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The ifIndex of the physical link corresponding
                 to this port."
        ::= { imaLinkEntry 1 }

imaLinkGroupIndex  OBJECT-TYPE
        SYNTAX     Integer32
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "The index of the IMA Group to
                 which this link belongs.  This value has
                 significance only if the link belongs to an IMA group."
        ::= { imaLinkEntry 2 }
```

```
imaLinkRowStatus  OBJECT-TYPE
        SYNTAX      RowStatus
        MAX-ACCESS   read-write
        STATUS      current
        DESCRIPTION
                "The imaLinkRowStatus object allows create,
                 change and delete operations on imaLinkTable entries.

                To create a new conceptual row (or instance) of the
                imaLinkTable, imaLinkRowStatus must be set to
                'createAndWait' or 'createAndGo.'
                A successful set of the object imaLinkGroupIndex must be
                performed before the RowStatus of this new row can
                transition to the 'active' state. The
                imaLinkGroupIndex provides the association between
                a physical IMA link to an IMA group.

                To change (modify) an imaLinkTable entry, the
                imaLinkRowStatus object must be set to 'notInService'.
                Only then can the conceptual row be changed.
                Setting object imaLinkGroupIndex to a different
                value has the effect of changing the association
                between a physical IMA link and an IMA group.  To place the
                link 'in group', the imaLinkRowStatus object is set to
                'active'. While the row is not in 'active' state,
                both the Transmit and Receive IMA state machines
                are in the 'Not In Group' state.

                To remove (delete) an imaLinkTable entry from this table,
                Set this object to 'destroy.'

                A network manager may elect to perform a delete operation
                followed immediately by a create operation instead of a
                modify operation. The net effect of the delete/create is to
                re-instantiate (reset) agent counters defined in this
                table."
        ::= { imaLinkEntry 3 }


imaLinkNeTxState  OBJECT-TYPE
        SYNTAX     ImaLinkState
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current state of the near-end transmit link."
        ::= { imaLinkEntry 4 }
```

```
imaLinkNeRxState  OBJECT-TYPE
        SYNTAX     ImaLinkState
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current state of the near-end receive link."
        ::= { imaLinkEntry 5 }

imaLinkFeTxState  OBJECT-TYPE
        SYNTAX     ImaLinkState
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current state of the far-end transmit
                 link as reported via ICP cells."
        ::= { imaLinkEntry 6 }

imaLinkFeRxState  OBJECT-TYPE
        SYNTAX     ImaLinkState
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current state of the far-end receive link
                 as reported via ICP cells."
        ::= { imaLinkEntry 7 }

imaLinkNeRxFailureStatus  OBJECT-TYPE
        SYNTAX     ImaLinkFailureStatus
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
        "The current link failure status of the near-end receive link."
        ::= { imaLinkEntry 8 }

imaLinkFeRxFailureStatus  OBJECT-TYPE
        SYNTAX     ImaLinkFailureStatus
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The current link failure status of the
                 far-end receive link as reported via ICP cells."
        ::= { imaLinkEntry 9 }

imaLinkTxLid  OBJECT-TYPE
        SYNTAX     ImaLid
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```

```
                "The outgoing LID used currenly on the link by the
                 local end.  This value has meaning only if the link
                 belongs to an IMA group."
        ::= { imaLinkEntry 10 }

imaLinkRxLid  OBJECT-TYPE
        SYNTAX    ImaLid
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The incoming LID used currenly on the link by
                 the remote end.  This value has meaning only if the
                 link belongs to an IMA group."
        ::= { imaLinkEntry 11 }

imaLinkRelDelay  OBJECT-TYPE
        SYNTAX     MilliSeconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The latest measured delay on this link relative
                 to the link, in the same IMA group, with the least delay."
        ::= { imaLinkEntry 12 }

imaLinkImaViolations  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "ICP violations: count of errored, invalid or
                 missing ICP cells during non-SES-IMA condition."
        ::= { imaLinkEntry 13 }

imaLinkOifAnomalies  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of OIF anomolies duringnon-SES-IMA
                 condition at the NE. This is an optional attribute"
        ::= { imaLinkEntry 14 }

imaLinkNeSevErroredSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Count of one second intervals containing
                 several (TDB) IV-IMA, or one or more link defects
                 (LOS, OOF/LOF, LCD), LIF, LODS defects during
                 non UAS-IMA condition."
        ::= { imaLinkEntry 15 }

imaLinkFeSevErroredSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Count of one second intervals containing one
                 or more IMA-RDI defects."
        ::= { imaLinkEntry 16 }

imaLinkNeUnavailSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Unavailable seconds: unavailability begins at the
                 onset of 10 contiguous SES-IMA and ends at the
                 onset of 10 contiguous seconds with non SES-IMA."
        ::= { imaLinkEntry 17 }

imaLinkFeUnavailSec    OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Unavailable seconds at far-end: unavailability begins
                 at the onset of 10 contiguous SES-IMA-FE
                 and ends at the onset of 10 contiguous seconds with
                 non SES-IMA-FE."
        ::= { imaLinkEntry 18 }

imaLinkNeTxUnusableSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Tx unusable seconds: the count of unusable seconds
                 at the near end Tx LSM."
        ::= { imaLinkEntry 19 }

imaLinkNeRxUnusableSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
```

```
        DESCRIPTION
                "Rx unusable seconds: the count of unusable
                 seconds at the near end Rx LSM."
        ::= { imaLinkEntry 20 }

imaLinkFeTxUnusableSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Unusable seconds at far-end: the count of seconds
                 with unusable indications at the far end Tx LSM."
        ::= { imaLinkEntry 21 }

imaLinkFeRxUnusableSec  OBJECT-TYPE
        SYNTAX      Seconds
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Unusable seconds at far-end: the count
                 of seconds with unusable indications at
                 the far end Rx LSM."
        ::= { imaLinkEntry 22 }

imaLinkNeTxNumFailures    OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times a near-end Tx failure
                 alarm condition has been entered for
                 this link."
        ::= { imaLinkEntry 23 }

imaLinkNeRxNumFailures    OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times a near-end Rx
                 failure alarm condition has been entered for
                 this link."
        ::= { imaLinkEntry 24 }

imaLinkFeTxNumFailures    OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times a far-end Tx failure
                 alarm condition has been entered for
                 this link.  This is an optional attribute"
        ::= { imaLinkEntry 25 }

imaLinkFeRxNumFailures    OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "The number of times a far-end Rx
                 failure alarm condition has been entered for
                 this link.  This is an optional attribute"
        ::= { imaLinkEntry 26 }

imaLinkTxStuffs  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Counts of stuff events inserted in the tx direction.
                 This is an optional attribute"
        ::= { imaLinkEntry 27 }

imaLinkRxStuffs  OBJECT-TYPE
        SYNTAX      Integer32
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Counts of stuff events inserted in the rx direction.
                 This is an optional attribute"
        ::= { imaLinkEntry 28 }

--
-- Test Pattern Procedure control objects. These objects are implemented
-- if the IMA implements the Test Pattern Procedure. In this case all
-- test pattern procedure related objects must be implemented.
-- Specifically these are
--
-- imaGroupTestLinkIfIndex
-- imaGroupTestPattern
-- imaGroupTestProcStatus
-- imaLinkTestProcStatus
-- imaLinkRxTestPattern
--
```

```
imaLinkRxTestPattern  OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This object identifies the test pattern
                 received in the ICP Cell (octet 17)
                 on the link during the IMA Test Pattern Procedure.
                 This value may then be compared to the
                 transmitted test pattern."
        ::= { imaLinkEntry 29 }

imaLinkTestProcStatus OBJECT-TYPE
        SYNTAX      ImaTestProcStatus
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This value indicates the current state
                 of the Test Pattern Procedure. If the
                 value is disabled(1), the test is not running.
                 A value of operating(2) means the test is running
                 and no error has been found on this interface. A value of
                 linkfail(3) means an error has been detected
                 on this link during the test.

                 Once an error occurs, the linkfail(3) value is
                 latched until either this object is read or until
                 the imaGroupTestProcStatus is moved to disabled(1).
                 Once read, if the error no longer persists, a
                 subsequent read will report the value
                 operating(2)."
        ::= { imaLinkEntry 30 }

-- imaLinkICPcellMon is used to indicate if the link is selected for
-- ICP Cell monitoring.  Any number of links in a group can have a TRUE
-- value for the imaLinkICPcellMon object.  If all links that have
-- imaLinkICPcellMon set to TRUE have and ifOperStatus 'down',
-- monitoring of the ICP Cell in the group is implementation specific.

imaLinkICPcellMon  OBJECT-TYPE
        SYNTAX     Boolean
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This value indicates if the link is selected for ICP Cell
                 monitoring purposes.  "
        ::= { imaLinkEntry 31 }

imaLinkICPcellPos  OBJECT-TYPE
        SYNTAX     Integer32
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "This value indicates where in the ima frame
                 a link should place its' ICP cell.
                 Note: this value must be between 0 and M the frame size."
        ::= { imaLinkEntry 32 }


END



-- ******************************************************
```

IMAPROV MIB

```
-- ******************************************************
--
-- IMA Provisioning Info

IMA-PROV-MIB DEFINITIONS ::= BEGIN

IMPORTS
        OBJECT-TYPE                        FROM RFC-1212
        saBrdNum, saPodNum, saImaProvFROM OASIS-SYSINFO-MIB;

-- Ima Provisioning Table
saImaProvTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaImaProvEntry
        ACCESS  not-accessible
        STATUS  mandatory
        DESCRIPTION
                "IMA Provisioning Support Table"
        ::= { saImaProv 1 }

saImaProvEntry OBJECT-TYPE
        SYNTAX  SaImaProvEntry
        ACCESS  not-accessible
        STATUS  mandatory
        DESCRIPTION
                "IMA Provisioning Table Entry"
        INDEX   { saBrdNum,
                saPodNum }
        ::= { saImaProvTable 1 }
```

```
saImaProvEntry ::=
       SEQUENCE {
              saImaProvGrpStatus         INTEGER,
-- STW - 980120         saImaProvTxImaId           INTEGER,
-- STW - 980120         saImaProvTxLinks           INTEGER,
-- STW - 980120         saImaProvRxLinks           INTEGER,
-- STW - 980120         saImaProvLinkStatus        INTEGER,
-- STW - 980120         saImaProvPort              INTEGER
              saImaProvGrpIndex   INTEGER
-- STW - 980120 - added as pass back for UI
              }

saImaProvGrpStatus  OBJECT-TYPE
       SYNTAX  INTEGER {
              none(0),
              createAndGo(1),
              createAndWait(2)
              }
       ACCESS  read-write
       STATUS  mandatory
       DESCRIPTION
              "group status"
       ::= { saImaProvEntry 1 }

-- STW - 980120 - all below removed from Mib

--          saImaProvTxImaId  OBJECT-TYPE
--              SYNTAX  INTEGER( 0..255 )
--              ACCESS  read-write
--              STATUS  mandatory
--              DESCRIPTION
--                  "transmit ima id"
--              ::= { saImaProvEntry 2 }

--          saImaProvTxLinks  OBJECT-TYPE
--              SYNTAX  INTEGER( 1..16 )
--             ACCESS  read-write
--              STATUS  mandatory
--              DESCRIPTION
--                  "number of transmit links to be in group"
--              ::= { saImaProvEntry 3 }

--          saImaProvRxLinks  OBJECT-TYPE
--              SYNTAX  INTEGER( 1..16 )
--              ACCESS  read-write
--              STATUS  mandatory
--              DESCRIPTION
--                  "number of transmit links to be in group"
--              ::= { saImaProvEntry 4 }

--          saImaProvLinkStatus  OBJECT-TYPE
--              SYNTAX  INTEGER {
--                  none(0),
--                  createAndGo(1),
--                  createAndWait(2)
--              }
--              ACCESS  read-write
--              STATUS  mandatory
--              DESCRIPTION
--                  "link status"
--              ::= { saImaProvEntry 5 }

--          saImaProvPort  OBJECT-TYPE
--              SYNTAX  INTEGER
--              ACCESS  read-write
--              STATUS  mandatory
--              DESCRIPTION
--                  "ima Port Number for command"
--              ::= { saImaProvEntry 6 }

-- STW - 980120 - added to Mib for Index pass back to UI

saImaProvGrpIndex  OBJECT-TYPE
       SYNTAX  INTEGER (0..65536) -- This should be 32 bit
       ACCESS  read-only
       STATUS  mandatory
       DESCRIPTION
              "Group table entry for newly created group"
       ::= { saImaProvEntry 2 }


END
```

```
-- ******************************************************
```

SIG MIB

```
-- ******************************************************

sa-SIGNALLING-MIB DEFINITIONS ::= BEGIN

IMPORTS
       OBJECT-TYPE, Counter32, Gauge32, Integer32
                  FROM SNMPv2-SMI
       ifIndex
                  FROM RFC1213-MIB
       saSignalling
                  FROM OASIS-SYSINFO-MIB
       Counter
                  FROM RFC1155-SMI;

-- groups in SA-SIG-ILMI-MIB
               saILMIOBJECT IDENTIFIER ::= { saSignalling 1 }
               saUNIOBJECT IDENTIFIER ::= { saSignalling 2 }
               saPNNIOBJECT IDENTIFIER ::= { saSignalling 3 }
               saSvcSapOBJECT IDENTIFIER ::= { saSignalling 4 }
               saAspvcOBJECT IDENTIFIER ::= { saSignalling 5 }

--=====================================================================
--
-- SA ILMI Parameter Table
--
--=====================================================================

-- ILMI Extension Table
-- This group is current for all ATM Interface devices.

saIlmiParamTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaIlmiParamEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "A table of ILMI Configurational and Operational
               information not covered by ATM Forum ILMI MIB."
       ::= { saILMI 1 }

saIlmiParamEntry OBJECT-TYPE
       SYNTAX  SaIlmiParamEntry
       MAX-ACCESS  not-accessible
       STATUS  current
       DESCRIPTION
              "An entry in the table, containing information about
               ILMI on an ATM Interface."
       INDEX   { saIlmiParamIndex }
       ::= { saIlmiParamTable 1 }

SaIlmiParamEntry ::=
       SEQUENCE {
              saIlmiParamIndex
                  INTEGER,
              saIlmiOperStatus
                  INTEGER,
              saIlmiBmkrVpi
                  INTEGER,
              saIlmiBmkrVci
                  INTEGER,
              saIlmiPollInt
                  INTEGER,
              saIlmiPollRetryCnt
                  INTEGER,
              saIlmiNumPdusTx
                  Counter,
              saIlmiNumPdusRx
                  Counter,
              saIlmiNumBytesTx
                  Counter,
              saIlmiNumBytesRx
                  Counter,
              saIlmiNumUmePollsTx
                  Counter,
              saIlmiNumUmeResponsesRx
                  Counter,
              saIlmiNumErrorsRx
                  Counter,
              saIlmiUmeState
                  INTEGER,
              saIlmiUmeStatus
                  INTEGER,
              saIlmiParamRowStatus
                  INTEGER
              }

saIlmiParamIndex OBJECT-TYPE
       SYNTAX  INTEGER (1..255)
       MAX-ACCESSread-only
       STATUS  current
       DESCRIPTION
              "IfIndex associated with the ATM Interface"
       ::= { saIlmiParamEntry 1 }
```

```
saIlmiOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                down(1),
                alloc-buff-failed(2),
                tunnel-add-failed(3),
                xcnt-add-failed(4),
                up(5),
                new(6)
                }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Operational status for ILMI function on this ATM port."
        ::= { saIlmiParamEntry 2 }

saIlmiBmkrVpi OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Internal BridgeMaker VPI"
        ::= { saIlmiParamEntry 3 }

saIlmiBmkrVci OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Internal BridgeMaker VPI"
        ::= { saIlmiParamEntry 4 }

saIlmiPollInt OBJECT-TYPE
        SYNTAX  INTEGER (1..255)
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "If ILMI is enabled for this ATM port, the duration
                 in seconds that the ILMI poll is generated, if DCE,
                 or monitored, if DTE. The default value is 5 seconds."
        ::= { saIlmiParamEntry 5 }

saIlmiPollRetryCnt OBJECT-TYPE
        SYNTAX  INTEGER (1..255)
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "If ILMI is enabled for this ATM port, the
                 consecutive missed poll threshold to be reached
                 before declaring the port's operational
                 status down. The default value is 4 times."
        ::= { saIlmiParamEntry 6 }

saIlmiNumPdusTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of ILMI PDU's transmitted on this ATM port."
        ::= { saIlmiParamEntry 7 }

saIlmiNumPdusRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of properly formatted ILMI PDU's
                 received on this ATM port."
        ::= { saIlmiParamEntry 8 }

saIlmiNumBytesTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of ILMI bytes transmitted on this ATM port."
        ::= { saIlmiParamEntry 9 }

saIlmiNumBytesRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of ILMI bytes received on this ATM port."
        ::= { saIlmiParamEntry 10 }

saIlmiNumUmePollsTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of ILMI polls sent by the UME
                 entity on this ATM DCE port."
        ::= { saIlmiParamEntry 11 }
```

```
saIlmiNumUmeResponsesRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of ILMI poll responses received by the
                 UME entity on this ATM DCE port."
        ::= { saIlmiParamEntry 12 }

saIlmiNumErrorsRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The number of improperly formatted ILMI PDU's
                 received on this ATM port."
        ::= { saIlmiParamEntry 13 }

saIlmiUmeState OBJECT-TYPE
        SYNTAX  INTEGER {
                ume-plnk-down-state(1),
                ume-llnk-down-state(2),
                ume-llnk-up-state(3),
                ume-registering-state(4),
                ume-reg-xchg-state(5)
                }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "ILMI UME FSM state"
        ::= { saIlmiParamEntry 14 }

saIlmiUmeStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                ilmi-down(1),
                ilmi-registering(2),
                ilmi-up(3)
                }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "ILMI UME statue"
        ::= { saIlmiParamEntry 15 }

saIlmiParamRowStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                create(1),
                created(2)
                }
        MAX-ACCESS read-create
        STATUS   current
        DESCRIPTION
        " Used to create an ILMI Parameter row using SNMP 'set' command "
        ::= { saIlmiParamEntry 16 }

--
--  The tables that are relevant to managing SVC addresses and prefixes
--  in a Sahara Network.
--

--
--  ILMI Node Prefix Table
--

saIlmiNodePrefixTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaIlmiNodePrefixEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "A table of prefixes associated with this node."
        ::= { saILMI 2 }

saIlmiNodePrefixEntry OBJECT-TYPE
        SYNTAX SaIlmiNodePrefixEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "The node prefix entry contains objects relevant to
                 SVC prefixes associated with the node.  Note that the
                 index variable, svcNodePrefixPrefix is a variable
                 length octet string and as such is encoded with
                 the octet string length per RFC1212,
                 section 4.1.6."
        INDEX { saIlmiNodePrefixPrefix }
        ::= { saIlmiNodePrefixTable 1 }

SaIlmiNodePrefixEntry ::= SEQUENCE
                {
                saIlmiNodePrefixPrefix
                    OCTET STRING,
                saIlmiNodePrefixAdminStatus
                    INTEGER,
                saIlmiNodePrefixNumBits
                    INTEGER,
                saIlmiNodePrefixNmbPlan
                    INTEGER,
```

```
                saIlmiNodePrefixOperStatus
                    INTEGER,
                saIlmiNodePrefixOrgScope
                    INTEGER,
                saIlmiNodePrefixRowStatus
                    INTEGER
                }

saIlmiNodePrefixPrefix OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(1..20))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "A prefix associated with this node.  E.164 prefixes
                 are coded as 1-15 ASCII octets with no leading
                 padding required.X.121 prefixes are coded as
                 1-14 ASCII octets with no leading padding required.
                 ATM endsystem prefixes are coded as 1-20 binary
                 octets.  Unused bits in the last octet must be set to 0."
        ::= { saIlmiNodePrefixEntry 1 }

saIlmiNodePrefixAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                no-operation(3)
                }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The status of this entry."
        ::= { saIlmiNodePrefixEntry 2 }

saIlmiNodePrefixNumBits OBJECT-TYPE
        SYNTAX INTEGER (1..160)
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The number of valid bits associated with this
                 entry's prefix object. By default, this value
                 will be 8 times the prefix object's octet
                 string length.  This value must be consistent
                 with the number of octets specified in the node prefix."
        ::= { saIlmiNodePrefixEntry 3 }

saIlmiNodePrefixNmbPlan OBJECT-TYPE
        SYNTAX INTEGER {
                e164(1),
                nsap(2),
                unknown(3)
                }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The numbering plan corresponding to this entry's
                 prefix object."
        ::= { saIlmiNodePrefixEntry 4 }

saIlmiNodePrefixOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                down(1),
                unknown-nmbPlan(2),
                wrong-numBits(3),
                up(4),
                new(5)
                }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "Operational status of this entry."
        ::= { saIlmiNodePrefixEntry 5 }

saIlmiNodePrefixOrgScope OBJECT-TYPE
        SYNTAX INTEGER {
                local(1),
                local-plus-one(2),
                local-plus-two(3),
                site-minus-one(4),
                intra-site(5),
                site-plus-one(6),
                org-minus-one(7),
                intra-org(8),
                org-plus-one(9),
                community-minus-one(10),
                intra-community(11),
                community-plus-one(12),
                regional(13),
                inter-regional(14),
                inter-global(15)
        }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
```

```
                "The organizational scope corresponding to
                 this entry's prefix object."
        DEFVAL { inter-global }
        ::= { saIlmiNodePrefixEntry 6 }

saIlmiNodePrefixRowStatus OBJECT-TYPE
        SYNTAX    INTEGER {
                create(1),
                created(2),
                delete(3)
                }
        MAX-ACCESS read-create
        STATUS    current
        DESCRIPTION
        " Used to create a Node Prefix row using SNMP 'set' command "
        ::= { saIlmiNodePrefixEntry 7}

--
--  ILMI Port Prefix Table
--

saIlmiPortPrefixTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaIlmiPortPrefixEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "A table of SVC address prefixes
                 associated with ports on this node."
        ::= { saILMI 3 }

saIlmiPortPrefixEntry OBJECT-TYPE
        SYNTAX SaIlmiPortPrefixEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "The prefix entry contains objects relevant to SVC prefixes
                 associated with this port.  Note that the index variable,
                 svcPrefixPrefix is a variable length octet string and as
                 such is encoded with the octet string length per RFC1212,
                 section 4.1.6."
        INDEX { saIlmiPortPrefixIfIndex, saIlmiPortPrefixPrefix }
        ::= { saIlmiPortPrefixTable 1 }

SaIlmiPortPrefixEntry ::=
        SEQUENCE {
                saIlmiPortPrefixIfIndex
                    INTEGER,
                saIlmiPortPrefixPrefix
                    OCTET STRING,
                saIlmiPortPrefixNumBits
                    INTEGER,
                saIlmiPortPrefixNmbPlan
                    INTEGER,
                saIlmiPortPrefixAdminStatus
                    INTEGER,
                saIlmiPortPrefixOperStatus
                    INTEGER,
                saIlmiPortPrefixOrgScope
                    INTEGER,
                saIlmiPortPrefixRowStatus
                    INTEGER
        }

saIlmiPortPrefixIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The interface value of the corresponding MIB-II ifEntry."
        ::= { saIlmiPortPrefixEntry 1 }

saIlmiPortPrefixPrefix OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(1..20))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "A prefix associated with this port.  E.164 prefixes are
                 coded as 1-15 ASCII octets with no leading padding
                 required. X.121 prefixes are coded as 1-14 ASCII
                 octets with no leading padding required.
                 ATM endsystem prefixes are coded as 1-20 binary
                 octets.  Unused bits in the last octet must be set to 0.

                 For ATM DCE ports only, atm-endsystem prefixes
                 with length 104 bits (13 octets) and all E.164
                 prefixes are eligible for ILMI address
                 registration."
        ::= { saIlmiPortPrefixEntry 2 }

saIlmiPortPrefixAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1),
                down(2),
                no-operation(3)
                }
        MAX-ACCESS read-write
```

```
        STATUS current
        DESCRIPTION
                "The status of this entry."
        ::= { saIlmiPortPrefixEntry 3 }

saIlmiPortPrefixNumBits OBJECT-TYPE
        SYNTAX INTEGER (0..160)
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The number of valid bits associated with
                 this entry's prefix object. By default, this
                 value will be 8 times the prefix object's octet
                 string length.  This value must be consistent
                 with the number of octets specified in the prefix.
                 The value 0 presents a special case and may
                 only be set when the prefix, itself, is a single
                 octet of value 0. A 0-length prefix on this port
                 signifies a default route to the switch's
                 routing function."
        ::= { saIlmiPortPrefixEntry 4 }

saIlmiPortPrefixNmbPlan OBJECT-TYPE
        SYNTAX INTEGER {
                e164(1),
                nsap(2),
                unknown(3)
        }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The numbering plan corresponding to this
                 entry's prefix object."
        ::= { saIlmiPortPrefixEntry 5 }

saIlmiPortPrefixOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                down(1),
                unknown-nmbPlan(2),
                wrong-numBits(3),
                up(4),
                new(5)
                }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "Operational status of this entry."
        ::= { saIlmiPortPrefixEntry 6 }

saIlmiPortPrefixOrgScope OBJECT-TYPE
        SYNTAX INTEGER {
                local(1),
                local-plus-one(2),
                local-plus-two(3),
                site-minus-one(4),
                intra-site(5),
                site-plus-one(6),
                org-minus-one(7),
                intra-org(8),
                org-plus-one(9),
                community-minus-one(10),
                intra-community(11),
                community-plus-one(12),
                regional(13),
                inter-regional(14),
                inter-global(15)
                }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The organizational scope corresponding to this entry's
prefix object."
        DEFVAL { inter-global }
        ::= { saIlmiPortPrefixEntry 7 }

saIlmiPortPrefixRowStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                create(1),
                created(2),
                delete(3)
                }
        MAX-ACCESS read-create
        STATUS   current
        DESCRIPTION
        " Used to create a Port Prefix row using SNMP 'set' command "
        ::= { saIlmiPortPrefixEntry 8 }

--
--   SVC ATM User Part Table
--

saIlmiUserPartTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaIlmiUserPartEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
```

```
                "A table of partial SVC addresses associated with
                 ports on this node, relevant only to ATM DTE ports
                 for use in ILMI address registration."
        ::= { saILMI 4 }

saIlmiUserPartEntry OBJECT-TYPE
        SYNTAX SaIlmiUserPartEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "The user part entry contains objects relevant to
                 partial SVC addresses associated with ATM DTE
                 ports on this node."
        INDEX { saIlmiUserPartIfIndex, saIlmiUserPartUserPart }
        ::= { saIlmiUserPartTable 1 }

SaIlmiUserPartEntry ::=
        SEQUENCE {
                saIlmiUserPartIfIndex
                    INTEGER,
                saIlmiUserPartUserPart
                    OCTET STRING,
                saIlmiUserPartAdminStatus
                    INTEGER,
                saIlmiUserPartRowStatus
                    INTEGER,
                saIlmiUserPartOperStatus
                    INTEGER
        }

saIlmiUserPartIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The interface value of the corresponding MIB-II ifEntry."
        ::= { saIlmiUserPartEntry 1 }

saIlmiUserPartUserPart OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(7))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "A partial ATM endsystem address associated
                 with this ATM DTE port. It will be combined with
                 ATM endsystem prefixes received from the
                 peer DCE to form a full ATM endsystem address.
                 This object is coded as 7 binary octets."
        ::= { saIlmiUserPartEntry 2 }

saIlmiUserPartAdminStatus OBJECT-TYPE
        SYNTAX INTEGER {
                configured(1), -- this entry has been configured by NMS
                invalid(2)     -- this entry will be marked down
        }
        MAX-ACCESS read-write
        STATUS current
        DESCRIPTION
                "The status of this entry."
        ::= { saIlmiUserPartEntry 3 }

saIlmiUserPartRowStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                create(1),
                created(2),
                delete(3)
                }
        MAX-ACCESS read-create
        STATUS   current
        DESCRIPTION
        " Used to create a Port Prefix row using SNMP 'set' command "
        ::= { saIlmiUserPartEntry 4 }

saIlmiUserPartOperStatus OBJECT-TYPE
        SYNTAX INTEGER {
                configured(1), -- this entry is up
                invalid(2)     -- this entry is down
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The operational status of this entry."
        ::= { saIlmiUserPartEntry 5 }
```

```
--=====================================================================
-- SA Svc Tunnel Table
--
--=====================================================================

--              Svc Tunnel Table
--
-- This group is current for all ATM Interface devices.
--

        saSvcTunnelTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaSvcTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of SVC BridgeMaker Tunnel table"
        ::= { saSvcSap 1 }

saSvcTunnelEntry OBJECT-TYPE
        SYNTAX  SaSvcTunnelEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about
                 BridgeMaker tunnel details for signaling VC"
        INDEX   {saSvcTunnelAtmPortIndex, saSvcTunnelBmkrIndex,
saSvcTunnelBmkrVp, saSvcTunnelBmkrVc }
        ::= { saSvcTunnelTable 1 }

SaSvcTunnelEntry ::=
        SEQUENCE {
                saSvcTunnelAtmPortIndex
                    INTEGER,
                saSvcTunnelBmkrIndex
                    INTEGER,
                saSvcTunnelBmkrVp
                    INTEGER,
                saSvcTunnelBmkrVc
                    INTEGER,
                saSvcTunnelAdminStatus
                    INTEGER,
                saSvcTunnelAtmPortVp
                    INTEGER,
                saSvcTunnelAtmPortVc
                    INTEGER,
                saSvcTunnelPcr
                    INTEGER,
                saSvcTunnelCdvt
                    INTEGER,
                saSvcTunnelCreateErrCode
                    INTEGER,
                saSvcTunnelConId
                    INTEGER
                }

saSvcTunnelAtmPortIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "IfIndex associated with the ATM Interface"
        ::= { saSvcTunnelEntry 1 }

saSvcTunnelBmkrIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "BridgeMaker ATM interaface ifIndex"
        ::= { saSvcTunnelEntry 2 }

saSvcTunnelBmkrVp OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Internal BridgeMaker VPI"
        ::= { saSvcTunnelEntry 3 }

saSvcTunnelBmkrVc OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Internal BridgeMaker VCI"
        ::= { saSvcTunnelEntry 4 }

saSvcTunnelAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                up(1)
                }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Admin status of the Signaling VC."
        ::= { saSvcTunnelEntry 5 }
```

```
saSvcTunnelAtmPortVp OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "VP of the ATM Interface"
        ::= { saSvcTunnelEntry 6 }

saSvcTunnelAtmPortVc OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "VC of the ATM Interface"
        ::= { saSvcTunnelEntry 7 }

saSvcTunnelPcr OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Peak Cell Rate"
        ::= { saSvcTunnelEntry 8 }

saSvcTunnelCdvt OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "cdvt"
        ::= { saSvcTunnelEntry 9 }

saSvcTunnelCreateErrCode OBJECT-TYPE
        SYNTAX  INTEGER {
                creating(1),
                success(2),
                port-failed-post(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Signaling VC creation error code"
        ::= { saSvcTunnelEntry 10 }

saSvcTunnelConId OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "cross connect ID - used to modify/delete an entry"
        ::= { saSvcTunnelEntry 11 }




-- ****************************************************************
```

svcAtmConfigTables

```
--
-- These were transferred from the Cascade.MIB.  The Cascade version
-- of these tables, were actually encoded as a single ASN.1 table.
-- Some SNMP managers (notable SNMPc from Castlerock) were unable to
-- browse tables that large.All object definitions remain intact,
-- but the table has been split into three independent tables, and
-- some syntax errors have been removed.
--
-- A mirror of this MIB can be instantiated under the cascade enterprise
-- if necessary.
-- ****************************************************************

--
*********************************************************************
-- svcAtmConfigTable1
--
-- First part of svcAtmConfigTable from cascade enterprise.
--
*********************************************************************
*

svcAtmConfigTable1 OBJECT-TYPE
        SYNTAX  SEQUENCE OF SvcAtmConfigEntry1
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "A table of ATM signalling parameters associated
                 with ATM logical ports.
                 The maximum number of entries is given by the value of
                 ifNumber in MIB-II."
        ::= { saSvcSap 2 }

svcAtmConfigEntry1 OBJECT-TYPE
        SYNTAX  SvcAtmConfigEntry1
        MAX-ACCESSnot-accessible
        STATUS  current
```

```
        DESCRIPTION
                "The SVC ATM configuration entry contains
                 objects relevant to the configuration and
                 monitoring of ATM signalling on an ATM logical port."
        INDEX { svcAtmConfigIfIndex }
        ::= { svcAtmConfigTable1 1 }

SvcAtmConfigEntry1 ::=
        SEQUENCE {
                svcAtmConfigIfIndex
                    INTEGER,
                svcAtmConfigSigAdminStatus
                    INTEGER,
                svcAtmConfigSigOperStatus
                    INTEGER,
                svcAtmConfigQ93bMaxRestart
                    INTEGER,
                svcAtmConfigQ93bMaxStatEnq
                    INTEGER,
                svcAtmConfigQ93bT303
                    INTEGER,
                svcAtmConfigQ93bT308
                    INTEGER,
                svcAtmConfigQ93bT309
                    INTEGER,
                svcAtmConfigQ93bT310
                    INTEGER,
                svcAtmConfigQ93bT313
                    INTEGER,
                svcAtmConfigQ93bT316
                    INTEGER,
                svcAtmConfigQ93bT322
                    INTEGER,
                svcAtmConfigQ93bT398
                    INTEGER,
                svcAtmConfigQ93bT399
                    INTEGER,
                svcAtmConfigQ93bT301
                    INTEGER,
                svcAtmConfigQ93bT397
                    INTEGER,
                svcAtmConfigAal5FrameDiscardStatus
                    INTEGER,
                svcAtmConfigClearCounts
                    INTEGER,
                svcAtmConfigSigXcntCause
                    INTEGER,
                svcAtmConfigSigVcRate
                    INTEGER
        }

svcAtmConfigIfIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The ifIndex value of the  corresponding ifEntry."
        ::= { svcAtmConfigEntry1 1 }

svcAtmConfigSigAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                enabled (1),
                disabled (2)
        }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The configured state of the ATM signalling
                 function for this port."
        ::= { svcAtmConfigEntry1 2 }

svcAtmConfigSigOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                down (1),
                connecting (2),
                up (3)
        }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The operational status of the signalling
                 function on this port."
        ::= { svcAtmConfigEntry1 3 }

svcAtmConfigQ93bMaxRestart OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum number of unacknowledged restarts to
                 send before declaring a signalling failure."
        ::= { svcAtmConfigEntry1 4 }
```

```
svcAtmConfigQ93bMaxStatEnq OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum number of unacknowledged status
                 enquiries to send before issuing a restart."
        ::= { svcAtmConfigEntry1 5 }

svcAtmConfigQ93bT303 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T303, specified in milliseconds."
        ::= { svcAtmConfigEntry1 6 }

svcAtmConfigQ93bT308 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T308, specified in milliseconds."
        ::= { svcAtmConfigEntry1 7 }

svcAtmConfigQ93bT309 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T309, specified in milliseconds."
        ::= { svcAtmConfigEntry1 8 }

svcAtmConfigQ93bT310 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T310, specified in milliseconds."
        ::= { svcAtmConfigEntry1 9 }

svcAtmConfigQ93bT313 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T313, specified in milliseconds."
        ::= { svcAtmConfigEntry1 10 }

svcAtmConfigQ93bT316 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T316, specified in milliseconds."
        ::= { svcAtmConfigEntry1 11 }

svcAtmConfigQ93bT322 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T322, specified in milliseconds."
        ::= { svcAtmConfigEntry1 12 }

svcAtmConfigQ93bT398 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T398, specified in milliseconds."
        ::= { svcAtmConfigEntry1 13 }

svcAtmConfigQ93bT399 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T399, specified in milliseconds."
        ::= { svcAtmConfigEntry1 14 }

svcAtmConfigQ93bT301 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T301, specified in milliseconds."
        ::= { svcAtmConfigEntry1 110 }

svcAtmConfigQ93bT397 OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Protocol Timer T397, specified in milliseconds."
        ::= { svcAtmConfigEntry1 111 }
```

```
svcAtmConfigAal5FrameDiscardStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                disabled (1),
                enabled (2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Indicates whether to perform EPD on SVCs on this port.
                 Applicable only to non-UNI4.0 and non-PNNI1.0 lports.
                 If set EPD is performed on AAL5 signalled circuits."
        ::= { svcAtmConfigEntry1 112 }

svcAtmConfigClearCounts  OBJECT-TYPE
        SYNTAX  INTEGER {
                normal(1),
                reset(2)
                }
        MAX-ACCESS  read-write
        STATUS   current
        DESCRIPTION
                "Setting this objects to reset, resets all the
                 running counts for signaling"
        ::= { svcAtmConfigEntry1 113 }

svcAtmConfigSigXcntCause OBJECT-TYPE
        SYNTAX  INTEGER {
                ok(1),
                failed(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Signaling VC cross-connect creation status."
        ::= { svcAtmConfigEntry1 114 }

svcAtmConfigSigVcRate OBJECT-TYPE
        SYNTAX   INTEGER {
                rate-64K(1),
                rate-128K(2),
                rate-256K(3),
                rate-512K(4),
                rate-1024K(5),
                rate-1544K(6),
                rate-2048K(7),
                rate-4096K(8),
                rate-8192K(9),
                rate-16384K(10)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Signaling VC Rate"
        ::= { svcAtmConfigEntry1 115 }


-- ****************************************************************
-- svcAtmConfigTable2
--
-- Second part of svcAtmConfigTable from cascade enterprise.
--****************************************************************



svcAtmConfigTable2 OBJECT-TYPE
        SYNTAX  SEQUENCE OF SvcAtmConfigEntry2
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "A table of ATM signalling parameters
                 associated with ATM logical ports.
                 The maximum number of entries is given by the value of
                 ifNumber in MIB-II."
        ::= { saSvcSap 3 }

svcAtmConfigEntry2 OBJECT-TYPE
        SYNTAX  SvcAtmConfigEntry2
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The SVC ATM configuration entry contains objects
                 relevant to the configuration and monitoring of
                 ATM signalling on an ATM logical port."
        INDEX { svcAtmConfigIfIndex }
        ::= { svcAtmConfigTable2 1 }

SvcAtmConfigEntry2 ::=
        SEQUENCE {
                svcAtmConfigQ93bTotalConns
                    Counter,
                svcAtmConfigQ93bActiveConns
                    Counter,
                svcAtmConfigQ93bLastCauseTx
                    INTEGER,
                svcAtmConfigQ93bLastCauseRx
```

```
    INTEGER,
svcAtmConfigQ93bNumSetupPduTx
    Counter,
svcAtmConfigQ93bNumSetupPduRx
    Counter,
svcAtmConfigQ93bNumCallProcPduTx
    Counter,
svcAtmConfigQ93bNumCallProcPduRx
    Counter,
svcAtmConfigQ93bNumConnectPduTx
    Counter,
svcAtmConfigQ93bNumConnectPduRx
    Counter,
svcAtmConfigQ93bNumConnectAckPduTx
    Counter,
svcAtmConfigQ93bNumConnectAckPduRx
    Counter,
svcAtmConfigQ93bNumReleasePduTx
    Counter,
svcAtmConfigQ93bNumReleasePduRx
    Counter,
svcAtmConfigQ93bNumReleaseCmpltPduTx
    Counter,
svcAtmConfigQ93bNumReleaseCmpltPduRx
    Counter,
svcAtmConfigQ93bNumAddPtyPduTx
    Counter,
svcAtmConfigQ93bNumAddPtyPduRx
    Counter,
svcAtmConfigQ93bNumAddPtyAckPduTx
    Counter,
svcAtmConfigQ93bNumAddPtyAckPduRx
    Counter,
svcAtmConfigQ93bNumAddPtyRejPduTx
    Counter,
svcAtmConfigQ93bNumAddPtyRejPduRx
    Counter,
svcAtmConfigQ93bNumDropPtyPduTx
    Counter,
svcAtmConfigQ93bNumDropPtyPduRx
    Counter,
svcAtmConfigQ93bNumDropPtyAckPduTx
    Counter,
svcAtmConfigQ93bNumDropPtyAckPduRx
    Counter,
svcAtmConfigQ93bNumStatusEnqPduTx
    Counter,
svcAtmConfigQ93bNumStatusEnqPduRx
    Counter,
svcAtmConfigQ93bNumStatusPduTx
    Counter,
svcAtmConfigQ93bNumStatusPduRx
    Counter,
svcAtmConfigQ93bNumRestartPduTx
    Counter,
svcAtmConfigQ93bNumRestartPduRx
    Counter,
svcAtmConfigQ93bNumRestartAckPduTx
    Counter,
svcAtmConfigQ93bNumRestartAckPduRx
    Counter,
svcAtmConfigQ93bNumNotifyPduTx
    Counter,
svcAtmConfigQ93bNumNotifyPduRx
    Counter,
svcAtmConfigQ93bNumProgressPduTx
    Counter,
svcAtmConfigQ93bNumProgressPduRx
    Counter,
svcAtmConfigQ93bNumAlertingPduTx
    Counter,
svcAtmConfigQ93bNumAlertingPduRx
    Counter,
svcAtmConfigQ93bNumPtyAlertingPduTx
    Counter,
svcAtmConfigQ93bNumPtyAlertingPduRx
    Counter
    }


svcAtmConfigQ93bTotalConns OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "The total number of SVC's established on this port."
       ::= { svcAtmConfigEntry2 15 }

svcAtmConfigQ93bActiveConns OBJECT-TYPE
       SYNTAX  Counter
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "The number of SVC's present on this port."
       ::= { svcAtmConfigEntry2 16 }
```

```
svcAtmConfigQ93bLastCauseTx OBJECT-TYPE
        SYNTAX  INTEGER {
                unalloc-nmb (1), -- unallocated (unassigned) number
                no-route-transnet (2), -- no route to transit network
                no-route-dest (3), -- no route to destination
                vcc-unacceptable-30 (10), -- UNI 3.0: VPCI/VCI unacceptable
                normal-call-clr-31 (16), -- UNI 3.1: normal call clearing
                user-busy (17), -- user busy
                no-user-response (18), -- no user response
                call-reject (21), -- call rejected
                nmb-changed (22), -- number changed
                call-reject-clir (23), -- user rejects all calls with CLIR
                dest-out-of-order (27), -- destination out of order
                invalid-nmb-format (28), -- invalid number format
                response-stat-enq (30), -- response toSTATUS ENQUIRY
                normal-unspecified (31), -- normal unspecified
                req-vcc-unavailable (35), -- requested VPCI/VCI unavailable
                vcc-fail-31 (36), -- UNI 3.1: VPCI/VCI assignment failure
                rate-unavail-31 (37), -- UNI 3.1: user cell rate
                                      -- unavailable
                network-out-of-order (38), -- network out of order
                temp-fail (41), -- Temporary failure
                access-info-discard (43), -- access info discarded
                no-vcc-available (45), -- no VPCI/VCI unavailable
                resources-unavailable (47), -- resources unavailable,
                                            -- unspecified
                qos-unavailable (49), -- Quality of Service unavailable
                rate-unavailable-30 (51), -- UNI 3.0: user cell
                                          -- rate unavailable
                b-cap-not-authorized (57), -- bearer capability not
                                           -- authorized
                b-cap-unavailable (58), -- bearer capability not available
                service-unavailable (63), -- Service or option unavailable
                b-cap-not-implemented (65), -- bearer capability
                                            -- not implemented
                combination-unsupported (73), -- unsupported comb.
                                              -- of traffic parameters
                aal-params-unsupp-31 (78), -- UNI 3.1: AAL parameters
                                           -- cannot be supported
                invalid-call-reference (81), -- invalid call reference
                no-channel (82), -- identified channel does not exist
                dest-incompatible (88), -- incompatible destination
                invalid-endpoint-ref (89), -- invalid endpoint reference
                invalid-transit-net (91), -- invalid transit
                                          -- network selection
                too-many-add-pty-req (92), -- too many add party requests
                aal-params-unsupp-30 (93), -- UNI 3.0:AAL parameters
                                           -- cannot be supported
                info-element-missing (96), -- current info element
                                           -- is missing
                msg-type-not-imp (97), -- message type not implemented
                info-element-not-imp (99), -- info element not implemented
                invalid-info-element (100), -- invalid info element
                message-not-compatible (101), -- msg type not
                                              -- compatible with call st
                timer-recovery (102), -- recovery on timer expire
                invalid-message-len (104), -- incorrect message length
                protocol-error (111), -- protocol error, unspecified
                optional-element-error (127), -- opt info el content
                                              -- error (non-std)
                no-route-next-node (128), -- pnni
                dtl-not-my-node (160)   -- pnni
        }
        MAX-ACCESS read-only
        STATUS  current
        DESCRIPTION
                "The last transmitted cause code for this port."
        ::= { svcAtmConfigEntry2 17 }

svcAtmConfigQ93bLastCauseRx OBJECT-TYPE
        SYNTAX  INTEGER {
                unalloc-nmb (1), -- unallocated (unassigned) number
                no-route-transnet (2), -- no route to transit network
                no-route-dest (3), -- no route to destination
                vcc-unacceptable-30 (10), -- UNI 3.0: VPCI/VCI unacceptable
                normal-call-clr-31 (16), -- UNI 3.1: normal call clearing
                user-busy (17), -- user busy
                no-user-response (18), -- no user response
                call-reject (21), -- call rejected
                nmb-changed (22), -- number changed
                call-reject-clir (23), -- user rejects all calls with CLIR
                dest-out-of-order (27), -- destination out of order
                invalid-nmb-format (28), -- invalid number format
                response-stat-enq (30), -- response toSTATUS ENQUIRY
                normal-unspecified (31), -- normal unspecified
                req-vcc-unavailable (35), -- requested VPCI/VCI unavailable
                vcc-fail-31  (36), -- UNI 3.1: VPCI/VCI assignment failure
                rate-unavail-31 (37), -- UNI 3.1: user cell rate
                                      -- unavailable
                network-out-of-order (38), -- network out of order
                temp-fail (41), -- Temporary failure
                access-info-discard (43), -- access info discarded
                no-vcc-available (45), -- no VPCI/VCI unavailable
                resources-unavailable (47), -- resources unavailable,
                                            -- unspecified
                qos-unavailable (49), -- Quality of Service unavailable
```

```
            rate-unavailable-30 (51), -- UNI 3.0: user cell rate
                                      -- unavailable
            b-cap-not-authorized (57), -- bearer capability not
                                       -- authorized
            b-cap-unavailable (58), -- bearer capability not available
            service-unavailable (63), -- Service or option unavailable
            b-cap-not-implemented (65), -- bearer capability not
                                        -- implemented
            combination-unsupported (73), -- unsupported comb. of
                                          -- traffic parameters
            aal-params-unsupp-31 (78), -- UNI 3.1: AAL parameters
                                       -- cannot be supported
            invalid-call-reference (81), -- invalid call reference
            no-channel (82), -- identified channel does not exist
            dest-incompatible (88), -- incompatible destination
            invalid-endpoint-ref (89), -- invalid endpoint reference
            invalid-transit-net (91), -- invalid transit network
                                      --  selection
            too-many-add-pty-req (92), -- too many add party requests
            aal-params-unsupp-30 (93), -- UNI 3.0:AAL parameters
                                       -- cannot be supported
            info-element-missing (96), -- mandatory info element
                                       -- is missing
            msg-type-not-imp (97), -- message type not implemented
            info-element-not-imp (99), -- info element not implemented
            invalid-info-element (100), -- invalid info element
            message-not-compatible (101), -- msg type not
                                          -- compatible with call st
            timer-recovery (102), -- recovery on timer expire
            invalid-message-len (104), -- incorrect message length
            protocol-error (111), -- protocol error, unspecified
            optional-element-error (127), -- opt info el content
                                          -- error (non-std)
            no-route-next-node (128), -- pnni
            dtl-not-my-node (160)  -- pnni
        }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The last received cause code for this port."
        ::= { svcAtmConfigEntry2 18 }

svcAtmConfigQ93bNumSetupPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of setup PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 19 }

svcAtmConfigQ93bNumSetupPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of setup PDU's received on this port."
        ::= { svcAtmConfigEntry2 20 }

svcAtmConfigQ93bNumCallProcPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of call proceeding PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 21 }

svcAtmConfigQ93bNumCallProcPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of call proceeding PDU's
                 received on this port."
        ::= { svcAtmConfigEntry2 22 }

svcAtmConfigQ93bNumConnectPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of connect PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 23 }

svcAtmConfigQ93bNumConnectPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of connect PDU's received on this port."
        ::= { svcAtmConfigEntry2 24 }

svcAtmConfigQ93bNumConnectAckPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
```

```
        DESCRIPTION
                "The number of connect ack PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 25 }

svcAtmConfigQ93bNumConnectAckPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of connect ack PDU's received on this port."
        ::= { svcAtmConfigEntry2 26 }

svcAtmConfigQ93bNumReleasePduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of release PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 27 }

svcAtmConfigQ93bNumReleasePduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of release PDU's received on this port."
        ::= { svcAtmConfigEntry2 28 }

svcAtmConfigQ93bNumReleaseCmpltPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of release complete PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 29 }

svcAtmConfigQ93bNumReleaseCmpltPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of release complete PDU's received
                 on this port."
        ::= { svcAtmConfigEntry2 30 }

svcAtmConfigQ93bNumAddPtyPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of add party PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 31 }

svcAtmConfigQ93bNumAddPtyPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of add party PDU's received on this port."
        ::= { svcAtmConfigEntry2 32 }

svcAtmConfigQ93bNumAddPtyAckPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of add party acknowledge PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 33 }

svcAtmConfigQ93bNumAddPtyAckPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of add party acknowledge PDU's received
                 on this port."
        ::= { svcAtmConfigEntry2 34 }

svcAtmConfigQ93bNumAddPtyRejPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of add party reject PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 35 }

svcAtmConfigQ93bNumAddPtyRejPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "The number of add party reject PDU's received
                 on this port."
        ::= { svcAtmConfigEntry2 36 }

svcAtmConfigQ93bNumDropPtyPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of drop party PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 37 }

svcAtmConfigQ93bNumDropPtyPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of drop party PDU's received on this port."
        ::= { svcAtmConfigEntry2 38 }

svcAtmConfigQ93bNumDropPtyAckPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of drop party acknowledge PDU's
                 transmitted on this port."
        ::= { svcAtmConfigEntry2 39 }

svcAtmConfigQ93bNumDropPtyAckPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of drop party acknowledge PDU's
                 received on this port."
        ::= { svcAtmConfigEntry2 40 }

svcAtmConfigQ93bNumStatusEnqPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status enquiry PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 41 }

svcAtmConfigQ93bNumStatusEnqPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status enquiry PDU's received on this port."
        ::= { svcAtmConfigEntry2 42 }

svcAtmConfigQ93bNumStatusPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 43 }

svcAtmConfigQ93bNumStatusPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status PDU's received on this port."
        ::= { svcAtmConfigEntry2 44 }

svcAtmConfigQ93bNumRestartPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of restart PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 45 }

svcAtmConfigQ93bNumRestartPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of restart PDU's received on this port."
        ::= { svcAtmConfigEntry2 46 }

svcAtmConfigQ93bNumRestartAckPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of restart acknowledge PDU's
                 transmitted on this port."
        ::= { svcAtmConfigEntry2 47 }
```

```
svcAtmConfigQ93bNumRestartAckPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of restart acknowledge PDU's received
                 on this port."
        ::= { svcAtmConfigEntry2 48 }

svcAtmConfigQ93bNumNotifyPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of notify PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 102 }

svcAtmConfigQ93bNumNotifyPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of notify PDU's received on this port."
        ::= { svcAtmConfigEntry2 103 }

svcAtmConfigQ93bNumProgressPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of progress PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 104 }

svcAtmConfigQ93bNumProgressPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of progress PDU's received on this port."
        ::= { svcAtmConfigEntry2 105 }

svcAtmConfigQ93bNumAlertingPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of alerting PDU's transmitted on this port."
        ::= { svcAtmConfigEntry2 106 }

svcAtmConfigQ93bNumAlertingPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of alerting PDU's received on this port."
        ::= { svcAtmConfigEntry2 107 }

svcAtmConfigQ93bNumPtyAlertingPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of party alerting PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry2 108 }

svcAtmConfigQ93bNumPtyAlertingPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of party alerting PDU's received on this port."
        ::= { svcAtmConfigEntry2 109 }



-- ****************************************************************
-- svcAtmConfigTable3
--
-- Third part of svcAtmConfigTable from cascade enterprise.
-- ****************************************************************

svcAtmConfigTable3 OBJECT-TYPE
        SYNTAX  SEQUENCE OF SvcAtmConfigEntry3
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "A table of ATM signalling parameters associated
                 with ATM logical ports. The maximum number of
                 entries is given by the value of ifNumber in MIB-II."
        ::= { saSvcSap 4 }

svcAtmConfigEntry3 OBJECT-TYPE
        SYNTAX  SvcAtmConfigEntry3
        MAX-ACCESSnot-accessible
```

```
        STATUS  current
        DESCRIPTION
                "The SVC ATM configuration entry contains objects
                 relevant to the configuration and monitoring of
                 ATM signalling on an ATM logical port."
        INDEX { svcAtmConfigIfIndex }
        ::= { svcAtmConfigTable3 1 }

SvcAtmConfigEntry3 ::=
        SEQUENCE {
                svcAtmConfigQSaalMaxCC
                    INTEGER,
                svcAtmConfigQSaalMaxPD
                    INTEGER,
                svcAtmConfigQSaalMaxStat
                    INTEGER,
                svcAtmConfigQSaalTPoll
                    INTEGER,
                svcAtmConfigQSaalTKeepalive
                    INTEGER,
                svcAtmConfigQSaalTNoResponse
                    INTEGER,
                svcAtmConfigQSaalTCC
                    INTEGER,
                svcAtmConfigQSaalTIdle
                    INTEGER,
                svcAtmConfigQSaalNumDiscardTx
                    Counter,
                svcAtmConfigQSaalNumDiscardRx
                    Counter,
                svcAtmConfigQSaalNumErrorTx
                    Counter,
                svcAtmConfigQSaalNumErrorRx
                    Counter,
                svcAtmConfigQSaalNumBgnPduTx
                    Counter,
                svcAtmConfigQSaalNumBgnPduRx
                    Counter,
                svcAtmConfigQSaalNumBgakPduTx
                    Counter,
                svcAtmConfigQSaalNumBgakPduRx
                    Counter,
                svcAtmConfigQSaalNumBgrejPduTx
                    Counter,
                svcAtmConfigQSaalNumBgrejPduRx
                    Counter,
                svcAtmConfigQSaalNumEndPduTx
                    Counter,
                svcAtmConfigQSaalNumEndPduRx
                    Counter,
                svcAtmConfigQSaalNumEndakPduTx
                    Counter,
                svcAtmConfigQSaalNumEndakPduRx
                    Counter,
                svcAtmConfigQSaalNumRsPduTx
                    Counter,
                svcAtmConfigQSaalNumRsPduRx
                    Counter,
                svcAtmConfigQSaalNumRsakPduTx
                    Counter,
                svcAtmConfigQSaalNumRsakPduRx
                    Counter,
                svcAtmConfigQSaalNumErPduTx
                    Counter,
                svcAtmConfigQSaalNumErPduRx
                    Counter,
                svcAtmConfigQSaalNumErakPduTx
                    Counter,
                svcAtmConfigQSaalNumErakPduRx
                    Counter,
                svcAtmConfigQSaalNumSdPduTx
                    Counter,
                svcAtmConfigQSaalNumSdPduRx
                    Counter,
                svcAtmConfigQSaalNumPollPduTx
                    Counter,
                svcAtmConfigQSaalNumPollPduRx
                    Counter,
                svcAtmConfigQSaalNumStatPduTx
                    Counter,
                svcAtmConfigQSaalNumStatPduRx
                    Counter,
                svcAtmConfigQSaalNumUstatPduTx
                    Counter,
                svcAtmConfigQSaalNumUstatPduRx
                    Counter,
                svcAtmConfigQSaalNumUdPduTx
                    Counter,
                svcAtmConfigQSaalNumUdPduRx
                    Counter,
                svcAtmConfigQSaalNumMdPduTx
                    Counter,
                svcAtmConfigQSaalNumMdPduRx
                    Counter,
                svcAtmConfigQSaalNumOctetsTx
                    Counter,
```

```
                svcAtmConfigQSaalNumOctetsRx
                    Counter,
                svcAtmConfigVpiStartVp
                    INTEGER,
                svcAtmConfigVpiStopVp
                    INTEGER,
                svcAtmConfigVpiStart
                    INTEGER,
                svcAtmConfigVpiStop
                    INTEGER,
                svcAtmConfigVciStart
                    INTEGER,
                svcAtmConfigVciStop
                    INTEGER,
                svcAtmConfigQSaalWindowSize
                    INTEGER,
                svcAtmConfigSvcCdvt
                    INTEGER,
                svcAtmConfigQSaalTxWindowDepth
                    Counter
                }

svcAtmConfigQSaalMaxCC OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum number of unacknowledged transmitted
                 control PDU's before declaring a loss of connection."
        ::= { svcAtmConfigEntry3 49 }

svcAtmConfigQSaalMaxPD OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum number of PDU's transmitted before a
                 POLL PDU is transmitted."
        ::= { svcAtmConfigEntry3 50 }

svcAtmConfigQSaalMaxStat OBJECT-TYPE
        SYNTAX  INTEGER (1..67)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The maximum number of list elements in a STAT PDU."
        ::= { svcAtmConfigEntry3 51 }

svcAtmConfigQSaalTPoll OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The protocol timer corresponding to the polling function,
                 specified in milliseconds."
        ::= { svcAtmConfigEntry3 52 }

svcAtmConfigQSaalTKeepalive OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The protocol timer corresponding to the
                 keepalive function,
                 specified in milliseconds."
        ::= { svcAtmConfigEntry3 53 }

svcAtmConfigQSaalTNoResponse OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The protocol timer corresponding to the response
                 timeout function,
                 specified in milliseconds."
        ::= { svcAtmConfigEntry3 54 }

svcAtmConfigQSaalTCC OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The protocol timer corresponding to the transmission of
                 control PDU's, specified in milliseconds."
        ::= { svcAtmConfigEntry3 55 }

svcAtmConfigQSaalTIdle OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The protocol timer corresponding to the idle function for
                 UNI 3.1, only, specified in milliseconds."
        ::= { svcAtmConfigEntry3 56 }
```

```
svcAtmConfigQSaalNumDiscardTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of QSaal transmit discards on this port."
        ::= { svcAtmConfigEntry3 57 }

svcAtmConfigQSaalNumDiscardRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of QSaal receive discards on this port."
        ::= { svcAtmConfigEntry3 58 }

svcAtmConfigQSaalNumErrorTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of QSaal transmit errors on this port."
        ::= { svcAtmConfigEntry3 59 }

svcAtmConfigQSaalNumErrorRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of QSaal receive errors on this port."
        ::= { svcAtmConfigEntry3 60 }

svcAtmConfigQSaalNumBgnPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin PDU's transmitted on this port."
        ::= { svcAtmConfigEntry3 61 }

svcAtmConfigQSaalNumBgnPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin PDU's received on this port."
        ::= { svcAtmConfigEntry3 62 }

svcAtmConfigQSaalNumBgakPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin acknowledge PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 63 }

svcAtmConfigQSaalNumBgakPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin acknowledge PDU's received
                 on this port."
        ::= { svcAtmConfigEntry3 64 }

svcAtmConfigQSaalNumBgrejPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin reject PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 65 }

svcAtmConfigQSaalNumBgrejPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of begin reject PDU's received on this port."
        ::= { svcAtmConfigEntry3 66 }

svcAtmConfigQSaalNumEndPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of end PDU's transmitted on this port."
        ::= { svcAtmConfigEntry3 67 }

svcAtmConfigQSaalNumEndPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "The number of end PDU's received on this port."
        ::= { svcAtmConfigEntry3 68 }

svcAtmConfigQSaalNumEndakPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of end acknowledge PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 69 }

svcAtmConfigQSaalNumEndakPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of end acknowledge PDU's received
                 on this port."
        ::= { svcAtmConfigEntry3 70 }

svcAtmConfigQSaalNumRsPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of resynchronization PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 71 }

svcAtmConfigQSaalNumRsPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of resynchronization PDU's received
                 on this port."
        ::= { svcAtmConfigEntry3 72 }

svcAtmConfigQSaalNumRsakPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of resynchronization acknowledge PDU's
transmitted on this port."
        ::= { svcAtmConfigEntry3 73 }

svcAtmConfigQSaalNumRsakPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of resynchronization acknowledge PDU's
                 received on this port."
        ::= { svcAtmConfigEntry3 74 }

svcAtmConfigQSaalNumErPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of error recovery PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 75 }

svcAtmConfigQSaalNumErPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of error recovery PDU's received on this port."
        ::= { svcAtmConfigEntry3 76 }

svcAtmConfigQSaalNumErakPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of error recovery acknowledge PDU's
                 transmitted on this port."
        ::= { svcAtmConfigEntry3 77 }

svcAtmConfigQSaalNumErakPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of error recovery acknowledge PDU's
                 received on this port."
        ::= { svcAtmConfigEntry3 78 }

svcAtmConfigQSaalNumSdPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
```

```
        DESCRIPTION
                "The number of sequenced data PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 79 }

svcAtmConfigQSaalNumSdPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of sequenced data PDU's received on this port."
        ::= { svcAtmConfigEntry3 80 }

svcAtmConfigQSaalNumPollPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of poll PDU's transmitted on this port."
        ::= { svcAtmConfigEntry3 81 }

svcAtmConfigQSaalNumPollPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of poll PDU's received on this port."
        ::= { svcAtmConfigEntry3 82 }

svcAtmConfigQSaalNumStatPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status PDU's transmitted on this port."
        ::= { svcAtmConfigEntry3 83 }

svcAtmConfigQSaalNumStatPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of status PDU's received on this port."
        ::= { svcAtmConfigEntry3 84 }

svcAtmConfigQSaalNumUstatPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unsolicited status PDU's transmitted
                 on this port."
        ::= { svcAtmConfigEntry3 85 }

svcAtmConfigQSaalNumUstatPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unsolicited status PDU's received
                 on this port."
        ::= { svcAtmConfigEntry3 86 }

svcAtmConfigQSaalNumUdPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unnumbered user data PDU's
                 transmitted on this port."
        ::= { svcAtmConfigEntry3 87 }

svcAtmConfigQSaalNumUdPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unnumbered user data PDU's received
                 on this port."
        ::= { svcAtmConfigEntry3 88 }

svcAtmConfigQSaalNumMdPduTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unnumbered management data PDU's
                 transmitted on this port."
        ::= { svcAtmConfigEntry3 89 }

svcAtmConfigQSaalNumMdPduRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of unnumbered management data PDU's
```

```
                received on this port."
        ::= { svcAtmConfigEntry3 90 }

svcAtmConfigQSaalNumOctetsTx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of octets sent on the signalling channel."
        ::= { svcAtmConfigEntry3 91 }

svcAtmConfigQSaalNumOctetsRx OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of octets received from the signalling
                 channel."
        ::= { svcAtmConfigEntry3 92 }

svcAtmConfigVpiStartVp OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Starting VPI value for SVP range.  Must be less than
                 or equal to svcAtmConfigVpiStopVp.  This object is
                 used in conjunction with the svcAtmConfigVpiStopVp
                 object. Values of 0 for both objects invalidates
                 the range checks."
        ::= { svcAtmConfigEntry3 93 }

svcAtmConfigVpiStopVp OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Ending VPI value for SVP range.  Must be greater than
                 or equal to svcAtmConfigVpiStartVp. This object is used
                 in conjunction with the svcAtmConfigVpiStartVp object.
                 Values of 0 for both objects invalidates the
                 range checks."
        ::= { svcAtmConfigEntry3 94 }

svcAtmConfigVpiStart OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Starting VPI value for SVC range.  Must be less than
                 or equal to svcAtmConfigVpiStop. This object is
                 used in conjunction with the svcAtmConfigVpiStop,
                 svcAtmConfigVciStart and svcAtmConfigVciStop objects.
                 Values of 0 for all objects invalidates
                 the range checks"
        ::= { svcAtmConfigEntry3 95 }

svcAtmConfigVpiStop OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Ending VPI value for SVC range.  Must be greater than
                 or equal to svcAtmConfigVpiStart. This object is used
                 in conjunction with the svcAtmConfigVpiStart,
                 svcAtmConfigVciStart and svcAtmConfigVciStop objects.
                 Values of 0 for all objects invalidates
                 the range checks."
        ::= { svcAtmConfigEntry3 96 }

svcAtmConfigVciStart OBJECT-TYPE
        SYNTAX INTEGER (32..65535)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Starting VCI value for SVC range.  Must be less than or
                 equal to svcAtmConfigVciStop. This object is used in
                 conjunction with the svcAtmConfigVpiStart,
                 svcAtmConfigVpiStop and svcAtmConfigVciStop objects.
                 Values of 0 for all objects invalidates
                 the range checks."
        ::= { svcAtmConfigEntry3 97}

svcAtmConfigVciStop OBJECT-TYPE
        SYNTAX INTEGER (32..65535)
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Ending VCI value for SVC range.  Must be greater than
                 or equal to svcAtmConfigVciStart. This object is
                 used in conjunction with the svcAtmConfigVpiStart,
                 svcAtmConfigVpiStop and svcAtmConfigVciStart objects.
                 Values of 0 for all objects invalidates
                 the range checks."
        ::= { svcAtmConfigEntry3 98 }
```

```
svcAtmConfigQSaalWindowSize OBJECT-TYPE
        SYNTAX  INTEGER (1..4095)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The window size for Q.SAAL."
        DEFVAL { 64 }
        ::= { svcAtmConfigEntry3 99 }

svcAtmConfigSvcCdvt OBJECT-TYPE
        SYNTAX  INTEGER (1..16777215)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The default cell delay variation tolerance, in
                 microseconds, to be used by the UPC at this port
                 for originating or terminating SVC's.
                 Higher values will result in a less restrictive UPC."
        DEFVAL { 600 }
        ::= { svcAtmConfigEntry3 100 }

svcAtmConfigQSaalTxWindowDepth OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The current depth of the Q.SAAL transmit window.
                 This number represents the number of outstanding
                 unacknowledged SD PDUs."
        ::= { svcAtmConfigEntry3 101 }


-- ****************************************************************
-- atmInterfaceExtTable
-- This table was transferred from IETF ATM2 MIB,
-- which is still pre-standard.
-- A mirror of this MIB may be created in the future,
-- if we must strictly comply with ATM2.
-- ****************************************************************


atmInterfaceExtTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmInterfaceExtEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "This table contains ATM interface
                 configuration and monitoring information not
                 defined in the atmInterfaceConfTable from the
                 ATM-MIB [1].  This includes the type of
                 connection setup procedures, ILMI information,
                 and information on the VPI/VCI range."
        ::= { saSvcSap 5 }

atmInterfaceExtEntry OBJECT-TYPE
        SYNTAX    AtmInterfaceExtEntry
        MAX-ACCESS   not-accessible
        STATUS    current
        DESCRIPTION
                "An entry extends the
                 atmInterfaceConfEntry defined in [1].  Each
                 entry corresponds to an ATM
                 interface."
        INDEX { ifIndex }
        ::= { atmInterfaceExtTable 1 }

AtmInterfaceExtEntry  ::= SEQUENCE  {
        atmIntfConfigType INTEGER,
        atmIntfActualType INTEGER,
        atmIntfConfigSide INTEGER,
        atmIntfActualSide INTEGER,
        atmIntfIlmiAdminStatus  INTEGER,
        atmIntfIlmiOperStatus INTEGER,
        atmIntfIlmiFsmState  INTEGER,
        atmIntfIlmiEstablishConPollIntvl Integer32,
        atmIntfIlmiCheckConPollIntvl  Integer32,
        atmIntfIlmiConPollInactFactor Integer32,
        atmIntfIlmiPublicPrivateIndctr INTEGER,
        atmInterfaceConfMaxSvpcVpi INTEGER,
        atmInterfaceCurrentMaxSvpcVpi INTEGER,
        atmInterfaceConfMaxSvccVpi INTEGER,
        atmInterfaceCurrentMaxSvccVpi INTEGER,
        atmInterfaceConfMinSvccVci INTEGER,
        atmInterfaceCurrentMinSvccVci INTEGER,
        atmIntfSigVccRxTrafficDescrIndex INTEGER,
        atmIntfSigVccTxTrafficDescrIndex INTEGER,
        atmIntfPvcFailures Counter32,
        atmIntfCurrentlyFailingPVpls  Gauge32,
        atmIntfCurrentlyFailingPVcls  Gauge32,
        atmIntfPvcFailuresTrapEnable  INTEGER,
        atmIntfPvcNotificationInterval INTEGER
        }
--  As new protocol variants are added, use these enumerations
--  to match IETF ATM2 pre-standard
--              other(1),
--              autoConfig(2),
```

```
--              ituDss2(3),
--              atmfUni3Dot0(4),
--              atmfUni3Dot1(5),
--              atmfUni4Dot0(6),
--              atmfIispUni3Dot0(7),
--              atmfIispUni3Dot1(8),
--              atmfIispUni4Dot0(9),
--              atmfPnni1Dot0(10),
--              atmfBici2Dot0(11),
--              atmfUniPvcOnly(12),
--              atmfNniPvcOnly(13)

atmIntfConfigTypeOBJECT-TYPE
        SYNTAX  INTEGER  {
                atmfUni3Dot0(4),
                atmfUni3Dot1(5),
                atmfIispUni3Dot0(7),
                atmfIispUni3Dot1(8),
                atmfUniPvcOnly(12)
                }
        MAX-ACCESS read-write
        STATUS   current
        DESCRIPTION
                "The type of connection setup procedures
                configured for the ATM interface.  Setting this
                variable to a value of 'other' is not allowed."
        DEFVAL { atmfUni3Dot0 }
        ::= { atmInterfaceExtEntry 1 }


atmIntfActualType  OBJECT-TYPE
        SYNTAX  INTEGER  {
                other(1),
                autoConfig(2),
                ituDss2(3),
                atmfUni3Dot0(4),
                atmfUni3Dot1(5),
                atmfUni4Dot0(6),
                atmfIispUni3Dot0(7),
                atmfIispUni3Dot1(8),
                atmfIispUni4Dot0(9),
                atmfPnni1Dot0(10),
                atmfBici2Dot0(11),
                atmfUniPvcOnly(12),
                atmfNniPvcOnly(13)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of connection setup procedures
                 currently being used on the interface.This may
                 reflect a manually configured value for the
                 interface type, or may be determined by other
                 means such as auto-configuration.  A value of
                 `autoConfig' indicates that auto-configuration
                 was requested but has not yet been completed."
        ::= { atmInterfaceExtEntry 2 }

atmIntfConfigSide  OBJECT-TYPE
        SYNTAX    INTEGER  {
                other(1),
                user(2),
                network(3)
                }
        MAX-ACCESS   read-write
        STATUS    current
        DESCRIPTION
                "The configured role of the managed entity as one
                 side of the ATM interface.  This value does not
                 apply when the object atmIntfConfigType is set to
                 `autoConfig', `atmfPnni1Dot0', or
                 `atmfBici2Dot0'."
        ::= { atmInterfaceExtEntry 3 }

atmIntfActualSideOBJECT-TYPE
        SYNTAX   INTEGER  {
                other(1),
                user(2),
                network(3),
                symmetric(4)
                }
        MAX-ACCESS read-only
        STATUS   current
        DESCRIPTION
                "The current role used by the managed entity to
                represent one side of the ATM interface."
        ::= { atmInterfaceExtEntry 4 }

atmIntfIlmiAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                none(0),   -- added for SA systems
                ilmi(1),
                ilmiAddressRegistration(2),
                ilmiConnectivity(4),
                ilmiPvcPvpMgmt(8),
                ilmiSigVccParamNegotiation(16)
```

```
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
         "Indicates which components of ILMI are
         administratively enabled on this interface.  If the
         'ilmi' bit is not set, then no ILMI components are
         operational.  ILMI components other than auto-
         configuration that are not represented in the value
         have their administrative status determined
         according to the 'ilmi' bit.  The ILMI auto-
         configuration component is enabled/disabled by the
         atmIntfConfigType object."
        ::= { atmInterfaceExtEntry 5 }

atmIntfIlmiOperStatus OBJECT-TYPE
        SYNTAX    INTEGER {
                none(0),   -- added for SA systems
                ilmi(1),
                ilmiAddressRegistration(2),
                ilmiConnectivity(4),
                ilmiPvcPvpMgmt(8),
                ilmiSigVccParamNegotiation(16)
                }
        MAX-ACCESS   read-only
        STATUS    current
        DESCRIPTION
                "Indicates which components of ILMI are operational
                 on this interface."
        ::= { atmInterfaceExtEntry 6 }

atmIntfIlmiFsmState OBJECT-TYPE
        SYNTAX   INTEGER { stopped(1),
                linkFailing(2),
                establishing(3),
                configuring(4),
                retrievingNetworkPrefixes(5),
                registeringNetworkPrefixes(6),
                retrievingAddresses(7),
                registeringAddresses(8),
                verifying(9)
                }
        MAX-ACCESS read-only
        STATUS   current
        DESCRIPTION
                "Indicates the state of the ILMI Finite State Machine
        associated with this interface."
        REFERENCE
                "ATM Forum ILMI 4.0 Specification, Appendix 1"
        ::= { atmInterfaceExtEntry 7 }

atmIntfIlmiEstablishConPollIntvl OBJECT-TYPE
        SYNTAX  Integer32 (1..65535)
        UNITS   "seconds"
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "The amount of time S between successive transmissions
                 of ILMI messages on this interface for the purpose of
                 detecting establishment of ILMI connectivity."
        REFERENCE
                "ATM Forum ILMI 4.0 Section 8.3.1"
        DEFVAL { 1 }
        ::= { atmInterfaceExtEntry 8 }

atmIntfIlmiCheckConPollIntvl OBJECT-TYPE
        SYNTAX  Integer32 (0..65535)
        UNITS   "seconds"
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                The amount of time T between successive transmissions
                 of ILMI messages on this interface for the purpose of
                 detecting loss of ILMI connectivity.  The distinguished
                 value zero disables ILMI connectivity procedures on
                 this interface."
        REFERENCE
                "ATM Forum ILMI 4.0 Section 8.3.1"
        DEFVAL { 5 }
        ::= { atmInterfaceExtEntry 9 }

atmIntfIlmiConPollInactFactor OBJECT-TYPE
        SYNTAX  Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                The number K of consecutive polls on this interface
                 for which no ILMI response message is received before
                 ILMI connectivity is declared lost."
        REFERENCE
                "ATM Forum ILMI 4.0 Section 8.3.1"
        DEFVAL { 4 }
        ::= { atmInterfaceExtEntry 10 }
```

```
atmIntfIlmiPublicPrivateIndctr  OBJECT-TYPE
       SYNTAX  INTEGER {
              other(1),
              public(2),
              private(3)
              }
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              Specifies whether this end of the interface is
               advertised in ILMI as a device of the `public' or
               `private' type."
       DEFVAL { private }
       ::= { atmInterfaceExtEntry 11 }

atmInterfaceConfMaxSvpcVpi OBJECT-TYPE
       SYNTAX  INTEGER(0..4095)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              The maximum VPI that the signalling stack on the ATM
               interface is configured to support for allocation to
               switched virtual path connections."
       ::= { atmInterfaceExtEntry 12 }

atmInterfaceCurrentMaxSvpcVpi OBJECT-TYPE
       SYNTAX  INTEGER(0..4095)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              The maximum VPI that the signalling stack on the ATM
               interface may currently allocate to switched virtual
               path connections.This value is the minimum of
               atmInterfaceConfMaxSvpcVpi, and the
               atmInterfaceMaxSvpcVpi of the interface's UNI/NNI peer.

 If the interface does not negotiate with its peer to
               determine the maximum VPI that can be allocated to
               SVPCs on the interface, then the value of this object
               must equal atmInterfaceConfMaxSvpcVpi. "
       ::= { atmInterfaceExtEntry 13 }

atmInterfaceConfMaxSvccVpi OBJECT-TYPE
       SYNTAX  INTEGER(0..4095)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              The maximum VPI that the signalling stack on the ATM
               interface is configured to support for allocation to
               switched virtual channel connections."
       ::= { atmInterfaceExtEntry 14 }

atmInterfaceCurrentMaxSvccVpi OBJECT-TYPE
       SYNTAX  INTEGER(0..4095)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              The maximum VPI that the signalling stack on the ATM
               interface may currently allocate to switched virtual
               channel connections.This value is the minimum of
               atmInterfaceConfMaxSvccVpi, and the
               atmInterfaceConfMaxSvccVpi of the interface's UNI/NNI
               peer.

 If the interface does not negotiate with its peer to
               determine the maximum VPI that can be allocated to
               SVCCs on the interface, then the value of this object
               must equal atmInterfaceConfMaxSvccVpi."
       ::= { atmInterfaceExtEntry 15 }

atmInterfaceConfMinSvccVci OBJECT-TYPE
       SYNTAX  INTEGER(0..65535)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              The minimum VCI that the signalling stack on the ATM
               interface is configured to support for allocation to
               switched virtual channel connections."
       ::= { atmInterfaceExtEntry 16 }

atmInterfaceCurrentMinSvccVci OBJECT-TYPE
       SYNTAX  INTEGER(0..65535)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              The minimum VCI that the signalling stack on the ATM
               interface may currently allocate to switched virtual
               channel connections.This value is the maximum of
               atmInterfaceConfMinSvccVci, and the
               atmInterfaceConfMinSvccVci of the interface's UNI/NNI
               peer.

               If the interface does not negotiate with its peer to
               determine the minimum VCI that can be allocated to
               SVCCs on the interface, then the value of this object
               must equal atmInterfaceConfMinSvccVci."
```

```
        ::= { atmInterfaceExtEntry 17 }

atmIntfSigVccRxTrafficDescrIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This object identifies the row in the
                 atmTrafficDescrParamTable used during ILMI
                 auto-configuration to specify the advertised
                 signalling VCC traffic parameters for the
                 receive direction.

                 The traffic descriptor resulting from ILMI auto-
                 configuration of the signalling VCC is indicated
                 in the atmVclTable."
        ::= { atmInterfaceExtEntry 18 }

atmIntfSigVccTxTrafficDescrIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This object identifies the row in the
                 atmTrafficDescrParamTable used during ILMI
                 auto-configuration to specify the advertised
                 signalling VCC traffic parameters for the
                 transmit direction.

                 The traffic descriptor resulting from ILMI auto-
                 configuration of the signalling VCC is indicated
                 in the atmVclTable."
        ::= { atmInterfaceExtEntry 19 }

atmIntfPvcFailures  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                The number of times the operational status of a PVPL
                 or PVCL on this interface has gone down."
        ::= { atmInterfaceExtEntry 20 }

atmIntfCurrentlyFailingPVpls OBJECT-TYPE
        SYNTAX  Gauge32
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                The current number of VPLs on this interface for which
                 there is an active row in the atmVplTable having an
                 atmVplConnKind value of `pvc' and an atmVplOperStatus
                 with a value other than `up'."
        ::= { atmInterfaceExtEntry 21 }

atmIntfCurrentlyFailingPVcls OBJECT-TYPE
        SYNTAX  Gauge32
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                The current number of VCLs on this interface for which
                 there is an active row in the atmVclTable having an
                 atmVclConnKind value of `pvc' and an atmVclOperStatus
                 with a value other than `up'."
        ::= { atmInterfaceExtEntry 22 }

atmIntfPvcFailuresTrapEnable OBJECT-TYPE
        SYNTAX  INTEGER {
                true(1),
                false(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                Allows the generation of traps in response to PVCL or
                 PVPL failures on this interface."
        DEFVAL { false }
        ::= { atmInterfaceExtEntry 23 }

atmIntfPvcNotificationInterval  OBJECT-TYPE
        SYNTAX  INTEGER (1..3600)
        UNITS   "seconds"
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                The minimum interval between the sending of
                 atmIntfPvcFailuresTrap notifications for this
                 interface."
        DEFVAL { 30 }
        ::= { atmInterfaceExtEntry 24 }


END
```

```
--=====================================================================--
```

Ascend Broadband - Adaptation Soft PVC (A-SPVC) MIB

```
--=====================================================================--

sa-ASPVC-MIB DEFINITIONS ::= BEGIN

IMPORTS
       DisplayString          FROM RFC1213-MIB
       OBJECT-TYPE            FROM SNMPv2-SMI
       TimeTicks              FROM RFC1155-SMI
       SaAspvc                FROM SA-SIGNALLING-MIB;


-- groups in SA-ASPVC-MIB
       SaAspvcAddress     OBJECT IDENTIFIER ::= { saAspvc 1 }
       SaAspvcStatus      OBJECT IDENTIFIER ::= { saAspvc 2 }
       SaAspvcService     OBJECT IDENTIFIER ::= { saAspvc 3 }
       SaAspvcTrafficDesc OBJECT IDENTIFIER ::= { saAspvc 4 }
       SaAspvcPvclProv    OBJECT IDENTIFIER ::= { saAspvc 5 }
--=====================================================================--
--                         A-SPVC Addressing MIBs
--
-- These objects provide addressing information for
-- local ASPVC terminators
--=====================================================================--

saAspvcCfgEsi OBJECT-TYPE
       SYNTAX  OCTET STRING (SIZE(6))
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "ESI used with port and node prefixes to identify incoming
               call setup messages as being A-SPVC's"
       ::= { saAspvcAddress 1 }

saAspvcDefaultEsi OBJECT-TYPE
       SYNTAX  OCTET STRING (SIZE(6))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Unique ESI programmed into ICM as part of
               manufacturing process, serves as power-on default
               for saAspvcCfgEsi in the absence of nv_db.dat"
       ::= { saAspvcAddress 2 }

saAspvcPrimaryAesa OBJECT-TYPE
       SYNTAX  OCTET STRING (SIZE(20))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Primary Network address to be used when attempting to
               reach ASPVC terminators within this node"
       ::= { saAspvcAddress 3 }

saAspvcNetPrefix OBJECT-TYPE
       SYNTAX  OCTET STRING (SIZE(13))
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Network prefix to identify incoming call
               setup messages as being A-SPVC's"
       ::= { saAspvcAddress 4 }

saAspvcTrunkSlot OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Slot number of the trunk"
       ::= { saAspvcAddress 5 }

saAspvcTrunkPod OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Pod number of the trunk"
       ::= { saAspvcAddress 6 }

saAspvcTrunkPort OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "Port number of the trunk"
       ::= { saAspvcAddress 7 }

saAspvcAutoNetPrefix OBJECT-TYPE
       SYNTAX  INTEGER {
              yes(1),
              no(2)
              }
       MAX-ACCESS  read-only
```

```
        STATUS  current
        DESCRIPTION
                "Yes, if saAspvcNetPrefix will be automatically populated
                 if ILMI is enabled on the truck. No, otherwise."
        ::= { saAspvcAddress 8 }

saAspvcNetPrefixNmbPlan OBJECT-TYPE
        SYNTAX  INTEGER {
                e164 (1),
                aesa (2),
                unknown (3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "This object specifies the addressing format. Supported
                 addressing formats are AESA and E.164. Set to none if
                 saAspvcNetPrefix object does not conform to supported
                 numbering plans."
        ::= { saAspvcAddress 9 }

--================================================================--
--           A-SPVC General Status Information
-- These objects provide error counts for inbound call setups that were
-- rejected by the A-SPVC manager.
--
--================================================================--

saAspvcClearCounts OBJECT-TYPE
        SYNTAX  INTEGER {
                yes(1),
                no(2)
        }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "clears all simple status variables for A-SPVCs"
        ::= { saAspvcStatus 1 }

saAspvcRejects OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of call setups rejected by A-SPVC Manager"
        ::= { saAspvcStatus 2 }

saAspvcBadAddress OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of call setups that had invalid Called Party IE"
        ::= { saAspvcStatus 3 }

saAspvcBadBhli OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of call setups that had no BHLI IE
                 or an invalid BHLI IE"
        ::= { saAspvcStatus 4 }

saAspvcNoHandle OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of call setups that had invalid service
                 handle in BHLI"
        ::= { saAspvcStatus 5 }

saAspvcMaxServices OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Max no of A-SPVC services allowed."
        ::= { saAspvcStatus 6 }

saAspvcCfgServices OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Number of A-SPVC services configured as of now"
        ::= { saAspvcStatus 7 }

--================================================================--
--               A-SPVC Service Information
-- A row will be automatically created in this table for each provisioned
-- service.  Service types will include native ATM VCLs as well as a
-- variety of adaptation service types such as CES IWFs, NLS tunnels,
-- FRF.5 tunnels, etc.
```

```
--
-- From this table, the user may configure how the service will be routed
-- out of the node by modifying the 'dialType' object in this table.
-- Supported dialTypes include PVC, PVP, ASPVC-ORIG, ASPVC-TERM, etc.
-- The various dialTypes are defined below:
--
-- PVC/PVP  - traditional SA service where trunk side if/VP/VC are
-- specified by the user during provisioning.
--
-- ASPVC-TERM  - service is provisioned, but does not go active until a
--               remote node calls the node and specifies the provisioned
--               service.

-- ASPVC-ORIG  - service is provisioned, and the AESA and service handle
--               of the corresponding ASPVC-TERM function is supplied as
--               part of provisioning.  This node will place a call to the
--               specified remote node, when the ASPVC-TERM on
--               the far end of the network accepts the call,
--               the service will go active.
--
-- SPVC-ORIG   - same as ASPVC-ORIG, except the AESA and far-end VP/VC
--               are supplied during service provisioning.  This
--               node will dial a far-end switch,  If the call is
--               accepted, the service will go active.
--=======================================================--

saAspvcServiceTable OBJECT-TYPE
       SYNTAX SEQUENCE OF SaAspvcServiceEntry
       MAX-ACCESS not-accessible
       STATUS current
       DESCRIPTION
              "Table of A-SPVC services.  Contains a record per
               service instance. All A-SPVC's are comprised of a
               Permanant VCL which represents the adaptation service,
               and an SVCL which represents the switched network
               circuit.  When an A-SPVC is operational,
               the PVCL will be cross-connected to the SVCL"
       ::= { saAspvcService 1 }

saAspvcServiceEntry OBJECT-TYPE
       SYNTAX SaAspvcServiceEntry
       MAX-ACCESS not-accessible
       STATUS current
       DESCRIPTION
              "Contains objects relevant to A-SPVC services"
       INDEX { saAspvcPifIndex, saAspvcPvpi, saAspvcPvci }
       ::= { saAspvcServiceTable 1 }
```

```
SaAspvcServiceEntry ::=
       SEQUENCE {
              SAAspvcPifIndex
                  INTEGER,
              SAAspvcPvpi
                  INTEGER,
              SAAspvcPvci
                  INTEGER,
              SAAspvcName
                  DisplayString,
              SAAspvcAdminStatus
                  INTEGER,
              SAAspvcOperStatus
                  INTEGER,
              SAAspvcLastChange
                  TimeTicks,
              SAAspvcDialType
                  INTEGER,
              SAAspvcServiceType
                  INTEGER,
              SAAspvcAppIfIndex
                  INTEGER,
              SAAspvcRootIfIndex
                  INTEGER,
              SAAspvcServiceCategory
                  INTEGER,
              SAAspvcFwdTdIndex
                  INTEGER,
              SAAspvcBwdTdIndex
                  INTEGER,
              SAAspvcForceTDs
                  INTEGER,
              SAAspvcTdOverride
                  INTEGER,
              saAspvcFwdFbw
                  INTEGER,
              saAspvcFwdVbw
                  INTEGER,
              saAspvcBwdFbw
                  INTEGER,
              saAspvcBwdVbw
                  INTEGER,
              SAAspvcTaggingOption
                  INTEGER,
              SAAspvcBwPriority
                  INTEGER,
              SAAspvcBumpPriority
                  INTEGER,
```

```
                SAAspvcSuInstId
                    INTEGER,
                SAAspvcState
                    INTEGER,
                SAAspvcCause
                    INTEGER
        }

saAspvcPifIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The ifIndex of the PVCL for this service"
        ::= { saAspvcServiceEntry 1 }

saAspvcPvpi OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The VPI of the PVCL for this service"
        ::= { saAspvcServiceEntry 2 }

saAspvcPvci OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The VCI of the PVCL for this service"
        ::= { saAspvcServiceEntry 3 }

saAspvcName OBJECT-TYPE
        SYNTAX  DisplayString(SIZE(0..40))
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "User Assigned Name for this service"
        ::= { saAspvcServiceEntry 4 }

saAspvcAdminStatus OBJECT-TYPE
        SYNTAX INTEGER {
                up(1),
                down(2)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The Administrative Status of this service"
        ::= { saAspvcServiceEntry 5 }

saAspvcOperStatus OBJECT-TYPE
        SYNTAX INTEGER {
                up(1),
                down(2),
                testing(3),
                diag(4),
                down-admin(5),
                down-oper(6),
                down-diag(7)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Operational Status for this service"
        ::= { saAspvcServiceEntry 6 }

saAspvcLastChange OBJECT-TYPE
        SYNTAX TimeTicks
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Time since last change in OperStatus for this service"
        ::= { saAspvcServiceEntry 7 }

saAspvcDialType OBJECT-TYPE
        SYNTAX INTEGER {
                none(0),
                pvc-orig(1),
                pvp(2),
                aspvc-orig(3),
                aspvc-term(4),
                spvc-orig(5),
                pvc-term(6)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "pvc-orig/pvp when no networking is required for service
                 aspvc-orig originates end to end A-SPVC call
                 aspvc-term terminates end to end A-SPVC call
                 spvc-orig originates SPVC call
                 pvc-term used for locally cross-connected IWFs
                  (also no networking required)"
        ::= { saAspvcServiceEntry 8 }
```

```
saAspvcServiceType OBJECT-TYPE
        SYNTAX INTEGER {
                spvcc(1),
                spvpc(2),
                ces(3),
                nls(4),
                ffs(5),
                vcs(6),
                uni-pvc(7),
                uni-pvp(8),
                cip(9)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Service Type identifier.  This maps to the Service Type
                Identifier in the Ascend Vendor-Specific B-HLI."
        ::= { saAspvcServiceEntry 9 }

saAspvcAppIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "ifIndex of service application beneath ATM switch
                 fabric port"
        ::= { saAspvcServiceEntry 10}

saAspvcRootIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "ifIndex of physical or logical interface from which this
                service is launched.  For example for CES the root ifIndex
                would be the DS1 port from which the service is launched.
                For NLS the root interface would be the bridge group from
                which the tunnel is launched.  This is information is used
                by the UI to generate service lists based on launch
                points."
        ::= { saAspvcServiceEntry 11}

saAspvcServiceCategory OBJECT-TYPE
        SYNTAX INTEGER {
                cbr-1(1),
                rt-vbr1(2),
                rt-vbr2(3),
                rt-vbr3(4),
                nrt-vbr1(5),
                nrt-vbr2(6),
                nrt-vbr3(7),
                ubr1(8),
                ubr2(9)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Defines the Service Category for the Configured Service"
        ::= { saAspvcServiceEntry 16 }

saAspvcFwdTdIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Index into the Traffic Descriptor Table
                for the Forward Traffic Descriptors"
        ::= { saAspvcServiceEntry 17 }

saAspvcBwdTdIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Index into the Traffic Descriptor Table
                for the Backward Traffic Descriptors"
        ::= { saAspvcServiceEntry 18 }

saAspvcForceTDs OBJECT-TYPE
        SYNTAX INTEGER {
                yes(1),
                no(2)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Forces Adaptation Traffic Descriptors into
                fwd and bwd traffic descriptors for this service"
        ::= { saAspvcServiceEntry 19 }

saAspvcTdOverride OBJECT-TYPE
        SYNTAX INTEGER {
                no(1),
                yes(2)
        }
        MAX-ACCESS  read-write
```

```
        STATUS    current
        DESCRIPTION
                "set to 'yes' if user directly edits traffic descriptor
          entries associated with this service."
        ::= { saAspvcServiceEntry 20 }

saAspvcFwdFbw OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Cells per Second debited from available forward
                 Fixed Bandwidth by CAC"
        ::= { saAspvcServiceEntry 21 }

saAspvcFwdVbw OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Cells per Second debited from available
                 forward Variable Bandwidth by CAC"
        ::= { saAspvcServiceEntry 22 }

saAspvcBwdFbw OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Cells per Second debited from available
                 backward Fixed Bandwidth by CAC"
        ::= { saAspvcServiceEntry 23 }

saAspvcBwdVbw OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Cells per Second debited from available
                 backward Variable Bandwidth by CAC"
        ::= { saAspvcServiceEntry 24 }

saAspvcTaggingOption OBJECT-TYPE
        SYNTAX INTEGER {
                not-appl(1),
                yes(2),
                no(3)
        }
        MAX-ACCESS read-only
        STATUS  current
        DESCRIPTION
                "Tagging Option, Depending on the Service Category
                 chosen Taggingoption may or may not be applicable"
        ::= { saAspvcServiceEntry 25 }

saAspvcBwPriority OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Bandwidth Priority"
        ::= { saAspvcServiceEntry 26 }

saAspvcBumpPriority OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Bumping Priority"
        ::= { saAspvcServiceEntry 27 }

saAspvcSuInstId OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "ASPVC control block index"
        ::= { saAspvcServiceEntry 28 }

saAspvcState OBJECT-TYPE
        SYNTAX INTEGER {
                init(1),
                active(2),
                dialing(3),
                wait4retry(4),
                wait4call(5),
                answering(6),
                stopped(7),
                cb-update(8)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "State for this service"
        ::= { saAspvcServiceEntry 29 }
```

```
saAspvcCause OBJECT-TYPE
        SYNTAX INTEGER {
                none(0),
                desc-OOR-vcm(1),
                cnctID-bad(2),

                no-bw-Src(3),
                no-bw-Dst(4),
                no-bfrs-Src(5),
                no-bfrs-Dst(6),

                vpvcUsed-Src(7),
                vpvcUsed-Dst(8),

                noPort-Src(9),
                noPort-Dst(10),
                prtNotRdySrc(11),
                prtNotRdyDst(12),
                portBad-Src(13),
                portBad-Dst(14),

                vci-OOR-Src(15),
                vci-OOR-Dst(16),
                vpi-OOR-Src(17),
                vpi-OOR-Dst(18),
                vpi-Rsvd-Src(19),
                vpi-Rsvd-Dst(20),
                pvp-OOR-Src(21),
                pvp-OOR-Dst(22),
                type-OOR-Src(23),
                type-OOR-Dst(24),

                bfrsFail-Src(25),
                bfrsFail-Dst(26),

                hwFail-Src(27),
                hwFail-Dst(28),

                rowFail-Src(29),
                rowFail-Dst(30),

                clrNoPortSrc(31),
                clrNoPortDst(32),

                clrRwFailSrc(33),
                clrRwFailDst(34),

                clear-ok(35),

                rate-OOR(36),
                desc-OOR(37),
                urateOOR(38),

                vpvc-ok(39),

                pre-empt(40),
                brd-oslt(41),

                user-unregistered(42),

                xcnct-init(43),

                cac-notReady(44),
                no-bw-sf(45),

                max-cause(46)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Oper status down while Admin is up,
                 this is the cause for oper down"
        ::= { saAspvcServiceEntry 30 }


--================================================================--
--                  A-SPVC PVC Table
-- A row is automatically populated in this table for each
-- service that is configured with a dialType of PVC or PVP.
-- This table provides the additional information necessary
-- to manage PVC/PVP based circuits.
--================================================================--

saAspvcPvcTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaAspvcPvcEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Table of A-SPVC services configured with
                 dial-type of PVC or PVP"
        ::= { saAspvcService 2 }

saAspvcPvcEntry OBJECT-TYPE
        SYNTAX SaAspvcPvcEntry
        MAX-ACCESS not-accessible
        STATUS current
```

```
        DESCRIPTION
                "Contains objects to provision PVC trunk-side services.
                 Indexed by drop side."
        INDEX {
                saAspvcPifIndex,
                saAspvcPvpi,
                saAspvcPvci,
                saAspvcPvcLeafRef }
        ::= { saAspvcPvcTable 1 }

SaAspvcPvcEntry ::=
        SEQUENCE {
                SAAspvcPvcLeafRef
                    INTEGER,
                SAAspvcPvcIfIndex
                    INTEGER,
                SAAspvcPvcVpi
                    INTEGER,
                SAAspvcPvcVci
                    INTEGER,
                SAAspvcPvcState
                    INTEGER,
                SAAspvcPvcRowInfo
                    INTEGER,
                SAAspvcPvcCause
                    INTEGER,
                SAAspvcPvcVcmHandle
                    INTEGER
                }

saAspvcPvcLeafRef OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Leaf Reference for point to multi-point PVCs,
                Until multi-point is supported this will always
                be equal to 1."
        ::= { saAspvcPvcEntry 1 }

saAspvcPvcIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The ifIndex of the VCL we are to
                which we are connecting"
        ::= { saAspvcPvcEntry 2 }

saAspvcPvcVpi OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The VPI of the VCL we are to
                which we are connecting"
        ::= { saAspvcPvcEntry 3 }

saAspvcPvcVci OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The VCI of the VCL we are to
                which we are connecting"
        ::= { saAspvcPvcEntry 4 }

saAspvcPvcState   OBJECT-TYPE
        SYNTAX     INTEGER {
                notInSrv(0),
                up(1),
                port-fail(2),
                add-pend(3),
                disc-pend(4),
                holding(5),
                disc-bad(6),
                down(7),
                add-bad(8),
                bad-Vpvc(9)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "PVC specific connection status"
        ::= { saAspvcPvcEntry 5}

saAspvcPvcRowInfo   OBJECT-TYPE
        SYNTAX     INTEGER  {
                not-inservice(2),
                submitted(10),
                modify(11),
                add(12),
                delete(14),
                delete-request(15),
                modify-pend(16),
                add-pend(17),
```

```
                del-pend(18),
                del-submit(19),
                del-complete(20),
                add-mod-complete(21)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Internal status for the PVC Manager "
        ::= { saAspvcPvcEntry 6}

saAspvcPvcCause   OBJECT-TYPE
        SYNTAX     INTEGER {
                ok(0),
                desc-OOR-vcm(1),
                cnctID-bad(2),

                no-bw-Src(3),
                no-bw-Dst(4),
                no-bfrs-Src(5),
                no-bfrs-Dst(6),

                vpvcUsed-Src(7),
                vpvcUsed-Dst(8),

                noPort-Src(9),
                noPort-Dst(10),
                prtNotRdySrc(11),
                prtNotRdyDst(12),
                portBad-Src(13),
                portBad-Dst(14),

                vci-OOR-Src(15),
                vci-OOR-Dst(16),
                vpi-OOR-Src(17),
                vpi-OOR-Dst(18),
                vpi-Rsvd-Src(19),
                vpi-Rsvd-Dst(20),
                pvp-OOR-Src(21),
                pvp-OOR-Dst(22),
                type-OOR-Src(23),
                type-OOR-Dst(24),

                bfrsFail-Src(25),
                bfrsFail-Dst(26),

                hwFail-Src(27),
                hwFail-Dst(28),

                rowFail-Src(29),
                rowFail-Dst(30),

                clrNoPortSrc(31),
                clrNoPortDst(32),

                clrRwFailSrc(33),
                clrRwFailDst(34),

                clear-ok(35),

                rate-OOR(36),
                desc-OOR(37),
                urateOOR(38),

                vpvc-ok(39),

                pre-empt(40),
                brd-oslt(41),

                user-unregistered(42),

                xcnct-init(43),

                cac-notReady(44),
                no-bw-sf(45),

                max-cause(46)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Detailed information on the cause of failure -
                 further describes connection state "
        ::= { saAspvcPvcEntry 7}

SaAspvcPvcVcmHandle   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " ID returned from VCM "
        ::= { saAspvcPvcEntry 8 }

SaAspvcPvcRowStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                created(2),
```

```
                delete(3),
                disconnect(7)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Used to signal PVCM to delete row "
        ::= { saAspvcPvcEntry 9 }


--=====================================================================--
-- Table to manage Soft PVCCs.
--
-- A row will be automatically added to this table for each
-- service that is configured with a dialType of
-- ASPVC_ORIG or SPVC_ORIG.  It provides the
-- additional managed objects required to manage ASPVC/SPVC originators.
--
-- This closely resembles the ATM Forum af-pnni-0066.000 MIB.  If we need
-- to formally support that MIB in the future, it should be minimal effort
-- to install a 'mirror' of this table under the atmForum enterprise
--=====================================================================--

saSoftPVccTable   OBJECT-TYPE
        SYNTAX   SEQUENCE OF SaSoftPVccEntry
        MAX-ACCESS  not-accessible
        STATUS   current
        DESCRIPTION
                "The (conceptual) table used to manage Soft
                Permanent Virtual Channel Connections (Soft PVCCs)."
        ::= { saAspvcService 3 }

saSoftPVccEntry   OBJECT-TYPE
        SYNTAX   SaSoftPVccEntry
        MAX-ACCESS  not-accessible
        STATUS   current
        DESCRIPTION
                "Each entry in this table represents a  Soft
                Permanent Virtual Channel Connection (Soft PVCC)
                originating at a switch interface.

                A Soft PVCC is a VCC that is:
                - provisioned at the originating (source)
                  interface of the connection
                - established by signalling procedures
                  across a network to a destination interface.

                A row in the atmVclTable must be created,
                defining a VCL on the source interface, prior to
                creating an saSoftPVccEntry row. The row in the
                atmVclTable must be active prior to activating the
                SASoftPVccEntry row.

              The contents of this table reflect only the
              characteristics unique to a Soft PVCC. The traffic
              parameters are defined in the VCL row for the source
              interface, as specified in the ATOMMIB (RFC1695) and
              the forthcoming addition, the Supplemental ATOMMIB.

              Note that the atmSigDescrParamTable contains some objects
              such as the AAL parameters, Broadband high layer
              information and Broadband low layer information
              elements which are used to carry end-to-end information.
              For this reason, these objects are not relevant to Soft
              PVCCs.

              When a row is made active, an attempt is made
              to set up a switched connection to an interface at
              the destination switch. No objects (other than
              SASoftPVccRowStatus) can be set while the row is
              active.

              At the destination, the VCL may be defined (but
              not cross-connected) prior to arrival of the Setup
              request.

              The combination of ifIndex, atmVclVpi, and atmVclVci
              specified in the index clause of this entry serves to
              identify the VCL on the source interface. The
              SASoftPVccLeafReference object aids in distinguishing
              between leaves of a point-to-multipoint Soft PVCC."
        INDEX { saAspvcPifIndex, saAspvcPvpi, saAspvcPvci, saSoftPVccLeafRef }
        ::= { saSoftPVccTable 1 }

saSoftPVccEntry ::=
        SEQUENCE {
                saSoftPVccLeafRef                INTEGER,
                saSoftPVccTargetAddress          OCTET STRING,
                saSoftPVccTargetSelectType       INTEGER,
                saSoftPVccTargetVpi              INTEGER,
                saSoftPVccTargetVci              INTEGER,
                saSoftPVccLastReleaseCause       INTEGER,
                saSoftPVccLastReleaseDiagnostic  OCTET STRING,
                saSoftPVccOperStatus             INTEGER,
                saSoftPVccRestart                INTEGER,
                saSoftPVccRetryInterval          INTEGER,
```

```
         saSoftPVccRetryTimer             INTEGER,
         saSoftPVccRetryThreshold         INTEGER,
         saSoftPVccRetryFailures          INTEGER,
         saSoftPVccRetryLimit             INTEGER,
         saSoftPVccRowStatus              INTEGER,
         saSoftPVccRemoteHandle           INTEGER
         }

saSoftPVccLeafRef OBJECT-TYPE
       SYNTAX  INTEGER
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Leaf Reference for point to multi-point connections"
       DEFVAL { 1 }
       ::= { saSoftPVccEntry 1 }

saSoftPVccTargetAddress OBJECT-TYPE
       SYNTAX  OCTET STRING
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The target ATM Address of this Soft PVCC."
       ::= { saSoftPVccEntry 2 }

saSoftPVccTargetSelectType OBJECT-TYPE
       SYNTAX  INTEGER {
              required(1),
              any(2)
              }
       MAX-ACCESS  read-create
       STATUS  current
       DESCRIPTION
              "Indicates whether the target VPI/VCI values
              are to be used at the destination.

              If the value 'any' is specified, the destination
              switch will choose the VPI/VCI values. In such a
              case, once the Soft PVCC saSoftPVccOperStatus
              value is 'connected', the value of this object
              changes to 'required', such that the same VPI/VCI
              values will continue to be used even if the connection
              is subsequently torn down and re-established. The
              VPI/VCI values chosen will be available for reading in
              SASoftPVccTargetVpi and saSoftPVccTargetVci.

              If the value 'required' is specified, then values
              must be supplied for objects saSoftPVccTargetVpi
              and saSoftPVccTargetVci prior to activation of the
              row. These values are then to be used at the destination."
       DEFVAL { required }
       ::= { saSoftPVccEntry 3 }

saSoftPVccTargetVpi  OBJECT-TYPE
       SYNTAX  INTEGER (0..4095)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The VPI value of the VCL used at the target interface.
              This value is not relevant when the value of
              SASoftPVccTargetSelectType is 'any'."
       DEFVAL { 0 }
       ::= { saSoftPVccEntry 4 }

saSoftPVccTargetVci  OBJECT-TYPE
       SYNTAX  INTEGER  (0..65535)
       MAX-ACCESS  read-write
       STATUS  current
       DESCRIPTION
              "The VCI value of the VCL used at the target interface.
               This value must be filled in when the
               SASoftPVccTargetSelectType is set to 'required'.This
               value is not relevant when the value of
               SASoftPVccTargetSelectType is 'any'."
       ::= { saSoftPVccEntry 5 }

saSoftPVccLastReleaseCause OBJECT-TYPE
       SYNTAX  INTEGER(1..127)
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Value of the Cause field of the Cause
              Information Element in the last RELEASE
              signalling message received for this Soft PVCC.
              Indicates the reason for the Release."
       ::= { saSoftPVccEntry 6 }

saSoftPVccLastReleaseDiagnostic  OBJECT-TYPE
       SYNTAX  OCTET STRING (SIZE(0..8))
       MAX-ACCESS  read-only
       STATUS  current
       DESCRIPTION
              "Value of the first 8 bytes of diagnostic information
              from the Cause field of the Cause Information Element
              in the last RELEASE signalling message received for
              this Soft PVCC."
```

```
        ::= { saSoftPVccEntry 7 }

saSoftPVccOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                other(1),
                establishmentInProgress(2),
                connected(3),
                retriesExhausted(4)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Describes the status of the Soft PVCC. When the
                row is not 'active', the value of this
                object is 'other'."
        ::= { saSoftPVccEntry 8 }

saSoftPVccRestart OBJECT-TYPE
        SYNTAX  INTEGER {
                    restart(1),
                    noop(2)
                    }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "When the value is set to 'restart' the Soft PVCC
                is released if necessary and a new setup procedure
                is begun. As a result of this action, the
                SASoftPVccOperStatus object transitions to
                'establishmentInProgress' (if not already in this state)
                and the saSoftPVccRetryFailures object is cleared

                When the value is set to 'noop' no operation is
                performed. When read, the value 'noop' is returned."
        ::= { saSoftPVccEntry 9 }

saSoftPVccRetryInterval OBJECT-TYPE
        SYNTAX  INTEGER (0..3600)
        UNITS    "seconds"
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Defines the period to wait before attempting
                to establish the Soft PVC after the first failed call
                attempt.  Zero represents an infinite interval
                indicating no retries."
        DEFVAL { 10 }
        ::= { saSoftPVccEntry 10 }

saSoftPVccRetryTimer OBJECT-TYPE
        SYNTAX  INTEGER (0..86400)
        UNITS    "seconds"
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Indicates the current value of the retry timer for
                this connection. When the value reaches zero an attempt
                will be made to establish the Soft PVCC. When the timer
                is not running, the value zero shall be returned."
        ::= { saSoftPVccEntry 11 }

saSoftPVccRetryThresholdOBJECT-TYPE
        SYNTAX  INTEGER (0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Indicates the number of consecutive call setup attempts
                for the same Soft PVCC which need to fail before the
                SASoftPvcCallFailures object is incremented. A value of
                zero indicates that an infinite number of call attempts
                are required to increment the saSoftPvcCallFailures object
                and thus disables alarms for the Soft PVCC."
        DEFVAL { 1 }
        ::= { saSoftPVccEntry 12 }

saSoftPVccRetryFailures OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Indicates how many attempts to establish the connection
                have failed.  This count is reset whenever a connection
                is successfully established or the Soft PVCC is restarted."
        ::= { saSoftPVccEntry 13 }

saSoftPVccRetryLimit OBJECT-TYPE
        SYNTAX  INTEGER (0..65535)
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Sets a maximum limit on how many consecutive unsuccessful
                call setup attempts can be made before stopping the attempt
                to set up the connection. If this limit is reached then
                management action will be required (e.g. setting
                SASoftPVccRestart to 'restart') to initiate a new attempt
                to establish the connection. A value of zero indicates
```

```
                no limit - the attempts will continue until successful."
        DEFVAL { 0 }
        ::= { saSoftPVccEntry 14 }

saSoftPVccRowStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                create(1),
                created(2),
                delete(3)
        }
        MAX-ACCESS  read-create
        STATUS  current
        DESCRIPTION
                "Used to create and delete a Soft PVCC. When this
                object is set to 'active' an attempt is made to
                set up the Soft PVCC. When this object has the value
                'active' and is set to another value, any
                set-up or connection in-progress is released."
        ::= { saSoftPVccEntry 15 }

saSoftPVccRemoteHandle OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
        "Service Handle.  This maps to the service instance
         identifier in the Ascend Vendor-Specific B-HLI.

        This field should used for ASPVC-ORIG, and should not
        be used for SPVC-ORIG.  For SPVC-ORIG the VP/VC fields
        of this table should be used to specify the remote VP/VC"
        ::= { saSoftPVccEntry 16 }

--=================================================================--
--            A-SPVC Termination Information
-- A row in this table will be automatically created for each service that
-- is configured with a dialType of ASPVC-TERM.
--
-- This table provides the additional management information necessary to
-- manage ASPVC terminator functions.
--
--=================================================================--

saAspvcTerminateTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaAspvcTerminateEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Table of A-SPVC terminate services.
                 Contains a record per service termination.
                 All A-SPVC terminations are represented by
                 a service type and a service identifier"
        ::= { saAspvcService 4 }

saAspvcTerminateEntry OBJECT-TYPE
        SYNTAX SaAspvcTerminateEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Contains objects relevant to A-SPVC terminate services"
        INDEX {
                saAspvcPifIndex,
                saAspvcPvpi,
                saAspvcPvci,
                saAspvcTerminateLeafRef }
        ::= { saAspvcTerminateTable 1 }

SaAspvcTerminateEntry ::=
        SEQUENCE {
                SAAspvcTerminateLeafRef
                    INTEGER,
                SAAspvcTerminateHandle
                    INTEGER,
                SAAspvcTerminateClearCounts
                    INTEGER,
                SAAspvcTerminateRejects
                    INTEGER,
                SAAspvcTerminateReason
                    INTEGER
        }
```

```
saAspvcTerminateLeafRef OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Leaf Reference for point to Multi-point terminators"
        ::= { saAspvcTerminateEntry 1 }



saAspvcTerminateHandle OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Unique Termination handle assigned to this service.
                This handle should be used by the corresponding ASPVC-ORIG
                function to specify the remote service"
        ::= { saAspvcTerminateEntry 2 }

saAspvcTerminateClearCounts OBJECT-TYPE
        SYNTAX INTEGER {
                yes(1),
                no(2)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Clear Counts for this Terminator"
        ::= { saAspvcTerminateEntry 3 }

saAspvcTerminateRejects OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Number of Times a call has been rejected by
                 this terminator"
        ::= { saAspvcTerminateEntry 4 }

saAspvcTerminateReason OBJECT-TYPE
        SYNTAX INTEGER {
                aal(1),
                td(2),
                bbc(4),
                qos(8)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Bit-Mask of reasons for call setup reject."
        ::= { saAspvcTerminateEntry 5 }




--================================================================--
--                        A-SPVC Root Service Table

-- A row in this table will be automatically created each time a row is
-- created in the Service Table.  This table provides alternate
-- indexing of the drop-side PVCL's to aid network management
-- applications such as the embedded UI of the SA product.
--
--================================================================--

saAspvcRootServiceTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaAspvcRootServiceEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Cross-reference listing of provisioned A-SPVC services.
                 Indexed from root ifIndex to provide screening
                 at root/port level for UI"
        ::= { saAspvcService 5 }

saAspvcRootServiceEntry OBJECT-TYPE
        SYNTAX SaAspvcRootServiceEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Primary value of table is alternate indexing"
        INDEX {
                saAspvcRootIndex,
                saAspvcAtmIfIndex,
                saAspvcAtmVpi,
                saAspvcAtmVci}
        ::= { saAspvcRootServiceTable 1 }

SaAspvcRootServiceEntry ::=
        SEQUENCE {
                SAAspvcRootIndex
                    INTEGER,
                SAAspvcAtmIfIndex
```

```
                INTEGER,
            SAAspvcAtmVpi
                INTEGER,
            SAAspvcAtmVci
                INTEGER
        }

saAspvcRootIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "ifIndex of Root Interface for Service"
        ::= { saAspvcRootServiceEntry 1 }

saAspvcAtmIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "ifIndex of ATM interface for service"
        ::= { saAspvcRootServiceEntry 2 }

saAspvcAtmVpi OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Internal VPI for service"
        ::= { saAspvcRootServiceEntry 3 }

saAspvcAtmVci OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Internal VCI for service"
        ::= { saAspvcRootServiceEntry 4 }
```

```
--==================================================================--
--                  A-SPVC ATM VCL Provisioning
--
-- This group of simple objects allow creation of PVCL (drop-side native
-- ATM UNI) inter-working functions.
--==================================================================--

saAspvcPvclProvIfIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "ifIndex of new drop-side UNI connection"
        ::= { saAspvcPvclProv 1 }

saAspvcPvclProvVpi OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "VPI of new drop-side UNI connection"
        ::= { saAspvcPvclProv 2 }

saAspvcPvclProvVci OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "VCI of new drop-side UNI connection"
        ::= { saAspvcPvclProv 3 }

saAspvcPvclProvServiceType OBJECT-TYPE
        SYNTAX INTEGER {
                uni-pvc(1),
                uni-pvp(2)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Type of new drop-side UNI connection (pvc or pvp)"
        ::= { saAspvcPvclProv 4 }

saAspvcPvclProvCmd OBJECT-TYPE
        SYNTAX INTEGER {
                noop(1),
                add-uni-iwf(2),
                del-uni-iwf(3)
                }
```

```
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "Add/Delete a drop-side UNI connection"
        ::= { saAspvcPvclProv 5 }

saAspvcPvclProvResp OBJECT-TYPE
        SYNTAX INTEGER {
                ok(1),
                in-use(2),
                not-present(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Results of processing ProvCmd"
        ::= { saAspvcPvclProv 6 }


--================================================================--
--                  A-SPVC ATM VCL Table
--
-- This table allows users to provision PVCL's for subsequent routing
-- out of the node as PVC/PVP/ASPVC/SPVC/etc.
--
--================================================================--

saAspvcPvclTable OBJECT-TYPE
        SYNTAX   SEQUENCE OF SaAspvcPvclEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Table of drop-side ATM VCLs.  Each VCL may be
                 routed out of the node as a PVC, PVP,
                 ASPVC_ORIG, ASPVC_TERM, SPVC, or SPVP"
        ::= { saAspvcService 6 }

saAspvcPvclEntry OBJECT-TYPE
        SYNTAX   SaAspvcPvclEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Contains objects relevant to A-SPVC services"
        INDEX { saAspvcPvclIfIndex, saAspvcPvclVpi, saAspvcPvclVci }
        ::= { saAspvcPvclTable 1 }

SaAspvcPvclEntry ::=
        SEQUENCE {
                SAAspvcPvclIfIndex
                    INTEGER,
                SAAspvcPvclVpi
                    INTEGER,
                SAAspvcPvclVci
                    INTEGER,
                SAAspvcPvclServiceType
                    INTEGER,
                SAAspvcPvclServiceRate
                    INTEGER,
                SAAspvcPvclUserRate
                    INTEGER,
                SAAspvcPvclURateStatus
                    INTEGER
        }



saAspvcPvclIfIndex   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "The ifIndex of the PVCL for this service"
        ::= { saAspvcPvclEntry 1 }

saAspvcPvclVpi   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "The VPI of the PVCL for this service"
        ::= { saAspvcPvclEntry 2 }

saAspvcPvclVci   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "The VCI of the PVCL for this service"
        ::= { saAspvcPvclEntry 3 }

saAspvcPvclServiceType   OBJECT-TYPE
        SYNTAX   INTEGER {
                uni-pvc(1),
                uni-pvp(2)
                }
        MAX-ACCESS read-only
```

```
        STATUS current
        DESCRIPTION
                "Reflects original Row Status value
                 (this object needs to be read-only !!!)"
        ::= { saAspvcPvclEntry 4 }

saAspvcPvclServiceRate   OBJECT-TYPE
        SYNTAX   INTEGER {
                rate-64Kb(1),
                rate-384Kb(2),
                rate-1536Kb(3),
                rate-1Mb(4),
                rate-2Mb(5),
                rate-5Mb(6),
                rate-10Mb(7),
                rate-40Mb(8),
                rate-50Mb(9),
                rate-100Mb(10),
                rate-150Mb(11),
                user-defined(12)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Selects canned service rate"
        ::= { saAspvcPvclEntry 5 }

saAspvcPvclUserRate   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-write
        STATUS    current
        DESCRIPTION
                "User defined rate"
        ::= { saAspvcPvclEntry 6 }

saAspvcPvclURateStatus   OBJECT-TYPE
        SYNTAX   INTEGER {
                ok(1),
                bad(2)
        }
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "Results of processing user entered rate"
        ::= { saAspvcPvclEntry 7 }

--================================================================--
--                      A-SPVC Switched Circuit Table
--
-- A row is automatically populated in this table for each service that is
-- configured with a dialType of SPVC-ORIG, ASPVC-ORIG, or ASPVC-TERM.

-- This table provides additional information relevant to
-- switched circuits.
--================================================================--
saAspvcScTable   OBJECT-TYPE
        SYNTAX   SEQUENCE OF SaAspvcScEntry
        MAX-ACCESS   not-accessible
        STATUS    current
        DESCRIPTION
                "Table of switched circuit status items"
        ::= { saAspvcService 7 }

saAspvcScEntry   OBJECT-TYPE
        SYNTAX   SaAspvcScEntry
        MAX-ACCESS    not-accessible
        STATUS   current
        DESCRIPTION
                "Contains switched circuit status"
        INDEX { saAspvcPvclIfIndex, saAspvcPvclVpi, saAspvcPvclVci,
saAspvcScLeafRef }
        ::= { saAspvcScTable 1 }

SaAspvcScEntry ::=
        SEQUENCE {
                SAAspvcScLeafRef
                    INTEGER,
                SAAspvcScCause
                    INTEGER,
                SAAspvcScIfIndex
                    INTEGER,
                SAAspvcScVpi
                    INTEGER,
                SAAspvcScVci
                    INTEGER,
                SAAspvcScLocation
                    INTEGER,
                SAAspvcScDiag
                    OCTET STRING
                }

saAspvcScLeafRef   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-only
```

```
        STATUS   current
        DESCRIPTION
                "Leaf Reference for this switched circuit"
        ::= { saAspvcScEntry 1 }

saAspvcScCause   OBJECT-TYPE
        SYNTAX   INTEGER {
        none (0),            -- non std, SA proprietary
        unalloc-nmb    (1),  -- unallocated (unassigned) number
        no-route-transnet (2),  -- no route to transit network
        no-route-dest     (3),  -- no route to destination
        vcc-unacceptable-30  (10), -- UNI 3.0: VPCI/VCI unacceptable
        normal-call-clr-31   (16), -- UNI 3.1: normal call clearing
        user-busy      (17), -- user busy
        no-user-response  (18), -- no user response
        call-reject    (21), -- call rejected
        nmb-changed    (22), -- number changed
        call-reject-clir  (23), -- user rejects all calls with CLIR
        dest-out-of-order (27), -- destination out of order
        invalid-nmb-format   (28), -- invalid number format
        response-stat-enq (30), -- response to STATUS ENQUIRY
        normal-unspecified   (31), -- normal unspecified
        req-vcc-unavailable  (35), -- requested VPCI/VCI unavailable
        vcc-fail-31    (36), -- UNI 3.1: VPCI/VCI assignment failure
        rate-unavail-31   (37), -- UNI 3.1: user cell rate unavailable
        network-out-of-order (38), -- network out of order
        temp-fail      (41), -- Temporary failure
        access-info-discard  (43), -- access info discarded
        no-vcc-available  (45), -- no VPCI/VCI unavailable
        resources-unavailable  (47), -- resources unavailable, unspecified
        qos-unavailable   (49), -- Quality of Service unavailable
        rate-unavailable-30  (51), -- UNI 3.0: user cell rate unavailable
        b-cap-not-authorized (57), -- bearer capability not authorized
        b-cap-unavailable (58), -- bearer capability not available
        service-unavailable  (63), -- Service or option unavailable
        b-cap-not-implemented   (65), -- bearer capability not implemented
        combination-unsupported (73), -- unsupported comb.
                                      -- of traffic parameters
        aal-params-unsupp-31 (78), -- UNI 3.1: AAL parameters
                                   --  cannot be supported
        invalid-call-reference  (81), -- invalid call reference
        no-channel     (82), -- identified channel does not exist
        dest-incompatible (88), -- incompatible destination
        invalid-endpoint-ref (89), -- invalid endpoint reference
        invalid-transit-net  (91), -- invalid transit network selection
        too-many-add-pty-req (92), -- too many add party requests
        aal-params-unsupp-30 (93), -- UNI 3.0:AAL parameters
                                  -- cannot be supported
        info-element-missing (96), -- mandatory info element is missing
        msg-type-not-imp  (97), -- message type not implemented
        info-element-not-imp (99), -- info element not implemented
        invalid-info-element (100),   -- invalid info element
        message-not-compatible  (101),   -- msg type not compatible
                                          -- with call st
        timer-recovery    (102),   -- recovery on timer expire
        invalid-message-len  (104),   -- incorrect message length
        protocol-error    (111),   -- protocol error, unspecified
        optional-element-error  (127),   -- opt info el content error
                                          -- (non-std)
        no-route-next-node   (128),   -- pnni
        dtl-not-my-node      (160)   -- pnni
        }
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "Last received cause code for this service."
        ::= { saAspvcScEntry 2 }

saAspvcScIfIndex   OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "The ifIndex of the Switched VCL for this service."
        ::= { saAspvcScEntry 3 }

saAspvcScVpi    OBJECT-TYPE
        SYNTAX   INTEGER
        MAX-ACCESS    read-only
        STATUS   current
        DESCRIPTION
                "The VPI of the Switched VCL for this service."
        ::= { saAspvcScEntry 4 }

saAspvcScVci    OBJECT-TYPE
        SYNTAX    INTEGER
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "The VCI of the Switched VCL for this service."
        ::= { saAspvcScEntry 5 }

saAspvcScLocation   OBJECT-TYPE
        SYNTAX    INTEGER {
                user (0),
                private-nwk-serving-loc-user (1),
```

```
                public-nwk-serving-loc-user (2),
                transit-nwk (3),
                public-nwk-serving-rem-user (4),
                private-nwk-serving-rem-user (5),
                intl-nwk (7),
                nwk-beyond-intw-point (10)
        }
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "Location of the cause originator"
        ::= { saAspvcScEntry 6 }

saAspvcScDiag   OBJECT-TYPE
        SYNTAX   OCTET STRING (SIZE(32))
        MAX-ACCESS   read-only
        STATUS   current
        DESCRIPTION
                "diagnostic info, if any"
        ::= { saAspvcScEntry 7 }
```

```
--=================================================================--
--                        A-SPVC PVC-Term Table
--
-- A row is automatically populated in this table for each service that is
-- configured with a dialType of PVC-Term. The dialType is always paired
-- with a PVC-Orig for locally cross-connected IWFs. The table is really
-- just a place holder, the PVC-Orig's table (PvcTable)
-- does the real work.
--=================================================================--

saAspvcPvcTermTable   OBJECT-TYPE
        SYNTAX   SEQUENCE OF SaAspvcPvcTermEntry
        MAX-ACCESS   not-accessible
        STATUS   current
        DESCRIPTION
                "Table of A-SPVC services configured with
                 dial-type of PVC-Term"
        ::= { saAspvcService 8 }

saAspvcPvcTermEntry OBJECT-TYPE
        SYNTAX SaAspvcPvcTermEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Contains objects provisioning PVCs
                 that are locally x-connected IWFs.
                 Indexed by drop side."
        INDEX { saAspvcPifIndex, saAspvcPvpi, saAspvcPvci }
        ::= { saAspvcPvcTermTable 1 }

SaAspvcPvcTermEntry ::=
        SEQUENCE {
                SAAspvcPvcTermIfIndex
                    INTEGER,
                SAAspvcPvcTermVpi
                    INTEGER,
                SAAspvcPvcTermVci
                    INTEGER
        }

saAspvcPvcTermIfIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The ifIndex of the VCL we are to which we are connecting"
        ::= { saAspvcPvcTermEntry 1 }

saAspvcPvcTermVpi OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The VPI of the VCL we are to which we are connecting"
        ::= { saAspvcPvcTermEntry 2 }

saAspvcPvcTermVci OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The VCI of the VCL we are to which we are connecting"
        ::= { saAspvcPvcTermEntry 3 }



--=================================================================--
--                  A-SPVC Traffic Descriptor Table
--
-- Each time a row is created in the service table.
-- Two rows will be created in this table to provide user control
-- over forward and backward traffic descriptors.
-- Two columnar objects in the Service Table provide table
-- indices back into this table for the forward and reverse entries.
--
--=================================================================--

saAspvcLastTdIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Last Traffic Descriptor Index"
        ::= { saAspvcTrafficDesc 1 }

saAspvcTdTable OBJECT-TYPE
        SYNTAX SEQUENCE OF SaAspvcTdEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "List of Traffic Descriptors used by A-SPVC services"
        ::= { saAspvcTrafficDesc 2 }
```

```
saAspvcTdEntry OBJECT-TYPE
        SYNTAX SaAspvcTdEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
                "Traffic Descriptor Table"
        INDEX { saAspvcTdIndex }
        ::= { saAspvcTdTable 1 }

SaAspvcTdEntry ::=
        SEQUENCE {
                SAAspvcTdIndex
                    INTEGER,
                SAAspvcTdPcr01
                    INTEGER,
                SAAspvcTdPcr0
                    INTEGER,
                SAAspvcTdScr01
                    INTEGER,
                SAAspvcTdScr0
                    INTEGER,
                SAAspvcTdMbs01
                    INTEGER,
                SAAspvcTdMbs0
                    INTEGER,
                SAAspvcTdCdvt
                    INTEGER,
                SAAspvcTdCongestAction
                    INTEGER,
                SAAspvcTdBufferSize
                    INTEGER,
                SAAspvcTdUpcEnable
                    INTEGER
                }

saAspvcTdIndex OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "Table Index"
        ::= { saAspvcTdEntry 1 }

saAspvcTdPcr01 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Peak Cell Rate for CLP=0+1"
        ::= { saAspvcTdEntry 2 }

saAspvcTdPcr0 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Peak Cell Rate for CLP=0"
        ::= { saAspvcTdEntry 3 }

saAspvcTdScr01 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Sustained Cell Rate for CLP=0+1"
        ::= { saAspvcTdEntry 4 }

saAspvcTdScr0 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Sustained Cell Rate for CLP=0"
        ::= { saAspvcTdEntry 5 }

saAspvcTdMbs01 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Maximum Burst Size for CLP=0+1"
        ::= { saAspvcTdEntry 6 }

saAspvcTdMbs0 OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Maximum Burst Size for CLP=0"
        ::= { saAspvcTdEntry 7 }
```

```
saAspvcTdCdvt OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "Cell Delay Variation Tolerance"
        ::= { saAspvcTdEntry 8 }

saAspvcTdCongestAction  OBJECT-TYPE
        SYNTAX INTEGER {
                none(1),
                setEFCI(2),
                earlyPacketDiscard(3),
                dropCLP1(4),
                setEFCIandEPD(5),
                setEFCIandCLP1(6)
        }
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
                "Action taken on Forward Congestion"
        ::= { saAspvcTdEntry 9 }

saAspvcTdBufferSize OBJECT-TYPE
        SYNTAX INTEGER {
                shallow(1),
                medium(2),
                high(3)
        }
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
        "Buffer size allocated for this connection"
        ::= { saAspvcTdEntry 10 }

saAspvcTdUpcEnable OBJECT-TYPE
        SYNTAX INTEGER {
                off(1),
                on(2)
        }
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
        "When enabled non-conforming cells are tagged or discarded, when
        disabled policing is in monitor mode only"
        ::= { saAspvcTdEntry 11 }

END
```

```
--====================================================================--
```

Sahara Network Call Control MIB

```
--====================================================================--

sa-NCC-MIB DEFINITIONS ::= BEGIN

IMPORTS
        OBJECT-TYPE FROM SNMPv2-SMI
        saSignallingFROM OASIS-SYSINFO-MIB
        TimeTicks   FROM RFC1155-SMI;

-- groups in SA-SIG-ILMI-MIB
saNcc   OBJECT IDENTIFIER ::= { saSignalling 6 }

--====================================================================
--
-- SA P2P SVC Table
--
--====================================================================

saNccP2PSvcTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF SaNccP2PSvcEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "A table containing information about tandem circuits."
        ::= { saNcc 1 }

saNccP2PSvcEntry OBJECT-TYPE
        SYNTAX  SaNccP2PSvcEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The objects relevant to a SVC calls"
        INDEX {
                saNccP2PSvcSrcIfIndex,
                saNccP2PSvcSrcVpi,
                saNccP2PSvcSrcVci,
                saNccP2PSvcDstIfIndex,
                saNccP2PSvcDstVpi,
                saNccP2PSvcDstVci}
        ::= { saNccP2PSvcTable 1 }

SaNccP2PSvcEntry          ::= SEQUENCE
        {       saNccP2PSvcSrcIfIndex            INTEGER,
                saNccP2PSvcSrcVpi                INTEGER,
                saNccP2PSvcSrcVci                INTEGER,
                saNccP2PSvcDstIfIndex            INTEGER,
                saNccP2PSvcDstVpi                INTEGER,
                saNccP2PSvcDstVci                INTEGER,
                saNccP2PSvcAdminStatus           INTEGER,
                saNccP2PSvcCallingParty          OCTET STRING,
                saNccP2PSvcCallingPartyNmbPlan   INTEGER,
                saNccP2PSvcCalledParty           OCTET STRING,
                saNccP2PSvcCalledPartyNmbPlan    INTEGER,
                saNccP2PSvcCreationTime          TimeTicks
                }

saNccP2PSvcSrcIfIndex     OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Source Interface Index; this is the value of ifIndex
                 for this side of the connection"
        ::= { saNccP2PSvcEntry 1}

saNccP2PSvcSrcVpi     OBJECT-TYPE
        SYNTAX      INTEGER  (0..4095)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Source VPI"
        ::= { saNccP2PSvcEntry 2}

saNccP2PSvcSrcVci     OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Source VCI"
        ::= { saNccP2PSvcEntry 3}

saNccP2PSvcDstIfIndex   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination Interface Index; this is the value of ifIndex
                 for this side of the connection"
        ::= { saNccP2PSvcEntry 4 }
```

```
saNccP2PSvcDstVpi     OBJECT-TYPE
        SYNTAX     INTEGER (0..4095)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination VPI "
        ::= { saNccP2PSvcEntry 5 }

saNccP2PSvcDstVci     OBJECT-TYPE
        SYNTAX     INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                " Destination VCI "
        ::= { saNccP2PSvcEntry 6 }

saNccP2PSvcAdminStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
                " Administative Status "
        ::= { saNccP2PSvcEntry 7 }

saNccP2PSvcCallingParty OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(0 | 8 | 20))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The calling party number for this call.
                 E.164 addresses are coded as 1-15 ASCII octets.
                 Atm-endsystem addresses are coded as 20 octet
                 binary addresses.
                 A 0 length octet string will invalidate this object."
        ::= { saNccP2PSvcEntry 8 }

saNccP2PSvcCallingPartyNmbPlan OBJECT-TYPE
        SYNTAX INTEGER{
                e164 (1),
                atm-endsystem (2),
                unknown(3)
        }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
                "The numbering plan corresponding to
                 saSvcCallingParty object."
        ::= { saNccP2PSvcEntry 9 }

saNccP2PSvcCalledParty OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(8 | 20))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The called party number for this call.
                 E.164 addresses are coded as 1-15 ASCII octets.
                 Atm-endsystem addresses are coded as 20 octet binary
addresses."
        ::= { saNccP2PSvcEntry 10 }

saNccP2PSvcCalledPartyNmbPlan OBJECT-TYPE
        SYNTAX INTEGER{
                e164 (1),
                atm-endsystem (2),
                unknown(3)
        }
        MAX-ACCESS  read-write
        STATUS current
        DESCRIPTION
                "The numbering plan corresponding to this entry's local
gateway address object."
        ::= { saNccP2PSvcEntry 11 }

saNccP2PSvcCreationTime OBJECT-TYPE
        SYNTAX  TimeTicks
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of sysUpTime when the circuit was created"
        ::= { saNccP2PSvcEntry 12 }

saNccEvent OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "for testing sncc"
        ::= { saNcc 2 }

END
```

```
-- ******************************************************
```

SCCS MIB

```
-- ******************************************************

OASIS-SCCS-MIB DEFINITIONS ::= BEGIN

IMPORTS
       OBJECT-TYPE            FROM SNMPv2-SMI
       saSCCSStats, saBrdNum  FROM OASIS-SYSINFO-MIB
       Counter                FROM RFC1155-SMI;

saSccsPerCallStats         OBJECT IDENTIFIER ::= { saSCCSStats 2 }
saSccsGlobalStats          OBJECT IDENTIFIER ::= { saSCCSStats 3}


saSccsPerCallStatsControl  OBJECT-TYPE
       SYNTAX                  INTEGER {
              enable(1),
              disable(2)
              }
       MAX-ACCESS          read-write
       STATUS              current
       DESCRIPTION
              "Enables/Disables per Call debug info (saSCCSCallTable). "
       ::= { saSCCSStats 1}



--=====================================================================
-- Call Control Block Info
-- contains informations about calls managed by SCCS layer.
--=====================================================================

SaSCCSCallTable  OBJECT-TYPE
       SYNTAX       SEQUENCE OF SaSCCSCallEntry
       MAX-ACCESS   not-accessible
       STATUS       current
       DESCRIPTION
              "SCCS Call Table "
       ::= { saSccsPerCallStats 1}

saSCCSCallEntry  OBJECT-TYPE
       SYNTAX       SaSCCSCallEntry
       MAX-ACCESS   not-accessible
       STATUS       current
       DESCRIPTION
              " "
       INDEX { saSccsCBIndex }
       ::= { saSCCSCallTable 1}

saSCCSCallEntry           ::= SEQUENCE
       {
              saSccsCBIndex          INTEGER,
              saSccsCCBStatus        INTEGER,
              saSccsState            INTEGER,
              saSccsNewEvent         INTEGER,
              saSccsUserId           INTEGER,
              saSccsSide             INTEGER,
              saSccsCallType         INTEGER,
              saSccsRole             INTEGER,
              saSccsSuInstId         INTEGER,
              saSccsSpInstId         INTEGER,
              saSccsAppInstId        INTEGER,
              saSccsPvclIfIndex      INTEGER,
              saSccsPvclVpi          INTEGER,
              saSccsPvclVci          INTEGER,
              saSccsSvclIfIndex      INTEGER,
              saSccsSvclVpi          INTEGER,
              saSccsSvclVci          INTEGER,
              saSccsIfIndex          INTEGER,
              saSccsProtocol         INTEGER
              }

SaSccsCBIndex    OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "Call Control Block Index"
       ::= {saSCCSCallEntry 1}

saSccsCCBStatus  OBJECT-TYPE
       SYNTAX         INTEGER {
              free(1),
              used(2)
              }
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "Status of the Call Control Block (Used / Free)"
       ::= {saSCCSCallEntry 2}
```

```
SaSccsState     OBJECT-TYPE
        SYNTAX          INTEGER {
                orig-init(1),
                orig-call-initiated(2),
                orig-status-ind-rcvd(3),
                orig-release-initiated(4),
                orig-active(5),

                dest-init(6),
                dest-validating-conn(7),
                dest-connect-sent(8),
                dest-release-initiated(9),
                dest-active(10)
                }
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "SCCS State of the call "
        ::= {saSCCSCallEntry 3}

saSccsNewEvent    OBJECT-TYPE
        SYNTAX          INTEGER {
                orig-setup-req(1),
                orig-conn-cfm(2),
                orig-rel-ind(3),
                orig-status-ind(4),
                orig-release(5),

                dest-conn-ind(6),
                dest-conn-rej(7),
                dest-conn-accept-a(8),
                dest-conn-accept-p(9),
                dest-conn-req(10),
                dest-rel-ind(11),
                dest-status-ind(12),
                dest-release(13),
                dest-rel-cfm(14)
                }
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "SCCS State Machine event"
        ::= {saSCCSCallEntry 4}

saSccsUserId      OBJECT-TYPE
        SYNTAX          INTEGER
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "SCCS User ID (SPVCM, NCC.. )"
        ::= {saSCCSCallEntry 5}

saSccsSide        OBJECT-TYPE
        SYNTAX          INTEGER {
                network(2),
                user(3)
                }
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "SCCS SIDE: User or Network "
        ::= {saSCCSCallEntry 6}

saSccsCallType    OBJECT-TYPE
        SYNTAX          INTEGER {
                active(2),
                passive(3)
                }
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "ACTIVE or PASSIVE"
        ::= {saSCCSCallEntry 7}

saSccsRole        OBJECT-TYPE
        SYNTAX          INTEGER {
                originating(2),
                destination(3)
                }
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "Originator or Terrminator"
        ::= {saSCCSCallEntry 8}

saSccsSuInstId    OBJECT-TYPE
        SYNTAX          INTEGER
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
                "SCCS Service User Instance ID at AMT interface"
        ::= {saSCCSCallEntry 9}
```

```
saSccsSpInstId    OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "SCCS Service Provider Instance ID at AMT interface"
       ::= {saSCCSCallEntry 10}

saSccsAppInstId   OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "SCCS Application Instance ID; assigned by SCCS users"
       ::= {saSCCSCallEntry 11}

saSccsPvclIfIndex OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "ifIndex for PVCL leg"
       ::= {saSCCSCallEntry 12}

saSccsPvclVpi     OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "VPI for PVCL leg"
       ::= {saSCCSCallEntry 13}

saSccsPvclVci     OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "VCI for PVCL leg"
       ::= {saSCCSCallEntry 14}

saSccsSvclIfIndex OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "ifIndex for SVCL leg"
       ::= {saSCCSCallEntry 15}

saSccsSvclVpi     OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "VPI for SVCL leg"
       ::= {saSCCSCallEntry 16}

saSccsSvclVci     OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "VCI for SVCL leg"
       ::= {saSCCSCallEntry 17}

saSccsIfIndex     OBJECT-TYPE
       SYNTAX         INTEGER
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "IfIndex on which the call was established"
       ::= {saSCCSCallEntry 18}

saSccsProtocol    OBJECT-TYPE
       SYNTAX         INTEGER {
              other(1),
              autoConfig(2),
              ituDss2(3),
              atmfUni3Dot0(4),
              atmfUni3Dot1(5),
              atmfUni4Dot0(6),
              atmfIispUni3Dot0(7),
              atmfIispUni3Dot1(8),
              atmfIispUni4Dot0(9),
              atmfPnni1Dot0(10),
              atmfBici2Dot0(11),
              atmfUniPvcOnly(12),
              atmfNniPvcOnly(13)
              }
       MAX-ACCESS     read-only
       STATUS         current
       DESCRIPTION
              "Protocol Variant"
       ::= {saSCCSCallEntry 19}
```

```
--=====================================================================
--                SCCS Global Statistics
--=====================================================================

saSccsNumSCCSUsers   OBJECT-TYPE
       SYNTAX        Counter
       MAX-ACCESS    read-only
       STATUS        current
       DESCRIPTION
              "Number of Registered SCCS Users"
       ::= { saSccsGlobalStats 1 }

SASccsTotalNumCBs    OBJECT-TYPE
       SYNTAX        Counter
       MAX-ACCESS    read-only
       STATUS        current
       DESCRIPTION
              "Total Number of Call Control Blocks"
       ::= { saSccsGlobalStats 2 }

SASccsNumFreeCBs     OBJECT-TYPE
       SYNTAX        Counter
       MAX-ACCESS    read-only
       STATUS        current
       DESCRIPTION
              "Number of Free Call Control Blocks"
       ::= { saSccsGlobalStats 3 }

SASccsNumAppSetupReqs   OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of SETUP requests issued by SCCS users "
       ::= { saSccsGlobalStats 4 }

SASccsNumAppReleaseReqs OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of Release requests issued by SCCS users"
       ::= { saSccsGlobalStats 5 }

SASccsNumAppConnectReqs OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of CONNECT requests issued by SCCS users"
       ::= { saSccsGlobalStats 6 }

SASccsNumAppRspAccepts  OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of Response Calls by SCCS users
               that were ACCEPTED "
       ::= { saSccsGlobalStats 7 }
SASccsNumAppRspRejects  OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of Response Calls by SCCS users that were REJECTED
"
       ::= { saSccsGlobalStats 8 }

SASccsNumAppSetupInds   OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of SETUP indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 9 }

SASccsNumAppReleaseInds OBJECT-TYPE
       SYNTAX          Counter
       MAX-ACCESS      read-only
       STATUS          current
       DESCRIPTION
              "Number of RELEASE indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 10 }

SASccsNumAppCallInitiatedInds OBJECT-TYPE
       SYNTAX                Counter
       MAX-ACCESS            read-only
       STATUS                current
       DESCRIPTION
              "Number of Call-Initiated indications
               passed up to SCCS Users"
       ::= { saSccsGlobalStats 11 }

SASccsNumAppConnectInds    OBJECT-TYPE
       SYNTAX             Counter
```

```
        MAX-ACCESS          read-only
        STATUS              current
        DESCRIPTION
                "Number of CONNECT indications passed up to SCCS Users"
        ::= { saSccsGlobalStats 12 }

SASccsNumAppStatusInds  OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of STATUS_IND indications passed up to SCCS Users"
        ::= { saSccsGlobalStats 13 }

SASccsNumAmtMsgsRcvd    OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Total Number of Messages received at the AMT interface"
        ::= { saSccsGlobalStats 14 }

SASccsNumAmtConnIndRcvd OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Conn Indication Messages
                 received at the AMT interface"
        ::= { saSccsGlobalStats 15 }

SASccsNumAmtStIndRcvd   OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Status Ind Messages received
                 at the AMT interface"
        ::= { saSccsGlobalStats 16 }

SASccsNumAmtConnCfmRcvd OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Conn Cfm Messages received
                 at the AMT interface"
        ::= { saSccsGlobalStats 17 }

SASccsNumAmtRelIndRcvd  OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Release Ind Messages
                 received at the AMT interface"
        ::= { saSccsGlobalStats 18 }

SASccsNumAmtRelCfmRcvd  OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Release Cfm Messages received
                 at the AMT interface"
        ::= { saSccsGlobalStats 19 }

SASccsNumAmtRstIndRcvd  OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Restart Ind Messages received
                 at the AMT interface"
        ::= { saSccsGlobalStats 20 }

SASccsNumAmtConnReqs    OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Conn Requests Messages issued
                 at the AMT interface"
        ::= { saSccsGlobalStats 21 }

SASccsNumAmtRelReqs     OBJECT-TYPE
        SYNTAX           Counter
        MAX-ACCESS       read-only
        STATUS           current
        DESCRIPTION
                "Number of Release Request Messages issued
                 at the AMT interface"
        ::= { saSccsGlobalStats 22 }
```

```
SASccsNumAmtStReqs         OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of Amt Status Requests "
       ::= { saSccsGlobalStats 23 }

SASccsNumAmtConnRsps    OBJECT-TYPE
       SYNTAX           Counter
       MAX-ACCESS       read-only
       STATUS           current
       DESCRIPTION
              "Number of Conn Response Messages issued
               at the AMT interface"
       ::= { saSccsGlobalStats 24 }

SASccsNumVcmFailures    OBJECT-TYPE
       SYNTAX           Counter
       MAX-ACCESS       read-only
       STATUS           current
       DESCRIPTION
              "Number of VCM calls that returned an error code"
       ::= { saSccsGlobalStats 25}

SASccsNumVcmCallouts    OBJECT-TYPE
       SYNTAX           Counter
       MAX-ACCESS       read-only
       STATUS           current
       DESCRIPTION
              "Number of times VCM called the sccs callout function."
       ::= { saSccsGlobalStats 26 }

SASccsNumCommsGetBuffCalls OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of times a COMMS buffer was allocated. Doesn't
               have to match the saSccsNumCommsRetBuffCalls count"
       ::= { saSccsGlobalStats 27 }

SASccsNumCommsRetBuffCalls OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of times a COMMS buffer was Freed up.
               Doesn't have to match the
               saSccsNumCommsGetBuffCalls count"
       ::= { saSccsGlobalStats 28 }

SASccsNumAccsInternalRelInd OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of Internally generated RelInds."
       ::= { saSccsGlobalStats 29 }

SASccsNoRoute              OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of times a route could not be found "
       ::= { saSccsGlobalStats 30 }

SASccsClearAll         OBJECT-TYPE
       SYNTAX              INTEGER {
              none(1),
              clear-all(2)
              }
       MAX-ACCESS          read-write
       STATUS              current
       DESCRIPTION
              "Clear all stats"
       ::= { saSccsGlobalStats 31 }

SASccsNumOrigActiveCalls   OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of  calls in the active state that
               were originated from this box"
       ::= { saSccsGlobalStats 32 }

SASccsNumDestActiveCalls   OBJECT-TYPE
       SYNTAX              Counter
       MAX-ACCESS          read-only
       STATUS              current
       DESCRIPTION
              "Number of calls in the active state that
               were established in response to call setup"
       ::= { saSccsGlobalStats 33 }
```

```
saSccsNumAmtStaIndRcvd        OBJECT-TYPE
       SYNTAX                 Counter
       MAX-ACCESS             read-only
       STATUS   current
       DESCRIPTION
              "Number of Status indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 34 }

saSccsNumAmtStaCfmRcvd        OBJECT-TYPE
       SYNTAX                 Counter
       MAX-ACCESS             read-only
       STATUS   current
       DESCRIPTION
              "Number of Status Confirms passed up to SCCS Users"
       ::= { saSccsGlobalStats 35 }

saSccsNumAmtAddPtyIndRcvd        OBJECT-TYPE
       SYNTAX                    Counter
       MAX-ACCESS                read-only
       STATUS   current
       DESCRIPTION
              "Number of Add Party Indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 36 }

saSccsNumAmtAddPtyCfmRcvd        OBJECT-TYPE
       SYNTAX                    Counter
       MAX-ACCESS                read-only
       STATUS   current
       DESCRIPTION
              "Number of Add Party Confirms passed up to SCCS Users"
       ::= { saSccsGlobalStats 37 }

saSccsNumAmtDrpPtyIndRcvd        OBJECT-TYPE
       SYNTAX                    Counter
       MAX-ACCESS                read-only
       STATUS   current
       DESCRIPTION
              "Number of Drop Party Indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 38 }

saSccsNumAmtDrpPtyCfmRcvd        OBJECT-TYPE
       SYNTAX                    Counter
       MAX-ACCESS                read-only
       STATUS   current
       DESCRIPTION
              "Number of Drop Party Confirms passed up to SCCS Users"
       ::= { saSccsGlobalStats 39 }

saSccsNumAmtAddPrjIndRcvd        OBJECT-TYPE
       SYNTAX                    Counter
       MAX-ACCESS                read-only
       STATUS   current
       DESCRIPTION
              "Number of Add-Party-Reject indications passed up to SCCS
               Users"
       ::= { saSccsGlobalStats 40 }

saSccsNumAmtLijIndRcvd        OBJECT-TYPE
       SYNTAX                 Counter
       MAX-ACCESS             read-only
       STATUS   current
       DESCRIPTION
              "Number of LIJ indications passed up to SCCS Users"
       ::= { saSccsGlobalStats 41 }


END
--================================================================--
```

SA CR MIB

```
--================================================================--

sa-CR-MIB DEFINITIONS ::= BEGIN

IMPORTS
       OBJECT-TYPE           FROM SNMPv2-SMI
       saSignalling          FROM OASIS-SYSINFO-MIB;

-- groups in SA-CR-ILMI-MIB
saCR      OBJECT IDENTIFIER ::= { saSignalling 7 }

--================================================================
--
-- SA Static ATM Call Route Table
--
--================================================================

saAtmRouteTable OBJECT-TYPE
       SYNTAX  SEQUENCE OF SaAtmRouteEntry
       MAX-ACCESSnot-accessible
       STATUS  current
       DESCRIPTION
              "Static ATM call route table"
       ::= { saCR 1 }
```

```
saAtmRouteEntry OBJECT-TYPE
        SYNTAX  SaAtmRouteEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "Static ATM call route entry"
        INDEX {saAtmRoutePortIndex, saAtmRoute, saAtmRouteLen}
        ::= { saAtmRouteTable 1 }

SaAtmRouteEntry ::= SEQUENCE
        {
        saAtmRoutePortIndex     INTEGER,
        saAtmRoute              OCTET STRING,
        saAtmRouteLen           INTEGER,
        saAtmRoutePri           INTEGER,
        saAtmRouteAdminStatus   INTEGER,
        saAtmRouteOperStatus    INTEGER,
        saAtmRouteRowStatus     INTEGER
        }

saAtmRoutePortIndex   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Index of the ATM port over which this
                 ATM route is rechable"
        ::= { saAtmRouteEntry 1}

saAtmRoute      OBJECT-TYPE
        SYNTAX     OCTET STRING
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "ATM static route"
        ::= { saAtmRouteEntry 2}

saAtmRouteLen   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "ATM static route length, in bits"
        ::= { saAtmRouteEntry 3}

saAtmRoutePri   OBJECT-TYPE
        SYNTAX     INTEGER
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
                "ATM static route priority, used to support parallel links"
        ::= { saAtmRouteEntry 4}

saAtmRouteAdminStatus   OBJECT-TYPE
        SYNTAX     INTEGER {
                valid(1),
                invalid(2)
                }
        MAX-ACCESS  read-write
        STATUS     current
        DESCRIPTION
                "Administrative status of the ATM static route.
                 Setting this object to invalid
                 helps the user keep the entry around without deleting it"
        ::= { saAtmRouteEntry 5}

saAtmRouteOperStatus   OBJECT-TYPE
        SYNTAX      INTEGER {
                up(1),
                down(2)
                }
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
                "Operational status of the ATM static route. "
        ::= { saAtmRouteEntry 6}

saAtmRouteRowStatusOBJECT-TYPE
        SYNTAX     INTEGER {
                create(1),
                created(2),
                delete(3)
                }
        MAX-ACCESS read-create
        STATUS current
        DESCRIPTION
                "create/delete control for row"
        ::= { saAtmRouteEntry 7}

END


-- ****************************************************
```

ILMI MIB

```
-- ******************************************************

ATM-FORUM-TC-MIB DEFINITIONS ::= BEGIN

IMPORTS
       Counter, IpAddressFROM RFC1155-SMI
       DisplayStringFROM RFC1213-MIB
       TRAP-TYPE              FROM RFC-1215
--     OBJECT-TYPE            FROM RFC-1212
       enterprises            FROM RFC1155-SMI
       OBJECT-TYPE FROM SNMPv2-SMI
       TEXTUAL-CONVENTIONFROM SNMPv2-TC;


-- Textual Conventions

-- Boolean values use this data type from RFC-1903, "Textual Conventions
-- for Version 2 of the Simple Network Management Protocol (SNMPv2)"
TruthValue ::= INTEGER { true(1), false(2) }

-- CLNP address values use this data type from RFC-1238, "CLNS MIB for
-- use with Connectionless Network Protocol (ISO 8473) and End System
-- to Intermediate System (ISO 9542)"
--ClnpAddress ::= OCTET STRING (SIZE (1..21))

ClnpAddress ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "CLNP Address"
       SYNTAX  OCTET STRING (SIZE (1..21))

-- ATM Service Categories use this data type (See [TM4.0]):
AtmServiceCategory ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "ATM Service Caregory."
       SYNTAX  INTEGER {
              other(1),
              cbr(2),
              rtVbr(3),
              nrtVbr(4),
              abr(5),
              ubr(6)
              }

-- ATM End-System Addresses use this data type:
--AtmAddress ::= OCTET STRING (SIZE (8 | 20))

AtmAddress ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "Atm Address"
       SYNTAX  OCTET STRING (SIZE (8 | 20))

-- Network-Prefixes for an ATM Address use this data type:
-- NetPrefix ::= OCTET STRING (SIZE (8 | 13))
NetPrefix ::= TEXTUAL-CONVENTION
       STATUS  current
       DESCRIPTION
              "Network Prefix"
       SYNTAX  OCTET STRING (SIZE (8 | 13))

-- In both the AtmAddress and NetPrefix conventions,
-- Native E.164 addresses are represented as 8 octets
-- using the format specified in section
-- 3.1.1.3 of the ATM Forum UNI Signalling 4.0 specification.
-- In contrast, an NSAP-encoded address is 20 octets, and an NSAP-encoded
-- network prefix is 13 octets long.


--              MIB Groups

-- a subtree for defining ATM Forum MIB object types
atmForum               OBJECT IDENTIFIER ::= { enterprises 353 }

-- a subtree for defining administrative object types
atmForumAdmin          OBJECT IDENTIFIER ::= { atmForum 1 }
atmfTransmissionTypes  OBJECT IDENTIFIER ::= { atmForumAdmin 2 }
atmfMediaTypes         OBJECT IDENTIFIER ::= { atmForumAdmin 3 }
atmfTrafficDescrTypes  OBJECT IDENTIFIER ::= { atmForumAdmin 4 }
atmfSrvcRegTypes       OBJECT IDENTIFIER ::= { atmForumAdmin 5 }

-- a subtree for defining ATM Interface MIB object types
atmForumUni            OBJECT IDENTIFIER ::= { atmForum 2 }
atmfPhysicalGroup      OBJECT IDENTIFIER ::= { atmForumUni 1 }
atmfAtmLayerGroup      OBJECT IDENTIFIER ::= { atmForumUni 2 }
atmfAtmStatsGroup      OBJECT IDENTIFIER ::= { atmForumUni 3 }
atmfVpcGroup           OBJECT IDENTIFIER ::= { atmForumUni 4 }
atmfVccGroup           OBJECT IDENTIFIER ::= { atmForumUni 5 }
atmfAddressGroup       OBJECT IDENTIFIER ::= { atmForumUni 6 }
atmfNetPrefixGroup     OBJECT IDENTIFIER ::= { atmForumUni 7 }
atmfSrvcRegistryGroup  OBJECT IDENTIFIER ::= { atmForumUni 8 }
atmfVpcAbrGroup        OBJECT IDENTIFIER ::= { atmForumUni 9 }
atmfVccAbrGroup        OBJECT IDENTIFIER ::= { atmForumUni 10 }
atmfAddressRegistrationAdminGroup OBJECT IDENTIFIER ::= { atmForumUni 11 }
```

```
--              Object Identifier definitions

-- Transmission Types: These values are no longer used
atmfUnknownType         OBJECT IDENTIFIER ::= { atmfTransmissionTypes 1}
atmfSonetSTS3c          OBJECT IDENTIFIER ::= { atmfTransmissionTypes 2 }
atmfDs3                 OBJECT IDENTIFIER ::= { atmfTransmissionTypes 3 }
atmf4B5B                OBJECT IDENTIFIER ::= { atmfTransmissionTypes 4 }
atmf8B10B               OBJECT IDENTIFIER ::= { atmfTransmissionTypes 5 }
atmfSonetSTS12c         OBJECT IDENTIFIER ::= { atmfTransmissionTypes 6 }
atmfE3                  OBJECT IDENTIFIER ::= { atmfTransmissionTypes 7 }
atmfT1                  OBJECT IDENTIFIER ::= { atmfTransmissionTypes 8 }
atmfE1                  OBJECT IDENTIFIER ::= { atmfTransmissionTypes 9 }

-- Media Types: These values are no longer used
atmfMediaUnknownType    OBJECT IDENTIFIER ::= { atmfMediaTypes 1 }
atmfMediaCoaxCable      OBJECT IDENTIFIER ::= { atmfMediaTypes 2 }
atmfMediaSingleMode     OBJECT IDENTIFIER ::= { atmfMediaTypes 3 }
atmfMediaMultiMode      OBJECT IDENTIFIER ::= { atmfMediaTypes 4 }
atmfMediaStp            OBJECT IDENTIFIER ::= { atmfMediaTypes 5 }
atmfMediaUtp            OBJECT IDENTIFIER ::= { atmfMediaTypes 6 }

-- Traffic Descriptor Types: These types are combined with a five element
-- parameter vector to describe a Traffic Descriptor.
-- Traffic Descriptors along with a Best Effort Indicator are used to
-- indicate a Conformance Definition as defined in [TM4.0].

-- These types are no longer used
atmfNoDescriptor        OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 1 }
atmfPeakRate            OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 2 }

-- The No CLP/No SCR Type
-- Indicates the CBR.1 Conformance Definition if Best Effort is No
-- Indicates the UBR.1 and UBR.2 Conformance Definitions if
--  Best Effort is Yes
atmfNoClpNoScr          OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 3 }
-- The use of the parameter vector for this type:
-- Parameter #1 - peak cell rate in cells/second for CLP=0+1 traffic
-- Parameter #2 - CDVT in tenths of microseconds
-- Parameters #3, #4 and #5 are unused

-- These types are no longer used
atmfClpNoTaggingNoScr   OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 4 }
atmfClpTaggingNoScr     OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 5 }

-- The SCR/No CLP Type
-- Indicates the VBR.1 Conformance Definition
atmfNoClpScr            OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 6 }
-- The use of the parameter vector for this type:
-- Parameter #1 - peak cell rate in cells/second for CLP=0+1 traffic
-- Parameter #2 - sustainable cell rate in cells/second for
                  CLP=0+1 traffic
-- Parameter #3 - maximum burst size in cells
-- Parameter #4 - CDVT in tenths of microseconds
-- Parameter #5 - unused

-- The CLP without Tagging/SCR Type
-- Indicates the VBR.2 Conformance Definition
atmfClpNoTaggingScr     OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 7 }
-- The use of the parameter vector for this type:
-- Parameter #1 - peak cell rate in cells/second for CLP=0+1 traffic
-- Parameter #2 - sustainable cell rate in cells/second for CLP=0 traffic
-- Parameter #3 - maximum burst size in cells
-- Parameter #4 - CDVT in tenths of microseconds
-- Parameter #5 - unused

-- The CLP with Tagging/SCR Type
-- Indicates the VBR.3 Conformance Definition
atmfClpTaggingScr       OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 8 }
-- The use of the parameter vector for this type:
-- Parameter #1 - peak cell rate in cells/second for CLP=0+1 traffic
-- Parameter #2 - sustainable cell rate in cells/second for CLP=0
--      traffic, excess tagged as CLP=1
-- Parameter #3 - maximum burst size in cells
-- Parameter #4 - CDVT in tenths of microseconds
-- Parameter #5 - unused

-- The ABR Type
-- Indicates the ABR Conformance Definition
atmfClpNoTaggingMcr      OBJECT IDENTIFIER ::= { atmfTrafficDescrTypes 9 }
-- The use of the parameter vector for this type:
-- Parameter #1 - peak cell rate in cells/second
-- parameter #2 - CDVT in tenths of microseconds
-- Parameter #3 - minimum cell rate in cells/second
-- Parameter #4 - unused
-- Parameter #5 - unused

--              Textual Conventions
-- All representations of ATM addresses in this MIB Module use
-- the data type:
-- AtmmAddress ::= OCTET STRING (SIZE (0 .. 32))    *** S Rajesh ***
-- Note this data type is used only by the deprecated object
-- atmfPortAddress. Another definition (a refined one) is
-- specified in the Textual Conventions MIB.
```

```
--              The Physical Port Group
-- This group is current for all ATM Interface devices.
--
-- The Physical Port Table

atmfPortTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of physical layer status and parameter
                 information for the ATM Interface's physical interface."
        ::= { atmfPhysicalGroup 1 }

atmfPortEntry OBJECT-TYPE
        SYNTAX  AtmfPortEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about
                 the physical layer of an ATM Interface."
        INDEX   { atmfPortIndex }
        ::= { atmfPortTable 1 }

AtmfPortEntry ::=
        SEQUENCE {
                atmfPortIndex
                    INTEGER,
                atmfPortAddress
                    AtmAddress,
                atmfPortTransmissionType
                    OBJECT IDENTIFIER,
                atmfPortMediaType
                    OBJECT IDENTIFIER,
                atmfPortOperStatus
                    INTEGER,
                atmfPortSpecific
                    OBJECT IDENTIFIER,
                atmfPortMyIfName
                    DisplayString,
                atmfPortMyIfIdentifier
                    INTEGER
                }

atmfPortIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
                 identifying the ATM Interface over which this message
                 was received."
        ::= { atmfPortEntry 1 }

atmfPortAddress OBJECT-TYPE
        SYNTAX  AtmAddress
        MAX-ACCESS  read-only
        STATUS  obsolete
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 2.0
                 of the UNI specification. The Address Group, defined
                 in theAddress Registration MIB should be used instead."
        ::= { atmfPortEntry 2 }

atmfPortTransmissionType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification. Appropriate Network Management
                 MIBs should be used instead."
        ::= { atmfPortEntry 3 }

atmfPortMediaType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification. Appropriate Network Management
                 MIBs should be used instead."
        ::= { atmfPortEntry 4 }

atmfPortOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                other(1),
                inService(2),
                outOfService(3),
                loopBack(4)
                }
        MAX-ACCESS  read-only
```

```
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification. Appropriate Network Management
                 MIBs should be used instead."
        ::= { atmfPortEntry 5 }

atmfPortSpecific OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification. Appropriate Network Management
                 MIBs should be used instead."
        ::= { atmfPortEntry 6 }

atmfPortMyIfName OBJECT-TYPE
        SYNTAX  DisplayString
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "A textual name of this interface. If this system is
                 manageable through SNMP, and supports the object
                 ifName, the value of this object must be identical
                 with that of ifName for the ifEntry of the lowest
                 level physical interface for this port. This interface
                 must be uniquely named on this system to distinguish
                 parallel links with a neighboring system.  If this
                 interface does not have a textual name, the value of
                 this object is a zero length string."
        ::= { atmfPortEntry 7 }

atmfPortMyIfIdentifier OBJECT-TYPE
        SYNTAX INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "A unique value for each ATM interface. The scheme used to
                 number the ATM interfaces on an ATM device is
                 implementation specific. One way to generate this value is
                 to use the ifIndex that an SNMP manager would use to
                 identify the port. This interface must be uniquely
                 numbered on this system to distinguish parallel
                 links with a neighboring system."
        ::= { atmfPortEntry 8 }

--  Note: The typical IME will support only one
--        of the following two objects
atmfMyIpNmAddress OBJECT-TYPE
        SYNTAX  IpAddress
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "An IP Address to which a Network Management Station
                 can send Network Management protocol messages, e.g. SNMP
                 messages to UDP port 161, in order to access network
                 management information concerning the operation of the
                 ATM device local to this IME. If this object is supported,
                 but the Network Management Agent has not been configured
                 with an IP Address, the IME should return 0.0.0.0."
        ::= { atmfPhysicalGroup 2 }

atmfMyOsiNmNsapAddress OBJECT-TYPE
        SYNTAX  ClnpAddress
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "An NSAP Address to which a Network Management Station
                 can send Network Management protocol messages in order
                 to access network management information concerning
                 the operation of the ATM device local to this IME.
                 If this object is supported,
                 but the Network Management Agent has not been configured
                 with an NSAP Address, the IME should return 0.0.0.0"
        ::= { atmfPhysicalGroup 3 }

atmfMySystemIdentifier OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE (6))
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "A 48 bit identifier, taken from the IEEE universally
                 administered MAC address space, which uniquely
                 identifies the ATM device local to this IME."
        ::= { atmfPhysicalGroup 4 }


--              The ATM Layer Group
-- This group is current for all ATM Interfaces.
--
-- ATM-layer specific information for the ATM Interface.

atmfAtmLayerTable OBJECT-TYPE
```

```
        SYNTAX  SEQUENCE OF AtmfAtmLayerEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of ATM layer status and parameter information
                 for the ATM Interface."
        ::= { atmfAtmLayerGroup 1 }

atmfAtmLayerEntry OBJECT-TYPE
        SYNTAX  AtmfAtmLayerEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about
                 the ATM layer of an ATM Interface."
        INDEX   { atmfAtmLayerIndex }
        ::= { atmfAtmLayerTable 1 }

AtmfAtmLayerEntry ::=
        SEQUENCE {
                atmfAtmLayerIndex
                    INTEGER,
                atmfAtmLayerMaxVPCs
                    INTEGER,
                atmfAtmLayerMaxVCCs
                    INTEGER,
                atmfAtmLayerConfiguredVPCs
                    INTEGER,
                atmfAtmLayerConfiguredVCCs
                    INTEGER,
                atmfAtmLayerMaxVpiBits
                    INTEGER,
                atmfAtmLayerMaxVciBits
                    INTEGER,
                atmfAtmLayerUniType
                    INTEGER,
                atmfAtmLayerUniVersion
                    INTEGER,
                atmfAtmLayerDeviceType
                    INTEGER,
                atmfAtmLayerIlmiVersion
                    INTEGER,
                atmfAtmLayerNniSigVersion
                    INTEGER,
                atmfAtmLayerMaxSvpcVpi
                    INTEGER,
                atmfAtmLayerMaxSvccVpi
                    INTEGER,
                atmfAtmLayerMinSvccVci
                    INTEGER
                }

atmfAtmLayerIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
                 identifying the ATM Interface over which this message
                 was received."
        ::= { atmfAtmLayerEntry 1 }

atmfAtmLayerMaxVPCs OBJECT-TYPE
        SYNTAX  INTEGER (0..4096)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of switched and permanent VPCs
                 supported on this ATM Interface. For virtual interfaces
                 (i.e. Virtual Path Connections), the maximum number of
                 VPCs PNNI may communicate over is set to zero."
        ::= { atmfAtmLayerEntry 2 }

atmfAtmLayerMaxVCCs OBJECT-TYPE
        SYNTAX  INTEGER (0..268435456)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of switched and permanent VCCs
                 supported on this ATM Interface."
        ::= { atmfAtmLayerEntry 3 }

atmfAtmLayerConfiguredVPCs OBJECT-TYPE
        SYNTAX  INTEGER (0..4096)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of permanent VPCs configured for use on
                 this ATM Interface. For virtual interfaces
                 (i.e. Virtual Path Connections used by PNNI),
                 the maximum number of VPCs
                 is set to zero."
        ::= { atmfAtmLayerEntry 4 }

atmfAtmLayerConfiguredVCCs OBJECT-TYPE
        SYNTAX  INTEGER (0.. 268435456)
```

```
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The number of permanent VCCs configured for use on
                 this ATM Interface."
        ::= { atmfAtmLayerEntry 5 }

atmfAtmLayerMaxVpiBits OBJECT-TYPE
        SYNTAX  INTEGER (0..12)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of active VPI bits on this ATM
                 Interface. For virtual interfaces (i.e. Virtual Path
                 Connections used by PNNI),
                 this value has no meaning and is set to zero."
        ::= { atmfAtmLayerEntry 6 }

atmfAtmLayerMaxVciBits OBJECT-TYPE
        SYNTAX  INTEGER (0..16)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of active VCI bits on this
                 ATM Interface."
        ::= { atmfAtmLayerEntry 7 }

atmfAtmLayerUniType OBJECT-TYPE
        SYNTAX  INTEGER {
                public(1),
                private(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of the ATM device, either public or private."
        ::= { atmfAtmLayerEntry 8 }


atmfAtmLayerUniVersion OBJECT-TYPE
        SYNTAX  INTEGER {
                version2point0(1),
                version3point0(2),
                version3point1(3),
                version4point0(4),
                unsupported(5)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "An indication of the latest version of the ATM Forum UNI
                 Signalling Specification that is supported on this ATM
                 Interface.  If this value is not present, a version
                 of the UNI earlier than 3.1 is supported.

                 If the peer IME's value of this object is the same as,
                 or later than the local IME's value, then the version
                 corresponding to the local IME's value should be
                 attempted.  Otherwise, if the peer IME's value of this
                 object is earlier, and supported locally, then the
                 local IME should attempt the version corresponding to
                 the peer IME's value.  Otherwise, compatibility of the
                 two IMEs cannot be assumed."
        ::= { atmfAtmLayerEntry 9 }


atmfAtmLayerDeviceType OBJECT-TYPE
        SYNTAX  INTEGER {
                user(1),
                node(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "This object determines the type of the ATM device.
                 This object is used in automatic ATM Interface-Type
                 determination procedure such that a correct
                 operational ATM Interface-type can be determined.
                 An ATM End System shall take the value of user(1),
                 and an ATM network node shall take the value of node(2)."
        ::= { atmfAtmLayerEntry 10 }

atmfAtmLayerIlmiVersion OBJECT-TYPE
        SYNTAX  INTEGER {
                unsupported(1),
                version4point0(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "An indication of the latest version of the ATM Forum
                 ILMI Specification that is supported on this ATM
Interface.

                 If the peer IME's value of this object is the same as,
                 or later than the local IME's value, then the version
```

```
                corresponding to the local IME's value should be
                attempted.  Otherwise, if the peer IME's value of this
                object is earlier, and supported locally, then the
                local IME should attempt the version corresponding to
                the peer IME's value.  Otherwise, compatibility of the
                two IMEs cannot be assumed.

                If this object is not present, a version of the ILMI
                earlier than 4.0 is supported."
        ::= { atmfAtmLayerEntry 11 }

atmfAtmLayerNniSigVersion OBJECT-TYPE
        SYNTAX  INTEGER {
                unsupported(1),
                iisp(2),
                pnniVersion1point0(3)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "An indication of the latest version of the ATM Forum
                 PNNI Signalling Specification that is supported on this
                 ATM Interface. Note that the PNNI routing version is not
                 determined through ILMI.

                 If the peer IME's value of this object is the same as,
                 or later than the local IME's value, then the version
                 corresponding to the local IME's value should be
                 attempted.  Otherwise, if the peer IME's value of this
                 object is earlier, and supported locally, then the
                 local IME should attempt the version corresponding to
                 the peer IME's value.  Otherwise, compatibility of the
                 two IMEs cannot be assumed."
        ::= { atmfAtmLayerEntry 12 }

atmfAtmLayerMaxSvpcVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4096)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum VPI that the signalling stack on the ATM
                 interface is configured to support for allocation to
                 switched virtual path connections."
        ::= { atmfAtmLayerEntry 13 }

atmfAtmLayerMaxSvccVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4096)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum VPI that the signalling stack on the ATM
                 interface is configured to support for allocation to
                 switched virtual channel connections."
        ::= { atmfAtmLayerEntry 14 }

atmfAtmLayerMinSvccVci OBJECT-TYPE
        SYNTAX  INTEGER (0..65536)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "This is the minimum VCI value that the
                 signalling stack is configured to support for
                 allocation to switched virtual channel connections.
                 The same value applies to all SVCC VPI values
                 for which the signalling stack is configured."
        ::= { atmfAtmLayerEntry 15 }


--              The ATM Statistics Group
-- This group is deprecated and should not be implemented except as
-- required for backward compatibility with version 3.1 of the UNI
-- specification.

atmfAtmStatsTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfAtmStatsEntry
        MAX-ACCESS  not-accessible
        STATUS  deprecated
        DESCRIPTION
                "This group is deprecated and should not be implemented
                 except as required for backward compatibility with version
                 3.1 of the UNI specification."
        ::= { atmfAtmStatsGroup 1 }

atmfAtmStatsEntry OBJECT-TYPE
        SYNTAX  AtmfAtmStatsEntry
        MAX-ACCESS  not-accessible
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        INDEX   { atmfAtmStatsIndex }
        ::= { atmfAtmStatsTable 1 }

AtmfAtmStatsEntry ::=
        SEQUENCE {
```

```
                atmfAtmStatsIndex
                    INTEGER,
                atmfAtmStatsReceivedCells
                    Counter,
                atmfAtmStatsDroppedReceivedCells
                    Counter,
                atmfAtmStatsTransmittedCells
                    Counter
                }

atmfAtmStatsIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfAtmStatsEntry 1 }

atmfAtmStatsReceivedCells OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfAtmStatsEntry 2 }

atmfAtmStatsDroppedReceivedCells OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfAtmStatsEntry 3 }

atmfAtmStatsTransmittedCells OBJECT-TYPE
        SYNTAX  Counter
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfAtmStatsEntry 4 }


--              The Virtual Path Group
-- This group is current for all ATM Interfaces.
--
-- Information concerning Virtual Path Connections

atmfVpcTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfVpcEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of status and parameter information on the
                 virtual path connections which cross this ATM
                 Interface. There is one entry in this table for each
                 permanent virtual path connection."
        ::= { atmfVpcGroup 1 }

atmfVpcEntry OBJECT-TYPE
        SYNTAX  AtmfVpcEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about a
                 particular virtual path connection."
        INDEX   { atmfVpcPortIndex, atmfVpcVpi }
        ::= { atmfVpcTable 1 }

AtmfVpcEntry ::=
        SEQUENCE {
                atmfVpcPortIndex
                    INTEGER,
                atmfVpcVpi
                    INTEGER,
                atmfVpcOperStatus
                    INTEGER,
                atmfVpcTransmitTDType
                    OBJECT IDENTIFIER,
                atmfVpcTransmitTDParam1
                    INTEGER,
                atmfVpcTransmitTDParam2
                    INTEGER,
                atmfVpcTransmitTDParam3
                    INTEGER,
                atmfVpcTransmitTDParam4
                    INTEGER,
                atmfVpcTransmitTDParam5
```

```
                INTEGER,
            atmfVpcReceiveTDType
                OBJECT IDENTIFIER,
            atmfVpcReceiveTDParam1
                INTEGER,
            atmfVpcReceiveTDParam2
                INTEGER,
            atmfVpcReceiveTDParam3
                INTEGER,
            atmfVpcReceiveTDParam4
                INTEGER,
            atmfVpcReceiveTDParam5
                INTEGER,
            atmfVpcQoSCategory
                INTEGER,
            atmfVpcTransmitQoSClass
                INTEGER,
            atmfVpcReceiveQoSClass
                INTEGER,
            atmfVpcBestEffortIndicator
                TruthValue,
            atmfVpcServiceCategory
                AtmServiceCategory
            }

atmfVpcPortIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
                 identifying the ATM Interface over which this message
                 was received."
        ::= { atmfVpcEntry 1 }

atmfVpcVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4095)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VPI value of this Virtual Path Connection at the
                 local ATM Interface."
        ::= { atmfVpcEntry 2 }

atmfVpcOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(1),
                end2endUp(2),
                end2endDown(3),
                localUpEnd2endUnknown(4),
                localDown(5)
                 }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The present actual operational status of the VPC.

                 A value of end2endUp(2) or end2endDown(3) would be
                 used if the end-to-end status is known. If only local
                 status information is available, a value of
                 localUpEnd2endUnknown(4) or localDown(5) would be
                 used."
        ::= { atmfVpcEntry 3 }



atmfVpcTransmitTDType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of traffic management, applicable to the
                 transmit direction of this VPC. The type may indicate
                 none, or a type with one or more parameters. These
                 parameters are specified as a parameter vector, in the
                 corresponding instances of the objects:
                 atmfVpcTransmitTDParam1,
                 atmfVpcTransmitTDParam2,
                 atmfVpcTransmitTDParam3,
                 atmfVpcTransmitTDParam4, and
                 atmfVpcTransmitTDParam5."
        ::= { atmfVpcEntry 4 }

atmfVpcTransmitTDParam1 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The first parameter of the transmit parameter vector
                 for this VPC, used according to the value of
                 atmfVpcTransmitTDType."
        ::= { atmfVpcEntry 5 }

atmfVpcTransmitTDParam2 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
```

```
        STATUS  current
        DESCRIPTION
                "The second parameter of the transmit parameter vector
                 for this VPC, used according to the value of
                 atmfVpcTransmitTDType."
        ::= { atmfVpcEntry 6 }

atmfVpcTransmitTDParam3 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The third parameter of the transmit parameter vector
                 for this VPC, used according to the value of
                 atmfVpcTransmitTDType."
        ::= { atmfVpcEntry 7 }


atmfVpcTransmitTDParam4 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fourth parameter of the transmit parameter vector
                 for this VPC, used according to the value of
                 atmfVpcTransmitTDType."
        ::= { atmfVpcEntry 8 }

atmfVpcTransmitTDParam5 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fifth parameter of the transmit parameter vector
                 for this VPC, used according to the value of
                 atmfVpcTransmitTDType."
        ::= { atmfVpcEntry 9 }

atmfVpcReceiveTDType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of traffic management, applicable to the
                 traffic in the receive direction of this VPC. The type
                 may indicate none, or a type with one or more
                 parameters. These parameters are specified as a
                 parameter vector, in the corresponding instances of
                 the objects:
                        atmfVpcReceiveTDParam1,
                        atmfVpcReceiveTDParam2,
                        atmfVpcReceiveTDParam3,
                        atmfVpcReceiveTDParam4, and
                        atmfVpcReceiveTDParam5."
        ::= { atmfVpcEntry 10 }

atmfVpcReceiveTDParam1 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The first parameter of the receive parameter vector
                 for this VPC, used according to the value of
                 atmfVpcReceiveTDType."
        ::= { atmfVpcEntry 11 }

atmfVpcReceiveTDParam2 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The second parameter of the receive parameter vector
                 for this VPC, used according to the value of
                 atmfVpcReceiveTDType."
        ::= { atmfVpcEntry 12 }

atmfVpcReceiveTDParam3 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The third parameter of the receive parameter vector
                 for this VPC, used according to the value of
                 atmfVpcReceiveTDType."
        ::= { atmfVpcEntry 13 }

atmfVpcReceiveTDParam4 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fourth parameter of the receive parameter vector
                 for this VPC, used according to the value of
                 atmfVpcReceiveTDType."
        ::= { atmfVpcEntry 14 }
```

```
atmfVpcReceiveTDParam5 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fifth parameter of the receive parameter vector
                 for this VPC, used according to the value of
                 atmfVpcReceiveTDType."
        ::= { atmfVpcEntry 15 }

atmfVpcQoSCategory OBJECT-TYPE
        SYNTAX  INTEGER {
                other(1),
                deterministic (2),
                statistical (3),
                unspecified (4)
                 }
        MAX-ACCESS  read-only
        STATUS  obsolete
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 2.0
                 of the UNI specification."
        ::= { atmfVpcEntry 16 }

atmfVpcTransmitQoSClass OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfVpcEntry 17 }

atmfVpcReceiveQoSClass OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfVpcEntry 18 }

atmfVpcBestEffortIndicator OBJECT-TYPE
        SYNTAX  TruthValue
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The object is examined when
                 atmfVpcTransmitTDType or
                 atmfVpcReceiveTDType for the associated
                 connection is equal to atmfNoClpNoScr.
                 If this object is set to false(2),
                 the network is requested to apply the CBR.1
                 conformance definition. If this object
                 is set to true(1), the network is requested to apply the
                 UBR.1 conformance definition."
        ::= { atmfVpcEntry 19 }

atmfVpcServiceCategory OBJECT-TYPE
        SYNTAX  AtmServiceCategory
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The service category of this virtual path connection."
        ::= { atmfVpcEntry 20 }


--              The Virtual Path ABR Group
-- This group contains per-VPC information, support for which is optional.
--
-- Attributes of ABR Virtual Path connections

atmfVpcAbrTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfVpcAbrEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of operational parameters related to the ABR
                 virtual path connections which cross this ATM
                 Interface. There is one entry in this table for each
                 ABR virtual path connection.

                 Each virtual path connection represented
                 in this table must also be represented by
                 an entry in the atmfVpcTable."
        ::= { atmfVpcAbrGroup 1 }

atmfVpcAbrEntry OBJECT-TYPE
        SYNTAX  AtmfVpcAbrEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about a
```

```
                particular ABR virtual path connection."
        INDEX   { atmfVpcAbrPortIndex, atmfVpcAbrVpi }
        ::= { atmfVpcAbrTable 1 }

AtmfVpcAbrEntry ::=
        SEQUENCE {
                atmfVpcAbrPortIndex
                    INTEGER,
                atmfVpcAbrVpi
                    INTEGER,
                atmfVpcAbrTransmitIcr
                    INTEGER,
                atmfVpcAbrTransmitNrm
                    INTEGER,
                atmfVpcAbrTransmitTrm
                    INTEGER,
                atmfVpcAbrTransmitCdf
                    INTEGER,
                atmfVpcAbrTransmitRif
                    INTEGER,
                atmfVpcAbrTransmitRdf
                    INTEGER,
                atmfVpcAbrTransmitAdtf
                    INTEGER,
                atmfVpcAbrTransmitCrm
                    INTEGER
                }

atmfVpcAbrPortIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
identifying
                 the ATM Interface over which this message was received."
        ::= { atmfVpcAbrEntry 1 }

atmfVpcAbrVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4095)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VPI value of this ABR Virtual Path Connection at the
                 local ATM Interface."
        ::= { atmfVpcAbrEntry 2 }

atmfVpcAbrTransmitIcr OBJECT-TYPE
        SYNTAX  INTEGER (0..16777215)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Initial Cell Rate: This is the rate at which the
                 source starts, both initially and after an idle period.
                 The unit is cells per second.  The value must not be
                 larger than PCR, and is usually lower."
        ::= { atmfVpcAbrEntry 3 }

atmfVpcAbrTransmitNrm OBJECT-TYPE
        SYNTAX  INTEGER {
                nrm2(1),
                nrm4(2),
                nrm8(3),
                nrm16(4),
                nrm32(5),
                nrm64(6),
                nrm128(7),
                nrm256(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of data cells a source may send
                 for each forward RM-cell.  The default value is nrm32(5)."
        ::= { atmfVpcAbrEntry 4 }

atmfVpcAbrTransmitTrm OBJECT-TYPE
        SYNTAX  INTEGER {
                trm0point78125(1),
                trm1point5625(2),
                trm3point125(3),
                trm6point25(4),
                trm12point5(5),
                trm25(6),
                trm50(7),
                trm100(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Upper bound on the time between forward RM-cells for
                 an active source (in milliseconds). The default value
                 is trm100(8)."
        ::= { atmfVpcAbrEntry 5 }

atmfVpcAbrTransmitCdf OBJECT-TYPE
```

```
        SYNTAX  INTEGER {
                cdf0(1),
                cdfOneOver64(2),
                cdfOneOver32(3),
                cdfOneOver16(4),
                cdfOneOver8(5),
                cdfOneOver4(6),
                cdfOneOver2(7),
                cdfOne(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Cutoff Decrease Factor: This field controls the rate
                 decrease associated with lost or delayed backward RM
                 cells.  Larger values result in faster rate decrease.
                 The default value is cdfOneOver16(4)."
        ::= { atmfVpcAbrEntry 6 }

atmfVpcAbrTransmitRif OBJECT-TYPE
        SYNTAX  INTEGER {
                rifOneOver32768(1),
                rifOneOver16384(2),
                rifOneOver8192(3),
                rifOneOver4096(4),
                rifOneOver2048(5),
                rifOneOver1024(6),
                rifOneOver512(7),
                rifOneOver256(8),
                rifOneOver128(9),
                rifOneOver64(10),
                rifOneOver32(11),
                rifOneOver16(12),
                rifOneOver8(13),
                rifOneOver4(14),
                rifOneOver2(15),
                rifOne(16)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Increment Factor: Controls the rate at
                 which the rate increases, when a backward
                 RM-cell is received with CI=0 and
                 NI=0.  Larger values lead to faster rate increase.
                 The default value is rifOneOver16(12)."
        ::= { atmfVpcAbrEntry 7 }

atmfVpcAbrTransmitRdf OBJECT-TYPE
        SYNTAX  INTEGER {
                rdfOneOver32768(1),
                rdfOneOver16384(2),
                rdfOneOver8192(3),
                rdfOneOver4096(4),
                rdfOneOver2048(5),
                rdfOneOver1024(6),
                rdfOneOver512(7),
                rdfOneOver256(8),
                rdfOneOver128(9),
                rdfOneOver64(10),
                rdfOneOver32(11),
                rdfOneOver16(12),
                rdfOneOver8(13),
                rdfOneOver4(14),
                rdfOneOver2(15),
                rdfOne(16)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Decrease Factor: Controls the rate decrease
                 which occurs when backward RM-cells with CI=1, are
                 received.  Larger values lead to faster rate
                 decrease.  The default value is rdfOneOver16(12)."
        ::= { atmfVpcAbrEntry 8 }

atmfVpcAbrTransmitAdtf OBJECT-TYPE
        SYNTAX  INTEGER (1..1023)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ACR Decrease Time Factor: Time permitted between
                 sending RM-cells, before the allowed rate (ACR) is
                 decreased to ICR.  Range is 10 ms to 10.23 seconds.
                 The unit is 10 milliseconds.  For example, the default
                 value of 50 corresponds to a time factor of 500 ms.
                 Larger values allow a source to retain its current
                 rate longer, during periods of relative inactivity.
                 The default is 50 (0.5 seconds)."
        ::= { atmfVpcAbrEntry 9 }

atmfVpcAbrTransmitCrm OBJECT-TYPE
        SYNTAX  INTEGER (0..8388608)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
```

```
                "RM Cells Before Cutoff: Limits the number of forward
                 RM-cells which may be sent in the absence of received
                 backward RM-cells."
        ::= { atmfVpcAbrEntry 10 }


--              The Virtual Channel Group
-- This group is current for all ATM Interfaces.
--
-- Information concerning Virtual Channel Connections

atmfVccTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfVccEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of status and parameter information on the
                 virtual channel connections which are visible at this
                 ATM Interface. There is one entry in this table for
                 each permanent virtual channel connection, including
                 reserved VCCs that are supported; e.g., signalling,
                 OAM flows, and ILMI, but not unassigned cells."
        ::= { atmfVccGroup 1 }

atmfVccEntry OBJECT-TYPE
        SYNTAX  AtmfVccEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about a
                 particular virtual channel connection."
        INDEX   { atmfVccPortIndex, atmfVccVpi, atmfVccVci }
        ::= { atmfVccTable 1 }

AtmfVccEntry ::=
        SEQUENCE {
                atmfVccPortIndex
                    INTEGER,
                atmfVccVpi
                    INTEGER,
                atmfVccVci
                    INTEGER,
                atmfVccOperStatus
                    INTEGER,
                atmfVccTransmitTDType
                    OBJECT IDENTIFIER,
                atmfVccTransmitTDParam1
                    INTEGER,
                atmfVccTransmitTDParam2
                    INTEGER,
                atmfVccTransmitTDParam3
                    INTEGER,
                atmfVccTransmitTDParam4
                    INTEGER,
                atmfVccTransmitTDParam5
                    INTEGER,
                atmfVccReceiveTDType
                    OBJECT IDENTIFIER,
                atmfVccReceiveTDParam1
                    INTEGER,
                atmfVccReceiveTDParam2
                    INTEGER,
                atmfVccReceiveTDParam3
                    INTEGER,
                atmfVccReceiveTDParam4
                    INTEGER,
                atmfVccReceiveTDParam5
                    INTEGER,
                atmfVccQoSCategory
                    INTEGER,
                atmfVccTransmitQoSClass
                    INTEGER,
                atmfVccReceiveQoSClass
                    INTEGER,
                atmfVccBestEffortIndicator
                    TruthValue,
                atmfVccTransmitFrameDiscard
                    TruthValue,
                atmfVccReceiveFrameDiscard
                    TruthValue,
                atmfVccServiceCategory
                    AtmServiceCategory
                }

atmfVccPortIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
                 identifying the ATM Interface over which this message
                 was received."
        ::= { atmfVccEntry 1 }

atmfVccVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4095)
```

```
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VPI value of this Virtual Channel Connection at
                 the local ATM Interface. For virtual interfaces (i.e.
                 Virtual Path Connections), this value has no meaning
                 and is set to zero "
        ::= { atmfVccEntry 2 }

atmfVccVci OBJECT-TYPE
        SYNTAX  INTEGER (0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VCI value of this Virtual Channel Connection at
                 the local ATM Interface."
        ::= { atmfVccEntry 3 }

atmfVccOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                unknown(1),
                end2endUp(2),
                end2endDown(3),
                localUpEnd2endUnknown(4),
                localDown(5)
                 }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The present actual operational status of the VCC. A
                 value of end2endUp(2) or end2endUp(3) is used if the
                 end to end status is known.

                 If only local status is known a value of
                 localUpEnd2endUnknown(4) or localDown(5) is used."
        ::= { atmfVccEntry 4 }

atmfVccTransmitTDType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of traffic management, applicable to the
                 transmit direction of this VCC. The type may indicate
                 none, or a type with one or more parameters. These
                 parameters are specified as a parameter vector, in the
                 corresponding instances of the objects:
                atmfVccTransmitTDParam1,
                atmfVccTransmitTDParam2,
                atmfVccTransmitTDParam3,
                atmfVccTransmitTDParam4, and
                atmfVccTransmitTDParam5."
        ::= { atmfVccEntry 5 }

atmfVccTransmitTDParam1 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The first parameter of the transmit parameter vector
                 for this VCC, used according to the value of
                 atmfVccTransmitTDType."
        ::= { atmfVccEntry 6 }



atmfVccTransmitTDParam2 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The second parameter of the transmit parameter vector
                 for this VCC, used according to the value of
                 atmfVccTransmitTDType."
        ::= { atmfVccEntry 7 }

atmfVccTransmitTDParam3 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The third parameter of the transmit parameter vector
                 for this VCC, used according to the value of
                 atmfVccTransmitTDType."
        ::= { atmfVccEntry 8 }

atmfVccTransmitTDParam4 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fourth parameter of the transmit parameter vector
                 for this VCC, used according to the value of
                 atmfVccTransmitTDType."
        ::= { atmfVccEntry 9 }
```

```
atmfVccTransmitTDParam5 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fifth parameter of the transmit parameter vector
                 for this VCC, used according to the value of
                 atmfVccTransmitTDType."
        ::= { atmfVccEntry 10 }

atmfVccReceiveTDType OBJECT-TYPE
        SYNTAX  OBJECT IDENTIFIER
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The type of traffic management, applicable to the
                 traffic in the receive direction of this VCC. The type
                 may indicate none, or a type with one or more
                 parameters. These parameters are specified as a
                 parameter vector, in the corresponding instances of
                 the objects:
                atmfVccReceiveTDParam1,
                atmfVccReceiveTDParam2,
                atmfVccReceiveTDParam3,
                atmfVccReceiveTDParam4, and
                atmfVccReceiveTDParam5."
        ::= { atmfVccEntry 11 }

atmfVccReceiveTDParam1 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The first parameter of the receive parameter vector
                 for this VCC, used according to the value of
                 atmfVccReceiveTDType."
        ::= { atmfVccEntry 12 }

atmfVccReceiveTDParam2 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The second parameter of the receive parameter vector
                 for this VCC, used according to the value of
                 atmfVccReceiveTDType."
        ::= { atmfVccEntry 13 }

atmfVccReceiveTDParam3 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The third parameter of the receive parameter vector
                 for this VCC, used according to the value of
                 atmfVccReceiveTDType."
        ::= { atmfVccEntry 14 }

atmfVccReceiveTDParam4 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fourth parameter of the receive parameter vector
                 for this VCC, used according to the value of
                 atmfVccReceiveTDType."
        ::= { atmfVccEntry 15 }

atmfVccReceiveTDParam5 OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The fifth parameter of the receive parameter vector
                 for this VCC, used according to the value of
                 atmfVccReceiveTDType."
        ::= { atmfVccEntry 16 }

atmfVccQoSCategory OBJECT-TYPE
        SYNTAX  INTEGER {
                other(1),
                deterministic(2),
                statistical(3),
                unspecified(4)
                 }
        MAX-ACCESS  read-only
        STATUS  obsolete
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 2.0
                 of the UNI specification."
        ::= { atmfVccEntry 17 }

 atmfVccTransmitQoSClass OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-only
```

```
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfVccEntry 18 }

atmfVccReceiveQoSClass OBJECT-TYPE
        SYNTAX  INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS  deprecated
        DESCRIPTION
                "This object should not be implemented except as
                 required for backward compatibility with version 3.1
                 of the UNI specification."
        ::= { atmfVccEntry 19 }


atmfVccBestEffortIndicator OBJECT-TYPE
        SYNTAX  TruthValue
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The object is examined when
                 atmfVccTransmitTDType or
                 atmfVccReceiveTDType for the associated
                 connection is equal to atmfNoClpNoScr.
                 If this object is set to false(2), the
                 network is requested to apply the CBR.1
                 conformance definition. If this object
                 is set to true(1), the network is requested to apply the
                 UBR.1 conformance definition."
        ::= { atmfVccEntry 20 }

atmfVccTransmitFrameDiscard OBJECT-TYPE
        SYNTAX  TruthValue
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "If set to true(1), this object indicates that
                 the network is requested to treat data for
                 this connection (in the transmit direction)
                 as frames (e.g. AAL5 CPCS_PDU's) rather
                 than as individual cells.  While the precise
                 implementation is network-specific, this treatment may
                 for example involve discarding entire frames during
                 congestion, rather than a few cells from many frames.
                 The default value is false(2)."
        ::= { atmfVccEntry 21 }

atmfVccReceiveFrameDiscard OBJECT-TYPE
        SYNTAX  TruthValue
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "If set to true(1), this object indicates that the network
                 is requested to treat data for this connection (in the
                 receive direction) as frames (e.g. AAL5 CPCS_PDU's) rather
                 than as individual cells.  While the precise
                 implementation is network-specific, this treatment may
                 for example involve discarding entire frames during
                 congestion, rather than a few cells from many frames.
                 The default value is false(2)."
        ::= { atmfVccEntry 22 }


atmfVccServiceCategory OBJECT-TYPE
        SYNTAX  AtmServiceCategory
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The service category of this virtual channel connection."
        ::= { atmfVccEntry 23 }




--              The Virtual Channel ABR Group
-- This group contains per-VCC information, support for which is optional.
--
-- Attributes of ABR Virtual Channel connections

atmfVccAbrTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfVccAbrEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of operational parameters related to the ABR
                 virtual channel connections which cross this ATM
                 Interface. There is one entry in this table for each
                 ABR virtual channel connection.

                 Each virtual channel connection represented
                 in this table must also be represented by
                 an entry in the atmfVccTable."
        ::= { atmfVccAbrGroup 1 }
```

```
atmfVccAbrEntry OBJECT-TYPE
        SYNTAX  AtmfVccAbrEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing information about a
                 particular ABR virtual channel connection."
        INDEX   { atmfVccAbrPortIndex, atmfVccAbrVpi, atmfVccAbrVci }
        ::= { atmfVccAbrTable 1 }

AtmfVccAbrEntry ::=
        SEQUENCE {
                atmfVccAbrPortIndex
                    INTEGER,
                atmfVccAbrVpi
                    INTEGER,
                atmfVccAbrVci
                    INTEGER,
                atmfVccAbrTransmitIcr
                    INTEGER,
                atmfVccAbrTransmitNrm
                    INTEGER,
                atmfVccAbrTransmitTrm
                    INTEGER,
                atmfVccAbrTransmitCdf
                    INTEGER,
                atmfVccAbrTransmitRif
                    INTEGER,
                atmfVccAbrTransmitRdf
                    INTEGER,
                atmfVccAbrTransmitAdtf
                    INTEGER,
                atmfVccAbrTransmitCrm
                    INTEGER
                }

atmfVccAbrPortIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning
                 of identifying the ATM Interface over
                 which this message was received."
        ::= { atmfVccAbrEntry 1 }

atmfVccAbrVpi OBJECT-TYPE
        SYNTAX  INTEGER (0..4095)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VPI value of this ABR Virtual Channel Connection
                 at the local ATM Interface. For virtual interfaces
                 (i.e. Virtual Path Connections), this value has
                 no meaning and is set to zero "
        ::= { atmfVccAbrEntry 2 }

atmfVccAbrVci OBJECT-TYPE
        SYNTAX  INTEGER (0..65535)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The VCI value of this ABR Virtual Channel
                 Connection at the local ATM Interface."
        ::= { atmfVccAbrEntry 3 }

atmfVccAbrTransmitIcr OBJECT-TYPE
        SYNTAX  INTEGER (0..16777215)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Initial Cell Rate: This is the rate at which the
                 source starts, both initially and after an idle period.
                 The unit is cells per second.  The value must not be
                 larger than PCR, and is usually lower."
        ::= { atmfVccAbrEntry 4 }

atmfVccAbrTransmitNrm OBJECT-TYPE
        SYNTAX  INTEGER {
                nrm2(1),
                nrm4(2),
                nrm8(3),
                nrm16(4),
                nrm32(5),
                nrm64(6),
                nrm128(7),
                nrm256(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The maximum number of data cells a source may send
                 for each forward RM-cell.  The default value is nrm32(5)."
        ::= { atmfVccAbrEntry 5 }
```

```
atmfVccAbrTransmitTrm OBJECT-TYPE
        SYNTAX  INTEGER {
                trm0point78125(1),
                trm1point5625(2),
                trm3point125(3),
                trm6point25(4),
                trm12point5(5),
                trm25(6),
                trm50(7),
                trm100(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Upper bound on the time between forward RM-cells for
                 an active source (in milliseconds). The default value
                 is trm100(8)."
        ::= { atmfVccAbrEntry 6 }

atmfVccAbrTransmitCdf OBJECT-TYPE
        SYNTAX  INTEGER {
                cdf0(1),
                cdfOneOver64(2),
                cdfOneOver32(3),
                cdfOneOver16(4),
                cdfOneOver8(5),
                cdfOneOver4(6),
                cdfOneOver2(7),
                cdfOne(8)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Cutoff Decrease Factor: This field controls the rate
                 decrease associated with lost or delayed backward RM
                 cells.  Larger values result in faster rate decrease.
                 The default value is cdfOneOver16(4)."
        ::= { atmfVccAbrEntry 7 }

atmfVccAbrTransmitRif OBJECT-TYPE
        SYNTAX  INTEGER {
                rifOneOver32768(1),
                rifOneOver16384(2),
                rifOneOver8192(3),
                rifOneOver4096(4),
                rifOneOver2048(5),
                rifOneOver1024(6),
                rifOneOver512(7),
                rifOneOver256(8),
                rifOneOver128(9),
                rifOneOver64(10),
                rifOneOver32(11),
                rifOneOver16(12),
                rifOneOver8(13),
                rifOneOver4(14),
                rifOneOver2(15),
                rifOne(16)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Increment Factor: Controls the rate at
                 which the rate increases, when a backward
                 RM-cell is received with CI=0 and NI=0.
                 Larger values lead to faster rate increase.
                  The default value is rifOneOver16(12)."
        ::= { atmfVccAbrEntry 8 }

atmfVccAbrTransmitRdf OBJECT-TYPE
        SYNTAX  INTEGER {
                rdfOneOver32768(1),
                rdfOneOver16384(2),
                rdfOneOver8192(3),
                rdfOneOver4096(4),
                rdfOneOver2048(5),
                rdfOneOver1024(6),
                rdfOneOver512(7),
                rdfOneOver256(8),
                rdfOneOver128(9),
                rdfOneOver64(10),
                rdfOneOver32(11),
                rdfOneOver16(12),
                rdfOneOver8(13),
                rdfOneOver4(14),
                rdfOneOver2(15),
                rdfOne(16)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "Rate Decrease Factor: Controls the rate decrease
                 which occurs when backward RM-cells with CI=1, are
                 received.  Larger values lead to faster rate
                 decrease.  The default value is rdfOneOver16(12)."
        ::= { atmfVccAbrEntry 9 }
```

```
atmfVccAbrTransmitAdtf OBJECT-TYPE
        SYNTAX  INTEGER (1..1023)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "ACR Decrease Time Factor: Time permitted between
                 sending RM-cells, before the allowed rate (ACR) is
                 decreased to ICR.  Range is 10 ms to 10.23 seconds.
                 The unit is 10 milliseconds.  For example, the default
                 value of 50 corresponds to a time factor of 500 ms.
                 Larger values allow a source to retain its current
                 rate longer, during periods of relative inactivity.
                 The default is 50 (0.5 seconds)."
        ::= { atmfVccAbrEntry 10 }

atmfVccAbrTransmitCrm OBJECT-TYPE
        SYNTAX  INTEGER (0..8388608)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "RM Cells Before Cutoff: Limits the number of forward
                 RM-cells which may be sent in the absence of received
                 backward RM-cells."
        ::= { atmfVccAbrEntry 11 }


atmfNetPrefixTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfNetPrefixEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table implemented by the user-side IME, containing the
                 network-prefix(es) for ATM-layer addresses in effect on
                 the user side of the UNI."
        ::= { atmfNetPrefixGroup 1 }

atmfNetPrefixEntry OBJECT-TYPE
        SYNTAX  AtmfNetPrefixEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about a single network-prefix for
                 ATM-layer addresses in effect on the user-side IME.
                 Note that the index variable atmNetPrefixPrefix is a
                 variable-length string, and as such the rule for
                 variable-length strings in section 4.1.6 of RFC 1212
                 applies."
        INDEX   { atmfNetPrefixPort, atmfNetPrefixPrefix }
        ::= { atmfNetPrefixTable 1 }

AtmfNetPrefixEntry ::=
        SEQUENCE {
                atmfNetPrefixPort
                    INTEGER,
                atmfNetPrefixPrefix
                    NetPrefix,
                atmfNetPrefixStatus
                    INTEGER
                }

atmfNetPrefixPort OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A unique value which identifies the UNI port for
                 which the network prefix for ATM addresses is in
                 effect.  The value of 0 has the special meaning of
                 identifying the local UNI."
        ::= { atmfNetPrefixEntry 1 }

atmfNetPrefixPrefix  OBJECT-TYPE
        SYNTAX  NetPrefix
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The network prefix for ATM addresses which is in
                 effect on the user side of the ATM UNI port."
        ::= { atmfNetPrefixEntry 2 }

atmfNetPrefixStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                valid(1),
                invalid(2)
                }
        MAX-ACCESS  read-create
        STATUS  current
        DESCRIPTION
                "An indication of the validity of the network prefix
                 for ATM addresses on the user side of the UNI port.
                 To configure a new network prefix in this table, the
                 network-side IME must set the appropriate instance of this
                 object to the value valid(1).  To delete an existing
                 network prefix in this table, the network-side IME must
                 set the appropriate instance of this object to the
                 value invalid(2).
```

```
                If circumstances occur on the user-side IME which cause a
                prefix to become invalid, the user-side IME modifies the
                value of the appropriate instance of this object
                to invalid(2).

                Whenever the value of this object for a particular
                prefix becomes invalid(2), the conceptual row for that
                prefix may be removed from the table at any time,
                either immediately or subsequently."
        ::= { atmfNetPrefixEntry 3 }




--                      The Address Group
--
-- The Address Table is implemented by the network-side IME.

atmfAddressTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfAddressEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table implemented by the network-side IME,
                 containing the ATM-layer addresses in effect
                 on the user side of the UNI."
        ::= { atmfAddressGroup 1 }

atmfAddressEntry OBJECT-TYPE
        SYNTAX  AtmfAddressEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "Information about a single ATM-layer address in effect
                 on the user-side IME.  Note that the index variable
                 atmAddressAtmAddress is a variable-length string, and as
                 such the rule for variable-length strings in section
                 4.1.6 of RFC 1212 applies."
        INDEX   { atmfAddressPort, atmfAddressAtmAddress }
        ::= { atmfAddressTable 1 }

AtmfAddressEntry ::=
        SEQUENCE {
                atmfAddressPort
                    INTEGER,
                atmfAddressAtmAddress
                    AtmAddress,
                atmfAddressStatus
                    INTEGER,
                atmfAddressOrgScope
                    INTEGER
                }

atmfAddressPort OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A unique value which identifies the UNI port for
                 which the ATM address is in effect.  The value of 0
                 has the special meaning of identifying the local UNI."
        ::= { atmfAddressEntry 1 }

atmfAddressAtmAddress  OBJECT-TYPE
        SYNTAX  AtmAddress
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "The ATM address which is in effect on the user side
                 of the ATM UNI port."
        ::= { atmfAddressEntry 2 }

atmfAddressStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                valid(1),
                invalid(2)
                }
        MAX-ACCESS  read-create
        STATUS  current
        DESCRIPTION
                "An indication of the validity of the ATM address at
                 the user side of the UNI port.  To configure a new
                 address in this table, the user-side IME must set the
                 appropriate instance of this object to the value
                 valid(1).  To delete an existing address in this table,
                 the user-side IME must set the appropriate instance of
                 this object to the value invalid(2).

                 If circumstances occur on the network-side IME which cause
                 an address to become invalid, the network-side IME
                 modifies the value of the appropriate instance of this
                 object to invalid(2).
```

```
                Whenever the value of this object for a particular
                address becomes invalid(2), the conceptual row for
                that address may be removed from the table at any
                time, either immediately or subsequently."
        ::= { atmfAddressEntry 3 }

atmfAddressOrgScope OBJECT-TYPE
        SYNTAX  INTEGER {
                localNetwork(1),
                localNetworkPlusOne(2),
                localNetworkPlusTwo(3),
                siteMinusOne(4),
                intraSite(5),
                sitePlusOne(6),
                organizationMinusOne(7),
                intraOrganization(8),
                organizationPlusOne(9),
                communityMinusOne(10),
                intraCommunity(11),
                communityPlusOne(12),
                regional(13),
                interRegional(14),
                global(15)
                }
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
                "This object indicates the organizational
                 scope for the referenced address. The information of
                 the referenced address shall not be distributed
                 outside the indicated scope. If the user-side IME does
                 not specify a value for the atmfAddressOrgScope object,
                 the network shall set the value of this object to
                 localNetwork(1), if the registered address is an ATM group
                 address, or to global(15), if the registered address is
                 an individual address.  Refer to Annex 6.0
                 of ATM Forum UNI Signalling 4.0 for guidelines regarding
                 the use of organizational scopes.

                 This organization hierarchy may be mapped to ATM network's
                 routing hierarchy such as PNNI's routing level and
                 the mapping shall be configurable in
                 nodes. Use of this object in a public network is for
                 further study.
                 The default values for organizational scope are
                 localNetwork(1) for ATM group addresses, and global(15)
                 for individual addresses."
        ::= { atmfAddressEntry 4 }


--           The Address Registration Admin Group
--
-- The Address Registration Admin Table is current for all IMEs.

atmfAddressRegistrationAdminTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfAddressRegistrationAdminEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "A table of Address Registration administrative
                 information for the ATM Interface."
        ::= { atmfAddressRegistrationAdminGroup 1 }



atmfAddressRegistrationAdminEntry OBJECT-TYPE
        SYNTAX  AtmfAddressRegistrationAdminEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the table, containing Address
                 Registration administrative information for the ATM
                 Interface."
        INDEX   { atmfAddrRegAdminIndex }
        ::= { atmfAddressRegistrationAdminTable 1 }


AtmfAddressRegistrationAdminEntry ::=
        SEQUENCE {
                atmfAddrRegAdminIndex
                    INTEGER,
                atmfAddrRegAdminStatus
                    INTEGER
                }

atmfAddrRegAdminIndex OBJECT-TYPE
        SYNTAX  INTEGER (0..2147483647)
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "The value of 0 which has the special meaning of
                 identifying the ATM Interface over which this message
                 was received."
        ::= { atmfAddressRegistrationAdminEntry 1 }
```

```
atmfAddrRegAdminStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                supported(1),
                unsupported(2)
                }
        MAX-ACCESS  read-only
        STATUS  current
        DESCRIPTION
                "An indication of whether or not Address Registration
                 is supported on this ATM Interface. Supported(1)
                 indicates that this ATM Interface supports address
                 registration. Unsupported(2) indicates that this ATM
                 Interface does not support address registration."
        ::= { atmfAddressRegistrationAdminEntry 2 }




-- Traps
atmfVpcChange TRAP-TYPE
        ENTERPRISE      atmForum
        VARIABLES       { atmfVpcPortIndex, atmfVpcVpi, atmfVpcOperStatus}
        DESCRIPTION
                "An atmfVpcChange trap indicates that
                 a permanent VPC has been added or deleted
                 at this ATM Interface or that the attributes
                 of an existing VPC have been modified. The variables
                 included in the trap identify the VPI value of the
                 reconfigured VPC at this ATM Interface."
        ::= 1



atmfVccChange TRAP-TYPE
        ENTERPRISE      atmForum
        VARIABLES
                {atmfVccPortIndex,
                 atmfVccVci,
                 atmfVccVpi,
                 atmfVccOperStatus }
        DESCRIPTION
                "An atmfVccChange trap indicates that
                 a permanent VCC has been added or deleted
                 at this ATM Interface or that the attributes
                 of an existing VCC have been modified. The variables
                 included in the trap identify the VCI and VPI values
                 of the reconfigured VCC at this ATM
                 Interface."
        ::= 2

END
```

2

The Ascend Broadband Access CESV2 MIB

ATMF-CES DEFINITIONS

IMPORTS

```
        enterprises
                FROM RFC1155-SMI
        OBJECT-TYPE, MODULE-IDENTITY, Counter32, Gauge32
                FROM SNMPv2-SMI
        MODULE-COMPLIANCE, OBJECT-GROUP
                FROM SNMPv2-CONF;

atmForum  OBJECT IDENTIFIER ::= { enterprises 353 }
atmForumNetworkManagement  OBJECT IDENTIFIER ::= {atmForum 5 }
atmfCESmib OBJECT IDENTIFIER ::= { atmForumNetworkManagement 2 }
atmfCES MODULE-IDENTITY
        LAST-UPDATED "9610170000Z"
        ORGANIZATION "ATM Forum Circuit Emulation Working Group"
        CONTACT-INFO "The ATM Forum
                2570 West El Camino Real, Suite 304
                Mountain View, CA 94040-1313 USA
                Phone: +1 415-949-6700
                Fax:   +1 415-949-6705
                info@atmforum.com"
        DESCRIPTION
                "The MIB Module to describe the DS1/E1 Circuit Emulation
                Interworking Function (Version 1.0)
                Note: The new Version 2 CES MIB replaces this earlier
                Version 1 CES MIB which exists as the (deprecated) first
                branch from the overall atmfCESmib object."
        ::= { atmfCESmib 2 }

-- An OBJECT IDENTIFIER for all ATM Forum circuit emulation MIBs
-- has been assigned as a branch from the ATM Forum Network
-- Management tree.  This MIB for the version 2 ATM Forum Circuit
-- Emulation specification is attached as the second branch from the
-- overall atmfCESmib object.
-- The following TEXTUAL-CONVENTIONS are used to link the CES
-- interworking function to ATM interface port, plus the
-- associated VPI and VCI.

-- VpiInteger ::= TEXTUAL-CONVENTION
--      STATUS  current
--      DESCRIPTION
--              "An integer large enough to hold a VPI"
--      SYNTAX  INTEGER (0..4095)

-- VciInteger ::= TEXTUAL-CONVENTION
--      STATUS  current
--      DESCRIPTION
--              "An integer large enough to hold a VCI"
--      SYNTAX  INTEGER (0..65535)

-- CESConnectionPort ::= TEXTUAL-CONVENTION
--      STATUS  current
--      DESCRIPTION
--              "Indicates the port associated with a Circuit Emulation
--               connection.  Objects of this type are always defined as
--               part of a set that includes
--                  fooPort     CESConnectionPort
--                  fooVpi      VpiInteger
--                  fooVci      VciInteger
--       The interpretation of these objects is as follows:
--       1. If no connection exists, `fooPort' has a value of 0.
--              Because Interface table entries always have `ifIndex'
--              values greater than 0, `fooPort' reliably serves as a
--              `connection exists' flag.
```

```
--              If no connection exists, `fooVpi' and `fooVci' are
--              not relevant and have a value of 0.
--       2. If a PVC or SVC exists, `fooPort' is defined to have
--              the value of the MIB-II/RFC1573 `ifIndex' of the ATM
--              interface associated with the VCC.  The ifType
--              associated with such an ifIndex value is either
--              atm(37) or atmLogical(80).  `fooVpi' and `fooVci'
--              will contain its VPI/VCI."
--      SYNTAX  INTEGER (0..2147483647)

-- AtmAddr ::= TEXTUAL-CONVENTION
--      DISPLAY-HINT "1x"
--      STATUS  current
--      DESCRIPTION
--      "The ATM address used by the network entity.  The address
--       types are: no address (0 octets), E.164 (8 octets), and
--       NSAP-encoded ATM Endsystem Address (20 octets).
--       Note: The E.164 address is encoded in BCD format."
--      SYNTAX  OCTET STRING (SIZE(0|8|20))

-- This is the MIB module for the ATM Forum Circuit Emulation
-- Service Interoperability Specification Version 2.0.
--
-- This MIB contains four tables:
--      CES Configuration Table
--      CES Mapping Table
--      CES Statistics Table
--      CES Active SVC Table
```

CES Configuration Table

```
atmfCESObjects  OBJECT IDENTIFIER ::= {atmfCES 1}
atmfCESConfTableOBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfCESConfEntry
        MAX-ACCESS not-accessible
        STATUS  current
        DESCRIPTION
                "The CES configuration table used to manage interworking
                 between CBR interfaces or channels and ATM Virtual
                 Channel Links (VCLs). The reverse mapping is shown in
                 the atmfCESMappingTable."
        ::= { atmfCESObjects  1 }

atmfCESConfEntryOBJECT-TYPE
        SYNTAX  AtmfCESConfEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the CES configuration table.  There is one
                 entry in the table per CES entity, mapping one CBR
                 interface, channel, or bundle to an ATM VCL.
                 Creation of a row in this table with a non-zero
                 atmfCESAtmIndex causes a corresponding entry in the
                 atmVclTable of the ATM-MIB (RFC1695) to be created."
        INDEX   { atmfCESCbrIndex }
        ::= { atmfCESConfTable 1 }
AtmfCESConfEntry ::= SEQUENCE  {
        atmfCESCbrIndex         INTEGER,
        atmfCESAtmIndex         INTEGER,
        atmfCESAtmVpi           INTEGER,
        atmfCESAtmVci           INTEGER,
        atmfCESCbrService       INTEGER,
        atmfCESCbrClockMode     INTEGER,
        atmfCESCas              INTEGER,
        atmfCESPartialFill      INTEGER,
        atmfCESBufMaxSize       INTEGER,
        atmfCESCdvRxT           INTEGER,
        atmfCESCellLossIntegrationPeriod  INTEGER,
        atmfCESConnType         INTEGER,
        atmfCESLocalAddr        OCTET STRING (SIZE(0|8|20)),
        atmfCESAdminStatus      INTEGER,
        atmfCESOperStatus       INTEGER,
        atmfCESConfRowStatus    INTEGER
        }

atmfCESCbrIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The value of this object is equal to MIB II's ifIndex
                 value of the CBR interface, channel, or bundle that
                 is being cross-connected to an ATM VCL."
        ::= { atmfCESConfEntry 1 }

atmfCESAtmIndex OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The value of this object is equal to MIB II's
                 ifIndex value of the ATM Port interface mapped through
                 this CES IWF to a CBR interface.  This value is
                 overwritten whenever an active or passive SVC is
                 established.
                 The distinguished value zero indicates that no ATM
```

```
                interface has been specified."
        ::= { atmfCESConfEntry 2 }

atmfCESAtmVpi   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The value of this object is equal to the VPI used by the
                 ATM VCL mapped through this CES IWF to a CBR interface.
                 This value is overwritten whenever an active or passive
                 SVC is established. The value is not relevant if no ATM
                 interface has been specified (i.e., atmfCESAtmIndex is
                 set to zero)."
        ::= { atmfCESConfEntry 3 }

atmfCESAtmVci   OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The value of this object is equal to the VCI used by the
                 ATM VCL mapped through this CES IWF to a CBR interface.
                 This value is overwritten whenever an active or passive
                 SVC is established.
                 The distinguished value zero indicates that no ATM VCL
                 has been specified."
        ::= { atmfCESConfEntry 4 }

atmfCESCbrService OBJECT-TYPE
        SYNTAX  INTEGER {
                    unstructured(1),
                    structured(2)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Define if DSx/Ex service is as structured or
                 unstructurednot. A structured(2) interface is some
                 nx64kbKbps. An unstructured (1) interface is 1.544Mbps,
                 2.048Mbps, 6.312Mbps, 44.736 Mbps, or 34.368 Mbps.
                 unstructured(1) passes all bits through the ATM network.
                 strucutured(2) passes data bits through the ATM network,
                 and may also pass signalling bits
                 At this time, only unstructured mode is defined for the
                 44.736 Mbps and 34.368 Mbps services."
        ::= { atmfCESConfEntry 5 }

atmfCESCbrClockModeOBJECT-TYPE
        SYNTAX  INTEGER {
                    synchronous(1),
                    srts(2),
                    adaptive(3)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Define if DSx/Ex service clocking mode. This maps into
                 transmit clock source of CBR interface.
                 For structured modes this value, if present, must be set
                 to synchronous(1)."
        DEFVAL { synchronous }
        ::= { atmfCESConfEntry 6 }

atmfCESCas     OBJECT-TYPE
        SYNTAX  INTEGER {
                    basic(1),
                    e1Cas(2),
                    ds1SfCas(3),
                    ds1EsfCas(4),
                    j2jt2Cas(5)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "This parameter selects which AAL1 Format should be used:
                 Basic does not carry CAS bits, and uses a single 125 usec
                 frame. e1Cas, ds1SfCas, dS1EsfCas and j2jt2Cas carry CAS
                 bits in a multiframe structure for E1, DS1 SF, DS1 ESF
                 and J2JT2  respectively. This applies to structured
                 interfaces only. Default is basic (1). For unstructured
                 interfaces this value, if present, must be set to the
                 default of basic (1)."
        DEFVAL { basic }
        ::= { atmfCESConfEntry 7 }

atmfCESPartialFill OBJECT-TYPE
        SYNTAX  INTEGER (0 .. 47)
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "If partial cell fill is used, the number of user octets
                 per cell must be set with this parameter.  Setting this
                 parameter to zero disables partial cell fill, and causes
                 all cells to be completely filled before they are sent."
        DEFVAL { 0 } -- Partial Cell Fill not used
```

```
        ::= { atmfCESConfEntry 8 }

atmfCESBufMaxSize  OBJECT-TYPE
        SYNTAX  INTEGER  (1..65536)
        UNITS    "10 usec"
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Define maximum size in 10 microsecond increments of the
                 reassembly buffer. Some implementations may want allow
                 the  maximum buffer size to be programmed to a size less
                 than the  physical limit to reduce the maximum delay
                 through a circuit."
        DEFVAL { 128 }
        ::= { atmfCESConfEntry 9 }

atmfCESCdvRxT OBJECT-TYPE
        SYNTAX  INTEGER  (1..65535)
        UNITS    "10 usec"
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The maximum cell arrival jitter in 10 usec increments
                 that  the reassembly process will tolerate in the cell
                 stream without producing errors on the CBR service
                 interface."
        DEFVAL { 100 }
        ::= { atmfCESConfEntry 10 }

atmfCESCellLossIntegrationPeriod   OBJECT-TYPE
        SYNTAX  INTEGER  (1000 .. 65535)
        UNITS    "msec"
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The time in milliseconds for the cell loss integration
                 period.  If a cells are continuously lost for this period
                 of time, atmfCESCellLossStatus is set to loss (2). The
                 default definition is 2500."
        DEFVAL { 2500 }
        ::= { atmfCESConfEntry 11 }

atmfCESConnType    OBJECT-TYPE
        SYNTAX  INTEGER {
                    other(1),
                    pvc(2),
                    activeSvc(3),
                    passiveSvc(4)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The type of ATM connectivity between associated CES IWF's.
                 Valid values are:
                    other - none of the types specified below
                    pvc - supporting connectivity is a permanent virtual
                           connection
                    activeSvc - attempt calls whenever none established
                    passiveSvc - accept calls"
        ::= { atmfCESConfEntry 12 }

atmfCESLocalAddr   OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(0|8|20))
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The ATM address of the local CES IWF process. This
                 address is an optional object. This address may be used
                 by the automatic SVC establishment procedures to
                 identify the intended recipient CES IWF of an incoming
                 automatic SVC call request. Optionally, the MAX-ACCESS of
                 this object may be read-only, for those implementations
                 where it is not desired to manually configure this
                 address."
        ::= { atmfCESConfEntry 13 }

atmfCESAdminStatus   OBJECT-TYPE
        SYNTAX  INTEGER {
                    up(1),
                    down(2)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The desired administrative status of the CES interworking
                 function.  The up and down states indicate that the
                 traffic flow is enabled or disabled respectively across
                 the CES interworking function. This is an optional
                 object."
        ::= { atmfCESConfEntry 14 }

atmfCESOperStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                    up(1),
                    down(2),
                    unknown(3)
```

```
            }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The operational status of the CES interworking function.
                 The up and down states indicate that the traffic flow is
                 enabled or disabled respectively across the CES
                 interworking function.  The unknown state indicates that
                 the state of the CES interworking function cannot be
                 determined.  The state will be down or unknown if the
                 supporting CBR or ATM interfaces are down or unknown,
                 respectively. This is an optional object."
        ::= { atmfCESConfEntry 15 }

atmfCESConfRowStatus OBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "This object is used to create new rows in this table,
                 modify existing rows, and to delete existing rows."
        ::= { atmfCESConfEntry 16 }
```

CES Mapping Table

```
atmfCESMappingTable  OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfCESMappingEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The CES mapping table used to show the mapping from ATM
                 VCLs to CBR interfaces or channels.  The mapping and
                 interworking functions are configured in the
                 atmfCESConfTable."
        ::= { atmfCESObjects 2 }

atmfCESMappingEntry  OBJECT-TYPE
        SYNTAX  AtmfCESMappingEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the CES mapping table.  There is one entry in
                 the table corresponding to each active row in the
                 atmfCESConfTable for which there is a non-zero
                 atmfCESAtmIndex."
        INDEX   { atmfCESAtmIndex,
                atmfCESAtmVpi,
                atmfCESAtmVci }
        ::= { atmfCESMappingTable 1 }

AtmfCESMappingEntry ::= SEQUENCE  {
        atmfCESMappingCbrIndex INTEGER
        }

atmfCESMappingCbrIndexOBJECT-TYPE
        SYNTAX  INTEGER
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The value of this object is equal to MIB II's ifIndex
                 value of the CBR interface, channel, or bundle that is
                 being cross-connected to an ATM VCL.  Examples of the
                 ifType value for the CBR entity are ds1(18), ds3(30),
                 ds0(81), or ds0bundle(82)."
        ::= { atmfCESMappingEntry 1 }
```

CES Statistics Table

```
atmfCESStatsTable  OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfCESStatsEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The CES AAL1 statistical data table."
        ::= { atmfCESObjects 3 }

atmfCESStatsEntryOBJECT-TYPE
        SYNTAX  AtmfCESStatsEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the CES AAL1 Stats table.  There is one
                 entry in this table corresponding to each entry in
                 the atmfCESConfTable."
        AUGMENTS  { atmfCESConfEntry }
        ::= { atmfCESStatsTable 1 }
AtmfCESStatsEntry ::= SEQUENCE  {
        atmfCESReassCells   Counter32,
        atmfCESHdrErrorsCounter32,
        atmfCESPointerReframesCounter32,
        atmfCESPointerParityErrors  Counter32,
        atmfCESAal1SeqErrorsCounter32,
        atmfCESLostCellsCounter32,
        atmfCESMisinsertedCellsCounter32,
        atmfCESBufUnderflowsCounter32,
        atmfCESBufOverflows Counter32,
```

```
        atmfCESCellLossStatus INTEGER
        }

atmfCESReassCells OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "This count gives the number of cells played out to the
                 CES Service Interface. It excludes cells that were
                 discarded for any reason, including cells that were not
                 used due to being declared misinserted, or discarded
                 while the reassembler was waiting to achieve
                 synchronization."
        ::= { atmfCESStatsEntry 1 }

atmfCESHdrErrors OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "The count of the number of AAL1 header errors detected,
                 including those corrected.  Header errors include
                 correctable and uncorrectable CRC, plus bad parity."
        ::= { atmfCESStatsEntry 2 }

atmfCESPointerReframes  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "This records the count of the number of events in which
                 the AAL1 reassembler found that an SDT pointer is not
                 where it is expected, and the pointer must be reacquired.
                 This count is an optional object and is only meaningful
                 for structured CES modes, as unstructured CES modes do
                 not use pointers. For unstructured CES modes, this count,
                 if present, should indicate zero."
        ::= { atmfCESStatsEntry 3 }

atmfCESPointerParityErrors  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "This records the count of the number of events in which
                 the AAL1 reassembler detects a parity check failure at
                 the point where a structured data pointer is expected.
                 This count is an optional object and is only meaningful
                 for structured  CES modes, as unstructured CES modes do
                 not use pointers. For unstructured CES modes, this count,
                 if present, should indicate zero."
        ::= { atmfCESStatsEntry 4 }

atmfCESAal1SeqErrors  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Number of times that the sequence number of an incoming
                 AAL1 Type 1 SAR-PDU causes a transition from the æsyncÆ
                 state to the æout of sequenceÆ state, as defined by ITU-T
                 I.363.1.  This count is an optional object."
        ::= { atmfCESStatsEntry 5 }

atmfCESLostCells   OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Number of lost cells, as detected by the AAL1 sequence
                 number processing, for example. This records the count of
                 the number of cells detected as lost in the network prior
                 to the destination CES IWF AAL1 layer processing.  This
                 count is an optional object."
        ::= { atmfCESStatsEntry 6 }

atmfCESMisinsertedCells   OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Number of AAL1 sequence violations which the
                 AAL Convergence sublayer interprets as a misinserted
                 cell, as defined by ITU-T I.363.1. This count is
                 an optional object."
        ::= { atmfCESStatsEntry 7 }

atmfCESBufUnderflows  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Number of buffer underflows. This records the count of
                 the number of times the CES reassembly buffer underflows.
                 In the case of a continuous underflow caused by a loss of
```

```
                ATM cell flow, a single buffer underflow should be
                counted. If the CES IWF is implemented with multiple
                buffers (such as a cell level buffer and a bit level
                buffer), then either buffer underflow will cause this
                count to be incremented."
        ::= { atmfCESStatsEntry 8 }

atmfCESBufOverflows  OBJECT-TYPE
        SYNTAX  Counter32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Number of buffer overflows. This records the count of the
                 number of times the CES reassembly buffer overflows. If
                 the CES IWF is implemented with multiple buffers (such as
                 a cell level buffer and a bit level buffer, then either
                 buffer overflow will cause this count to be incremented "
        ::= { atmfCESStatsEntry 9 }

atmfCESCellLossStatus  OBJECT-TYPE
        SYNTAX  INTEGER {
                    noLoss(1),
                    loss(2)
                    }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "When cells are continuously lost for the number of
                 milliseconds specified by
                 atmfCESCellLossIntegrationPeriod, the value is set to
                 loss (2). When cells are no longer lost, the value is
                 set  to noLoss (1)."
        ::= { atmfCESStatsEntry 10 }
```

CES Active SVC Table

```
atmfCESActiveSvcTable  OBJECT-TYPE
        SYNTAX  SEQUENCE OF AtmfCESActiveSvcEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "The table used to manage active SVCs established across
                 ATM networks between CES entities."
        ::= { atmfCESObjects 4 }

atmfCESActiveSvcEntry  OBJECT-TYPE
        SYNTAX  AtmfCESActiveSvcEntry
        MAX-ACCESSnot-accessible
        STATUS  current
        DESCRIPTION
                "An entry in the CES active SVC table.  There is one entry
                 in the table corresponding to each active row in the
                 atmfCESConfTable for which the atmfCESConnType takes the
                 value 'activeSvc'."
        INDEX   { atmfCESCbrIndex }
        ::= { atmfCESActiveSvcTable 1 }
AtmfCESActiveSvcEntry ::= SEQUENCE  {
        atmfCESRemoteAddr                OCTET STRING (SIZE(0|8|20)),
        atmfCESFirstRetryInterval        INTEGER,
        atmfCESRetryTimer                INTEGER,
        atmfCESRetryLimit                INTEGER,
        atmfCESRetryFailures             Gauge32,
        atmfCESActiveSvcRestart          INTEGER,
        atmfCESActiveSvcOperStatus       INTEGER,
        atmfCESLastReleaseCause          INTEGER,
        atmfCESLastReleaseDiagnostics    OCTET STRING (SIZE(0|8|20))
        }

atmfCESRemoteAddr  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(0|8|20))
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The ATM address supporting the corresponding far end CES
                 IWF process.  If no address is supplied, no attempts to
                 establish the active SVC are initiated."
        ::= { atmfCESActiveSvcEntry 1 }

atmfCESFirstRetryInterval OBJECT-TYPE
        SYNTAX  INTEGER (1..3600)
        UNITS   "seconds"
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "The time to wait before attempting to establish the SVC
                 after the first failed call attempt.  The time to wait
                 between subsequent call attempts may differ to implement
                 a backoff scheme.  Zero represents an infinite interval
                 indicating no retries."
        DEFVAL { 10 }
        ::= { atmfCESActiveSvcEntry 2 }

atmfCESRetryTimer  OBJECT-TYPE
        SYNTAX  INTEGER (0..86400)
        UNITS   "seconds"
        MAX-ACCESSread-only
```

```
        STATUS  current
        DESCRIPTION
                "Indicates the current value of the retry timer for this
                 connection.  When the value reaches zero an attempt will
                 be made to establish the active SVC.  When the timer is
                 not running, the value zero shall be returned."
        ::= { atmfCESActiveSvcEntry 3 }

atmfCESRetryLimit  OBJECT-TYPE
        SYNTAX  INTEGER (0..65535)
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "Sets a maximum limit on how many consecutive unsuccessful
                 call setup attempts can be made before stopping the
                 attempt to set up the connection.  If this limit is
                 reached then management action will be required
                 (e.g. setting atmfCESActiveSvcRestart to 'restart') to
                 initiate a new attempt to establish the connection.  A
                 value of zero indicates no limit - the attempts will
                 continue until successful. This limit is an optional
                 object. If not present, no limit on call attempts is
                 assumed."
        DEFVAL { 0 }
        ::= { atmfCESActiveSvcEntry 4 }

atmfCESRetryFailures   OBJECT-TYPE
        SYNTAX  Gauge32
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Indicates how many attempts to establish the connection
                 have failed.  This count is reset whenever a connection
                 is successfully established or the active SVC is
                 restarted."
        ::= { atmfCESActiveSvcEntry 5 }

atmfCESActiveSvcRestart  OBJECT-TYPE
        SYNTAX  INTEGER {
                    restart(1),
                    noop(2)
                    }
        MAX-ACCESSread-write
        STATUS  current
        DESCRIPTION
                "When the value is set to 'restart' the active SVC is
                 released if necessary and a new setup procedure is
                 begun.  As a result of this action, the
                 atmfCESActiveSvcOperStatus object transitions to
                 'establishmentInProgress' (if not already in this state)
                 and the atmfCESRetryFailures object is cleared.
                 When the value is set to 'noop' no operation is
                 performed.  When read, the value 'noop' is returned."
        ::= { atmfCESActiveSvcEntry 6 }

atmfCESActiveSvcOperStatus OBJECT-TYPE
        SYNTAX  INTEGER {
                    other(1),
                    establishmentInProgress(2),
                    connected(3),
                    retriesExhausted(4),
                    noAddressSupplied(5),
                    lowerLayerDown(6)
                    }
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Describes the status of the active SVC.  Valid values are:
                    other - none of the types specified below
                    establishmentInProgress - connection is not
                              operational, but call attempts are ongoing
                    connected - connection is currently operational
                    retriesExhausted - retry limit has been reached and
                              call attempts have ceased
                    noAddressSupplied - no remote address has been
                              configured, so no call attempts are
                              initiated
                    lowerLayerDown - underlying CES IWF is not operational
                 When the row is not 'active', the value of this object is
                 'other'."
        ::= { atmfCESActiveSvcEntry 7 }

atmfCESLastReleaseCause OBJECT-TYPE
        SYNTAX  INTEGER(1..127)
        MAX-ACCESSread-only
        STATUS  current
        DESCRIPTION
                "Value of the Cause field of the Cause information element
                 in the last RELEASE signalling message received for this
                 active SVC.  Indicates the reason for the release. This
                 is an optional object."
        ::= { atmfCESActiveSvcEntry 8 }

atmfCESLastReleaseDiagnostics  OBJECT-TYPE
        SYNTAX  OCTET STRING (SIZE(0|8|20))
        MAX-ACCESSread-only
```

```
        STATUS  current
        DESCRIPTION
                "Value of the first 8 bytes of diagnostic information from
                 the Cause field of the Cause information element in the
                 last RELEASE signalling message received for this active
                 SVC. This is an optional object."
        ::= { atmfCESActiveSvcEntry 9 }

-- Conformance Information
atmfCESConformanceOBJECT IDENTIFIER ::= { atmfCES 2 }
atmfCESGroups OBJECT IDENTIFIER ::= { atmfCESConformance 1 }
atmfCESCompliancesOBJECT IDENTIFIER ::= { atmfCESConformance 2 }

-- Compliance Statements
atmfCESCompliance MODULE-COMPLIANCE
        STATUS  current
        DESCRIPTION
                "The compliance statement for SNMP entities which support
                 the ATM Forum Circuit Emulation Services."
        MODULE  -- this module
        MANDATORY-GROUPS {
                 atmfCESBasicConfigGroup,
                 atmfCESBasicStatsGroup,
                 atmfCESMappingGroup
                 }

        GROUP   atmfCESStructConfigGroup
        DESCRIPTION
                "This group is mandatory only for IWFs that support
                 Structured DS1, E1 or J2 Nx64 kbit/s Service."

        GROUP   atmfCESStructStatsGroup
        DESCRIPTION
                "This group is mandatory only for IWFs that support
                 Structured DS1, E1 or J2 Nx64 kbit/s Service."

        GROUP   atmfCESSvcConfigGroup
        DESCRIPTION
                "This group is mandatory only when support for automatic
                 SVC initiation procedures is provided."

        OBJECT    atmfCESLocalAddr
        MIN-ACCESS read-only
        DESCRIPTION
                "Support for manual configuration of the local CES
                 interworking function address is not required."

        OBJECT  atmfCESAdminStatus
        MIN-ACCESS not-accessible
        DESCRIPTION
                "Support of atmfCESAdminStatus is not required."

        OBJECT    atmfCESOperStatus
        MIN-ACCESS not-accessible
        DESCRIPTION
                "Support of atmfCESOperStatus is not required."

        OBJECT    atmfCESPointerReframes
        DESCRIPTION
                "Support for counting AAL1 Pointer Reframes is not
                 required."

        OBJECT    atmfCESPointerParityErrors
        DESCRIPTION
                "Support for counting AAL1 Pointer Parity Errors is not
                 required."

        OBJECT    atmfCESAal1SeqErrors
        DESCRIPTION
                "Support for counting AAL1 Sequence Errors is not
                 required."

        OBJECT    atmfCESLostCells
        DESCRIPTION
                "Support for counting Lost Cells is not required."

        OBJECT    atmfCESMisinsertedCells
        DESCRIPTION
                "Support for counting Misinserted Cells is not required."

        OBJECT     atmfCESRetryLimit
        MIN-ACCESS  not-accessible
        DESCRIPTION
                "Support of a retry limit is not required."

        OBJECT    atmfCESLastReleaseCause
        MIN-ACCESS not-accessible
        DESCRIPTION
                "Support for the Last Release Cause object is not
                 required."

        OBJECT    atmfCESLastReleaseDiagnostics
        MIN-ACCESS not-accessible
        DESCRIPTION
                "Support for the Last Release Diagnostics object is
                 not required."
```

```
        ::= { atmfCESCompliances 1 }

-- Units of Conformance

atmfCESBasicConfigGroup OBJECT-GROUP
        OBJECTS {
                atmfCESAtmIndex,
                atmfCESAtmVpi,
                atmfCESAtmVci,
                atmfCESCbrService,
                atmfCESCbrClockMode,
                atmfCESBufMaxSize,
                atmfCESCdvRxT,
                atmfCESCellLossIntegrationPeriod,
                atmfCESConnType,
                atmfCESAdminStatus,
                atmfCESOperStatus,
                atmfCESConfRowStatus
                }
        STATUS  current
        DESCRIPTION
                "A collection of objects providing configuration
                 information for generic Circuit Emulation Service IWFs."
        ::= { atmfCESGroups 1 }

atmfCESBasicStatsGroup OBJECT-GROUP
        OBJECTS {
                atmfCESReassCells,
                atmfCESHdrErrors,
                atmfCESAal1SeqErrors,
                atmfCESLostCells,
                atmfCESMisinsertedCells,
                atmfCESBufUnderflows,
                atmfCESBufOverflows,
                atmfCESCellLossStatus
                }
        STATUS  current
        DESCRIPTION
                "A collection of objects providing statistics information
                 for generic Circuit Emulation Service IWFs."
        ::= { atmfCESGroups 2 }

atmfCESStructConfigGroup OBJECT-GROUP
        OBJECTS {
                atmfCESCas,
                atmfCESPartialFill
                }
        STATUS  current
        DESCRIPTION
                "A collectioin of objects providing configuration
                 information for Structured DS1, E1 or J2 Nx64 kbit/s
                 Service IWFs."
        ::= { atmfCESGroups 3 }

atmfCESStructStatsGroup OBJECT-GROUP
        OBJECTS {
                atmfCESPointerReframes,
                atmfCESPointerParityErrors
                }
        STATUS  current
        DESCRIPTION
                "A collection of objects providing statistics information
                 for Structured DS1, E1 or J2 Nx64 kbit/s Service IWFs."
        ::= { atmfCESGroups 4 }

atmfCESMappingGroup OBJECT-GROUP
        OBJECTS {
                atmfCESMappingCbrIndex
                }
        STATUS  current
        DESCRIPTION
                "A collection of objects providing information about the
                 mapping from ATM VCLs to CBR interfaces or channels."
        ::= { atmfCESGroups 5 }

atmfCESSvcConfigGroup OBJECT-GROUP
        OBJECTS {
                atmfCESLocalAddr,
                atmfCESRemoteAddr,
                atmfCESFirstRetryInterval,
                atmfCESRetryTimer,
                atmfCESRetryLimit,
                atmfCESRetryFailures,
                atmfCESActiveSvcRestart,
                atmfCESActiveSvcOperStatus,
                atmfCESLastReleaseCause,
                atmfCESLastReleaseDiagnostics
                }
        STATUS  current
        DESCRIPTION
                "A collection of objects providing SVC connection
                 establishment support configuration information for CES
                 IWFs."
        ::= { atmfCESGroups 6 }
END
```