

**Definitions of Managed Objects
for the ADSL Lines**

October 30, 1998

[draft-ietf-adslmib-adslinemib-02.txt](#)**1. Status of this Memo**

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2. Abstract

This document defines a standard SNMP MIB for ADSL lines based on the ADSL Forum standard data model [9]. The model assumed by this MIB is that the SNMP agent's perspective is from the ATU-C side which acts as a proxy for the ATU-R. Each MIB instance includes information for both ends of a single line, i.e., both the ATU-C and ATU-R.

It should be noted that much of the content for the first version of this document came from work completed by the ADSL Forum's Network

Management working group and documented in ADSL Forum TR-006 "SNMP-based ADSL Line MIB"[9]. See Acknowledgement Section for a list of individuals involved with this effort.

3. The SNMP Network Management Framework

The SNMP Management Framework presently consists of five major components:

- o An overall architecture, described in [RFC 2271](#) [13].
- o Mechanisms for describing and naming objects and events for the purpose of management. The first version of this Structure of Management Information (SMI) is called SMIV1 and described in [RFC 1155](#) [14], [RFC 1212](#) [15] and [RFC 1215](#) [16]. The second version, called SMIV2, is described in [RFC 1902](#) [1], [RFC 1903](#) [2] and [RFC 1904](#) [17].
- o Message protocols for transferring management information. The first version of the SNMP message protocol is called SNMPv1 and described in [RFC 1157](#) [7]. A second version of the SNMP message protocol, which is not an Internet standards track protocol, is called SNMPv2c and described in [RFC 1901](#) [18] and [RFC 1906](#) [19]. The third version of the message protocol is called SNMPv3 and described in [RFC 1906](#) [19], [RFC 2272](#) [20] and [RFC 2274](#) [21].
- o Protocol operations for accessing management information. The first set of protocol operations and associated PDU formats is described in [RFC 1157](#) [7]. A second set of protocol operations and associated PDU formats is described in [RFC 1905](#) [8].
- o A set of fundamental applications described in [RFC 2273](#) [22] and the view-based access control mechanism described in [RFC 2275](#) [23].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the mechanisms defined in the SMI.

This document specifies a MIB module that is compliant to the SMIV2. A MIB conforming to the SMIV1 can be produced through the appropriate translations. The resulting translated MIB must be semantically equivalent, except where objects or events are omitted because no translation is possible (e.g., use of Counter64). Some machine readable information in SMIV2 will be converted into textual

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descriptions in SMIV1 during the translation process. However, this loss of machine readable information is not considered to change the semantics of the MIB.

4. Object Definitions

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the extended subset of Abstract Syntax Notation One (ASN.1) defined in the SMI. In particular, each object type is named by an OBJECT IDENTIFIER, an administratively assigned name. The object type together with an object instance serves to uniquely identify a specific instantiation of the object. For human convenience, we often use a textual string, termed the descriptor, to also refer to the object type.

5. Introduction

This document describes an ADSL Line MIB which is intended to work within the SNMP Network Management Framework ([section 3](#)). All MIB definitions are backward compatible for SNMPv1 implementation.

The MIB definitions are attached. The MIB will eventually be located in the MIB tree under mib-2 transmission, further discussed in [section 6](#) of this document.

6. Relationship of the ADSL LINE MIB with standard MIBs

This section outlines the relationship of ADSL Line MIB with other MIBs described in RFCs and in their various degrees of "standardization".

6.1 Use of the IfTable

The ADSL LINE MIB specifies the detailed attributes of a data interface. As such, it needs to integrate with IF-MIB [[5](#)]. The IANA has assigned the following ifType(s) relative to ADSL:

```
IANAifType ::= TEXTUAL-CONVENTION          . . .
SYNTAX INTEGER {
    adsl(94),      -- Asymmetric Digital Subscriber Loop
```

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```

. . .

    adslInterleave(124),    -- ADSL Interleaved Channel
    adslFast(125),         -- ADSL Fast Channel          . .
.      }

```

Interfaces of each of these types are modeled by this document. Pending approval of the IANA, under the advisement from IESG, adslMIB will be used as the root of this MIB and will be assigned to the value { transmission 94 }.

Most MIB tables in this document represent information of one of these interface types and are indexed by ifIndex. Remaining are 'profile' tables which may be accessed by the profileIndex. This is explained in more detail in [section 7.4](#) Profiles.

6.1.1 ADSL Interface Types

As shown below, three ADSL interface types are defined in this document, namely physical, interleaved channel, and fast channel. The physical interface represents characteristics of the physical media associated with both the ATUC and ATUR. The interleaved and fast channel interface represent the characteristics of the two types of ADSL channels.

For each ADSL Line, a physical interface always exists. Depending on which ADSL operational configuration is present (as listed in Figure 5), the channel interfaces (fast or interleaved) may or may not exist.

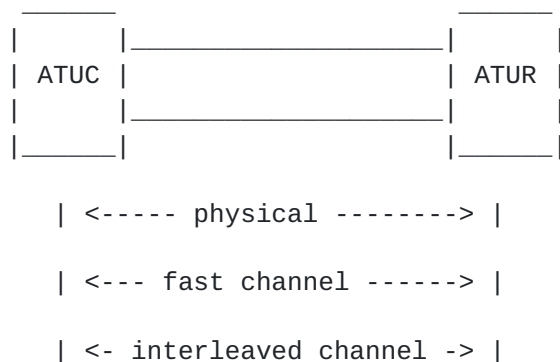


Figure 1: ADSL Model

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6.1.2 Use of IF-MIB (Interface MIB [RFC 2233](#)) [[5](#)]

The following attributes are part of the necessary ifGeneralInformationGroup object group specified in [RFC 2233](#) [[5](#)], and are not duplicated in the ADSL MIB. Keep in mind that these objects apply to the agent's view of the line.

ifTable Object	Use for ADSL
=====	
ifIndex	Interface index.
ifDescr	See interfaces MIB [5]
ifType	physical - adsl(94) fast - adslFast(125) interleaved - adslInterleave(124)
ifSpeed	Transmit rate from the perspective of the agent. physical - line rate fast - channel rate interleaved - channel rate
ifPhysAddress	This object should have an octet string with zero length.
ifAdminStatus	See interfaces MIB [5]
ifOperStatus	See interfaces MIB [5] Supplemented by adslAturCurrStatus and adslAturCurrStatus
ifLastChange	See interfaces MIB [5]
ifName	See interfaces MIB [5]
ifLinkUpDownTrapEnable	See interfaces MIB [5] Default set as follows: physical - enabled(1) fast - disabled(2) interleaved - disabled(2)
ifHighSpeed	Speed of line in Mega-bits per second (ifSpeed/1,000,000)

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ifConnectorPresent See interfaces MIB [5]

Default set as follows:

```
physical      - true(1)
fast          - false(2)
interleaved   - false(2)
```

ifAlias See interfaces MIB [5]

ifTableLastChange See interfaces MIB [5]

=====

Figure 2: Use of ifTable Objects: ifGeneralInformationGroup

Use of the ifStackTable to associate the entries for physical, fast, interleaved channels, and higher layers (e.g., ATM) is shown below in figure 3. Use of ifStackTable is necessary, because configuration information is stored in profile tables associated with the physical-layer ifEntry only. The channels' ifEntrys need the ifStackTable to find their associated physical-layer entry and thus their configuration parameters. (See Profile section, 7.4).

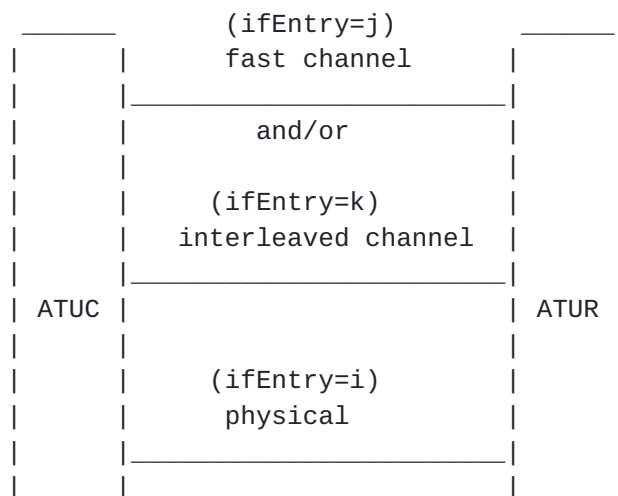


Figure 3: Use of ifStackTable (part 1)

The ifStackTable is then used to show the relationships between the various ADSL interfaces, as illustrated below in figure 4.

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HigherLayer	LowerLayer

j	i
k	i

Figure 4: Use of ifStackTable (part 2)

The ifRcvAddressTable is not applicable for ADSL interfaces.

6.2 Relationship with [RFC 2037](#) [25]

Implementation of the Entity MIB [25] is optional. It in no way alters the information required in the adslLineMib, nor does it alter the relationship with IF-MIB.

The Entity MIB introduces a standardized way of presenting the components of complex systems, such as a Digital Subscriber Line Access Multiplexer (DSLAM), that may contain multiple racks, shelves, line cards, and/or ports. The Entity MIB's main goal is to present these system components, their containment relationship, and mapping information with other MIBs such as the Interface MIB and the adslLineMib.

If implemented, the Entity MIB should include entities for the ATU-C in the entPhysicalTable. The MIB's entAliasMappingTable would contain mapping information identifying the 'ifIndex' object associated with each ATU-C. Also associating the relationship between the ifTable and Entity MIB, the entPhysicalTable contains an 'entPhysicalName' object, which approximates the semantics of the 'ifName' object from the Interface MIB.

7. Conventions used in the MIB

7.1 Naming Conventions

A. Atuc/Atur are used for the ATU-C and ATU-R. In other RFCs, these are sometimes referred to as the Near End (Ne) and Far End (Fe) respectively, but not in this document.

B. The terms, "transmit" and "receive", are from the perspective of the corresponding table's end of the line. For example, adslAtucChanConfMaxTxRate defines the "downstream" rate, while adslAturChanConfMaxTxRate defines the "upstream" rate for a

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particular channel.

C. There are two possible channels: fast, and interleaved. None, one or both may be implemented on a particular ADSL Line. Figure 5 illustrates all possible operational configurations.

D. Lof, Lol, Los, Lpr mean Loss of Framing, Link, Signal, and Power, respectively. Lpr is used by T1E1, so it is used for consistency (rather than Lop).

A Loss of Link condition is declared at the ATU-C if a Loss of Signal is not preceded by a 'dying-gasp' message from the ATU-R. Note that Loss of Link is only supported by the ATU-C.

E. ES means errored second. An Errored Second is any second containing one or more CRC anomaly, or one or more Los(s) or Severely Errored Frame (Sef) defect(s).

F. A "block" is a physical-layer 'data buffer' over which CRCs are calculated. For example, in DMT, the block is defined as the ADSL superframe. The block duration is 250 micro-seconds so the block length in bytes, as defined in `adslAtu*ChanCrcBlockLength`, varies with data rate. See Line Code Specific MIBs [\[11\]](#) [\[12\]](#) for more line code specific information.

G. Atn means Attenuation, Psd is Power Spectral Density and Snr is Signal to Noise Ratio.

H. LCS means line code specific, e.g.,

- o DMT = Discrete MultiTone
- o CAP = Carrierless Amplitude and Phase modulation and
- o QAM = Quadrature Amplitude Modulation

I. Vendor (in the Inventory objects) refers to the manufacturer of the ATU-C or ATU-R assembly, not the modem chip vendor. When in doubt, use the manufacturer of the smallest field replaceable unit (e.g., stand-alone modem box, plug-in board).

7.2 Structure

The MIB has multiple parallel tables. There are tables for:

- o line - common attributes

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- o atuc and atur status
- o atuc and atur performance
 - Current and up to 96 buckets of 15 min performance history
 - Current and Previous 1-day bucket performance history
- o profiles - configuration parameters and alarm parameters

There are separate tables for Physical and Channel layers. Since their attributes are similar, only one set of "channel" tables are defined to be used for both fast and interleaved channels. The corresponding ifType gives the proper interpretation for that ifEntry.

Finally, there are separate LCS tables, also for each end. These are currently stubs. These will each be separate MIB Modules.

There could have been fewer tables by combining the ATU-C and ATU-R information into shared tables. However, the tables are more easily read when there are two identical sets of data.

The figure below lists the five possible ADSL operational configurations. (indicated by the value of the adslLineType). In all configurations, the physical line interface entry will exist. However, the existence of the ADSL channel varies in each case, as shown below.

Table	Phys	Fast	Interleaved
No Channels (1)	Y		
Fast Only (2)	Y	Y	
Interleaved Only (3)	Y		Y
Fast or Interleaved (4)	Y	Y	Y
Fast and Interleaved (5)	Y	Y	Y

Figure 5: ADSL Operational configurations

NOTE: In (4), channel exists of either Fast or Interleaved type, but not both. The Manager may select the type of channel to be used.

Depending on which operation configuration exists, some or all ADSL MIB tables could be supported, as shown in below. See Conformance Statements for more information on which objects are mandatory.

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Table	Phys	Fast	Interleaved
adslLineTable	Y		
adslAtucPhysTable	Y		
adslAturPhysTable	Y		
adslAtucChanTable		Y	Y
adslAturChanTable		Y	Y
adslAtucPerfDataTable	Y		
adslAturPerfDataTable	Y		
adslAtucIntervalTable	Y		
adslAturIntervalTable	Y		
adslAtucChanPerfDataTable		Y	Y
adslAturChanPerfDataTable		Y	Y
adslAtucChanIntervalTable		Y	Y
adslAturChanIntervalTable		Y	Y

Figure 6: Use of ADSL MIB Tables with various ifIndex values

NOTE: The adslLineConfProfileTable and adslLineAlarmConfProfileTable will be present for all scenarios. See Profile Section of this document for implementation details such as profile creation, assignment, and indexing.

7.3 Counters, Interval Buckets and Thresholds

For physical-level ES, Los, Lof, Lol, Lpr and line initialization attempts, there are event counters, current 15-minute and one (up to 96) 15-minute history bucket(s) of "interval-counters", as well as current and previous 1-day interval-counters.

There is no requirement for an agent to ensure fixed relationship between the start of a fifteen minute and any wall clock; however some implementations may align the fifteen minute intervals with quarter hours. Likewise, an implementation may choose to align one day intervals with start of a day.

In all cases, the sum of the corresponding 15-minute interval timers for the current day should equal the current 1-day timers. However, in most cases, this will not be the sum of all 96 intervals, as they represent a rolling set of data.

At the channel level, there are counters for total received blocks, received-and-corrected blocks, received-but-uncorrectable blocks, and transmitted blocks. There are the same set of 15-minute and 1-day buckets as at the physical layer.

Separate tables are provided for the 96 interval-counters. They are

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indexed by {ifIndex, AdslAtu*IntervalNumber}.

Every physical layer object with a 15 minute current bucket also has a 15-min threshold trap.

Counters are not reset when an ATU-C is reinitialized, only when the agent is reset or reinitialized (or under specific request outside the scope of this MIB).

7.4 Profiles

As a managed node can handle a large number of ATU-Cs (e.g., hundreds or perhaps thousands of ADSL lines), provisioning every parameter on every ATU-C may become burdensome. In response, two MIB tables have been created to define ADSL equipment configuration data profiles, as well as a mechanism to associate the equipment to these profiles. This concept is similar to the one used in ATM MIB ([RFC 1695\[24\]](#)) to define ATM traffic descriptor sets.

Profile tables may be implemented in one of two ways, but not simultaneously:

- o MODE-I: Dynamic Profiles - one profile shared by one or multiple ADSL lines.
- o MODE-II: Static Profiles - one profile per ADSL physical line always.

7.4.1 MODE-I : Dynamic Profiles

Implementations using this mode will enable the manager to dynamically create and delete profiles as needed. The index of the profile is an arbitrary integer in the range 1..N, where N is the maximum number of profiles supported by the equipment and is implementation specific.

One or more ADSL lines may be configured to share parameters of a single profile (say `adslLineConfProfileIndex = 'n'`) by setting their `adslLineConfProfile` objects to the value of profile's index (n). If a change is made to Profile-n, all lines that refer to it will be re-configured to the changed parameters.

The next figure shows an example of how this mode can be implemented. In the example, ADSL lines '1' and 'x' share the configuration in Profile-n, while line '2' uses Profile-1. Please note that all three entries for each ADSL line, the physical layer, fast channel, and

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interleaved channel are represented by "i", "j", and "k". However, only the physical-layer entry "i" contains an `adslLineTable` entry, so only those entries contain pointers to the `adslConfProfileEntry`. The `ifStackTable` (see [rfc2233](#) [5]) must be used to link the channel entries to the corresponding physical layer entry to get the channel's configuration parameters.

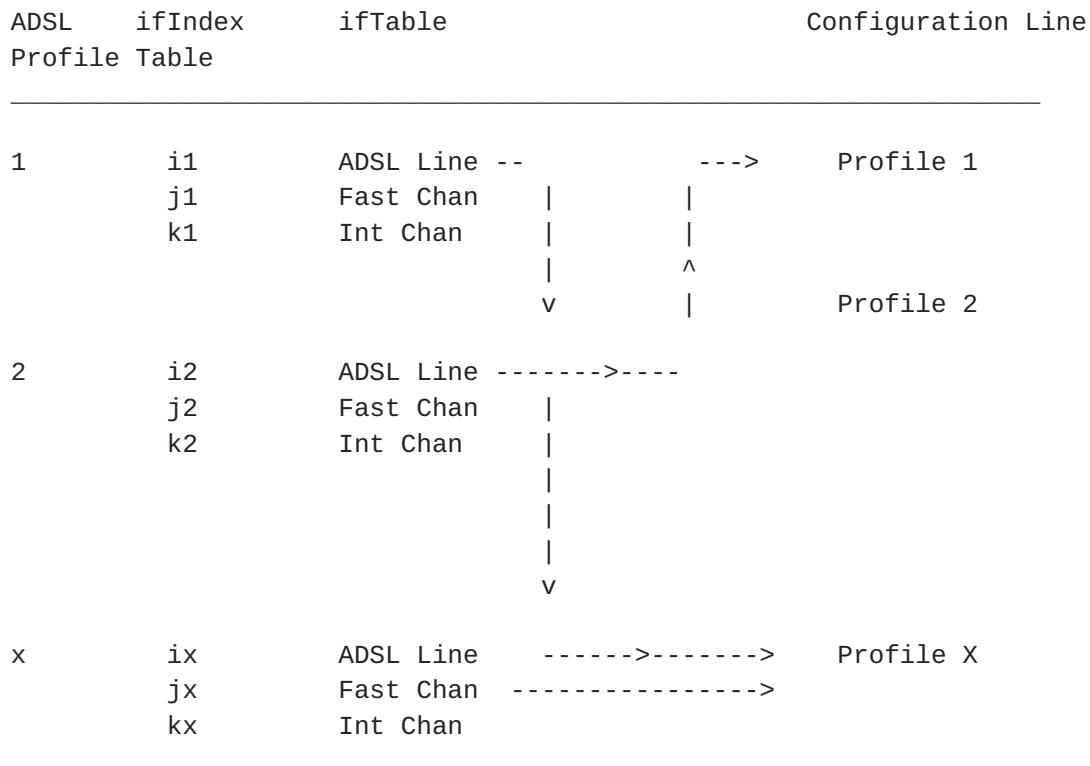


Figure 7: Use of Profiles in MODE-I

The same is true for the alarm profile (not shown), although there is no requirement that its index (call it "m") be the same as the configuration profile.

In this mode, profiles are allocated and deleted dynamically, and six objects:

```
adslLineConfProfile, adslLineConfProfileIndexNext,
adslLineConfProfileRowStatus, adslLineAlarmProfile,
adslLineAlarmConfProfileIndexNext, and
adslLineAlarmConfProfileRowStatus
```

are all used in conjunction with profiles.

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7.4.2 MODE-II : Static Profiles

Implementations with this mode will automatically create a profile one-for-one with each ADSL line physical entry with the profileIndex being the same as the ifIndex of the corresponding ADSL line entry ("ix"). In this mode, the Agent will not allow a Manager to create/delete profiles in this mode. Therefore, the adslLineConfProfile, adslLineConfProfileIndexNext, adslLineConfProfileRowStatus, adslLineAlarmProfile, adslLineAlarmConfProfileIndexNext, and adslLineAlarmConfProfileRowStatus objects have minimal value in this mode as each line has a unique, fixed profile that is not shared with other lines. These six variables are read-only in this mode.

The figure below shows an example of this mode. In the example, ADSL lines `1', `2', and `x' each have their own profiles.

ADSL	ifIndex	ifTable	Configuration Line
Profile Table			
1	i1	ADSL Line	-----> Profile 1
	j1	Fast Chan	
	k1	Int Chan	
2	i2	ADSL Line	-----> Profile 2
	j2	Fast Chan	
	k2	Int Chan	
x	ix	ADSL Line	-----> Profile X
	jx	Fast Chan	
	kx	Int Chan	

Figure 8: User Profiles in MODE II

7.5 Traps

These SNMP traps are required: coldStart / warmStart (per [6]) -- which are per agent (e.g., per DSLAM in such a device), and linkUp / linkDown (per [5]) -- which are per interface (i.e., ADSL line). Note: [RFC 2233](#) [5] recommends that linkUp / linkDown only be used at a physical layer ifEntry, as discussed above.

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A linkDown trap is generated whenever any of Lof, Los, Lol, or Lpr occurs. At this operational point, a manager can use adslAtu*CurrStatus for additional detailed information. The corresponding linkUp trap is sent when all link failure conditions are cleared.

The traps defined in this MIB are for initialization failure, rate change, and for the threshold crossings associated with the following events: Lofs, Lols, Loss, Lprs, and ESs. Each threshold has its own enable/threshold value. When that value is 0, the trap is disabled.

The objects adslAtu*CurrStatus indicate, through a bitmask, all outstanding error conditions or that the line is operational. Note that each object claims to represent the status of the modem at that end of the line. However, since the SNMP agent co-resides with the ATU-C, adslAturCurrStatus may be incomplete. For example, when there are errors on the line, the ATU-R may not be able to correctly report this condition. Therefore, not all conditions are included in adslAturCurrStatus.

A threshold trap occurs whenever the corresponding current 15-minute interval error counter becomes equal to the threshold value. Since the current 15-minute counter are reset to 0 every 15 minutes, if the condition persists, the trap may recur as often as every 15 minutes. For example, to get a trap whenever a "loss of" event occurs (but at most once every 15 minutes), set the corresponding "Thresh15Min" to 1. The agent will generate a trap when the event originally occurs. Note that the NMS will get a linkDown trap, as well, if enabled. At the beginning of the next 15 minute interval, the counter is reset. When the first second goes by, the current interval bucket will be 1, which equals the threshold, and the trap will be sent again.

The rate change trap is invoked when the transmit rate on a channel either increases by adsl(x)Thresh(y)RateUp or decreases by adsl(x)Thresh(y)RateDown. The trap is per direction:(x) == Atuc or Atur, and per channel: (y) == Fast or Interleave. In other words, the trap is sent whenever the rate changes in either direction on either channel and:

$$\text{CurrTxRate} \geq \text{PrevTxRate} \text{ plus ThreshRateUp}$$

or

$$\text{CurrTxRate} \leq \text{PrevTxRate} \text{ minus ThreshRateDown}$$

No trap is sent on initialization.

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It can be disabled by setting the Up (and/or) Down threshold rates to 0.

The PrevTxRate object is set to the current value at initialization and when a trap is sent. Thus rate changes are cumulative until the total change exceeds the threshold.

8. Conformance and Compliance

See the conformance and compliance statements within the information module.

9. Definitions

ADSL-LINE-MIB DEFINITIONS ::= BEGIN

IMPORTS

```
MODULE-IDENTITY, OBJECT-TYPE,
Counter32, Gauge32, Integer32,
NOTIFICATION-TYPE, transmission      FROM SNMPv2-SMI
TEXTUAL-CONVENTION, RowStatus,
TruthValue, VariablePointer           FROM SNMPv2-TC
MODULE-COMPLIANCE, OBJECT-GROUP,
NOTIFICATION-GROUP                   FROM SNMPv2-CONF
ifIndex                              FROM IF-MIB
PerfCurrentCount,
PerfIntervalCount                    FROM PerfHist-TC-MIB
;
```

adslMIB MODULE-IDENTITY

LAST-UPDATED "9810301200Z"

ORGANIZATION "IETF ADSL MIB Working Group"

CONTACT-INFO

"

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IETF ADSL MIB Working Group (adsl@xlist.agcs.com)

"

DESCRIPTION

"The MIB module defining objects for the management of a pair of ADSL modems at each end of the ADSL line. Each such Line is indexed by ifIndex and appears as an interface on a central DSLAM (Digital Subscriber Line Access Mux.) Attributes on the ATUR are proxied by the DSLAM.

ADSL lines may support optional Fast or Interleaved channels. If these are supported, additional entries corresponding to the supported channels must be created in the ifTable. Thus an ADSL line that supports both channels will have three entries in the ifTable, one for each physical, fast, and interleaved, whose ifType values are equal to adsl(94), fast(125), and interleaved(124), respectively. The ifStackTable is used to represent the relationship between the entries.

Naming Conventions:

Atuc -- (ATUC) modem at near (Central) end of line
Atur -- (ATUR) modem at Remote end of line
Curr -- Current
Prev -- Previous
Atn -- Attenuation
ES -- Errored Second.
LCS -- Line Code Specific
Lof -- Loss of Frame
Lol -- Loss of Link
Los -- Loss of Signal
Lpr -- Loss of Power
xxxs-- interval of Seconds in which xxx occurs
(e.g., xxx=Lof, Los, Lpr)
Max -- Maximum
Mgn -- Margin
Min -- Minimum
Psd -- Power Spectral Density
Snr -- Signal to Noise Ratio
Tx -- Transmit
Blks-- Blocks, a data unit, see
adslAtuXChanCrcBlockLength

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"

REVISION "9808071200Z"

DESCRIPTION

 "Changes taken at the March 98 ADSL WG meeting:

- Added Conformance Statement
- SNMPv3 conformance
- [RFC-2233](#) conformance

 Comments from Technical Advisors, Wijnen and Tesink:

- DisplayString -> UTF-8 String
- minimized # of mandatory performance counts
- Corrected Syntax of current status objects.
- Corrected use of SNMP SMI.

 Lessons learned through implementation of MIB (ADSLF TR006):

- clarified definition of channel block size, SNR Interleave Delay, Attenuation, and Output power.
- corrected UNITS and SYNTAX of adsl rate objects, Version#, VendorID.
- added missing line activation objects.

 General editorial cleanup.

 Added Security Statement (Dave Allan)

"

REVISION "9808071200Z"

DESCRIPTION

 "General editorial cleanup.

"

REVISION "9810301200Z"

DESCRIPTION

"

 Changes taken at the August 98 ADSL WG meeting:

- Used PerfCurrentCount and PerfIntervalCount when appropriate.
- Updated Security Statement to conform with current format.
- Changed SYNTAX of Serial #, Vendor ID, and Version # to `OCTET STRING'.

 Comments taken from Jeff Johnson and other WG contributors:

- Removed references to MIB-2 and [RFC-1213](#).
- Re-organized the `Use of IF-MIB' section for clarification and conformance reasons.
- Changed definition of profile control objects: For the static profiles, they are read-only. Updated conformance statements in a likely

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manner.

- Removed references to ifTestTypes. IF-MIB does support at this time.
- Minor changes to entity mib section.
- Changed SYNTAX of SNR, Attenuation, Attainable rate, and Output power to `Gauge32`.
- Changed SYNTAX of adslLineSpecific to VariablePointer.
- Swapped lossOfLink(4) and lossOfSignalQuality(5) of Atur Current Status to line up better with Atur Current Status.
- Removed ifIndex from traps
- and many additional and useful editorial comments.

"

::= { transmission xx } -- to be assigned to `94' by IANA.

adslLineMib OBJECT IDENTIFIER ::= { adslMIB 1 }

adslMibObjects OBJECT IDENTIFIER ::= { adslLineMib 1 }

AdslLineProfileType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"This data type is used to identify a row in an ADSL Line Profile Table."

SYNTAX INTEGER

adslLineTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslLineEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table includes common attributes describing both ends of the line. It is required for all ADSL physical interfaces. ADSL physical interfaces are those ifEntries where ifType is equal to adsl(94)."

::= { adslMibObjects 1 }

adslLineEntry OBJECT-TYPE

SYNTAX AdslLineEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "An entry in adslLineTable."

INDEX { ifIndex }

::= { adslLineTable 1 }

AdslLineEntry ::=

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```
SEQUENCE {
    adslLineCoding          INTEGER,
    adslLineType            INTEGER,
    adslLineSpecific        VariablePointer,
    adslLineConfProfile     AdslLineProfileType,
    adslLineAlarmConfProfile AdslLineProfileType
}

adslLineCoding OBJECT-TYPE
    SYNTAX      INTEGER {
        other (1),
        dmt (2), -- Discrete MultiTone
        cap (3), -- Carrierless Amplitude & Phase modulation
        qam (4)  -- Quadrature Amplitude Modulation
    }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Specifies the ADSL coding type used on this line.
        Other types may be added in the future."
    ::= { adslLineEntry 1 }

adslLineType OBJECT-TYPE
    SYNTAX      INTEGER {
        noChannel (1),      -- no channels exist
        fastOnly (2),       -- fast channel exists only
        interleavedOnly (3), -- interleaved channel exists
                             -- only
        fastOrInterleaved (4), -- either fast or interleaved
                             -- channels can exist, but
                             -- only one at any time
        fastAndInterleaved (5) -- both fast or interleaved
                             -- channels exist
    }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Defines the type of ADSL physical line
        entity that exists, by defining whether and how
        the line is channelized.  If the line is channelized,
        the value will be other than noChannel(1).  This
        object defines which channel type(s) are supported.

        In the case that the line is channelized, the manager
        can use the ifStackTable to determine the ifIndex for
        the associated channel(s)."
    ::= { adslLineEntry 2 }
```

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adslLineSpecific OBJECT-TYPE

SYNTAX VariablePointer

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"OID instance in vendor-specific MIB. The Instance may be used to determine shelf/slot/port of the ATUC interface in a DSLAM."

::= { adslLineEntry 3 }

adslLineConfProfile OBJECT-TYPE

SYNTAX AdslLineProfileType

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The value of this object identifies the row in the ADSL Line Configuration Profile Table, (adslLineConfProfileTable), which applies for this ADSL line, and channels if applicable. In the case which the configuration profile has not been set, the value will be set to `0'."

If the implementator of this MIB has chosen not to implement `dynamic assignment' of profiles, this object's MIN-ACCESS is read-only."

::= { adslLineEntry 4 }

adslLineAlarmConfProfile OBJECT-TYPE

SYNTAX AdslLineProfileType

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The value of this object identifies the row in the ADSL Line Alarm Configuration Profile Table, (adslLineAlarmConfProfileTable), which applies to this ADSL line, and channels if applicable. In the case which the configuration profile has not been set, the value will be set to `0'."

If the implementator of this MIB has chosen not to implement `dynamic assignment' of profiles, this object's MIN-ACCESS is read-only."

::= { adslLineEntry 5 }

adslAtucPhysTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAtucPhysEntry

MAX-ACCESS not-accessible

STATUS current

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DESCRIPTION

"This table provides one row for each ATUC.

Each row contains the Physical Layer Parameters

table for that ATUC. ADSL physical interfaces are

those ifEntries where ifType is equal to adsl(94)."

```
::= { adslMibObjects 2 }
```

```
adslAtucPhysEntry      OBJECT-TYPE
    SYNTAX               AdslAtucPhysEntry
    MAX-ACCESS            not-accessible
    STATUS                current
    DESCRIPTION           "An entry in the adslAtucPhysTable."
    INDEX                 { ifIndex }
 ::= { adslAtucPhysTable 1 }
```

```
AdslAtucPhysEntry ::=
```

```
    SEQUENCE {
        adslAtucInvSerialNumber      OCTET STRING,
        adslAtucInvVendorID          OCTET STRING,
        adslAtucInvVersionNumber     OCTET STRING,
        adslAtucCurrSnrMgn           Gauge32,
        adslAtucCurrAtn              Gauge32,
        adslAtucCurrStatus            BITS,
        adslAtucCurrOutputPwr        Gauge32,
        adslAtucCurrAttainableRate   Gauge32
    }
```

```
-- inventory group
```

```
--
```

```
-- These items should describe the lowest level identifiable
```

```
-- component, be it a stand-alone modem, a card in a rack,
```

```
-- a child-board, etc.
```

```
--
```

```
adslAtucInvSerialNumber OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..32))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Vendor specific string that identifies the vendor
         equipment."
 ::= { adslAtucPhysEntry 1 }
```

```
adslAtucInvVendorID OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..16))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The vendor ID assigned by T1E1.413 according to its
```


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```

        Annex D.\[10\]"
 ::= { adslAtucPhysEntry 2 }

adslAtucInvVersionNumber OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..16))
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Vendor specific version number sent by this ATU as
         part of the initialization messages."
 ::= { adslAtucPhysEntry 3 }

-- current status group
--
adslAtucCurrSnrMgn OBJECT-TYPE
    SYNTAX      Gauge32(0..310)
    UNITS        "tenth dB"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Noise Margin as seen by this ATU with respect to its
         received signal in tenth dB."
 ::= { adslAtucPhysEntry 4 }

adslAtucCurrAtn OBJECT-TYPE
    SYNTAX      Gauge32(0..630)
    UNITS        "tenth dB"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Measured difference in the total power transmitted by
         the peer ATU and the total power received by this ATU.
         This value is determined in accordance with
         T1.413[10]."
```

```
 ::= { adslAtucPhysEntry 5 }

adslAtucCurrStatus OBJECT-TYPE
    SYNTAX      BITS {
        noDefect(0),
        lossOfFraming(1),
        lossOfSignal(2),
        lossOfPower(3),
        lossOfSignalQuality(4),
        lossOfLink(5),
        dataInitFailure(6),
        configInitFailure(7),
        protocolInitFailure(8),
        noPeerAtuPresent(9)
```

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```
    }
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "Status indicates current state ATUC line.  This is a
    bit-map of possible conditions.  The various bit
    positions are:

0      noDefect          There no defects on the line

1      lossOfFraming      ATUC failure due to not
                        receiving valid frame.

2      lossOfSignal       ATUC failure due to not
                        receiving signal.

3      lossOfPower        ATUC failure due to loss of
                        power.
                        Note: the Agent may still
                        function.

4      lossOfSignalQuality Loss of Signal Quality is
                        declared when the Noise Margin
                        falls below the Minimum Noise
                        Margin, or the bit-error-rate
                        exceeds 10^-7.

5      lossOfLink         ATUC failure due to inability
                        to link with ATUR.

6      dataInitFailure    ATUC failure during
                        initialization due to bit
                        errors corrupting startup
                        exchange data.

7      configInitFailure  ATUC failure during
                        initialization due to peer
                        ATU not able to support
                        requested configuration

8      protocolInitFailure ATUC failure during
                        initialization due to
                        incompatible protocol used by
                        the peer ATU.

9      noPeerAtuPresent   ATUC failure during
                        initialization due to no
                        activation sequence detected
```

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from peer ATU.

This is intended to supplement ifOperStatus."
 ::= { adslAtucPhysEntry 6 }

adslAtucCurrOutputPwr OBJECT-TYPE

SYNTAX Gauge32(0..310)

UNITS "tenth dBm"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Measured total output power transmitted by this ATU.
 This is the measurement that was reported during
 the last activation sequence."

::= { adslAtucPhysEntry 7 }

adslAtucCurrAttainableRate OBJECT-TYPE

SYNTAX Gauge32

UNITS "bps"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the maximum currently attainable data rate
 by the ATU. This value will be equal or greater than
 the current line rate."

::= { adslAtucPhysEntry 8 }

adslAturPhysTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAturPhysEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides one row for each ATUR
 Each row contains the Physical Layer Parameters
 table for that ATUR. ADSL physical interfaces are
 those ifEntries where ifType is equal to adsl(94)."

::= { adslMibObjects 3 }

adslAturPhysEntry OBJECT-TYPE

SYNTAX AdslAturPhysEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "An entry in the adslAturPhysTable."

INDEX { ifIndex }

::= { adslAturPhysTable 1 }

AdslAturPhysEntry ::=

SEQUENCE {

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```
        adslAturInvSerialNumber      OCTET STRING,
        adslAturInvVendorID          OCTET STRING,
        adslAturInvVersionNumber     OCTET STRING,
        adslAturCurrSnrMgn           Gauge32,
        adslAturCurrAtn              Gauge32,
        adslAturCurrStatus           BITS,
        adslAturCurrOutputPwr        Gauge32,
        adslAturCurrAttainableRate   Gauge32
    }

-- inventory group
--
adslAturInvSerialNumber OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..32))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Vendor specific string that identifies the vendor
        equipment."
    ::= { adslAturPhysEntry 1 }

adslAturInvVendorID OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..16))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The vendor ID assigned by T1E1.413 according to its
        Annex D."
    ::= { adslAturPhysEntry 2 }

adslAturInvVersionNumber OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE (0..16))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Vendor specific version number sent by this ATU as
        part of the initialization messages."
    ::= { adslAturPhysEntry 3 }

-- current status group
--
adslAturCurrSnrMgn OBJECT-TYPE
    SYNTAX      Gauge32(0..310)
    UNITS        "tenth dB"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Noise Margin as seen by this ATU with respect to its
```


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received signal. This value is determined in
accordance with T1.413 [10]."
::= { adslAturPhysEntry 4 }

adslAturCurrAtn OBJECT-TYPE

SYNTAX Gauge32(0..630)

UNITS "tenth dB"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Measured difference in the total power transmitted by
the peer ATU and the total power received by this ATU.
This value is determined in accordance with
T1.413[10]."

::= { adslAturPhysEntry 5 }

adslAturCurrStatus OBJECT-TYPE

SYNTAX BITS {
noDefect(0),
lossOfFraming(1),
lossOfSignal(2),
lossOfPower(3),
lossOfSignalQuality(4)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Status indicates current state ATUR line. This is a
bit-map of possible conditions. Due to the isolation
of the ATUR when line problems occur, many state
conditions like loss of power, loss of quality signal,
and initialization errors, can not be determined.
While trouble shooting ATUR, also use object,
adslAtucCurrStatus. The various bit positions are:

0	noDefect	There no defects on the line
1	lossOfFraming	ATUR failure due to not receiving valid frame
2	lossOfSignal	ATUR failure due to not receiving signal
3	lossOfPower	ATUR failure due to loss of power
4	lossOfSignalQuality	Loss of Signal Quality is declared when the Noise Margin

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falls below the Minimum Noise
Margin, or the
bit-error-rate exceeds 10^{-7} .

This is intended to supplement ifOperStatus."
 ::= { adslAturPhysEntry 6 }

adslAturCurrOutputPwr OBJECT-TYPE

SYNTAX Gauge32(0..310)

UNITS "tenth dBm"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Measured total output power transmitted by this ATU.
 This is the measurement that was reported during
 the last activation sequence."

::= { adslAturPhysEntry 7 }

adslAturCurrAttainableRate OBJECT-TYPE

SYNTAX Gauge32

UNITS "bps"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the maximum currently attainable data rate
 by the ATU. This value will be equal or greater than
 the current line rate."

::= { adslAturPhysEntry 8 }

adslAtucChanTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAtucChanEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides one row for each ATUC channel.
 ADSL channel interfaces are those ifEntries
 where ifType is equal to adslInterleave(124)
 or adslFast(125)."

::= { adslMibObjects 4 }

adslAtucChanEntry OBJECT-TYPE

SYNTAX AdslAtucChanEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "An entry in the adslAtucChanTable."

INDEX { ifIndex }

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```
::= { adslAtucChanTable 1 }
```

```
AdslAtucChanEntry ::=
```

```
    SEQUENCE {  
        adslAtucChanInterleaveDelay    Gauge32,  
        adslAtucChanCurrTxRate         Gauge32,  
        adslAtucChanPrevTxRate         Gauge32,  
        adslAtucChanCrcBlockLength     Gauge32  
    }
```

```
-- current group
```

```
--
```

```
adslAtucChanInterleaveDelay OBJECT-TYPE
```

```
    SYNTAX      Gauge32  
    UNITS       "milli-seconds"  
    MAX-ACCESS  read-only  
    STATUS      current  
    DESCRIPTION
```

```
        "Interleave Delay for this channel.
```

```
  
        Interleave delay applies only to the  
        interleave channel and defines the mapping  
        (relative spacing) between subsequent input  
        bytes at the interleaver input and their placement  
        in the bit stream at the interleaver output.  
        Larger numbers provide greater separation between  
        consecutive input bytes in the output bit stream  
        allowing for improved impulse noise immunity at  
        the expense of payload latency.
```

```
  
        In the case where the ifType is Fast(125), use  
        noSuchObject."
```

```
::= { adslAtucChanEntry 1 }
```

```
adslAtucChanCurrTxRate OBJECT-TYPE
```

```
    SYNTAX      Gauge32  
    UNITS       "bps"  
    MAX-ACCESS  read-only  
    STATUS      current  
    DESCRIPTION  
        "Actual transmit rate on this channel."
```

```
::= { adslAtucChanEntry 2 }
```

```
adslAtucChanPrevTxRate OBJECT-TYPE
```

```
    SYNTAX      Gauge32  
    UNITS       "bps"  
    MAX-ACCESS  accessible-for-notify  
    STATUS      current
```

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DESCRIPTION

"The rate at the time of the last
adslAtucRateChangeTrap event. It is also set at
initialization to prevent a trap being sent.

Rate changes less than adslAtucThresh(*)RateDown
or less than adslAtucThresh(*)RateUp will not
cause a trap or cause this object to change.
(*) == Fast or Interleave.

See AdslLineAlarmConfProfileEntry."

::= { adslAtucChanEntry 3 }

adslAtucChanCrcBlockLength OBJECT-TYPE

SYNTAX Gauge32

UNITS "byte"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the length of the channel data-block
on which the CRC operates. Refer to Line Code
Specific MIBs, [\[11\]](#) and [\[12\]](#) for more
information."

::= { adslAtucChanEntry 4 }

adslAturChanTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAturChanEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides one row for each ATUR channel.
ADSL channel interfaces are those ifEntries
where ifType is equal to adslInterleave(124)
or adslFast(125)."

::= { adslMibObjects 5 }

adslAturChanEntry OBJECT-TYPE

SYNTAX AdslAturChanEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "An entry in the adslAturChanTable."

INDEX { ifIndex }

::= { adslAturChanTable 1 }

AdslAturChanEntry ::=

SEQUENCE {

adslAturChanInterleaveDelay Gauge32,

adslAturChanCurrTxRate Gauge32,

adslAturChanPrevTxRate Gauge32,

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```
        adslAturChanCrcBlockLength      Gauge32
    }

-- current group
--
adslAturChanInterleaveDelay OBJECT-TYPE
    SYNTAX      Gauge32
    UNITS        "milli-seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Interleave Delay for this channel.

        Interleave delay applies only to the
        interleave channel and defines the mapping
        (relative spacing) between subsequent input
        bytes at the interleaver input and their placement
        in the bit stream at the interleaver output.
        Larger numbers provide greater separation between
        consecutive input bytes in the output bit stream
        allowing for improved impulse noise immunity at
        the expense of payload latency.

        In the case where the ifType is Fast(125), use
        noSuchObject."
    ::= { adslAturChanEntry 1 }

adslAturChanCurrTxRate OBJECT-TYPE
    SYNTAX      Gauge32
    UNITS        "bps"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Actual transmit rate on this channel."
    ::= { adslAturChanEntry 2 }

adslAturChanPrevTxRate OBJECT-TYPE
    SYNTAX      Gauge32
    UNITS        "bps"
    MAX-ACCESS   accessible-for-notify
    STATUS       current
    DESCRIPTION
        "The rate at the time of the last
        adslAturRateChangeTrap event. It is also set at
        initialization to prevent a trap being sent.

        Rate changes less than adslAturThresh(*)RateDown
        or less than adslAturThresh(*)RateUp will not
```

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```

        cause a trap or cause this object to change.
        (*) == Fast or Interleave.
        See AdslLineAlarmConfProfileEntry."
 ::= { adslAturChanEntry 3 }

adslAturChanCrcBlockLength OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Indicates the length of the channel data-block
        on which the CRC operates. Refer to Line Code
        Specific MIBs, [11] and [12] for more
        information."
 ::= { adslAturChanEntry 4 }

adslAtucPerfDataTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF AdslAtucPerfDataEntry
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "This table provides one row for each ATUC.
        ADSL physical interfaces are
        those ifEntries where ifType is equal to adsl(94)."
 ::= { adslMibObjects 6 }

adslAtucPerfDataEntry OBJECT-TYPE
    SYNTAX      AdslAtucPerfDataEntry
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION "An entry in adslAtucPerfDataTable."
    INDEX       { ifIndex }
 ::= { adslAtucPerfDataTable 1 }

AdslAtucPerfDataEntry ::=
    SEQUENCE {
        adslAtucPerfLofs      Counter32,
        adslAtucPerfLoss      Counter32,
        adslAtucPerfLols      Counter32,
        adslAtucPerfLprs      Counter32,
        adslAtucPerfESs       Counter32,
        adslAtucPerfInits     Counter32,
        adslAtucPerfValidIntervals INTEGER,
        adslAtucPerfInvalidIntervals INTEGER,
        adslAtucPerfCurr15MinTimeElapsed PerfCurrentCount,
        adslAtucPerfCurr15MinLofs PerfCurrentCount,
        adslAtucPerfCurr15MinLoss PerfCurrentCount,
        adslAtucPerfCurr15MinLols PerfCurrentCount,

```

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```

        adslAtucPerfCurr15MinLprs      PerfCurrentCount,
        adslAtucPerfCurr15MinESS       PerfCurrentCount,
        adslAtucPerfCurr15MinInits     PerfCurrentCount,
        adslAtucPerfCurr1DayTimeElapsed INTEGER,
        adslAtucPerfCurr1DayLofs       Gauge32,
        adslAtucPerfCurr1DayLoss       Gauge32,
        adslAtucPerfCurr1DayLols       Gauge32,
        adslAtucPerfCurr1DayLprs       Gauge32,
        adslAtucPerfCurr1DayESS        Gauge32,
        adslAtucPerfCurr1DayInits      Gauge32,
        adslAtucPerfPrev1DayMoniSecs   INTEGER,
        adslAtucPerfPrev1DayLofs       Gauge32,
        adslAtucPerfPrev1DayLoss       Gauge32,
        adslAtucPerfPrev1DayLols       Gauge32,
        adslAtucPerfPrev1DayLprs       Gauge32,
        adslAtucPerfPrev1DayESS        Gauge32,
        adslAtucPerfPrev1DayInits      Gauge32
    }

-- Event Counters
--
-- Also see adslAtucIntervalTable for 15 minute interval
-- elapsed counters.
--
adslAtucPerfLofs OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Framing failures since
        agent reset."
    ::= { adslAtucPerfDataEntry 1 }

adslAtucPerfLoss OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Signal failures since
        agent reset."
    ::= { adslAtucPerfDataEntry 2 }

adslAtucPerfLols OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Link failures since

```

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```
        agent reset."
 ::= { adslAtucPerfDataEntry 3 }

adslAtucPerfLprs OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Power failures since
        agent reset."
 ::= { adslAtucPerfDataEntry 4 }

adslAtucPerfESS OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Errored Seconds since agent
        reset. The errored second parameter is a count of
        one-second intervals containing one or more crc
        anomalies, or one or more los or sef defects."
 ::= { adslAtucPerfDataEntry 5 }

adslAtucPerfInits OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the line initialization attempts since
        agent reset. Includes both successful and failed
        attempts."
 ::= { adslAtucPerfDataEntry 6 }

-- general 15 min interval information
--
adslAtucPerfValidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of previous 15-minute intervals in the
        adslAtucInterval Table for which valid data
        has been stored. This value will be equal to the
        maximum # of intervals that are kept (n) unless the
        device was brought online within the last (nx15)
        minutes. In the case where the agent is a proxy,
        it is possible that some intervals are unavailable."
```


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```

        In this case, this interval is the maximum interval
        for which valid data is available."
 ::= { adslAtucPerfDataEntry 7 }

adslAtucPerfInvalidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of 15 minute intervals in which no valid
        data is available."
 ::= { adslAtucPerfDataEntry 8 }

-- 15 min current performance group
--
adslAtucPerfCurr15MinTimeElapsed OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS       "seconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Total elapsed seconds in this interval.
        A full interval is 900 seconds."
 ::= { adslAtucPerfDataEntry 9 }

adslAtucPerfCurr15MinLofs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS       "seconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Count of seconds in the current 15 minute interval
        when there was Loss of Framing."
 ::= { adslAtucPerfDataEntry 10 }

adslAtucPerfCurr15MinLoss OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS       "seconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Count of seconds in the current 15 minute interval
        when there was Loss of Signal."
 ::= { adslAtucPerfDataEntry 11 }

adslAtucPerfCurr15MinLols OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS       "seconds"
```

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```
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "Count of seconds in the current 15 minute interval
    when there was Loss of Link."
:= { adslAtucPerfDataEntry 12 }

adslAtucPerfCurr15MinLprs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of seconds in the current 15 minute interval
        when there was Loss of Power."
    ::= { adslAtucPerfDataEntry 13 }

adslAtucPerfCurr15MinESs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of Errored Seconds in the current 15 minute
        interval. The errored second parameter is a count of
        one-second intervals containing one or more crc
        anomalies, or one or more los or sef defects."
    ::= { adslAtucPerfDataEntry 14 }

adslAtucPerfCurr15MinInits OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the line initialization attempts in the
        current 15 minute interval. Includes both successful
        and failed attempts."
    ::= { adslAtucPerfDataEntry 15 }

-- 1-day current and previous performance group
--
adslAtucPerfCurr1DayTimeElapsed OBJECT-TYPE
    SYNTAX      INTEGER(0..86399)
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of seconds that have elapsed since the
```

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beginning of the current 1-day interval."
::= { adslAtucPerfDataEntry 16 }

adslAtucPerfCurr1DayLofs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss of
Framing during the current day as measured by
adslAtucPerfCurr1DayTimeElapsed."

::= { adslAtucPerfDataEntry 17 }

adslAtucPerfCurr1DayLoss OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss of
Signal during the current day as measured by
adslAtucPerfCurr1DayTimeElapsed."

::= { adslAtucPerfDataEntry 18 }

adslAtucPerfCurr1DayLols OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss of
Link during the current day as measured by
adslAtucPerfCurr1DayTimeElapsed."

::= { adslAtucPerfDataEntry 19 }

adslAtucPerfCurr1DayLprs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss of
Power during the current day as measured by
adslAtucPerfCurr1DayTimeElapsed."

::= { adslAtucPerfDataEntry 20 }

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adslAtucPerfCurr1DayESs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of Errored Seconds during the current day as measured by adslAtucPerfCurr1DayTimeElapsed. The errored second parameter is a count of one-second intervals containing one or more crc anomalies, or one or more los or sef defects."

::= { adslAtucPerfDataEntry 21 }

adslAtucPerfCurr1DayInits OBJECT-TYPE

SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the line initialization attempts in the day as measured by adslAtucPerfCurr1DayTimeElapsed. Includes both successful and failed attempts."

::= { adslAtucPerfDataEntry 22 }

adslAtucPerfPrev1DayMoniSecs OBJECT-TYPE

SYNTAX INTEGER(0..899)
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The time in the previous 1-day interval over which the performance monitoring information is actually counted. This value will normally be the same as the total interval duration except in a situation where performance monitoring data can not be collected for any reason. Typically Elapsed 1-day time will be copied into Monitored Seconds when the 1-day roll-over occurs."

::= { adslAtucPerfDataEntry 23 }

adslAtucPerfPrev1DayLofs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of seconds in the interval when there was Loss of Framing within the most recent previous 1-day period."

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```
::= { adslAtucPerfDataEntry 24 }
```

```
adslAtucPerfPrev1DayLoss OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of seconds in the interval when there was  
    Loss of Signal within the most recent previous  
    1-day period."
```

```
::= { adslAtucPerfDataEntry 25 }
```

```
adslAtucPerfPrev1DayLols OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of seconds in the interval when there was  
    Loss of Link within the most recent previous  
    1-day period."
```

```
::= { adslAtucPerfDataEntry 26 }
```

```
adslAtucPerfPrev1DayLprs OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of seconds in the interval when there was  
    Loss of Power within the most recent previous  
    1-day period."
```

```
::= { adslAtucPerfDataEntry 27 }
```

```
adslAtucPerfPrev1DayESs OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of Errored Seconds within the most recent  
    previous 1-day period. The errored second parameter is  
    a count of one-second intervals containing one or more  
    crc anomalies, or one or more los or sef defects."
```

```
::= { adslAtucPerfDataEntry 28 }
```

```
adslAtucPerfPrev1DayInits OBJECT-TYPE
```

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SYNTAX Gauge32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION

"Count of the line initialization attempts in the most recent previous 1-day period. Includes both successful and failed attempts."

::= { adslAtucPerfDataEntry 29 }

adslAturPerfDataTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAturPerfDataEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION

"This table provides one row for each ATUR. ADSL physical interfaces are those ifEntries where ifType is equal to adsl(94)."

::= { adslMibObjects 7 }

adslAturPerfDataEntry OBJECT-TYPE

SYNTAX AdslAturPerfDataEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION "An entry in adslAturPerfDataTable."
 INDEX { ifIndex }

::= { adslAturPerfDataTable 1 }

AdslAturPerfDataEntry ::=

SEQUENCE {
 adslAturPerfLofs Counter32,
 adslAturPerfLoss Counter32,
 adslAturPerfLprs Counter32,
 adslAturPerfESSs Counter32,
 adslAturPerfValidIntervals INTEGER,
 adslAturPerfInvalidIntervals INTEGER,
 adslAturPerfCurr15MinTimeElapsed PerfCurrentCount,
 adslAturPerfCurr15MinLofs PerfCurrentCount,
 adslAturPerfCurr15MinLoss PerfCurrentCount,
 adslAturPerfCurr15MinLprs PerfCurrentCount,
 adslAturPerfCurr15MinESSs PerfCurrentCount,
 adslAturPerfCurr1DayTimeElapsed INTEGER,
 adslAturPerfCurr1DayLofs Gauge32,
 adslAturPerfCurr1DayLoss Gauge32,
 adslAturPerfCurr1DayLprs Gauge32,
 adslAturPerfCurr1DayESSs Gauge32,
 adslAturPerfPrev1DayMoniSecs INTEGER,
 adslAturPerfPrev1DayLofs Gauge32,

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```
        adslAturPerfPrev1DayLoss      Gauge32,
        adslAturPerfPrev1DayLprs      Gauge32,
        adslAturPerfPrev1DayESS       Gauge32
    }

-- Event (Raw) Counters
--
-- Also see adslAturIntervalTable for 15 minute interval
-- elapsed counters.
--
adslAturPerfLofs OBJECT-TYPE
    SYNTAX      Counter32
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Framing failures since
        agent reset."
    ::= { adslAturPerfDataEntry 1 }

adslAturPerfLoss OBJECT-TYPE
    SYNTAX      Counter32
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Signal failures since
        agent reset."
    ::= { adslAturPerfDataEntry 2 }

adslAturPerfLprs OBJECT-TYPE
    SYNTAX      Counter32
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Loss of Power failures since
        agent reset."
    ::= { adslAturPerfDataEntry 3 }

adslAturPerfESS OBJECT-TYPE
    SYNTAX      Counter32
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of the number of Errored Seconds since agent
        reset. The errored second parameter is a count of
```

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```
        one-second intervals containing one or more crc
        anomalies, or one or more los or sef defects."
 ::= { adslAturPerfDataEntry 4 }

-- general 15 min interval information
--
adslAturPerfValidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of previous 15-minute intervals in the
        adslAturInterval Table for which valid data
        has been stored. This value will be equal to the
        maximum # of intervals that are kept (n) unless the
        device was brought online within the last (nx15) min.
        In the case where the agent is a proxy, it is possible
        that some intervals are unavailable. In this case, this
        interval is the maximum interval for which valid data
        is available."
 ::= { adslAturPerfDataEntry 5 }

adslAturPerfInvalidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "The number of 15 minute intervals in which no valid
        data is available."
 ::= { adslAturPerfDataEntry 6 }

-- 15 min current performance group
--
adslAturPerfCurr15MinTimeElapsed OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Total elapsed seconds in this interval.
        A full interval is 900 seconds."
 ::= { adslAturPerfDataEntry 7 }

adslAturPerfCurr15MinLofs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
```


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```
DESCRIPTION
    "Count of seconds in the current 15 minute interval
    when there was Loss of Framing."
 ::= { adslAturPerfDataEntry 8 }

adslAturPerfCurr15MinLoss OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of seconds in the current 15 minute interval
        when there was Loss of Signal."
 ::= { adslAturPerfDataEntry 9 }

adslAturPerfCurr15MinLprs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of seconds in the current 15 minute interval
        when there was Loss of Power."
 ::= { adslAturPerfDataEntry 10 }

adslAturPerfCurr15MinESs OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of Errored Seconds in the current 15 minute
        interval. The errored second parameter is a count of
        one-second intervals containing one or more crc
        anomalies, or one or more los or sef defects."
 ::= { adslAturPerfDataEntry 11 }

-- 1-day current and previous performance group
--
adslAturPerfCurr1DayTimeElapsed OBJECT-TYPE
    SYNTAX      INTEGER(0..86399)
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of seconds that have elapsed since the
        beginning of the current 1-day interval."
 ::= { adslAturPerfDataEntry 12 }
```

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adslAturPerfCurr1DayLofs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss
of Framing during the current day as measured by
adslAturPerfCurr1DayTimeElapsed."

::= { adslAturPerfDataEntry 13 }

adslAturPerfCurr1DayLoss OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss
of Signal during the current day as measured by
adslAturPerfCurr1DayTimeElapsed."

::= { adslAturPerfDataEntry 14 }

adslAturPerfCurr1DayLprs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of the number of seconds when there was Loss
of Power during the current day as measured by
adslAturPerfCurr1DayTimeElapsed."

::= { adslAturPerfDataEntry 15 }

adslAturPerfCurr1DayESs OBJECT-TYPE

SYNTAX Gauge32
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Count of Errored Seconds during the current day as
measured by adslAturPerfCurr1DayTimeElapsed.
The errored second parameter is a count of
one-second intervals containing one or more crc
anomalies, or one or more los or sef defects."

::= { adslAturPerfDataEntry 16 }

adslAturPerfPrev1DayMoniSecs OBJECT-TYPE

SYNTAX INTEGER(0..899)

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UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time in the previous 1-day interval over which the performance monitoring information is actually counted. This value will normally be the same as the total interval duration except in a situation where performance monitoring data can not be collected for any reason. Typically Elapsed 1-day time will be copied into Monitored Seconds when the 1-day roll-over occurs."

::= { adslAturPerfDataEntry 17 }

adslAturPerfPrev1DayLofs OBJECT-TYPE

SYNTAX Gauge32

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss of Framing within the most recent previous 1-day period."

::= { adslAturPerfDataEntry 18 }

adslAturPerfPrev1DayLoss OBJECT-TYPE

SYNTAX Gauge32

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss of Signal within the most recent previous 1-day period."

::= { adslAturPerfDataEntry 19 }

adslAturPerfPrev1DayLprs OBJECT-TYPE

SYNTAX Gauge32

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss of Power within the most recent previous 1-day period."

::= { adslAturPerfDataEntry 20 }

adslAturPerfPrev1DayESs OBJECT-TYPE

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SYNTAX Gauge32
 UNITS "seconds"
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION

"Count of Errored Seconds within the most recent previous 1-day period. The errored second parameter is a count of one-second intervals containing one or more crc anomalies, or one or more los or sef defects."

::= { adslAturPerfDataEntry 21 }

adslAtucIntervalTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAtucIntervalEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION

"This table provides one row for each ATUC performance data collection interval. ADSL physical interfaces are those ifEntries where ifType is equal to adsl(94)."

::= { adslMibObjects 8 }

adslAtucIntervalEntry OBJECT-TYPE

SYNTAX AdslAtucIntervalEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION "An entry in the adslAtucIntervalTable."
 INDEX { ifIndex, adslAtucIntervalNumber }

::= { adslAtucIntervalTable 1 }

AdslAtucIntervalEntry ::=

SEQUENCE {
 adslAtucIntervalNumber INTEGER,
 adslAtucIntervalLofs PerfIntervalCount,
 adslAtucIntervalLoss PerfIntervalCount,
 adslAtucIntervalLols PerfIntervalCount,
 adslAtucIntervalLprs PerfIntervalCount,
 adslAtucIntervalESs PerfIntervalCount,
 adslAtucIntervalInits PerfIntervalCount,
 adslAtucIntervalValidData TruthValue
 }

adslAtucIntervalNumber OBJECT-TYPE

SYNTAX INTEGER(1..96)
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION

"Performance Data Interval number 1 is the

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the most recent previous interval; interval
96 is 24 hours ago. Intervals 2..96 are
optional."

::= { adslAtucIntervalEntry 1 }

adslAtucIntervalLofs OBJECT-TYPE

SYNTAX PerfIntervalCount

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss
of Framing."

::= { adslAtucIntervalEntry 2 }

adslAtucIntervalLoss OBJECT-TYPE

SYNTAX PerfIntervalCount

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss
of Signal."

::= { adslAtucIntervalEntry 3 }

adslAtucIntervalLols OBJECT-TYPE

SYNTAX PerfIntervalCount

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss
of Link."

::= { adslAtucIntervalEntry 4 }

adslAtucIntervalLprs OBJECT-TYPE

SYNTAX PerfIntervalCount

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of seconds in the interval when there was Loss
of Power."

::= { adslAtucIntervalEntry 5 }

adslAtucIntervalESSs OBJECT-TYPE

SYNTAX PerfIntervalCount

UNITS "seconds"

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```
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "Count of Errored Seconds in the interval.
    The errored second parameter is a count of
    one-second intervals containing one or more crc
    anomalies, or one or more los or sef defects."
::= { adslAtucIntervalEntry 6 }

adslAtucIntervalInits  OBJECT-TYPE
    SYNTAX      PerfIntervalCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of the line initialization attempts
        during the interval. Includes both successful
        and failed attempts."
    ::= { adslAtucIntervalEntry 7 }

adslAtucIntervalValidData OBJECT-TYPE
    SYNTAX TruthValue
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This object indicates if there is valid data
        for this interval."
    ::= { adslAtucIntervalEntry 8 }

adslAturIntervalTable  OBJECT-TYPE
    SYNTAX      SEQUENCE OF AdslAturIntervalEntry
    MAX-ACCESS   not-accessible
    STATUS      current
    DESCRIPTION
        "This table provides one row for each ATUR
        performance data collection interval.
        ADSL physical interfaces are those
        ifEntries where ifType is equal to adsl(94)."
    ::= { adslMibObjects 9 }

adslAturIntervalEntry  OBJECT-TYPE
    SYNTAX      AdslAturIntervalEntry
    MAX-ACCESS   not-accessible
    STATUS      current
    DESCRIPTION  "An entry in the adslAturIntervalTable."
    INDEX       { ifIndex, adslAturIntervalNumber }
    ::= { adslAturIntervalTable 1 }

AdslAturIntervalEntry ::=
```

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```
SEQUENCE {
    adslAturIntervalNumber      INTEGER,
    adslAturIntervalLofs       PerfIntervalCount,
    adslAturIntervalLoss       PerfIntervalCount,
    adslAturIntervalLprs       PerfIntervalCount,
    adslAturIntervalESS        PerfIntervalCount,
    adslAturIntervalValidData   TruthValue
}
```

adslAturIntervalNumber OBJECT-TYPE

```
SYNTAX      INTEGER(1..96)
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
```

"Performance Data Interval number 1 is the
the most recent previous interval; interval
96 is 24 hours ago. Intervals 2..96 are
optional."

::= { adslAturIntervalEntry 1 }

adslAturIntervalLofs OBJECT-TYPE

```
SYNTAX      PerfIntervalCount
UNITS       "seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"Count of seconds in the interval when there was
Loss of Framing."

::= { adslAturIntervalEntry 2 }

adslAturIntervalLoss OBJECT-TYPE

```
SYNTAX      PerfIntervalCount
UNITS       "seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"Count of seconds in the interval when there was
Loss of Signal."

::= { adslAturIntervalEntry 3 }

adslAturIntervalLprs OBJECT-TYPE

```
SYNTAX      PerfIntervalCount
UNITS       "seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"Count of seconds in the interval when there was
Loss of Power."

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```
::= { adslAturIntervalEntry 4 }
```

```
adslAturIntervalESs OBJECT-TYPE
```

```
    SYNTAX      PerfIntervalCount
```

```
    UNITS       "seconds"
```

```
    MAX-ACCESS  read-only
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "Count of Errored Seconds in the interval.
```

```
        The errored second parameter is a count of
        one-second intervals containing one or more crc
        anomalies, or one or more los or sef defects."
```

```
::= { adslAturIntervalEntry 5 }
```

```
adslAturIntervalValidData OBJECT-TYPE
```

```
    SYNTAX TruthValue
```

```
    MAX-ACCESS read-only
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "This object indicates if there is valid data
        for this interval."
```

```
 ::= { adslAturIntervalEntry 6 }
```

```
adslAtucChanPerfDataTable      OBJECT-TYPE
```

```
    SYNTAX      SEQUENCE OF AdslAtucChanPerfDataEntry
```

```
    MAX-ACCESS  not-accessible
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "This table provides one row for each ATUC channel.
        ADSL channel interfaces are those ifEntries
        where ifType is equal to adslInterleave(124)
        or adslFast(125)."
```

```
::= { adslMibObjects 10 }
```

```
adslAtucChanPerfDataEntry      OBJECT-TYPE
```

```
    SYNTAX      AdslAtucChanPerfDataEntry
```

```
    MAX-ACCESS  not-accessible
```

```
    STATUS      current
```

```
    DESCRIPTION "An entry in adslAtucChanPerfDataTable."
```

```
    INDEX      { ifIndex }
```

```
::= { adslAtucChanPerfDataTable 1 }
```

```
AdslAtucChanPerfDataEntry ::=
```

```
    SEQUENCE {
```

```
        adslAtucChanReceivedBlks          Counter32,
```

```
        adslAtucChanTransmittedBlks       Counter32,
```

```
        adslAtucChanCorrectedBlks         Counter32,
```


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```

        adslAtucChanUncorrectBlks          Counter32,
        adslAtucChanPerfValidIntervals     INTEGER,
        adslAtucChanPerfInvalidIntervals   INTEGER,
        adslAtucChanPerfCurr15MinTimeElapsed PerfCurrentCount,
        adslAtucChanPerfCurr15MinReceivedBlks PerfCurrentCount,
        adslAtucChanPerfCurr15MinTransmittedBlks
PerfCurrentCount,
        adslAtucChanPerfCurr15MinCorrectedBlks PerfCurrentCount,
        adslAtucChanPerfCurr15MinUncorrectBlks PerfCurrentCount,
        adslAtucChanPerfCurr1DayTimeElapsed   INTEGER,
        adslAtucChanPerfCurr1DayReceivedBlks   Gauge32,
        adslAtucChanPerfCurr1DayTransmittedBlks Gauge32,
        adslAtucChanPerfCurr1DayCorrectedBlks   Gauge32,
        adslAtucChanPerfCurr1DayUncorrectBlks   Gauge32,
        adslAtucChanPerfPrev1DayMoniSecs       INTEGER,
        adslAtucChanPerfPrev1DayReceivedBlks   Gauge32,
        adslAtucChanPerfPrev1DayTransmittedBlks Gauge32,
        adslAtucChanPerfPrev1DayCorrectedBlks   Gauge32,
        adslAtucChanPerfPrev1DayUncorrectBlks   Gauge32
    }
-- performance group
--
-- Note: block is intended to be the length of the channel
--       data-block on which the CRC operates. See
--       adslAtucChanCrcBlockLength for more information.
--
adslAtucChanReceivedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks received on this channel
        since agent reset."
 ::= { adslAtucChanPerfDataEntry 1 }

adslAtucChanTransmittedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks transmitted on this
        channel since agent reset."
 ::= { adslAtucChanPerfDataEntry 2 }

adslAtucChanCorrectedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current

```

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DESCRIPTION

"Count of all blocks received with errors that were corrected since agent reset. These blocks are passed on as good data."

::= { adslAtucChanPerfDataEntry 3 }

adslAtucChanUncorrectBlks OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all blocks received with uncorrectable errors since agent reset."

::= { adslAtucChanPerfDataEntry 4 }

-- general 15 min interval information

--

adslAtucChanPerfValidIntervals OBJECT-TYPE

SYNTAX INTEGER(0..96)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of previous 15-minute intervals in the adslAtucChanIntervalTable Table for which valid data has been stored. This value will be equal to the max number of intervals that are kept (n) unless the device was brought online within the last (nx15) minutes. In the case where the agent is a proxy, it is possible that some intervals are unavailable. In this case, this interval is the maximum interval for which valid data is available."

::= { adslAtucChanPerfDataEntry 5 }

adslAtucChanPerfInvalidIntervals OBJECT-TYPE

SYNTAX INTEGER(0..96)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of 15 minute intervals in which no valid data is available."

::= { adslAtucChanPerfDataEntry 6 }

-- 15 min current performance group

--

adslAtucChanPerfCurr15MinTimeElapsed OBJECT-TYPE

SYNTAX PerfCurrentCount

UNITS "seconds"

MAX-ACCESS read-only

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```

    STATUS      current
    DESCRIPTION
        "Total elapsed seconds in this interval.
        A full interval is 900 seconds."
 ::= { adslAtucChanPerfDataEntry 7 }

adslAtucChanPerfCurr15MinReceivedBlks OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks received on this channel
        within the current 15 minute interval."
 ::= { adslAtucChanPerfDataEntry 8 }

adslAtucChanPerfCurr15MinTransmittedBlks OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks transmitted on this
        channel within the current 15 minute interval."
 ::= { adslAtucChanPerfDataEntry 9 }

adslAtucChanPerfCurr15MinCorrectedBlks  OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all blocks received with errors that were
        corrected on this channel within the current 15 minute
        interval."
 ::= { adslAtucChanPerfDataEntry 10 }

adslAtucChanPerfCurr15MinUncorrectBlks  OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all blocks received with uncorrectable
        errors on this channel within the current 15 minute
        interval."
 ::= { adslAtucChanPerfDataEntry 11 }

-- 1-day current and previous performance group
--
adslAtucChanPerfCurr1DayTimeElapsed OBJECT-TYPE
    SYNTAX      INTEGER(0..86399)
```

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```

    UNITS          "seconds"
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "Number of seconds that have elapsed since the
         beginning of the current 1-day interval."
 ::= { adslAtucChanPerfDataEntry 12 }

adslAtucChanPerfCurr1DayReceivedBlks  OBJECT-TYPE
    SYNTAX         Gauge32
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "Count of all encoded blocks received on this
         channel during the current day as measured by
         adslAtucChanPerfCurr1DayTimeElapsed."
 ::= { adslAtucChanPerfDataEntry 13 }

adslAtucChanPerfCurr1DayTransmittedBlks  OBJECT-TYPE
    SYNTAX         Gauge32
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "Count of all encoded blocks transmitted on this
         channel during the current day as measured by
         adslAtucChanPerfCurr1DayTimeElapsed."
 ::= { adslAtucChanPerfDataEntry 14 }

adslAtucChanPerfCurr1DayCorrectedBlks  OBJECT-TYPE
    SYNTAX         Gauge32
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "Count of all blocks received with errors that were
         corrected on this channel during the current day as
         measured by adslAtucChanPerfCurr1DayTimeElapsed."
 ::= { adslAtucChanPerfDataEntry 15 }

adslAtucChanPerfCurr1DayUncorrectBlks  OBJECT-TYPE
    SYNTAX         Gauge32
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "Count of all blocks received with uncorrectable
         errors on this channel during the current day as
         measured by adslAtucChanPerfCurr1DayTimeElapsed."
 ::= { adslAtucChanPerfDataEntry 16 }
```


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adslAtucChanPerfPrev1DayMoniSecs OBJECT-TYPE

SYNTAX INTEGER(0..86399)

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time in the previous 1-day interval over which the performance monitoring information is actually counted. This value will normally be the same as the total interval duration except in a situation where performance monitoring information can not be collected for any reason. Typically Elapsed 1-day time will be copied into Monitored Seconds when the 1-day roll-over occurs."

::= { adslAtucChanPerfDataEntry 17 }

adslAtucChanPerfPrev1DayReceivedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all encoded blocks received on this channel within the most recent previous 1-day period."

::= { adslAtucChanPerfDataEntry 18 }

adslAtucChanPerfPrev1DayTransmittedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all encoded blocks transmitted on this channel within the most recent previous 1-day period."

::= { adslAtucChanPerfDataEntry 19 }

adslAtucChanPerfPrev1DayCorrectedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all blocks received with errors that were corrected on this channel within the most recent previous 1-day period."

::= { adslAtucChanPerfDataEntry 20 }

adslAtucChanPerfPrev1DayUncorrectBlks OBJECT-TYPE

SYNTAX Gauge32

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MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all blocks received with uncorrectable errors on this channel within the most recent previous 1-day period."

::= { adslAtucChanPerfDataEntry 21 }

adslAturChanPerfDataTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAturChanPerfDataEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides one row for each ATUR channel. ADSL channel interfaces are those ifEntries where ifType is equal to adslInterleave(124) or adslFast(125)."

::= { adslMibObjects 11 }

adslAturChanPerfDataEntry OBJECT-TYPE

SYNTAX AdslAturChanPerfDataEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "An entry in adslAturChanPerfDataTable."

INDEX { ifIndex }

::= { adslAturChanPerfDataTable 1 }

AdslAturChanPerfDataEntry ::=

SEQUENCE {

adslAturChanReceivedBlks Counter32,

adslAturChanTransmittedBlks Counter32,

adslAturChanCorrectedBlks Counter32,

adslAturChanUncorrectBlks Counter32,

adslAturChanPerfValidIntervals INTEGER,

adslAturChanPerfInvalidIntervals INTEGER,

adslAturChanPerfCurr15MinTimeElapsed PerfCurrentCount,

adslAturChanPerfCurr15MinReceivedBlks PerfCurrentCount,

adslAturChanPerfCurr15MinTransmittedBlks

PerfCurrentCount,

adslAturChanPerfCurr15MinCorrectedBlks PerfCurrentCount,

adslAturChanPerfCurr15MinUncorrectBlks PerfCurrentCount,

adslAturChanPerfCurr1DayTimeElapsed INTEGER,

adslAturChanPerfCurr1DayReceivedBlks Gauge32,

adslAturChanPerfCurr1DayTransmittedBlks Gauge32,

adslAturChanPerfCurr1DayCorrectedBlks Gauge32,

adslAturChanPerfCurr1DayUncorrectBlks Gauge32,

adslAturChanPerfPrev1DayMoniSecs INTEGER,

adslAturChanPerfPrev1DayReceivedBlks Gauge32,

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```
        adslAturChanPerfPrev1DayTransmittedBlks Gauge32,
        adslAturChanPerfPrev1DayCorrectedBlks   Gauge32,
        adslAturChanPerfPrev1DayUncorrectBlks   Gauge32
    }
-- performance group
--
-- Note: block is intended to be the length of the channel
--       data-block on which the CRC operates. See
--       adslAturChanCrcBlockLength for more information.
--
adslAturChanReceivedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks received on this channel
         since agent reset."
 ::= { adslAturChanPerfDataEntry 1 }

adslAturChanTransmittedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all encoded blocks transmitted on this
         channel since agent reset."
 ::= { adslAturChanPerfDataEntry 2 }

adslAturChanCorrectedBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all blocks received with errors that were
         corrected since agent reset. These blocks are passed
         on as good data."
 ::= { adslAturChanPerfDataEntry 3 }

adslAturChanUncorrectBlks OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all blocks received with uncorrectable
         errors since agent reset."
 ::= { adslAturChanPerfDataEntry 4 }

-- general 15 min interval information
```

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```
--
adslAturChanPerfValidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of previous 15-minute intervals in the
        adslAturChanIntervalTable Table for which valid data
        has been stored. This value will be equal to the
        max # of intervals that are kept (n) unless the device
        was brought online within the last (nx15) minutes. In
        the case where the agent is a proxy, it is possible
        that some intervals are unavailable. In this case,
        this interval is the maximum interval for which valid
        data is available."
    ::= { adslAturChanPerfDataEntry 5 }

adslAturChanPerfInvalidIntervals OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "The number of 15 minute intervals in which no valid
        data is available."
    ::= { adslAturChanPerfDataEntry 6 }

-- 15 min current performance group
--
adslAturChanPerfCurr15MinTimeElapsed OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    UNITS        "seconds"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Total elapsed seconds in this interval.
        A full interval is 900 seconds."
    ::= { adslAturChanPerfDataEntry 7 }

adslAturChanPerfCurr15MinReceivedBlks OBJECT-TYPE
    SYNTAX      PerfCurrentCount
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Count of all encoded blocks received on this
        channel within the current 15 minute interval."
    ::= { adslAturChanPerfDataEntry 8 }

adslAturChanPerfCurr15MinTransmittedBlks OBJECT-TYPE
```


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```
SYNTAX      PerfCurrentCount
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Count of all encoded blocks transmitted on this
    channel within the current 15 minute interval."
::= { adslAturChanPerfDataEntry 9 }

adslAturChanPerfCurr15MinCorrectedBlks  OBJECT-TYPE
SYNTAX      PerfCurrentCount
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Count of all blocks received with errors that were
    corrected on this channel within the current 15 minute
    interval."
::= { adslAturChanPerfDataEntry 10 }

adslAturChanPerfCurr15MinUncorrectBlks  OBJECT-TYPE
SYNTAX      PerfCurrentCount
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Count of all blocks received with uncorrectable
    errors on this channel within the current 15 minute
    interval."
::= { adslAturChanPerfDataEntry 11 }

-- 1-day current and previous performance group
--
adslAturChanPerfCurr1DayTimeElapsed  OBJECT-TYPE
SYNTAX      INTEGER(0..86399)
UNITS       "seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Number of seconds that have elapsed since the
    beginning of the current 1-day interval."
::= { adslAturChanPerfDataEntry 12 }

adslAturChanPerfCurr1DayReceivedBlks  OBJECT-TYPE
SYNTAX      Gauge32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Count of all encoded blocks received on this
    channel during the current day as measured by
    adslAturChanPerfCurr1DayTimeElapsed."
```

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```
::= { adslAturChanPerfDataEntry 13 }
```

```
adslAturChanPerfCurr1DayTransmittedBlks OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of all encoded blocks transmitted on this  
    channel during the current day as measured by  
    adslAturChanPerfCurr1DayTimeElapsed."
```

```
::= { adslAturChanPerfDataEntry 14 }
```

```
adslAturChanPerfCurr1DayCorrectedBlks OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of all blocks received with errors that were  
    corrected on this channel during the current day as  
    measured by adslAturChanPerfCurr1DayTimeElapsed."
```

```
::= { adslAturChanPerfDataEntry 15 }
```

```
adslAturChanPerfCurr1DayUncorrectBlks OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of all blocks received with uncorrectable  
    errors on this channel during the current day as  
    measured by adslAturChanPerfCurr1DayTimeElapsed."
```

```
::= { adslAturChanPerfDataEntry 16 }
```

```
adslAturChanPerfPrev1DayMoniSecs OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..86399)
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "The time in the previous 1-day interval over which  
    the performance monitoring information is actually  
    counted. This value will normally be the same as the  
    total interval duration except in a situation where  
    performance monitoring information can not be collected  
    for any reason. Typically Elapsed 1-day time will be  
    copied into Monitored Seconds when the 1-day roll-over  
    occurs."
```

```
::= { adslAturChanPerfDataEntry 17 }
```

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adslAturChanPerfPrev1DayReceivedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all encoded blocks received on this channel within the most recent previous 1-day period."

::= { adslAturChanPerfDataEntry 18 }

adslAturChanPerfPrev1DayTransmittedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all encoded blocks transmitted on this channel within the most recent previous 1-day period."

::= { adslAturChanPerfDataEntry 19 }

adslAturChanPerfPrev1DayCorrectedBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all blocks received with errors that were corrected on this channel within the most recent previous 1-day period."

::= { adslAturChanPerfDataEntry 20 }

adslAturChanPerfPrev1DayUncorrectBlks OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of all blocks received with uncorrectable errors on this channel within the most recent previous 1-day period."

::= { adslAturChanPerfDataEntry 21 }

adslAtucChanIntervalTable OBJECT-TYPE

SYNTAX SEQUENCE OF AdslAtucChanIntervalEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides one row for each ATUC channel's performance data collection interval.
ADSL channel interfaces are those ifEntries

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```
        where ifType is equal to adslInterleave(124)
        or adslFast(125)."
```

```
 ::= { adslMibObjects 12 }
```

```
adslAtucChanIntervalEntry  OBJECT-TYPE
    SYNTAX          AdslAtucChanIntervalEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "An entry in the adslAtucIntervalTable."
    INDEX           { ifIndex, adslAtucChanIntervalNumber }
 ::= { adslAtucChanIntervalTable 1 }
```

```
AdslAtucChanIntervalEntry ::=
    SEQUENCE {
        adslAtucChanIntervalNumber          INTEGER,
        adslAtucChanIntervalReceivedBlks    PerfIntervalCount,
        adslAtucChanIntervalTransmittedBlks PerfIntervalCount,
        adslAtucChanIntervalCorrectedBlks   PerfIntervalCount,
        adslAtucChanIntervalUncorrectBlks   PerfIntervalCount,
        adslAtucChanIntervalValidData       TruthValue
    }
```

```
adslAtucChanIntervalNumber OBJECT-TYPE
    SYNTAX          INTEGER(1..96)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Performance Data Interval number 1 is the
        the most recent previous interval; interval
        96 is 24 hours ago.  Intervals 2..96 are
        optional."
 ::= { adslAtucChanIntervalEntry 1 }
```

```
adslAtucChanIntervalReceivedBlks OBJECT-TYPE
    SYNTAX          PerfIntervalCount
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Count of all encoded blocks received on this channel
        during this interval."
 ::= { adslAtucChanIntervalEntry 2 }
```

```
adslAtucChanIntervalTransmittedBlks OBJECT-TYPE
    SYNTAX          PerfIntervalCount
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Count of all encoded blocks transmitted on this
        channel during this interval."
```


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```
::= { adslAtucChanIntervalEntry 3 }
```

```
adslAtucChanIntervalCorrectedBlks OBJECT-TYPE
```

```
SYNTAX      PerfIntervalCount
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of all blocks received with errors that were  
    corrected on this channel during this interval."
```

```
::= { adslAtucChanIntervalEntry 4 }
```

```
adslAtucChanIntervalUncorrectBlks OBJECT-TYPE
```

```
SYNTAX      PerfIntervalCount
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Count of all blocks received with uncorrectable  
    errors on this channel during this interval."
```

```
::= { adslAtucChanIntervalEntry 5 }
```

```
adslAtucChanIntervalValidData OBJECT-TYPE
```

```
SYNTAX TruthValue
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "This object indicates if there is valid data  
    for this interval."
```

```
::= { adslAtucChanIntervalEntry 6 }
```

```
adslAturChanIntervalTable OBJECT-TYPE
```

```
SYNTAX      SEQUENCE OF AdslAturChanIntervalEntry
```

```
MAX-ACCESS  not-accessible
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "This table provides one row for each ATUR channel's  
    performance data collection interval.
```

```
    ADSL channel interfaces are those ifEntries  
    where ifType is equal to adslInterleave(124)  
    or adslFast(125)."
```

```
::= { adslMibObjects 13 }
```

```
adslAturChanIntervalEntry OBJECT-TYPE
```

```
SYNTAX      AdslAturChanIntervalEntry
```

```
MAX-ACCESS  not-accessible
```

```
STATUS      current
```

```
DESCRIPTION  "An entry in the adslAturIntervalTable."
```

```
INDEX       { ifIndex, adslAturChanIntervalNumber }
```

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```
::= { adslAturChanIntervalTable 1 }
```

```
AdslAturChanIntervalEntry ::=
```

```
    SEQUENCE {
```

```
        adslAturChanIntervalNumber                INTEGER,
```

```
        adslAturChanIntervalReceivedBlks
```

```
    PerfIntervalCount,
```

```
        adslAturChanIntervalTransmittedBlks
```

```
    PerfIntervalCount,
```

```
        adslAturChanIntervalCorrectedBlks
```

```
    PerfIntervalCount,
```

```
        adslAturChanIntervalUncorrectBlks
```

```
    PerfIntervalCount,
```

```
        adslAturChanIntervalValidData                TruthValue
```

```
    }
```

```
adslAturChanIntervalNumber OBJECT-TYPE
```

```
    SYNTAX      INTEGER(1..96)
```

```
    MAX-ACCESS  not-accessible
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "Performance Data Interval number 1 is the  
        the most recent previous interval; interval  
        96 is 24 hours ago.  Intervals 2..96 are  
        optional."
```

```
::= { adslAturChanIntervalEntry 1 }
```

```
adslAturChanIntervalReceivedBlks OBJECT-TYPE
```

```
    SYNTAX      PerfIntervalCount
```

```
    MAX-ACCESS  read-only
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "Count of all encoded blocks received on this channel  
        during this interval."
```

```
::= { adslAturChanIntervalEntry 2 }
```

```
adslAturChanIntervalTransmittedBlks OBJECT-TYPE
```

```
    SYNTAX      PerfIntervalCount
```

```
    MAX-ACCESS  read-only
```

```
    STATUS      current
```

```
    DESCRIPTION
```

```
        "Count of all encoded blocks transmitted on this  
        channel during this interval."
```

```
::= { adslAturChanIntervalEntry 3 }
```

```
adslAturChanIntervalCorrectedBlks OBJECT-TYPE
```

```
    SYNTAX      PerfIntervalCount
```

```
    MAX-ACCESS  read-only
```

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```
STATUS      current
DESCRIPTION
    "Count of all blocks received with errors that were
    corrected on this channel during this interval."
::= { adslAturChanIntervalEntry 4 }

adslAturChanIntervalUncorrectBlks OBJECT-TYPE
    SYNTAX      PerfIntervalCount
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "Count of all blocks received with uncorrectable
        errors on this channel during this interval."
    ::= { adslAturChanIntervalEntry 5 }

adslAturChanIntervalValidData OBJECT-TYPE
    SYNTAX TruthValue
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "This object indicates if there is valid data
        for this interval."
    ::= { adslAturChanIntervalEntry 6 }

-- Profile Group
--
adslLineConfProfileIndexNext OBJECT-TYPE
    SYNTAX      INTEGER
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "This object contains an appropriate value to
        be used for adslLineConfProfileIndex when creating
        entries in the adslLineConfProfileTable. The value
        `0' indicates that no unassigned entries are
        available. To obtain the adslLineConfProfileIndexNext
        value for a new entry, the manager issues a
        management protocol retrieval operation to obtain
        the current value of this object. After the
        manager has used this profile index by
        assigning values to this new profile, the agent
        should modify the value to the next unassigned
        index.

        If the implementator of this MIB has chosen not
        to implement `dynamic assignment' of profiles, this
        object's MIN-ACCESS is read-only and its value
```

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is always `0'`
 ::= { adslMibObjects 14}

adslLineConfProfileTable OBJECT-TYPE
 SYNTAX SEQUENCE OF AdslLineConfProfileEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "This table contains information on the ADSL line
 configuration. One entry in this table reflects a
 profile defined by a manager which can be used to
 configure the ADSL line."
 ::= { adslMibObjects 15}

adslLineConfProfileEntry OBJECT-TYPE
 SYNTAX AdslLineConfProfileEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Each entry consists of a list of parameters that
 represents the configuration of an ADSL modem. A
 profile is created in one step with all necessary
 parameter values and adslLineProfileRowStatus set to
 createAndGo. This RowStatus object is also used
 to delete destroy profiles."
 INDEX { adslLineConfProfileIndex}
 ::= { adslLineConfProfileTable 1}

AdslLineConfProfileEntry ::=

SEQUENCE {	
adslLineConfProfileIndex	
AdslLineProfileType,	
adslAtucConfRateMode	INTEGER,
adslAtucConfRateChanRatio	INTEGER,
adslAtucConfTargetSnrMgn	INTEGER,
adslAtucConfMaxSnrMgn	INTEGER,
adslAtucConfMinSnrMgn	INTEGER,
adslAtucConfDownshiftSnrMgn	INTEGER,
adslAtucConfUpshiftSnrMgn	INTEGER,
adslAtucConfMinUpshiftTime	INTEGER,
adslAtucConfMinDownshiftTime	INTEGER,
adslAtucChanConfFastMinTxRate	INTEGER,
adslAtucChanConfInterleaveMinTxRate	INTEGER,
adslAtucChanConfFastMaxTxRate	INTEGER,
adslAtucChanConfInterleaveMaxTxRate	INTEGER,
adslAtucChanConfMaxInterleaveDelay	INTEGER,
adslAturConfRateMode	INTEGER,
adslAturConfRateChanRatio	INTEGER,

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```

    adslAturConfTargetSnrMgn          INTEGER,
    adslAturConfMaxSnrMgn             INTEGER,
    adslAturConfMinSnrMgn             INTEGER,
    adslAturConfDownshiftSnrMgn       INTEGER,
    adslAturConfUpshiftSnrMgn         INTEGER,
    adslAturConfMinUpshiftTime         INTEGER,
    adslAturConfMinDownshiftTime       INTEGER,
    adslAturChanConfFastMinTxRate      INTEGER,
    adslAturChanConfInterleaveMinTxRate INTEGER,
    adslAturChanConfFastMaxTxRate      INTEGER,
    adslAturChanConfInterleaveMaxTxRate INTEGER,
    adslAturChanConfMaxInterleaveDelay INTEGER,
    adslLineConfProfileRowStatus       RowStatus
}

adslLineConfProfileIndex OBJECT-TYPE
    SYNTAX      AdslLineProfileType
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "This object is used by the line configuration table
        in order to identify a row of this table"
    ::= { adslLineConfProfileEntry 1 }

adslAtucConfRateMode OBJECT-TYPE
    SYNTAX      INTEGER {
        fixed (1),          -- no rate adaptation
        adaptAtStartup (2), -- perform rate adaptation
                           -- only at initialization
        adaptAtRuntime (3)  -- perform rate adaptation at
                           -- any time (i.e., RADSL)
    }
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Defines what form of transmit rate adaptation is
        configured on this modem.  See ADSL Forum TR-005 [3]
        for more information."
    ::= { adslLineConfProfileEntry 2 }

adslAtucConfRateChanRatio OBJECT-TYPE
    SYNTAX      INTEGER(0..100)
    UNITS        "%"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Configured allocation ratio of excess transmit
        bandwidth between fast and interleaved channels.  Only

```

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applies when two channel mode and RADSL are supported.
Distribute bandwidth on each channel in excess of the
corresponding ChanConfMinTxRate so that:

adslAtucConfRateChanRatio =

$$[\text{Fast} / (\text{Fast} + \text{Interleaved})] * 100$$

In other words this value is the fast channel
percentage."

::= { adslLineConfProfileEntry 3 }

adslAtucConfTargetSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Target Signal/Noise Margin.

This is the Noise Margin the modem must achieve

with a BER of 10⁻⁷ or better to successfully complete
initialization."

::= { adslLineConfProfileEntry 4 }

adslAtucConfMaxSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Maximum acceptable Signal/Noise Margin.

If the Noise Margin is above this the modem should
attempt to reduce its power output to optimize its
operation."

::= { adslLineConfProfileEntry 5 }

adslAtucConfMinSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Minimum acceptable Signal/Noise Margin.

If the noise margin falls below this level, the modem
should attempt to increase its power output. If that
is not possible the modem will attempt to
re-initialize or shut down."

::= { adslLineConfProfileEntry 6 }

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adslAtucConfDownshiftSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Signal/Noise Margin for rate downshift.

If the noise margin falls below this level, the modem should attempt to decrease its transmit rate. In the case that RADSL is not present, the value will be `0'."

::= { adslLineConfProfileEntry 7 }

adslAtucConfUpshiftSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Signal/Noise Margin for rate upshift.

If the noise margin rises above this level, the modem should attempt to increase its transmit rate. In the case that RADSL is not present, the value will be `0'."

::= { adslLineConfProfileEntry 8 }

adslAtucConfMinUpshiftTime OBJECT-TYPE

SYNTAX INTEGER(0..16383)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Minimum time that the current margin is above UpshiftSnrMgn before an upshift occurs.

In the case that RADSL is not present, the value will be `0'."

::= { adslLineConfProfileEntry 9 }

adslAtucConfMinDownshiftTime OBJECT-TYPE

SYNTAX INTEGER(0..16383)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Minimum time that the current margin is below

DownshiftSnrMgn before a downshift occurs.

In the case that RADSL is not present, the value will be `0'."

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```
::= { adslLineConfProfileEntry 10 }
```

```
adslAtucChanConfFastMinTxRate OBJECT-TYPE
```

```
SYNTAX      INTEGER
```

```
UNITS       "bps"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured Minimum Transmit rate for `Fast' channels,  
    in bps. See adslAtucConfRateChanRatio for information  
    regarding RADSL mode and ATUR transmit rate for  
    ATUC receive rates."
```

```
::= { adslLineConfProfileEntry 11 }
```

```
adslAtucChanConfInterleaveMinTxRate OBJECT-TYPE
```

```
SYNTAX      INTEGER
```

```
UNITS       "bps"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured Minimum Transmit rate for `Interleave'  
    channels, in bps. See adslAtucConfRateChanRatio for  
    information regarding RADSL mode and see  
    ATUR transmit rate for receive rates."
```

```
::= { adslLineConfProfileEntry 12 }
```

```
adslAtucChanConfFastMaxTxRate OBJECT-TYPE
```

```
SYNTAX      INTEGER
```

```
UNITS       "bps"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured Maximum Transmit rate for `Fast' channels,  
    in bps. See adslAtucConfRateChanRatio for information  
    regarding RADSL mode and see ATUR transmit rate for  
    ATUC receive rates."
```

```
::= { adslLineConfProfileEntry 13 }
```

```
adslAtucChanConfInterleaveMaxTxRate OBJECT-TYPE
```

```
SYNTAX      INTEGER
```

```
UNITS       "bps"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured Maximum Transmit rate for `Interleave'  
    channels, in bps. See adslAtucConfRateChanRatio for  
    information regarding RADSL mode and ATUR transmit  
    rate for ATUC receive rates."
```


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```
::= { adslLineConfProfileEntry 14 }
```

```
adslAtucChanConfMaxInterleaveDelay OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..255)
```

```
UNITS       "milli-seconds"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured maximum Interleave Delay for this channel.
```

```
    Interleave delay applies only to the interleave channel
    and defines the mapping (relative spacing) between
    subsequent input bytes at the interleaver input and
    their placement in the bit stream at the interleaver
    output.  Larger numbers provide greater separation
    between consecutive input bytes in the output bit
    stream allowing for improved impulse noise immunity
    at the expense of payload latency."
```

```
::= { adslLineConfProfileEntry 15 }
```

```
adslAturConfRateMode OBJECT-TYPE
```

```
SYNTAX      INTEGER {
```

```
    fixed (1),          -- no rate adaptation
```

```
    adaptAtStartup (2), -- perform rate adaptation
```

```
                        -- only at initialization
```

```
    adaptAtRuntime (3)  -- perform rate adaptation at
```

```
                        -- any time (i.e., RADSL)
```

```
}
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Defines what form of transmit rate adaptation is
    configured on this modem.  See ADSL Forum TR-005 [3]
    for more information."
```

```
::= { adslLineConfProfileEntry 16 }
```

```
adslAturConfRateChanRatio OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..100)
```

```
UNITS       "%"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Configured allocation ratio of excess transmit
    bandwidth between fast and interleaved channels.  Only
    applies when two channel mode and RADSL are supported.
    Distribute bandwidth on each channel in excess of the
    corresponding ChanConfMinTxRate so that:
    adslAturConfRateChanRatio =
```

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$$[\text{Fast} / (\text{Fast} + \text{Interleaved})] * 100$$

In other words this value is the fast channel percentage."

::= { adslLineConfProfileEntry 17 }

adslAturConfTargetSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Target Signal/Noise Margin.

This is the Noise Margin the modem must achieve

with a BER of 10⁻⁷ or better to successfully complete initialization."

::= { adslLineConfProfileEntry 18 }

adslAturConfMaxSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Maximum acceptable Signal/Noise Margin.

If the Noise Margin is above this the modem should attempt to reduce its power output to optimize its operation."

::= { adslLineConfProfileEntry 19 }

adslAturConfMinSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Minimum acceptable Signal/Noise Margin.

If the noise margin falls below this level, the modem should attempt to increase its power output. If that is not possible the modem will attempt to re-initialize or shut down."

::= { adslLineConfProfileEntry 20 }

adslAturConfDownshiftSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

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DESCRIPTION

"Configured Signal/Noise Margin for rate downshift.
If the noise margin falls below this level, the modem
should attempt to decrease its transmit rate. In
the case that RADSL is not present,
the value will be `0'."

::= { adslLineConfProfileEntry 21 }

adslAturConfUpshiftSnrMgn OBJECT-TYPE

SYNTAX INTEGER(0..310)

UNITS "tenth dB"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured Signal/Noise Margin for rate upshift.
If the noise margin rises above this level, the modem
should attempt to increase its transmit rate.
In the case that RADSL is not present,
the value will be `0'."

::= { adslLineConfProfileEntry 22 }

adslAturConfMinUpshiftTime OBJECT-TYPE

SYNTAX INTEGER(0..16383)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Minimum time that the current margin is above
UpshiftSnrMgn before an upshift occurs.
In the case that RADSL is not present, the value will
be `0'."

::= { adslLineConfProfileEntry 23 }

adslAturConfMinDownshiftTime OBJECT-TYPE

SYNTAX INTEGER(0..16383)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Minimum time that the current margin is below
DownshiftSnrMgn before a downshift occurs.
In the case that RADSL is not present, the value will
be `0'."

::= { adslLineConfProfileEntry 24 }

adslAturChanConfFastMinTxRate OBJECT-TYPE

SYNTAX INTEGER

UNITS "bps"

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```
MAX-ACCESS    read-create
STATUS        current
DESCRIPTION
    "Configured Minimum Transmit rate for `Fast' channels,
    in bps.  See adslAturConfRateChanRatio for information
    regarding RADSL mode and ATUC transmit rate
    for ATUR receive rates."
::= { adslLineConfProfileEntry 25 }

adslAturChanConfInterleaveMinTxRate OBJECT-TYPE
    SYNTAX      INTEGER
    UNITS        "bps"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Configured Minimum Transmit rate for `Interleave'
        channels, in bps.  See adslAturConfRateChanRatio for
        information regarding RADSL mode and ATUC transmit rate
        for ATUR receive rates."
    ::= { adslLineConfProfileEntry 26 }

adslAturChanConfFastMaxTxRate OBJECT-TYPE
    SYNTAX      INTEGER
    UNITS        "bps"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Configured Maximum Transmit rate for `Fast' channels,
        in bps.  See adslAturConfRateChanRatio for information
        regarding RADSL mode and ATUC transmit rate
        for ATUR receive rates."
    ::= { adslLineConfProfileEntry 27 }

adslAturChanConfInterleaveMaxTxRate OBJECT-TYPE
    SYNTAX      INTEGER
    UNITS        "bps"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Configured Maximum Transmit rate for `Interleave'
        channels, in bps.  See adslAturConfRateChanRatio for
        information regarding RADSL mode and see
        ATUC transmit rate for ATUR receive rates."
    ::= { adslLineConfProfileEntry 28 }

adslAturChanConfMaxInterleaveDelay OBJECT-TYPE
    SYNTAX      INTEGER(0..255)
    UNITS        "milli-seconds"
```


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MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Configured maximum Interleave Delay for this channel.

Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream allowing for improved impulse noise immunity at the expense of payload latency."

::= { adslLineConfProfileEntry 29 }

adslLineConfProfileRowStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This object is used to create a new row or modify or delete an existing row in this table.

Before a profile is deleted or taken out of service, (by setting this object to 'destroy' or 'outOfService') it must be first unreferenced from all associated lines.

If the implementator of this MIB has chosen not to implement 'dynamic assignment' of profiles, this object's MIN-ACCESS is read-only and its value is always to be 'active'."

::= { adslLineConfProfileEntry 30 }

adslLineAlarmConfProfileIndexNext OBJECT-TYPE

SYNTAX INTEGER

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object contains an appropriate value to be used for adslLineAlarmConfProfileIndex when creating entries in the adslLineAlarmConfTable. The value '0' indicates that no unassigned entries are available. To obtain the adslLineAlarmConfProfileIndexNext value for a new entry, the manager issues a management protocol retrieval operation to obtain the current value of this object. After the

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manager has used this profile index by assigning values to this new profile, the agent should modify the value to the next unassigned index.

If the implementator of this MIB has chosen not to implement 'dynamic assignment' of profiles, this object's MIN-ACCESS is read-only and its value is always '0'."

```
::= { adslMibObjects 16}
```

```
adslLineAlarmConfProfileTable    OBJECT-TYPE
    SYNTAX          SEQUENCE OF AdslLineAlarmConfProfileEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This table contains information on the ADSL line
        configuration.  One entry in this table reflects a
        profile defined by a manager which can be used to
        configure the modem for a physical line"
::= { adslMibObjects 17}
```

```
adslLineAlarmConfProfileEntry    OBJECT-TYPE
    SYNTAX          AdslLineAlarmConfProfileEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Each entry consists of a list of parameters that
        represents the configuration of an ADSL modem.  A
        profile is created in one step with all necessary
        parameter values and adslLineAlarmConfProfileRowStatus
        set to createAndGo.  This RowStatus object is also
        used to delete destroy profiles."
    INDEX { adslLineAlarmConfProfileIndex}
::= { adslLineAlarmConfProfileTable 1}
```

```
AdslLineAlarmConfProfileEntry ::=
    SEQUENCE {
        adslLineAlarmConfProfileIndex
AdslLineProfileType,
        adslAtucThresh15MinLofs          INTEGER,
        adslAtucThresh15MinLoss          INTEGER,
        adslAtucThresh15MinLols          INTEGER,
        adslAtucThresh15MinLprs          INTEGER,
        adslAtucThresh15MinESS           INTEGER,
        adslAtucThreshFastRateUp         Integer32,
        adslAtucThreshInterleaveRateUp   Integer32,
        adslAtucThreshFastRateDown       Integer32,
```

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```

        adslAtucThreshInterleaveRateDown      Integer32,
        adslAtucInitFailureTrapEnable          INTEGER,
        adslAturThresh15MinLofs                INTEGER,
        adslAturThresh15MinLoss                INTEGER,
        adslAturThresh15MinLprs                INTEGER,
        adslAturThresh15MinESS                 INTEGER,
        adslAturThreshFastRateUp               Integer32,
        adslAturThreshInterleaveRateUp         Integer32,
        adslAturThreshFastRateDown             Integer32,
        adslAturThreshInterleaveRateDown       Integer32,
        adslLineAlarmConfProfileRowStatus      RowStatus
    }

```

```

adslLineAlarmConfProfileIndex  OBJECT-TYPE
    SYNTAX          AdslLineProfileType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object is used by the line alarm configuration
        table in order to identify a row of this table"
    ::= { adslLineAlarmConfProfileEntry 1}

```

```

adslAtucThresh15MinLofs  OBJECT-TYPE
    SYNTAX          INTEGER(0..900)
    UNITS           "seconds"
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The number of Loss of Frame Seconds
        encountered by an ADSL interface within any given 15
        minutes performance data collection period, which
        causes the SNMP agent to send an
        adslAtucPerfLofsThreshTrap.

        Limit of one trap will be sent for any one interval.  A
        value of `0' will disable the trap."
    ::= { adslLineAlarmConfProfileEntry 2}

```

```

adslAtucThresh15MinLoss  OBJECT-TYPE
    SYNTAX          INTEGER(0..900)
    UNITS           "seconds"
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The number of Loss of Signal Seconds
        encountered by an ADSL interface within any given 15
        minutes performance data collection period, which
        causes the SNMP agent to send an

```

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adslAtucPerfLossThreshTrap.

Limit of one trap will be sent for any one interval.

A value of `0' will disable the trap."

::= { adslLineAlarmConfProfileEntry 3}

adslAtucThresh15MinLols OBJECT-TYPE

SYNTAX INTEGER(0..900)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The number of Loss of Link Seconds encountered by an ADSL interface within any given 15 minutes performance data collection period, which causes the SNMP agent to send an adslAtucPerfLolsThreshTrap. Limit of one trap will be sent for any one interval. A value of `0' will disable the trap."

::= { adslLineAlarmConfProfileEntry 4}

adslAtucThresh15MinLprs OBJECT-TYPE

SYNTAX INTEGER(0..900)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The number of Loss of Power Seconds encountered by an ADSL interface within any given 15 minutes performance data collection period, which causes the SNMP agent to send an adslAtucPerfLprsThreshTrap. Limit of one trap will be sent for any one interval. A value of `0' will disable the trap."

::= { adslLineAlarmConfProfileEntry 5}

adslAtucThresh15MinESs OBJECT-TYPE

SYNTAX INTEGER(0..900)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The number of Errored Seconds encountered by an ADSL interface within any given 15 minutes performance data collection period, which causes the SNMP agent to send an adslAtucPerfESsThreshTrap. Limit of one trap will be sent for any one interval."

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A value of `0' will disable the trap."
::= { adslLineAlarmConfProfileEntry 6}

adslAtucThreshFastRateUp OBJECT-TYPE

SYNTAX Integer32

UNITS "bps"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Applies to `Fast' channels only.
Configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate > ChanPrevTxRate plus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 7}

adslAtucThreshInterleaveRateUp OBJECT-TYPE

SYNTAX Integer32

UNITS "bps"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Applies to `Interleave' channels only.
Configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate > ChanPrevTxRate plus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 8}

adslAtucThreshFastRateDown OBJECT-TYPE

SYNTAX Integer32

UNITS "bps"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Applies to `Fast' channels only.
Configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate < ChanPrevTxRate minus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 9 }

adslAtucThreshInterleaveRateDown OBJECT-TYPE

SYNTAX Integer32

UNITS "bps"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

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```

        "Applies to `Interleave' channels only.
        Configured change in rate causing an
        adslAtucRateChangeTrap. A trap is produced when:
        ChanCurrTxRate < ChanPrevTxRate minus the value of
        this object. Set to `0' to disable."
 ::= { adslLineAlarmConfProfileEntry 10 }

adslAtucInitFailureTrapEnable OBJECT-TYPE
    SYNTAX      INTEGER {
        enable (1),
        disable (2)
    }
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "Enables and disables the InitFailureTrap. This
        object is defaulted disable(2)."
```

```

DEFVAL { disable }
 ::= { adslLineAlarmConfProfileEntry 11 }

adslAturThresh15MinLofs OBJECT-TYPE
    SYNTAX      INTEGER(0..900)
    UNITS       "seconds"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The number of Loss of Frame Seconds
        encountered by an ADSL interface within any given 15
        minutes performance data collection period, which
        causes the SNMP agent to send an
        adslAtucPerfLofsThreshTrap.
        Limit of one trap will be sent for any one interval.
        A value of `0' will disable the trap."
 ::= { adslLineAlarmConfProfileEntry 12 }

adslAturThresh15MinLoss OBJECT-TYPE
    SYNTAX      INTEGER(0..900)
    UNITS       "seconds"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The number of Loss of Signal Seconds
        encountered by an ADSL interface within any given 15
        minutes performance data collection period, which
        causes the SNMP agent to send an
        adslAtucPerfLossThreshTrap.
        Limit of one trap will be sent for any one interval.
        A value of `0' will disable the trap."
```

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```
::= { adslLineAlarmConfProfileEntry 13 }
```

```
adslAturThresh15MinLprs OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..900)
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "The number of Loss of Power Seconds
    encountered by an ADSL interface within any given 15
    minutes performance data collection period, which
    causes the SNMP agent to send an
    adslAtucPerfLprsThreshTrap.
    Limit of one trap will be sent for any one interval.
    A value of `0' will disable the trap."
```

```
::= { adslLineAlarmConfProfileEntry 14 }
```

```
adslAturThresh15MinESs OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..900)
```

```
UNITS       "seconds"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "The number of Errored Seconds
    encountered by an ADSL interface within any given 15
    minutes performance data collection period, which
    causes the SNMP agent to send an
    adslAtucPerfESsThreshTrap.
```

```
    Limit of one trap will be sent for any one interval.
    A value of `0' will disable the trap."
```

```
::= { adslLineAlarmConfProfileEntry 15 }
```

```
adslAturThreshFastRateUp OBJECT-TYPE
```

```
SYNTAX      Integer32
```

```
UNITS       "bps"
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Applies to `Fast' channels only.
    Configured change in rate causing an
    adslAtucRateChangeTrap. A trap is produced when:
    ChanCurrTxRate > ChanPrevTxRate plus the value of
    this object. Set to `0' to disable."
```

```
::= { adslLineAlarmConfProfileEntry 16 }
```

```
adslAturThreshInterleaveRateUp OBJECT-TYPE
```

```
SYNTAX      Integer32
```

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UNITS "bps"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"Applies to `Interleave' channels only.
configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate > ChanPrevTxRate plus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 17 }

adslAturThreshFastRateDown OBJECT-TYPE

SYNTAX Integer32
UNITS "bps"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"Applies to `Fast' channels only.
Configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate < ChanPrevTxRate minus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 18 }

adslAturThreshInterleaveRateDown OBJECT-TYPE

SYNTAX Integer32
UNITS "bps"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"Applies to `Interleave' channels only.
Configured change in rate causing an
adslAtucRateChangeTrap. A trap is produced when:
ChanCurrTxRate < ChanPrevTxRate minus the value of
this object. Set to `0' to disable."

::= { adslLineAlarmConfProfileEntry 19 }

adslLineAlarmConfProfileRowStatus OBJECT-TYPE

SYNTAX RowStatus
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object is used to create a new row or modify or
delete an existing row in this table.

Before a profile is deleted or taken out of service,
(by setting this object to `destroy' or
`outOfService') it must be first unreferenced

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from all associated lines.

If the implementator of this MIB has chosen not to implement 'dynamic assignment' of profiles, this object's MIN-ACCESS is read-only and its value is always to be 'active'."

```
::= { adslLineAlarmConfProfileEntry 20 }
```

```
-- Line Code Specific Tables
```

```
-- These are place holders for the Line Code Specific MIBs  
-- once they become available.
```

```
adslLCSTable OBJECT IDENTIFIER ::= { adslMibObjects 18 }
```

```
-- trap definitions
```

```
adslTraps OBJECT IDENTIFIER ::= { adslLineMib 2 }
```

```
adslAtucTraps OBJECT IDENTIFIER ::= { adslTraps 1 }
```

```
adslAtucPerfLofsThreshTrap      NOTIFICATION-TYPE  
    OBJECTS { adslAtucThresh15MinLofs }  
    STATUS current  
    DESCRIPTION  
        "Loss of Framing 15-minute interval threshold exceeded"  
 ::= { adslAtucTraps 0 1 }
```

```
adslAtucPerfLossThreshTrap      NOTIFICATION-TYPE  
    OBJECTS { adslAtucThresh15MinLoss }  
    STATUS current  
    DESCRIPTION  
        "Loss of Signal 15-minute interval threshold exceeded"  
 ::= { adslAtucTraps 0 2 }
```

```
adslAtucPerfLprsThreshTrap      NOTIFICATION-TYPE  
    OBJECTS { adslAtucThresh15MinLprs }  
    STATUS current  
    DESCRIPTION  
        "Loss of Power 15-minute interval threshold exceeded"  
 ::= { adslAtucTraps 0 3 }
```

```
adslAtucPerfESsThreshTrap      NOTIFICATION-TYPE  
    OBJECTS { adslAtucThresh15MinESs }  
    STATUS current  
    DESCRIPTION  
        "Errored Second 15-minute interval threshold exceeded"
```

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```
::= { adslAtucTraps 0 4 }
```

```
adslAtucRateChangeTrap NOTIFICATION-TYPE
```

```
  OBJECTS {adslAtucChanCurrTxRate,  
            adslAtucChanPrevTxRate }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "The ATUCs transmit rate has changed (RADSL mode only)"
```

```
::= { adslAtucTraps 0 5 }
```

```
adslAtucPerfLolsThreshTrap NOTIFICATION-TYPE
```

```
  OBJECTS { adslAtucThresh15MinLols }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "Loss of Link 15-minute interval threshold exceeded"
```

```
::= { adslAtucTraps 0 6 }
```

```
adslAtucInitFailureTrap NOTIFICATION-TYPE
```

```
  OBJECTS { adslAtucCurrStatus }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "ATUC initialization failed. See adslAtucCurrStatus  
    for potential reasons."
```

```
::= { adslAtucTraps 0 7 }
```

```
adslAturTraps OBJECT IDENTIFIER ::= { adslTraps 2 }
```

```
adslAturPerfLofsThreshTrap NOTIFICATION-TYPE
```

```
  OBJECTS { adslAturThresh15MinLofs }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "Loss of Framing 15-minute interval threshold exceeded"
```

```
::= { adslAturTraps 0 1 }
```

```
adslAturPerfLossThreshTrap NOTIFICATION-TYPE
```

```
  OBJECTS { adslAturThresh15MinLoss }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "Loss of Signal 15-minute interval threshold exceeded"
```

```
::= { adslAturTraps 0 2 }
```

```
adslAturPerfLprsThreshTrap NOTIFICATION-TYPE
```

```
  OBJECTS { adslAturThresh15MinLprs }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "Loss of Power 15-minute interval threshold exceeded"
```

```
::= { adslAturTraps 0 3 }
```

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```
adslAturPerfESsThreshTrap      NOTIFICATION-TYPE
    OBJECTS { adslAturThresh15MinESs }
    STATUS   current
    DESCRIPTION
        "Errored Second 15-minute interval threshold exceeded"
    ::= { adslAturTraps 0 4 }

adslAturRateChangeTrap  NOTIFICATION-TYPE
    OBJECTS {adslAturChanCurrTxRate,
              adslAturChanPrevTxRate }
    STATUS   current
    DESCRIPTION
        "The ATURs transmit rate has changed (RADSL mode only)"
    ::= { adslAturTraps 0 5 }

-- no adslAturPerfLolsThreshTrap possible { 6 }

-- no adslAturInitFailureTrap possible { 7 }


-- conformance information

adslConformance OBJECT IDENTIFIER ::= { adslLineMib 3 }

adslGroups OBJECT IDENTIFIER ::= { adslConformance 1 }
adslCompliances OBJECT IDENTIFIER ::= { adslConformance 2 }


-- compliance statements

adslLineMibCompliance MODULE-COMPLIANCE
    STATUS   current
    DESCRIPTION
        "The compliance statement for SNMP entities
        which have ADSL interfaces."

    MODULE  -- this module
    MANDATORY-GROUPS
        {
            adslLineGroup, adslPhysicalGroup, adslChannelGroup,
            adslAtucPhysPerfIntervalGroup,
            adslAturPhysPerfIntervalGroup, adslLineProfileGroup,
            adslLineAlarmProfileGroup
        }

    GROUP      adslLineProfileControlGroup
    DESCRIPTION
        "This group is mandatory only when the dynamic profile
```

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mode is implemented."

GROUP adslAtucPhysPerfRawCounterGroup

DESCRIPTION

"This group is optional."

GROUP adslAturPhysPerfRawCounterGroup

DESCRIPTION

"This group is optional."

GROUP adslAtucChanPerformanceGroup

DESCRIPTION

"This group is optional."

GROUP adslAturChanPerformanceGroup

DESCRIPTION

"This group is optional."

OBJECT adslAtucIntervalNumber

SYNTAX INTEGER (1..1)

DESCRIPTION

"It is allowable to implement only one ATU-C 15-minute performance interval."

OBJECT adslAturIntervalNumber

SYNTAX INTEGER (1..1)

DESCRIPTION

"It is allowable to implement only one ATU-R 15-minute performance interval."

OBJECT adslAtucIntervalNumber

SYNTAX INTEGER (1..1)

DESCRIPTION

"It is allowable to implement only one ATU-C channel 15-minute performance interval."

OBJECT adslAtucIntervalNumber

SYNTAX INTEGER (1..1)

DESCRIPTION

"It is allowable to implement only one ATU-R channel 15-minute performance interval."

OBJECT adslLineConfProfile

MIN-ACCESS read-only

DESCRIPTION

"Read-only access is applicable when static profiles are implemented."

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OBJECT adslLineConfProfileIndexNext
MIN-ACCESS read-only
DESCRIPTION
 "Read-only access is applicable only when static
 profiles are implemented."

OBJECT adslLineConfProfileRowStatus
MIN-ACCESS read-only
DESCRIPTION
 "Read-only access is applicable only when static
 profiles are implemented."

OBJECT adslLineAlarmProfile
MIN-ACCESS read-only
DESCRIPTION
 "Read-only access is applicable only when static
 profiles are implemented."

OBJECT adslLineAlarmConfProfileIndexNext
MIN-ACCESS read-only
DESCRIPTION
 "Read-only access is applicable only when static
 profiles are implemented."

OBJECT adslLineAlarmConfProfileRowStatus
MIN-ACCESS read-only
DESCRIPTION
 "Read-only access is applicable only when static
 profiles are implemented."

::= { adslCompliances 1 }

-- units of conformance

adslLineGroup OBJECT-GROUP
 OBJECTS {
 adslLineCoding, adslLineType, adslLineSpecific
 }
 STATUS current
 DESCRIPTION
 "A collection of objects providing configuration
 information about an ADSL Line."

::= { adslGroups 1 }

adslPhysicalGroup OBJECT-GROUP
 OBJECTS {
 adslAtucInvSerialNumber, adslAtucInvVendorID,
 adslAtucInvVersionNumber, adslAtucCurrSnrMgn,
 adslAtucCurrAtn, adslAtucCurrStatus,

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```
    adslAtucCurrOutputPwr, adslAtucCurrAttainableRate,
    adslAturInvSerialNumber, adslAturInvVendorID,
    adslAturInvVersionNumber, adslAturCurrSnrMgn,
    adslAturCurrAtn, adslAturCurrStatus,
    adslAturCurrOutputPwr, adslAturCurrAttainableRate
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing physical
  configuration information of the ADSL Line."
::= { adslGroups 2 }

adslChannelGroup      OBJECT-GROUP
  OBJECTS {
    adslAtucChanInterleaveDelay, adslAtucChanCurrTxRate,
    adslAtucChanPrevTxRate, adslAtucChanCrcBlockLength,
    adslAturChanInterleaveDelay, adslAturChanCurrTxRate,
    adslAturChanPrevTxRate, adslAturChanCrcBlockLength
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing configuration
  information about an ADSL channel."
::= { adslGroups 3 }

adslAtucPhysPerfRawCounterGroup OBJECT-GROUP
  OBJECTS {
    adslAtucPerfLofs, adslAtucPerfLoss,
    adslAtucPerfLols, adslAtucPerfLprs,
    adslAtucPerfESS, adslAtucPerfInits
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing raw performance
  counts on an ADSL Line (ATU-C end)."
::= { adslGroups 4 }

adslAtucPhysPerfIntervalGroup OBJECT-GROUP
  OBJECTS {
    adslAtucPerfValidIntervals,
    adslAtucPerfInvalidIntervals,
    adslAtucPerfCurr15MinTimeElapsed,
    adslAtucPerfCurr15MinLofs, adslAtucPerfCurr15MinLoss,
    adslAtucPerfCurr15MinLols, adslAtucPerfCurr15MinLprs,
    adslAtucPerfCurr15MinESS, adslAtucPerfCurr15MinInits,
    adslAtucPerfCurr1DayLofs, adslAtucPerfCurr1DayLoss,
    adslAtucPerfCurr1DayLols, adslAtucPerfCurr1DayLprs,
    adslAtucPerfCurr1DayESS, adslAtucPerfCurr1DayInits,
```

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```
    adslAtucPerfPrev1DayMoniSecs,
    adslAtucPerfPrev1DayLofs, adslAtucPerfPrev1DayLoss,
    adslAtucPerfPrev1DayLols, adslAtucPerfPrev1DayLprs,
    adslAtucPerfPrev1DayESS, adslAtucPerfPrev1DayInits,
    adslAtucIntervalLofs, adslAtucIntervalLoss,
    adslAtucIntervalLols, adslAtucIntervalLprs,
    adslAtucIntervalESS, adslAtucIntervalInits,
    adslAtucIntervalValidData
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing current 15-minute,
  1-day; and previous 1-day performance counts on
  ADSL Line (ATU-C end) ."
 ::= { adslGroups 5 }

adslAturPhysPerfRawCounterGroup OBJECT-GROUP
  OBJECTS {
    adslAturPerfLofs, adslAturPerfLoss,
    adslAturPerfLprs, adslAturPerfESS
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing raw performance
  counts on an ADSL Line (ATU-R end)."
```

```
 ::= { adslGroups 6 }

adslAturPhysPerfIntervalGroup OBJECT-GROUP
  OBJECTS {
    adslAturPerfValidIntervals,
    adslAturPerfInvalidIntervals,
    adslAturPerfCurr15MinTimeElapsed,
    adslAturPerfCurr15MinLofs, adslAturPerfCurr15MinLoss,
    adslAturPerfCurr15MinLprs, adslAturPerfCurr15MinESS,
    adslAturPerfCurr1DayTimeElapsed,
    adslAturPerfCurr1DayLofs, adslAturPerfCurr1DayLoss,
    adslAturPerfCurr1DayLprs, adslAturPerfCurr1DayESS,
    adslAturPerfPrev1DayMoniSecs,
    adslAturPerfPrev1DayLofs, adslAturPerfPrev1DayLoss,
    adslAturPerfPrev1DayLprs, adslAturPerfPrev1DayESS,
    adslAturIntervalLofs,
    adslAturIntervalLoss, adslAturIntervalLprs,
    adslAturIntervalESS, adslAturIntervalValidData
  }
STATUS      current
DESCRIPTION
  "A collection of objects providing current 15-minute,
  1-day; and previous 1-day performance counts on
```

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```
        ADSL Line (ATU-R end)."  
 ::= { adslGroups 7 }  
  
adslAtucChanPerformanceGroup OBJECT-GROUP  
    OBJECTS {  
        adslAtucChanReceivedBlks,  
        adslAtucChanTransmittedBlks,  
        adslAtucChanCorrectedBlks,  
        adslAtucChanUncorrectBlks,  
        adslAtucChanPerfValidIntervals,  
        adslAtucChanPerfInvalidIntervals,  
        adslAtucChanPerfCurr15MinTimeElapsed,  
        adslAtucChanPerfCurr15MinReceivedBlks,  
        adslAtucChanPerfCurr15MinTransmittedBlks,  
        adslAtucChanPerfCurr15MinCorrectedBlks,  
        adslAtucChanPerfCurr15MinUncorrectBlks,  
        adslAtucChanPerfCurr1DayTimeElapsed,  
        adslAtucChanPerfCurr1DayReceivedBlks,  
        adslAtucChanPerfCurr1DayTransmittedBlks,  
        adslAtucChanPerfCurr1DayCorrectedBlks,  
        adslAtucChanPerfCurr1DayUncorrectBlks,  
        adslAtucChanPerfPrev1DayMoniSecs,  
        adslAtucChanPerfPrev1DayReceivedBlks,  
        adslAtucChanPerfPrev1DayTransmittedBlks,  
        adslAtucChanPerfPrev1DayCorrectedBlks,  
        adslAtucChanPerfPrev1DayUncorrectBlks,  
        adslAtucChanIntervalReceivedBlks,  
        adslAtucChanIntervalTransmittedBlks,  
        adslAtucChanIntervalCorrectedBlks,  
        adslAtucChanIntervalUncorrectBlks,  
        adslAtucChanIntervalValidData  
    }  
    STATUS      current  
    DESCRIPTION  
        "A collection of objects providing channel block  
        performance information on an ADSL channel  
        (ATU-C end)."  
 ::= { adslGroups 8 }  
  
adslAturChanPerformanceGroup OBJECT-GROUP  
    OBJECTS {  
        adslAturChanReceivedBlks,  
        adslAturChanTransmittedBlks,  
        adslAturChanCorrectedBlks,  
        adslAturChanUncorrectBlks,  
        adslAturChanPerfValidIntervals,  
        adslAturChanPerfInvalidIntervals,  
        adslAturChanPerfCurr15MinTimeElapsed,
```


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```
    adslAturChanPerfCurr15MinReceivedBlks,
    adslAturChanPerfCurr15MinTransmittedBlks,
    adslAturChanPerfCurr15MinCorrectedBlks,
    adslAturChanPerfCurr15MinUncorrectBlks,
    adslAturChanPerfCurr1DayTimeElapsed,
    adslAturChanPerfCurr1DayReceivedBlks,
    adslAturChanPerfCurr1DayTransmittedBlks,
    adslAturChanPerfCurr1DayCorrectedBlks,
    adslAturChanPerfCurr1DayUncorrectBlks,
    adslAturChanPerfPrev1DayMoniSecs,
    adslAturChanPerfPrev1DayReceivedBlks,
    adslAturChanPerfPrev1DayTransmittedBlks,
    adslAturChanPerfPrev1DayCorrectedBlks,
    adslAturChanPerfPrev1DayUncorrectBlks,
    adslAturChanIntervalReceivedBlks,
    adslAturChanIntervalTransmittedBlks,
    adslAturChanIntervalCorrectedBlks,
    adslAturChanIntervalUncorrectBlks,
    adslAturChanIntervalValidData
  }
STATUS      current
DESCRIPTION
    "A collection of objects providing channel block
    performance information on an ADSL channel
    (ATU-C end)."
```

```
::= { adslGroups 9 }
```

```
adslLineProfileGroup OBJECT-GROUP
    OBJECTS {
        adslAtucConfRateMode, adslAtucConfRateChanRatio,
        adslAtucConfTargetSnrMgn, adslAtucConfMaxSnrMgn,
        adslAtucConfMinSnrMgn,
        adslAtucConfDownshiftSnrMgn,
        adslAtucConfUpshiftSnrMgn,
        adslAtucConfMinUpshiftTime,
        adslAtucConfMinDownshiftTime,
        adslAtucChanConfFastMinTxRate,
        adslAtucChanConfInterleaveMinTxRate,
        adslAtucChanConfFastMaxTxRate,
        adslAtucChanConfInterleaveMaxTxRate,
        adslAtucChanConfMaxInterleaveDelay,
        adslAturConfRateMode, adslAturConfRateChanRatio,
        adslAturConfTargetSnrMgn, adslAturConfMaxSnrMgn,
        adslAturConfMinSnrMgn, adslAturConfDownshiftSnrMgn,
        adslAturConfUpshiftSnrMgn,
        adslAturConfMinUpshiftTime,
        adslAturConfMinDownshiftTime,
        adslAturChanConfFastMinTxRate,
```

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```
        adslAturChanConfInterleaveMinTxRate,
        adslAturChanConfFastMaxTxRate,
        adslAturChanConfInterleaveMaxTxRate,
        adslAturChanConfMaxInterleaveDelay
    }
    STATUS      current
    DESCRIPTION
        "A collection of objects providing provisioning
        information about an ADSL Line."
    ::= { adslGroups 10 }

adslLineAlarmProfileGroup OBJECT-GROUP
    OBJECTS {
        adslAtucThresh15MinLofs, adslAtucThresh15MinLoss,
        adslAtucThresh15MinLols, adslAtucThresh15MinLprs,
        adslAtucThresh15MinESs, adslAtucThreshFastRateUp,
        adslAtucThreshInterleaveRateUp,
        adslAtucThreshFastRateDown,
        adslAtucThreshInterleaveRateDown,
        adslAtucInitFailureTrapEnable,
        adslAturThresh15MinLofs, adslAturThresh15MinLoss,
        adslAturThresh15MinLprs, adslAturThresh15MinESs,
        adslAturThreshFastRateUp,
        adslAturThreshInterleaveRateUp,
        adslAturThreshFastRateDown,
        adslAturThreshInterleaveRateDown
    }
    STATUS      current
    DESCRIPTION
        "A collection of objects providing alarm provisioning
        information about an ADSL Line."
    ::= { adslGroups 11 }

adslLineProfileControlGroup OBJECT-GROUP
    OBJECTS {
        adslLineConfProfile, adslLineAlarmConfProfile,
        adslLineConfProfileIndexNext,
        adslLineConfProfileRowStatus,
        adslLineAlarmConfProfileIndexNext,
        adslLineAlarmConfProfileRowStatus
    }
    STATUS      current
    DESCRIPTION
        "A collection of objects providing profile
        control for the ADSL system."
    ::= { adslGroups 12 }

adslNotificationsGroup NOTIFICATION-GROUP
```

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```
    NOTIFICATIONS {
        adslAtucPerfLofsThreshTrap,
        adslAtucPerfLossThreshTrap,
        adslAtucPerfLprsThreshTrap,
        adslAtucPerfESsThreshTrap,
        adslAtucRateChangeTrap,
        adslAtucPerfLolsThreshTrap,
        adslAtucInitFailureTrap,
        adslAturPerfLofsThreshTrap,
        adslAturPerfLossThreshTrap,
        adslAturPerfLprsThreshTrap,
        adslAturPerfESsThreshTrap,
        adslAturRateChangeTrap
    }
    STATUS          current
    DESCRIPTION
        "The collection of adsl notifications."
    ::= { adslGroups 13 } END
```

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12. Security Considerations

1) Blocking unauthorized access to the ADSL MIB via the element management system is outside the scope of this document. It should be noted that access to the MIB permits the unauthorized entity to modify the profiles (sect 7.4) such that both subscriber service and network operations can be interfered with. Subscriber service can be altered by modifying any of a number of service characteristics such as rate partitioning and maximum transmission rates. Network operations can be impacted by modification of trap thresholds such as SNR margins.

2) There are a number of managed objects in this MIB that may be considered to contain sensitive information. In particular, the certain objects may be considered sensitive in many environments, since it would allow an intruder to obtain information about which vendor's equipment is in use on the network. Therefore, it may be important in some environments to control read access to these objects and possibly to even encrypt the values of these object when sending them over the network via SNMP. Not all versions of SNMP provide features for such a secure environment.

SNMPv1 by itself is such an insecure environment. Even if the network itself is secure (for example by using IPSec), even then,

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there is no control as to who on the secure network is allowed to access and GET (read) the objects in this MIB. It is recommended that the implementors consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model [RFC 2274](#) [21] and the View-based Access Control Model [RFC 2275](#) [23] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to an instance of this MIB, is properly configured to give access to those objects only to those principals (users) that have legitimate rights to access them.

3) ADSL layer connectivity from the ATU-R will permit the subscriber to manipulate both the ADSL link directly and the AOC/EOC channels for their own loop. For example, unchecked or unfiltered fluctuations initiated by the subscriber could generate sufficient traps to potentially overwhelm either the management interface to the network or the element manager. Other attacks affecting the ATU-R portions of the MIB may also be possible.

13. Authors' Addresses

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