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Definitions of Managed Objects for New Generation Asymmetric Digital Subscriber Lines (NG-ADSL) draft-ietf-adslmib-adsl2-00.txt

Status of this Memo

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Abstract

This document defines a portion of the Management Information Base (MIB) module for use with network management protocols in the Internet community. In particular, it describes objects used for managing parameters of "Asymmetric Digital Subscriber Line" family of interface types, especially including ADSL, ADSL2, and ADSL2+.

Table of Contents

1. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to section 7 of RFC 3410 [RFC3410].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIv2, which is described in STD 58, RFC 2578 [RFC2578], STD 58, RFC 2579 [RFC2579] and STD 58, RFC 2580 [RFC2580].

2. Overview

This document describes an SNMP MIB module for managing the ADSL/ADSL2 and ADSL2+ Lines. These definitions are based upon the specifications for defined in T1E1, European Telecommunications Standards Institute(ETSI), and International Telecommunication Union (ITU) documentation [to be added].

Additionally the management framework for New Generation ADSL lines specified by the Digital Subscriber Line Forum (DSLF) has been taken into consideration [DSLFTR90].

The MIB module is located in the MIB tree under MIB-2 transmission.

The key words "MUST", "MUST NOT", "RECOMMENDED", and "SHOULD" in this document are to be interpreted as described in [RFC2119].

2.1 Relationship of this MIB Module to other MIB Modules

To be added

2.2 Conventions used in the MIB Module

2.2.1 Naming Conventions

A. Atuc -- (ATUC) transceiver at near (Central) end of line
B. Atur -- (ATUR) transceiver at Remote end of line
C. Atu -- One of either Atuc or Atur
D. Curr -- Current
F. Atn -- Attenuation
G. Max -- Maximum
H. Mgn -- Margin
I. PSD -- Power Spectral Density
J. Rx -- Receive
K. Snr -- Signal to Noise Ratio
L. Tx -- Transmit

2.3 Structure

The NG ADSL Line MIB contains the following MIB group:

To be added

2.4 Persistence

All read-create objects defined in this MIB module SHOULD be stored persistently. Following is an exhaustive list of these persistent objects:

To be added

Note also that the interface indices in this MIB are maintained persistently. View-based Access Control Model (VACM) data relating to these SHOULD be stored persistently as well [RFC3415].

3. Conformance and Compliance

To be added

4. Definitions

```
Adsl2-MIB

  DEFINITIONS  ::=  BEGIN

IMPORTS

  MODULE-IDENTITY,
  OBJECT-TYPE,
  TimeTicks,
  transmission,
  Unsigned32,
  snmpModules,
  Integer32
    FROM SNMPv2-SMI

  DisplayString,
  TEXTUAL-CONVENTION,

  ifIndex
    FROM IF-MIB

  RowStatus
    FROM SNMPv2-TC

  SnmpAdminString
    FROM SNMP-FRAMEWORK-MIB

  adsl2         OBJECT IDENTIFIER ::= { Adsl2 1 }
  -----------------------------------------------
  adsl2Status      OBJECT IDENTIFIER ::= { adsl2 1 }
  adsl2Inventory   OBJECT IDENTIFIER ::= { adsl2 2 }
  adsl2Commands    OBJECT IDENTIFIER ::= { adsl2 3 }
  adsl2PM          OBJECT IDENTIFIER ::= { adsl2 4 }
  adsl2Config      OBJECT IDENTIFIER ::= { adsl2 5 }
  adsl2Profile     OBJECT IDENTIFIER ::= { adsl2 6 }
  -----------------------------------------------
  adsl2PMLine      OBJECT IDENTIFIER ::= { adsl2PM 1 }
  adsl2PMChannel   OBJECT IDENTIFIER ::= { adsl2PM 2 }
  -----------------------------------------------
  adsl2ConfigLine  OBJECT IDENTIFIER ::= { adsl2Config 1 }
  -----------------------------------------------
  adsl2ProfileLine      OBJECT IDENTIFIER ::= { adsl2Profile 1 }
  adsl2ProfileChannel   OBJECT IDENTIFIER ::= { adsl2Profile 2 }
  -----------------------------------------------
```

```
-----------------------------------------------
--          Textual Conventions              --
-----------------------------------------------
  Adsl2YesNo  ::= TEXTUAL-CONVENTION
    STATUS              current
    DESCRIPTION         ""
    SYNTAX              INTEGER  {
     yes (1),
     no (2)
  }

Adsl2InitResult ::= TEXTUAL-CONVENTION
    STATUS       current
    DESCRIPTION  ""
    SYNTAX       INTEGER {
      noFail(0),
      configError(1),
      configNotFeasible(2),
      commFail(3),
      noPeerAtu(4),
      otherCause(5)
     }

Adsl2TransmissionModeType ::= TEXTUAL-CONVENTION
    STATUS       current
    DESCRIPTION
     "A set of ADSL2 line transmission modes, with one bit
      per mode.  The notes (F) and (L) denote Full-Rate
      and Lite/splitterless respectively:
      Bit 00 : Regional Std. (ANSI T1.413) (F)
      Bit 01 : Regional Std. (ETSI DTS/TM06006) (F)
     Bit 02 : G.992.1 POTS non-overlapped (F)
     Bit 03 : G.992.1 POTS overlapped (F)
     Bit 04 : G.992.1 ISDN non-overlapped (F)
     Bit 05 : G.992.1 ISDN overlapped (F)
     Bit 06 : G.992.1 TCM-ISDN non-overlapped (F)
     Bit 07 : G.992.1 TCM-ISDN overlapped (F)
     Bit 08 : G.992.2 POTS non-overlapped (L)
     Bit 09 : G.992.2 POTS overlapped (L)
     Bit 10 : G.992.2 with TCM-ISDN non-overlapped (L)
     Bit 11 : G.992.2 with TCM-ISDN overlapped (L)
     Bit 12 : G.992.1 TCM-ISDN symmetric (F) --- not in G.997.1
     Bit 13-17: Reserved
     Bit 18 : G.992.3 POTS non-overlapped (F)
     Bit 19 : G.992.3 POTS overlapped (F)
     Bit 20 : G.992.3 ISDN non-overlapped (F)
     Bit 21 : G.992.3 ISDN overlapped (F)
     Bit 22-23: Reserved
     Bit 24 : G.992.4 POTS non-overlapped (L)
     Bit 25 : G.992.4 POTS overlapped (L)
```

Bit 26-27: Reserved

```
    Bit 28 : G.992.3 Annex I All-Digital non-overlapped (F)
    Bit 29 : G.992.3 Annex I All-Digital overlapped (F)
    Bit 30 : G.992.3 Annex J All-Digital non-overlapped (F)
    Bit 31 : G.992.3 Annex J All-Digital overlapped (F)
    Bit 32 : G.992.4 Annex I All-Digital non-overlapped (L)
    Bit 33 : G.992.4 Annex I All-Digital overlapped (L)
    Bit 34 : G.992.3 Annex L POTS non-overlapped, mode 1, wide U/S (F)
    Bit 35 : G.992.3 Annex L POTS non-overlapped, mode 2, narrow U/S(F)
    Bit 36 : G.992.3 Annex L POTS overlapped, mode 3, wide U/S (F)
    Bit 37 : G.992.3 Annex L POTS overlapped, mode 4, narrow U/S (F)
    Bit 38 : G.992.3 Annex M POTS non-overlapped (F)
    Bit 39 : G.992.3 Annex M POTS overlapped (F)
    Bit 40 : G.992.5 POTS non-overlapped (F)
    Bit 41 : G.992.5 POTS overlapped (F)
    Bit 42 : G.992.5 ISDN non-overlapped (F)
    Bit 43 : G.992.5 ISDN overlapped (F)
    Bit 44-45: Reserved
    Bit 46 : G.992.5 Annex I All-Digital non-overlapped (F)
    Bit 47 : G.992.5 Annex I All-Digital overlapped (F)
    Bit 48 : G.992.5 Annex J All-Digital non-overlapped (F)
    Bit 49 : G.992.5 Annex J All-Digital overlapped (F)
    Bit 50 : G.992.5 Annex M POTS non-overlapped (F)
    Bit 51 : G.992.5 Annex M POTS overlapped (F)
    Bit 52-55: Reserved
   "
  SYNTAX      BITS {
 ansit1413(0),
       etsi(1),
       q9921PotsNonOverlapped(2),
       q9921PotsOverlapped(3),
       q9921IsdnNonOverlapped(4),
       q9921isdnOverlapped(5),
       q9921tcmIsdnNonOverlapped(6),
       q9921tcmIsdnOverlapped(7),
       q9922potsNonOverlapeed(8),
       q9922potsOverlapped(9),
       q9922tcmIsdnNonOverlapped(10),
       q9922tcmIsdnOverlapped(11),
       q9921tcmIsdnSymmetric(12),
       reserved1(13),
       reserved2(14),
       reserved3(15),
       reserved4(16),
       reserved5(17),
       q9923PotsNonOverlapped(18),
       q9923PotsOverlapped(19),
       q9923IsdnNonOverlapped(20),
       q9923isdnOverlapped(21),
```

```
        reserved6(22),
        reserved7(23),
```

```
        q9924potsNonOverlapeed(24),
        q9924potsOverlapped(25),
        reserved8(26),
        reserved9(27),
        q9923AnnexIAllDigNonOverlapped(28),
        q9923AnnexIAllDigOverlapped(29),
        q9923AnnexJAllDigNonOverlapped(30),
        q9923AnnexJAllDigOverlapped(31),
        q9924AnnexIAllDigNonOverlapped(32),
        q9924AnnexIAllDigOverlapped(33),
        q9923AnnexLMode1NonOverlapped(34),
        q9923AnnexLMode2NonOverlapped(35),
        q9923AnnexLMode3Overlapped(36),
        q9923AnnexLMode4Overlapped(37),
        q9923AnnexMPotsNonOverlapped(38),
        q9923AnnexMPotsOverlapped(39),
        q9925PotsNonOverlapped(40),
        q9925PotsOverlapped(41),
        q9925IsdnNonOverlapped(42),
        q9925isdnOverlapped(43),
        reserved10(44),
        reserved11(45),
        q9925AnnexIAllDigNonOverlapped(46),
        q9925AnnexIAllDigOverlapped(47),
        q9925AnnexJAllDigNonOverlapped(48),
        q9925AnnexJAllDigOverlapped(49),
        q9925AnnexMPotsNonOverlapped(50),
        q9925AnnexMPotsOverlapped(51),
        reserved12(52),
        reserved13(53),
        reserved14(54),
        reserved15(55)
       }

Adsl2PowerMngState::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      l0(0),
      l1(1),
      l2(2),
      l3(3)
    }

Adsl2Unit::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      atuc(1),
```

```
      atur(2)
   }
```

```
Adsl2RAMode::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      manual(1),
      raInit(2),
      dynamicRa(3)
    }

Adsl2SymbolProtection::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      noProtection(1),
      halfSymbol(2),
      singleSymbol(3),
      twoSymbol(4)
   }

Adsl2MaxBer::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      eminus3(1),
      eminus5(2),
      eminus7(3)
   }


Adsl2EnaDis ::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      enabled (1),
      disabled (2)
   }

Adsl2ConfPmsForce ::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION  ""
    SYNTAX INTEGER {
      l3toL0 (0),
      l0toL2 (2),
      l0orL2toL3 (3)
      }
```

```
Adsl2ScMaskDs ::= TEXTUAL-CONVENTION
    STATUS       current
    DESCRIPTION
             "
            "
    SYNTAX      BITS {
bit0(0),bit1(1),bit2(2),bit3(3),bit4(4),bit5(5),
bit6(6),bit7(7),bit8(8),bit9(9),bit10(10),bit11(11),
bit12(12),bit13(13),bit14(14),bit15(15),bit16(16),
bit17(17),bit18(18),bit19(19),bit20(20),bit21(21),
bit22(22),bit23(23),bit24(24),bit25(25),bit26(26),
bit27(27),bit28(28),bit29(29),bit30(30),bit31(31),
bit32(32),bit33(33),bit34(34),bit35(35),bit36(36),
bit37(37),bit38(38),bit39(39),bit40(40),bit41(41),
bit42(42),bit43(43),bit44(44),bit45(45),bit46(46),
bit47(47),bit48(48),bit49(49),bit50(50),bit51(51),
bit52(52),bit53(53),bit54(54),bit55(55),bit56(56),
bit57(57),bit58(58),bit59(59),bit60(60),bit61(61),
bit62(62),bit63(63),bit64(64),bit65(65),bit66(66),
bit67(67),bit68(68),bit69(69),bit70(70),bit71(71),
bit72(72),bit73(73),bit74(74),bit75(75),bit76(76),
bit77(77),bit78(78),bit79(79),bit80(80),bit81(81),
bit82(82),bit83(83),bit84(84),bit85(85),bit86(86),
bit87(87),bit88(88),bit89(89),bit90(90),bit91(91),
bit92(92),bit93(93),bit94(94),bit95(95),bit96(96),
bit97(97),bit98(98),bit99(99),bit100(100),
bit101(101),bit102(102),bit103(103),bit104(104),
      bit105(105),bit106(106),bit107(107),bit108(108),
      bit109(109),bit110(110),bit111(111),bit112(112),
      bit113(113),bit114(114),bit115(115),bit116(116),
      bit117(117),bit118(118),bit119(119),bit120(120),
      bit121(121),bit122(122),bit123(123),bit124(124),
      bit125(125),bit126(126),bit127(127),bit128(128),
      bit129(129),bit130(130),bit131(131),bit132(132),
      bit133(133),bit134(134),bit135(135),bit136(136),
      bit137(137),bit138(138),bit139(139),bit140(140),
      bit141(141),bit142(142),bit143(143),bit144(144),
      bit145(145),bit146(146),bit147(147),bit148(148),
      bit149(149),bit150(150),bit151(151),bit152(152),
      bit153(153),bit154(154),bit155(155),bit156(156),
      bit157(157),bit158(158),bit159(159),bit160(160),
      bit161(161),bit162(162),bit163(163),bit164(164),
      bit165(165),bit166(166),bit167(167),bit168(168),
      bit169(169),bit170(170),bit171(171),bit172(172),
      bit173(173),bit174(174),bit175(175),bit176(176),
      bit177(177),bit178(178),bit179(179),bit180(180),
      bit181(181),bit182(182),bit183(183),bit184(184),
      bit185(185),bit186(186),bit187(187),bit188(188),
      bit189(189),bit190(190),bit191(191),bit192(192),
```

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      bit193(193),bit194(194),bit195(195),bit196(196),
      bit197(197),bit198(198),bit199(199),bit200(200),
      bit201(201),bit202(202),bit203(203),bit204(204),
```

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      bit205(205),bit206(206),bit207(207),bit208(208),
      bit209(209),bit210(210),bit211(211),bit212(212),
      bit213(213),bit214(214),bit215(215),bit216(216),
      bit217(217),bit218(218),bit219(219),bit220(220),
      bit221(221),bit222(222),bit223(223),bit224(224),
      bit225(225),bit226(226),bit227(227),bit228(228),
      bit229(229),bit230(230),bit231(231),bit232(232),
      bit233(233),bit234(234),bit235(235),bit236(236),
      bit237(237),bit238(238),bit239(239),bit240(240),
      bit241(241),bit242(242),bit243(243),bit244(244),
      bit245(245),bit246(246),bit247(247),bit248(248),
      bit249(249),bit250(250),bit251(251),bit252(252),
      bit253(253),bit254(254),bit255(255),bit256(256),
      bit257(257),bit258(258),bit259(259),bit260(260),
      bit261(261),bit262(262),bit263(263),bit264(264),
      bit265(265),bit266(266),bit267(267),bit268(268),
      bit269(269),bit270(270),bit271(271),bit272(272),
      bit273(273),bit274(274),bit275(275),bit276(276),
      bit277(277),bit278(278),bit279(279),bit280(280),
      bit281(281),bit282(282),bit283(283),bit284(284),
      bit285(285),bit286(286),bit287(287),bit288(288),
      bit289(289),bit290(290),bit291(291),bit292(292),
      bit293(293),bit294(294),bit295(295),bit296(296),
      bit297(297),bit298(298),bit299(299),bit300(300),
      bit301(301),bit302(302),bit303(303),bit304(304),
      bit305(305),bit306(306),bit307(307),bit308(308),
      bit309(309),bit310(310),bit311(311),bit312(312),
      bit313(313),bit314(314),bit315(315),bit316(316),
      bit317(317),bit318(318),bit319(319),bit320(320),
      bit321(321),bit322(322),bit323(323),bit324(324),
      bit325(325),bit326(326),bit327(327),bit328(328),
      bit329(329),bit330(330),bit331(331),bit332(332),
      bit333(333),bit334(334),bit335(335),bit336(336),
      bit337(337),bit338(338),bit339(339),bit340(340),
      bit341(341),bit342(342),bit343(343),bit344(344),
      bit345(345),bit346(346),bit347(347),bit348(348),
      bit349(349),bit350(350),bit351(351),bit352(352),
      bit353(353),bit354(354),bit355(355),bit356(356),
      bit357(357),bit358(358),bit359(359),bit360(360),
      bit361(361),bit362(362),bit363(363),bit364(364),
      bit365(365),bit366(366),bit367(367),bit368(368),
      bit369(369),bit370(370),bit371(371),bit372(372),
      bit373(373),bit374(374),bit375(375),bit376(376),
      bit377(377),bit378(378),bit379(379),bit380(380),
      bit381(381),bit382(382),bit383(383),bit384(384),
      bit385(385),bit386(386),bit387(387),bit388(388),
      bit389(389),bit390(390),bit391(391),bit392(392),
      bit393(393),bit394(394),bit395(395),bit396(396),
      bit397(397),bit398(398),bit399(399),bit400(400),
```

```
      bit401(401),bit402(402),bit403(403),bit404(404),
      bit405(405),bit406(406),bit407(407),bit408(408),
      bit409(409),bit410(410),bit411(411),bit412(412),
```

```
      bit413(413),bit414(414),bit415(415),bit416(416),
      bit417(417),bit418(418),bit419(419),bit420(420),
      bit421(421),bit422(422),bit423(423),bit424(424),
      bit425(425),bit426(426),bit427(427),bit428(428),
      bit429(429),bit430(430),bit431(431),bit432(432),
      bit433(433),bit434(434),bit435(435),bit436(436),
      bit437(437),bit438(438),bit439(439),bit440(440),
      bit441(441),bit442(442),bit443(443),bit444(444),
      bit445(445),bit446(446),bit447(447),bit448(448),
      bit449(449),bit450(450),bit451(451),bit452(452),
      bit453(453),bit454(454),bit455(455),bit456(456),
      bit457(457),bit458(458),bit459(459),bit460(460),
      bit461(461),bit462(462),bit463(463),bit464(464),
      bit465(465),bit466(466),bit467(467),bit468(468),
      bit469(469),bit470(470),bit471(471),bit472(472),
      bit473(473),bit474(474),bit475(475),bit476(476),
      bit477(477),bit478(478),bit479(479),bit480(480),
      bit481(481),bit482(482),bit483(483),bit484(484),
      bit485(485),bit486(486),bit487(487),bit488(488),
      bit489(489),bit490(490),bit491(491),bit492(492),
      bit493(493),bit494(494),bit495(495),bit496(496),
      bit497(497),bit498(498),bit499(499),bit500(500),
      bit501(501),bit502(502),bit503(503),bit504(504),
      bit505(505),bit506(506),bit507(507),bit508(508),
      bit509(509),bit510(510),bit511(511)
}

Adsl2ScMaskUs ::= TEXTUAL-CONVENTION
    STATUS       current
    DESCRIPTION
                  "
                  "
    SYNTAX      BITS {
      bit0(0),bit1(1),bit2(2),bit3(3),bit4(4),bit5(5),
      bit6(6),bit7(7),bit8(8),bit9(9),bit10(10),bit11(11),
      bit12(12),bit13(13),bit14(14),bit15(15),bit16(16),
      bit17(17),bit18(18),bit19(19),bit20(20),bit21(21),
      bit22(22),bit23(23),bit24(24),bit25(25),bit26(26),
      bit27(27),bit28(28),bit29(29),bit30(30),bit31(31),
      bit32(32),bit33(33),bit34(34),bit35(35),bit36(36),
      bit37(37),bit38(38),bit39(39),bit40(40),bit41(41),
      bit42(42),bit43(43),bit44(44),bit45(45),bit46(46),
      bit47(47),bit48(48),bit49(49),bit50(50),bit51(51),
      bit52(52),bit53(53),bit54(54),bit55(55),bit56(56),
      bit57(57),bit58(58),bit59(59),bit60(60),bit61(61),
      bit62(62),bit63(63)
      }
```

```
    ngadslMIB MODULE-IDENTITY
       LAST-UPDATED "200506010000Z" --         June 01, 2005
       ORGANIZATION "ADSLMIB Working Group"
       CONTACT-INFO "WG-email:  adslmib@ietf.org
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            "
-------------------------------------------------
--          adsl2LineStatusTable               --
-------------------------------------------------

adsl2LineStatusTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineStatusTable contains status parameters of ADSL2
      line"
     ::= { adsl2Status  1 }
```

```
adsl2LineStatusEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineStatusTable contains status parameters of ADSL2
      line"

     INDEX  { adsl2LStatusLineIfIndex }

     ::= { adsl2LineStatusTable  1 }

Adsl2LineStatusEntry  ::=
     SEQUENCE {
     adsl2LStatusLineIfIndex         Unsigned32,
     adsl2LStatusAtuTransSys         Adsl2TransmissionModeType,
     adsl2LStatusPwrMngState         Adsl2PowerMngState,
     adsl2LStatusInitResult          Adsl2InitResult,
     adsl2LStatusLastStateDs         Unsigned32 (0..10),
     adsl2LStatusLastStateUs         Unsigned32 (0..10),
     adsl2LStatusStatusAtur          Unsigned32,
     adsl2LStatusStatusAtuc          Unsigned32,
     adsl2LStatusLnAttenDs           Unsigned32,
     adsl2LStatusLnAttenUs           Unsigned32,
     adsl2LStatusSigAttenDs          Unsigned32,
     adsl2LStatusSigAttenUs          Unsigned32,
     adsl2LStatusSnrMarginDs         Integer32,
     adsl2LStatusSnrMarginUs         Integer32,
     adsl2LStatusAttainableRateDs    Unsigned32,
     adsl2LStatusAttainableRateUs    Unsigned32,
     adsl2LStatusActPsdDs            Integer32,
     adsl2LStatusActPsdUs            Integer32,
     adsl2LStatusActAtpdDs           Integer32,
     adsl2LStatusActAtpdUs           Integer32
     }


adsl2LStatusLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
     ATUC board in the system."
     ::= { adsl2LineStatusEntry 1 }
```

```
adsl2LStatusAtuTransSys  OBJECT-TYPE
     SYNTAX      Adsl2TransmissionModeType
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU Transmission System (ATS) in use.
     It is coded in a bit-map representation with one bit set to  '1'
     (the selected coding for the ADSL line).
     This parameter may be derived from the handshaking procedures
     defined in Recommendation G.994.1.
     A set of ADSL2 line transmission modes, with one bit per mode.
     The notes (F) and (L) denote Full-Rate and Lite/splitterless
     respectively:
     Bit 00 : Regional Std. (ANSI T1.413) (F)
     Bit 01 : Regional Std. (ETSI DTS/TM06006) (F)
     Bit 02 : G.992.1 POTS non-overlapped (F)
     Bit 03 : G.992.1 POTS overlapped (F)
     Bit 04 : G.992.1 ISDN non-overlapped (F)
     Bit 05 : G.992.1 ISDN overlapped (F)
     Bit 06 : G.992.1 TCM-ISDN non-overlapped (F)
     Bit 07 : G.992.1 TCM-ISDN overlapped (F)
     Bit 08 : G.992.2 POTS non-overlapped (L)
     Bit 09 : G.992.2 POTS overlapped (L)
     Bit 10 : G.992.2 with TCM-ISDN non-overlapped (L)
     Bit 11 : G.992.2 with TCM-ISDN overlapped (L)
     Bit 12 : G.992.1 TCM-ISDN symmetric (F) --- not in G.997.1
     Bit 13-17: Reserved
     Bit 18 : G.992.3 POTS non-overlapped (F)
     Bit 19 : G.992.3 POTS overlapped (F)
     Bit 20 : G.992.3 ISDN non-overlapped (F)
     Bit 21 : G.992.3 ISDN overlapped (F)
     Bit 22-23: Reserved
     Bit 24 : G.992.4 POTS non-overlapped (L)
     Bit 25 : G.992.4 POTS overlapped (L)
     Bit 26-27: Reserved
     Bit 28 : G.992.3 Annex I All-Digital non-overlapped (F)
     Bit 29 : G.992.3 Annex I All-Digital overlapped (F)
     Bit 30 : G.992.3 Annex J All-Digital non-overlapped (F)
     Bit 31 : G.992.3 Annex J All-Digital overlapped (F)
     Bit 32 : G.992.4 Annex I All-Digital non-overlapped (L)
     Bit 33 : G.992.4 Annex I All-Digital overlapped (L)
     Bit 34 : G.992.3 Annex L POTS non-overlapped, mode 1, wide U/S (F)
     Bit 35 : G.992.3 Annex L POTS non-overlapped, mode 2, narrow U/S(F)
     Bit 36 : G.992.3 Annex L POTS overlapped, mode 3, wide U/S (F)
     Bit 37 : G.992.3 Annex L POTS overlapped, mode 4, narrow U/S (F)
     Bit 38 : G.992.3 Annex M POTS non-overlapped (F)
     Bit 39 : G.992.3 Annex M POTS overlapped (F)
     Bit 40 : G.992.5 POTS non-overlapped (F)
     Bit 41 : G.992.5 POTS overlapped (F)
```

Bit 42 : G.992.5 ISDN non-overlapped (F)
Bit 43 : G.992.5 ISDN overlapped (F)

```
     Bit 44-45: Reserved
     Bit 46 : G.992.5 Annex I All-Digital non-overlapped (F)
     Bit 47 : G.992.5 Annex I All-Digital overlapped (F)
     Bit 48 : G.992.5 Annex J All-Digital non-overlapped (F)
     Bit 49 : G.992.5 Annex J All-Digital overlapped (F)
     Bit 50 : G.992.5 Annex M POTS non-overlapped (F)
     Bit 51 : G.992.5 Annex M POTS overlapped (F)
     Bit 52-55 : Reserved"
     ::= { adsl2LineStatusEntry 2 }

adsl2LStatusPwrMngState  OBJECT-TYPE
     SYNTAX      Adsl2PowerMngState
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The current power management state. One of four possible power
      management states:
     L0 - Synchronized and full transmission (i.e. Showtime),
     L1 - Power Down with reduced net data rate (G.992.2 only),
     L2 - Power Down with reduced net data rate (G.992.3 and G.992.4
          only),
     L3 - No power
     The various possible values are:L0(0), L1(1), L2(2), L3(3)."
     ::= { adsl2LineStatusEntry 3 }

adsl2LStatusInitResult  OBJECT-TYPE
     SYNTAX      Adsl2InitResult
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Indicates the result of the last full initialization performed on
      the line. It is an enumeration type with the
      following values: noFailure(0), configError(1),
      configNotFeasible(2),commFail(3), noPeerAtu(4), otherCause(5)."
     ::= { adsl2LineStatusEntry 4 }

adsl2LStatusLastStateDs  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..10)
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The last successful transmitted initialization state in the
      downstream direction in the last full initialization
      performed on the line. States are per the specific ADSL type
      and are counted from 0 (if G.994.1 is used) or 1 (if G.994.1 is
      not used) up to Showtime."
     ::= { adsl2LineStatusEntry 5 }
```

```
adsl2LStatusLastStateUs  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..10)
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The last successful transmitted initialization state in the
     upstream direction in the last full initialization performed on the
     line. States are per the specific ADSL type and are counted from 0
     (if G.994.1 is used) or 1 (if G.994.1 is not used) up to Showtime."
     ::= { adsl2LineStatusEntry 6 }

adsl2LStatusStatusAtur  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Indicates current state (existing failures) of the ATU-R. This is
      a bit-map of possible conditions. The various bit positions are:
     noFailure(0), lossOfFraming(1), lossOfSignal(2), lossOfPower(3),
     InitFailure(4) - never active on ATU-R"
     ::= { adsl2LineStatusEntry 7 }

adsl2LStatusStatusAtuc  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Indicates current state (existing failures) of the ATU-C. This is
     a bit-map of possible conditions. The various bit positions are:
     noFailure(0), lossOfFraming(1), lossOfSignal(2), lossOfPower(3),
     InitFailure(4)"
     ::= { adsl2LineStatusEntry 8 }

adsl2LStatusLnAttenDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
     ATU-C and the total power received by the ATU-R over all sub
     carriers during diagnostics mode and initialization.
     It ranges from 0 to 1270 units of 0.1 dB. (Physical values are 0
     to 127 dB). A value of all 1's indicates the line attenuation is
     out of range to be represented."
     ::= { adsl2LineStatusEntry 9 }
```

```
adsl2LStatusLnAttenUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
     ATU-R and the total power received by the ATU-C over all sub
     carriers during diagnostics mode and initialization.
     It ranges from 0 to 1270 units of 0.1 dB. (Physical values are 0 to
     127 dB). A value of all 1's indicates the line attenuation is out
     of range to be represented."
     ::= { adsl2LineStatusEntry 10 }

adsl2LStatusSigAttenDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
     ATU-C and the total power received by the ATU-R over all sub
     carriers during Showtime. It ranges from 0 to 1270 units of 0.1 dB.
     (Physical values are 0 to 127 dB). A value of all 1's indicates the
     line attenuation is out of range to be represented."
     ::= { adsl2LineStatusEntry 11 }

adsl2LStatusSigAttenUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
     ATU-R and the total power received by the ATU-C over all sub
     carriers during Showtime. It ranges from 0 to 1270 units of 0.1 dB.
     (Physical values are 0 to 127 dB). A value of all 1's indicates the
     line attenuation is out of range to be represented."
     ::= { adsl2LineStatusEntry 12 }

adsl2LStatusSnrMarginDs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Downstream SNR Margin is the maximum increase in dB of the noise
     power received at the ATU-R, such that the BER requirements are
     met for all downstream bearer channels. It ranges from -640 to 630
     units of 0.1 dB. (Physical values are -64 to 63 dB). A value of all
     1's indicates the line attenuation is out of range to be
     represented."
     ::= { adsl2LineStatusEntry 13 }
```

```
adsl2LStatusSnrMarginUs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Upstream SNR Margin is the maximum increase in dB of the noise
     power received at the ATU-C, such that the BER requirements are
     met for all downstream bearer channels.. It ranges from -640 to
     630 units of 0.1 dB. (Physical values are -64 to 63 dB).
     A value of all 1's indicates the line attenuation is out of
     range to be represented."
     ::= { adsl2LineStatusEntry 14 }

adsl2LStatusAttainableRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Maximum Attainable Data Rate Downstream.
     The maximum downstream net data rate currently attainable by the
     ATU-C transmitter and the ATU-R receiver, coded in bit/s."
     ::= { adsl2LineStatusEntry 15 }

adsl2LStatusAttainableRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Maximum Attainable Data Rate Upstream.
     The maximum upstream net data rate currently attainable by the
     ATU-R transmitter and the ATU-C receiver, coded in bit/s."
     ::= { adsl2LineStatusEntry 16 }

adsl2LStatusActPsdDs OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Power Spectrum Density (PSD) Downstream. The average
     downstream transmit PSD over the sub carriers used for
     downstream. It ranges from -900 to 0 units of 0.1 dB. (Physical
     values are -90 to 0 dBm/Hz). A value of all 1's
     indicates the measurement is out of range to be represented."
     ::= { adsl2LineStatusEntry 17 }
```

```
adsl2LStatusActPsdUs OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Power Spectrum Density (PSD) Upstream. The average upstream
      transmit PSD over the sub carriers used for upstream. It ranges
      from -900 to 0 units of 0.1 dB. (Physical values are -90 to 0
      dBm/Hz). A value of all 1's indicates the measurement is out of
      range to be represented."
     ::= { adsl2LineStatusEntry 18 }

adsl2LStatusActAtpdDs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Aggregate Transmit Power Downstream. The total amount of
     transmit power delivered by the ATU?C at the U-C reference point,
     at the instant of measurement. It ranges from -310 to 310 units of
     0.1 dB. (Physical values are -31 to 31 dBm). A value of all 1's
     indicates the measurement is out of range to be represented."
     ::= { adsl2LineStatusEntry 19 }

adsl2LStatusActAtpdUs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Aggregate Transmit Power Upstream. The total amount of
      transmit power delivered by the ATU?R at the U-R
     reference point, at the instant of measurement. It ranges from
     -310 to 310 units of 0.1 dB. (Physical values are -31 to 31 dBm).
      A value of all 1's indicates the measurement is out of range to
      be represented."
     ::= { adsl2LineStatusEntry 20 }


-----------------------------------------------
--        adsl2ChannelStatusTable             --
-----------------------------------------------

adsl2ChannelStatusTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2ChannelStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2ChannelStatusTable contains status
     parameters of ADSL2 channel."
```

```
    ::= { adsl2Status  2 }
```

```
adsl2ChannelStatusEntry  OBJECT-TYPE
     SYNTAX      Adsl2ChannelStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2ChannelStatusTable contains status
     parameters of ADSL2 channel."

     INDEX  { adsl2ChStatusChannelIfIndex, adsl2ChStatusUnit}

     ::= { adsl2ChannelStatusTable  1 }

Adsl2ChannelStatusEntry  ::=
     SEQUENCE {
     adsl2ChStatusChannelIfIndex      Unsigned32,
     adsl2ChStatusUnit                Adsl2Unit,
     adsl2ChStatusActDataRate         Unsigned32(0..50000000),
     adsl2ChStatusPrevDataRate        Unsigned32(0..50000000),
     adsl2ChStatusActDelay            Unsigned32(0..64),
     adsl2ChStatusAtmStatus           Unsigned32
      }

adsl2ChStatusChannelIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain channel on the
     ADSL line on an ATUC board in the system."
     ::= { adsl2ChannelStatusEntry 1 }

adsl2ChStatusUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit ATUC(1) or ATUR(2)."
     ::= { adsl2ChannelStatusEntry 2 }

adsl2ChStatusActDataRate  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The actual net data rate the bearer channel is operating at,
     if in L0 power management state. In L1 or L2 states, it relates
     to the previous L0 state. The data rate is coded in bit/s."
     ::= { adsl2ChannelStatusEntry 3 }
```

```
adsl2ChStatusPrevDataRate  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The previous net data rate the bearer channel was operating at
      just before the latest rate change event.  This could be a full
      or short initialization, fast retrain, DRA or power management
      transitions, excluding transitions between L0 state and L1 or
      L2 states. The data rate is coded in bit/s."
     ::= { adsl2ChannelStatusEntry 4 }

adsl2ChStatusActDelay  OBJECT-TYPE
     SYNTAX      Unsigned32(0..64)
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The actual one-way interleaving delay introduced by the
     PMS-TC in the direction of the bearer channel, if in L0
     power management state. In L1 or L2 states, it relates to
     the previous L0 state. It is coded in ms (rounded to the
     nearest ms)."
     ::= { adsl2ChannelStatusEntry 5 }

adsl2ChStatusAtmStatus  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Indicates current state (existing failures) of the ADSL channel
      in case its Data Path is ATM. This is a bit-map of possible
      conditions. The various bit positions are:
     noFailure(0),
     noCellDelineation(1),
     lossOfCellDelineation (2).
     In case the channel is not of ATM Data Path the object is set
     to '0'."
     ::= { adsl2ChannelStatusEntry 6 }

-----------------------------------------------
--        Adsl2SCStatusTable                 --
-----------------------------------------------

adsl2SCStatusTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2SCStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table adsl2SCStatusTable contains status parameters
```

```
      of ADSL2 sub carriers."
      ::= { Adsl2Status  3 }
```

```
adsl2SCStatusEntry  OBJECT-TYPE
     SYNTAX      Adsl2SCStatusEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Hfadsl2SCStatusEntry contains status parameters
     of ADSL2 sub carriers."
     INDEX  { adsl2SCStatusLineIfIndex}
     ::= { adsl2SCStatusTable  1 }

Adsl2SCStatusEntry  ::=
     SEQUENCE {
     adsl2SCStatusLineIfIndex         Unsigned32,
     adsl2SCStatusSnrDs                 OCTET STRING  ( SIZE (0..512)),
     adsl2SCStatusSnrUs                 OCTET STRING  ( SIZE (0..64)),
     adsl2SCStatusBitsAllocDs           OCTET STRING  ( SIZE (0..256)),
     adsl2SCStatusBitsAllocUs           OCTET STRING  ( SIZE (0..32)),
     adsl2SCStatusGainAllocDs           OCTET STRING  ( SIZE (0..1024)),
     adsl2SCStatusGainAllocUs           OCTET STRING  ( SIZE (0..128)),
     adsl2SCStatusLinScaleDs            Integer32,
     adsl2SCStatusLinRealDs             OCTET STRING  ( SIZE (0..1024)),
     adsl2SCStatusLinImgDs              OCTET STRING  ( SIZE (0..1024)),
     adsl2SCStatusLogMtDs               Unsigned32,
     adsl2SCStatusLogDs                 OCTET STRING  ( SIZE (0..1024)),
     adsl2SCStatusLinScaleUs            Integer32,
     adsl2SCStatusLinRealUs             OCTET STRING  ( SIZE (0..128)),
     adsl2SCStatusLinImgUs              OCTET STRING  ( SIZE (0..128)),
     adsl2SCStatusLogMtUs               Unsigned32,
     adsl2SCStatusLogUs                 OCTET STRING  ( SIZE (0..128)),
     adsl2SCStatusQlnMtDs               Unsigned32,
     adsl2SCStatusQlnDs                 OCTET STRING  ( SIZE (0..512)),
     adsl2SCStatusQlnMtUs               Unsigned32,
     adsl2SCStatusQlnUs                 OCTET STRING  ( SIZE (0..64)),
     adsl2SCStatusLnAttenDs             Unsigned32,
     adsl2SCStatusLnAttenUs             Unsigned32,
     adsl2SCStatusSigAttenDs            Unsigned32,
     adsl2SCStatusSigAttenUs            Unsigned32,
     adsl2SCStatusSnrMarginDs           Integer32,
     adsl2SCStatusSnrMarginUs           Integer32,
     adsl2SCStatusAttainableRateDs      Unsigned32,
     adsl2SCStatusAttainableRateUs      Unsigned32,
     adsl2SCStatusActAtpDs              Integer32,
     adsl2SCStatusActAtpUs              Integer32
     }

adsl2SCStatusLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
```

```
    DESCRIPTION
    "The ifIndex pattern that identifies a certain ADSL line on an
    xTUC board in the system."
    ::= { adsl2SCStatusEntry 1 }
```

```
adsl2SCStatusSnrDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..512))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The SNR Margin per subcarrier, expressing the ratio between the
      received signal power and received noise power per subscriber.
      An array of 512 bytes, for up to 512 downstream
     sub-carriers, depending on NSCds. Byte i (0<=i<NSCds) is set to a
      value in the range 0 to 254 to indicate that the respective
      downstream sub-carrier i has SNR
     of: (-32 + Adsl2SubcarrierSnrDs(i)/2) in dB (i.e., -32 to 95dB).
     The special value 255 means that no measurement could be done for
     the subcarrier because it is out of the PSD mask passband or that
     the noise PSD is out of range to be represented."
     ::= { adsl2SCStatusEntry 3 }

adsl2SCStatusSnrUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..64))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The SNR Margin per subcarrier, expressing the ratio between the
     received signal power and received noise power per subscriber.
     An array of 64 bytes, for up to 64 upstream sub-carriers,
     depending on NSCus. Byte i (0<=i<NSCus) is set to a value in the
     range 0 to 254 to indicate that the respective upstream sub-carrier
     i has SNR of: (-32 + Adsl2SubcarrierSnrUs(i)/2) in dB
     (i.e., -32 to 95dB). The special value 255 means that no
     measurement could be done for the subcarrier because it is out of
     the PSD mask passband or that the noise PSD is out of range to
     be represented."
     ::= { adsl2SCStatusEntry 5 }

adsl2SCStatusBitsAllocDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..256))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The bits allocation per subcarrier. An array of 256 bytes
     (512 nibbles), for up to 512 downstream sub-carriers, depending
      on NSCds. Nibble i (0<=i<NSCds) is set to a value in the range
      0 to 15 to indicate that the respective downstream sub-carrier
      i has the same amount of bits allocation."
     ::= { adsl2SCStatusEntry 6 }
```

```
adsl2SCStatusBitsAllocUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..32))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The bits allocation per subcarrier. An array of 32 bytes
     (64 nibbles), for up to 64 upstream sub-carriers, depending on
     NSCus. Nibble i (0<=i<NSCus) is set to a value in the range 0
     to 15 to indicate that the respective upstream sub-carrier i
     has the same amount of bits allocation."
     ::= { adsl2SCStatusEntry 7 }

adsl2SCStatusGainAllocDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..1024))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The gain allocation per subcarrier. An array of 512 16-bits
     values, for up to 512 downstream sub-carriers, depending on NSCds.
     Value i (0<=i<NSCds) is in the range 0 to 4093 to indicate that
     the respective downstream sub-carrier i has the same amount of gain
     value. The gain value is represented as a multiple of 1/512 on
     linear scale."
     ::= { adsl2SCStatusEntry 8 }

adsl2SCStatusGainAllocUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..128))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The gain allocation per subcarrier. An array of 64 16-bits values,
     for up to 64 upstream sub-carriers, depending on NSCus.
     Value i (0<=i<NSCus) is in the range 0 to 4093 to indicate that the
     respective upstream sub-carrier i has the same amount of gain
     value. The gain value is represented as a multiple of 1/512 on
     linear scale."
     ::= { adsl2SCStatusEntry 9 }

adsl2SCStatusLinScaleDs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The scale factor to be applied to the downstream H(f) linear
     representation values.  This parameter is only available after a
     loop diagnostic procedure."
     ::= { adsl2SCStatusEntry 10 }
```

```
adsl2SCStatusLinRealDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..1024))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 512 complex downstream H(f) linear representation
     values in linear scale for up to 512 downstream sub-carriers,
     depending on NSCds.  Each array entry represents the real component
     [referred here as a(i)] of Hlin(f = i*Df) value for a particular
     sub-carrier index i (0<=i<NSCds).  Hlin(f) is represented as
     ((scale/2^15)*((a(i)+j*b(i))/2^15)), where scale is
     Adsl2SubcarrierLinScaleDs and a(i) and b(i) [provided by the
     Adsl2SubcarrierLinDsImg object] are in the range (-2^15+1) to
     (+2^15-1).
     A special value a(i)=b(i)= -2^15 indicates that no measurement
     could be done for the subcarrier because it is out of the passband
     or that the attenuation is out of range to be represented. This
     parameter is only available after a loop diagnostic procedure."
     ::= { adsl2SCStatusEntry 11 }

adsl2SCStatusLinImgDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..1024))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 512 complex downstream H(f) linear representation
     values in linear scale for up to 512 downstream sub-carriers,
     depending on NSCds.  Each array entry represents the imaginary
     component [referred here as b(i)] of Hlin(f = i*Df) value for
     a particular sub-carrier index i (0<=i<NSCds).
     Hlin(f) is represented as ((scale/2^15)*((a(i)+j*b(i))/2^15)),
     where scale is Adsl2SubcarrierLinScaleDs and a(i) [provided by
     the Adsl2SubcarrierLinDsReal object] and b(i) are in the range
     (-2^15+1) to (+2^15-1). A special value a(i)=b(i)= -2^15 indicates
     that no measurement could be done for the subcarrier because it is
     out of the passband or that the attenuation is out of range to be
     represented. This parameter is only available after a loop
     diagnostic procedure."
     ::= { adsl2SCStatusEntry 12 }

adsl2SCStatusLogMtDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The number of symbols used to measure the downstream H(f)
     logarithmic measurement values.  This parameter should correspond
     to the value specified in the recommendation (e.g. the number of
     symbols in 1 s. time interval for G.992.3). This parameter
```

```
    corresponds to 1 second in loop diagnostic procedure and should be
    updated in initialization"
    ::= { adsl2SCStatusEntry 13 }
```

```
adsl2SCStatusLogDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..1024))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 512 real downstream H(f) logarithmic representation
      values in dB for up to 512 downstream sub-carriers, depending on
      NSCds. Each array entry represents the real Hlog(f = i*Df) value
      for a particular sub-carrier index i, (0<=i<NSCds).
      The real Hlog(f) value is represented as (6-m(i)/10), with m(i) in
      the range 0 to 1022.  A special value m=1023 indicates that no
      measurement could be done for the subcarrier because it is out of
      the passband or that the attenuation is out of range to be
      represented. This parameter is applicable in loop diagnostic
      procedure and initialization."
     ::= { adsl2SCStatusEntry 14 }

adsl2SCStatusLinScaleUs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The scale factor to be applied to the upstream H(f) linear
      representation values.  This parameter is only available after a
      loop diagnostic procedure."
     ::= { adsl2SCStatusEntry 15 }

adsl2SCStatusLinRealUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..128))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 64 complex upstream H(f) linear representation values
      in linear scale for up to 64 upstream sub-carriers, depending on
      NSCus. Each array entry represents the real component [referred
      here as a(i)] of Hlin(f = i*Df) value for a particular sub-carrier
      index i (0<=i<NSCus). Hlin(f) is represented as
      ((scale/2^15)*((a(i)+j*b(i))/2^15)), where scale is
      Adsl2SubcarrierLinScaleUs and a(i) and b(i) [provided by the
      Adsl2SubcarrierLinUsImg object] are in the range (-2^15+1) to
      (+2^15-1). A special value a(i)=b(i)= -2^15 indicates that no
      measurement could be done for the subcarrier because it is out of
      the passband or that the attenuation is out of range to be
      represented. This parameter is only available after a loop
      diagnostic procedure."
     ::= { adsl2SCStatusEntry 16 }
```

```
adsl2SCStatusLinImgUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..128))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 64 complex upstream H(f) linear representation values
      in linear scale for up to 64 upstream sub-carriers, depending on
      NSCus. Each array entry represents the imaginary component
      [referred here as b(i)] of Hlin(f = i*Df) value for a particular
      sub-carrier index i (0<=i<NSCus). Hlin(f) is represented as
      ((scale/2^15)*((a(i)+j*b(i))/2^15)), where scale is
      Adsl2SubcarrierLinScaleUs and a(i) [provided by the
      Adsl2SubcarrierLinUsReal object] and b(i) are in the range
      (-2^15+1) to (+2^15-1).  A special value a(i)=b(i)= -2^15
      indicates that no measurement could be done for the subcarrier
      because it is out of the passband or that the attenuation is out
      of range to be represented. This parameter is only available after
      a loop diagnostic procedure."
     ::= { adsl2SCStatusEntry 17 }

adsl2SCStatusLogMtUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The number of symbols used to measure the upstream H(f)
     logarithmic measurement values.  This parameter should correspond
     to the value specified in the recommendation (e.g. the number of
     symbols in 1 s. time interval for G.992.3).  This parameter
     corresponds to 1 second in loop diagnostic procedure and should be
     updated in initializationis "
     ::= { adsl2SCStatusEntry 18 }

adsl2SCStatusLogUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..128))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 64 real upstream H(f) logarithmic representation
      values in dB for up to 64 upstream sub-carriers, depending on
      NSCus. Each array entry represents the real Hlog(f = i*Df) value
      for a particular sub-carrier index i, (0<=i<NSCus).  The real
      Hlog(f) value is represented as (6-m(i)/10), with m(i) in the
      range 0 to 1022.  A special value m=1023 indicates that no
      measurement could be done for the subcarrier because it is out of
      the passband or that the attenuation is out of range to be
      represented. This parameter is applicable in loop diagnostic
      procedure and initialization."
     ::= { adsl2SCStatusEntry 19 }
```

```
adsl2SCStatusQlnMtDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The number of symbols used to measure the downstream Quiet Line
      Noise values.   This parameter should correspond to the value
      specified in the recommendation (e.g. the number of symbols in
      1 s. time interval for G.992.3).  This parameter corresponds to
      1 second in loop diagnostic procedure and should be updated in
      initialization "
     ::= { adsl2SCStatusEntry 20 }

adsl2SCStatusQlnDs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..512))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 512 real downstream Quiet Line Noise values in dB for
      up to 512 downstream sub-carriers, depending on NSCds. Each array
      entry represents the QLN(f = i*Df) value for a particular
      subcarrier index i, (0<=i<NSCds). The QLN(f) is represented as
      ( -23-n(i)/2), with n(i) in the range 0 to 254.  A special value
      n(i)=255 indicates that no measurement could be done for the
      subcarrier because it is out of the passband or that the noise PSD
      is out of range to be represented.   This parameter is applicable
      in loop diagnostic procedure and initialization."
     ::= { adsl2SCStatusEntry 21 }

adsl2SCStatusQlnMtUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The number of symbols used to measure the upstream Quiet Line
      Noise values.  This parameter should correspond to the value
      specified in the recommendation (e.g. the number of symbols in
      1 s. time interval for G.992.3).  This parameter corresponds to 1
      second in loop diagnostic procedure and should be updated in
      initializationis updated after a loop diagnostic procedure."
     ::= { adsl2SCStatusEntry 22 }
```

```
adsl2SCStatusQlnUs  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..64))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "An array of 64 real upstream Quiet Line Noise values in dB for up
      to 64 upstream sub-carriers, depending on NSCus. Each array entry
      represents the QLN(f = i*Df) value for a particular sub-carrier
      index i, (0<=i<NSCus).  The QLN(f) is represented as (-23-n(i)/2),
      with n(i) in the range 0 to 254.  A special value n(i)=255
      indicates that no measurement could be done for the subcarrier
      because it is out of the passband or that the noise PSD is out of
      range to be represented.   This parameter is applicable in loop
      diagnostic procedure and initialization."
     ::= { adsl2SCStatusEntry 23 }

adsl2SCStatusLnAttenDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
      ATU-C and the total power received by the ATU-R over all sub
      carriers during diagnostics mode and initialization. It ranges
      from 0 to 1270 units of 0.1 dB. (Physical values are 0 to 127 dB).
      A value of all 1's indicates the line attenuation is out of range
      to be represented."
     ::= { adsl2SCStatusEntry 24 }

adsl2SCStatusLnAttenUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
      ATU-R and the total power received by the ATU-C over all sub
      carriers during diagnostics mode and initialization. It ranges
      from 0 to 1270 units of 0.1 dB. (Physical values are 0 to 127 dB).
      A value of all 1's indicates the line attenuation is out of range
      to be represented."
     ::= { adsl2SCStatusEntry 25 }

adsl2SCStatusSigAttenDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
      ATU-C and the total power received by the ATU-R over all sub
```

```
      carriers during Showtime.  It ranges from 0 to 1270 units of 0.1
      dB. (Physical values are 0 to 127 dB).  A value of all 1's
      indicates the line attenuation is out of range to be represented."
     ::= { adsl2SCStatusEntry 26 }
```

```
adsl2SCStatusSigAttenUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The measured difference in the total power transmitted by the
      ATU-R and the total power received by the ATU-C over all sub
      carriers during Showtime.  It ranges from 0 to 1270 units of 0.1
      dB. (Physical values are 0 to 127 dB).  A value of all 1's
      indicates the line attenuation is out of range to be represented."
     ::= { adsl2SCStatusEntry 27 }

adsl2SCStatusSnrMarginDs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "SNR Margin is the maximum increase in dB of the noise power
      received at the ATU-R, such that the BER requirements are met for
      all bearer channels received at the ATU-R.  It ranges from -640 to
      630 units of 0.1 dB. (Physical values are -64 to 63 dB). A value
      of all 1's indicates the SNR margin is out of range to be
      represented."
     ::= { adsl2SCStatusEntry 28 }

adsl2SCStatusSnrMarginUs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "SNR Margin is the maximum increase in dB of the noise power
      received at the ATU-C, such that the BER requirements are met for
      all bearer channels received at the ATU-C. It ranges from -640 to
      630 units of 0.1 dB. (Physical values are -64 to 63 dB). A value
      of all 1's indicates the SNR margin is out of range to be
      represented."
     ::= { adsl2SCStatusEntry 29 }

adsl2SCStatusAttainableRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Maximum Attainable Data Rate. The maximum net data rate currently
      attainable by the ATU-C transmitter and ATU-R receiver, coded in
      bit/s."
     ::= { adsl2SCStatusEntry 30 }
```

```
adsl2SCStatusAttainableRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Maximum Attainable Data Rate. The maximum net data rate currently
      attainable by the ATU-R transmitter and ATU-C receiver, coded in
      bit/s."
     ::= { adsl2SCStatusEntry 31 }

adsl2SCStatusActAtpDs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Aggregate Transmit Power from the ATU-C. The total amount
      of transmit-power delivered at either the U-C (ATU-C) reference
      point, at the instant of measurement.  It ranges from -310 to 310
      units of 0.1 dB. (Physical values are -31 to 31 dBm).  A value of
      all 1's indicates the measurement is out of range to be
      represented."
     ::= { adsl2SCStatusEntry 32 }

adsl2SCStatusActAtpUs  OBJECT-TYPE
     SYNTAX      Integer32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Actual Aggregate Transmit Power from the ATU-R. The total amount
      of transmit-power delivered at either the U-C (ATU-R) reference
      point, at the instant of measurement.  It ranges from -310 to 310
      units of 0.1 dB. (Physical values are -31 to 31 dBm).  A value of
      all 1's indicates the measurement is out of range to be
      represented."
     ::= { adsl2SCStatusEntry 33 }

-----------------------------------------------
--        adsl2LineInventoryTable            --
-----------------------------------------------

adsl2LineInventoryTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineInventoryEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineInventoryTable contains inventory of ADSL2
      unit."
     ::= { adsl2Inventory  1 }
```

```
adsl2LineInventoryEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineInventoryEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineInventoryTable contains inventory of ADSL2
      unit."
     INDEX  { adsl2LInvLineIfIndex ,adsl2LInvUnit }

     ::= { adsl2LineInventoryTable  1 }

Adsl2LineInventoryEntry  ::=
     SEQUENCE {
     adsl2LInvLineIfIndex              Unsigned32,
     adsl2LInvUnit                     Adsl2Unit,
     adsl2LInvG994VendorId             OCTET STRING  ( SIZE (0..8)),
     adsl2LInvSystemVendorId           OCTET STRING  ( SIZE (0..8)),
     adsl2LInvVersionNumber            OCTET STRING  ( SIZE (0..16)),
     adsl2LInvSerialNumber             OCTET STRING  ( SIZE (0..32)),
     adsl2LInvSelfTestResult           OCTET STRING  ( SIZE (0..4)),
     adsl2LInvTransmissionCapabilities  Adsl2TransmissionModeType
     }

adsl2LInvLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain channel on the ADSL
      line on an ATUC board in the system."
     ::= { adsl2LineInventoryEntry 1 }

adsl2LInvUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit ATUC{1} or ATUR{2}."
     ::= { adsl2LineInventoryEntry 2 }

adsl2LInvG994VendorId  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..8))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU G.994.1 Vendor ID as inserted in the G.994.1 CL/CLR
      message. It consists of 8 binary octets, including a country code
      followed by a (regionally allocated) provider code, as defined in
      Recommendation T.35."
```

```
    ::= { adsl2LineInventoryEntry  3 }
```

```
adsl2LInvSystemVendorId  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..8))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU System Vendor ID (identifies the ATU system integrator) as
      inserted in the Overhead Messages (both ATUs for G.992.3 and
      G.992.4) or in the Embedded Operations Channel (only ATU-R in
      G.992.1 and G.992.2).  It consists of 8 binary octets, with same
      format as used for Adsl2InvG994VendorId."
     ::= { adsl2LineInventoryEntry  4 }

adsl2LInvVersionNumber  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..16))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU version number (vendor specific information) as inserted
      in the Overhead Messages (both ATUs for G.992.3 and G.992.4) or in
      the Embedded Operations Channel (only ATU-R in G.992.1 and
      G.992.2). It consists of up to 16 binary octets"
     ::= { adsl2LineInventoryEntry  5 }

adsl2LInvSerialNumber  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..32))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU serial number (vendor specific information) as inserted in
      the Overhead Messages (both ATUs for G.992.3 and G.992.4) or in
      the Embedded Operations Channel (only ATU-R in G.992.1 and
      G.992.2). It is vendor specific information. It consists of up to
      32 ASCII characters."
     ::= { adsl2LineInventoryEntry  6 }

adsl2LInvSelfTestResult  OBJECT-TYPE
     SYNTAX      OCTET STRING  ( SIZE (0..4))
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU self-test result, coded as a 32-bit integer. The most
      significant octet of this object is '0' if the self-test passed
      and '1' if the self-test failed. The interpretation of the other
      octets is vendor discretionary."
     ::= { adsl2LineInventoryEntry  7 }
```

```
adsl2LInvTransmissionCapabilities  OBJECT-TYPE
     SYNTAX      Adsl2TransmissionModeType
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The ATU transmission system capability list of the different
      coding types.  It is coded in a bit-map representation with 1 or
      more bits set. A bit set to  '1' means that the ATU supports the
      respective coding. The value may be derived from the handshaking
      procedures defined in G.994.1.
      A set of ADSL2 line transmission modes, with one bit per mode. The
      notes (F) and (L) denote Full-Rate and Lite/splitterless
      respectively:
      Bit 00 : Regional Std. (ANSI T1.413) (F)
      Bit 01 : Regional Std. (ETSI DTS/TM06006) (F)
      Bit 02 : G.992.1 POTS non-overlapped (F)
      Bit 03 : G.992.1 POTS overlapped (F)
      Bit 04 : G.992.1 ISDN non-overlapped (F)
      Bit 05 : G.992.1 ISDN overlapped (F)
      Bit 06 : G.992.1 TCM-ISDN non-overlapped (F)
      Bit 07 : G.992.1 TCM-ISDN overlapped (F)
      Bit 08 : G.992.2 POTS non-overlapped (L)
      Bit 09 : G.992.2 POTS overlapped (L)
      Bit 10 : G.992.2 with TCM-ISDN non-overlapped (L)
      Bit 11 : G.992.2 with TCM-ISDN overlapped (L)
      Bit 12 : G.992.1 TCM-ISDN symmetric (F) --- not in G.997.1
      Bit 13-17: Reserved
      Bit 18 : G.992.3 POTS non-overlapped (F)
      Bit 19 : G.992.3 POTS overlapped (F)
      Bit 20 : G.992.3 ISDN non-overlapped (F)
      Bit 21 : G.992.3 ISDN overlapped (F)
      Bit 22-23: Reserved
      Bit 24 : G.992.4 POTS non-overlapped (L)
      Bit 25 : G.992.4 POTS overlapped (L)
      Bit 26-27: Reserved
      Bit 28 : G.992.3 Annex I All-Digital non-overlapped (F)
      Bit 29 : G.992.3 Annex I All-Digital overlapped (F)
      Bit 30 : G.992.3 Annex J All-Digital non-overlapped (F)
      Bit 31 : G.992.3 Annex J All-Digital overlapped (F)
      Bit 32 : G.992.4 Annex I All-Digital non-overlapped (L)
      Bit 33 : G.992.4 Annex I All-Digital overlapped (L)
      Bit 34 : G.992.3 Annex L POTS non-overlapped, mode 1, wide U/S (F)
      Bit 35 : G.992.3 Annex L POTS non-overlapped, mode 2, narrow
               U/S (F)
      Bit 36 : G.992.3 Annex L POTS overlapped, mode 3, wide U/S (F)
      Bit 37 : G.992.3 Annex L POTS overlapped, mode 4, narrow U/S (F)
      Bit 38 : G.992.3 Annex M POTS non-overlapped (F)
      Bit 39 : G.992.3 Annex M POTS overlapped (F)
      Bit 40 : G.992.5 POTS non-overlapped (F)
```

Bit 41 : G.992.5 POTS overlapped (F)
Bit 42 : G.992.5 ISDN non-overlapped (F)
Bit 43 : G.992.5 ISDN overlapped (F)

```
      Bit 44-45: Reserved
      Bit 46 : G.992.5 Annex I All-Digital non-overlapped (F)
      Bit 47 : G.992.5 Annex I All-Digital overlapped (F)
      Bit 48 : G.992.5 Annex J All-Digital non-overlapped (F)
      Bit 49 : G.992.5 Annex J All-Digital overlapped (F)
      Bit 50 : G.992.5 Annex M POTS non-overlapped (F)
      Bit 51 : G.992.5 Annex M POTS overlapped (F)
      Bit 52-55 : Reserved"
     ::= { adsl2LineInventoryEntry  8 }


-----------------------------------------------
--        adsl2LineCommandTable               --
-----------------------------------------------

adsl2LineCommandTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineCommandEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table adsl2LineCommandTable provides tools t execute command
      on ADSL2 line level."
     ::= { adsl2Commands  1 }

adsl2LineCommandEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineCommandEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table adsl2LineCommandTable contains the assignment of ADSL2
      profile to line."
      INDEX  { adsl2LCmndLineIfIndex }

     ::= { adsl2LineCommandTable  1 }

Adsl2LineCommandEntry  ::=
     SEQUENCE {
     adsl2LCmndLineIfIndex          Unsigned32,
     adsl2LCmndConfPmsf             Adsl2ConfPmsForce,
     adsl2LCmndConfLdsf             Adsl2YesNo,
     adsl2LCmndConfLdsfFailReason   Unsigned32
     }

adsl2LCmndLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
```

```
      ATUC board in the system."
     ::= { adsl2LineCommandEntry 1 }
```

```
adsl2LCmndConfPmsf  OBJECT-TYPE
     SYNTAX      Adsl2ConfPmsForce
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Power management state forced. Defines the line states to be
      forced by the near-end ATU on this line. The various possible
      values are:
     L3toL0 (0),
     L0toL2 (2),
     L0orL2toL3 (3)."
     ::= { adsl2LineCommandEntry 2 }

adsl2LCmndConfLdsf  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Loop diagnostics mode forced (LDSF). Defines whether the line
      should be forced into the loop diagnostics mode by the near-end
      ATU on this line or only be responsive to loop diagnostics
      initiated by the far-end ATU. The various possible values are:
      Yes{1}, No{2}"
     ::= { adsl2LineCommandEntry 4 }

adsl2LCmndConfLdsfFailReason  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "The status of the recent occasion the Loop diagnostics mode forced
      (LDSF) was issued for the associated line. Possible values are:
      None {1} - The default value in case LDSF was never requested for
                 the associated line.
      Success {2} - The recent command completed successfully.
      InProgress {3} - The Loop Diagnostics process is in progress.
      Unsupported {4} - The NE or the line card doesn't support LDSF.
      CannotRun {5} - The NE cannot initiate the command, due to a non
                  specific reason.
      Aborted {6} - The Loop Diagnostics process aborted.
      Failed {7} - The Loop Diagnostics process failed.
      IllegalMode {8} - The NE cannot initiate the command, due to the
                  specific mode of the relevant line.
      AdminUp {9} - The NE cannot initiate the command, as the relevant
                  line is administratively 'Up'."
     ::= { adsl2LineCommandEntry 6 }

-------------------------------------------------
--        adsl2LineConfigTable                --
```

```
adsl2LineConfigTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineConfigEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfigTable contains the assignment of ADSL2
      profile to line."
     ::= { adsl2ConfigLine  1 }


adsl2LineConfigEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineConfigEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfigTable contains the assignment of ADSL2
      profile to line."
     INDEX  { adsl2LCnfgLineIfIndex }

     ::= { adsl2LineConfigTable  1 }

Adsl2LineConfigEntry  ::=
     SEQUENCE {
     adsl2LCnfgLineIfIndex       Unsigned32,
     adsl2LCnfgLineTemplate      SnmpAdminString
     }

adsl2LCnfgLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain channel on the ADSL
      line on an ATUC board in the system."
     ::= { adsl2LineConfigEntry 1 }

adsl2LCnfgLineTemplate  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Line
      Configuration Templates Table, (Adsl2ConfTemplatesTable), which
      applies for this ADSL2 line."
     ::= { adsl2LineConfigEntry 2 }



-----------------------------------------------
--        adsl2LineConfTemplateTable          --
```

```
adsl2LineConfTemplateTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineConfTemplateEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfTemplateTable contains ADSL2 line
      configuration template."
     ::= { adsl2ProfileLine  1 }

adsl2LineConfTemplateEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineConfTemplateEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfTemplateTable contains ADSL2 line
      configuration template."
     INDEX  { adsl2LConfTempTemplateName }

     ::= { adsl2LineConfTemplateTable  1 }

Adsl2LineConfTemplateEntry  ::=
     SEQUENCE {
     adsl2LConfTempTemplateName      SnmpAdminString ,
     adsl2LConfTempLineProfile       SnmpAdminString,
     adsl2LConfTempChan1ConfProfile  SnmpAdminString,
     adsl2LConfTempChan1RaRatioDs    Unsigned32(0..100),
     adsl2LConfTempChan1RaRatioUs    Unsigned32(0..100),
     adsl2LConfTempChan2ConfProfile  SnmpAdminString,
     adsl2LConfTempChan2RaRatioDs    Unsigned32(0..100),
     adsl2LConfTempChan2RaRatioUs    Unsigned32(0..100),
     adsl2LConfTempChan3ConfProfile  SnmpAdminString,
     adsl2LConfTempChan3RaRatioDs    Unsigned32(0..100),
     adsl2LConfTempChan3RaRatioUs    Unsigned32(0..100),
     adsl2LConfTempChan4ConfProfile  SnmpAdminString,
     adsl2LConfTempChan4RaRatioDs    Unsigned32(0..100),
     adsl2LConfTempChan4RaRatioUs    Unsigned32(0..100),
     adsl2LConfTempRowStatus         RowStatus
     }

adsl2LConfTempTemplateName  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "This object identifies a row in this table."
     ::= { adsl2LineConfTemplateEntry 1 }
```

```
adsl2LConfTempLineProfile  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Line
      Configuration Profile Table, (Adsl2LineConfProfileTable), which
      applies for this ADSL2 line."
     ::= { adsl2LineConfTemplateEntry 2 }

adsl2LConfTempChan1ConfProfile  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Channel
      Configuration Profile Table, (Adsl2ChanConfProfileTable), which
      applies for ADSL2 bearer channel #1. If channel is unused then
      the object is set to Null.."
     ::= { adsl2LineConfTemplateEntry 3 }

adsl2LConfTempChan1RaRatioDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #1 when performing rate adaptation
      on Downstream. The ratio refers to the available data rate in
      excess of the Minimum Data Rate summed over all bearer channels.
      Also, the 1- Adsl2ConfTemplateChan1RaRatioDs is the ratio of
      excess data rate to be assigned to all other bearer channels on
      Downstream direction.The sum of rate adaptation ratios over all
      bearers on the same direction shall be equal to 100%."
     ::= { adsl2LineConfTemplateEntry 4 }

adsl2LConfTempChan1RaRatioUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #1 when performing rate adaptation
      on Upstream. The ratio refers to the available data rate in excess
      of the Minimum Data Rate summed over all bearer channels. Also,
      the 1- Adsl2ConfTemplateChan1RaRatioUs is the ratio of excess data
      rate to be assigned to all other bearer channels on Upstream
      direction.The sum of rate adaptation ratios over all bearers on
      the same direction shall be equal to 100 %."
```

```
    ::= { adsl2LineConfTemplateEntry 5 }
```

```
adsl2LConfTempChan2ConfProfile  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Channel
      Configuration Profile Table, (Adsl2ChanConfProfileTable), which
      applies for ADSL2 bearer channel #2. If channel is unused then
      the object is set to Null."
     ::= { adsl2LineConfTemplateEntry 6 }

adsl2LConfTempChan2RaRatioDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #2 when performing rate adaptation
      on Downstream. The ratio refers to the available data rate in
      excess of the Minimum Data Rate summed over all bearer channels.
      Also, the 1- Adsl2ConfTemplateChan2RaRatioDs is the ratio of
      excess data rate to be assigned to all other bearer channels on
      Downstream direction.The sum of rate adaptation ratios over all
      bearers on the same direction shall be equal to 100%."
     ::= { adsl2LineConfTemplateEntry 7 }

adsl2LConfTempChan2RaRatioUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #2 when performing rate adaptation
      on Upstream. The ratio refers to the available data rate in excess
      of the Minimum Data Rate summed over all bearer channels. Also,
      the 1- Adsl2ConfTemplateChan2RaRatioUs is the ratio of excess data
      rate to be assigned to all other bearer channels on Upstream
      direction.The sum of rate adaptation ratios over all bearers on
      the same direction shall be equal to 100 %."
     ::= { adsl2LineConfTemplateEntry 8 }

adsl2LConfTempChan3ConfProfile  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Channel
      Configuration Profile Table, (Adsl2ChanConfProfileTable), which
      applies for ADSL2 bearer channel #3. If channel is unused then
```

```
      the object is set to Null."
     ::= { adsl2LineConfTemplateEntry 9 }
```

```
adsl2LConfTempChan3RaRatioDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #3 when performing rate adaptation
      on Downstream. The ratio refers to the available data rate in
      excess of the Minimum Data Rate summed over all bearer channels.
      Also, the 1- Adsl2ConfTemplateChan3RaRatioDs is the ratio of
      excess data rate to be assigned to all other bearer channels on
      Downstream direction.The sum of rate adaptation ratios over all
      bearers on the same direction shall be equal to 100%."
     ::= { adsl2LineConfTemplateEntry 10 }

adsl2LConfTempChan3RaRatioUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #3 when performing rate adaptation
      on Upstream. The ratio refers to the available data rate in excess
      of the Minimum Data Rate summed over all bearer channels. Also,
      the 1- Adsl2ConfTemplateChan3RaRatioUs is the ratio of excess data
      rate to be assigned to all other bearer channels on Upstream
      direction.The sum of rate adaptation ratios over all bearers on
      the same direction shall be equal to 100%."
     ::= { adsl2LineConfTemplateEntry 11 }

adsl2LConfTempChan4ConfProfile  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The value of this object identifies the row in the ADSL2 Channel
      Configuration Profile Table, (Adsl2ChanConfProfileTableDs), which
      applies for ADSL2 bearer channel #4. If channel is unused Then the
      object is set to Null."
     ::= { adsl2LineConfTemplateEntry 12 }

adsl2LConfTempChan4RaRatioDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #4 when performing rate adaptation
      on Downstream. The ratio refers to the available data rate in
      excess of the Minimum Data Rate summed over all bearer channels.
```

```
      Also, the 1- Chan4RaRatio is the ratio of excess data rate to be
      assigned to all other bearer channels.The sum of rate adaptation
      ratios over all bearers on the same direction shall sum to 100%."
     ::= { adsl2LineConfTemplateEntry 13 }
```

```
adsl2LConfTempChan4RaRatioUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..100)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Rate Adaptation Ratio. The ratio (in %) that should be taken into
      account for the bearer channel #4 when performing rate adaptation
      on Upstream. The ratio refers to the available data rate in
      excess of the Minimum Data Rate summed over all bearer channels.
      Also, the 1- Chan4RaRatio is the ratio of excess data rate to be
      assigned to all other bearer channels.The sum of rate adaptation
      ratios over all bearers on the same direction shall sum to 100%."
     ::= { adsl2LineConfTemplateEntry 14 }

adsl2LConfTempRowStatus  OBJECT-TYPE
     SYNTAX      RowStatus
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Row Status."
     ::= { adsl2LineConfTemplateEntry 15 }
----------------------------------------
--        adsl2LineConfProfTable        --
----------------------------------------

adsl2LineConfProfTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2LineConfProfEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfProfTable contains ADSL2 line profile
      configuration."
     ::= { adsl2ProfileLine  3 }

adsl2LineConfProfEntry  OBJECT-TYPE
     SYNTAX      Adsl2LineConfProfEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2LineConfProfTable contains ADSL2 line profile
      configuration."
     INDEX  { adsl2LConfProfProfileName }

     ::= { adsl2LineConfProfTable  1 }

Adsl2LineConfProfEntry  ::=
     SEQUENCE {
     adsl2LConfProfProfileName           SnmpAdminString,
     adsl2LConfProfScMaskDs              Adsl2ScMaskDs,
```

```
    adsl2LConfProfScMaskUs          Adsl2ScMaskUs,
    adsl2LConfProfRaModeDs          Adsl2RAMode,
    adsl2LConfProfRaModeUs          Adsl2RAMode,
    adsl2LConfProfRaUsNrmDs         Unsigned32(0..310),
```

```
     adsl2LConfProfRaUsNrmUs             Unsigned32(0..310),
     adsl2LConfProfRaUsTimeDs            Unsigned32(0..16383),
     adsl2LConfProfRaUsTimeUs            Unsigned32(0..16383),
     adsl2LConfProfRaDsNrmsDs            Unsigned32(0..310),
     adsl2LConfProfRaDsNrmsUs            Unsigned32(0..310),
     adsl2LConfProfRaDsTimeDs            Unsigned32(0..16383),
     adsl2LConfProfRaDsTimeUs            Unsigned32(0..16383),
     adsl2LConfProfTargetSnrmDs          Unsigned32(0..310),
     adsl2LConfProfTargetSnrmUs          Unsigned32(0..310),
     adsl2LConfProfMaxSnrmDs             Unsigned32,
     adsl2LConfProfMaxSnrmUs             Unsigned32,
     adsl2LConfProfMinSnrmDs             Unsigned32(0..310),
     adsl2LConfProfMinSnrmUs             Unsigned32(0..310),
     adsl2LConfProfMsgMinUs              Unsigned32(4000..64000),
     adsl2LConfProfMsgMinDs              Unsigned32(4000..64000),
     adsl2LConfProfAtuTransSysEna        Adsl2TransmissionModeType,
     adsl2LConfProfPmMode                Unsigned32,
     adsl2LConfProfL0Time                Unsigned32(0..255),
     adsl2LConfProfL2Time                Unsigned32(0..255),
     adsl2LConfProfL2Atpr                Unsigned32(0..31),
     adsl2LConfProfL2Atprt               Unsigned32(0..31),
     adsl2LConfProfMaxNomPsdDs           Integer32(-600..-400),
     adsl2LConfProfMaxNomPsdUs           Integer32(-600..-380),
     adsl2LConfProfMaxNomAtpDs           Unsigned32(0..255),
     adsl2LConfProfMaxNomAtpUs           Unsigned32(0..255),
     adsl2LConfProfMaxNomRxPwrUs         Integer32(-255..2147483647),
     adsl2LConfProfRowStatus              RowStatus
     }

adsl2LConfProfProfileName  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "This object identifies a row in this table."
     ::= { adsl2LineConfProfEntry 1 }

adsl2LConfProfScMaskDs  OBJECT-TYPE
     SYNTAX      Adsl2ScMaskDs
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Sub-carriers mask. A bitmap of 512 bits, that allows masking up
      to 512 downstream sub-carriers, depending on NSCds. If bit i
      (0<=i<NSCds) is set to '1' the respective downstream sub-carrier i
      is masked and if set to '0' the respective sub-carrier is
      unmasked.  Note that there should be always unmasked sub carriers
      (i.e., the object cannot be all 1's).  Also note that in case
      NSCds<512 all bits i (NSCds <i<=512) should be set to '1'."
     ::= { adsl2LineConfProfEntry 2 }
```

```
adsl2LConfProfScMaskUs  OBJECT-TYPE
     SYNTAX      Adsl2ScMaskUs
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Sub-carriers mask. A bitmap of 64 bits, that allows masking up to
      64 downstream sub-carriers, depending on NSCds. If bit i
      (0<=i<NSCus) is set to '1' the respective upstream sub-carrier i
      is masked and if set to '0' the respective sub-carrier is
      unmasked.  Note that there should be always unmasked sub carriers
      (i.e., the object cannot be all 1's).  Also note that in case
      NSCus<64 all bits i (NSCus <i<=64) should be set to '1'."
     ::= { adsl2LineConfProfEntry 3 }

adsl2LConfProfRaModeDs  OBJECT-TYPE
     SYNTAX      Adsl2RAMode
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The mode of operation of a rate-adaptive ATU?C in the transmit
      direction. The parameter can take three values:
     Manual (1),
     RaInit (2),
     DynamicRa (3)."
     ::= { adsl2LineConfProfEntry 5 }

adsl2LConfProfRaModeUs  OBJECT-TYPE
     SYNTAX      Adsl2RAMode
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The mode of operation of a rate-adaptive ATU?R in the transmit
      direction. The parameter can take three values:
     Manual (1),
     RaInit (2),
     DynamicRa (3)."
     ::= { adsl2LineConfProfEntry 6 }

adsl2LConfProfRaUsNrmDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Downstream Up-Shift Noise Margin value, to be used when
      Adsl2LineConfRaModeDs is set to DynamicRa. If the downstream
      noise margin is above this value and stays above that for more
      than the time specified by the Adsl2LineConfRaUsTimeDs, the
      ATU?R shall attempt to increase the downstream net data rate. The
      Downstream Up-shift Noise Margin ranges from 0 to 310 units of 0.1
      dB. (Physical values are 0 to 31 dB). "
```

```
    ::= { adsl2LineConfProfEntry 7 }
```

```
adsl2LConfProfRaUsNrmUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Upstream Up-Shift Noise Margin value, to be used when
      Adsl2LineConfRaModeUs is set to DynamicRa. If the upstream noise
      margin is above this value and stays above that for more than the
      time specified by the Adsl2LineConfRaUsTimeUs, the ATU?C shall
      attempt to increase the upstream net data rate. The Upstream
      Up-shift Noise Margin ranges from 0 to 310 units of 0.1 dB.
      (Physical values are 0 to 31 dB)."
     ::= { adsl2LineConfProfEntry 8 }

adsl2LConfProfRaUsTimeDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..16383)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Downstream Up-Shift Time Interval, to be used when
      Adsl2LineConfRaModeDs is set to DynamicRa. The interval of time
      the downstream noise margin should stay above the Downstream
      Up-shift Noise Margin before the ATU?R shall attempt to increase
      the downstream net data rate. The time interval ranges from 0 to
      16383 seconds."
     ::= { adsl2LineConfProfEntry 9 }

adsl2LConfProfRaUsTimeUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..16383)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Upstream Up-Shift Time Interval, to be used when
      Adsl2LineConfRaModeUs is set to DynamicRa. The interval of time
      the upstream noise margin should stay above the Upstream
      Up-shift Noise Margin before the ATU?C shall attempt to increase
      the upstream net data rate. The time interval ranges from 0 to
      16383 seconds."
     ::= { adsl2LineConfProfEntry 10 }

adsl2LConfProfRaDsNrmsDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Downstream Down-Shift Noise Margin value, to be used when
      Adsl2LineConfRaModeDs is set to DynamicRa. If the downstream noise
      margin is below this value and stays below that for more than the
      time specified by the Adsl2LineConfRaDsTimeDs, the ATU?R shall
      attempt to decrease the downstream net data rate. The Downstream
```

```
      Down-shift Noise Margin ranges from 0 to 310 units of 0.1 dB.
      (Physical values are 0 to 31 dB)."
     ::= { adsl2LineConfProfEntry 11 }
```

```
adsl2LConfProfRaDsNrmsUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Upstream Downshift Noise Margin value, to be used when
      Adsl2LineConfRaModeUs is set to DynamicRa. If the upstream noise
      margin is below this value and stays below that for more than the
      time specified by the Adsl2LineConfRaDsTimeUs, the ATU?C shall
      attempt to decrease the upstream net data rate. The Upstream
      Down-shift Noise Margin ranges from 0 to 310 units of 0.1 dB.
      (Physical values are 0 to 31 dB)."
      ::= { adsl2LineConfProfEntry 12 }

adsl2LConfProfRaDsTimeDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..16383)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Downstream Downshift Time Interval, to be used when
     Adsl2LineConfRaModeDs is set to DynamicRa. The interval of time the
     downstream noise margin should stay below the Downstream Down-shift
     Noise Margin before the ATU?R shall attempt to decrease the
     downstream net data rate. The time interval ranges from 0 to 16383
     seconds."
     ::= { adsl2LineConfProfEntry 13 }

adsl2LConfProfRaDsTimeUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..16383)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Upstream Down-Shift Time Interval, to be used when
      Adsl2LineConfRaModeUs is set to DynamicRa. The interval of time
      the upstream noise margin should stay below the Upstream
      Down-shift Noise Margin before the ATU?C shall attempt to decrease
      the upstream net data rate. The time interval ranges from 0 to
      16383 seconds."
     ::= { adsl2LineConfProfEntry 14 }

adsl2LConfProfTargetSnrmDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Noise Margin the ATU?R receiver shall achieve, relative to
      the BER requirement for each of the downstream bearer channels, or
      better, to successfully complete initialization. The target noise
      margin ranges from 0 to 310 units of 0.1 dB. (Physical values are
```

```
      0 to 31 dB)."
     ::= { adsl2LineConfProfEntry 15 }
```

```
adsl2LConfProfTargetSnrmUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The Noise Margin the ATU?C receiver shall achieve, relative to the
      BER requirement for each of the upstream bearer channels, or
      better, to successfully complete initialization. The target noise
      margin ranges from 0 to 310 units of 0.1 dB. (Physical values are
      0 to 31 dB)."
     ::= { adsl2LineConfProfEntry 16 }

adsl2LConfProfMaxSnrmDs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum Noise Margin the ATU?R receiver shall try to sustain.
      If the Noise Margin is above this level, the ATU-R shall request
      the ATU?C to reduce the ATU?C transmit power to get a noise margin
      below this limit (if this functionality is supported). The
      maximum noise margin ranges from 0 to 310 units of 0.1 dB.
      (Physical values are 0 to 31 dB). A value of all 1's  means that
      there is no maximum."
     ::= { adsl2LineConfProfEntry 17 }

adsl2LConfProfMaxSnrmUs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum Noise Margin the ATU?C receiver shall try to sustain.
      If the Noise Margin is above this level, the ATU-C shall request
      the ATU?R to reduce the ATU?R transmit power to get a noise
      margin below this limit (if this functionality is supported). The
      maximum noise margin ranges from 0 to 310 units of 0.1 dB.
      (Physical values are 0 to 31 dB). A value of all 1's  means that
      there is no maximum."
     ::= { adsl2LineConfProfEntry 18 }

adsl2LConfProfMinSnrmDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The minimum Noise Margin the ATU?R receiver shall tolerate. If the
      noise margin falls below this level, the ATU-R shall request the
      ATU?C to increase the ATU?C transmit power. If an increase to
      ATU-C transmit power is not possible, a loss-of-margin (LOM)
```

defect occurs, the ATU?R shall fail and attempt to reinitialize
and the NMS shall be notified. The minimum noise margin ranges
from 0 to 310 units of 0.1 dB. (Physical values are 0 to 31 dB).
A value of 0 means that there is no minimum."

```
     ::= { adsl2LineConfProfEntry 19 }

adsl2LConfProfMinSnrmUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..310)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The minimum Noise Margin the ATU?C receiver shall tolerate. If
      the noise margin falls below this level, the ATU-C shall request
      the ATU?R to increase the ATU?R transmit power. If an increase of
      ATU?R transmit power is not possible, a loss-of-margin (LOM)
      defect occurs, the ATU?C shall fail and attempt to re?initialize
      and the NMS shall be notified. The minimum noise margin ranges
      from 0 to 310 units of 0.1 dB. (Physical values are 0 to 31 dB).
      A value of 0  means that there is no minimum.."
     ::= { adsl2LineConfProfEntry 20 }

adsl2LConfProfMsgMinUs  OBJECT-TYPE
     SYNTAX      Unsigned32(4000..64000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Overhead Rate Upstream. Defines the minimum rate of the
      message-based overhead that shall be maintained by the ATU in
      upstream direction. Expressed in bits per second and ranges from
      4000 to 64000 bps."
     ::= { adsl2LineConfProfEntry 21 }

adsl2LConfProfMsgMinDs  OBJECT-TYPE
     SYNTAX      Unsigned32(4000..64000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Overhead Rate Downstream. Defines the minimum rate of the
      message-based overhead that shall be maintained by the ATU in
      downstream direction. Expressed in bits per second and ranges
      from 4000 to 64000 bps. "
     ::= { adsl2LineConfProfEntry 22 }

adsl2LConfProfAtuTransSysEna  OBJECT-TYPE
     SYNTAX      Adsl2TransmissionModeType
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "ATU Transmission System Enabling (ATSE). A list of the different
      coding types enabled in this profile. It is coded in a bit-map
      representation with 1 or more bits set. A bit set to  '1' means
      that the ATUs may apply the respective coding for the ADSL line.
      A bit set to '0' means that the ATUs cannot apply the respective
      coding for the ADSL line. All 'reserved' bits should be set to
```

```
      '0'."
     ::= { adsl2LineConfProfEntry 23 }
```

```
adsl2LConfProfPmMode  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Power management state Enabling. Defines the line states the ATU-C
      or ATU-R may autonomously transition to on this line. The various
      bit positions are:    L3state (0), L1_2state (1)A bit with a '1'
      value means that the ATU is allowed to transit into the respective
      state and a '0' value means that the ATU is not allowed to transit
      into the respective state."
     ::= { adsl2LineConfProfEntry 24 }

adsl2LConfProfL0Time  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..255)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "This minimum time (in seconds) between an Exit from the L2 state
      and the next Entry into the L2 state. It ranges from 0 to 255
      seconds."
     ::= { adsl2LineConfProfEntry 25 }

adsl2LConfProfL2Time  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..255)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "This minimum time (in seconds) between:
      *An Entry into the L2 state and the first Power Trim in the L2
      state and *Between two consecutive Power Trims in the L2 State. It
      ranges from 0 to 255 seconds."
     ::= { adsl2LineConfProfEntry 26 }

adsl2LConfProfL2Atpr  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..31)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum aggregate transmit power reduction (in dB) that can be
      performed through a single Power Trim in the L2 state. It ranges
      from 0 dB to 31 dB."
     ::= { adsl2LineConfProfEntry 27 }

adsl2LConfProfL2Atprt  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..31)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
```

```
      "The maximum aggregate transmit power reduction (in dB) that can
       be performed at a transition from L0 into L2 state or through a
       single Power Trim in the L2 state. It ranges from 0 dB to 31 dB."
      ::= { adsl2LineConfProfEntry 28 }
```

```
adsl2LConfProfMaxNomPsdDs  OBJECT-TYPE
     SYNTAX      Integer32(-600..-400)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum nominal transmit PSD in the downstream direction
      during initialization and Showtime. It ranges from -600 to -400
      units of 0.1 dBm/Hz. (physical values are -60 to -40 dBm/Hz).
      There should be multiple MAXNOMPSDds parameters in the profile in
      case multiple bits are set in Adsl2LineConfAtse."
     ::= { adsl2LineConfProfEntry 29 }

adsl2LConfProfMaxNomPsdUs  OBJECT-TYPE
     SYNTAX      Integer32(-600..-380)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum nominal transmit PSD in the upstream direction during
      initialization and Showtime. It ranges from -600 to -380 units of
      0.1 dBm/Hz. (physical values are -60 to -38  dBm/Hz).There should
      be multiple MAXNOMPSDus parameters in the profile in case multiple
      bits are set in Adsl2LineConfAtse."
     ::= { adsl2LineConfProfEntry 30 }

adsl2LConfProfMaxNomAtpDs  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..255)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum nominal aggregate transmit power in the downstream
      direction during initialization and Showtime. It ranges from 0 to
      255 units of 0.1 dBm (physical values are 0 to 25.5 dBm)."
     ::= { adsl2LineConfProfEntry 31 }

adsl2LConfProfMaxNomAtpUs  OBJECT-TYPE
     SYNTAX      Unsigned32 (0..255)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum nominal aggregate transmit power in the upstream
      direction during initialization and Showtime. It ranges from 0 to
      255 units of 0.1 dBm (physical values are 0 to 25.5 dBm)."
     ::= { adsl2LineConfProfEntry 32 }

adsl2LConfProfMaxNomRxPwrUs  OBJECT-TYPE
     SYNTAX      Integer32(-255..2147483647)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "The maximum upstream aggregate receive power over the relevant set
```

```
      of sub-carriers. The ATU-C should verify that the upstream power
      cutback is such that this maximum aggregate receive power value is
      honored. It ranges from -255 to 255 units of 0.1 dBm (physical
      values are -25.5 to 25.5 dBm). A value of all ones means that
      there is no limit."
     ::= { adsl2LineConfProfEntry 33 }
```

```
adsl2LConfProfRowStatus  OBJECT-TYPE
     SYNTAX      RowStatus
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Row Status"
     ::= { adsl2LineConfProfEntry 36 }


-----------------------------------------------
--          adsl2ChConfProfileTable          --
-----------------------------------------------

adsl2ChConfProfileTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2ChConfProfileEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table adsl2ChConfProfileTable contains ADSL2 channel profile
      configuration."
     ::= { adsl2ProfileChannel 1 }

adsl2ChConfProfileEntry  OBJECT-TYPE
     SYNTAX      Adsl2ChConfProfileEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2ChConfProfileTable contains ADSL2 channel profile
      configuration."

     INDEX  { adsl2ChConfProfProfileName }

     ::= { adsl2ChConfProfileTable  1 }

Adsl2ChConfProfileEntry  ::=
     SEQUENCE {
     adsl2ChConfProfProfileName          SnmpAdminString,
     adsl2ChConfProfMinDataRateDs        Unsigned32(0..50000000),
     adsl2ChConfProfMinDataRateUs        Unsigned32(0..50000000),
     adsl2ChConfProfMinResDataRateDs     Unsigned32(0..50000000),
     adsl2ChConfProfMinResDataRateUs     Unsigned32(0..50000000),
     adsl2ChConfProfMaxDataRateDs        Unsigned32(0..50000000),
     adsl2ChConfProfMaxDataRateUs        Unsigned32(0..50000000),
     adsl2ChConfProfMinDataRateLowPwrDs  Unsigned32(0..50000000),
     adsl2ChConfProfMinDataRateLowPwrUs  Unsigned32(0..50000000),
```

```
     adsl2ChConfProfMaxDelayDs          Unsigned32(0..64),
     adsl2ChConfProfMaxDelayUs          Unsigned32(0..64),
     adsl2ChConfProfMinProtectionDs     Adsl2SymbolProtection,
     adsl2ChConfProfMinProtectionUs     Adsl2SymbolProtection,
     adsl2ChConfProfMaxBerDs            Adsl2MaxBer,
     adsl2ChConfProfMaxBerUs            Adsl2MaxBer,
     adsl2ChConfProfUsDataRateDs        Unsigned32(0..50000000),
     adsl2ChConfProfDsDataRateDs        Unsigned32(0..50000000),
     adsl2ChConfProfUsDataRateUs        Unsigned32(0..50000000),
     adsl2ChConfProfDsDataRateUs        Unsigned32(0..50000000),
     adsl2ChConfProfImaEnabled          Adsl2EnaDis,
     adsl2ChConfProfRowStatus           RowStatus
     }

adsl2ChConfProfProfileName  OBJECT-TYPE
     SYNTAX      SnmpAdminString (SIZE(1..32))
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "This object identifies a row in this table."
     ::= { adsl2ChConfProfileEntry 1 }

adsl2ChConfProfMinDataRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Data Rate on Downstream direction. The minimum net data
      rate for the bearer channel, coded in bit/s."
     ::= { adsl2ChConfProfileEntry 2 }

adsl2ChConfProfMinDataRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Data Rate on Upstream direction. The minimum net data
      rate for the bearer channel, coded in bit/s."
     ::= { adsl2ChConfProfileEntry 3 }

adsl2ChConfProfMinResDataRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Reserved Data Rate on Downstream direction. The minimum
      reserved net data rate for the bearer channel, coded in bit/s.
      This parameter is used only if the Rate Adaptation Mode in the
      direction of the bearer channel (i.e., Adsl2LineConfRaModeDs)
      is set to DynamicRa."
```

```
    ::= { adsl2ChConfProfileEntry 4 }
```

```
adsl2ChConfProfMinResDataRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Reserved Data Rate on Upstream direction. The minimum
      reserved net data rate for the bearer channel, coded in
      bit/s. This parameter is used only if the Rate Adaptation Mode in
      the direction of the bearer channel (i.e., Adsl2LineConfRaModeUs)
      is set to DynamicRa."
     ::= { adsl2ChConfProfileEntry 5 }

adsl2ChConfProfMaxDataRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Data Rate on Downstream direction. The maximum net data
      rate for the bearer channel, coded in bit/s."
     ::= { adsl2ChConfProfileEntry 6 }

adsl2ChConfProfMaxDataRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Data Rate on Upstream direction. The maximum net data
      rate for the bearer channel, coded in bit/s."
     ::= { adsl2ChConfProfileEntry 7 }

adsl2ChConfProfMinDataRateLowPwrDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Data Rate in Low Power state on Downstream direction. The
      minimum net data rate for the bearer channel, coded in bit/s.,
      during the low power state (L1 in G.992.2, L2 in G.992.3)."
     ::= { adsl2ChConfProfileEntry 8 }

adsl2ChConfProfMinDataRateLowPwrUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Data Rate in Low Power state on Upstream direction. The
      minimum net data rate for the bearer channel, coded in bit/s.,
      during the low power state (L1 in G.992.2, L2 in G.992.3)."
     ::= { adsl2ChConfProfileEntry 9 }
```

```
adsl2ChConfProfMaxDelayDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..64)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Interleave Delay on Downstream direction. The maximum
      one-way interleaving delay introduced by the PMS-TC on Downstream
      direction.. The ATUs shall choose the S (factor) and D (depth)
      values such that the actual one-way interleaving delay
      (Adsl2ChanStatusActDelay) is as close to but less or equal than
      Adsl2ChanConfMaxDelayDs. The delay is coded in ms, with the value
      0 indicating no delay bound is being imposed."
     ::= { adsl2ChConfProfileEntry 10 }

adsl2ChConfProfMaxDelayUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..64)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Interleave Delay on Upstream direction. The maximum
      one-way interleaving delay introduced by the PMS-TC on Upstream
      direction.. The ATUs shall choose the S (factor) and D (depth)
      values such that the actual one-way interleaving delay
      (Adsl2ChanStatusActDelay) is as close to but less or equal than
      Adsl2ChanConfMaxDelayUs. The delay is coded in ms, with the value
      0 indicating no delay bound is being imposed."
     ::= { adsl2ChConfProfileEntry 11 }

adsl2ChConfProfMinProtectionDs  OBJECT-TYPE
     SYNTAX      Adsl2SymbolProtection
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Impulse Noise Protection on Downstream direction. The
      minimum impulse noise protection for the bearer channel, expressed
      in symbols. The parameter can take the following values:
     NoProtection (1),
     HalfSymbol (2),
     SingleSymbol (3),
     TwoSymbols (4)."
     ::= { adsl2ChConfProfileEntry 12 }

adsl2ChConfProfMinProtectionUs  OBJECT-TYPE
     SYNTAX      Adsl2SymbolProtection
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Minimum Impulse Noise Protection on Upstream direction. The
      minimum impulse noise protection for the bearer channel, expressed
      in symbols. The parameter can take the following values:
```

```
     NoProtection (1),
     HalfSymbol (2),
     SingleSymbol (3),
     TwoSymbols (4)"
```

```
     ::= { adsl2ChConfProfileEntry 13 }

adsl2ChConfProfMaxBerDs  OBJECT-TYPE
     SYNTAX      Adsl2MaxBer
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Bit Error Ratio on Downstream direction. The maximum bit
      error ratio for the bearer channel. The parameter can take the
      following values (for 1E-3, 1E-5 or 1E-7):
     Eminus3 (1),
     Eminus5 (2),
     Eminus7 (3)"
     ::= { adsl2ChConfProfileEntry 14 }

adsl2ChConfProfMaxBerUs  OBJECT-TYPE
     SYNTAX      Adsl2MaxBer
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Maximum Bit Error Ratio on Upstream direction. The maximum bit
      error ratio for the bearer channel. The parameter can take the
      following values (for 1E-3, 1E-5 or 1E-7):
     Eminus3 (1),
     Eminus5 (2),
     Eminus7 (3)"
     ::= { adsl2ChConfProfileEntry 15 }

adsl2ChConfProfUsDataRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Data Rate Threshold Up shift for downstream direction. An
      'Up-shift rate change' event is triggered when the actual
      downstream data rate exceeds, by more than the threshold, the data
      rate at the last entry into Showtime. The parameter is coded in
      bit/s."
     ::= { adsl2ChConfProfileEntry 16 }

adsl2ChConfProfDsDataRateDs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Data Rate Threshold Downshift for downstream direction. A
      'Down-shift rate change' event is triggered when the actual
      downstream data rate is below the data rate at the last entry into
      Showtime, by more than the threshold. The parameter is coded in
      bit/s."
```

```
    ::= { adsl2ChConfProfileEntry 17 }
```

```
adsl2ChConfProfUsDataRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Data Rate Threshold Up shift for upstream direction. An 'Up-shift
      rate change' event is triggered when the actual
      upstream data rate exceeds, by more than the threshold, the data
      rate at the last entry into Showtime. The parameter is coded in
      bit/s."
     ::= { adsl2ChConfProfileEntry 18 }

adsl2ChConfProfDsDataRateUs  OBJECT-TYPE
     SYNTAX      Unsigned32(0..50000000)
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Data Rate Threshold Downshift for upstream direction. A
      'Down-shift rate change' event is triggered when the actual
      upstream data rate is below the data rate at the last entry into
      Showtime, by more than the threshold. The parameter is coded in
      bit/s."
     ::= { adsl2ChConfProfileEntry 19 }

adsl2ChConfProfImaEnabled  OBJECT-TYPE
     SYNTAX      Adsl2EnaDis
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "IMA Mode Enable. The parameter enables the IMA operation mode in
      the ATM Data Path. Relevant only if the channel is of ATM Data
      Path. When in 'enable' state the ATM data path should comply with
      the requirements for IMA transmission."
     ::= { adsl2ChConfProfileEntry 20 }

adsl2ChConfProfRowStatus  OBJECT-TYPE
     SYNTAX      RowStatus
     MAX-ACCESS  read-write
     STATUS      current
     DESCRIPTION
     "Row Status"
     ::= { adsl2ChConfProfileEntry 21 }

--
--PM line current counters
--
adsl2PMLineCurrTable  OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineCurrEntry
     MAX-ACCESS  not-accessible
     STATUS      current
```

```
    DESCRIPTION
    "The table adsl2PMLineCurrTable contains current Performance
     Monitoring results of ADSL2 line."
    ::= {adsl2PMLine 1}
```

```
adsl2PMLineCurrEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineCurrEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table adsl2PMLineCurrTable contains current Performance
      Monitoring results of ADSL2 line."

     INDEX  { adsl2PMLCurrLineIfIndex, adsl2PMLCurrUnit }

     ::= { adsl2PMLineCurrTable  1 }

Adsl2PMLineCurrEntry  ::=
     SEQUENCE {
        adsl2PMLCurrLineIfIndex            Unsigned32,
        adsl2PMLCurrUnit                   Adsl2Unit,
        adsl2PMLCurrValidIntervals         Unsigned32,
        adsl2PMLCurrInvalidIntervals       Unsigned32,
        adsl2PMLCurr15MTimeElapsed         Unsigned32,
        adsl2PMLCurr15MFecSeconds          Unsigned32,
        adsl2PMLCurr15MEs                  Unsigned32,
        adsl2PMLCurr15MSes                 Unsigned32,
        adsl2PMLCurr15MLoss                Unsigned32,
        adsl2PMLCurr15MUas                 Unsigned32,
        adsl2PMLCurr1DayValidIntervals     Unsigned32,
        adsl2PMLCurr1DayInvalidIntervals   Unsigned32,
        adsl2PMLCurr1DayTimeElapsed        Unsigned32,
        adsl2PMLCurr1DayFecSeconds         Unsigned32,
        adsl2PMLCurr1DayEs                 Unsigned32,
        adsl2PMLCurr1DaySes                Unsigned32,
        adsl2PMLCurr1DayLoss               Unsigned32,
        adsl2PMLCurr1DayUas                Unsigned32
}

adsl2PMLCurrLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain
      ADSL line on an ATUC board in the system."
     ::= { adsl2PMLineCurrEntry 1 }

adsl2PMLCurrUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit ATUC{1} or ATUR{2}."
     ::= { adsl2PMLineCurrEntry 2 }
```

```
adsl2PMLCurrValidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Valid intervals."
     ::= { adsl2PMLineCurrEntry 3 }

adsl2PMLCurrInvalidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Invalid intervals."
     ::= { adsl2PMLineCurrEntry 4 }

adsl2PMLCurr15MTimeElapsed  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total elapsed seconds in this interval"
     ::= { adsl2PMLineCurrEntry 5 }

adsl2PMLCurr15MFecSeconds  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was at least one
      FEC correction event for one or more bearer channels in this line.
      This parameter is inhibited during UAS or SES."
     ::= { adsl2PMLineCurrEntry 6 }

adsl2PMLCurr15MEs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
     ATU-C: CRC-8 >= 1 for one or more bearer channels OR LOS >= 1 OR
      SEF >=1 OR LPR >= 1
     ATU-R: FEBE >= 1 for one or more bearer channels OR LOS-FE >=1 OR
      RDI >=1 OR LPR-FE >=1
     This parameter is inhibited during UAS."
     ::= { adsl2PMLineCurrEntry 7 }
```

```
adsl2PMLCurr15MSes  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: (CRC-8 summed over all bearer channels) >= 18 OR LOS >= 1
        OR SEF >= 1 OR LPR >= 1
      ATU-R: (FEBE summed over all bearer channels) >= 18 OR LOS-FE >= 1
        OR RDI >= 1 OR LPR-FE >= 1
      This parameter is inhibited during UAS."
     ::= { adsl2PMLineCurrEntry 8 }

adsl2PMLCurr15MLoss  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was LOS (or
      LOS-FE for ATU-R)."
     ::= { adsl2PMLineCurrEntry 9 }

adsl2PMLCurr15MUas  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds in Unavailability State during this interval.
      Unavailability begins at the onset of 10 contiguous severely
       errored seconds, and ends at the onset of 10 contiguous seconds
       with no severely errored seconds."
     ::= { adsl2PMLineCurrEntry 10 }

adsl2PMLCurr1DayValidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Valid intervals."
     ::= { adsl2PMLineCurrEntry 11 }

adsl2PMLCurr1DayInvalidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Invalid intervals."
     ::= { adsl2PMLineCurrEntry 12 }
```

```
adsl2PMLCurr1DayTimeElapsed  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total elapsed seconds in this interval."
     ::= { adsl2PMLineCurrEntry 13 }

adsl2PMLCurr1DayFecSeconds  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was at least one
      FEC correction event for one or more bearer channels in this line.
      This parameter is inhibited during UAS or SES."
     ::= { adsl2PMLineCurrEntry 14 }

adsl2PMLCurr1DayEs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: CRC-8 >= 1 for one or more bearer channels OR LOS >= 1 OR
        SEF >= 1 OR LPR >= 1
      ATU-R: FEBE >= 1 for one or more bearer channels OR LOS-FE >= 1
        OR RDI >= 1 OR LPR-FE >= 1
      This parameter is inhibited during UAS."
     ::= { adsl2PMLineCurrEntry 15 }

adsl2PMLCurr1DaySes  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: (CRC-8 summed over all bearer channels) >= 18 OR LOS >= 1
        OR SEF >= 1 OR LPR >= 1
      ATU-R: (FEBE summed over all bearer channels) >= 18 OR
         LOS-FE >= 1 OR RDI >= 1 OR LPR-FE >= 1
      This parameter is inhibited during UAS."
     ::= { adsl2PMLineCurrEntry 16 }

adsl2PMLCurr1DayLoss  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was LOS (or
```

```
      LOS-FE for ATU-R)."
     ::= { adsl2PMLineCurrEntry 17 }
```

```
adsl2PMLCurr1DayUas  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds in Unavailability State during this interval.
      Unavailability begins at the onset of 10 contiguous severely
       errored seconds, and ends at the onset of 10 contiguous seconds
       with no severely errored seconds."
     ::= { adsl2PMLineCurrEntry 18 }

--
--PM line init current counters
--

adsl2PMLineInitTable   OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineInitEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitTable contains current initialization
      counters of ADSL2 line."
     ::= {adsl2PMLine 2}

adsl2PMLineInitEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineInitEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitTable contains current initialization
      counters of ADSL2 line. ."

     INDEX  { adsl2PMLInitLineIfIndex }

     ::= { adsl2PMLineInitTable  1 }

Adsl2PMLineInitEntry  ::=
      SEQUENCE {
        adsl2PMLInitLineIfIndex            Unsigned32,
        adsl2PMLInit15MfullInits           Unsigned32,
        adsl2PMLInit15MfailedFullInits     Unsigned32,
        adsl2PMLInit15MShortInits          Unsigned32,
        adsl2PMLInit15MFailedShortInits    Unsigned32,
        adsl2PMLInit1DayFullInits          Unsigned32,
        adsl2PMLInit1DayFailedFullInits    Unsigned32,
        adsl2PMLInit1DayShortInits         Unsigned32,
        adsl2PMLInit1DayFailedShortInits   Unsigned32
        }
```

```
adsl2PMLInitLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
      ATUC board in the system."
     ::= { adsl2PMLineInitEntry 1 }

adsl2PMLInit15MfullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of full initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitEntry 2 }

adsl2PMLInit15MfailedFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed full initializations on the line during this
      interval."
     ::= { adsl2PMLineInitEntry 3 }

adsl2PMLInit15MShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of short initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitEntry 4 }

adsl2PMLInit15MFailedShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed short initializations on the line during this
      interval."
     ::= { adsl2PMLineInitEntry 5 }

adsl2PMLInit1DayFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
```

```
     "Count of full initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitEntry 6 }
```

```
adsl2PMLInit1DayFailedFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed full initializations on the line during this
      interval."
     ::= { adsl2PMLineInitEntry 7 }

adsl2PMLInit1DayShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of short initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitEntry 8 }

adsl2PMLInit1DayFailedShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed short initializations on the line during this
      interval."
     ::= { adsl2PMLineInitEntry 9 }

--
--PM line history 15M
--

adsl2PMLineHist15MinTable    OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineHist15MinTable contains PM line history for
      15min intervals of ADSL2 line."
     ::= {adsl2PMLine 3}

adsl2PMLineHist15MinEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineHist15MinTable contains PM line history for
      15min intervals of ADSL2 line ."

     INDEX  { adsl2PMLHist15MLineIfIndex, adsl2PMLHist15MUnit,
      adsl2PMLHist15MInterval }
```

```
    ::= { adsl2PMLineHist15MinTable  1 }
```

```
Adsl2PMLineHist15MinEntry  ::=
     SEQUENCE {
        adsl2PMLHist15MLineIfIndex          Unsigned32,
        adsl2PMLHist15MUnit                 Adsl2Unit,
        adsl2PMLHist15MInterval             Unsigned32,
        adsl2PMLHist15MMonitoredTime        Unsigned32,
        adsl2PMLHist15MFecSeconds           Unsigned32,
        adsl2PMLHist15MEs                   Unsigned32,
        adsl2PMLHist15MSes                  Unsigned32,
        adsl2PMLHist15MLoss                 Unsigned32,
        adsl2PMLHist15MUas                  Unsigned32,
        adsl2PMLHist15MValidInterval        Adsl2YesNo
        }

adsl2PMLHist15MLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
      ATUC board in the system."
     ::= { adsl2PMLineHist15MinEntry 1 }

adsl2PMLHist15MUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit ATUC{1} or ATUR{2}."
     ::= { adsl2PMLineHist15MinEntry 2 }

adsl2PMLHist15MInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMLineHist15MinEntry 3 }

adsl2PMLHist15MMonitoredTime  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total seconds monitored in this interval."
     ::= { adsl2PMLineHist15MinEntry 4 }
```

```
adsl2PMLHist15MFecSeconds  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was at least one
      FEC correction event for one or more bearer channels in this line.
      This parameter is inhibited during UAS or SES."
     ::= { adsl2PMLineHist15MinEntry 5 }

adsl2PMLHist15MEs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: CRC-8 >= 1 for one or more bearer channels OR LOS >= 1 OR
         SEF >= 1 OR LPR >= 1
      ATU-R: FEBE >= 1 for one or more bearer channels OR LOS-FE >= 1
         OR RDI >= 1 OR LPR-FE >=1
      This parameter is inhibited during UAS."
     ::= { adsl2PMLineHist15MinEntry 6 }

adsl2PMLHist15MSes  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: (CRC-8 summed over all bearer channels) >= 18 OR LOS >= 1
         OR SEF >= 1 OR LPR >= 1
      ATU-R: (FEBE summed over all bearer channels) >= 18 OR
         LOS-FE >= 1 OR RDI >= 1 OR LPR-FE >= 1
      This parameter is inhibited during UAS.."
     ::= { adsl2PMLineHist15MinEntry 7 }

adsl2PMLHist15MLoss  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was LOS (or
      LOS-FE for ATU-R)."
     ::= { adsl2PMLineHist15MinEntry 8 }

adsl2PMLHist15MUas  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
```

DESCRIPTION
"Count of seconds in Unavailability State during this interval.
Unavailability begins at the onset of 10 contiguous severely
errored seconds, and ends at the onset of 10 contiguous seconds

```
      with no severely errored seconds."
     ::= { adsl2PMLineHist15MinEntry 9 }

adsl2PMLHist15MValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "Does the interval contain valid information?"
     ::= { adsl2PMLineHist15MinEntry 10 }

--
--PM line hist 1D
--
adsl2PMLineHist1DayTable     OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineHist1DayEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineHist1DayTable contains PM line history for
      24 hours intervals of ADSL2 line."
     ::= {adsl2PMLine 4}

adsl2PMLineHist1DayEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineHist1DayEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineHist1DayTable contains PM line history for
      24 hours intervals of ADSL2 line."

     INDEX  { adsl2PMLHist1DLineIfIndex, adsl2PMLHist1DUnit,
      adsl2PMLHist1DInterval }

     ::= { adsl2PMLineHist1DayTable  1 }

Adsl2PMLineHist1DayEntry  ::=
     SEQUENCE {
        adsl2PMLHist1DLineIfIndex       Unsigned32,
        adsl2PMLHist1DUnit              Adsl2Unit,
        adsl2PMLHist1DInterval          Unsigned32,
        adsl2PMLHist1DMonitoredTime     Unsigned32,
        adsl2PMLHist1DFecSeconds        Unsigned32,
        adsl2PMLHist1DEs                Unsigned32,
        adsl2PMLHist1DSes               Unsigned32,
        adsl2PMLHist1DLoss              Unsigned32,
        adsl2PMLHist1DUas               Unsigned32,
        adsl2PMLHist1DValidInterval     Adsl2YesNo
         }
```

```
adsl2PMLHist1DLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
```

```
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
      ATUC board in the system."
     ::= { adsl2PMLineHist1DayEntry 1 }

adsl2PMLHist1DUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit."
     ::= { adsl2PMLineHist1DayEntry 2 }

adsl2PMLHist1DInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMLineHist1DayEntry 3 }

adsl2PMLHist1DMonitoredTime  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total seconds monitored in this interval."
     ::= { adsl2PMLineHist1DayEntry 4 }

adsl2PMLHist1DFecSeconds  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was at least one
      FEC correction event for one or more bearer channels in this line.
      This parameter is inhibited during UAS or SES."
     ::= { adsl2PMLineHist1DayEntry 5 }

adsl2PMLHist1DEs  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: CRC-8 >= 1 for one or more bearer channels OR LOS >= 1 OR
         SEF >= 1 OR LPR >= 1
      ATU-R: FEBE >= 1 for one or more bearer channels OR LOS-FE >= 1
         OR RDI >= 1 OR LPR-FE >=1
      This parameter is inhibited during UAS."
```

```
     ::= { adsl2PMLineHist1DayEntry 6 }

adsl2PMLHist1DSes  OBJECT-TYPE
     SYNTAX      Unsigned32
```

```
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was:
      ATU-C: (CRC-8 summed over all bearer channels) >= 18 OR LOS >= 1
         OR SEF >= 1 OR LPR >= 1
      ATU-R: (FEBE summed over all bearer channels) >= 18 OR
         LOS-FE >= 1 OR RDI >= 1 OR LPR-FE >= 1
      This parameter is inhibited during UAS."
     ::= { adsl2PMLineHist1DayEntry 7 }

adsl2PMLHist1DLoss  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds during this interval that there was LOS (or
      LOS-FE for ATU-R)."
     ::= { adsl2PMLineHist1DayEntry 8 }

adsl2PMLHist1DUas  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of seconds in Unavailability State during this interval.
      Unavailability begins at the onset of 10 contiguous severely
      errored seconds, and ends at the onset of 10 contiguous seconds
      with no severely errored seconds."
     ::= { adsl2PMLineHist1DayEntry 9 }

adsl2PMLHist1DValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "Does the interval contain valid information?"
     ::= { adsl2PMLineHist1DayEntry 10 }

--
--PM line init list 15M
--
adsl2PMLineInitHist15MinTable      OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineInitHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitHist15MinTable contains PM line
      initialization history for 15 minutes intervals of ADSL2 line."
     ::= {adsl2PMLine 5}
```

```
adsl2PMLineInitHist15MinEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineInitHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitHist15MinTable contains PM line
      initialization history for 15 minutes intervals of ADSL2 line."
     INDEX  {adsl2PMLHistInit15MLineIfIndex,
        adsl2PMLHistInit15MInterval}
     ::= { adsl2PMLineInitHist15MinTable  1 }

Adsl2PMLineInitHist15MinEntry  ::=
     SEQUENCE {
       adsl2PMLHistInit15MLineIfIndex          Unsigned32,
       adsl2PMLHistInit15MInterval             Unsigned32,
       adsl2PMLHistInit15MFullInits            Unsigned32,
       adsl2PMLHistInit15MFailedFullInits      Unsigned32,
       adsl2PMLHistInit15MShortInits           Unsigned32,
       adsl2PMLHistInit15MFailedShortInits     Unsigned32,
       adsl2PMLHistInit15MValidInterval        Adsl2YesNo
      }

adsl2PMLHistInit15MLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an ATUC
      board in the system."
     ::= { adsl2PMLineInitHist15MinEntry 1 }


adsl2PMLHistInit15MInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMLineInitHist15MinEntry 2 }

adsl2PMLHistInit15MFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of full initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitHist15MinEntry 3 }
```

```
adsl2PMLHistInit15MFailedFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
```

```
     DESCRIPTION
     "Count of failed full initializations on the line during this
      interval."
     ::= { adsl2PMLineInitHist15MinEntry 4 }

adsl2PMLHistInit15MShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of short initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitHist15MinEntry 5 }

adsl2PMLHistInit15MFailedShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed short initializations on the line during this
      interval."
     ::= { adsl2PMLineInitHist15MinEntry 6 }

adsl2PMLHistInit15MValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "Does the interval contain valid information?."
     ::= { adsl2PMLineInitHist15MinEntry 7 }

--
--PM line inithist 1D
--
adsl2PMLineInitHist1DayTable       OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMLineInitHist1DayEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitHist1DayTable contains PM line
      initialization history for 24 hours intervals of ADSL2 line."
     ::= {adsl2PMLine 6}

adsl2PMLineInitHist1DayEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMLineInitHist1DayEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMLineInitHist1DayTable contains PM line
      initialization history for 24 hours intervals of ADSL2 line."
```

```
    INDEX  { adsl2PMLHistinit1DLineIfIndex, adsl2PMLHistinit1DInterval}

    ::= { adsl2PMLineInitHist1DayTable  1 }
```

```
Adsl2PMLineInitHist1DayEntry  ::=
    SEQUENCE {
       adsl2PMLHistinit1DLineIfIndex          Unsigned32,
       adsl2PMLHistinit1DInterval             Unsigned32,
       adsl2PMLHistinit1DFullInits            Unsigned32,
       adsl2PMLHistinit1DFailedFullInits      Unsigned32,
       adsl2PMLHistinit1DShortInits           Unsigned32,
       adsl2PMLHistinit1DFailedShortInits     Unsigned32,
       adsl2PMLHistinit1DValidInterval        Adsl2YesNo
       }
adsl2PMLHistinit1DLineIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an ATUC
      board in the system."
     ::= { adsl2PMLineInitHist1DayEntry 1 }


adsl2PMLHistinit1DInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMLineInitHist1DayEntry 2 }

adsl2PMLHistinit1DFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of full initializations attempted on the line (successful
      and failed) during this interval."
     ::= { adsl2PMLineInitHist1DayEntry 3 }

adsl2PMLHistinit1DFailedFullInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed full initializations on the line during this
      interval."
     ::= { adsl2PMLineInitHist1DayEntry 4 }

adsl2PMLHistinit1DShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
```

```
      STATUS      current
      DESCRIPTION
      "Count of short initializations attempted on the line (successful
       and failed) during this interval."
```

```
     ::= { adsl2PMLineInitHist1DayEntry 5 }

adsl2PMLHistinit1DFailedShortInits  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of failed short initializations on the line during this
      interval."
     ::= { adsl2PMLineInitHist1DayEntry 6 }

adsl2PMLHistinit1DValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "Does the interval contain valid information?"
     ::= { adsl2PMLineInitHist1DayEntry 7 }
--
--PM channel current counters
--
adsl2PMChCurrTable        OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMChCurrEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChCurrTable contains current Performance
      Monitoring results of ADSL2 channel."
     ::= {adsl2PMChannel 1}

adsl2PMChCurrEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMChCurrEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChCurrTable contains current Performance
      Monitoring results of ADSL2 channel."
     INDEX  { adsl2PMChCurrChannelIfIndex, adsl2PMChCurrUnit }
     ::= { adsl2PMChCurrTable  1 }

Adsl2PMChCurrEntry  ::=
     SEQUENCE {
       adsl2PMChCurrChannelIfIndex          Unsigned32,
       adsl2PMChCurrUnit                    Adsl2Unit,
       adsl2PMChCurrValidIntervals          Unsigned32,
       adsl2PMChCurrInvalidIntervals        Unsigned32,
       adsl2PMChCurr15MtimeElapsed          Unsigned32,
       adsl2PMChCurr15McodingViolations     Unsigned32,
       adsl2PMChCurr15MCorrectedBlocks      Unsigned32,
       adsl2PMChCurr1DayValidIntervals      Unsigned32,
```

```
       adsl2PMChCurr1DayInvalidIntervals     Unsigned32,
       adsl2PMChCurr1DayTimeElapsed          Unsigned32,
       adsl2PMChCurr1DayCodingViolations     Unsigned32,
       adsl2PMChCurr1DayCorrectedBlocks      Unsigned32
```

```
    }

adsl2PMChCurrChannelIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
      ATUC board in the system."
     ::= { adsl2PMChCurrEntry 1 }

adsl2PMChCurrUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit."
     ::= { adsl2PMChCurrEntry 2 }

adsl2PMChCurrValidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Valid intervals."
     ::= { adsl2PMChCurrEntry 3 }

adsl2PMChCurrInvalidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Invalid intervals."
     ::= { adsl2PMChCurrEntry 4 }

adsl2PMChCurr15MtimeElapsed  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total elapsed seconds in this interval."
     ::= { adsl2PMChCurrEntry 5 }

adsl2PMChCurr15McodingViolations  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of CRC?8 (FEBE for ATU-R) anomalies occurring in the channel
      during the interval. This parameter is inhibited during UAS or
```

```
      SES. If the CRC is applied over multiple channels, then each
      related CRC?8 (or FEBE)anomaly should increment each of the
      counters related to the individual channels."
     ::= { adsl2PMChCurrEntry 6 }
```

```
adsl2PMChCurr15MCorrectedBlocks  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of FEC (FFEC for ATU-R) anomalies (corrected code words)
      occurring in the channel during the interval. This parameter is
      inhibited during UAS or SES. If the FEC is applied over multiple
      channels, then each related FEC (or FFEC) anomaly should
      increment each of the counters related to the individual
      channels."
     ::= { adsl2PMChCurrEntry 7 }

adsl2PMChCurr1DayValidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Valid intervals."
     ::= { adsl2PMChCurrEntry 8 }

adsl2PMChCurr1DayInvalidIntervals  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Invalid intervals."
     ::= { adsl2PMChCurrEntry 9 }

adsl2PMChCurr1DayTimeElapsed  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total elapsed seconds in this interval."
     ::= { adsl2PMChCurrEntry 10 }

adsl2PMChCurr1DayCodingViolations  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of CRC?8 (FEBE for ATU-R) anomalies occurring in the channel
      during the interval.  This parameter is inhibited during UAS or
      SES.  If the CRC is applied over multiple channels, then each
      related CRC?8 (or FEBE) anomaly should increment each of the
      counters related to the individual channels."
     ::= { adsl2PMChCurrEntry 11 }
```

```
adsl2PMChCurr1DayCorrectedBlocks  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
```

```
     DESCRIPTION
     "Count of FEC (FFEC for ATU-R) anomalies (corrected code words)
      occurring in the channel during the interval. This parameter is
      inhibited during UAS or SES. If the FEC is applied over multiple
      channels, then each related FEC (or FFEC) anomaly should
      increment each of the counters related to the individual
      channels."
     ::= { adsl2PMChCurrEntry 12 }

--
--PM channel hist 15M
--
adsl2PMChHist15MinTable         OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMChHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChCurrTable contains current Performance
      Monitoring results of ADSL2 channel."
     ::= {adsl2PMChannel 2}

adsl2PMChHist15MinEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMChHist15MinEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChCurrTable contains current Performance
      Monitoring results of ADSL2 channel."
     INDEX  { adsl2PMChHist15MChannelIfIndex, adsl2PMChHist15MUnit,
      adsl2PMChHist15MInterval }

     ::= { adsl2PMChHist15MinTable  1 }

Adsl2PMChHist15MinEntry  ::=
     SEQUENCE {
       adsl2PMChHist15MChannelIfIndex          Unsigned32,
       adsl2PMChHist15MUnit                    Adsl2Unit,
       adsl2PMChHist15MInterval                Unsigned32,
       adsl2PMChHist15MMonitoredTime           Unsigned32,
       adsl2PMChHist15MCodingViolations        Unsigned32,
       adsl2PMChHist15MCorrectedBlocks         Unsigned32,
       adsl2PMChHist15MValidInterval           Adsl2YesNo
       }

adsl2PMChHist15MChannelIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an ATUC
```

```
      board in the system."
     ::= { adsl2PMChHist15MinEntry 1 }

adsl2PMChHist15MUnit  OBJECT-TYPE
```

```
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit."
     ::= { adsl2PMChHist15MinEntry 2 }

adsl2PMChHist15MInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMChHist15MinEntry 3 }

adsl2PMChHist15MMonitoredTime  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total seconds monitored in this interval."
     ::= { adsl2PMChHist15MinEntry 4 }

adsl2PMChHist15MCodingViolations  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of CRC?8 (FEBE for ATU-R) anomalies occurring in the channel
      during the interval.  This parameter is inhibited during UAS or
      SES.  If the CRC is applied over multiple channels, then each
      related CRC?8 (or FEBE) anomaly should increment each of the
      counters related to the individual channels."
     ::= { adsl2PMChHist15MinEntry 5 }

adsl2PMChHist15MCorrectedBlocks  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of FEC (FFEC for ATU-R) anomalies (corrected code words)
      occurring in the channel during the interval. This parameter is
      inhibited during UAS or SES.   If the FEC is applied over multiple
      channels, then each related FEC (or FFEC) anomaly should increment
      each of the counters related to the individual channels."
     ::= { adsl2PMChHist15MinEntry 6 }

adsl2PMChHist15MValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
```

```
    STATUS      current
    DESCRIPTION
    "Does the interval contain valid information?"
    ::= { adsl2PMChHist15MinEntry 7 }
```

```
--
--PM channel hist 1D
--
adsl2PMChHist1DTable         OBJECT-TYPE
     SYNTAX      SEQUENCE  OF  Adsl2PMChHist1DEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChHist1DayTable contains PM channel history for
      1 day intervals of ADSL2."
     ::= {adsl2PMChannel 3}

adsl2PMChHist1DEntry  OBJECT-TYPE
     SYNTAX      Adsl2PMChHist1DEntry
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The table Adsl2PMChHist1DayTable contains PM channel history for
      1 day intervals of ADSL2."
     INDEX  { adsl2PMChHist1DChannelIfIndex, adsl2PMChHist1DUnit,
      adsl2PMChHist1DInterval }

     ::= { adsl2PMChHist1DTable  1 }

Adsl2PMChHist1DEntry  ::=
     SEQUENCE {
       adsl2PMChHist1DChannelIfIndex           Unsigned32,
       adsl2PMChHist1DUnit                     Adsl2Unit,
       adsl2PMChHist1DInterval                 Unsigned32,
       adsl2PMChHist1DMonitoredTime            Unsigned32,
       adsl2PMChHist1DCodingViolations         Unsigned32,
       adsl2PMChHist1DCorrectedBlocks          Unsigned32,
       adsl2PMChHist1DValidInterval            Adsl2YesNo
       }

adsl2PMChHist1DChannelIfIndex  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The ifIndex pattern that identifies a certain ADSL line on an
      ATUC board in the system."
     ::= { adsl2PMChHist1DEntry 1 }

adsl2PMChHist1DUnit  OBJECT-TYPE
     SYNTAX      Adsl2Unit
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The termination unit."
```

```
     ::= { adsl2PMChHist1DEntry 2 }

adsl2PMChHist1DInterval  OBJECT-TYPE
     SYNTAX      Unsigned32
```

```
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "The interval number."
     ::= { adsl2PMChHist1DEntry 3 }

adsl2PMChHist1DMonitoredTime  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Total seconds monitored in this interval."
     ::= { adsl2PMChHist1DEntry 4 }

adsl2PMChHist1DCodingViolations  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of CRC?8 (FEBE for ATU-R) anomalies occurring in the
      channel during the interval.  This parameter is inhibited during
      UAS or SES. If the CRC is applied over multiple channels, then
      each related CRC?8 (or FEBE) anomaly should increment each of the
      counters related to the individual channels."
     ::= { adsl2PMChHist1DEntry 5 }

adsl2PMChHist1DCorrectedBlocks  OBJECT-TYPE
     SYNTAX      Unsigned32
     MAX-ACCESS  read-only
     STATUS      current
     DESCRIPTION
     "Count of FEC (FFEC for ATU-R) anomalies (corrected code words)
      occurring in the channel during the interval. This parameter is
      inhibited during UAS or SES.  If the FEC is applied over multiple
      channels, then each related FEC (or FFEC) anomaly should increment
      each of the counters related to the individual channels."
     ::= { adsl2PMChHist1DEntry 6 }

adsl2PMChHist1DValidInterval  OBJECT-TYPE
     SYNTAX      Adsl2YesNo
     MAX-ACCESS  not-accessible
     STATUS      current
     DESCRIPTION
     "Does the interval contain valid information ?"
     ::= { adsl2PMChHist1DEntry 7 }


END
```

5. Acknowledgments

6. Security Considerations

To be added

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB module.

It is RECOMMENDED that implementers consider the security features as provided by the SNMPv3 framework (see [RFC3410], section 8), including full support for the SNMPv3 cryptographic mechanisms (for authentication and privacy).

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED to deploy SNMPv3 and to enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of a MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

7. IANA Considerations

The IANA is kindly requested to assign the value of the MODULE-IDENTITY. The authors suggest transmission 227, see section 4.

8. References

8.1. Normative References

8.2. Informative References

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