IEEE8023-MAU-MIB DEFINITIONS ::= BEGIN

 IMPORTS

 Counter32, Integer32, Counter64, Unsigned32,

 OBJECT-TYPE, MODULE-IDENTITY, NOTIFICATION-TYPE, org

 FROM SNMPv2-SMI -- RFC 2578

 TruthValue, AutonomousType

 FROM SNMPv2-TC -- RFC 2579

 OBJECT-GROUP, MODULE-COMPLIANCE, NOTIFICATION-GROUP

 FROM SNMPv2-CONF -- RFC 2580

 InterfaceIndex

 FROM IF-MIB -- RFC 2863

 IANAifMauTypeListBits, IANAifMauMediaAvailable,

 IANAifMauAutoNegCapBits, IANAifJackType

 FROM IANA-MAU-MIB

 -- http://www.iana.org/assignments/ianamau-mib

 ;

 ieee8023mauMIB MODULE-IDENTITY

 LAST-UPDATED "202307310000Z" – July 31, 2023

 ORGANIZATION

 "IEEE 802.3 Working Group"

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DESCRIPTION

 "Management information for 802.3 MAUs."

 REVISION "202307310000Z" – July 31, 2023

 DESCRIPTION

 "Revision, based on an earlier version in IEEE Std 802.3.1-2013

 addressing changes from IEEE Std 802.3 revisions 2012, 2015, 2018,

 and 2022."

 REVISION "201304110000Z" -- April 11, 2013

 DESCRIPTION

 "Revision, based on an earlier version in IEEE Std 802.3.1-2011."

 REVISION "201102020000Z" -- February 2, 2011

 DESCRIPTION

 "Initial version, based on an earlier version published

 as RFC 4836."

 ::= { org ieee(111) standards-association-numbers-series-standards(2)

 lan-man-stds(802) ieee802dot3(3) ieee802dot3dot1mibs(1) 13 }

 ieee8023snmpDot3MauMgt OBJECT IDENTIFIER ::= { ieee8023mauMIB 1 }

 dot3RpMauBasicGroup

 OBJECT IDENTIFIER ::= { ieee8023snmpDot3MauMgt 1 }

 dot3IfMauBasicGroup

 OBJECT IDENTIFIER ::= { ieee8023snmpDot3MauMgt 2 }

 -- The following object is a placeholder

 -- to preserve the arc assignments that follow it.

 dot3PlaceholderGroup

 OBJECT IDENTIFIER ::= { ieee8023snmpDot3MauMgt 3 }

 -- OIDs under the following branch are reserved for

 -- the IANA-MAU-MIB to assign as MAU type values:

 -- { ieee8023snmpDot3MauMgt 4 }

 dot3IfMauAutoNegGroup

 OBJECT IDENTIFIER ::= { ieee8023snmpDot3MauMgt 5 }

 --

 -- The Basic Repeater MAU Table

 --

 rpMauTable OBJECT-TYPE

 SYNTAX SEQUENCE OF RpMauEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Table of descriptive and status information

 about the MAU(s) attached to the ports of a

 repeater."

 ::= { dot3RpMauBasicGroup 1 }

 rpMauEntry OBJECT-TYPE

 SYNTAX RpMauEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing information

 about a single MAU."

 INDEX { rpMauGroupIndex,

 rpMauPortIndex,

 rpMauIndex

 }

 ::= { rpMauTable 1 }

 RpMauEntry ::=

 SEQUENCE {

 rpMauGroupIndex Integer32,

 rpMauPortIndex Integer32,

 rpMauIndex Integer32,

 rpMauType AutonomousType,

 rpMauStatus INTEGER,

 rpMauMediaAvailable IANAifMauMediaAvailable,

 rpMauMediaAvailableStateExits Counter32,

 rpMauJabberState INTEGER,

 rpMauJabberingStateEnters Counter32,

 rpMauFalseCarriers Counter32

 }

 rpMauGroupIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the group

 containing the port to which the MAU described

 by this entry is connected.

 Note: In practice, a group will generally be

 a field-replaceable unit (i.e., module, card,

 or board) that can fit in the physical system

 enclosure, and the group number will correspond

 to a number marked on the physical enclosure.

 The group denoted by a particular value of this

 object is the same as the group denoted by the

 same value of rptrGroupIndex."

 REFERENCE "RFC 2108, rptrGroupIndex."

 ::= { rpMauEntry 1 }

 rpMauPortIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the repeater

 port within group rpMauGroupIndex to which the

 MAU described by this entry is connected."

 REFERENCE "RFC 2108, rptrPortIndex."

 ::= { rpMauEntry 2 }

 rpMauIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the MAU

 described by this entry from among other

 MAUs connected to the same port

 (rpMauPortIndex)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.1"

 ::= { rpMauEntry 3 }

 rpMauType OBJECT-TYPE

 SYNTAX AutonomousType

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object identifies the MAU type. Values for

 standard IEEE 802.3 MAU types are defined in the

 IANA maintained IANA-MAU-MIB module, as

 OBJECT-IDENTITIES of dot3MauType.

 If the MAU type is unknown, the object identifier

 zeroDotZero is returned."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.2"

 ::= { rpMauEntry 4 }

 rpMauStatus OBJECT-TYPE

 SYNTAX INTEGER {

 other(1),

 unknown(2),

 operational(3),

 standby(4),

 shutdown(5),

 reset(6)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "The current state of the MAU. This object may

 be implemented as a read-only object by those

 agents and MAUs that do not implement software

 control of the MAU state. Some agents may not

 support setting the value of this object to some

 of the enumerated values.

 The value other(1) is returned if the MAU is in

 a state other than one of the states 2 through

 6.

 The value unknown(2) is returned when the MAU's

 true state is unknown; for example, when it is

 being initialized.

 A MAU in the operational(3) state is fully

 functional; it operates, and passes signals to its

 attached DTE or repeater port in accordance to

 its specification.

 A MAU in standby(4) state forces DI and CI to

 idle, and the media transmitter to idle or fault,

 if supported. Standby(4) mode only applies to

 link type MAUs. The state of

 rpMauMediaAvailable is unaffected.

 A MAU in shutdown(5) state assumes the same

 condition on DI, CI, and the media transmitter,

 as though it were powered down or not connected.

 The MAU may return other(1) value for the

 rpMauJabberState and rpMauMediaAvailable objects

 when it is in this state. For an AUI, this

 state will remove power from the AUI.

 Setting this variable to the value reset(6)

 resets the MAU in the same manner as a

 power-off, power-on cycle of at least one-half

 second would. The agent is not required to

 return the value reset(6).

 Setting this variable to the value

 operational(3), standby(4), or shutdown(5)

 causes the MAU to assume the respective state,

 except that setting a mixing-type MAU or an AUI

 to standby(4) will cause the MAU to enter the

 shutdown state."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.7, 30.5.1.2.2, and 30.5.1.2.1"

 ::= { rpMauEntry 5 }

 rpMauMediaAvailable OBJECT-TYPE

 SYNTAX IANAifMauMediaAvailable

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object identifies Media Available state of

 the MAU, complementary to the rpMauStatus. Values

 for the standard IEEE 802.3 Media Available states

 are defined in the IANA maintained IANA-MAU-MIB

 module, as IANAifMauMediaAvailable TC."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.4, aMediaAvailable."

 ::= { rpMauEntry 6 }

 rpMauMediaAvailableStateExits OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of times that

 rpMauMediaAvailable for this MAU instance leaves

 the state available(3).

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of rptrMonitorPortLastChange."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.5

 RFC 2108, rptrMonitorPortLastChange"

 ::= { rpMauEntry 7 }

 rpMauJabberState OBJECT-TYPE

 SYNTAX INTEGER {

 other(1),

 unknown(2),

 noJabber(3),

 jabbering(4)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The value other(1) is returned if the jabber

 state is not 2, 3, or 4. The agent shall

 return other(1) for MAU type dot3MauTypeAUI.

 The value unknown(2) is returned when the MAU's

 true state is unknown; for example, when it is

 being initialized.

 If the MAU is not jabbering the agent returns

 noJabber(3). This is the 'normal' state.

 If the MAU is in jabber state the agent returns

 the jabbering(4) value."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.6"

 ::= { rpMauEntry 8 }

 rpMauJabberingStateEnters OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of times that

 mauJabberState for this MAU instance enters the

 state jabbering(4). For MAUs of type

 dot3MauTypeAUI, dot3MauType100BaseT4,

 dot3MauType100BaseTX, dot3MauType100BaseFX, and

 all 1000 Mb/s types, this counter will

 indicate zero.

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of rptrMonitorPortLastChange."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.6,

 RFC 2108, rptrMonitorPortLastChange"

 ::= { rpMauEntry 9 }

 rpMauFalseCarriers OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of false carrier events

 during IDLE in 100BASE-X links. This counter

 does not increment at the symbol rate. It can

 increment after a valid carrier completion at a

 maximum rate of once per 100 ms until the next

 carrier event.

 This counter increments only for MAUs of type

 dot3MauType100BaseT4, dot3MauType100BaseTX,

 dot3MauType100BaseFX, and all 1000 Mb/s types.

 For all other MAU types, this counter will

 indicate zero.

 The approximate minimum time for rollover of

 this counter is 7.4 hours.

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of rptrMonitorPortLastChange."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.10,

 RFC 2108, rptrMonitorPortLastChange"

 ::= { rpMauEntry 10 }

 -- The rpJackTable applies to MAUs attached to repeaters

 -- which have one or more external jacks (connectors).

 rpJackTable OBJECT-TYPE

 SYNTAX SEQUENCE OF RpJackEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Information about the external jacks attached

 to MAUs attached to the ports of a repeater."

 ::= { dot3RpMauBasicGroup 2 }

 rpJackEntry OBJECT-TYPE

 SYNTAX RpJackEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing information

 about a particular jack."

 INDEX { rpMauGroupIndex,

 rpMauPortIndex,

 rpMauIndex,

 rpJackIndex

 }

 ::= { rpJackTable 1 }

 RpJackEntry ::=

 SEQUENCE {

 rpJackIndex Integer32,

 rpJackType IANAifJackType

 }

 rpJackIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the jack

 described by this entry from among other jacks

 attached to the same MAU (rpMauIndex)."

 ::= { rpJackEntry 1 }

 rpJackType OBJECT-TYPE

 SYNTAX IANAifJackType

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The jack connector type, as it appears on the

 outside of the system."

 ::= { rpJackEntry 2 }

 --

 -- The Basic Interface MAU Table

 --

 ifMauTable OBJECT-TYPE

 SYNTAX SEQUENCE OF IfMauEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Table of descriptive and status information

 about MAU(s) attached to an interface."

 ::= { dot3IfMauBasicGroup 1 }

 ifMauEntry OBJECT-TYPE

 SYNTAX IfMauEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing information

 about a single MAU."

 INDEX { ifMauIfIndex,

 ifMauIndex

 }

 ::= { ifMauTable 1 }

 IfMauEntry ::=

 SEQUENCE {

 ifMauIfIndex InterfaceIndex,

 ifMauIndex Integer32,

 ifMauType AutonomousType,

 ifMauStatus INTEGER,

 ifMauMediaAvailable IANAifMauMediaAvailable,

 ifMauMediaAvailableStateExits Counter32,

 ifMauJabberState INTEGER,

 ifMauJabberingStateEnters Counter32,

 ifMauFalseCarriers Counter32,

 ifMauDefaultType AutonomousType,

 ifMauAutoNegSupported TruthValue,

 ifMauTypeListBits IANAifMauTypeListBits,

 ifMauHCFalseCarriers Counter64,

 ifMauPCSCodingViolations Counter64,

 ifMauFECAbility INTEGER,

 ifMauFECMode INTEGER,

 ifMauFECCorrectedBlocks Counter64,

 ifMauFECUnCorrectableBlocks Counter64,

 ifMauSNROpMarginChnlA Integer32,

 ifMauSNROpMarginChnlB Integer32,

 ifMauSNROpMarginChnlC Integer32,

 ifMauSNROpMarginChnlD Integer32,

 ifMauEEESupportList IANAifMauTypeListBits,

 ifMauEEELDFastRetrainCount Counter32,

 ifMauEEELPFastRetrainCount Counter32,

 ifMauTimeSyncCapabilityTX TruthValue,

 ifMauTimeSyncCapabilityRX TruthValue,

 ifMauTimeSyncDelayTXmax Integer32,

 ifMauTimeSyncDelayTXmin Integer32,

 ifMauTimeSyncDelayRXmax Integer32,

 ifMauTimeSyncDelayRXmin Integer32

 }

 ifMauIfIndex OBJECT-TYPE

 SYNTAX InterfaceIndex

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the interface

 to which the MAU described by this entry is

 connected."

 REFERENCE "RFC 2863, ifIndex"

 ::= { ifMauEntry 1 }

 ifMauIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the MAU

 described by this entry from among other MAUs

 connected to the same interface (ifMauIfIndex)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.1"

 ::= { ifMauEntry 2 }

 ifMauType OBJECT-TYPE

 SYNTAX AutonomousType

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object identifies the MAU type. Values for

 standard IEEE 802.3 MAU types are defined in the

 IANA maintained IANA-MAU-MIB module, as

 OBJECT-IDENTITIES of dot3MauType.

 If the MAU type is unknown, the object identifier

 zeroDotZero is returned.

 This object represents the operational type of

 the MAU, as determined by either 1) the result

 of the Auto-Negotiation function or 2) if

 Auto-Negotiation is not enabled or is not

 implemented for this MAU, by the value of the

 object ifMauDefaultType. In case 2), a set to

 the object ifMauDefaultType will force the MAU

 into the new operating mode."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.2"

 ::= { ifMauEntry 3 }

 ifMauStatus OBJECT-TYPE

 SYNTAX INTEGER {

 other(1),

 unknown(2),

 operational(3),

 standby(4),

 shutdown(5),

 reset(6)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "The current state of the MAU. This object may

 be implemented as a read-only object by those

 agents and MAUs that do not implement software

 control of the MAU state. Some agents may not

 support setting the value of this object to some

 of the enumerated values.

 The value other(1) is returned if the MAU is in

 a state other than one of the states 2 through

 6.

 The value unknown(2) is returned when the MAU's

 true state is unknown; for example, when it is

 being initialized.

 A MAU in the operational(3) state is fully

 functional; it operates, and passes signals to its

 attached DTE or repeater port in accordance to

 its specification.

 A MAU in standby(4) state forces DI and CI to

 idle and the media transmitter to idle or fault,

 if supported. Standby(4) mode only applies to

 link type MAUs. The state of

 ifMauMediaAvailable is unaffected.

 A MAU in shutdown(5) state assumes the same

 condition on DI, CI, and the media transmitter,

 as though it were powered down or not connected.

 The MAU may return other(1) value for the

 ifMauJabberState and ifMauMediaAvailable objects

 when it is in this state. For an AUI, this

 state will remove power from the AUI.

 Setting this variable to the value reset(6)

 resets the MAU in the same manner as a

 power-off, power-on cycle of at least one-half

 second would. The agent is not required to

 return the value reset(6).

 Setting this variable to the value

 operational(3), standby(4), or shutdown(5)

 causes the MAU to assume the respective state,

 except that setting a mixing-type MAU or an AUI

 to standby(4) will cause the MAU to enter the

 shutdown state."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.7, 30.5.1.2.2, and 30.5.1.2.1"

 ::= { ifMauEntry 4 }

 ifMauMediaAvailable OBJECT-TYPE

 SYNTAX IANAifMauMediaAvailable

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object identifies Media Available state of

 the MAU, complementary to the ifMauStatus. Values

 for the standard IEEE 802.3 Media Available states

 are defined in the IANA maintained IANA-MAU-MIB

 module, as IANAifMauMediaAvailable TC."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.4"

 ::= { ifMauEntry 5 }

 ifMauMediaAvailableStateExits OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of times that

 ifMauMediaAvailable for this MAU instance leaves

 the state available(3).

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of ifCounterDiscontinuityTime."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.5,

 RFC 2863, ifCounterDiscontinuityTime."

 ::= { ifMauEntry 6 }

 ifMauJabberState OBJECT-TYPE

 SYNTAX INTEGER {

 other(1),

 unknown(2),

 noJabber(3),

 jabbering(4)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The value other(1) is returned if the jabber

 state is not 2, 3, or 4. The agent shall

 return other(1) for MAU type dot3MauTypeAUI.

 The value unknown(2) is returned when the MAU's

 true state is unknown; for example, when it is

 being initialized.

 If the MAU is not jabbering the agent returns

 noJabber(3). This is the 'normal' state.

 If the MAU is in jabber state the agent returns

 the jabbering(4) value."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.6"

 ::= { ifMauEntry 7 }

 ifMauJabberingStateEnters OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of times that

 mauJabberState for this MAU instance enters the

 state jabbering(4). This counter will

 indicate zero for MAUs of type dot3MauTypeAUI

 and those of speeds above 10 Mb/s.

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of ifCounterDiscontinuityTime."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.6,

 RFC 2863, ifCounterDiscontinuityTime."

 ::= { ifMauEntry 8 }

 ifMauFalseCarriers OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of false carrier events

 during IDLE in 100BASE-X and 1000BASE-X links.

 For all other MAU types, this counter will

 indicate zero. This counter does not

 increment at the symbol rate.

 It can increment after a valid carrier

 completion at a maximum rate of once per 100 ms

 for 100BASE-X and once per 10us for 1000BASE-X

 until the next CarrierEvent.

 This counter can roll over very quickly. A

 management station is advised to poll the

 ifMauHCFalseCarriers instead of this counter in

 order to avoid loss of information.

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of ifCounterDiscontinuityTime."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.10,

 RFC 2863, ifCounterDiscontinuityTime."

 ::= { ifMauEntry 9 }

 ifMauDefaultType OBJECT-TYPE

 SYNTAX AutonomousType

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "This object identifies the default

 administrative baseband MAU type to be used in

 conjunction with the operational MAU type

 denoted by ifMauType.

 The set of possible values for this object is

 the same as the set defined for the ifMauType

 object.

 This object represents the

 administratively-configured type of the MAU. If

 Auto-Negotiation is not enabled or is not

 implemented for this MAU, the value of this

 object determines the operational type of the

 MAU. In this case, a set to this object will

 force the MAU into the specified operating mode.

 If Auto-Negotiation is implemented and enabled

 for this MAU, the operational type of the MAU

 is determined by Auto-Negotiation, and the value

 of this object denotes the type to which the MAU

 will automatically revert if/when

 Auto-Negotiation is later disabled.

 It may be necessary to provide for underlying hardware

 implementations which do not follow the exact behavior

 specified above.

 In particular, when ifMauAutoNegAdminStatus transitions

 from enabled to disabled, the agent implementation shall

 verify that the operational type of the MAU

 (as reported by ifMauType) correctly transitions to

 the value specified by this object, rather than

 continuing to operate at the value earlier

 determined by the Auto-Negotiation function."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.1, and 22.2.4.1.4"

 ::= { ifMauEntry 10 }

 ifMauAutoNegSupported OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object indicates whether or not

 Auto-Negotiation is supported on this MAU."

 ::= { ifMauEntry 11 }

 ifMauTypeListBits OBJECT-TYPE

 SYNTAX IANAifMauTypeListBits

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value that uniquely identifies the set of

 possible IEEE 802.3 types that the MAU could be.

 If Auto-Negotiation is present on this MAU, this

 object maps to ifMauAutoNegCapabilityBits.

 Note that this MAU may be capable of operating

 as a MAU type that is beyond the scope of this

 MIB. This is indicated by returning the

 bit value bOther in addition to any bit values

 for standard capabilities that are listed in the

 IANAifMauTypeListBits TC."

 ::= { ifMauEntry 12 }

 ifMauHCFalseCarriers OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of false carrier events

 during IDLE in 100BASE-X and 1000BASE-X links.

 For all other MAU types, this counter will

 indicate zero. This counter does not

 increment at the symbol rate.

 This counter is a 64-bit version of

 ifMauFalseCarriers. Since the 32-bit version of

 this counter can roll over very quickly,

 management stations are advised to poll the

 64-bit version instead, in order to avoid loss

 of information.

 Discontinuities in the value of this counter can

 occur at re-initialization of the management

 system and at other times, as indicated by the

 value of ifCounterDiscontinuityTime."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.10,

 RFC 2863, ifCounterDiscontinuityTime."

 ::= { ifMauEntry 13 }

 ifMauPCSCodingViolations OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "Generalized nonresettable counter. This counter

 has a maximum increment rate of 25 000 000

 counts per second for 100 Mb/s implementations and

 125 000 000 counts per second for 1000 Mb/s

 implementations.

 For 100 Mb/s operation it is a count of the number

 of events that cause the PHY to indicate 'Data

 reception with errors' on the MII (see IEEE Std 802.3,

 Table 22-2).

 For 1000 Mb/s operation it is a count of the

 number of events that cause the PHY to indicate 'Data

 reception error' or 'Carrier Extend Error' on the GMII

 (see IEEE Std 802.3, Table 35-2). The contents of this

 attribute is undefined when FEC is operating."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.14"

 ::= {ifMauEntry 14}

 ifMauFECAbility OBJECT-TYPE

 SYNTAX INTEGER {

 unknown(1),

 supported(2),

 notsupported(3)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A read-only value that indicates if the

 PHY supports an optional FEC sublayer for

 forward error correction (see IEEE Std 802.3, 65.2

 and IEEE Std 802.3, Clause 74, Clause 91, and Clause 108).

 If an IEEE Std 802.3, Clause 45 MDIO Interface to the

 PCS is present, then this attribute will map to the

 FEC capability register (see IEEE Std 802.3, 45.2.10.2 or

 45.2.1.107)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.15"

 ::= {ifMauEntry 15}

 ifMauFECMode OBJECT-TYPE

 SYNTAX INTEGER {

 unknown(1),

 disabled(2),

 enabled(3),

 baseREnabled(4),

 rsFecEnabled(5)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "A read-write value that indicates the mode of

 operation of the optional FEC sublayer for forward

 error correction (see IEEE Std 802.3, 65.2 and

 IEEE Std 802.3, Clause 74, Clause 91, and clause 108).

 A GET operation returns the current mode of operation

 of the PHY. A SET operation changes the mode of

 operation of the PHY to the indicated value. The

 enumerations ‘baseREnabled’ and ‘rsFecEnabled’ are

 only used for 25GBASE-CR, 25GBASE-CR-S, 25GBASE-KR, and 25GBASE-KR-S PHYs where operation in the no-FEC mode

 maps to the enumeration ‘disabled’, operation in the

 BASE-R FEC mode maps to the enumeration ‘baseREnabled’,

 and operation in the RS-FEC mode maps to the enumeration

 ‘rsFecEnabled’’ (see IEEE Std 802.3, 110.6 and 111.6).

 If an IEEE Std 802.3, Clause 45 MDIO Interface is

 present, this attribute maps to the FEC enable bit or to

 the RS-FEC enable bit in the appropriate FEC control

 register based upon the PHY type and the FEC operating

 mode (see IEEE Std 802.3, 45.2.10.3, 45.2.1.108, and

 45.2.1.116)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.16"

 ::= {ifMauEntry 16}

 ifMauFECCorrectedBlocks OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS deprecated

 DESCRIPTION

 "\*\*\*\*\*\*\*\*\*\* THIS OBJECT IS DEPRECATED \*\*\*\*\*\*\*\*\*\*

 Generalized nonresettable counter. This counter

 has a maximum increment rate of 1 200 000

 counts per second for 1000 Mb/s implementations,

 and 5 000 000 counts per second for 10 Gb/s

 implementations.

 For 1000BASE-PX PHYs or 10GBASE-R PHYs, a count

 of corrected FEC blocks. This counter will not

 increment for other PHY types.

 Increment the counter by one for each received block

 that is corrected by the FEC function in the PHY.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS is present,

 then this object maps to the FEC corrected blocks

 counter (see IEEE Std 802.3, 45.2.8.5 and 45.2.1.91)"

 REFERENCE "IEEE Std 802.3, 30.5.1.1.17"

 ::= {ifMauEntry 17}

 ifMauFECUnCorrectableBlocks OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS deprecated

 DESCRIPTION

 "\*\*\*\*\*\*\*\*\*\* THIS OBJECT IS DEPRECATED \*\*\*\*\*\*\*\*\*\*

 Generalized nonresettable counter. This counter

 has a maximum increment rate of 1 200 000

 counts per second for 1000 Mb/s implementations,

 and 5 000 000 counts per second for 10 Gb/s

 implementations.

 For 1000BASE-PX, 10/25/40/50/100/200/400GBASE-R,

 100GBASE-P, 10GBASE-PR, or 10/1GBASE-PRX PHYs, a count

 of uncorrectable FEC blocks. This counter will not

 increment for other PHY types.

 Increment the counter by one for each received block

 that is determined to be uncorrectable by the FEC

 function in the PHY.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS is present,

 then this object maps to the FEC uncorrectable

 blocks counter (see IEEE Std 802.3, 45.2.8.6 and

 45.2.1.92)"

 REFERENCE "IEEE Std 802.3, 30.5.1.1.18"

 ::= {ifMauEntry 18}

 ifMauSNROpMarginChnlA OBJECT-TYPE

 SYNTAX Integer32 (-127..127)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The current SNR operating margin measured at the

 slicer input for channel A for the 10GBASE-T PMA.

 It is reported in units of 0.1 dB to an accuracy of

 0.5 dB within the range of -12.7 dB to 12.7 dB.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to the

 PMA/PMD is present, then this attribute maps to the SNR

 operating margin channel A register

 (see IEEE Std 802.3, 45.2.1.81)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.19"

 ::= {ifMauEntry 19}

 ifMauSNROpMarginChnlB OBJECT-TYPE

 SYNTAX Integer32 (-127..127)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The current SNR operating margin measured at the

 slicer input for channel B for the 10GBASE-T PMA.

 It is reported in units of 0.1 dB to an accuracy of

 0.5 dB within the range of -12.7 dB to 12.7 dB.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to the

 PMA/PMD is present, then this attribute maps to the SNR

 operating margin channel B register

 (see IEEE Std 802.3, 45.2.1.82)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.20"

 ::= {ifMauEntry 20}

 ifMauSNROpMarginChnlC OBJECT-TYPE

 SYNTAX Integer32 (-127..127)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The current SNR operating margin measured at the

 slicer input for channel C for the 10GBASE-T PMA.

 It is reported in units of 0.1 dB to an accuracy of

 0.5 dB within the range of -12.7 dB to 12.7 dB.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to the

 PMA/PMD is present, then this attribute maps to the SNR

 operating margin channel C register

 (see IEEE Std 802.3, 45.2.1.83)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.21"

 ::= {ifMauEntry 21}

 ifMauSNROpMarginChnlD OBJECT-TYPE

 SYNTAX Integer32 (-127..127)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The current SNR operating margin measured at the

 slicer input for channel D for the 10GBASE-T PMA.

 It is reported in units of 0.1 dB to an accuracy of

 0.5 dB within the range of -12.7 dB to 12.7 dB.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to the

 PMA/PMD is present, then this attribute maps to the SNR

 operating margin channel D register

 (see IEEE Std 802.3, 45.2.1.84)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.22"

 ::= {ifMauEntry 22}

 ifMauEEESupportList OBJECT-TYPE

 SYNTAX IANAifMauTypeListBits

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A read-only list of the possible PHY types for which

 the underlying system supports Energy-Efficient Ethernet

 (EEE) as defined in IEEE Std 802.3, Clause 78.

 If IEEE Std 802.3, Clause 28 or Clause 73 Auto-Negotiation

 Is present, then this attribute maps to the local

 technology ability or advertised ability of the local device "

 REFERENCE "IEEE Std 802.3, 30.5.1.1.23"

 ::= { ifMauEntry 23 }

 ifMauEEELDFastRetrainCount OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A count of the number of fast retrains initiated by the

 local device. This counter can be derived from

 fr\_tx\_counter (see IEEE Std 802.3, 55.4.5.4, 113.4.5.4,

 and 126.4.5.4). If IEEE Std 802.3, Clause 45 MDIO

 Interface to the PMA/PMD is present, then this attribute

 Can be derived from the LD fast retrain count register (see IEEE Std 802.3, 45.2.1.94.2)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.24"

 ::= { ifMauEntry 24 }

 ifMauEEELPFastRetrainCount OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION ""A count of the number of fast retrains initiated by the

 link partner. This counter can be derived from

 fr\_rx\_counter (see IEEE Std 802.3, 55.4.5.4, 113.4.5.4,

 and 126.4.5.4). If IEEE Std 802.3, Clause 45 MDIO

 Interface to the PMA/PMD is present, then this attribute

 Can be derived from the LP fast retrain count register (see IEEE Std 802.3, 45.2.1.94.1)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.25"

 ::= { ifMauEntry 25 }

 ifMauTimeSyncCapabilityTX OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object indicates whether or not transmit

 Time Sync is supported on this MAU."

 REFERENCE "IEEE Std 802.3, 30.13.1.1"

 ::= { ifMauEntry 26 }

 ifMauTimeSyncCapabilityRX OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "This object indicates whether or not receive

 Time Sync is supported on this MAU."

 REFERENCE "IEEE Std 802.3, 30.13.1.2"

 ::= { ifMauEntry 27 }

 ifMauTimeSyncDelayTXmax OBJECT-TYPE

 SYNTAX Integer32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The maximum data delay as specified in IEEE Std 802.3,

 90.7, expressed in units of ns.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to

 PMA/PMD, WIS, PCS, PHY XS, DTE XS and/or TC is

 present, then the value stored in this attribute

 represents the maximum transmit path data delay

 values, consisting of the sum of the values of the

 registers in the instantiated sublayers (for each MMD,

 in case of multiple instances)"

 REFERENCE "IEEE Std 802.3, 30.13.1.3"

 ::= { ifMauEntry 28 }

 ifMauTimeSyncDelayTXmin OBJECT-TYPE

 SYNTAX Integer32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The minimum data delay as specified in IEEE Std 802.3,

 90.7, expressed in units of ns.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to

 PMA/PMD, WIS, PCS, PHY XS, DTE XS and/or TC is

 present, then the value stored in this attribute

 represents the minimum transmit path data delay

 values, consisting of the sum of the values of the

 registers in the instantiated sublayers (for each MMD,

 in case of multiple instances)"

 REFERENCE "IEEE Std 802.3, 30.13.1.4"

 ::= { ifMauEntry 29 }

 ifMauTimeSyncDelayRXmax OBJECT-TYPE

 SYNTAX Integer32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The maximum data delay as specified in IEEE Std 802.3,

 90.7, expressed in units of ns.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to

 PMA/PMD, WIS, PCS, PHY XS, DTE XS and/or TC is

 present, then the value stored in this attribute

 represents the maximum receive path data delay

 values, consisting of the sum of the values of the

 registers in the instantiated sublayers (for each MMD,

 in case of multiple instances)"

 REFERENCE "IEEE Std 802.3, 30.13.1.5"

 ::= { ifMauEntry 30 }

 ifMauTimeSyncDelayRXmin OBJECT-TYPE

 SYNTAX Integer32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The minimum data delay as specified in IEEE Std 802.3,

 90.7, expressed in units of ns.

 If an IEEE Std 802.3, Clause 45 MDIO Interface to

 PMA/PMD, WIS, PCS, PHY XS, DTE XS and/or TC is

 present, then the value stored in this attribute

 represents the minimum receive path data delay

 values, consisting of the sum of the values of the

 registers in the instantiated sublayers (for each MMD,

 in case of multiple instances)"

 REFERENCE "IEEE Std 802.3, 30.13.1.6"

 ::= { ifMauEntry 31 }

 -- The ifJackTable applies to MAUs attached to interfaces

 -- which have one or more external jacks (connectors).

 ifJackTable OBJECT-TYPE

 SYNTAX SEQUENCE OF IfJackEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Information about the external jacks attached

 to MAUs attached to an interface."

 ::= { dot3IfMauBasicGroup 2 }

 ifJackEntry OBJECT-TYPE

 SYNTAX IfJackEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing information

 about a particular jack."

 INDEX { ifMauIfIndex,

 ifMauIndex,

 ifJackIndex

 }

 ::= { ifJackTable 1 }

 IfJackEntry ::=

 SEQUENCE {

 ifJackIndex Integer32,

 ifJackType IANAifJackType

 }

 ifJackIndex OBJECT-TYPE

 SYNTAX Integer32 (1..2147483647)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This variable uniquely identifies the jack

 described by this entry from among other jacks

 attached to the same MAU."

 ::= { ifJackEntry 1 }

 ifJackType OBJECT-TYPE

 SYNTAX IANAifJackType

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "The jack connector type, as it appears on the

 outside of the system."

 ::= { ifJackEntry 2 }

 --

 -- The MAU Per-PCS Lane Statistics Table

 --

 ifMauPerPCSLaneStatsTable OBJECT-TYPE

 SYNTAX SEQUENCE OF IfMauPerPCSLaneStatsEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Table of Per-PCS lane status information

 about MAUs attached to an interface."

 ::= { dot3IfMauBasicGroup 3 }

 ifMauPerPCSLaneStatsEntry OBJECT-TYPE

 SYNTAX IfMauPerPCSLaneStatsEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing information

 about a single PCS lane."

 INDEX { ifMauIfIndex,

 ifMauIndex,

 ifPCSLaneIndex

 }

 ::= { ifMauPerPCSLaneStatsTable 1 }

 IfMauPerPCSLaneStatsEntry ::=

 SEQUENCE {

 ifPCSLaneIndex Unsigned32,

 ifMauPPLFECCorrectedBlocks Counter64,

 ifMauPPLFECUncorrectableBlocks Counter64,

 ifMauBIPErrorCount Counter32,

 ifMauPCStoPHYLaneMapping Unsigned32

 }

 ifPCSLaneIndex OBJECT-TYPE

 SYNTAX Unsigned32 (0..255)

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "This object provides the identification of the

 PCS lane for which this ifMauPerPCSLaneStatsEntry

 is applicable. This object can hold an integer value

 from 0 to N-1, where N is the total number of PCS

 lanes supported by the given PCS. "

 ::= { ifMauPerPCSLaneStatsEntry 1 }

 ifMauPPLFECCorrectedBlocks OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "Generalized nonresettable counter. This counter has a

 maximum increment rate of 1 200 000 counts per second

 for 1000 Mb/s implementations, 5 000 000 counts per

 second for 10 Gb/s and 40 Gb/s implementations, and

 2 500 000 counts per second for 100 Gb/s implementations.

 For 1000BASE-PX, 10/25/40/50/100/200/400GBASE-R,

 100GBASE-P, 10GBASE-PR, or 10/1GBASE-PRX PHYs that

 support FEC across the MDI, an array of corrected FEC

 block counters. The counters do not increment for other

 PHY types. The indices of this array (0 to N – 1) denote

 the FEC sublayer instance number where N is the number

 of FEC sublayer instances in use.

 The number of FEC sublayer instances in use is set to one

 for PHYs that do not use PCS lanes or use a single FEC

 instance for all lanes. Each element of this array

 contains a count of corrected FEC blocks for that FEC

 sublayer instance.

 Increment the counter by one for each FEC block received

 across the MDI that is corrected by the FEC function in

 the PHY for the corresponding lane or FEC sublayer

 instance.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS

 is present, then this object maps to the FEC corrected

 blocks counter for PSC lane number n, identified by

 the ifPCSLaneIndex object

 (see IEEE Std 802.3, 45.2.10.5 and 45.2.1.109

 for 10GBASE-R, 45.2.3.41 for 10GBASE-PR and

 10/1GBASE-PRX, 45.2.1.131 for BASE-R, 45.2.1.118 for

 RS-FEC, 45.2.3.62 for PCS FEC, and 45.2.1.227 for

 SC-FEC)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.17"

 ::= { ifMauPerPCSLaneStatsEntry 2 }

 ifMauPPLFECUncorrectableBlocks OBJECT-TYPE

 SYNTAX Counter64

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "Generalized nonresettable counter. This counter has a

 maximum increment rate of 1 200 000 counts per second

 for 1000 Mb/s implementations, 5 000 000 counts

 per second for 10 Gb/s and 40 Gb/s implementations,

 and 2 500 000 counts per second for 100 Gb/s

 implementations.

 For 1000BASE-PX, 10/25/40/50/100/200/400GBASE-R,

 100GBASE-P, 10GBASE-PR, or 10/1GBASE-PRX PHYs that

 support FEC across the MDI, an array of uncorrectable FEC

 block counters. The counters do not increment for other

 PHY types. The indices of this array (0 to N – 1) denote

 the FEC sublayer instance number where N is the number

 of FEC sublayer instances in use.

 The number of FEC sublayer instances in use is set to one

 for PHYs that do not use PCS lanes or use a single FEC

 instance for all lanes. Each element of this array

 contains a count of uncorrectable FEC blocks for that FEC

 sublayer instance.

 Increment the counter by one for each FEC block that

 is determined to be uncorrectable by the FEC function

 in the PHY for the corresponding lane or FEC sublayer instance.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS

 is present, then this object maps to the FEC uncorrectable

 blocks counter for PSC lane number n, identified by

 the ifPCSLaneIndex object

 (see IEEE Std 802.3, 45.2.10.6 and 45.2.1.110 for 10GBASE-R,

 45.2.3.42 for 10GBASE-PR and 10/1GBASE-PRX, 45.2.1.149 for

 BASE-R, 45.2.1.119 for RS-FEC, 45.2.3.63 for PCS FEC, and

 45.2.1.228 for SC-FEC)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.18"

 ::= { ifMauPerPCSLaneStatsEntry 3 }

 ifMauBIPErrorCount OBJECT-TYPE

 SYNTAX Counter32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "Generalized nonresettable counter. This counter

 has a maximum increment rate of 10 000 counts per

 second for 40 Gb/s and 50 Gb/s implementations and

 5 000 counts per second for 100 Gb/ s implementations.

 For 40/50/100GBASE-R PHYs and and 100GBASE-P PHYs,

 an array of BIP error counters. The counters do not

 increment for other PHY types. The indices of this

 array (0 to n – 1) denote the PCS lane number where

 n is the number of PCS lanes in use. Each element of

 this array contains a count of BIP errors for that

 PCS lane.

 Increment the counter by one for each BIP error

 detected during alignment marker removal in the

 PCS identified by the ifPCSLaneIndex object.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS is

 present, then this object maps to the BIP error

 counter for PCS lane number n, identified by the

 ifPCSLaneIndex object

 (see IEEE Std 802.3, 45.2.3.47 and 45.2.3.48)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.11"

 ::= { ifMauPerPCSLaneStatsEntry 4 }

 ifMauPCStoPHYLaneMapping OBJECT-TYPE

 SYNTAX Unsigned32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "For 40/50/100/200/400GBASE-R PHYs and 100GBASE-P PHYs,

 an array of PCS lane identifiers. The indices of this

 array (0 to n – 1) denote the service interface lane

 number where n is the number of PCS lanes in use. Each

 element of this array contains the PCS lane number for the PCS lane that has been detected in the

 corresponding service interface lane.

 If IEEE Std 802.3, Clause 45 MDIO Interface to the PCS is

 present, then this object maps to the Lane

 mapping register for PCS lane number n, identified

 by the ifPCSLaneIndex object

 (see IEEE Std 802.3, 45.2.3.49 and 45.2.3.50)."

 REFERENCE "IEEE Std 802.3, 30.5.1.1.12"

 ::= { ifMauPerPCSLaneStatsEntry 5 }

 --

 -- The MAU Auto-Negotiation Table

 --

 ifMauAutoNegTable OBJECT-TYPE

 SYNTAX SEQUENCE OF IfMauAutoNegEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "Configuration and status objects for the

 Auto-Negotiation function of MAUs attached to

 interfaces.

 The ifMauAutoNegTable applies to systems in

 which Auto-Negotiation is supported on one or

 more MAUs attached to interfaces. Note that if

 Auto-Negotiation is present and enabled, the

 ifMauType object reflects the result of the

 Auto-Negotiation function."

 ::= { dot3IfMauAutoNegGroup 1 }

 ifMauAutoNegEntry OBJECT-TYPE

 SYNTAX IfMauAutoNegEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION "An entry in the table, containing configuration

 and status information for the Auto-Negotiation

 function of a particular MAU."

 INDEX { ifMauIfIndex,

 ifMauIndex

 }

 ::= { ifMauAutoNegTable 1 }

 IfMauAutoNegEntry ::=

 SEQUENCE {

 ifMauAutoNegAdminStatus INTEGER,

 ifMauAutoNegRemoteSignaling INTEGER,

 ifMauAutoNegConfig INTEGER,

 ifMauAutoNegRestart INTEGER,

 ifMauAutoNegCapabilityBits IANAifMauAutoNegCapBits,

 ifMauAutoNegCapAdvertisedBits IANAifMauAutoNegCapBits,

 ifMauAutoNegCapReceivedBits IANAifMauAutoNegCapBits,

 ifMauAutoNegRemoteFaultAdvertised INTEGER,

 ifMauAutoNegRemoteFaultReceived INTEGER

 }

 ifMauAutoNegAdminStatus OBJECT-TYPE

 SYNTAX INTEGER {

 enabled(1),

 disabled(2)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "Setting this object to enabled(1) will cause

 the interface that has the Auto-Negotiation

 signaling ability to be enabled.

 If the value of this object is disabled(2) then

 the interface will act as it would if it had no

 Auto-Negotiation signaling. Under these

 conditions, an IEEE 802.3 MAU will immediately

 be forced to the state indicated by the value of

 the object ifMauDefaultType.

 When ifMauAutoNegAdminStatus transitions from enabled

 to disabled, the agent implementation shall

 verify that the operational type of the MAU (as

 reported by ifMauType) correctly transitions to

 the value specified by the ifMauDefaultType

 object, rather than continuing to operate at the

 value earlier determined by the Auto-Negotiation

 function."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.2, and 30.6.1.2.2"

 ::= { ifMauAutoNegEntry 1 }

 ifMauAutoNegRemoteSignaling OBJECT-TYPE

 SYNTAX INTEGER {

 detected(1),

 notdetected(2)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value indicating whether the remote end of

 the link is using Auto-Negotiation signaling. It

 takes the value detected(1) if and only if,

 during the previous link negotiation, FLP Bursts

 were received."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.3"

 ::= { ifMauAutoNegEntry 2 }

 ifMauAutoNegConfig OBJECT-TYPE

 SYNTAX INTEGER {

 other(1),

 configuring(2),

 complete(3),

 disabled(4),

 parallelDetectFail(5)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value indicating the current status of the

 Auto-Negotiation process. The enumeration

 parallelDetectFail(5) maps to a failure in

 parallel detection as defined in IEEE Std 802.3,

 28.2.3.1."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.4"

 ::= { ifMauAutoNegEntry 4 }

 ifMauAutoNegRestart OBJECT-TYPE

 SYNTAX INTEGER {

 restart(1),

 norestart(2)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "If the value of this object is set to

 restart(1) then this will force Auto-Negotiation

 to begin link renegotiation. If Auto-Negotiation

 signaling is disabled, a write to this object

 has no effect.

 Setting the value of this object to norestart(2)

 has no effect."

 REFERENCE "IEEE Std 802.3, 30.6.1.2.1"

 ::= { ifMauAutoNegEntry 5 }

 ifMauAutoNegCapabilityBits OBJECT-TYPE

 SYNTAX IANAifMauAutoNegCapBits

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value that uniquely identifies the set of

 capabilities of the local Auto-Negotiation

 entity. Note that interfaces that support this

 MIB may have capabilities that extend beyond the

 scope of this MIB.

 Note that the local Auto-Negotiation entity may

 support some capabilities beyond the scope of

 this MIB. This is indicated by returning the

 bit value bOther in addition to any bit values

 for standard capabilities that are listed in the

 IANAifMauAutoNegCapBits TC."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.5

 ."

 ::= { ifMauAutoNegEntry 6 }

 ifMauAutoNegCapAdvertisedBits OBJECT-TYPE

 SYNTAX IANAifMauAutoNegCapBits

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "A value that uniquely identifies the set of

 capabilities advertised by the local

 Auto-Negotiation entity.

 Capabilities in this object that are not

 available in ifMauAutoNegCapabilityBits cannot

 be enabled.

 Note that the local Auto-Negotiation entity may

 advertise some capabilities beyond the scope of

 this MIB. This is indicated by returning the

 bit value bOther in addition to any bit values

 for standard capabilities that are listed in the

 IANAifMauAutoNegCapBits TC."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.6"

 ::= { ifMauAutoNegEntry 7 }

 ifMauAutoNegCapReceivedBits OBJECT-TYPE

 SYNTAX IANAifMauAutoNegCapBits

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value that uniquely identifies the set of

 capabilities received from the remote

 Auto-Negotiation entity.

 Note that interfaces that support this MIB may

 be attached to remote Auto-Negotiation entities

 that have capabilities beyond the scope of this

 MIB. This is indicated by returning the bit

 value bOther in addition to any bit values for

 standard capabilities that are listed in the

 IANAifMauAutoNegCapBits TC."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.7"

 ::= { ifMauAutoNegEntry 8 }

 ifMauAutoNegRemoteFaultAdvertised OBJECT-TYPE

 SYNTAX INTEGER {

 noError(1),

 offline(2),

 linkFailure(3),

 autoNegError(4)

 }

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION "A value that identifies any local fault

 indications that this MAU has detected and will

 advertise at the next Auto-Negotiation

 interaction for 1000 Mb/s MAUs."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.6"

 ::= { ifMauAutoNegEntry 9 }

 ifMauAutoNegRemoteFaultReceived OBJECT-TYPE

 SYNTAX INTEGER {

 noError(1),

 offline(2),

 linkFailure(3),

 autoNegError(4)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A value that identifies any fault indications

 received from the far end of a link by the

 local Auto-Negotiation entity for 1000 Mb/s

 MAUs."

 REFERENCE "IEEE Std 802.3, 30.6.1.1.7"

 ::= { ifMauAutoNegEntry 10 }

 -- Placeholder to preserve module structure and assignments

 dot3Placeholder OBJECT-TYPE

 SYNTAX INTEGER {

 placeholder(1)

 }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION "A placeholder object to preserve the assignments

 that follow in the module. The assignment was given

 to the object broadMauBasicTable in earlier

 versions of this module. Preserving the assignments that

 follow is considered important because they are used for

 the IANA-MAU-MIB to assign as MAU type values."

 REFERENCE "none"

 ::= { dot3PlaceholderGroup 1 }

 -- Notifications for use by 802.3 MAUs

 snmpDot3MauTraps OBJECT IDENTIFIER ::= { ieee8023snmpDot3MauMgt 0 }

 rpMauJabberTrap NOTIFICATION-TYPE

 OBJECTS { rpMauJabberState }

 STATUS current

 DESCRIPTION "This trap is sent whenever a managed repeater

 MAU enters the jabber state.

 The agent shall limit the generation of

 consecutive rpMauJabberTraps so that there is at

 least a five-second gap between them."

 REFERENCE "IEEE Std 802.3, 30.5.1.3.1"

 ::= { snmpDot3MauTraps 1 }

 ifMauJabberTrap NOTIFICATION-TYPE

 OBJECTS { ifMauJabberState }

 STATUS current

 DESCRIPTION "This trap is sent whenever a managed interface

 MAU enters the jabber state.

 The agent shall limit the generation of

 consecutive ifMauJabberTraps so that there is at

 least a five-second gap between them."

 REFERENCE "IEEE Std 802.3, 30.5.1.3.1"

 ::= { snmpDot3MauTraps 2 }

 -- Conformance statements

 mauModConf

 OBJECT IDENTIFIER ::= { ieee8023mauMIB 2 }

 mauModCompls

 OBJECT IDENTIFIER ::= { mauModConf 1 }

 mauModObjGrps

 OBJECT IDENTIFIER ::= { mauModConf 2 }

 mauModNotGrps

 OBJECT IDENTIFIER ::= { mauModConf 3 }

 -- Object groups

 mauRpGrpBasic OBJECT-GROUP

 OBJECTS { rpMauType,

 rpMauStatus,

 rpMauMediaAvailable,

 rpMauMediaAvailableStateExits,

 rpMauJabberState,

 rpMauJabberingStateEnters

 }

 STATUS current

 DESCRIPTION "Basic conformance group for MAUs attached to

 repeater ports. This group is also the

 conformance specification for RFC 1515

 implementations."

 ::= { mauModObjGrps 1 }

 mauRpGrp100Mbs OBJECT-GROUP

 OBJECTS { rpMauFalseCarriers }

 STATUS current

 DESCRIPTION "Conformance group for MAUs attached to

 repeater ports with 100 Mb/s or greater

 capability."

 ::= { mauModObjGrps 2 }

 mauRpGrpJack OBJECT-GROUP

 OBJECTS { rpJackType }

 STATUS current

 DESCRIPTION "Conformance group for MAUs attached to

 repeater ports with managed jacks."

 ::= { mauModObjGrps 3 }

 mauIfGrpBasic OBJECT-GROUP

 OBJECTS { ifMauType,

 ifMauStatus,

 ifMauMediaAvailable,

 ifMauMediaAvailableStateExits,

 ifMauJabberState,

 ifMauJabberingStateEnters,

 dot3Placeholder

 }

 STATUS current

 DESCRIPTION "Basic conformance group for MAUs attached to

 interfaces. This group also provides a

 conformance specification for RFC 1515

 implementations."

 ::= { mauModObjGrps 4 }

 mauIfGrpJack OBJECT-GROUP

 OBJECTS { ifJackType }

 STATUS current

 DESCRIPTION "Conformance group for MAUs attached to

 interfaces with managed jacks."

 ::= { mauModObjGrps 5 }

 mauIfGrpHighCapacity OBJECT-GROUP

 OBJECTS { ifMauFalseCarriers,

 ifMauTypeListBits,

 ifMauDefaultType,

 ifMauAutoNegSupported

 }

 STATUS current

 DESCRIPTION "Conformance group for MAUs attached to

 interfaces with 100 Mb/s or greater capability."

 ::= { mauModObjGrps 6 }

 mauIfGrpAutoNeg2 OBJECT-GROUP

 OBJECTS { ifMauAutoNegAdminStatus,

 ifMauAutoNegRemoteSignaling,

 ifMauAutoNegConfig,

 ifMauAutoNegCapabilityBits,

 ifMauAutoNegCapAdvertisedBits,

 ifMauAutoNegCapReceivedBits,

 ifMauAutoNegRestart

 }

 STATUS current

 DESCRIPTION "Conformance group for MAUs attached to

 interfaces with managed Auto-Negotiation."

 ::= { mauModObjGrps 7 }

 mauIfGrpAutoNeg1000Mbps OBJECT-GROUP

 OBJECTS { ifMauAutoNegRemoteFaultAdvertised,

 ifMauAutoNegRemoteFaultReceived

 }

 STATUS current

 DESCRIPTION "Conformance group for 1000 Mb/s MAUs attached to

 interfaces with managed Auto-Negotiation."

 ::= { mauModObjGrps 8 }

 mauIfGrpHCStats OBJECT-GROUP

 OBJECTS { ifMauHCFalseCarriers,

 ifMauPCSCodingViolations

 }

 STATUS current

 DESCRIPTION "Conformance for high capacity statistics for

 MAUs attached to interfaces."

 ::= { mauModObjGrps 9 }

 mauIfGrpFEC OBJECT-GROUP

 OBJECTS { ifMauFECAbility,

 ifMauFECMode,

 ifMauFECCorrectedBlocks,

 ifMauFECUnCorrectableBlocks

 }

 STATUS current

 DESCRIPTION "Conformance for FEC capable

 MAUs attached to interfaces."

 ::= { mauModObjGrps 10 }

 mauIfGrpSNR OBJECT-GROUP

 OBJECTS { ifMauSNROpMarginChnlA,

 ifMauSNROpMarginChnlB,

 ifMauSNROpMarginChnlC,

 ifMauSNROpMarginChnlD

 }

 STATUS current

 DESCRIPTION "Conformance for SNR operating margin reporting

 MAUs attached to interfaces."

 ::= { mauModObjGrps 11 }

 mauIfGrpEEE OBJECT-GROUP

 OBJECTS { ifMauEEESupportList,

 ifMauEEELDFastRetrainCount,

 ifMauEEELPFastRetrainCount

 }

 STATUS current

 DESCRIPTION "Conformance EEE support and Fast Retrain count

 reporting MAUs attached to interfaces."

 ::= { mauModObjGrps 12 }

 mauIfGrpTimeSync OBJECT-GROUP

 OBJECTS { ifMauTimeSyncCapabilityTX,

 ifMauTimeSyncCapabilityRX,

 ifMauTimeSyncDelayTXmax,

 ifMauTimeSyncDelayTXmin,

 ifMauTimeSyncDelayRXmax,

 ifMauTimeSyncDelayRXmin

 }

 STATUS current

 DESCRIPTION "Conformance Time Sync support and delay

 reporting MAUs attached to interfaces."

 ::= { mauModObjGrps 13 }

 mauIfGrpPerPCSLaneStats OBJECT-GROUP

 OBJECTS { ifMauPPLFECCorrectedBlocks,

 ifMauPPLFECUncorrectableBlocks,

 ifMauBIPErrorCount,

 ifMauPCStoPHYLaneMapping

 }

 STATUS current

 DESCRIPTION "Conformance Per-PCS lane statistics

 reporting MAUs attached to interfaces."

 ::= { mauModObjGrps 14 }

 -- Notification groups

 rpMauNotifications NOTIFICATION-GROUP

 NOTIFICATIONS { rpMauJabberTrap }

 STATUS current

 DESCRIPTION "Notifications for repeater MAUs."

 ::= { mauModNotGrps 1 }

 ifMauNotifications NOTIFICATION-GROUP

 NOTIFICATIONS { ifMauJabberTrap }

 STATUS current

 DESCRIPTION "Notifications for interface MAUs."

 ::= { mauModNotGrps 2 }

 -- Compliance statements

 mauModRpCompl2 MODULE-COMPLIANCE

 STATUS current

 DESCRIPTION "Compliance for MAUs attached to repeater

 ports.

 Note that compliance with this compliance

 statement requires compliance with the

 snmpRptrModCompl MODULE-COMPLIANCE statement of

 the IEEE8023-SNMP-REPEATER-MIB defined in Clause 7."

 MODULE -- this module

 MANDATORY-GROUPS { mauRpGrpBasic }

 GROUP mauRpGrp100Mbs

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that have 100 Mb/s or

 greater capability."

 GROUP mauRpGrpJack

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that have one or more

 external jacks."

 GROUP rpMauNotifications

 DESCRIPTION "Implementation of this group is recommended

 for MAUs attached to repeater ports."

 OBJECT rpMauStatus

 MIN-ACCESS read-only

 DESCRIPTION "Write access is not required."

 ::= { mauModCompls 1 }

 mauModIfCompl3 MODULE-COMPLIANCE

 STATUS current

 DESCRIPTION "Compliance for MAUs attached to interfaces.

 Note that compliance with this compliance

 statement requires compliance with the

 ifCompliance3 MODULE-COMPLIANCE statement of the

 IF-MIB (RFC 2863) and the dot3Compliance2

 MODULE-COMPLIANCE statement of the

 IEEE8023-EtherLike-MIB defined in Clause 10."

 MODULE -- this module

 MANDATORY-GROUPS { mauIfGrpBasic }

 GROUP mauIfGrpHighCapacity

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that have 100 Mb/s

 or greater capability."

 GROUP mauIfGrpHCStats

 DESCRIPTION "Implementation of this group is mandatory

 for MAUs that have 1000 Mb/s capacity, and

 is recommended for MAUs that have 100 Mb/s

 capacity."

 GROUP mauIfGrpJack

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that have one or more

 external jacks."

 GROUP mauIfGrpAutoNeg2

 DESCRIPTION "Implementation of this group is mandatory

 for MAUs that support managed

 Auto-Negotiation."

 GROUP mauIfGrpAutoNeg1000Mbps

 DESCRIPTION "Implementation of this group is mandatory

 for MAUs that have 1000 Mb/s or greater

 capability and support managed

 Auto-Negotiation."

 GROUP ifMauNotifications

 DESCRIPTION "Implementation of this group is recommended

 for MAUs attached to interfaces."

 OBJECT ifMauStatus

 MIN-ACCESS read-only

 DESCRIPTION "Write access is not required."

 GROUP mauIfGrpFEC

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that incorporate FEC."

 GROUP mauIfGrpSNR

 DESCRIPTION "Implementation of this optional group is

 recommended for MAUs that report SNR operating

 margin."

 GROUP mauIfGrpEEE

 DESCRIPTION "Implementation of this group is

 mandatory for MAUs that support EEE."

 GROUP mauIfGrpTimeSync

 DESCRIPTION "Implementation of this group is

 mandatory for MAUs that support Time Sync"

 GROUP mauIfGrpPerPCSLaneStats

 DESCRIPTION "Implementation of this group is

 mandatory for MAUs that report per-PCS lane

 statistics."

 ::= { mauModCompls 2 }

 END