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"

CONTACT-INFO

" WG-URL: http://www.ieee802.org/3/index.html

WG-EMail: mailto:stds-802-3-dialog@ieee.org

Contact: IEEE 802.3 Working Group Chair

Postal: C/O IEEE 802.3 Working Group

IEEE Standards Association

445 Hoes Lane

Piscataway, NJ 08854

USA

E-mail: mailto:stds-802-3-dialog@ieee.org"

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