IEEE8023-SNMP-REPEATER-MIB DEFINITIONS ::= BEGIN

IMPORTS

Counter32, Counter64, Integer32, Gauge32,

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

FROM SNMPv2-SMI

TimeStamp, MacAddress, TEXTUAL-CONVENTION,

RowStatus, TestAndIncr

FROM SNMPv2-TC

OBJECT-GROUP, MODULE-COMPLIANCE, NOTIFICATION-GROUP

FROM SNMPv2-CONF

OwnerString

FROM RFC1271-MIB;

ieee8023snmpRptrMIB MODULE-IDENTITY

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

ORGANIZATION

"IEEE 802.3 Working Group"

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DESCRIPTION

"Management information for IEEE 802.3 repeaters."

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 revision, based on an earlier version in RFC 2108"

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

lan-man-stds(802) ieee802dot3(3) ieee802dot3dot1mibs(1) 7 }

ieee8023snmpDot3RptrMgt OBJECT IDENTIFIER ::= { ieee8023snmpRptrMIB 1}

OptMacAddr ::= TEXTUAL-CONVENTION

DISPLAY-HINT "1x:"

STATUS current

DESCRIPTION

"Either a 6 octet address in the 'canonical'

order defined by IEEE Std 802.1a, i.e., as if it

were transmitted least significant bit first

if a value is available or a zero length string."

REFERENCE

"See MacAddress in SNMPv2-TC. The only difference

is that a zero length string is allowed as a value

for OptMacAddr and not for MacAddress."

SYNTAX OCTET STRING (SIZE (0 | 6))

-- Basic information at the repeater, group, and port level.

rptrBasicPackage

OBJECT IDENTIFIER ::= { ieee8023snmpDot3RptrMgt 1 }

rptrGroupInfo

OBJECT IDENTIFIER ::= { rptrBasicPackage 1 }

rptrPortInfo

OBJECT IDENTIFIER ::= { rptrBasicPackage 2 }

rptrAllRptrInfo

OBJECT IDENTIFIER ::= { rptrBasicPackage 3 }

-- Monitoring information at the repeater, group, and port level.

rptrMonitorPackage

OBJECT IDENTIFIER ::= { ieee8023snmpDot3RptrMgt 2 }

rptrMonitorRptrInfo

OBJECT IDENTIFIER ::= { rptrMonitorPackage 1 }

rptrMonitorGroupInfo

OBJECT IDENTIFIER ::= { rptrMonitorPackage 2 }

rptrMonitorPortInfo

OBJECT IDENTIFIER ::= { rptrMonitorPackage 3 }

rptrMonitorAllRptrInfo

OBJECT IDENTIFIER ::= { rptrMonitorPackage 4 }

-- Address tracking information at the repeater, group,

-- and port level.

rptrAddrTrackPackage

OBJECT IDENTIFIER ::= { ieee8023snmpDot3RptrMgt 3 }

rptrAddrTrackRptrInfo

OBJECT IDENTIFIER ::= { rptrAddrTrackPackage 1 }

rptrAddrTrackGroupInfo

-- this subtree is currently unused

OBJECT IDENTIFIER ::= { rptrAddrTrackPackage 2 }

rptrAddrTrackPortInfo

OBJECT IDENTIFIER ::= { rptrAddrTrackPackage 3 }

-- TopN information.

rptrTopNPackage

OBJECT IDENTIFIER ::= { ieee8023snmpDot3RptrMgt 4 }

rptrTopNRptrInfo

-- this subtree is currently unused

OBJECT IDENTIFIER ::= { rptrTopNPackage 1 }

rptrTopNGroupInfo

-- this subtree is currently unused

OBJECT IDENTIFIER ::= { rptrTopNPackage 2 }

rptrTopNPortInfo

OBJECT IDENTIFIER ::= { rptrTopNPackage 3 }

-- Basic information at the group level.

--

-- Configuration and status objects for each

-- managed group in the repeater system, independent

-- of whether there is one or more managed

-- repeater-units in the repeater system.

rptrGroupTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrGroupEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of descriptive and status information about

the groups of ports."

::= { rptrGroupInfo 1 }

rptrGroupEntry OBJECT-TYPE

SYNTAX RptrGroupEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing information

about a single group of ports."

INDEX { rptrGroupIndex }

::= { rptrGroupTable 1 }

RptrGroupEntry ::=

SEQUENCE {

rptrGroupIndex

Integer32,

rptrGroupObjectID

OBJECT IDENTIFIER,

rptrGroupOperStatus

INTEGER,

rptrGroupPortCapacity

Integer32

}

rptrGroupIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the group within the

repeater system for which this entry contains

information."

REFERENCE

"IEEE Std 802.3, 30.4.2.1.1"

::= { rptrGroupEntry 1 }

rptrGroupObjectID OBJECT-TYPE

SYNTAX OBJECT IDENTIFIER

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The vendor's authoritative identification of the

group. This value may be allocated within the SMI

enterprises subtree (1.3.6.1.4.1) and provides a

straight-forward and unambiguous means for

determining what kind of group is being managed.

For example, this object could take the value

1.3.6.1.4.1.4242.1.2.14 if vendor 'Flintstones,

Inc.' was assigned the subtree 1.3.6.1.4.1.4242,

and had assigned the identifier

1.3.6.1.4.1.4242.1.2.14 to its 'Wilma Flintstone

6-Port FOIRL Plug-in module.'"

::= { rptrGroupEntry 2 }

rptrGroupOperStatus OBJECT-TYPE

SYNTAX INTEGER {

other(1),

operational(2),

malfunctioning(3),

notPresent(4),

underTest(5),

resetInProgress(6)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"An object that indicates the operational status

of the group.

A status of notPresent(4) indicates that the group

is temporarily or permanently physically and/or

logically not a part of the repeater. It is an

implementation-specific matter as to whether the

agent effectively removes notPresent entries from

the table.

A status of operational(2) indicates that the

group is functioning, and a status of

malfunctioning(3) indicates that the group is

malfunctioning in some way."

::= { rptrGroupEntry 3 }

rptrGroupPortCapacity OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The rptrGroupPortCapacity is the number of ports

that can be contained within the group. Valid

range is 1-2147483647. Within each group, the

ports are uniquely numbered in the range from 1 to

rptrGroupPortCapacity.

Some ports may not be present in the repeater system, in

which case the actual number of ports present

will be less than the value of rptrGroupPortCapacity.

The number of ports present in the group will never

be greater than the value of rptrGroupPortCapacity.

Note: In practice, this will generally be the

number of ports on a module, card, or board, and

the port numbers will correspond to numbers marked

on the physical embodiment."

REFERENCE

"IEEE Std 802.3, 30.4.2.1.2"

::= { rptrGroupEntry 4 }

-- Basic information at the port level.

--

-- Configuration and status objects for

-- each managed repeater port in the repeater system,

-- independent of whether there is one or more

-- managed repeater-units in the repeater system.

rptrPortTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of descriptive and status information about

the repeater ports in the repeater system. The number of

entries is independent of the number of repeaters

in the managed repeater system."

::= { rptrPortInfo 1 }

rptrPortEntry OBJECT-TYPE

SYNTAX RptrPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing information

about a single port."

INDEX { rptrPortGroupIndex, rptrPortIndex }

::= { rptrPortTable 1 }

RptrPortEntry ::=

SEQUENCE {

rptrPortGroupIndex

Integer32,

rptrPortIndex

Integer32,

rptrPortAdminStatus

INTEGER,

rptrPortAutoPartitionState

INTEGER,

rptrPortOperStatus

INTEGER,

rptrPortRptrId

Integer32

}

rptrPortGroupIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the group containing the

port for which this entry contains information."

::= { rptrPortEntry 1 }

rptrPortIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the port within the group

for which this entry contains information. This

identifies the port independently from the repeater

to which it may be attached. The numbering scheme for

ports is implementation specific; however, this

value can never be greater than

rptrGroupPortCapacity for the associated group."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.1"

::= { rptrPortEntry 2 }

rptrPortAdminStatus OBJECT-TYPE

SYNTAX INTEGER {

enabled(1),

disabled(2)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Setting this object to disabled(2) disables the

port. A disabled port neither transmits nor

receives. Once disabled, a port shall be

explicitly enabled to restore operation. A port

that is disabled when power is lost or when a

reset is exerted shall remain disabled when normal

operation resumes.

The admin status takes precedence over auto-

partition and functionally operates between the

auto-partition mechanism and the AUI/PMA, PCS/PMA

or GMII/PCS as applicable.

Setting this object to enabled(1) enables the port

and exerts a BEGIN on the port's auto-partition

state machine.

(In effect, when a port is disabled, the value of

rptrPortAutoPartitionState for that port is frozen

until the port is next enabled. When the port

becomes enabled, the rptrPortAutoPartitionState

becomes notAutoPartitioned(1), regardless of its

pre-disabling state.)"

REFERENCE

"IEEE Std 802.3, 30.4.3.1.2 and 30.4.3.2.1"

::= { rptrPortEntry 3 }

rptrPortAutoPartitionState OBJECT-TYPE

SYNTAX INTEGER {

notAutoPartitioned(1),

autoPartitioned(2)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The autoPartitionState flag indicates whether the

port is currently partitioned by the repeater's

auto-partition protection.

The conditions that cause port partitioning are

specified in partition state machine in IEEE Std 802.3

Clause 9 and Clause 27. They are not differentiated here.

An IEEE Std 802.3, Clause 27 and Clause 41 repeater port

partitions on entry to the PARTITION WAIT state of the

partition state diagram (see IEEE Std 802.3, Figure 27–8

and Figure 41–4)."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.3"

::= { rptrPortEntry 4 }

rptrPortOperStatus OBJECT-TYPE

SYNTAX INTEGER {

operational(1),

notOperational(2),

notPresent(3)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object indicates the port's operational

status. The notPresent(3) status indicates the

port is physically removed (note this may or may

not be possible depending on the type of port.)

The operational(1) status indicates that the port

is enabled (see rptrPortAdminStatus) and working,

even though it might be auto-partitioned (see

rptrPortAutoPartitionState).

If this object has the value operational(1) and

rptrPortAdminStatus is set to disabled(2), it is

expected that this object's value will soon change

to notOperational(2)."

::= { rptrPortEntry 5 }

rptrPortRptrId OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object identifies the repeater to

which this port belongs. The repeater

identified by a particular value of this object

is the same as that identified by the same

value of rptrInfoId. A value of zero

indicates that this port currently is not

a member of any repeater."

::= { rptrPortEntry 6 }

-- New version of basic information at the repeater level.

--

-- Configuration, status, and control objects for

-- each managed repeater in the repeater system.

rptrInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table of information about each

non-trivial repeater. The number of entries

depends on the physical configuration of the

managed repeater system."

::= { rptrAllRptrInfo 1 }

rptrInfoEntry OBJECT-TYPE

SYNTAX RptrInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing information

about a single non-trivial repeater."

INDEX { rptrInfoId }

::= { rptrInfoTable 1 }

RptrInfoEntry ::=

SEQUENCE {

rptrInfoId

Integer32,

rptrInfoRptrType

INTEGER,

rptrInfoOperStatus

INTEGER,

rptrInfoReset

INTEGER,

rptrInfoPartitionedPorts

Gauge32,

rptrInfoLastChange

TimeStamp

}

rptrInfoId OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the repeater for which

this entry contains information."

::= { rptrInfoEntry 1 }

rptrInfoRptrType OBJECT-TYPE

SYNTAX INTEGER {

other(1), -- undefined or unknown

tenMb(2),

onehundredMbClassI(3),

onehundredMbClassII(4),

onethousandMb(5)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The rptrInfoRptrType returns a value that identifies

the CSMA/CD repeater type."

REFERENCE

"IEEE Std 802.3, 30.4.1.1.2"

::= { rptrInfoEntry 2 }

rptrInfoOperStatus OBJECT-TYPE

SYNTAX INTEGER {

other(1),

ok(2),

failure(3),

failureGroup(4),

failurePort(5),

failureGeneral(6)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The rptrInfoOperStatus object indicates the

operational state of the repeater."

REFERENCE

"IEEE Std 802.3, 30.4.1.1.5"

::= { rptrInfoEntry 3 }

rptrInfoReset OBJECT-TYPE

SYNTAX INTEGER {

noReset(1),

reset(2)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Setting this object to reset(2) causes a

transition to the START state of see IEEE Std 802.3,

Figure 9-2 for a 10 Mb/s repeater, and to the START

state of see IEEE Std 802.3, Figure 27-2 for a

100 Mb/s repeater.

Setting this object to noReset(1) has no effect.

The agent will return the value noReset(1)

when this object is read.

After receiving a request to set this variable to

reset(2), the agent is allowed to delay the reset

for a short period. For example, the implementor

may choose to delay the reset long enough to allow

the SNMP response to be transmitted. In any

event, SNMP requires that a response be transmitted.

This action does not reset the management counters

defined in this document nor does it affect the

portAdminStatus parameters. Included in this

action is the execution of a disruptive Self-Test

with the following characteristics: a) The nature

of the tests is not specified. b) The test resets

the repeater but without affecting management

information about the repeater. c) The test does

not inject packets onto any segment. d) Packets

received during the test may or may not be

transferred. e) The test does not interfere with

management functions.

After performing this self-test, the agent will

update the repeater health information (including

rptrInfoOperStatus), and send a rptrInfoResetEvent

notification."

REFERENCE

"IEEE Std 802.3, 30.4.1.2.1"

::= { rptrInfoEntry 4 }

rptrInfoPartitionedPorts OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object returns the total number of ports in

the repeater whose current state meets all three

of the following criteria: rptrPortOperStatus

does not have the value notPresent(3),

rptrPortAdminStatus is enabled(1), and

rptrPortAutoPartitionState is autoPartitioned(2)."

::= { rptrInfoEntry 5 }

rptrInfoLastChange OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime when any of the following

conditions occurred:

1) agent cold- or warm-started;

2) this instance of repeater was created

(such as when a device or module was

added to the repeater system);

3) a change in the value of rptrInfoOperStatus;

4) ports were added or removed as members of

the repeater; or

5) any of the counters associated with this

repeater had a discontinuity."

::= { rptrInfoEntry 6 }

-- Statistics at the port level.

--

rptrMonitorPortTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrMonitorPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of performance and error statistics for the

ports. The number of entries is the same as that

in the rptrPortTable.

The columnar object rptrMonitorPortLastChange

is used to indicate possible discontinuities

of counter type columnar objects in the table."

::= { rptrMonitorPortInfo 1 }

rptrMonitorPortEntry OBJECT-TYPE

SYNTAX RptrMonitorPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing performance and

error statistics for a single port."

INDEX { rptrMonitorPortGroupIndex, rptrMonitorPortIndex }

::= { rptrMonitorPortTable 1 }

RptrMonitorPortEntry ::=

SEQUENCE {

rptrMonitorPortGroupIndex

Integer32,

rptrMonitorPortIndex

Integer32,

rptrMonitorPortReadableFrames

Counter32,

rptrMonitorPortReadableOctets

Counter32,

rptrMonitorPortFCSErrors

Counter32,

rptrMonitorPortAlignmentErrors

Counter32,

rptrMonitorPortFrameTooLongs

Counter32,

rptrMonitorPortShortEvents

Counter32,

rptrMonitorPortRunts

Counter32,

rptrMonitorPortCollisions

Counter32,

rptrMonitorPortLateEvents

Counter32,

rptrMonitorPortVeryLongEvents

Counter32,

rptrMonitorPortDataRateMismatches

Counter32,

rptrMonitorPortAutoPartitions

Counter32,

rptrMonitorPortTotalErrors

Counter32,

rptrMonitorPortLastChange

TimeStamp

}

rptrMonitorPortGroupIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the group containing the

port for which this entry contains information."

::= { rptrMonitorPortEntry 1 }

rptrMonitorPortIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the port within the group

for which this entry contains information."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.1"

::= { rptrMonitorPortEntry 2 }

rptrMonitorPortReadableFrames OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is the number of frames of valid

frame length that have been received on this port.

This counter is incremented by one for each frame

received on this port whose OctetCount is greater

than or equal to minFrameSize and less than or

equal to maxFrameSize (Ref: IEEE 802.3 Std,

4.4.2.1) and for which the FCSError and

CollisionEvent signals are not asserted.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

This statistic provides one of the parameters

necessary for obtaining the packet error ratio.

The approximate minimum time for rollover of this

counter is 80 hours at 10 Mb/s."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.4"

::= { rptrMonitorPortEntry 3 }

rptrMonitorPortReadableOctets OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is the number of octets contained in

valid frames that have been received on this port.

This counter is incremented by OctetCount for each

frame received on this port that has been

determined to be a readable frame (i.e., including

FCS octets but excluding framing bits and dribble

bits).

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

This statistic provides an indicator of the total

data transferred. The approximate minimum time

for rollover of this counter in a 10 Mb/s repeater

is 58 minutes.

For ports receiving traffic at a maximum rate in

a 100 Mb/s repeater, this counter can roll over

in less than 6 minutes. Since that amount of time

could be less than a management station's poll cycle

time, in order to avoid a loss of information a

management station is advised to also poll the

rptrMonitorPortUpper32Octets object, or to use the

64-bit counter defined by

rptrMonitorPortHCReadableOctets instead of the

two 32-bit counters."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.5"

::= { rptrMonitorPortEntry 4 }

rptrMonitorPortFCSErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each frame

received on this port with the FCSError signal

asserted and the FramingError and CollisionEvent

signals deasserted and whose OctetCount is greater

than or equal to minFrameSize and less than or

equal to maxFrameSizeLimit (See IEEE Std 802.3, 4.2.7.1).

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 80 hours at 10 Mb/s."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.6"

::= { rptrMonitorPortEntry 5 }

rptrMonitorPortAlignmentErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each frame

received on this port with the FCSError and

FramingError signals asserted and CollisionEvent

signal deasserted and whose OctetCount is greater

than or equal to minFrameSize and less than or

equal to maxFrameSizeLimit (See IEEE Std 802.3, 4.2.7.1).

If rptrMonitorPortAlignmentErrors is

incremented then the rptrMonitorPortFCSErrors

Counter shall not be incremented for the same

frame.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 80 hours at 10 Mb/s."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.7"

::= { rptrMonitorPortEntry 6 }

rptrMonitorPortFrameTooLongs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each frame

received on this port whose OctetCount is greater

than maxFrameSizeLimit (See IEEE Std 802.3, 4.2.7.1).

If rptrMonitorPortFrameTooLongs is incremented

then neither the rptrMonitorPortAlignmentErrors

nor the rptrMonitorPortFCSErrors counter shall be

incremented for the frame.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 61 days in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.8"

::= { rptrMonitorPortEntry 7 }

rptrMonitorPortShortEvents OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each

CarrierEvent on this port with ActivityDuration

less than ShortEventMaxTime. ShortEventMaxTime is

greater than 74 bit times and less than 82 bit

times. ShortEventMaxTime has tolerances included

to provide for circuit losses between a

conformance test point at the AUI and the

measurement point within the state machine.

Notes:

ShortEvents may indicate externally

generated noise hits that will cause the repeater

to transmit Runts to its other ports, or propagate

a collision (which may be late) back to the

transmitting DTE and damaged frames to the rest of

the network.

Implementors may wish to consider selecting the

ShortEventMaxTime towards the lower end of the

allowed tolerance range to accommodate bit losses

suffered through physical channel devices not

budgeted for within this standard.

The significance of this attribute is different

in 10 and 100 Mb/s collision domains. IEEE Std 802.3,

Clause 9 repeaters perform fragment extension of short

events which would be counted as runts on the

interconnect ports of other repeaters. IEEE Std 802.3,

Clause 27 repeaters do not perform fragment extension.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 16 hours in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.9"

::= { rptrMonitorPortEntry 8 }

rptrMonitorPortRunts OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each

CarrierEvent on this port that meets one of the

following two conditions. Only one test need be

made. a) The ActivityDuration is greater than

ShortEventMaxTime and less than ValidPacketMinTime

and the CollisionEvent signal is deasserted. b)

The OctetCount is less than 64, the

ActivityDuration is greater than ShortEventMaxTime

and the CollisionEvent signal is deasserted.

ValidPacketMinTime is greater than or equal to 552

bit times and less than 565 bit times.

An event whose length is greater than 74 bit times

but less than 82 bit times shall increment either

the shortEvents counter or the runts counter but

not both. A CarrierEvent greater than or equal to

552 bit times but less than 565 bit times may or

may not be counted as a runt.

ValidPacketMinTime has tolerances included to

provide for circuit losses between a conformance

test point at the AUI and the measurement point

within the state machine.

Runts usually indicate collision fragments, a

normal network event. In certain situations

associated with large diameter networks a

percentage of collision fragments may exceed

ValidPacketMinTime.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 16 hours in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.10"

::= { rptrMonitorPortEntry 9 }

rptrMonitorPortCollisions OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"For an IEEE Std 802.3, Clause 9 repeater, this

counter is incremented by one for any CarrierEvent

signal on any port for which the CollisionEvent signal

on this port is asserted. For an IEEE Std 802.3,

Clause 27 repeater port the counter increments on

entering the Collision Count Increment state of the

partition state diagram (see IEEE Std 802.3,

Figure 27-8).

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 16 hours in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.11"

::= { rptrMonitorPortEntry 10 }

rptrMonitorPortLateEvents OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"For am IEEE Std 802.3, Clause 9 repeater port,

this counter is incremented by one for each

CarrierEvent on this port in which the CollIn(X)

variable transitions to the value SQE (see

IEEE Std 802.3, 9.6.6.2) while the

ActivityDuration is greater than the

LateEventThreshold. For an IEEE Std 802.3, Clause 27

repeater port, this counter is incremented by one on

entering the Collision Count Increment state

of the partition state diagram (see IEEE Std 802.3,

Figure 27-8) while the ActivityDuration is greater

Than the LateEvent- Threshold. Such a CarrierEvent

is counted twice, as both a collision and as a

lateEvent.

The LateEventThreshold is greater than 480 bit

times and less than 565 bit times.

LateEventThreshold has tolerances included to

permit an implementation to build a single

threshold to serve as both the LateEventThreshold

and ValidPacketMinTime threshold.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 81 hours in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.12"

::= { rptrMonitorPortEntry 11 }

rptrMonitorPortVeryLongEvents OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"For an IEEE Std 802.3, Clause 9 repeater port,

this counter is incremented by one for each

CarrierEvent whose ActivityDuration is greater than

the MAU Jabber Lockup Protection timer TW3

(see IEEE Std 802.3 9.6.1 and 9.6.5).

For an IEEE Std 802.3, Clause 27 repeater port,

this counter is incremented by one on entry to the

Rx Jabber state of the receiver timer state

diagram (see IEEE Std 802.3, Figure 27-7).

Other counters may be incremented as appropriate.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.13"

::= { rptrMonitorPortEntry 12 }

rptrMonitorPortDataRateMismatches OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each

frame received by this port that meets all

of the conditions required by only one of the

following two measurement methods:

Measurement method A: 1) The CollisionEvent

signal is not asserted (10 Mb/s operation) or

the Collision Count Increment state of the

partition state diagram (see IEEE Std 802.3,

Figure 27-8) has not been entered

(100 Mb/s operation). 2) The ActivityDuration

is greater than ValidPacketMinTime. 3) The

frequency (data rate) is detectably mismatched

from the local transmit frequency.

Measurement method B: 1) The CollisionEvent

signal is not asserted (10 Mb/s operation)

or the Collision Count Increment state of the

partition state diagram (see IEEE Std 802.3,

Figure 27-8) has not been entered

(100 Mb/s operation). 2) The OctetCount is

greater than 63. 3) The frequency (data

rate) is detectably mismatched from the local

transmit frequency. The exact degree of

mismatch is vendor specific and is to be

defined by the vendor for conformance testing.

When this event occurs, other counters whose

increment conditions were satisfied may or may not

also be incremented, at the implementor's

discretion. Whether or not the repeater was able

to maintain data integrity is beyond the scope of

this standard.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.14"

::= { rptrMonitorPortEntry 13 }

rptrMonitorPortAutoPartitions OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for

each time the repeater has automatically

partitioned this port.

The conditions that cause an IEEE Std 802.3,

Clause 9 repeater port to partition are specified in

the partition state diagram in IEEE Std 802.3,

Clause 9. They are not differentiated

here. An IEEE Std 802.3, Clause 27 repeater port

partitions on entry to the Partition Wait state of the

partition state diagram (see IEEE Std 802.3,

Figure 27-8).

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.15"

::= { rptrMonitorPortEntry 14 }

rptrMonitorPortTotalErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The total number of errors which have occurred on

this port. This counter is the summation of the

values of other error counters (for the same

port), namely:

rptrMonitorPortFCSErrors,

rptrMonitorPortAlignmentErrors,

rptrMonitorPortFrameTooLongs,

rptrMonitorPortShortEvents,

rptrMonitorPortLateEvents,

rptrMonitorPortVeryLongEvents,

rptrMonitorPortDataRateMismatches, and

rptrMonitorPortSymbolErrors.

This counter is redundant in the sense that it is

the summation of information already available

through other objects. However, it is included

specifically because the regular retrieval of this

object as a means of tracking the health of a port

provides a considerable optimization of network

management traffic over the otherwise necessary

retrieval of the summed counters.

Note that rptrMonitorPortRunts is not included

in this total; this is because runts usually

indicate collision fragments, a normal network

event.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

::= { rptrMonitorPortEntry 15 }

rptrMonitorPortLastChange OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime when the last of

the following occurred:

1) the agent cold- or warm-started;

2) the row for the port was created

(such as when a device or module was added

to the repeater system); or

3) any condition that would cause one of

the counters for the row to experience

a discontinuity."

::= { rptrMonitorPortEntry 16 }

rptrMonitor100PortTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrMonitor100PortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of additional performance and error

statistics for 100 Mb/s ports, above and

beyond those parameters that apply to both

10 and 100 Mb/s ports. Entries exist only for

ports attached to 100 Mb/s repeaters.

The columnar object rptrMonitorPortLastChange

is used to indicate possible discontinuities

of counter type columnar objects in this table."

::= { rptrMonitorPortInfo 2 }

rptrMonitor100PortEntry OBJECT-TYPE

SYNTAX RptrMonitor100PortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing performance

and error statistics for a single 100 Mb/s port."

INDEX { rptrMonitorPortGroupIndex, rptrMonitorPortIndex }

::= { rptrMonitor100PortTable 1 }

RptrMonitor100PortEntry ::=

SEQUENCE {

rptrMonitorPortIsolates

Counter32,

rptrMonitorPortSymbolErrors

Counter32,

rptrMonitorPortUpper32Octets

Counter32,

rptrMonitorPortHCReadableOctets

Counter64

}

rptrMonitorPortIsolates OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one each time that

the repeater port automatically isolates as a

consequence of false carrier events. The conditions

which cause a port to automatically isolate are

defined by the transition from the False Carrier

state to the Link Unstable state of the carrier

integrity state diagram (see IEEE Std 802.3,

Figure 27-9).

Note: Isolates do not affect the value of

the PortOperStatus object.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.16"

::= { rptrMonitor100PortEntry 1 }

rptrMonitorPortSymbolErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one each time when

valid length packet was received at the port and

there was at least one occurrence of an invalid

data symbol. This can increment only once per valid

carrier event. A collision presence at any port of

the repeater containing port N, will not cause this

attribute to increment.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 7.4 hours at 100 Mb/s."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.17"

::= { rptrMonitor100PortEntry 2 }

rptrMonitorPortUpper32Octets OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is the number of octets contained in

valid frames that have been received on this port,

modulo 2\*\*32. That is, it contains the upper 32

bits of a 64-bit octets counter, of which the

lower 32 bits are contained in the

rptrMonitorPortReadableOctets object.

This two-counter mechanism is provided for those

network management protocols that do not support

64-bit counters (e.g. SNMP V1) and are used to

manage a repeater type of 100 Mb/s.

Conformance clauses for this MIB are defined such

that implementation of this object is not required

in a repeater system which does not support 100 Mb/s.

However, repeater systems with mixed 10 and 100 Mb/s ports

may implement this object across all ports,

including 10 Mb/s. If this object is implemented, the

value shall be a valid count as defined

in the first paragraph of this description.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

::= { rptrMonitor100PortEntry 3 }

rptrMonitorPortHCReadableOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is the number of octets contained in

valid frames that have been received on this port.

This counter is incremented by OctetCount for each

frame received on this port which has been

determined to be a readable frame (i.e., including

FCS octets but excluding framing bits and dribble

bits).

This statistic provides an indicator of the total

data transferred.

This counter is a 64-bit version of rptrMonitor-

PortReadableOctets. It should be used by network

management protocols which suppport 64-bit counters

(e.g., SNMPv2).

Conformance clauses for this MIB are defined such

that implementation of this object is not required

in a repeater system which does not support 100 Mb/s.

However, repeater systems with mixed 10 and 100 Mb/s ports

may implement this object across all ports,

including 10 Mb/s. If this object is implemented, the

value shall be a valid count as defined

in the first paragraph of this description.

A discontinuity may occur in the value

when the value of object

rptrMonitorPortLastChange changes."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.5"

::= { rptrMonitor100PortEntry 4 }

-- New version of statistics at the repeater level.

--

-- Statistics objects for each managed repeater

-- in the repeater system.

rptrMonTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrMonEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table of information about each

non-trivial repeater. The number of entries

in this table is the same as the number of

entries in the rptrInfoTable.

The columnar object rptrInfoLastChange is

used to indicate possible discontinuities of

counter type columnar objects in this table."

::= { rptrMonitorAllRptrInfo 1 }

rptrMonEntry OBJECT-TYPE

SYNTAX RptrMonEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing information

about a single non-trivial repeater."

INDEX { rptrInfoId }

::= { rptrMonTable 1 }

RptrMonEntry ::=

SEQUENCE {

rptrMonTxCollisions

Counter32,

rptrMonTotalFrames

Counter32,

rptrMonTotalErrors

Counter32,

rptrMonTotalOctets

Counter32

}

rptrMonTxCollisions OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"For an IEEE Std 802.3, Clause 9 (10 Mb/s) repeater,

this counter is incremented every time the repeater

state machine enters the TRANSMIT COLLISION state

from any state other than ONE PORT LEFT

(see IEEE Std 802.3, Figure 9-2).

For an IEEE Std 802.3, Clause 27 repeater, this counter

Is incremented every time the repeater core state

diagram enters the Jam state as a result of

Activity(ALL) > 1 (see IEEE Std 802.3, Figure 27-2).

The approximate minimum time for rollover of this

counter is 16 hours in a 10 Mb/s repeater and 1.6

hours in a 100 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.1.1.8"

::= { rptrMonEntry 1 }

rptrMonTotalFrames OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of frames of valid frame length

that have been received on the ports in this repeater

and for which the FCSError and CollisionEvent

signals were not asserted. If an implementation

can not obtain a count of frames as seen by

the repeater itself, this counter may be

implemented as the summation of the values of the

rptrMonitorPortReadableFrames counters for all of

the ports in the repeater.

This statistic provides one of the parameters

necessary for obtaining the packet error ratio.

The approximate minimum time for rollover of this

counter is 80 hours in a 10 Mb/s repeater."

::= { rptrMonEntry 3 }

rptrMonTotalErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The total number of errors which have occurred on

all of the ports in this repeater. The errors

included in this count are the same as those listed

for the rptrMonitorPortTotalErrors counter. If an

implementation can not obtain a count of these

errors as seen by the repeater itself, this counter

may be implemented as the summation of the values of

the rptrMonitorPortTotalErrors counters for all of

the ports in the repeater."

::= { rptrMonEntry 4 }

rptrMonTotalOctets OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The total number of octets contained in the valid

frames that have been received on the ports in

this group. If an implementation can not obtain

a count of octets as seen by the repeater itself,

this counter may be the summation of the

values of the rptrMonitorPortReadableOctets

counters for all of the ports in the group.

This statistic provides an indicator of the total

data transferred. The approximate minimum time

for rollover of this counter in a 10 Mb/s repeater

is 58 minutes divided by the number of ports in

the repeater.

For 100 Mb/s repeaters processing traffic at a

maximum rate, this counter can roll over in less

than 6 minutes divided by the number of ports in

the repeater. Since that amount of time could

be less than a management station's poll cycle

time, in order to avoid a loss of information a

management station is advised to also poll the

rptrMonUpper32TotalOctets object, or to use the

64-bit counter defined by rptrMonHCTotalOctets

instead of the two 32-bit counters."

::= { rptrMonEntry 5 }

rptrMon100Table OBJECT-TYPE

SYNTAX SEQUENCE OF RptrMon100Entry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table of additional information about each

100 Mb/s repeater, augmenting the entries in

the rptrMonTable. Entries exist in this table

only for 100 Mb/s repeaters.

The columnar object rptrInfoLastChange is

used to indicate possible discontinuities of

counter type columnar objects in this table."

::= { rptrMonitorAllRptrInfo 2 }

rptrMon100Entry OBJECT-TYPE

SYNTAX RptrMon100Entry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing information

about a single 100 Mb/s repeater."

INDEX { rptrInfoId }

::= { rptrMon100Table 1 }

RptrMon100Entry ::=

SEQUENCE {

rptrMonUpper32TotalOctets

Counter32,

rptrMonHCTotalOctets

Counter64

}

rptrMonUpper32TotalOctets OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The total number of octets contained in the valid

frames that have been received on the ports in

this repeater, modulo 2\*\*32. That is, it contains

the upper 32 bits of a 64-bit counter, of which

the lower 32 bits are contained in the

rptrMonTotalOctets object. If an implementation

can not obtain a count of octets as seen

by the repeater itself, the 64-bit value

may be the summation of the values of the

rptrMonitorPortReadableOctets counters combined

with the corresponding rptrMonitorPortUpper32Octets

counters for all of the ports in the repeater.

This statistic provides an indicator of the total

data transferred within the repeater.

This two-counter mechanism is provided for those

network management protocols that do not support

64-bit counters (e.g., SNMP v1) and are used to

manage a repeater type of 100 Mb/s.

Conformance clauses for this MIB are defined such

that implementation of this object is not required

in a repeater system which does not support 100 Mb/s.

However, repeater systems with mixed 10 and 100 Mb/s ports

may implement this object across all ports,

including 10 Mb/s. If this object is implemented, the

value shall be a valid count as defined

in the first paragraph of this description."

::= { rptrMon100Entry 1 }

rptrMonHCTotalOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The total number of octets contained in the valid

frames that have been received on the ports in

this group. If a implementation can not obtain

a count of octets as seen by the repeater itself,

this counter may be the summation of the

values of the rptrMonitorPortReadableOctets

counters for all of the ports in the group.

This statistic provides an indicator of the total

data transferred.

This counter is a 64-bit (high-capacity) version

of rptrMonUpper32TotalOctets and rptrMonTotalOctets.

It should be used by network management protocols

which support 64-bit counters (e.g. SNMPv2).

Conformance clauses for this MIB are defined such

that implementation of this object is not required

in a repeater system which does not support 100 Mb/s.

However, repeater systems with mixed 10 and 100 Mb/s ports

may implement this object across all ports,

including 10 Mb/s. If this object is implemented, the

value shall be a valid count as defined

in the first paragraph of this description."

::= { rptrMon100Entry 2 }

--

-- The Repeater Address Search Table

--

-- This table provides an active address tracking

-- capability which can be also used to collect the

-- necessary information for mapping the topology

-- of a network. Note that an NMS is required to have

-- read-write access to the table in order to access

-- this function. Section 4 "Topology Mapping" of

-- IETF RFC 2108 [B19] contains a description of an

-- algorithm that can make use of this table,

-- in combination with the forwarding databases

-- of managed bridges/switches in the network,

-- to map network topology. Devices may also

-- use the protocol and a set of managed

-- objects defined in IEEE Std 802.1AB Station

-- and Media Access Control Connectivity

-- Discovery to discover the physical topology

-- from adjacent stations.

--

rptrAddrSearchTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrAddrSearchEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains one entry per repeater in the

repeater system. It defines objects that allow a network

management application to instruct an agent to watch

for a given MAC address and report which port it

was seen on. Only one address search can be in

progress on each repeater at any one time. Before

starting an address search, a management application

should obtain 'ownership' of the entry in

rptrAddrSearchTable for the repeater that is to

perform the search. This is accomplished with the

rptrAddrSearchLock and rptrAddrSearchStatus as

follows:

try\_again:

get(rptrAddrSearchLock, rptrAddrSearchStatus)

while (rptrAddrSearchStatus != notInUse)

{

/\* Loop waiting for objects to be available\*/

short delay

get(rptrAddrSearchLock, rptrAddrSearchStatus)

}

/\* Try to claim map objects \*/

lock\_value = rptrAddrSearchLock

if ( set(rptrAddrSearchLock = lock\_value,

rptrAddrSearchStatus = inUse,

rptrAddrSearchOwner = 'my-IP-address)

== FAILURE)

/\* Another manager got the lock \*/

goto try\_again

/\* I have the lock \*/

set (rptrAddrSearchAddress = <search target>)

wait for rptrAddrSearchState to change from none

if (rptrAddrSearchState == single)

get (rptrAddrSearchGroup, rptrAddrSearchPort)

/\* release the lock, making sure not to overwrite

anyone else's lock \*/

set (rptrAddrSearchLock = lock\_value+1,

rptrAddrSearchStatus = notInUse,

rptrAddrSearchOwner = '')

A management station first retrieves the values of

the appropriate instances of the rptrAddrSearchLock

and rptrAddrSearchStatus objects, periodically

repeating the retrieval if necessary, until the value

of rptrAddrSearchStatus is 'notInUse'. The

management station then tries to set the same

instance of the rptrAddrSearchLock object to the

value it just retrieved, the same instance of the

rptrAddrSearchStatus object to 'inUse', and the

corresponding instance of rptrAddrSearchOwner to a

value indicating itself. If the set operation

succeeds, then the management station has obtained

ownership of the rptrAddrSearchEntry, and the value

of rptrAddrSearchLock is incremented by the agent (as

per the semantics of TestAndIncr). Failure of the

set operation indicates that some other manager has

obtained ownership of the rptrAddrSearchEntry.

Once ownership is obtained, the management station

can proceed with the search operation. Note that the

agent will reset rptrAddrSearchStatus to 'notInUse'

if it has been in the 'inUse' state for an abnormally

long period of time, to prevent a misbehaving manager

from permanently locking the entry. It is suggested

that this timeout period be between one and five

minutes.

When the management station has completed its search

operation, it should free the entry by setting

the instance of the rptrAddrSearchLock object to the

previous value + 1, the instance of the

rptrAddrSearchStatus to 'notInUse', and the instance

of rptrAddrSearchOwner to a zero length string. This

is done to prevent overwriting another station's

lock."

::= { rptrAddrTrackRptrInfo 1 }

rptrAddrSearchEntry OBJECT-TYPE

SYNTAX RptrAddrSearchEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry containing objects for invoking an address

search on a repeater."

INDEX { rptrInfoId }

::= { rptrAddrSearchTable 1 }

RptrAddrSearchEntry ::=

SEQUENCE {

rptrAddrSearchLock TestAndIncr,

rptrAddrSearchStatus INTEGER,

rptrAddrSearchAddress MacAddress,

rptrAddrSearchState INTEGER,

rptrAddrSearchGroup Integer32,

rptrAddrSearchPort Integer32,

rptrAddrSearchOwner OwnerString

}

rptrAddrSearchLock OBJECT-TYPE

SYNTAX TestAndIncr

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This object is used by a management station as an

advisory lock for this rptrAddrSearchEntry."

::= { rptrAddrSearchEntry 1 }

rptrAddrSearchStatus OBJECT-TYPE

SYNTAX INTEGER {

notInUse(1),

inUse(2)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This object is used to indicate that some management

station is currently using this rptrAddrSearchEntry.

Cooperating managers should set this object to

'notInUse' when they are finished using this entry.

The agent will automatically set the value of this

object to 'notInUse' if it has been set to 'inUse'

for an unusually long period of time."

::= { rptrAddrSearchEntry 2 }

rptrAddrSearchAddress OBJECT-TYPE

SYNTAX MacAddress

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This object is used to search for a specified MAC

address. When this object is set, an address search

begins. This automatically sets the corresponding

instance of the rptrAddrSearchState object to 'none'

and the corresponding instances of the

rptrAddrSearchGroup and rptrAddrSearchPort objects to

0.

When a valid frame is received by this repeater with

a source MAC address that matches the current value

of rptrAddrSearchAddress, the agent will update the

corresponding instances of rptrAddrSearchState,

rptrAddrSearchGroup and rptrAddrSearchPort to reflect

the current status of the search, and the group and

port on which the frame was seen."

::= { rptrAddrSearchEntry 3 }

rptrAddrSearchState OBJECT-TYPE

SYNTAX INTEGER {

none(1),

single(2),

multiple(3)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The current state of the MAC address search on this

repeater. This object is initialized to 'none' when

the corresponding instance of rptrAddrSearchAddress

is set. If the agent detects the address on exactly

one port, it will set this object to 'single', and

set the corresponding instances of

rptrAddrSearchGroup and rptrAddrSearchPort to reflect

the group and port on which the address was heard.

If the agent detects the address on more than one

port, it will set this object to 'multiple'."

::= { rptrAddrSearchEntry 4 }

rptrAddrSearchGroup OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The group from which an error-free frame whose

source address is equal to the corresponding instance

of rptrAddrSearchAddress has been received. The

value of this object is undefined when the

corresponding instance of rptrAddrSearchState is

equal to 'none' or 'multiple'."

::= { rptrAddrSearchEntry 5 }

rptrAddrSearchPort OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The port from which an error-free frame whose

source address is equal to the corresponding instance

of rptrAddrSearchAddress has been received. The

value of this object is undefined when the

corresponding instance of rptrAddrSearchState is

equal to 'none' or 'multiple'."

::= { rptrAddrSearchEntry 6 }

rptrAddrSearchOwner OBJECT-TYPE

SYNTAX OwnerString

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The entity that currently has 'ownership' of this

rptrAddrSearchEntry."

::= { rptrAddrSearchEntry 7 }

--

-- The Port Address Tracking Table

--

-- This table provides a way for a network management

-- application to passively gather information (using

-- read-only privileges) about which network addresses

-- are connected to which ports of a repeater.

--

rptrAddrTrackTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrAddrTrackEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of address mapping information about the

ports."

::= { rptrAddrTrackPortInfo 1 }

rptrAddrTrackEntry OBJECT-TYPE

SYNTAX RptrAddrTrackEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the table, containing address mapping

information about a single port."

INDEX { rptrAddrTrackGroupIndex, rptrAddrTrackPortIndex }

::= { rptrAddrTrackTable 1 }

RptrAddrTrackEntry ::=

SEQUENCE {

rptrAddrTrackGroupIndex

INTEGER,

rptrAddrTrackPortIndex

INTEGER,

rptrAddrTrackSourceAddrChanges

Counter32,

rptrAddrTrackNewLastSrcAddress

OptMacAddr,

rptrAddrTrackCapacity

Integer32

}

rptrAddrTrackGroupIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the group containing the

port for which this entry contains information."

::= { rptrAddrTrackEntry 1 }

rptrAddrTrackPortIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object identifies the port within the group

for which this entry contains information."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.1"

::= { rptrAddrTrackEntry 2 }

rptrAddrTrackSourceAddrChanges OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter is incremented by one for each time

that the rptrAddrTrackNewLastSrcAddress attribute

for this port has changed.

This may indicate whether a link is connected to a

single DTE or another multi-user segment.

A discontinuity may occur in the value when the

value of object rptrMonitorPortLastChange changes.

The approximate minimum time for rollover of this

counter is 81 hours in a 10 Mb/s repeater."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.19"

::= { rptrAddrTrackEntry 3 }

rptrAddrTrackNewLastSrcAddress OBJECT-TYPE

SYNTAX OptMacAddr

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is the SourceAddress of the last

readable frame (i.e., counted by

rptrMonitorPortReadableFrames) received by this

port. If no frames have been received by this

port since the agent began monitoring the port

activity, the agent shall return a string of

length zero."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.18"

::= { rptrAddrTrackEntry 4 }

rptrAddrTrackCapacity OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The maximum number of addresses that can be

detected on this port. This value indicates

to the maximum number of entries in the

rptrExtAddrTrackTable relative to this port.

If this object has the value of 1, the agent

implements only the LastSourceAddress mechanism

described by IETF RFC 1368 or IETF RFC 1516."

::= { rptrAddrTrackEntry 5 }

-- Table for multiple addresses per port

rptrExtAddrTrackTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrExtAddrTrackEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table to extend the address tracking table (i.e.,

rptrAddrTrackTable) with a list of source MAC

addresses that were recently received on each port.

The number of ports is the same as the number

of entries in table rptrPortTable. The number of

entries in this table depends on the agent/repeater

implementation and the number of different

addresses received on each port.

The first entry for each port contains

the same MAC address that is given by the

rptrAddrTrackNewLastSrcAddress for that port.

Entries in this table for a particular port are

retained when that port is switched from one

repeater to another.

The ordering of MAC addresses listed for a

particular port is implementation dependent."

::= { rptrAddrTrackPortInfo 2 }

rptrExtAddrTrackEntry OBJECT-TYPE

SYNTAX RptrExtAddrTrackEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A row in the table of extended address tracking

information for ports. Entries cannot be directly

created or deleted via SNMP operations."

INDEX { rptrAddrTrackGroupIndex,

rptrAddrTrackPortIndex,

rptrExtAddrTrackMacIndex }

::= { rptrExtAddrTrackTable 1 }

RptrExtAddrTrackEntry ::= SEQUENCE {

rptrExtAddrTrackMacIndex Integer32,

rptrExtAddrTrackSourceAddress MacAddress

}

rptrExtAddrTrackMacIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The index of a source MAC address seen on

the port.

The ordering of MAC addresses listed for a

particular port is implementation dependent.

There is no implied relationship between a

particular index and a particular MAC

address. The index for a particular MAC

address may change without notice."

::= { rptrExtAddrTrackEntry 1 }

rptrExtAddrTrackSourceAddress OBJECT-TYPE

SYNTAX MacAddress

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The source MAC address from a readable frame

(i.e., counted by rptrMonitorPortReadableFrames)

recently received by the port."

REFERENCE

"IEEE Std 802.3, 30.4.3.1.18"

::= { rptrExtAddrTrackEntry 2 }

-- The Repeater Top "N" Port Group

-- The Repeater Top N Port group is used to prepare reports that

-- describe a list of ports ordered by one of the statistics in the

-- Repeater Monitor Port Table. The statistic chosen by the

-- management station is sampled over a management

-- station-specified time interval, making the report rate based.

-- The management station also specifies the number of ports that

-- are reported.

--

-- The rptrTopNPortControlTable is used to initiate the generation

-- of a report. The management station may select the parameters

-- of such a report, such as which repeater, which statistic, how

-- many ports, and the start and stop times of the sampling. When

-- the report is prepared, entries are created in the

-- rptrTopNPortTable associated with the relevent

-- rptrTopNControlEntry. These entries are static for

-- each report after it has been prepared.

-- Note that counter discontinuities may appear in some

-- implementations if ports' assignment to repeaters changes

-- during the collection of data for a Top "N" report.

-- A management application could read the corresponding

-- rptrMonitorPortLastChange timestamp in order to check

-- whether a discontinuity occurred.

rptrTopNPortControlTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrTopNPortControlEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table of control records for reports on the top 'N'

ports for the rate of a selected counter. The number

of entries depends on the configuration of the agent.

The maximum number of entries is implementation

dependent."

::= { rptrTopNPortInfo 1 }

rptrTopNPortControlEntry OBJECT-TYPE

SYNTAX RptrTopNPortControlEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A set of parameters that control the creation of a

report of the top N ports according to several metrics."

INDEX { rptrTopNPortControlIndex }

::= { rptrTopNPortControlTable 1 }

RptrTopNPortControlEntry ::= SEQUENCE {

rptrTopNPortControlIndex

Integer32,

rptrTopNPortRepeaterId

Integer32,

rptrTopNPortRateBase

INTEGER,

rptrTopNPortTimeRemaining

Integer32,

rptrTopNPortDuration

Integer32,

rptrTopNPortRequestedSize

Integer32,

rptrTopNPortGrantedSize

Integer32,

rptrTopNPortStartTime

TimeStamp,

rptrTopNPortOwner

OwnerString,

rptrTopNPortRowStatus

RowStatus

}

rptrTopNPortControlIndex OBJECT-TYPE

SYNTAX Integer32 (1 .. 65535)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An index that uniquely identifies an entry in the

rptrTopNPortControl table. Each such entry defines

one top N report prepared for a repeater or repeater system."

::= { rptrTopNPortControlEntry 1 }

rptrTopNPortRepeaterId OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Identifies the repeater for which a top N report will

be prepared (see rptrInfoId). If the value of this

object is positive, only ports assigned to this repeater

will be used to form the list in which to order the

Top N table. If this value is zero, all ports will be

eligible for inclusion on the list.

The value of this object may not be modified if the

associated rptrTopNPortRowStatus object is equal to

active(1).

If, for a particular row in this table, the repeater

specified by the value of this object goes away (is

removed from the rptrInfoTable) while the associated

rptrTopNPortRowStatus object is equal to active(1),

the row in this table is preserved by the agent but

the value of rptrTopNPortRowStatus is changed to

notInService(2), and the agent may time out the row

if appropriate. If the specified repeater comes

back (reappears in the rptrInfoTable) before the row

has been timed out, the management station sets

the value of the rptrTopNPortRowStatus object back

to active(1) if desired (the agent doesn't do this

automatically)."

::= { rptrTopNPortControlEntry 2 }

rptrTopNPortRateBase OBJECT-TYPE

SYNTAX INTEGER {

readableFrames(1),

readableOctets(2),

fcsErrors(3),

alignmentErrors(4),

frameTooLongs(5),

shortEvents(6),

runts(7),

collisions(8),

lateEvents(9),

veryLongEvents(10),

dataRateMismatches(11),

autoPartitions(12),

totalErrors(13),

isolates(14),

symbolErrors(15)

}

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The monitored variable, which the rptrTopNPortRate

variable is based upon.

The value of this object may not be modified if

the associated rptrTopNPortRowStatus object has

a value of active(1)."

::= { rptrTopNPortControlEntry 3 }

rptrTopNPortTimeRemaining OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The number of seconds left in the report

currently being collected. When this object

is modified by the management station, a new

collection is started, possibly aborting a

currently running report. The new value is

used as the requested duration of this report,

which is loaded into the associated

rptrTopNPortDuration object.

When this object is set to a non-zero value,

any associated rptrTopNPortEntries shall be

made inaccessible by the agent. While the value

of this object is non-zero, it decrements by one

per second until it reaches zero. During this

time, all associated rptrTopNPortEntries shall

remain inaccessible. At the time that this object

decrements to zero, the report is made accessible

in the rptrTopNPortTable. Thus, the rptrTopNPort

table needs to be created only at the end of the

collection interval.

If the value of this object is set to zero

while the associated report is running, the

running report is aborted and no associated

rptrTopNPortEntries are created."

DEFVAL { 0 }

::= { rptrTopNPortControlEntry 4 }

rptrTopNPortDuration OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of seconds that this report has

collected during the last sampling interval,

or if this report is currently being collected,

the number of seconds that this report is being

collected during this sampling interval.

When the associated rptrTopNPortTimeRemaining

object is set, this object shall be set by the

agent to the same value and shall not be modified

until the next time the rptrTopNPortTimeRemaining

is set.

This value shall be zero if no reports have been

requested for this rptrTopNPortControlEntry."

::= { rptrTopNPortControlEntry 5 }

rptrTopNPortRequestedSize OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The maximum number of repeater ports requested

for the Top N Table.

When this object is created or modified, the

agent should set rptrTopNPortGrantedSize as close

to this object as is possible for the particular

implementation and available resources."

DEFVAL { 10 }

::= { rptrTopNPortControlEntry 6 }

rptrTopNPortGrantedSize OBJECT-TYPE

SYNTAX Integer32 (0..65535)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The maximum number of repeater ports in the

top N table.

When the associated rptrTopNPortRequestedSize object is

created or modified, the agent should set this object as

closely to the requested value as is possible for the

particular implementation and available resources. The

agent shall not lower this value except as a result of a

set to the associated rptrTopNPortRequestedSize object."

::= { rptrTopNPortControlEntry 7 }

rptrTopNPortStartTime OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime when this top N report was

last started. In other words, this is the time that

the associated rptrTopNPortTimeRemaining object was

modified to start the requested report.

If the report has not yet been started, the value

of this object is zero."

::= { rptrTopNPortControlEntry 8 }

rptrTopNPortOwner OBJECT-TYPE

SYNTAX OwnerString

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The entity that configured this entry and is

using the resources assigned to it."

::= { rptrTopNPortControlEntry 9 }

rptrTopNPortRowStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The status of this row.

If the value of this object is not equal to

active(1), all associated entries in the

rptrTopNPortTable shall be deleted by the

agent."

::= { rptrTopNPortControlEntry 10 }

-- Top "N" reports

rptrTopNPortTable OBJECT-TYPE

SYNTAX SEQUENCE OF RptrTopNPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table of reports for the top 'N' ports based on

setting of associated control table entries. The

maximum number of entries depends on the number

of entries in table rptrTopNPortControlTable and

the value of object rptrTopNPortGrantedSize for

each entry.

For each entry in the rptrTopNPortControlTable,

repeater ports with the highest value of

rptrTopNPortRate shall be placed in this table

in decreasing order of that rate until there is

no more room or until there are no more ports."

::= { rptrTopNPortInfo 2 }

rptrTopNPortEntry OBJECT-TYPE

SYNTAX RptrTopNPortEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A set of statistics for a repeater port that is

part of a top N report."

INDEX { rptrTopNPortControlIndex,

rptrTopNPortIndex }

::= { rptrTopNPortTable 1 }

RptrTopNPortEntry ::= SEQUENCE {

rptrTopNPortIndex

Integer32,

rptrTopNPortGroupIndex

Integer32,

rptrTopNPortPortIndex

Integer32,

rptrTopNPortRate

Gauge32

}

rptrTopNPortIndex OBJECT-TYPE

SYNTAX Integer32 (1..65535)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An index that uniquely identifies an entry in

the rptrTopNPort table among those in the same

report. This index is between 1 and N, where N

is the number of entries in this report. Increasing

values of rptrTopNPortIndex shall be assigned to

entries with decreasing values of rptrTopNPortRate

until index N is assigned to the entry with the

lowest value of rptrTopNPortRate or there are no

more rptrTopNPortEntries.

No ports are included in a report where their

value of rptrTopNPortRate would be zero."

::= { rptrTopNPortEntry 1 }

rptrTopNPortGroupIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object identifes the group containing

the port for this entry. (See also object

type rptrGroupIndex.)"

::= { rptrTopNPortEntry 2 }

rptrTopNPortPortIndex OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The index of the repeater port.

(See object type rptrPortIndex.)"

::= { rptrTopNPortEntry 3 }

rptrTopNPortRate OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The amount of change in the selected variable

during this sampling interval for the identified

port. The selected variable is that port's

instance of the object selected by

rptrTopNPortRateBase."

::= { rptrTopNPortEntry 4 }

-- Notifications for use by Repeaters

-- Notifications for repeaters in a multiple-repeater implementation.

-- An implementation may send either the single-repeater OR

-- multiple-repeater version of these notifications (1 or 4; 2 or 5)

-- but not both.

ieee8023snmpDot3RptrNotifications OBJECT IDENTIFIER

::= {ieee8023snmpDot3RptrMgt 0}

rptrInfoHealth NOTIFICATION-TYPE

OBJECTS { rptrInfoOperStatus }

STATUS current

DESCRIPTION

"In a repeater system containing multiple managed repeaters,

the rptrInfoHealth notification conveys information

related to the operational status of a repeater.

It is sent either when the value of rptrInfoOperStatus

changes, or upon completion of a non-disruptive test.

The agent shall limit the generation of

consecutive rptrInfoHealth notifications for

the same repeater so that there is at least

a five-second gap between notifications of this type.

When notifications are throttled, they are dropped,

not queued for sending at a future time. (Note

that 'generating' a notification means sending

to all configured recipients.)"

REFERENCE

"IEEE Std 802.3, 30.4.1.3.1

notification."

::= { ieee8023snmpDot3RptrNotifications 4 }

rptrInfoResetEvent NOTIFICATION-TYPE

OBJECTS { rptrInfoOperStatus }

STATUS current

DESCRIPTION

"In a repeater system containing multiple managed

repeaters, the rptrInfoResetEvent notification

conveys information related to the operational

status of a repeater. This notification is sent

on completion of a repeater reset action. A

repeater reset action is defined as a transition

to the START state of IEEE Std 802.3, Figure 9-2,

when triggered by a management command

(e.g., an SNMP Set on the rptrInfoReset object).

The agent shall limit the generation of

consecutive rptrInfoResetEvent notifications for

a single repeater so that there is at least

a five-second gap between notifications of

this type. When notifications are throttled,

they are dropped, not queued for sending at

a future time. (Note that 'generating' a

notification means sending to all configured

recipients.)

The rptrInfoResetEvent is not sent when the

agent restarts and sends an SNMP coldStart or

warmStart trap. However, it is recommended that

a repeater agent send the rptrInfoOperStatus

object as an optional object with its coldStart

and warmStart trap PDUs."

REFERENCE

"IEEE Std 802.3, 30.4.1.3.2"

::= { ieee8023snmpDot3RptrNotifications 5 }

-- Conformance statements

snmpRptrModConf

OBJECT IDENTIFIER ::= { ieee8023snmpRptrMIB 2 }

snmpRptrModCompls

OBJECT IDENTIFIER ::= { snmpRptrModConf 1 }

snmpRptrModObjGrps

OBJECT IDENTIFIER ::= { snmpRptrModConf 2 }

snmpRptrModNotGrps

OBJECT IDENTIFIER ::= { snmpRptrModConf 3 }

-- Object groups

snmpRptrGrpBasic OBJECT-GROUP

OBJECTS { rptrGroupObjectID,

rptrGroupOperStatus,

rptrGroupPortCapacity,

rptrPortAdminStatus,

rptrPortAutoPartitionState,

rptrPortOperStatus,

rptrPortRptrId,

rptrInfoRptrType,

rptrInfoOperStatus,

rptrInfoReset,

rptrInfoPartitionedPorts,

rptrInfoLastChange }

STATUS current

DESCRIPTION

"Basic group for a repeater system with one or more

repeater-units in multisegment (post-RFC 1516)

version of the MIB module."

::= { snmpRptrModObjGrps 1 }

snmpRptrGrpMonitor OBJECT-GROUP

OBJECTS { rptrMonitorPortReadableFrames,

rptrMonitorPortReadableOctets,

rptrMonitorPortFCSErrors,

rptrMonitorPortAlignmentErrors,

rptrMonitorPortFrameTooLongs,

rptrMonitorPortShortEvents,

rptrMonitorPortRunts,

rptrMonitorPortCollisions,

rptrMonitorPortLateEvents,

rptrMonitorPortVeryLongEvents,

rptrMonitorPortDataRateMismatches,

rptrMonitorPortAutoPartitions,

rptrMonitorPortTotalErrors,

rptrMonitorPortLastChange,

rptrMonTxCollisions,

rptrMonTotalFrames,

rptrMonTotalErrors,

rptrMonTotalOctets }

STATUS current

DESCRIPTION

"Monitor group for a repeater system with one or more

repeater-units in multisegment (post-RFC 1516)

version of the MIB module."

::= { snmpRptrModObjGrps 2 }

snmpRptrGrpMonitor100 OBJECT-GROUP

OBJECTS { rptrMonitorPortIsolates,

rptrMonitorPortSymbolErrors,

rptrMonitorPortUpper32Octets,

rptrMonUpper32TotalOctets }

STATUS current

DESCRIPTION

"Monitor group for 100 Mb/s ports and repeaters

in a repeater system with one or more repeater-units in

multisegment (post-RFC 1516) version of the MIB

module. Repeater systems which support Counter64 should

also implement snmpRptrGrpMonitor100w64."

::= { snmpRptrModObjGrps 3 }

snmpRptrGrpMonitor100w64 OBJECT-GROUP

OBJECTS { rptrMonitorPortHCReadableOctets,

rptrMonHCTotalOctets }

STATUS current

DESCRIPTION

"Monitor group for 100 Mb/s ports and repeaters in a

repeater system with one or more repeater-units and support

for Counter64."

::= { snmpRptrModObjGrps 4 }

snmpRptrGrpAddrTrack OBJECT-GROUP

OBJECTS { rptrAddrTrackSourceAddrChanges,

rptrAddrTrackNewLastSrcAddress,

rptrAddrTrackCapacity }

STATUS current

DESCRIPTION

"Passive address tracking group for post-RFC 1516

version of the MIB module."

::= { snmpRptrModObjGrps 5 }

snmpRptrGrpExtAddrTrack OBJECT-GROUP

OBJECTS { rptrExtAddrTrackSourceAddress }

STATUS current

DESCRIPTION

"Extended passive address tracking group for

a repeater system with one or more repeater-units in

post-RFC 1516 version of the MIB module."

::= { snmpRptrModObjGrps 6 }

snmpRptrGrpRptrAddrSearch OBJECT-GROUP

OBJECTS { rptrAddrSearchLock,

rptrAddrSearchStatus,

rptrAddrSearchAddress,

rptrAddrSearchState,

rptrAddrSearchGroup,

rptrAddrSearchPort,

rptrAddrSearchOwner }

STATUS current

DESCRIPTION

"Active MAC address search group and topology

mapping support for repeaters."

::= { snmpRptrModObjGrps 7 }

snmpRptrGrpTopNPort OBJECT-GROUP

OBJECTS { rptrTopNPortRepeaterId,

rptrTopNPortRateBase,

rptrTopNPortTimeRemaining,

rptrTopNPortDuration,

rptrTopNPortRequestedSize,

rptrTopNPortGrantedSize,

rptrTopNPortStartTime,

rptrTopNPortOwner,

rptrTopNPortRowStatus,

rptrTopNPortGroupIndex,

rptrTopNPortPortIndex,

rptrTopNPortRate }

STATUS current

DESCRIPTION

"Top 'N' group for repeater ports."

::= { snmpRptrModObjGrps 8 }

ieee8023snmpDot3RptrNotGroup NOTIFICATION-GROUP

NOTIFICATIONS { rptrInfoHealth,

rptrInfoResetEvent }

STATUS current

DESCRIPTION

"Conformance Group for repeater notifications.

Formerly an empty group."

::= {snmpRptrModNotGrps 1}

-- Compliance statements

snmpRptrModCompl MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"Compliance for the multisegment version of the

MIB module for a repeater system with one or more

repeater-units."

MODULE -- this module

MANDATORY-GROUPS { snmpRptrGrpBasic,

snmpRptrGrpMonitor,

snmpRptrGrpAddrTrack }

GROUP snmpRptrGrpMonitor100

DESCRIPTION

"Implementation of this group is

mandatory for managed repeater systems that

contain 100 Mb/s repeaters."

GROUP snmpRptrGrpMonitor100w64

DESCRIPTION

"Implementation of this group is

mandatory for managed repeater systems that

contain 100 Mb/s repeaters and that

can support Counter64."

GROUP snmpRptrGrpExtAddrTrack

DESCRIPTION

"Implementation of this group is

recommended for repeater systems that have

the necessary instrumentation to track

MAC addresses of multiple DTEs attached

to a single repeater port."

GROUP snmpRptrGrpRptrAddrSearch

DESCRIPTION

"Implementation of this group is

recommended for repeater systems that allow

read-write access and that have

the necessary instrumentation to

search all incoming data streams

for a particular MAC address."

GROUP snmpRptrGrpTopNPort

DESCRIPTION

"Implementation of this group is

recommended for repeater systems that have

the necessary resources to support

TopN statistics reporting."

GROUP ieee8023snmpDot3RptrNotGroup

DESCRIPTION

"Implementation of this group is

recommended for repeaters that

support notifications."

::= { snmpRptrModCompls 1 }

END