```
IEEE8023-ETHER-WIS-MIB DEFINITIONS ::= BEGIN

   IMPORTS
       MODULE-IDENTITY, OBJECT-TYPE,
       Gauge32, org
           FROM SNMPv2-SMI
       ifIndex
           FROM IF-MIB
       MODULE-COMPLIANCE, OBJECT-GROUP
           FROM SNMPv2-CONF
       sonetMediumStuff2, sonetSectionStuff2,
       sonetLineStuff2, sonetFarEndLineStuff2,
       sonetPathStuff2, sonetFarEndPathStuff2,
       sonetMediumType, sonetMediumLineCoding,
       sonetMediumLineType, sonetMediumCircuitIdentifier,
       sonetMediumLoopbackConfig, sonetSESthresholdSet,
       sonetPathCurrentWidth
           FROM SONET-MIB;

   ieee8023etherWisMIB MODULE-IDENTITY
        LAST-UPDATED "201304110000Z" -- April 11, 2013
        ORGANIZATION
          "IEEE 802.3 working group"
        CONTACT-INFO
            "WG-URL: http://www.ieee802.org/3/index.html
            WG-EMail: STDS-802-3-MIB@LISTSERV.IEEE.ORG

            Contact: Howard Frazier
            Postal:  3151 Zanker Road
                     San Jose, CA 95134
                     USA
            Tel:     +1.408.922.8164
            E-mail:  hfrazier@broadcom.com"
DESCRIPTION
         "The objects in this MIB module are used in conjunction
         with objects in the SONET-MIB module and the MAU-MIB module to manage
         the Ethernet WAN Interface Sublayer (WIS) defined in
         IEEE Std 802.3.

         Of particular interest are IEEE Std 802.3, Clause 50, 'WAN Interface
         Sublayer (WIS), type 10GBASE-W', Clause 30, '10 Mb/s,
         100 Mb/s, 1000 Mb/s, and 10 Gb/s Management, and Link
         Aggregation Management', and Clause 45, 'Management
         Data Input/Output (MDIO) Interface'."

       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 3637."

            ::= { org ieee(111) standards-association-numbers-series-standards(2)
                 lan-man-stds(802) ieee802dot3(3) ieee802dot3dot1mibs(1) 12 }


   -- The main sections of the module

   etherWisObjects     OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 1 }

   etherWisObjectsPath OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 2 }

   etherWisConformance OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 3 }

   -- groups in the Ethernet WIS MIB module

   etherWisDevice      OBJECT IDENTIFIER ::= { etherWisObjects 1 }

   etherWisSection     OBJECT IDENTIFIER ::= { etherWisObjects 2 }

   etherWisPath        OBJECT IDENTIFIER ::= { etherWisObjectsPath 1 }
```

```
etherWisFarEndPath  OBJECT IDENTIFIER ::= { etherWisObjectsPath 2 }

-- The Device group

-- These objects provide WIS extensions to
-- the SONET-MIB Medium Group.

etherWisDeviceTable OBJECT-TYPE
    SYNTAX  SEQUENCE OF EtherWisDeviceEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "The table for Ethernet WIS devices"
     ::= { etherWisDevice 1 }

etherWisDeviceEntry OBJECT-TYPE
    SYNTAX  EtherWisDeviceEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "An entry in the Ethernet WIS device table. For each
       instance of this object there shall be a corresponding
       instance of sonetMediumEntry."
    INDEX  { ifIndex }
     ::= { etherWisDeviceTable 1 }

EtherWisDeviceEntry ::=
    SEQUENCE {
        etherWisDeviceTxTestPatternMode     INTEGER,
        etherWisDeviceRxTestPatternMode     INTEGER,
        etherWisDeviceRxTestPatternErrors   Gauge32
        }

etherWisDeviceTxTestPatternMode OBJECT-TYPE
    SYNTAX  INTEGER {
                none(1),
                squareWave(2),
                prbs31(3),
                mixedFrequency(4)
            }
    MAX-ACCESS  read-write
    STATUS  current
    DESCRIPTION
       "This variable controls the transmit test pattern mode.
       The value none(1) puts the the WIS transmit path into
       the normal operating mode. The value squareWave(2) puts
       the WIS transmit path into the square wave test pattern
       mode described in IEEE Std 802.3, 50.3.8.1.
       The value prbs31(3) puts the WIS transmit path into the
       PRBS31 test pattern mode described in IEEE Std 802.3
       50.3.8.2. The value mixedFrequency(4) puts the
       WIS transmit path into the mixed frequency test pattern
       mode described in IEEE Std 802.3, 50.3.8.3.
       Any attempt to set this object to a value other than
       none(1) when the corresponding instance of ifAdminStatus
       has the value up(1) shall be rejected with the error
       inconsistentValue, and any attempt to set the corresponding
       instance of ifAdminStatus to the value up(1) when an
       instance of this object has a value other than none(1)
       shall be rejected with the error inconsistentValue."
    REFERENCE
       "IEEE Std 802.3, 50.3.8, WIS test pattern generator and
       checker, 45.2.2.6, 10G WIS control 2 register (2.7), and
       45.2.2.7.2, PRBS31 pattern testing ability (2.8.1)."
     ::= { etherWisDeviceEntry 1 }

etherWisDeviceRxTestPatternMode OBJECT-TYPE
    SYNTAX  INTEGER {
                none(1),
                prbs31(3),
                mixedFrequency(4)
            }
```

```
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
           "This variable controls the receive test pattern mode.
           The value none(1) puts the the WIS receive path into the
           normal operating mode. The value prbs31(3) puts the WIS
           receive path into the PRBS31 test pattern mode described
           in IEEE Std 802.3, 50.3.8.2. The value
           mixedFrequency(4) puts the WIS receive path into the mixed
           frequency test pattern mode described in IEEE Std 802.3,
           50.3.8.3. Any attempt to set this object to a
           value other than none(1) when the corresponding instance
           of ifAdminStatus has the value up(1) shall be rejected with
           the error inconsistentValue, and any attempt to set the
           corresponding instance of ifAdminStatus to the value up(1)
           when an instance of this object has a value other than
           none(1) shall be rejected with the error inconsistentValue."
        REFERENCE
           "IEEE Std 802.3, 50.3.8, WIS test pattern generator and
           checker, 45.2.2.6, 10G WIS control 2 register (2.7), and
           and 45.2.2.7.2, PRBS31 pattern testing ability (2.8.1)."
         ::= { etherWisDeviceEntry 2 }

    etherWisDeviceRxTestPatternErrors OBJECT-TYPE
        SYNTAX  Gauge32 ( 0..65535 )
        MAX-ACCESS  read-write
        STATUS  current
        DESCRIPTION
           "This object counts the number of errors detected when the
           WIS receive path is operating in the PRBS31 test pattern
           mode. It is reset to zero when the WIS receive path
           initially enters that mode, and it increments each time
           the PRBS pattern checker detects an error as described in
           IEEE Std 802.3, 50.3.8.2 unless its value is
           65535, in which case it remains unchanged. This object is
           writeable so that it may be reset upon explicit request
           of a command generator application while the WIS receive
           path continues to operate in PRBS31 test pattern mode."
        REFERENCE
           "IEEE Std 802.3, 50.3.8, WIS test pattern generator and
           checker, 45.2.2.7.2, PRBS31 pattern testing ability
           (2.8.1), and 45.2.2.8, 10G WIS test pattern error counter
           register (2.9)."
         ::= { etherWisDeviceEntry 3 }
    -- The Section group

    -- These objects provide WIS extensions to
    -- the SONET-MIB Section Group.

    etherWisSectionCurrentTable OBJECT-TYPE
        SYNTAX  SEQUENCE OF EtherWisSectionCurrentEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
           "The table for the current state of Ethernet WIS sections."
         ::= { etherWisSection 1 }

    etherWisSectionCurrentEntry OBJECT-TYPE
        SYNTAX  EtherWisSectionCurrentEntry
        MAX-ACCESS  not-accessible
        STATUS  current
        DESCRIPTION
           "An entry in the etherWisSectionCurrentTable. For each
           instance of this object there shall be a corresponding
           instance of sonetSectionCurrentEntry."
        INDEX  { ifIndex }
         ::= { etherWisSectionCurrentTable 1 }

    EtherWisSectionCurrentEntry ::=
        SEQUENCE {
            etherWisSectionCurrentJ0Transmitted OCTET STRING,
            etherWisSectionCurrentJ0Received    OCTET STRING
            }
```

```
etherWisSectionCurrentJ0Transmitted OBJECT-TYPE
    SYNTAX  OCTET STRING (SIZE (16))
    MAX-ACCESS  read-write
    STATUS  current
    DESCRIPTION
       "This is the 16-octet section trace message that
       is transmitted in the J0 byte. The value should
       be '89'h followed by fifteen octets of '00'h
       (or some cyclic shift thereof) when the section
       trace function is not used, and the implementation
       should use that value (or a cyclic shift thereof)
       as a default if no other value has been set."
    REFERENCE
       "IEEE Std 802.3, 30.8.1.1.8, aJ0ValueTX."
     ::= { etherWisSectionCurrentEntry 1 }

etherWisSectionCurrentJ0Received OBJECT-TYPE
    SYNTAX  OCTET STRING (SIZE (16))
    MAX-ACCESS  read-only
    STATUS  current
    DESCRIPTION
       "This is the 16-octet section trace message that
       was most recently received in the J0 byte."
    REFERENCE
       "IEEE Std 802.3, 30.8.1.1.9, aJ0ValueRX."
     ::= { etherWisSectionCurrentEntry 2 }

-- The Path group

-- These objects provide WIS extensions to
-- the SONET-MIB Path Group.

etherWisPathCurrentTable OBJECT-TYPE
    SYNTAX  SEQUENCE OF EtherWisPathCurrentEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "The table for the current state of Ethernet WIS paths."
     ::= { etherWisPath 1 }

etherWisPathCurrentEntry OBJECT-TYPE
    SYNTAX  EtherWisPathCurrentEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "An entry in the etherWisPathCurrentTable. For each
       instance of this object there shall be a corresponding
       instance of sonetPathCurrentEntry."
    INDEX  { ifIndex }
     ::= { etherWisPathCurrentTable 1 }

EtherWisPathCurrentEntry ::=
    SEQUENCE {
        etherWisPathCurrentStatus           BITS,
        etherWisPathCurrentJ1Transmitted    OCTET STRING,
        etherWisPathCurrentJ1Received       OCTET STRING
        }
etherWisPathCurrentStatus OBJECT-TYPE
    SYNTAX  BITS {
                etherWisPathLOP(0),
                etherWisPathAIS(1),
                etherWisPathPLM(2),
                etherWisPathLCD(3)
            }
    MAX-ACCESS  read-only
    STATUS  current
    DESCRIPTION
       "This variable indicates the current status of the
       path payload with a bit map that can indicate multiple
       defects at once. The bit positions are assigned as
       follows:
```

```
        etherWisPathLOP(0)
           This bit is set to indicate that an
           LOP-P (Loss of Pointer - Path) defect
           is being experienced. When this
           bit is set, sonetPathSTSLOP shall be set
           in the corresponding instance of
           sonetPathCurrentStatus.

        etherWisPathAIS(1)
           This bit is set to indicate that an
           AIS-P (Alarm Indication Signal - Path)
           defect is being experienced. When
           this bit is set, sonetPathSTSAIS shall be
           set in the corresponding instance of
           sonetPathCurrentStatus.

        etherWisPathPLM(1)
           This bit is set to indicate that a
           PLM-P (Payload Label Mismatch - Path)
           defect is being experienced. When
           this bit is set, sonetPathSignalLabelMismatch
           shall be set in the corresponding instance of
           sonetPathCurrentStatus.
        etherWisPathLCD(3)
           This bit is set to indicate that an
           LCD-P (Loss of Codegroup Delination - Path)
           defect is being experienced. Since this
           defect is detected by the PCS and not by
           the path layer itself, there is no
           corresponding bit in sonetPathCurrentStatus."
    REFERENCE
           "IEEE Std 802.3, 30.8.1.1.18, aPathStatus."
     ::= { etherWisPathCurrentEntry 1 }

etherWisPathCurrentJ1Transmitted OBJECT-TYPE
    SYNTAX  OCTET STRING (SIZE (16))
    MAX-ACCESS  read-write
    STATUS  current
    DESCRIPTION
       "This is the 16-octet path trace message that
       is transmitted in the J1 byte. The value should
       be '89'h followed by fifteen octets of '00'h
       (or some cyclic shift thereof) when the path
       trace function is not used, and the implementation
       should use that value (or a cyclic shift thereof)
       as a default if no other value has been set."
    REFERENCE
       "IEEE Std 802.3, 30.8.1.1.23, aJ1ValueTX."
     ::= { etherWisPathCurrentEntry 2 }

etherWisPathCurrentJ1Received OBJECT-TYPE
    SYNTAX  OCTET STRING (SIZE (16))
    MAX-ACCESS  read-only
    STATUS  current
    DESCRIPTION
       "This is the 16-octet path trace message that
       was most recently received in the J1 byte."
    REFERENCE
       "IEEE Std 802.3, 30.8.1.1.24, aJ1ValueRX."
     ::= { etherWisPathCurrentEntry 3 }
-- The Far End Path group

-- These objects provide WIS extensions to
-- the SONET-MIB Far End Path Group.

etherWisFarEndPathCurrentTable OBJECT-TYPE
    SYNTAX  SEQUENCE OF EtherWisFarEndPathCurrentEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "The table for the current far-end state of Ethernet WIS
       paths."
     ::= { etherWisFarEndPath 1 }
```

```
etherWisFarEndPathCurrentEntry OBJECT-TYPE
    SYNTAX  EtherWisFarEndPathCurrentEntry
    MAX-ACCESS  not-accessible
    STATUS  current
    DESCRIPTION
       "An entry in the etherWisFarEndPathCurrentTable. For each
       instance of this object there shall be a corresponding
       instance of sonetFarEndPathCurrentEntry."
    INDEX  { ifIndex }
     ::= { etherWisFarEndPathCurrentTable 1 }

EtherWisFarEndPathCurrentEntry ::=
    SEQUENCE {
        etherWisFarEndPathCurrentStatus     BITS
        }

etherWisFarEndPathCurrentStatus OBJECT-TYPE
    SYNTAX  BITS {
                etherWisFarEndPayloadDefect(0),
                etherWisFarEndServerDefect(1)
            }
    MAX-ACCESS  read-only
    STATUS  current
    DESCRIPTION
       "This variable indicates the current status at the
       far end of the path using a bit map that can indicate
       multiple defects at once. The bit positions are
       assigned as follows:

       etherWisFarEndPayloadDefect(0)
          A far end payload defect (i.e., far end
          PLM-P or LCD-P) is currently being signaled
          in G1 bits 5-7.

       etherWisFarEndServerDefect(1)
          A far end server defect (i.e., far end
          LOP-P or AIS-P) is currently being signaled
          in G1 bits 5-7. When this bit is set,
          sonetPathSTSRDI shall be set in the corresponding
          instance of sonetPathCurrentStatus."
    REFERENCE
       "IEEE Std 802.3, 30.8.1.1.25, aFarEndPathStatus."
     ::= { etherWisFarEndPathCurrentEntry 1 }

--
--     Conformance Statements
--

etherWisGroups      OBJECT IDENTIFIER ::= { etherWisConformance 1 }

etherWisCompliances OBJECT IDENTIFIER ::= { etherWisConformance 2 }

--     Object Groups

etherWisDeviceGroupBasic OBJECT-GROUP
    OBJECTS {
        etherWisDeviceTxTestPatternMode,
        etherWisDeviceRxTestPatternMode
        }
    STATUS  current
    DESCRIPTION
       "A collection of objects that support test
       features required of all WIS devices."
     ::= { etherWisGroups 1 }

etherWisDeviceGroupExtra OBJECT-GROUP
    OBJECTS {
        etherWisDeviceRxTestPatternErrors
        }
    STATUS  current
    DESCRIPTION
       "A collection of objects that support
```

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```
       optional WIS device test features."
     ::= { etherWisGroups 2 }
etherWisSectionGroup OBJECT-GROUP
    OBJECTS {
        etherWisSectionCurrentJ0Transmitted,
        etherWisSectionCurrentJ0Received
        }
    STATUS  current
    DESCRIPTION
       "A collection of objects that provide
       required information about a WIS section."
     ::= { etherWisGroups 3 }

etherWisPathGroup OBJECT-GROUP
    OBJECTS {
        etherWisPathCurrentStatus,
        etherWisPathCurrentJ1Transmitted,
        etherWisPathCurrentJ1Received
        }
    STATUS  current
    DESCRIPTION
       "A collection of objects that provide
       required information about a WIS path."
     ::= { etherWisGroups 4 }

etherWisFarEndPathGroup OBJECT-GROUP
    OBJECTS {
        etherWisFarEndPathCurrentStatus
        }
    STATUS  current
    DESCRIPTION
       "A collection of objects that provide required
       information about the far end of a WIS path."
     ::= { etherWisGroups 5 }

--     Compliance Statements

etherWisCompliance MODULE-COMPLIANCE
    STATUS  current
    DESCRIPTION
       "The compliance statement for interfaces that include
       the Ethernet WIS. Compliance with the following
       external compliance statements is prerequisite:

       MIB module             Compliance Statement
       ----------             --------------------
       IF-MIB                 ifCompliance3
       IF-INVERTED-STACK-MIB  ifInvCompliance
       IEEE8023-EtherLike-MIB dot3Compliance2
       MAU-MIB                mauModIfCompl3"
    MODULE  -- this module
        MANDATORY-GROUPS {
            etherWisDeviceGroupBasic,
            etherWisSectionGroup,
            etherWisPathGroup,
            etherWisFarEndPathGroup
            }

        OBJECT       etherWisDeviceTxTestPatternMode
        SYNTAX       INTEGER {
            none(1),
            squareWave(2),
            mixedFrequency(4)
            }
        DESCRIPTION
            "Support for values other than none(1),
            squareWave(2), and mixedFrequency(4)
            is not required."

        OBJECT       etherWisDeviceRxTestPatternMode
        SYNTAX       INTEGER {
            none(1),
            mixedFrequency(4)
```

```
        }
    DESCRIPTION
        "Support for values other than none(1)
        and mixedFrequency(4) is not required."

    GROUP       etherWisDeviceGroupExtra
    DESCRIPTION
        "Implementation of this group, along with support for
        the value prbs31(3) for etherWisDeviceTxTestPatternMode
        and etherWisDeviceRxTestPatternMode, is necessary if the
        optional PRBS31 test pattern mode is to be supported."

    OBJECT      etherWisDeviceRxTestPatternErrors
    WRITE-SYNTAX Gauge32 ( 0 )
    DESCRIPTION
        "An implementation is not required to
        allow values other than zero to be
        written to this object."
MODULE SONET-MIB
    MANDATORY-GROUPS {
        sonetMediumStuff2,
        sonetSectionStuff2,
        sonetLineStuff2,
        sonetFarEndLineStuff2,
        sonetPathStuff2,
        sonetFarEndPathStuff2
        }

    OBJECT      sonetMediumType
    SYNTAX      INTEGER {
        sonet(1)
        }
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required, nor is support
        for any value other than sonet(1)."

    OBJECT      sonetMediumLineCoding
    SYNTAX      INTEGER {
        sonetMediumNRZ(4)
        }
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required, nor is support
        for any value other than sonetMediumNRZ(4)."

    OBJECT      sonetMediumLineType
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required."

    OBJECT      sonetMediumCircuitIdentifier
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required."

    OBJECT      sonetMediumLoopbackConfig
    SYNTAX      BITS {
        sonetNoLoop(0),
        sonetFacilityLoop(1)
        }
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required, nor is support for values
        other than sonetNoLoop(0) and sonetFacilityLoop(1)."

    OBJECT      sonetSESthresholdSet
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required, and only one
        of the enumerated values need be supported."

    OBJECT      sonetPathCurrentWidth
```

```
        SYNTAX       INTEGER {
            sts192cSTM64(6)
            }
        MIN-ACCESS   read-only
        DESCRIPTION
            "Write access is not required, nor is support
            for any value other than sts192cSTM64(6)."

    ::= { etherWisCompliances 1 }

END
```