

**IEEE Standard for
Local and metropolitan area networks—
Media Access Control (MAC) Bridges and
Virtual Bridged Local Area Networks—
Corrigendum 2: Technical and editorial
corrections**

IEEE Computer Society

Sponsored by the
LAN/MAN Standards Committee

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IEEE Std 802.1Q™2011/Cor 2-2012
(Corrigendum to IEEE Std 802.1Q™-2011
as amended by IEEE Std 802.1Qbe™-2011,
IEEE Std 802.1Qbc™-2011, IEEE Std 802.1Qbb™-2011,
IEEE Std 802.1Qaz™-2011, IEEE Std 802.1Qbf™-2011,
IEEE Std 802.aq™-2012, and IEEE Std 802bg™-2012)

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Approved 19 October 2012

IEEE-SA Standards Board

Abstract: This corrigendum to IEEE Std 802.1Q-2011 corrects technical and editorial errors identified by the IEEE 802.1 Working Group's maintenance activity.

Keywords: Bridged Local Area Networks, IEEE 802.1Q-2011, local area networks (LANs), MAC Bridges, metropolitan area networks, Virtual Bridged Local Area Networks (virtual LANs).

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Introduction

This introduction is not part of IEEE Std 802.1Q-2011/Cor 2-2012, IEEE Standard for Local and metropolitan area networks—Media Access Control (MAC) Bridges and Virtual Bridged Local Area Networks—Corrigendum 2: Technical and editorial corrections.

This amendment to IEEE Std 802.1Q-2011 specifies shortest path bridging of unicast and multicast frames, including protocols to calculate multiple active topologies that can share learned station information, and support of a virtual local area network (VLAN) by multiple, per topology VLAN identifiers (VIDs).

This standard contains state-of-the-art material. The area covered by this standard is undergoing evolution. Revisions are anticipated within the next few years to clarify existing material, to correct possible errors, and to incorporate new related material. Information on the current revision state of this and other IEEE 802® standards may be obtained from

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Participants

At the time this amendment was submitted to the IEEE-SA Standards Board for approval, the IEEE 802.1 Working Group had the following membership:

Tony Jeffree, *Chair and Editor*

Glenn Parsons, *Vice Chair and Chair, Maintenance Task Group*

Zehavit Alon	Franz Goetz	David Olsen
Yafan An	Mark Gravel	Donald Pannell
Ting Ao	Eric Gray	Mark Pearson
Peter Ashwood-Smith	Yingjie Gu	Joseph Pelissier
Christian Boiger	Craig Gunther	Rene Raeber
Brad Booth	Stephen Haddock	Karen T. Randall
Paul Bottorff	Hitoshi Hayakawa	Josef Roese
Rudolf Brandner	Marcus Jochim	Dan Romascanu
Craig Carlson	Girault Jones	Jessy Rouyer
Xin Chang	Daya Kamath	Ali Sajassi
Weiyang Cheng	Hal Keen	Panagiotis Saltsidis
Paul Congdon	Srikanth Keesara	Kochiro Seto
Diego Crupnicoff	Yongbum Kim	Michael Seaman
Rodney Cummings	Philippe Klein	Rakesh Sharma
Claudio DeSanti	Oliver Kleineberg	Takeshi Shimzu
Donald Eastlake	Lin Li	Kevin Stanton
Janos Farkas	Jeff Lynch	Michael Johas Teener
Donald Fedyk	Thomas Mack-Crane	Patricia Thaler
Norman Finn	David Martin	Jeremy Touve
Andre Fredette	John Messenger	Maarten Vissers
Geoffrey Garner	John Morris	Yueha Wei
Anoop Ghanwani	Eric Multanen	Min Xiao

The following members of the individual balloting committee voted on this amendment. Balloters may have voted for approval, disapproval, or abstention.

Thomas Alexander	Akio Iso	Satoshi Oyama
Danilo Antonelli	Atsushi Ito	Ivan Reede
Alex Ashley	Raj Jain	Maximilian Riegel
Michael Bahr	Tony Jeffree	Benjamin Rolfe
Christian Boiger	Shinkyō Kaku	Jessy Rouyer
Nancy Bravin	Junghong Kao	John Santhoff
William Byrd	Piotr Karocki	Bartien Sayogo
Juan Carreon	Stuart Kerry	Michael Seaman
Romana Challans	Yongbum Kim	Gil Shultz
Keith Chow	Bruce Kraemer	Kapil Sood
Charles Cook	Paul Lambert	Manikantan Srinivasan
Rodney Cummings	John Lemon	Thomas Starai
Claudio DeSanti	Shen Loh	Walter Struppler
Donald Eastlake	William Lumpkins	Patrik Sundstrom
Donald Fedyk	Greg Luri	Joseph Tardo
Yukihiro Fujimoto	Michael Lynch	William Taylor
Devon Gayle	Thomas Mack-Crane	Patricia Thaler
Anoop Ghanwani	Elvis Maculuba	Dmitri Varsanofiev
Randall Groves	Jeffery Masters	Prabodh Varshney
Michael Gundlach	John Messenger	John Vergis
Craig Gunther	Joseph Moran	Hung-Yu Wei
Stephen Haddock	Michael S. Newman	Ludwig Winkel
Marek Hajduczenia	Charles Ngethe	Oren Yuen
David Hunter	Satoshi Obara	
Noriyuki Ikeuchi		

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Richard H. Hulett, *Chair*
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Satish Aggarwal	Alexander Gelman	Oleg Logvinov
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Ted Burse	Joseph L. Koepfinger*	Mike Seavey
Clint Chaplin	David J. Law	Yatin Trivedi
Wael Diab	Thomas Lee	Phil Winston
Jean-Philippe Faure	Hung Ling	Yu Yuan

*Member Emeritus

Also included are the following nonvoting IEEE-SA Standards Board liaisons:

Richard DeBlasio, *DOE Representative*
Michael Janezic, *NIST Representative*

Patrick Gibbons
IEEE Standards Program Manager, Document Development

Kathryn Bennett
IEEE Standards Program Manager, Technical Program Development

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IEEE Standard for Local and metropolitan area networks—

Media Access Control (MAC) Bridges and Virtual Bridged Local Area Networks—

Corrigendum 2: Technical and editorial corrections

This corrigendum is based on IEEE Std 802.1Q™-2011, as modified by IEEE Std 802.1Qbe™-2011, IEEE Std 802.1Qbc™-2011, IEEE Std 802.1Qbb™-2011, IEEE Std 802.1Qaz™-2011, IEEE Std 802.1Qbf™-2011, IEEE Std 802.1aq™-2012, and IEEE Std 802.1Qbg™-2012.

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NOTE—The editing instructions contained in this corrigendum define how to merge the material contained here into the base document and its other amendments to form the new comprehensive standard. Editing instructions are shown in ***bold italic***. Four editing instructions are used: change, delete, insert, and replace. ***Change*** is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed either by using ***strikethrough*** (to remove old material) and ***underscore*** (to add new material). ***Delete*** removes existing material. ***Insert*** adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. ***Replace*** is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard.¹

¹Notes in text, tables, and figures are given for information only, and do not contain requirements needed to implement the standard.

5. Conformance

5.4 VLAN-aware Bridge component requirements

5.4.4 Multiple Stream Registration Protocol (MSRP) requirements

Change list item b) as shown:

- b) Exchange MRPDUs as required by those state machines, formatted in accordance with the generic PDU format described in 10.8, and able to carry application-specific information as defined in Clause 35, ~~using the group MAC addresses reserved for use by MRP applications, as defined in Table 10-1~~ using the “Individual LAN Scope group address, Nearest Bridge group address” as defined in Table 8-1, Table 8-2 and Table 8-3 (C-VLAN, S-VLAN and TPMR component Reserved addresses, respectively).

5.16 End station requirements for MMRP, MVRP, and MSRP

5.16.3 MSRP requirements and options

Change list item b) as shown:

- b) Exchange MPDUs as required by the MRP state machine(s) implemented, formatted in accordance with the generic PDU format described in 10.8, and able to carry application-specific information as defined in 35.2.2, ~~using the MSRP Application address as defined in Table 10-1~~ using the “Individual LAN Scope group address, Nearest Bridge group address” as defined in Table 8-1, Table 8-2 and Table 8-3 (C-VLAN, S-VLAN and TPMR component Reserved addresses, respectively).

6. Support of the MAC Service

Replace Figure 6-2 as shown:

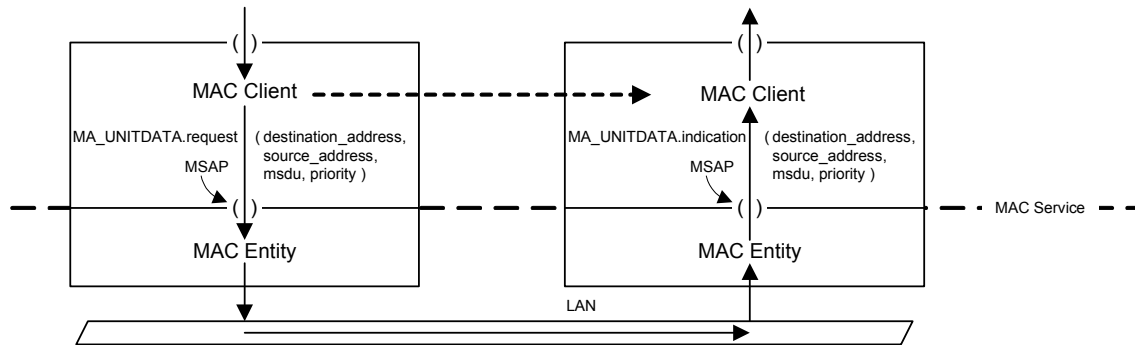


Figure 6-2—MAC entities, the MAC Service, and MAC Service users (clients)

6.1 Basic architectural concepts and terms

6.1.4 Service access points, interface stacks, and ports

Change the first paragraph as shown:

Each service is provided to a single protocol entity at a service access point (SAP) within a system. A given N-entity can support a number of N-SAPs and use one or more $(N - 1)$ -SAPs. The SAP serves to delineate the boundary between protocol specifications and to specify the externally observable relationship between entities operating those protocols. An SAP is an abstraction and does not necessarily correspond to any concrete realization within a system, but an N-entity often associates management counters with the SAP and provides status parameters that can be used by the $(N + 1)$ -entity using the SAP. Examples include the MAC_Operational and ~~operPointToPointMAC~~ operPointToPointMAC status parameters (6.6.2, 6.6.3). Each service access point has an identifier with a value that is local to the system and uniquely identifies the service access point within the system.

Replace Figure 6-3 and change the last paragraph of 6.1.4, as shown:

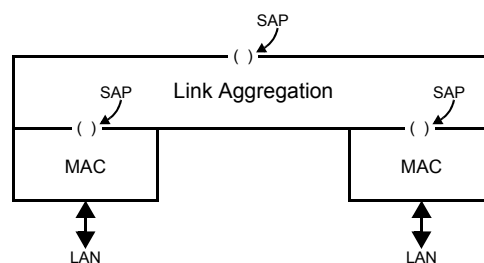


Figure 6-3—An interface stack

The term “port” is used to refer to the interface stack for a given SAP. Often the interface stack comprises a single protocol entity attached to a single LAN, and port can be conveniently used to refer to several aspects of the interface stack, including the physical interface connector for example. In more complex situations—

such as that in Figure 6-3, where the parts of the interface stack provided by the ~~IEEE 802.3~~ MAC entities effectively compose two ports that are then used by link aggregation to provide a single port to its user—the port has to be clearly specified in terms of the particular SAP supported.

6.1.6 MAC Service clients

Change the first paragraph as shown:

The protocol entity that uses the service provided at an MSAP is commonly referred to as client of the MAC Service or of the entity providing the service. Within a Bridge, the MAC Relay Entity is a client of the ISS or EISS, and the LLC Entity is a client of the MAC Service. The LLC Entity is specified in ISO/IEC 8802.2 and provides protocol ~~identification-identification~~, multiplexing and demultiplexing to and from a number of clients that use a common MSAP. The clients of LLC are also often referred to as clients of the MAC.

6.10 Support of the ISS/EISS by Provider Instance Ports

Change NOTE 1 as shown:

NOTE 1—Higher Layer Entities may interface to any Virtual Instance Port and/or the Provider Instance Port at the service access points represented by any VIP-ISS and/or the PIP-ISS using the Bridge Port Connectivity specified in 8.5.1. Protocol shims such as Connectivity Fault Management Maintenance Points may interface at any VIP-EISS using the EISS Multiplex Entity specified in 6.17, or at the PIP-ISS using the Backbone Service Instance Multiplex Entity specified in 6.18. ~~Figure 6-4~~Figure 26-2 shows a Provider Instance Port with both Bridge Port Connectivity and CFM shims.

Insert the following text at the end of 6.10, immediately before the heading for 6.10.1:

NOTE—There is a 1:1 relationship between a given value of the connection_identifier and a backbone MAC address. This level of indirection is provided to allow the use of the connection_identifier parameter for other purposes by other types of Bridge Ports. The relationship between a given connection_identifier value and a backbone MAC address is maintained as long as any FDB entry contains this value for the connection_identifier. No ageing mechanism other than that specified for Dynamic FDB entries is implied.

10. Multiple Registration Protocol (MRP) and Multiple MAC Registration Protocol (MMRP)

10.8 Structure and encoding of MRP Protocol Data Units

10.8.1 Structure

10.8.1.2 Structure definition

Change the BNF production for VectorAttribute as shown:

VectorAttribute ::= VectorHeader, FirstValue {, Vector }

10.8.2 Encoding of MRPDU parameters

10.8.2.8 Encoding of VectorHeader

Change list item e) and insert new list items, as shown:

- e) The number of AttributeEvent values ~~is nonzero, and~~ does not exceed 8191.
- f) If the number of AttributeEvent values is zero, FirstValue is ignored and the value is skipped. However, FirstValue is still present, and of the correct length, in octets, as specified by the AttributeLength field (10.8.2.3) for the Attribute to which the message applies.
- g) If LeaveAllEvent is a NullLeaveAllEvent, the number of AttributeEvent values is nonzero.

13. Spanning Tree Protocols

13.29 State machine procedures

13.29.32 updtDigest()

Change the text of 13.29.32 as shown:

Updates agreeDigest, ~~and agreeN, and agreeND~~, following calculation of a new topology or topologies by ISISSPB, and checks for a topology match with the updated values of those variables, as follows.

If agreeDigest is not equal to agreementDigest and:

- a) agreeN is equal to ~~agreedND~~agreeND, or
- b) agreeN plus one is equal to ~~agreedND~~agreeND;

then:

- c) agreeDigest is set equal to agreementDigest, and
- d) agreeDigestValid is reset to FALSE, and
- e) agreeN is set equal to agreeN plus one.

Additionally, if agreeDigest is now equal to agreementDigest and:

- f) agreeDigest equals agreedDigest, and
- g) agreedDigestValid is TRUE,

then:

- h) if ~~agreedND~~agreedND is not equal to agreedN plus one, then:
 - 1) ~~agreedND~~agreedND is set equal to agreedN plus one, and
 - 2) newInfoMsti is set.

and

- i) if ~~agreedND~~agreedND is equal to agreeN and agreedMisorder is FALSE, or
- j) if ~~agreedND~~agreedND is set equal to agreeN plus one, then:
 - 1) agreedTopology is set TRUE, and
 - 2) agreedMisorder is set FALSE;

otherwise, i.e., if (f) and (g) above are not both TRUE:

- k) if ~~agreedND~~agreedND is not equal to agreedN, then:
 - 1) ~~agreedND~~agreedND is set equal to agreedN, and
 - 2) newInfoMsti is set.

The agreeDigest, agreeN, and ~~agreedND~~agreedND, variables determine the values of the Agreement Digest, Agreement Number (AN), and Discarded Agreement Number (DAN), transmitted in SPT BPDU and SPB Hello PDUs. This procedure is used by updtRolesTree() before using updtAgreement() for each SPT, and also by rcvAgreements(), since the latter can rotate the AN sequence window number and thus allow agreeDigest to be updated with agreementDigest.

Wherever `newInfoMsti` is set in this procedure, transmission of an SPB Hello PDU to convey the updated digest and sequence number information is also requested. SPT BPDUs and SPB Hello PDUs perform additional functions and are subject to different rate limiters, but both convey the Agreement Digest and related information.

17. Management Information Base (MIB)

17.2 Structure of the MIB

17.2.2 Structure of the IEEE8021-BRIDGE MIB

Change the following row of Table 17-3, as shown:

ieee8021BridgeTpPortTable	dot1dTpPortTable	12.4.2, ~~C.4~~
---------------------------	------------------	------------------------

17.5 Dynamic component and Port creation

17.5.2 Component creation

Insert the following new subclause at the end of 17.5.2, renumbering if necessary:

17.5.2.6 T-component creation

The T-component has no specific component creation rules.

17.7 MIB modules

17.7.2 Definitions for the IEEE8021-BRIDGE MIB module

Delete the existing text of 17.7.2 and insert the following text:

```
IEEE8021-BRIDGE-MIB DEFINITIONS ::= BEGIN

-- =====
-- MIB for IEEE 802.1D devices
-- =====

IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE,
    Integer32, Counter64
        FROM SNMPv2-SMI
    RowStatus, MacAddress, TruthValue, TimeInterval
        FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF
    ifIndex, InterfaceIndexOrZero, ifGeneralInformationGroup
        FROM IF-MIB
    ieee802dot1mibs, IEEE8021PbbComponentIdentifier,
    IEEE8021BridgePortNumber, IEEE8021PriorityCodePoint,
    IEEE8021BridgePortType, IEEE8021PriorityValue,
    IEEE8021PbbComponentIdentifierOrZero,
    IEEE8021BridgePortNumberOrZero
        FROM IEEE8021-TC-MIB
    SnmpAdminString
        FROM SNMP-FRAMEWORK-MIB
```

```
systemGroup
  FROM SNMPv2-MIB
;

ieee8021BridgeMib MODULE-IDENTITY
  LAST-UPDATED "201208100000Z" -- August 10, 2012
  ORGANIZATION "IEEE 802.1 Working Group"
  CONTACT-INFO
    " WG-URL: http://grouper.ieee.org/groups/802/1/index.html
      WG-EMail: stds-802-1@ieee.org

      Contact: David Levi
      Postal: C/O IEEE 802.1 Working Group
              IEEE Standards Association
              445 Hoes Lane
              P.O. Box 1331
              Piscataway
              NJ 08855-1331
              USA
      E-mail: STDS-802-1-L@LISTSERV.IEEE.ORG"
  DESCRIPTION
    "The Bridge MIB module for managing devices that support
    IEEE 802.1D. This MIB module is derived from the IETF
    BRIDGE-MIB, RFC 4188.

    Unless otherwise indicated, the references in this MIB
    module are to IEEE Std 802.1Q-2011.

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    This version of this MIB module is part of IEEE802.1Q;
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                  ieee8021BridgeBaseComponentType
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  REVISION      "201202150000Z" -- February 15, 2012
  DESCRIPTION    "Extended ieee8021BridgeBaseComponentType to
                  include erComponent and
                  ieee8021BridgeBasePortTypeCapabilities to include
                  stationFacingBridgePort, uplinkAccessPort and
                  uplinkRelayPort.
                  Added tables ieee8021BridgeBaseIfToPortTable and
                  ieee8021BridgePortTable
                  as part of IEEE Std 802.1Qbg."

  REVISION      "201104060000Z" -- April 6, 2011
  DESCRIPTION    "Modifications to support Remote Customer Service
                  Interfaces."

  REVISION      "201102270000Z" -- February 27, 2011
  DESCRIPTION    "Minor edits to contact information etc. as part of
                  2011 revision of IEEE Std 802.1Q."

  REVISION      "200810150000Z" -- October 15, 2008
  DESCRIPTION    "Initial revision, derived from RFC 4188."
```

```

 ::= { ieee802dot1mibs 2 }

-- =====
-- subtrees in the Bridge MIB
-- =====

ieee8021BridgeNotifications
    OBJECT IDENTIFIER ::= { ieee8021BridgeMib 0 }

ieee8021BridgeObjects
    OBJECT IDENTIFIER ::= { ieee8021BridgeMib 1 }

ieee8021BridgeConformance
    OBJECT IDENTIFIER ::= { ieee8021BridgeMib 2 }

ieee8021BridgeBase
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 1 }
ieee8021BridgeTp
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 2 }
ieee8021BridgePriority
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 3 }
ieee8021BridgeMrp
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 4 }
ieee8021BridgeMmrp
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 5 }
ieee8021BridgeInternalLan
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 6 }
ieee8021BridgeDot1d
    OBJECT IDENTIFIER ::= { ieee8021BridgeObjects 7 }

-- =====
-- the ieee8021BridgeBase subtree
-- =====
-- Implementation of the ieee8021BridgeBase subtree is mandatory
-- for all bridges.
-- =====

-- =====
-- the ieee8021BridgeBaseTable
-- =====
ieee8021BridgeBaseTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021BridgeBaseEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table that contains generic information about every
        bridge component. All writable objects in this table
        MUST be persistent over power up restart/reboot."
    REFERENCE   "12.4.1"
    ::= { ieee8021BridgeBase 1 }

ieee8021BridgeBaseEntry OBJECT-TYPE
    SYNTAX      Ieee8021BridgeBaseEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects containing information for each bridge
        component."
    INDEX { ieee8021BridgeBaseComponentId }

```

```

 ::= { ieee8021BridgeBaseTable 1 }

Ieee8021BridgeBaseEntry ::=
  SEQUENCE {
    ieee8021BridgeBaseComponentId
      IEEE8021PbbComponentIdentifier,
    ieee8021BridgeBaseBridgeAddress
      MacAddress,
    ieee8021BridgeBaseNumPorts
      Integer32,
    ieee8021BridgeBaseComponentType
      INTEGER,
    ieee8021BridgeBaseDeviceCapabilities
      BITS,
    ieee8021BridgeBaseTrafficClassesEnabled
      TruthValue,
    ieee8021BridgeBaseMmrpEnabledStatus
      TruthValue,
    ieee8021BridgeBaseRowStatus
      RowStatus
  }

ieee8021BridgeBaseComponentId OBJECT-TYPE
  SYNTAX      IEEE8021PbbComponentIdentifier
  MAX-ACCESS  not-accessible
  STATUS      current
  DESCRIPTION
    "The component identifier is used to distinguish between the
    multiple virtual bridge instances within a PBB. In simple
    situations where there is only a single component the default
    value is 1."
  ::= { ieee8021BridgeBaseEntry 1 }

ieee8021BridgeBaseBridgeAddress OBJECT-TYPE
  SYNTAX      MacAddress
  MAX-ACCESS  read-create
  STATUS      current
  DESCRIPTION
    "The MAC address used by this bridge when it is
    referred to in a unique fashion. It is recommended
    that this be the numerically smallest MAC address of
    all ports that belong to this bridge. However, it is
    only required to be unique. When concatenated with
    ieee8021SpanningTreePriority, a unique BridgeIdentifier
    is formed, which is used in the Spanning Tree Protocol.

    This object may not be modified while the corresponding
    instance of ieee8021BridgeBaseRowStatus is active(1).

    The value of this object MUST be retained across
    reinitializations of the management system."
  REFERENCE   "12.4.1.1.3 a)"
  ::= { ieee8021BridgeBaseEntry 2 }

ieee8021BridgeBaseNumPorts OBJECT-TYPE
  SYNTAX      Integer32
  UNITS       "ports"
  MAX-ACCESS  read-only
  STATUS      current

```

DESCRIPTION

"The number of ports controlled by this bridging entity."

REFERENCE "12.4.1.1.3 c)"

::= { ieee8021BridgeBaseEntry 3 }

ieee8021BridgeBaseComponentType OBJECT-TYPE

SYNTAX INTEGER {
 iComponent(1),
 bComponent(2),
 cVlanComponent(3),
 sVlanComponent(4),
 dBridgeComponent(5),
 erComponent(6),
 tComponent(7)
}

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Indicates the component type(s) of this bridge. The following component types are possible:

iComponent(1) - An S-VLAN component of a Backbone Edge Bridge which performs encapsulation of customer frames.

bComponent(2) - An S-VLAN component of a Backbone Edge Bridge which bundles backbone service instances into B-VLANs.

cVlanComponent(3) - A C-VLAN component of an enterprise VLAN bridge or of a Provider Bridge used to process C-tagged frames.

sVlanComponent(4) - An S-VLAN component of a Provider Bridge.

dBridgeComponent(5) - A VLAN unaware component of an 802.1D bridge.

erComponent(6) - An Edge Relay component of an EVB Station.

tComponent(7) - A TPMR component in a Backbone Edge Bridge.

This object may not be modified while the corresponding instance of ieee8021BridgeBaseRowStatus is active(1).

The value of this object MUST be retained across reinitializations of the management system."

REFERENCE "12.3 m)"

::= { ieee8021BridgeBaseEntry 4 }

ieee8021BridgeBaseDeviceCapabilities OBJECT-TYPE

SYNTAX BITS {
 dot1dExtendedFilteringServices(0),
 dot1dTrafficClasses(1),
 dot1qStaticEntryIndividualPort(2),
 dot1qIVLCapable(3),
 dot1qSVLCapable(4),

```

dot1qHybridCapable(5),
dot1qConfigurablePvidTagging(6),
dot1dLocalVlanCapable(7)
}
MAX-ACCESS    read-create
STATUS        current
DESCRIPTION
    "Indicates the optional parts of IEEE 802.1D and 802.1Q
    that are implemented by this device and are manageable
    through this MIB. Capabilities that are allowed on a
    per-port basis are indicated in
    ieee8021BridgeBasePortCapabilities.

dot1dExtendedFilteringServices(0),
    -- can perform filtering of
    -- individual multicast addresses
    -- controlled by MMRP.
dot1dTrafficClasses(1),
    -- can map user priority to
    -- multiple traffic classes.
dot1qStaticEntryIndividualPort(2),
    -- dot1qStaticUnicastReceivePort &
    -- dot1qStaticMulticastReceivePort
    -- can represent non-zero entries.
dot1qIVLCapable(3),    -- Independent VLAN Learning (IVL).
dot1qSVLCapable(4),    -- Shared VLAN Learning (SVL).
dot1qHybridCapable(5),
    -- both IVL & SVL simultaneously.
dot1qConfigurablePvidTagging(6),
    -- whether the implementation
    -- supports the ability to
    -- override the default PVID
    -- setting and its egress status
    -- (VLAN-Tagged or Untagged) on
    -- each port.
dot1dLocalVlanCapable(7)
    -- can support multiple local
    -- bridges, outside of the scope
    -- of 802.1Q defined VLANs.

```

This object may not be modified while the corresponding instance of ieee8021BridgeBaseRowStatus is active(1).

The value of this object MUST be retained across reinitializations of the management system."

```

REFERENCE      "12.10.1.1.3 b)"
 ::= { ieee8021BridgeBaseEntry 5 }

```

ieee8021BridgeBaseTrafficClassesEnabled OBJECT-TYPE

```

SYNTAX          TruthValue
MAX-ACCESS      read-create
STATUS          current
DESCRIPTION

```

"The value true(1) indicates that Traffic Classes are enabled on this bridge. When false(2), the bridge operates with a single priority level for all traffic.

This object may be modified while the corresponding instance of ieee8021BridgeBaseRowStatus is active(1).

The value of this object MUST be retained across reinitializations of the management system."
DEFVAL { true }
::= { ieee8021BridgeBaseEntry 6 }

ieee8021BridgeBaseMmrpEnabledStatus OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"The administrative status requested by management for MMRP. The value true(1) indicates that MMRP should be enabled on this device, in all VLANs, on all ports for which it has not been specifically disabled. When false(2), MMRP is disabled, in all VLANs and on all ports, and all MMRP packets will be forwarded transparently. This object affects both Applicant and Registrar state machines. A transition from false(2) to true(1) will cause a reset of all MMRP state machines on all ports.

This object may be modified while the corresponding instance of ieee8021BridgeBaseRowStatus is active(1).

The value of this object MUST be retained across reinitializations of the management system."
DEFVAL { true }
::= { ieee8021BridgeBaseEntry 7 }

ieee8021BridgeBaseRowStatus OBJECT-TYPE

SYNTAX RowStatus
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"The object indicates the status of an entry, and is used to create/delete entries.

The following objects MUST be set prior to making a new entry active:

ieee8021BridgeBaseBridgeAddress
ieee8021BridgeBaseComponentType
ieee8021BridgeBaseDeviceCapabilities

It is recommended that these three objects not be allowed to be modified while the corresponding instance of ieee8021BridgeBaseRowStatus object is active(1).

The following objects are not required to be set before making a new entry active (they will take their defaults), and they also may be modified while the corresponding instance of this object is active(1):

ieee8021BridgeBaseTrafficClassesEnabled
ieee8021BridgeBaseMmrpEnabledStatus

The value of this object and all corresponding instances of other objects in this table MUST be retained across reinitializations of the management system."

::= { ieee8021BridgeBaseEntry 8 }

```

-- =====
-- The Generic Bridge Port Table
-- =====
ieee8021BridgeBasePortTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021BridgeBasePortEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table that contains generic information about every
        port that is associated with this bridge.  Transparent,
        and source-route ports are included."
    REFERENCE   "12.4.2"
    ::= { ieee8021BridgeBase 4 }

ieee8021BridgeBasePortEntry OBJECT-TYPE
    SYNTAX      Ieee8021BridgeBasePortEntry
    MAX-ACCESS  not-accessible
    STATUS      current

    DESCRIPTION
        "A list of objects containing information for each port
        of the bridge."
    INDEX { ieee8021BridgeBasePortComponentId,
            ieee8021BridgeBasePort }
    ::= { ieee8021BridgeBasePortTable 1 }

Ieee8021BridgeBasePortEntry ::=
    SEQUENCE {
        ieee8021BridgeBasePortComponentId
            IEEE8021PbbComponentIdentifier,
        ieee8021BridgeBasePort
            IEEE8021BridgePortNumber,
        ieee8021BridgeBasePortIfIndex
            InterfaceIndexOrZero,
        ieee8021BridgeBasePortDelayExceededDiscards
            Counter64,
        ieee8021BridgeBasePortMtuExceededDiscards
            Counter64,
        ieee8021BridgeBasePortCapabilities
            BITS,
        ieee8021BridgeBasePortTypeCapabilities
            BITS,
        ieee8021BridgeBasePortType
            IEEE8021BridgePortType,
        ieee8021BridgeBasePortExternal
            TruthValue,
        ieee8021BridgeBasePortAdminPointToPoint
            INTEGER,
        ieee8021BridgeBasePortOperPointToPoint
            TruthValue,
        ieee8021BridgeBasePortName
            SnmpAdminString
    }

ieee8021BridgeBasePortComponentId OBJECT-TYPE
    SYNTAX      IEEE8021PbbComponentIdentifier
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION

```

"The component identifier is used to distinguish between the multiple virtual bridge instances within a PBB. In simple situations where there is only a single component the default value is 1."

::= { ieee8021BridgeBasePortEntry 1 }

ieee8021BridgeBasePort OBJECT-TYPE

SYNTAX IEEE8021BridgePortNumber

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The port number of the port for which this entry contains bridge management information."

REFERENCE "12.4.2.1.2 a)"

::= { ieee8021BridgeBasePortEntry 2 }

ieee8021BridgeBasePortIfIndex OBJECT-TYPE

SYNTAX InterfaceIndexOrZero

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The value of the instance of the IfIndex object, defined in the IF-MIB, for the interface corresponding to this port, or the value 0 if the port has not been bound to an underlying frame source and sink."

It is an implementation specific decision as to whether this object may be modified if it has been created or if 0 is a legal value.

The underlying IfEntry indexed by this column MUST be persistent across reinitializations of the management system."

::= { ieee8021BridgeBasePortEntry 3 }

ieee8021BridgeBasePortDelayExceededDiscards OBJECT-TYPE

SYNTAX Counter64

UNITS "frames"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of frames discarded by this port due to excessive transit delay through the bridge. It is incremented by both transparent and source route bridges."

Discontinuities in the value of the counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime object of the associated interface (if any)."

REFERENCE "12.6.1.1.3 f)"

::= { ieee8021BridgeBasePortEntry 4 }

ieee8021BridgeBasePortMtuExceededDiscards OBJECT-TYPE

SYNTAX Counter64

UNITS "frames"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of frames discarded by this port due

to an excessive size. It is incremented by both transparent and source route bridges.

Discontinuities in the value of the counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime object of the associated interface (if any)."

REFERENCE "12.6.1.1.3 g)"
::= { ieee8021BridgeBasePortEntry 5 }

ieee8021BridgeBasePortCapabilities OBJECT-TYPE

SYNTAX BITS {
dot1qDot1qTagging(0),
dot1qConfigurableAcceptableFrameTypes(1),
dot1qIngressFiltering(2)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the parts of IEEE 802.1D and 802.1Q that are optional on a per-port basis, that are implemented by this device, and that are manageable through this MIB.

dot1qDot1qTagging(0), -- supports 802.1Q VLAN tagging of
-- frames and MVRP.

dot1qConfigurableAcceptableFrameTypes(1),
-- allows modified values of
-- dot1qPortAcceptableFrameTypes.

dot1qIngressFiltering(2)
-- supports the discarding of any
-- frame received on a Port whose
-- VLAN classification does not
-- include that Port in its Member
-- set."

REFERENCE "12.10.1.1.3 c)"
::= { ieee8021BridgeBasePortEntry 6 }

ieee8021BridgeBasePortTypeCapabilities OBJECT-TYPE

SYNTAX BITS {
customerVlanPort(0),
providerNetworkPort(1),
customerNetworkPort(2),
customerEdgePort(3),
customerBackbonePort(4),
virtualInstancePort(5),
dBridgePort(6),
remoteCustomerAccessPort(7),
stationFacingBridgePort(8),
uplinkAccessPort(9),
uplinkRelayPort(10)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the capabilities of this port. The corresponding instance of ieee8021BridgeBasePortType can potentially take any of the values for which the corresponding bit in this object is 1. The possible port types are as follows: