



IEEE Standard for

Local and metropolitan area networks—

Virtual Bridged Local Area Networks

**Amendment 11: Two-Port Media
Access Control (MAC) Relay**

IEEE Computer Society

Sponsored by the
LAN/MAN Standards Committee

IEEE
3 Park Avenue
New York, NY 10016-5997, USA

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IEEE Std 802.1Q™-2005)

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Approved 9 December 2009

IEEE-SA Standards Board

Abstract: This amendment to IEEE Std 802.1Q specifies the function of a MAC Relay with two MACs, and the protocols and procedures to support its operation. A MAC Relay is transparent to all frame-based media independent protocols except those explicitly addressed to this device. It is remotely manageable through at least one of its external MACs, and signals a failure of either MAC's LAN through the other MAC.

Keywords: MAC Relay, network interface device, Provider Bridged Networks, Virtual Bridged Local Area Networks, Virtual LANs, VLANs

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Contents

1. Overview.....	2
1.1 Scope.....	2
2. References.....	3
3. Definitions	5
4. Abbreviations.....	7
5. Conformance.....	9
5.2 Conformant components and equipment.....	9
5.11 Backbone Edge Bridge conformance	9
5.14 VLAN-unaware Bridge component requirements.....	10
5.15 TPMR component conformance.....	10
5.16 TPMR conformance.....	11
5.17 T-component conformance	11
6. Support of the MAC Service in VLANs.....	13
6.5 Quality of service maintenance.....	13
6.10 Support of the ISS/EISS by Provider Instance Ports	13
6.20 Support of the ISS with signaled priority	14
8. Principles of bridge operation.....	17
8.5 Bridge Port Transmit and Receive.....	17
8.6 The Forwarding Process	19
8.13 Addressing	22
12. VLAN Bridge Management.....	23
12.19 TPMR managed objects.....	23
17. Management Information Base.....	33
23. MAC status propagation.....	51
23.1 Model of operation.....	53
23.2 MAC status protocol (MSP) overview	54
23.3 MAC status protocol state machines	58
23.4 State machine timers.....	60
23.5 MSP performance parameters.....	60
23.6 State machine variables	61
23.7 State machine procedures	63
23.8 Status Transition state machine	63
23.9 Status Notification state machine	63
23.10 Receive Process	63
23.11 Transmit Process.....	64
23.12 Management of MSP	64
23.13 MSPDU transmission, addressing, and protocol identification.....	65
23.14 Representation and encoding of octets	66
23.15 MSPDU structure.....	66
23.16 Validation of received MSPDUs	67

23.17	Other MSP participants.....	67
25.	Support of the MAC Service by Provider Backbone Bridged Networks	69
25.2	Customer service interface.....	71
25.11	Transparent service interface	71
Annex A	(normative)PICS proforma.....	75
A.5	Major capabilities	75
A.5	Major capabilities	75
A.5	Major capabilities	75
A.7	Relay and filtering of frames	77
A.8	Basic Filtering Services	77
A.14	Bridge management	78
A.24	Management Information Base (MIB)	79
A.25	TPMR.....	79
A.26	MSP	80
Annex K	(informative) TPMR use cases.....	81
K.1	Use case 1—TPMR as User to Network Interface (UNI) demarcation device	81
K.2	Use case 2—TPMRs with aggregated links	82
K.3	Use case 3—Multiple TPMRs	82
K.4	Special cases	83

Figures

Figure 6-4	Provider Instance Ports	14
Figure 6-12	Supporting the ISS with signaled priority	15
Figure 8-8	Bridge Port Transmit and Receive	17
Figure 8-9	TPMR Port Transmit and Receive	18
Figure 23-1	TPMR connecting two Bridge Ports	51
Figure 23-2	TPMR chain connecting Bridge Ports	51
Figure 23-3	MAC Status Shims and the MAC Status Propagation Entity	53
Figure 23-4	Adding connectivity	55
Figure 23-5	Losing connectivity	56
Figure 23-6	TPMR recovery	57
Figure 23-7	Notification from one end of the link to the other	58
Figure 23-8	Immediate MAC status notification at the end of a link	58
Figure 23-9	MSPE state machine overview	59
Figure 23-10	Status Transition state machine	63
Figure 23-11	Status Notification state machine	64
Figure 23-12	MSPDU structure	66
Figure 25-1	Internal organization of the MAC sublayer in a PBBN	69
Figure 25-2	Provider Backbone Bridge terminology	70
Figure 25-3	Customer service interface types	71
Figure 25-15	Transparent service interface	72
Figure 25-16	Transparent service interface equipment	73
Figure K-1	TPMR as UNI demarcation device	81
Figure K-2	TPMRs with aggregated links	82
Figure K-3	Multiple TPMRs	82
Figure K-4	Recovery at the end of a chain	83
Figure K-5	Near simultaneous recoveries	84
Figure K-6	Near simultaneous failure and recovery	84
Figure K-7	Loss with quick recovery	85

Tables

Table 8-1	C-VLAN component Reserved addresses	20
Table 8-3	TPMR component Reserved addresses.....	21
Table 8-2	S-VLAN component Reserved addresses.....	21
Table 17-1	Structure of the MIB modules	33
Table 17-14	IEEE8021-TPMR MIB Structure and relationship to this standard	33
Table 23-1	Time sequence diagram symbols.....	55
Table 23-2	MSP performance parameters.....	61
Table 23-3	MSPDU group destination address.....	65
Table 23-4	MSP Ethernet Type assignment.....	65
Table 23-5	MSP Packet Types	67

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This amendment specifies changes to the forwarding and queuing functions described in IEEE Std 802.1Q™. Changes are applied to the base text of IEEE Std 802.1Q-2005, as modified by those amendments that had been approved, but not incorporated into the base text of the standard, at the time that this amendment was approved, namely (in chronological order) IEEE Std 802.1ad™, IEEE Std 802.1ak™, IEEE Std 802.1ag™, IEEE Std 802.1ah™, IEEE Std 802.1Q-2005/Cor 1, IEEE Std 802.1ap™, IEEE Std 802.1Qaw™, and IEEE Std 802.1Qay™. Text shown in bold italics in this amendment defines the editing instructions necessary to changes to this base text. Three editing instructions are used: ***change***, ***delete***, and ***insert***. ***Change*** is used to make a change to existing material. The editing instruction specifies the location of the change and describes what is being changed. Changes to existing text may be clarified using ~~strikeout~~ markings to indicate removal of old material, and underline markings to indicate addition of new material. ***Delete*** removes existing material. ***Insert*** adds new material without changing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. Editorial notes will not be carried over into future editions of IEEE Std 802.1Q.

1. Overview

1.1 Scope

Insert the following text at the end of this subclause:

Additionally, this standard specifies the function of a Two-Port MAC Relay (TPMR), along with protocols and procedures that support its operation. A TPMR is a type of bridge that has only two externally accessible Ports, and supports a subset of the functionality of a MAC Bridge. A TPMR is transparent to all frame-based media independent protocols, except those explicitly addressed to it and those that are destined for reserved MAC addresses that the relay function of the TPMR is defined not to forward. It is remotely manageable through at least one of its external MACs, and signals a failure of either MAC's LAN through the other MAC. A TPMR should only be attached to point-to-point LANs. The conformance requirements for a TPMR are stated in 5.15 and 5.16.