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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44812-2024

**Information technology - Telecommunications and information
exchange between systems - Local and metropolitan area
networks - Bridges and bridged networks**

信息技术 系统间远程通信和信息交换 局域网和城域网 桥接和桥接网络

(English Translation)

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Foreword

This document is in accordance with GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" Drafting.

This document is modified using ISO/IEC/IEEE 8802-1Q.2024 Local area network for telecommunication and information exchange between information technology systems and Metropolitan Area Network Specific Requirements Part 1Q. Bridges and Bridged Networks.

This document is consistent with ISO/IEC/IEEE Compared with 8802-1Q.2024, the following structural adjustments have been made.

---Added Chapter 46 and Chapter 47.

---ISO/IEC/IEEE

Appendix U of 8802-1Q.2024 was adjusted to reference.

--- Added Appendix U.

This document is consistent with ISO/IEC/IEEE the technical differences of 8802-1Q.2024 and their reasons are as follows.

--- Using normative references ISO/IEC/IEEE 8802-A replaced IEEE Std 802 (see Chapter 3, 9.7, 13.8), to accommodate Our country's technological conditions;

--- Using normative references ISO/IEC/IEEE 8802-1AC replaced IEEE Std 802.1AC (see 3.224, 5.4, 8.2, 8.5, 15.1, A.40) to adapt to my country's technical conditions;

--- Use normative references GB/T 42459-2023 replaces IEEE Std 802.1AB-2005 (see 21.5.3.2, 21.5.3.3, D.2.7, D.2.8, D.2.9, D.2.10, D.2.11) to adapt to my country's technical conditions;

--- Use normative references GB/T 15629.3-2014 replaces IEEE Std 802.1AE (see 27.20), to adapt to my country's Technical conditions;

The following editorial changes have been made to this document.

--- Change the name of the standard to "Telecommunications and Information Exchange between Information Technology Systems in Local Area Networks and Metropolitan Area Networks Bridging and Connect to the network";

---Incorporated into ISO/IEC/IEEE 8802-1Q.2020/AMD 2.2021, ISO/IEC/IEEE 8802-1Q.2020/AMD 3.2021, ISO/IEC/IEEE Amendments to 8802-1Q.2020/AMD31.2021, outer margins of the affected clauses Blank positions are marked with vertical double lines (||);

--- Added informative references to GB/T 25068.5-2021 (see 17.4, D.5.4);

--- Use informative references to GB/T 15629.2-2008 replaced ISO/IEC 8802-2 (see 6.12, 12.10.1.7.1);

--- Use informative references to GB/T 15629.3-2014 replaces IEEE Std 802.1AE (see 3.83, 6.7.1, 6.12, 8.6.3, 10.6, 12.10.1.7.1, 12.10.1.7.2, 12.14.4.1.2, 12.14.6.3.2, 12.14.7.1.3, 14.1.1, 17.7.4, 20.51.5, 21.5.2, 22.1.8, 35.1.1, 35.2.2.8.4, A.6, A.24, D.2.4.3, G.1, G.2.1, G.2.2, Appendix K, M.1, N.2, N.3);

--- Use informative references to ISO/IEC/IEEE 8802-A replaced IEEE Std 802 (see 6.1, 26.4, 41.3.3);

--- Use informative references to ISO/IEC/IEEE 8802-3 replaced IEEE Std 802.3-2015 (see 3.82, 3.108, 3.166, Chapter 6, 8.2, 12.9.1.2, 22.1.9, D.2.5, G.2.2, J.1, K.1, M.1, N.3);

--- Use informative references to ISO/IEC/IEEE 8802-1AC replaced IEEE Std 802.1AC (see 3.25, 3.110, 3.119, 3.224, 5.13, 5.24, Chapter 6, 8.1.1, 8.4, 9.1, 10.1, 10.6, 10.7.11, 12.4, 12.6.2.1, 12.8.2, 12.19.3.2, 13.1, 13.16.2.1, 13.22, 13.27.45, 13.28.16, 13.29.15, Chapter 16, 17.2.2, 17.7.2, Chapter 18, 20.47.1.2, 22.2.1, 26.8, Chapter 23, 26.8, 29.3.9.1, 30.8, 32.1.1, 33.2, 35.2.2.9.4, 39.2.2.1, 43.3.7.5, A.6, A.7, B.10, M.1);

--- Use informative references to GB/T 9387.1-1998 replaced ISO/IEC 7498-1:1994 (see 6.1, Chapter 15, GB/T 44812-2024 XVIII Chapter 25);

--- Use informative references to GB/T 42459-2023 replaces IEEE Std 802.1AB-2005 (see 12.21.2, 12.21.3);

--- Use informative references to GB/T 28455-2012 replaced IEEE Std 802.1X (see 8.13.9, 10.1, 25.2, 25.6);

--- Use GB for informational reference 15629.11-2003 replaces IEEE 802.11 (see 3.67, 3.110, 6.22, 12.19.1.2.1.3,

--- Corrected the serial numbers of tables and figures;

---Added TSN configuration example (see Appendix U);

---Deleted the unreferenced abbreviation DAB.

1 Overview

All types of IEEE

802 Local Area Networks (LANs, see 3.108) 1) can be used with Media Access Control (MAC) bridges (see 3.149) or virtual VLAN bridges (see 3.291) are connected together and are collectively referred to as bridges (see 3.23). This document defines bridges and bridged networks.

VLAN helps to manage logical groups of sites. Sites in the same VLAN communicate with each other as if they were on the same LAN.

Communication is similar, but communication between VLANs is limited. VLAN bridge and site management allows adding and removing VLANs.

or mobile site.

This document further extends the VLAN Bridge specification to enable service provider organizations to use the common facilities of bridges and local area networks to provide Independent customer organizations are provided with independent LANs, bridged or virtual bridged networks.

This document specifies the protocols and protocol entities in a bridge architecture, providing functionality for detecting, verifying, and isolating connection failures in a bridged network.

These capabilities can be used in networks operated by multiple independent organizations, each with limited management rights over each other's devices.

1.1 Scope

This document specifies bridges that connect local area networks, each supporting different or identical media access control methods.

IEEE

802 MAC service to provide bridged networks and VLANs.

1.2 Purpose

As defined in this document, a bridge allows the compatible interconnection of information technology equipment connected to separate local area networks.

1.3 Introduction

To achieve compatible interconnection of information technology equipment, IEEE uses interconnected media access control methods that are different or identical.

802LAN

Supported IEEE

MAC Services, this document specifies the operation of MAC bridges and VLAN bridges. To