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**Information technology
— Telecommunications
and information exchange
between systems — Local and
metropolitan area networks —
Specific requirements**

Part 1BR: Virtual bridged local area
networks — Bridge port extension

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**Information technology —
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and metropolitan area networks —
Specific requirements —**

**Part 1BR:
Virtual bridged local area networks
— Bridge port extension**

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*Partie 1BR: Réseaux de zone locale virtuelle pontée — Extension du
port de pontage*

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IEEE Standard for
Local and metropolitan area networks—

Virtual Bridged Local Area Networks— Bridge Port Extension

IEEE Computer Society

Sponsored by the
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IEEE Std 802.1BR™-2012

**IEEE Standard for
Local and metropolitan area networks—**

**Virtual Bridged Local Area Networks—
Bridge Port Extension**

Sponsor

**LAN/MAN Standards Committee
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IEEE Computer Society**

Approved 14 May 2012

IEEE-SA Standards Board

Abstract: This standard specifies the operation of Bridge Port Extenders, including management, protocols, and algorithms. Bridge Port Extenders operate in support of the MAC Service by Extended Bridges.

Keywords: Bridged Local Area Networks, Data Center Bridging, DCB, Edge Virtual Bridging, EVB, IEEE 802.1BR, LANs, local area networks, MAC Bridges, MANs, metropolitan area networks, Virtual Bridged Local Area Networks

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Introduction

This introduction is not part of IEEE Std 802.1BR-2012, IEEE Standard for Local and metropolitan area networks—Virtual Bridged Local Area Networks—Bridge Port Extension.

This standard specifies the devices, protocols, procedures, and managed objects necessary to extend a bridge and its management beyond its physical enclosure using IEEE 802[®] LAN technologies.

To this end, it:

- a) Identifies and isolates traffic between ports within an Extended Bridge;
- b) Specifies a tag format for this identification;
- c) Establishes an Extended Bridge consisting of a Controlling Bridge and one or more Bridge Port Extenders;
- d) Specifies the functionality and the specific requirements of a Bridge Port Extender;
- e) Extends the MAC service of a Bridge Port across the interconnected Bridge Port Extenders, including support of Customer Virtual Local Area Networks (C-VLANs).
- f) Establishes the requirements of bridge components and systems for the attachment of Bridge Port Extenders;
- g) Specifies a protocol to provide for the configuration and monitoring of Bridge Port Extenders by a Controlling Bridge; and
- h) Establishes the requirements for Bridge Management to support Port Extension, identifying the managed objects and defining the management operations.

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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IEEE Standard for Local and metropolitan area networks— Virtual Bridged Local Area Networks— Bridge Port Extension

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1. Overview

This standard specifies a Bridge Port Extender that provides the capability to extend MAC service over an Extended Bridge. This capability may be used, for example, to extend a bridge over multiple physical devices or to extend the MAC service of a bridge to a virtual end station.

1.1 Scope

This standard specifies the devices, protocols, procedures, and managed objects necessary to extend a bridge and its management beyond its physical enclosure using IEEE 802[®] LAN technologies.

To this end, it:

- a) Identifies and isolates traffic between ports within an Extended Bridge;
- b) Specifies a tag format for this identification;
- c) Establishes an Extended Bridge consisting of a Controlling Bridge and one or more Bridge Port Extenders;
- d) Specifies the functionality and the specific requirements of a Bridge Port Extender;
- e) Extends the MAC service of a Bridge Port across the interconnected Bridge Port Extenders, including support of Customer Virtual Local Area Networks (C-VLANs).