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IEEE Std 802.1AC™-2016
(Revision of
IEEE Std 802.1AC-2012)

IEEE Standard for
Local and metropolitan area networks—

Media Access Control (MAC) Service Definition

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Abstract: The MAC Service and the Internal Sublayer Service (ISS) are defined in this standard. This standard specifies media-dependent convergence functions that map IEEE 802® MAC interfaces to the ISS. The MAC Service is derived from the ISS.

Keywords: IEEE 802, IEEE 802.1AC, Internal Sublayer Service, ISS, LAN, local area network, MAC Service, MAN, metropolitan area network

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Introduction

This introduction is not part of IEEE Std 802.1AC-2016, IEEE Standard for Local and metropolitan area networks—Media Access Control (MAC) Service Definition.

During the history of IEEE 802, several different MAC types have been developed, all of which have a core of functionality that is common to IEEE 802 MACs in general, but all of which also provide functionality that extends beyond that common core. An example can be found in the way priority information is conveyed in different MACs; some have no means of conveying priority, some can convey two different priority code points, some can convey eight priority code points.

While such differences are not an issue in a Local Area Network (LAN) that employs a single MAC technology, they can become an issue in LANs where more than one MAC technology is employed, for example in Bridged LANs. It was therefore important at an early stage of MAC Bridge development to develop a clear definition of the MAC Service that would facilitate the definition of a common Bridging technology that could apply to all MAC types.

The MAC Service definition was first standardized as ISO/IEC 15802-1:1995 [B3]. When the ISO/IEC standard reached its 5-year revision point, IEEE 802 was asked to take over the document and revise it to reflect changes since publication. This revision emphasizes the fundamental relayable nature of the MAC Service provided to end stations by defining it in terms of the service, common to bridges and end stations, previously documented as the Internal Sublayer Service (ISS) in IEEE Std 802.1D™. In addition to the material that was contained in ISO/IEC 15802-1, this standard documents the ISS that was originally defined in IEEE Std 802.1D. 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—

Media Access Control (MAC) Service Definition

1. Scope

The scope of this standard is to define the Media Access Control (MAC) Service provided by all IEEE 802® MACs, and the Internal Sublayer Service (ISS) provided within MAC Bridges, in abstract terms of the following:

a) Their semantics, primitive actions, and events; and

b) The parameters of, interrelationship between, and valid sequences of these actions and events.

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