Supplement to IEEE Standard for Information technology—
Telecommunications and information exchange between systems—
Local and metropolitan area networks—
Specific requirements—

Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications:

Higher-Speed Physical Layer Extension in the 2.4 GHz Band

Sponsor

**LAN/MAN Standards Committee
of the
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Abstract: Changes and additions to IEEE Std 802.11, 1999 Edition are provided to support the higher rate physical layer (PHY) for operation in the 2.4 GHz band.
Keywords: 2.4 GHz, high speed, local area network (LAN), radio frequency (RF), wireless

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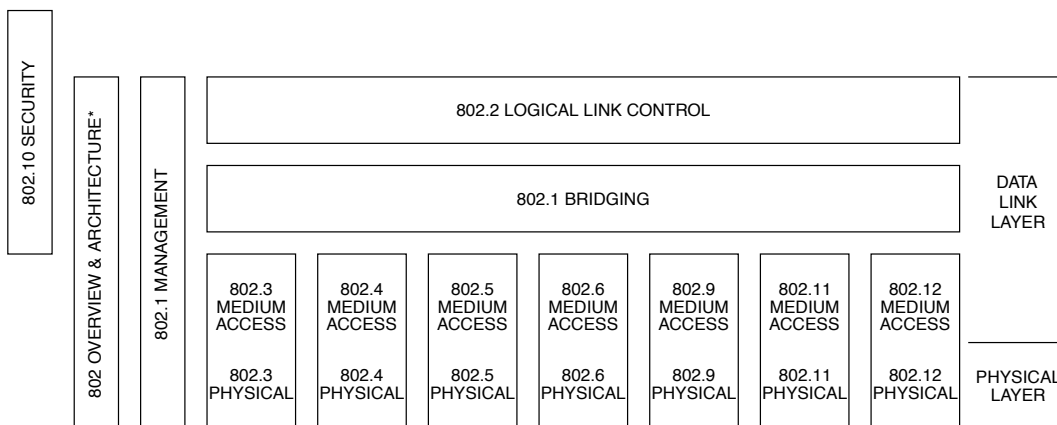> P.O. Box 1331
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Introduction

This standard is part of a family of standards for local and metropolitan area networks. The relationship between the standard and other members of the family is shown below. (The numbers in the figure refer to IEEE standard numbers.)

* Formerly IEEE Std 802.1A.

This family of standards deals with the Physical and Data Link layers as defined by the International Organization for Standardization (ISO) Open Systems Interconnection (OSI) Basic Reference Model (ISO/IEC 7498-1:1994). The access standards define seven types of medium access technologies and associated physical media, each appropriate for particular applications or system objectives. Other types are under investigation.

The standards defining the access technologies are as follows:

- IEEE Std 802   *Overview and Architecture*. This standard provides an overview to the family of IEEE 802 Standards.

- ANSI/IEEE Std 802.1B and 802.1k [ISO/IEC 15802-2]   *LAN/MAN Management*. Defines an OSI management-compatible architecture, and services and protocol elements for use in a LAN/MAN environment for performing remote management.

- ANSI/IEEE Std 802.1D [ISO/IEC 15802-3]   *Media Access Control (MAC) Bridges*. Specifies an architecture and protocol for the interconnection of IEEE 802 LANs below the MAC service boundary.

- ANSI/IEEE Std 802.1E [ISO/IEC 15802-4]   *System Load Protocol*. Specifies a set of services and protocol for those aspects of management concerned with the loading of systems on IEEE 802 LANs.

- IEEE Std 802.1F   *Common Definitions and Procedures for IEEE 802 Management Information*

- ANSI/IEEE Std 802.1G [ISO/IEC 15802-5]   *Remote Media Access Control Bridging*. Specifies extensions for the interconnection, using non-LAN communication technologies, of geographically separated IEEE 802 LANs below the level of the logical link control protocol.

- ANSI/IEEE Std 802.2 [ISO/IEC 8802-2] *Logical Link Control*

- ANSI/IEEE Std 802.3 [ISO/IEC 8802-3] *CSMA/CD Access Method and Physical Layer Specifications*

- ANSI/IEEE Std 802.4 [ISO/IEC 8802-4] *Token Passing Bus Access Method and Physical Layer Specifications*

- ANSI/IEEE Std 802.5 [ISO/IEC 8802-5] *Token Ring Access Method and Physical Layer Specifications*

- ANSI/IEEE Std 802.6 [ISO/IEC 8802-6] *Distributed Queue Dual Bus Access Method and Physical Layer Specifications*

- ANSI/IEEE Std 802.9 [ISO/IEC 8802-9] *Integrated Services (IS) LAN Interface at the Medium Access Control and Physical Layers*

- ANSI/IEEE Std 802.10 *Interoperable LAN/MAN Security*

- IEEE Std 802.11 [ISO/IEC DIS 8802-11] *Wireless LAN Medium Access Control and Physical Layer Specifications*

- ANSI/IEEE Std 802.12 [ISO/IEC DIS 8802-12] *Demand Priority Access Method, Physical Layer and Repeater Specifications*

In addition to the family of standards, the following is a recommended practice for a common Physical Layer technology:

- IEEE Std 802.7 *IEEE Recommended Practice for Broadband Local Area Networks*

The following additional working groups have authorized standards projects under development:

- IEEE 802.14 *Standard Protocol for Cable-TV Based Broadband Communication Network*

- IEEE 802.15 *Wireless Personal Area Networks Access Method and Physical Layer Specifications*

- IEEE 802.16 *Broadband Wireless Access Method and Physical Layer Specifications*

Participants

At the time this standard was balloted, the 802.11 Working Group had the following membership:

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Al Petrick, *Co-Vice Chair*
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