
**Information technology —
Telecommunications and information
exchange between systems — Local and
metropolitan area networks — Common
specifications —**

Part 5:

**Remote Media Access Control (MAC) bridging
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*Technologies de l'information — Télécommunications et échange
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Partie 5: Pontage pour le contrôle d'accès aux supports (MAC) à distance

International Standard ISO/IEC 15802-5:1998(E)

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ISO/IEC 15802 consists of the following parts, under the general title *Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Common specifications*:

- *Part 1: Medium Access Control (MAC) service definition*
- *Part 2: LAN/MAN management*
- *Part 3: Media Access Control (MAC) bridges*
- *Part 4: System load protocol*
- *Part 5: Remote Media Access Control (MAC) bridging*

Annexes A and B form an integral part of this part of ISO/IEC 15802. Annexes C and D are for information only.



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International Standard ISO/IEC 15802-5: 1998(E)
ANSI/IEEE Std 802.1G, 1998 Edition

**Information technology—
Telecommunications and information
exchange between systems—
Local and metropolitan area networks—
Common specifications—**

**Part 5: Remote Media Access Control
(MAC) bridging**

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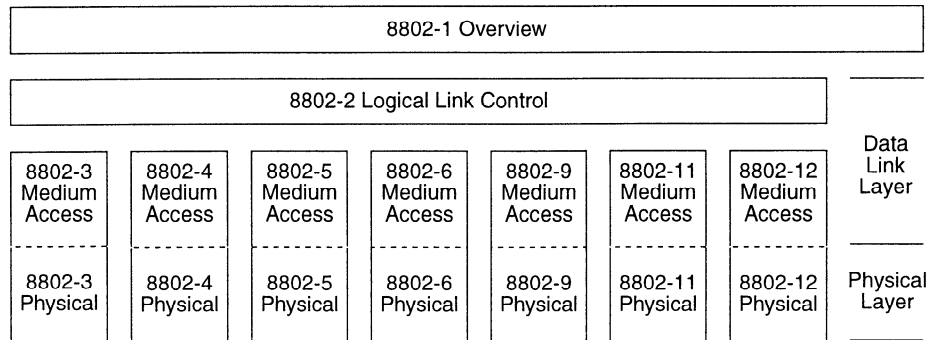
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Foreword to International Standard ISO/IEC 15802-5: 1998

This International Standard is part of a family of International Standards for Local and Metropolitan Area Networks. The relationship between this International Standard, which provides extensions to the behavior of ISO/IEC 10038, and the other members of the family is shown below. (The numbers in the figure refer to ISO/IEC Standard numbers.)



This family of International Standards deals with the Physical and Data Link layers as defined by the 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 International Standards defining the access technologies are as follows:

- a) ISO/IEC 8802-3, utilizing carrier sense multiple access with collision detection (CSMA/CD) as the access method.
- b) ISO/IEC 8802-4, utilizing token passing bus as the access method.
- c) ISO/IEC 8802-5, utilizing token passing ring as the access method.
- d) ISO/IEC 8802-6, utilizing distributed queuing dual bus as the access method.
- e) ISO/IEC 8802-9, a unified access method offering integrated services for backbone networks.
- f) ISO/IEC DIS 8802-11, a wireless LAN utilizing carrier sense multiple access with collision avoidance (CSMA/CA) as the access method.
- g) ISO/IEC DIS 8802-12, utilizing Demand Priority as the access method.

ISO/IEC TR 8802-1, *Overview of Local Area Network Standards*, provides an overview of the series of ISO/IEC 8802 standards.

ISO/IEC 8802-2, *Logical Link Control*, is used in conjunction with the medium access standards to provide the data link layer service to network layer protocols.

ISO/IEC 15802-1, *Medium Access Control (MAC) service definition*, specifies the characteristics of the common MAC Service provided by all IEEE 802 LAN MACs. The service is defined in terms of primitives that can be passed between peer service users, their parameters, their interrelationship and valid sequences, and the associated events of the service.

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.

ISO/IEC 10038, *Media Access Control (MAC) bridges*, specifies an architecture and protocol for the interconnection of IEEE 802 LANs below the level of the logical link control protocol (to be renumbered 15802-3).

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.

ISO/IEC 15802-5, *Remote Media Access Control (MAC) 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 802.1G, 1998 Edition

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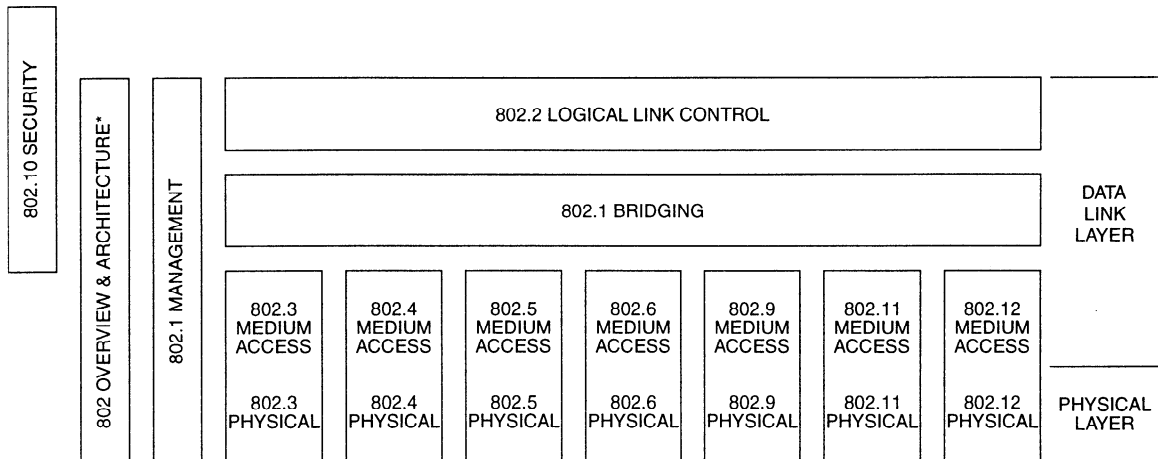
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Introduction to ANSI/IEEE Std 802.1G, 1998 Edition

(This introduction is not a part of ANSI/IEEE Std 802.1G, 1998 Edition or of ISO/IEC 15802-5: 1998.)

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.

[ISO/IEC 15802-5:1998](https://standards.ieee.org/iso-icc-15802-5-1998)

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 10038] *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.
- ANSI/IEEE Std 802.1G [ISO/IEC 15802-5] *Remote Media Access Control (MAC) 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 *Token Passing Bus Access Method and Physical Layer Specifications*
[ISO/IEC 8802-4]
- ANSI/IEEE Std 802.5 *Token Ring Access Method and Physical Layer Specifications*
[ISO/IEC 8802-5]
- ANSI/IEEE Std 802.6 *Distributed Queue Dual Bus Access Method and Physical Layer Specifications*
[ISO/IEC 8802-6]
- ANSI/IEEE Std 802.9 *Integrated Services (IS) LAN Interface at the Medium Access Control (MAC) and Physical (PHY) Layers*
[ISO/IEC 8802-9]
- ANSI/IEEE Std 802.10 *Interoperable LAN/MAN Security*
- IEEE Std 802.11 *Wireless LAN Medium Access Control (MAC) and Physical Layer Specifications*
[ISO/IEC DIS 8802-11]
- ANSI/IEEE Std 802.12 *Demand Priority Access Method, Physical Layer and Repeater Specifications*
[ISO/IEC DIS 8802-12]

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*

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The following additional working group has authorized standards projects under development:

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- IEEE 802.14 *Standard Protocol for Cable-TV Based Broadband Communication Network*
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An additional standards series, identified by the number 1802, has been established to identify the conformance test methodology documents for the 802 family of standards. Thus the conformance test documents for 802.3 are numbered 1802.3.

ANSI/IEEE Std 802.1G, 1998 Edition [ISO/IEC 15802-5: 1998]

This standard specifies extensions to the architecture and protocol of ISO/IEC 10038 that provide for the interconnection, using non-LAN communication technologies, of geographically separated IEEE 802 LANs below the level of the logical link control protocol.

This standard contains state-of-the-art material. The area covered by this standard is undergoing evolution. Revisions are possible 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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