

IEEE Standards for Local and Metropolitan Area Networks:

**Supplement to Token-Passing Bus Access Method and
Physical Layer Specifications**

**Enhancements for Physical Layer Diversity
(Redundant Media Control Unit)**

Sponsor

**Technical Committee on Computer Communications
of the
IEEE Computer Society**

Approved September 28, 1992

IEEE Standards Board

Abstract: This supplement to ISO/IEC 8802-4 : 1990 [ANSI/IEEE 802.4-1990] provides a recommendation for employing diversity in the Physical Layer of token-passing bus systems conforming to ISO/IEC 8802-4 : 1990 for local and metropolitan area networks.

Keywords: local area networks; metropolitan area networks; physical layer diversity; redundant media control unit; token-passing bus access method

The Institute of Electrical and Electronics Engineers, Inc.
345 East 47th Street, New York, NY 10017-2394, USA

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Printed in the United States of America

ISBN 1-55937-266-4

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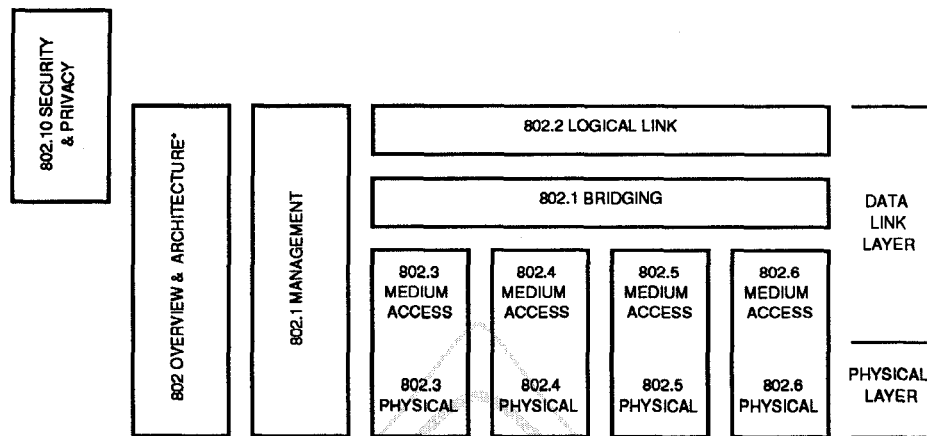
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Foreword

(This foreword is not a part of IEEE Std 802.4b-1992.)

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 Basic Reference Model (ISO 7498 : 1984). The access standards define several 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 these technologies are as follows:

- IEEE Std 802[†]: Overview and Architecture. This standard provides an overview to the family of IEEE 802 standards. This document forms part of the 802.1 scope of work.
- IEEE Std 802.1D: MAC Bridging. Specifies an architecture and protocol for the interconnection of IEEE 802 LANs below the MAC service boundary.
- IEEE Std 802.1E: 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 8802-2 [ANSI/IEEE Std 802.2]: Logical Link Control
- ISO/IEC 8802-3 [ANSI/IEEE Std 802.3]: CSMA/CD Access Method and Physical Layer Specifications
- ISO/IEC 8802-4 [ANSI/IEEE Std 802.4]: Token Bus Access Method and Physical Layer Specifications

[†] The 802 Architecture and Overview Specification, originally known as IEEE Std 802.1A, has been renumbered as IEEE Std 802. This has been done to accommodate recognition of the base standard in a family of standards. References to IEEE Std 802.1A should be considered as references to IEEE Std 802.

- ISO/IEC 8802-5 [ANSI/IEEE Std 802.5]: Token Ring Access Method and Physical Layer Specifications
- IEEE Std 802.6: Metropolitan Area Network Access Method and Physical Layer Specifications
- IEEE Std 802.10: Interoperable Local Area Network (LAN) Security (SILS), Secure Data Exchange

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

- IEEE Std 802.7: IEEE Recommended Practice for Broad-band Local Area Networks

The reader of this document is urged to become familiar with the complete family of standards.

Conformance Test Methodology

A new standards series, identified by the number 1802, has been established to identify the conformance test methodology documents for the 802 family of standards. This makes the correspondence between the various 802 standards and their applicable conformance test requirements readily apparent. Thus the conformance test documents for 802.3 are numbered 1802.3, the conformance test documents for 802.5 will be 1802.5, and so on.

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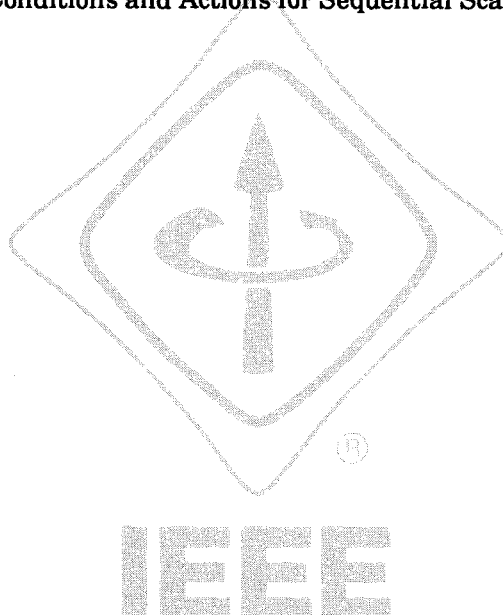
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0. Introduction to Supplement

This supplement adds a recommendation for employing diversity in the Physical Layer of token-passing bus systems conforming to ISO/IEC 8802-4 : 1990 [ANSI/IEEE Std 802.4-1990]. The material contained in this supplement will be incorporated into the body of this standard when it is next revised. This supplement has a structure that is similar to ISO/IEC 8802-4 : 1990 in order to facilitate cross-reference between the two documents and the eventual incorporation of this supplement into ISO/IEC 8802-4 : 1990. Directions for that incorporation are in an italic typeface in this supplement.

The scope of this supplement is the same as the scope described in 1.1 of ISO/IEC 8802-4 : 1990.

To be added to ISO/IEC 8802-4 : 1990

1. Introduction and Overview

Replace Fig 1-1 with:

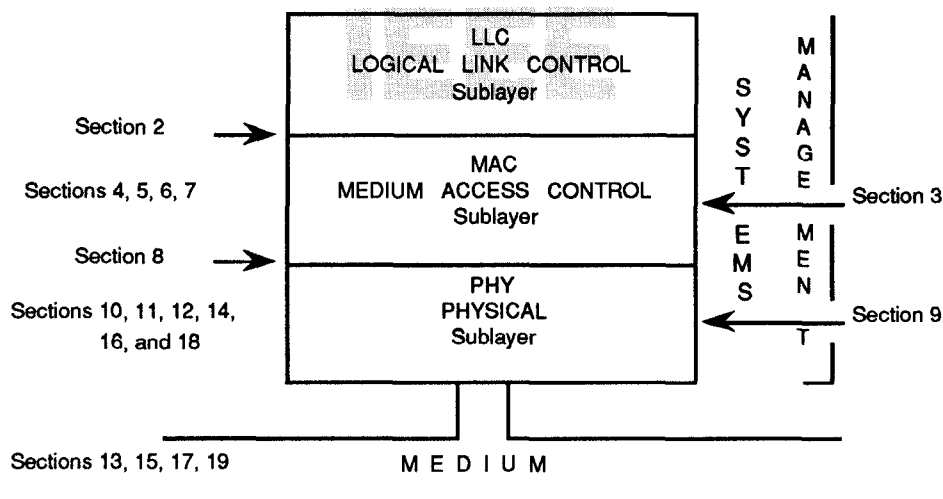


Fig 1-1
Relationship of Adjacent Protocol Layers