This is an *Archive IEEE Standard.* It has been withdrawn or superseded by a later version of the standard.

ARCHIVE STANDARDS MAY HAVE VALUE AS HISTORICAL DOCUMENTS, BUT THEY ARE NOT VALID OR APPROVED IEEE STANDARDS. THE IEEE SHALL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM THE SUBSCRIBER'S OR USERS' PRACTICE OF THIS UNAPPROVED, ARCHIVE IEEE STANDARD.

For more information about this or other current, revised or withdrawn standards, please consult the IEEE Standards Status report on-line at http://standards.ieee.org/db/status/ .

IEEE Standards for Local and Metropolitan Area Networks:

Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications

Media Access Control (MAC) Parameters, Physical Layer, Medium Attachment Units, and Repeater for 100 Mb/s Operation, Type 100BASE-T (Clauses 21–30)

Sponsor

**LAN MAN Standards Committee
of the
IEEE Computer Society**

Approved 14 June 1995

IEEE Standards Board

Approved 4 April 1996

American National Standards Institute

2nd Printing, Corrected Edition

Abstract: The ISO/IEC CSMA/CD Media Access Control (MAC) is given an additional set of parameters for 100 Mb/s operation. A repeater and added Physical Layers, known collectively as 100BASE-T, as well as significant additional supporting material for a Media Independent Interface (MII), management, and automatic configuration, are specified. This includes 100BASE-T4, which uses four pairs of Category 3, 4, or 5 generic twisted, balanced cable; 100BASE-TX, which uses two pairs of Category 5 balanced cable or 150 Ω shielded balanced cable; and 100BASE-FX, which uses two multi-mode fibers. Fibre Distributed Data Interface (FDDI) media interface specifications are referenced to provide the 100BASE-TX and 100BASE-FX physical signaling channels, defined under the subcategory 100BASE-X.
Keywords: 100BASE-FX, 100BASE-T, 100BASE-T4, 100BASE-TX, 100BASE-X, Auto-Negotiation, Fast Ethernet, management, Media Independent Interface (MII), repeater

IEEE Standards documents are developed within the Technical Committees of the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Board. Members of the committees serve voluntarily and without compensation. They are not necessarily members of the Institute. The standards developed within IEEE represent a consensus of the broad expertise on the subject within the Institute as well as those activities outside of IEEE that have expressed an interest in participating in the development of the standard.

Use of an IEEE Standard is wholly voluntary. The existence of an IEEE Standard does not imply that there are no other ways to produce, test, measure, purchase, market, or provide other goods and services related to the scope of the IEEE Standard. Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change brought about through developments in the state of the art and comments received from users of the standard. Every IEEE Standard is subjected to review at least every five years for revision or reaffirmation. When a document is more than five years old and has not been reaffirmed, it is reasonable to conclude that its contents, although still of some value, do not wholly reflect the present state of the art. Users are cautioned to check to determine that they have the latest edition of any IEEE Standard.

Comments for revision of IEEE Standards are welcome from any interested party, regardless of membership affiliation with IEEE. Suggestions for changes in documents should be in the form of a proposed change of text, together with appropriate supporting comments.

Interpretations: Occasionally questions may arise regarding the meaning of portions of standards as they relate to specific applications. When the need for interpretations is brought to the attention of IEEE, the Institute will initiate action to prepare appropriate responses. Since IEEE Standards represent a consensus of all concerned interests, it is important to ensure that any interpretation has also received the concurrence of a balance of interests. For this reason IEEE and the members of its technical committees are not able to provide an instant response to interpretation requests except in those cases where the matter has previously received formal consideration.

Comments on standards and requests for interpretations should be addressed to:

> Secretary, IEEE Standards Board
> 445 Hoes Lane
> P.O. Box 1331
> Piscataway, NJ 08855-1331
> USA

> Note: Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. The IEEE shall not be responsible for identifying all patents for which a license may be required by an IEEE standard or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Corrected Edition, June 1996

The following corrections have been made to this edition:

Page 23: The designation of reference [A5] has been corrected to ANSI/EIA/TIA 526-14-1990. *[Note that further updates to annex A can be found in ISO/IEC 8802-3: 1996.]*

Page 32: In the last line of text on the page, the word "fourth" has been corrected to "sixth."

Page 174: In figure 24-11, the "BAD SSD" box text has been corrected. "RXD<3.0> ⇐ 1110" now reads "RXD<3:0> ⇐ 1110".

Page 234: The page, containing subclauses 27.7.4.11 and 27.7.4.12, was inadvertently omitted from the first printing. It is now included.

Page 286: Under list item a), notes 2 and 3 were misnumbered and have been corrected. Also, references in notes 2 and 3 to table 29-2 have been corrected to table 29-3.

Page 301: In table 30-1d, "aAutoNegAdvertisedTechnologyAbilit" has been corrected to "aAutoNegAdvertisedTechnologyAbility".

Page 312: In subclause 30.4.1.1.2, the reference to 20.2.2.3 for "other" has been corrected to 30.2.5.
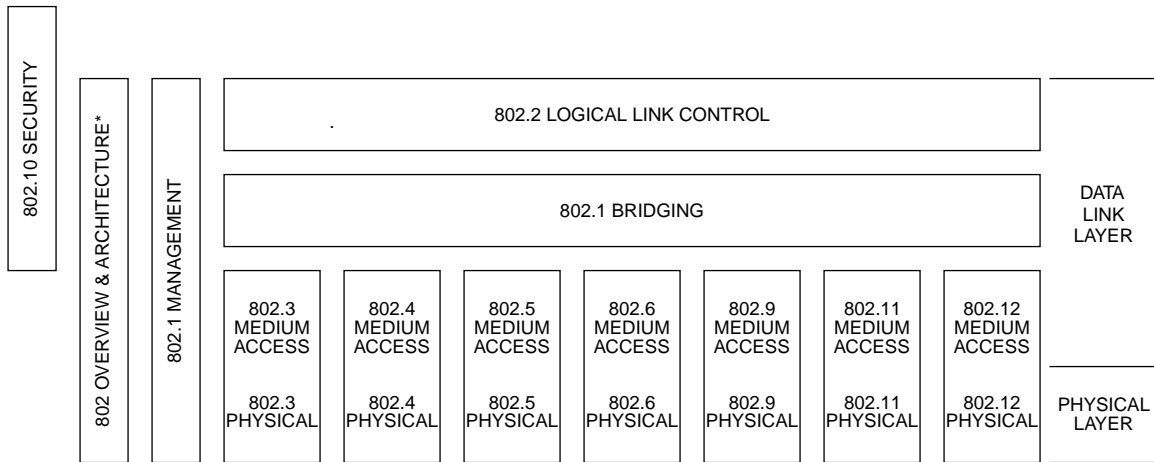
Page 323: In subclause 30.5.1.1.2, the reference to 20.2.2.3 for "other" has been corrected to 30.2.5.

Note that additional corrections are under consideration, and that some reference documents have been updated. These will be included in future maintenance documents.

Introduction

(This introduction is not part of IEEE Std 802.3u-1995.)

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.)

802.10 SECURITY	802 OVERVIEW & ARCHITECTURE*	802.1 MANAGEMENT	802.2 LOGICAL LINK CONTROL							DATA LINK LAYER
			802.1 BRIDGING							
			802.3 MEDIUM ACCESS	802.4 MEDIUM ACCESS	802.5 MEDIUM ACCESS	802.6 MEDIUM ACCESS	802.9 MEDIUM ACCESS	802.11 MEDIUM ACCESS	802.12 MEDIUM ACCESS	
			802.3 PHYSICAL	802.4 PHYSICAL	802.5 PHYSICAL	802.6 PHYSICAL	802.9 PHYSICAL	802.11 PHYSICAL	802.12 PHYSICAL	PHYSICAL LAYER

* 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 the technologies noted above are as follows:

- IEEE Std 802[1]: 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.

- ANSI/IEEE Std 802.1B [ISO/IEC 15802-2]: LAN/MAN Management. Defines an Open Systems Interconnection (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]: MAC Bridging. 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.

---

[1]The 802 Architecture and Overview standard, 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.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

WHAT WILL YOU BUILD? | sales@docketalarm.com | 1-866-77-FASTCASE

fastcase
Smarter legal research.