

### DRAFT AMENDMENT ISO/IEC DIS 8802-3/Amd.2 ANSI/IEEE Std 802.3af

Attributed to ISO/IEC JTC 1 by the Central Secretariat (see page iii)

Voting begins on 2003-11-14

Voting terminates on 2004-04-14

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION INTERNATIONAL ELECTROTECHNICAL COMMISSION • МЕЖДУНАРОДНАЯ ЭЛЕКТРОТЕХНИЧЕСКАЯ КОММИСИЯ • COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

## FAST-TRACK PROCEDURE

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements —

Part 3:

Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications

### AMENDMENT 2: Data Terminal Equipment (DTE) power via Media Dependent Interface (MDI) (standards.iteh.ai)

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseaux locaux et métropolitains — Prescriptions spécifiques — Sister available status et métropolitains — Prescriptions spécifiques — Réseaux - Réseaux

Partie 3: Accès multiple par surveillance du signal et détection de collision (CSMA/CD) et spécifications pour la couche physique

AMENDEMENT 2: Puissance de l'équipement du terminal des données (DTE) via l'interface dépendante des médias (MDI)

ICS 35.110

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### NOTE FROM ITTF

This draft International Standard is submitted for JTC 1 national body vote under the Fast-Track Procedure.

In accordance with Resolution 30 of the JTC 1 Berlin Plenary 1993, the proposer of this document recommends assignment of ISO/IEC 8802-3 to JTC 1/SC 6.

### "FAST-TRACK" PROCEDURE

**1** Any P-member and any Category A liaison organization of ISO/IEC JTC 1 may propose that an existing standard from any source be submitted directly for vote as a DIS. The criteria for proposing an existing standard for the fast-track procedure are a matter for each proposer to decide.

**2** The proposal shall be received by the ITTF which will take the following actions.

**2.1** To settle the copyright and/or trade mark situation with the proposer, so that the proposed text can be freely copied and distributed within JTC 1 without restriction.

**2.2** To assess in consultation with the JTC 1 secretariat which SC is competent for the subject covered by the proposed standard and to ascertain that there is no evident contradiction with other International Standards.

**2.3** To distribute the text of the proposed standard as a DIS. In case of particularly bulky documents the ITTF may demand the necessary number of copies from the proposer.

**3** The period for combined DIS voting shall be six months. In order to be accepted the DIS must be supported by 75 % of the votes cast (abstention is not counted as a vote) and by two-thirds of the P-members voting of JTC 1.

**4** At the end of the voting period, the comments received, whether editorial only or technical, will be dealt with by a working group appointed by the secretariat of the relevant SC-482c-bf45b80255e49212/iso-iec-8802-3-pdam-2

**5** If, after the deliberations of this WG, the requirements of 3 above are met, the amended text shall be sent to the ITTF by the secretariat of the relevant SC for publication as an International Standard.

If it is impossible to agree to a text meeting the above requirements, the proposal has failed and the procedure is terminated.

In either case the WG shall prepare a full report which will be circulated by the ITTF.

6 If the proposed standard is accepted and published, its maintenance will be handled by JTC 1.

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# 802.3af™

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

## Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications

## Amendment: Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)

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Published by The Institute of Electrical and Electronics Engineers, Inc. 3 Park Avenue, New York, NY 10016-5997, USA

18 June 2003

Print: SH95132 PDF: SS95132

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ISO/IEC 8802-3/PDAM 2 https://standards.iteh.ai/catalog/standards/sist/9d843f01-5815-482c-bf45b80255e49212/iso-iec-8802-3-pdam-2 IEEE Standard for Information technology— Telecommunications and information exchange between systems— Local and metropolitan area networks— Specific requirements

## Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications

## Amendment: Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)

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ISO/IEC 8802-3/PDAM 2

Approved 12 Junel 2003 standards.iteh.ai/catalog/standards/sist/9d843f01-5815-482c-bf45-IEEE-SA Standards Board b80255e49212/iso-iec-8802-3-pdam-2

**Abstract:** Support for optionally powering a 10BASE-T, 100BASE-TX or 1000BASE-T DTE device via the Power Interface (PI) using physical layers defined in Clauses 14, 25, and 40. The Power Sourcing Equipment (PSE) is located at an endpoint or midspan, separate from and between the MDIs, and provides power to the Powered Device (PD) over the Link Section. The PSE detection protocol distinguishes a compatible PD from non-compatible devices and precludes the application of power and possible damage to non-compatible devices. The PSE monitors the Maintain Power Signature (MPS) and removes power when it is no longer requested or required. Optional management function requirements are specified.

Keywords: 802.3af, Link Section, midspan, MPS, PD, PI, POE, power, Power over Ethernet, PSE

The Institute of Electrical and Electronics Engineers, Inc. 3 Park Avenue, New York, NY 10016-5997, USA

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 Print:
 ISBN 0-7381-3696-4
 SH95132

 PDF:
 ISBN 0-7381-3697-2
 SS95132

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### Introduction to IEEE Std 802.3af-2003

[This introduction is not part of IEEE Std 802.3af-2003, IEEE Standard for Information technology— Telecommunications and information exchange between systems—Local and metropolitan area networks— Specific requirements CSMA/CD Access Method and Physical Layer Specifications Amendment: Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)]

This amendment 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.<sup>1</sup>)



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

The standards defining the technologies noted above are as follows:

- IEEE Std 802<sup>2</sup> *Overview and Architecture*. This standard provides an overview to the family of IEEE 802 Standards.
- IEEE Std 802.1B<sup>™</sup>
   *LAN/MAN Management*. Defines an OSI management-compatible architecture, and services and protocol elements for use in a LAN/MAN [ISO/IEC 15802-2]
   *LAN/MAN Management*. Defines an OSI management-compatible
   *LAN/MAN Management*. Defines an OSI management-compatible
   *architecture*, and services and protocol elements for use in a LAN/MAN
- IEEE Std 802.1D<sup>™</sup> *Media Access Control (MAC) Bridges.* Specifies an architecture and protocol for the interconnection of IEEE 802 LANs below the MAC service boundary.
- IEEE Std 802.1E<sup>™</sup> System Load Protocol. Specifies a set of services and protocol for those aspects [ISO/IEC 15802-4] of management concerned with the loading of systems on IEEE 802 LANs.

<sup>&</sup>lt;sup>1</sup>The IEEE standards referred to in the above figure and list are trademarks owned by the Institute of Electrical and Electronics Engineers, Incorporated.

<sup>&</sup>lt;sup>2</sup>The IEEE 802 Overview and Architecture Specification, originally known as IEEE Std 802.1A, has been renumbered as IEEE Std 802. This has been done to accomodate 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.

- IEEE Std 802.1F<sup>™</sup> Common Definitions and Procedures for IEEE 802 Management Information.
- IEEE Std 802.1G<sup>™</sup> Remote Media Access Control (MAC) Bridging. Specifies extensions for the [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.
- IEEE Std 802.1H<sup>™</sup> Media Access Control (MAC) Bridging of Ethernet V2.0 in Local Area [ISO/IEC TR 11802-5] Networks.
- IEEE Std 802.2 Logical Link Control. [ISO/IEC 8802-2]
- IEEE Std 802.3 CSMA/CD Access Method and Physical Layer Specifications.
- IEEE Std 802.5 Token Ring Access Method and Physical Layer Specifications. [ISO/IEC 8802-5]
- IEEE Std 802.10 Interoperable LAN/MAN Security.
- IEEE Std 802.11 Wireless LAN Medium Access Control (MAC) and Physical Layer [ISO/IEC DIS 8802-11] Specifications.
- IEEE Std 802.15 Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for: Wireless Personal Area Networks.
- IEEE Std 802.16

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Standard Air Interface for Fixed Broadband Wireless Access Systems.

In addition to the family of standards, the following is a recommended practice for a common Physical Layer technology: (standards.iteh.ai)

• IEEE Std 802.7<sup>™</sup> *IEEE Recommended Practice for Broadband Local Area Networks*. https://standards.iteh.ai/catalog/standards/sist/9d843f01-5815-482c-bf45-

b80255e49212/iso-iec-8802-3-pdam-2

### Conformance test methodology

An additional standard, IEEE Std 1802.3<sup>™</sup> provides conformance test information for 10BASE-T.

### IEEE Std 802.3af-2003

This standard contains state-of-the-art material. The area covered by this standard is undergoing evolution. Revisions are anticipated to this standard within the next few years to clarify existing material, to correct possible errors, and to incorporate new related material.

#### **Participants**

The following is a list of chairs and editors at the time the IEEE 802.3 Working Group balloted this standard:

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David J. Law, Vice Chair

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#### Judith Gorman, Secretary ISO/IEC 8802-3/PDAM 2

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\*Member Emeritus

Also included are the following nonvoting IEEE-SA Standards Board liaisons:

Alan Cookson, *NIST Representative* Satish K. Aggarwal, *NRC Representative* 

#### Catherine Berger IEEE Standards Project Editor

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