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IEEE
P802.2c

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

Part 2: Logical link control

AMENDMENT 3: Conformance requirements

*Technologies de l'information — Télécommunications et échange
d'information entre systèmes — Réseaux locaux et métropolitains —
Exigences spécifiques —*

Partie 2: Contrôle de liaison logique

AMENDEMENT 3: Prescriptions de conformité



Reference number
ISO/IEC 8802-2:1994/Amd.3:1995(E)
IEEE P802.2c

Abstract: Conformance requirements for ISO/IEC 8802-2 : 1994 [ANSI/IEEE Std 802.2, 1994] are provided.

Keywords: Local area networks, protocols; logical link control

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IEEE P802.2c (Draft IEEE Standard)

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

Part 2: Logical link control

Amendment 3: Conformance requirements

Sponsor

**Technical Committee on Computer Communications
of the
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Amendment 3 to ISO/IEC 8802-2:1994

Foreword

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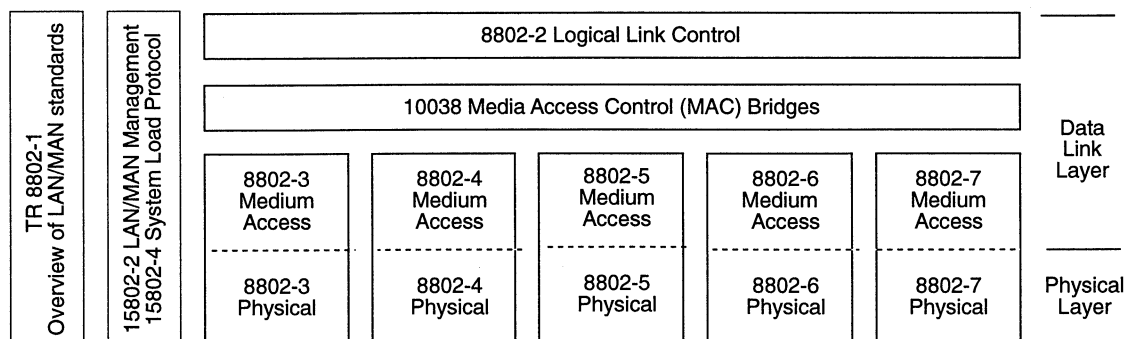
Amendment 3 to International Standard ISO/IEC 8802-2:1994 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.



International Organization for Standardization/International Electrotechnical Commission
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Foreword to ISO/IEC 8802-2:1994/Amd. 3:1995(E)

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



This family of International Standards deals with the Physical and Data Link layers as defined by the ISO Open Systems Interconnection Basic Reference Model (ISO 7498 : 1984). The access standards define five 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:

- ISO/IEC 8802-3 [ANSI/IEEE Std 802.3, 1993 Edition], a bus utilizing CSMA/CD as the access method.
- ISO/IEC 8802-4 [ANSI/IEEE Std 802.4-1990], a bus utilizing token passing as the access method.
- ISO/IEC 8802-5 [ANSI/IEEE Std 802.5-1992], a ring utilizing token passing as the access method.
- ISO/IEC 8802-6 [ANSI/IEEE Std 802.6, 1994 Edition], a dual bus utilizing distributed queuing as the access method.
- ISO 8802-7, a ring utilizing slotted ring as the access method.

ISO/IEC TR 8802-1 provides an overview of the LAN/MAN standards, along with details of their document numbering.

ISO/IEC 8802-2 [ANSI/IEEE Std 802.2, 1994 Edition], *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 10038 [ANSI/IEEE Std 802.1D, 1993 Edition], *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.

ISO/IEC 15802-2 [ANSI/IEEE Std 802.1B, 1995 Edition], *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.

ISO/IEC 15802-4 [ANSI/IEEE Std 802.1E, 1994 Edition], *System Load Protocol*, specifies a set of services and protocol for those aspects of management concerned with the loading of systems in ISO/IEC LAN/MAN environments.

IEEE P802.2c (Draft IEEE Standard)

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

Part 2: Logical link control

Amendment 3: Conformance requirements

NOTE—This amendment is a draft IEEE standard (IEEE P802.2c). When it has completed the IEEE approval process, it will be incorporated into the next edition of ISO/IEC 8802-2.

This amendment provides conformance requirements for ISO/IEC 8802-2 : 1994 [ANSI/IEEE Std 802.2, 1994 Edition]. These items are defined as a series of changes and additions to the existing text of ISO/IEC 8802-2 : 1994; the text therefore assumes all material, including references, abbreviations, definitions, services and protocols contained in the base text. The clause and subclause numbering in the following clauses corresponds to the clause and subclause numbering in the final document (i.e., when these additions are incorporated). Text shown in ***bold italics*** in the remainder of this document defines the editing instructions necessary to incorporate the changes and additions into ISO/IEC 8802-2 : 1994.

Add the following text to the end of 1.1 as a new paragraph:

“To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented. Such a statement is called a Protocol Implementation Conformance Statement (PICS), as defined in ISO/IEC 9646-1 : 1994. This International Standard provides such a PICS proforma in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-2.”

Add the following two references to 1.3:

“ISO/IEC 9646-1 : 1994, Information technology—Open Systems Interconnection—Conformance testing methodology and framework—Part 1: General concepts.

ISO/IEC 9646-2 : 1994, Information technology—Open Systems Interconnection—Conformance testing methodology and framework—Part 2: Abstract Test Suite specification.”

Add the following text at the end of 1.4.2:

“This International Standard uses the following terms as defined in ISO/IEC 9646-1 : 1994:

protocol implementation conformance statement, PICS
PICS proforma.”

Add a new subclause (1.5) as follows:

1.5 Conformance

1.5.1 Static conformance

1.5.1.1 General requirements

An implementation that claims conformance to this International Standard shall implement the following:

- a) LLC Type 1 operation as specified in 6.9.

1.5.1.2 Optional requirements

An implementation that claims conformance to this International Standard may implement any of the following options:

- a) LLC Type 2 operation, or LLC Type 3 operation, or LLC Type 2 operation and LLC Type 3 operation. LLC Type 2 operation is specified in 7.9, and LLC Type 3 operation is specified in 8.7, or
- b) The flow control technique as specified in annex B, or
- c) Initiation of the Duplicate Address Check procedure as specified in 6.9, or
- d) Initiation of the TEST function as specified in 6.7, or
- e) The RDE as specified in clause 9.

1.5.2 Dynamic conformance

For each function that the PICS states to be supported, the implementation shall exhibit behavior consistent with the implementation of the following:

- a) The corresponding data link layer procedures, and
- b) The encoding of any transmitted frames

as specified in the clauses to which the PICS proforma entry for the function refers.

1.5.3 PICS proforma

The supplier of a protocol implementation that is claimed to conform to this International Standard shall complete a copy of the PICS proforma in annex A, including the information necessary to identify fully both the supplier and the implementation.

Add a new annex A as follows:

Annex A¹

(normative)

PICS proforma

A.1 Introduction

The supplier of a protocol implementation that is claimed to conform to ISO/IEC 8802-2 : 1994 shall complete the following Protocol Implementation Conformance Statement (PICS) proforma.

A completed PICS proforma is the PICS for the implementation in question. The PICS is a statement of which capabilities and options of the protocol have been implemented. The PICS can have a number of uses, including use

- By the protocol implementor, as a checklist to reduce the risk of failure to conform to the standard through oversight
- By the supplier and acquirer, or potential acquirer, of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma
- By the user, or potential user, of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS proformas)
- By a protocol tester, as the basis for selecting appropriate tests against which to assess the claim for conformance of the implementation

A.2 Abbreviations and special symbols

A.2.1 Status symbols

M	Mandatory field/function
O	Optional field/function
O.<n>	Optional field/function, but support of at least one of the group of options labeled by the same numeral <n> is required
X	Prohibited
<pred>:	Conditional item symbol, including predicate identification (see A.3.4), applicable to a particular item
<pred>::	Conditional item symbol, including predicate identification (see A.3.4), applicable to a table or a group of tables
<item>:	Conditional symbol, status is dependent on the support marked for <item> (see A.3.4)

A.2.2 General abbreviations

N/A	Not applicable
PICS	Protocol Implementation Conformance Statement

¹Copyright release for PICS proformas: Users of this standard may freely reproduce the PICS proforma in this annex so that it can be used for its intended purpose and may further publish the completed PICS.