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

Part 1: Medium Access Control (MAC) service definition

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

Partie 1: Définition du Contrôle d'accès au support (MAC)



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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to the national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 15802-1 was prepared by ISO/IEC JTC 1, *Information technology - Subcommittee SC 6, Telecommunications and information exchange between systems*.

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: *Remote MAC bridging*
- Part 4: *System load protocol*

Annex A of this part of ISO/IEC 15802 is for information only.

Introduction

ISO/IEC 15802 is one of a set of International Standards produced to facilitate the interconnection of information processing systems. It is related to other International Standards in the set as defined by ISO/IEC 7498-1. The reference model described by ISO/IEC 7498-1 subdivides the area of standardization for Open Systems Interconnection (OSI) into a series of layers and allows for each layer to be further divided into sublayers.

This part of ISO/IEC 15802 defines the service provided by the Medium Access Control Sublayer to the Logical Link Control Sublayer at the boundary between the Medium Access Control and Logical Link Control Sublayers. The Medium Access Control and Logical Link Control Sublayers are sublayers of the Data Link Layer of the OSI Basic Reference Model as illustrated in figure 1. The Medium Access Control Sublayer is not described in ISO/IEC 7498-1 but is of value in the specification of ISO/IEC 8802 Local Area Networks.



Figure 1 - Relationship of the Medium Access Control and Logical Link Control Sublayer to the OSI Data Link Layer

This part of ISO/IEC 15802 provides a definition of the MAC Service made available to the MAC Service user by the action of a Medium Access Control Protocol over the underlying service. The relationship is illustrated in figure 2.

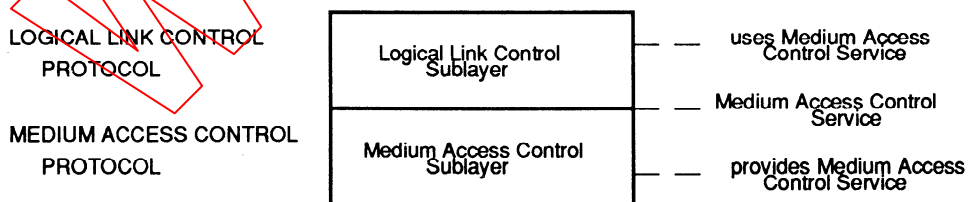


Figure 2 - Relationship of this part of ISO/IEC 15802 to other International Standards

Throughout the set of International Standards, the term "service" refers to the abstract capability provided by one layer of the OSI Basic Reference Model to the layer immediately above. Thus, the MAC Service defined in this part of ISO/IEC 15802 is a conceptual architectural service, independent of administrative divisions.

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

Part 1: Medium Access Control (MAC) service definition

1 Scope

This part of ISO/IEC 15802 defines the Medium Access Control Service found in local area network architecture in abstract terms of

- a) the primitive actions and events of the service;
- b) the parameters associated with each primitive action and event, and the form they take; and
- c) the interrelationship between, and the valid sequences of, these actions and events.

The principal objectives of this part of ISO/IEC 15802 are

- a) to specify the characteristics of a conceptual Medium Access Control Service;
- b) guide the development of Medium Access Control Protocols; and
- c) guide the development of OSI protocols which make use of the MAC Service.

This part of ISO/IEC 15802 does not specify individual implementation or products, nor does it constrain the implementation of Medium Access Control entities and interfaces within an information processing system.

There is no conformance of equipment to this part of ISO/IEC 15802. Instead, conformance is achieved through implementation of conforming Medium Access Control Protocols that fulfil the Medium Access Control Service defined in this part of ISO/IEC 15802.

2 Normative references

The following International Standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 15802. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 15802 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 7498-1 : 1994, *Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model.*

ISO 7498-3 : 1989, *Information processing systems - Open Systems Interconnection - Basic Reference Model - Part 3: Naming and addressing.*

ISO/IEC 10731:1994, *Information technology - Open Systems Interconnection - Basic Reference Model - Conventions for the definition of OSI services.*