

Australian/New Zealand Standard™

Information processing systems— Local area networks

Part 12: Demand-priority access method, physical layer and repeater specifications

[ISO/IEC title: Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements, Part 12: Demand-Priority access method, physical layer and repeater specifications]

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT/1, Information Systems—Interconnection.

This Standard is identical with and has been reproduced from ISO/IEC 8802-12:1998, *Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements*, Part 12: *Demand-Priority access method, physical layer and repeater specifications*.

The objective of this Standard is to provide designers of local area networks a specification for an access method using demand priority.

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AUSTRALIAN/NEW ZEALAND STANDARD

Information processing systems—Local area networks

Part 12:

Demand-priority access method, physical layer and repeater specifications

1. Overview**1.1 Scope**

This International Standard defines the protocol and compatible interconnection of data communication equipment via a repeater-controlled, star-topology Local Area Network (LAN) using the demand-priority access method.

1.2 Purpose

The purpose of this protocol is to provide a higher speed LAN with deterministic access, priority, and optional filtering. Pursuant to this, the protocol will

- a) Provide a minimum data rate of 100 Mb/s.
- b) Provide smooth migration from ISO/IEC 8802-3 and ISO/IEC 8802-5 LANs.
- c) Support either ISO/IEC 8802-3 or ISO/IEC 8802-5 frame format and MAC service interface to the LLC.
- d) Support a cascaded star topology over twisted pair and fibre-optic generic building wiring.
- e) Allow topologies of 2.5 km and greater with three levels of cascading.
- f) Provide a Physical Layer Bit Error Rate (BER) of less than 10^{-8} .
- g) Provide fair access and bounded latency.
- h) Provide two priority levels: normal and high.
- i) Provide a low-latency service through high priority for support of multimedia applications over extended networks.
- j) Support an option for filtering individually addressed packets at the repeater to enhance privacy.

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