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Australian Standard®

Information systems—Equipment—Fibre Distributed Data Interfaces (FDDI)—Part 2: Token ring Media Access Control (MAC)

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PREFACE

This Standard was prepared by the Standards Australia Committee on Information Systems—Equipment. It is identical with and has been reproduced from ISO/IEC 9314-1 *Information processing systems—Fibre Distributed Data Interface (FDDI) Part 2: Token Ring Media Access Control (MAC).*

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For the purpose of this Australian Standard, the ISO/IEC text should be modified as follows:

Reference to International Standard or other Publication		*Australian Standard*	
ISO/IEC		AS	
9314-1	Information processing systems—Fibre Distributed Data (FDDI)—Part 1: Token Ring Physical Layer Protocol (PHY)	3734.1	Information systems—Equipment—Fibre Distributed Data Interface (FDDI)—PHYsical layer protocol (PHY)

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Information systems—Equipment—Fibre distributed data interface (FDDI)

Part 2: Token ring media access control (MAC)

1 Scope

This part of ISO 9314 specifies the Media Access Control (MAC), the lower sublayer of the Data Link Layer (DLL), for Fibre Distributed Data Interface (FDDI).

FDDI provides a high-bandwidth(100 Mbit/s), general-purpose interconnection among computers and peripheral equipment using fibre optics as the transmission medium in a ring configuration. FDDI can be configured to support a sustained transfer rate of approximately 80 Mbit/s (10 Mbyte/s). It may not meet the response time requirements of all unbuffered high speed devices. FDDI establishes the connection among many stations distributed over distances of several kilometres in extent. Default values for the FDDI were calculated to accommodate rings of up to 1 000 physical links and a total fibre path length of 200 km (typically corresponding to 500 stations and 100 km of dual fibre cable).

FDDI consists of

(a) A Physical Layer (PL), which provides the medium, connectors, optical bypassing, and driver/receiver requirements. PL also defines encode/decode and clock requirements as required for framing the data for transmission on the medium or to the higher layers of the FDDI. For purposes of this part of 9314, references to the PL are made in terms of the Physical Layer entity designated PHY.

(b) A Data Link Layer (DLL), which is divided into two sublayers:

(1) A Media Access Control (MAC) which provides fair and deterministic access to the medium, address recognition, and generationand verification of frame check sequences. Its primary function is the delivery of frames, including frame insertion, repetition, and removal. The definition of MAC is contained in this part of ISO 9314.

(2) A Logical Link Control (LLC) which provides a common protocol to provide the required data assurance services between MAC and the Network Layer.

(c) A Station Management (SMT)[1)] which provides the control necessary at the station level to manage the processes under way in the various FDDI layers such that a station may work co-operatively on a ring. SMT provides services such as control of station initialization, configuration management, fault isolation and recovery, and scheduling procedures.

[1)] SMT will form the subject of a future part of ISO 9314.