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Australian Standard®

Information processing systems—Open Systems Interconnection—Basic reference model

Part 3: Naming and addressing

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PREFACE

This Standard was prepared by the Standards Australia Committee on Information Systems—Interconnection. It is identical with and has been reproduced from International Standard ISO 7498-3: 1988, *Information processing systems—Open Systems Interconnection—Basic Reference Model*—Part 3: *Naming and Addressing.*

The Standard is one of a series of Open Systems Interconnection (OSI) Standards which are currently under development. Since OSI Standards are developmental, there may be some minor difficulties encountered in their implementation. For this reason, Standards Australia will be providing a limited interpretation service to coordinate and disseminate information concerning difficulties which are identified in using this Standard.

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

(i) *Terminology* The words 'Australian Standard' should replace the words 'International Standard' wherever they appear.

(ii) *References* The references to International Standards should be replaced by references to Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
7498	Information processing systems—Open Systems Interconnection—Basic Reference Model	2777	Information processing systems—Open Systems Interconnection—Basic reference model
7498/Add1	Information processing systems—Open Systems Interconnection—Basic Reference Model—Addendum 1: Connectionless-mode transmission	2777	Supp.1 Information processing systems—Open Systems Interconnection—Basic reference model—Supplement 1: Connectionless mode transmission
7498-4	Information processing systems—Open Systems Interconnection—Basic Reference Model—Part 4: Management Framework	2777.4	Information processing systems—Open Systems Interconnection—Basic reference model—Part 4: Management framework
8348/Add2	Information processing systems—Data communication—Network Service Definition—Addendum 2: Network layer addressing	2994	Supp. 1 Information processing systems—Data communication—Network service definition—Supplement 1: Network layer addressing
8509	Information processing systems—Open Systems Interconnection—Service Conventions	3620	Information processing systems—Open Systems Interconnection—Service conventions
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Part 3: Naming and addressing

Introduction

This part of the Basic Reference Model for Open Systems Interconnection (ISO 7498) extends the basic architectural concepts of identifiers described in 5.4 of ISO 7498.

This part of ISO 7498 states the architectural principles which are followed in the production of any standard which involves the identification (naming) and location (addressing) of objects for the purpose of interconnection within the Open System Interconnection Environment (OSIE).

This part of ISO 7498 has sufficient flexibility to accommodate advances in technology and expansion in user demands. This flexibility is also intended to allow the phased transition from existing implementations to OSI standards.

NOTE - This part of ISO 7498 is expected to be subject to future expansion, in particular with regard to Multi-Peer Data Transmission (MPDT).

The architectural principles stated within this part of ISO 7498 ensure that any ISO standard that involves the identification and location of objects within the OSIE for the purpose of interconnection will:

a) avoid any restrictions on:

1) the functionality that may be made available through current or future International Standards,

2) the functionality of any real open system,

3) the internal design of any real open system;

b) preserve the principle of layer independence in the OSIE. That is, the internal functioning of one layer is not constrained by any other layer;

c) preserve the principle of implementation independence in the OSIE, as expressed in 4.2 of ISO 7498. That is, no real open system (or administrator thereof) is required to know anything about the implementation design of any other real open system (or administration thereof), nor does any real open system impose such knowledge as a condition for communication using OSI standards;

d) allow economical support for interconnection within the OSIE; in particular individual standards produced within the framework specified by this part of ISO 7498 should make it possible to provide facilities which give adequate levels of performance, reliability, and integrity and which ease the administration by humans with respect to identifying and locating objects within the OSIE for the purpose of interconnection.

The description of naming and addressing for the OSIE given in this part of ISO 7498 is developed in stages.

Clauses 1 - 4 provide basic introductory and reference information.

Clause 5 introduces concepts of naming.

Clause 6 prescribes, for the OSIE, the objects named, the operation of addressing, and the uses of addressing.

Clause 7 prescribes, for the OSIE, the objective of naming and addressing and the mechanisms to be employed to meet that objective.

Clause 8 prescribes the principles governing the nature and use of addressing information in (N)-services.

Clause 9 prescribes the principles governing the nature and use of addressing information in (N)-protocols.

Clause 10 provides a layer independent description of the layer directory-functions necessary to support the addressing structure established by clauses 7, 8, and 9, based on the general mechanisms and principles established in clauses 5 and 6.

Clause 11 prescribes the use of the directory-functions in each layer.

Clause 12 defines the nature of addressing domains and registration authorities.

Clause 13 prescribes the registration procedures required for naming in the OSIE.

Clause 14 prescribes the requirements for directory facilities in the OSIE.

NOTE - This part of ISO 7498 provides clarifications of the basic architecture defined in ISO 7498 where this is necessary for a full understanding of the naming and addressing requirements within the OSIE.