INTERNATIONAL STANDARD

ISO/IEC 7498-3

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Information technology — Open Systems Interconnection — Basic Reference Model: Naming and addressing

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Modèle de référence de base: Dénomination et adressage

Reference number
ISO/IEC 7498-3:1997(E)

Contents

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 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 7498-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 18, *Document processing and related communication,* in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.650.

This second edition cancels and replaces the first edition (ISO 7498-3:1989), which has been technically revised.

ISO/IEC 7498 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Basic Reference Model*:

— *Part 1: The Basic Model*

— *Part 2: Security Architecture*

— *Part 3: Naming and addressing*

— *Part 4: Management framework*

— *Part 5: Multipeer communication architecture*

Introduction

This Recommendation | International Standard extends the basic architectural concepts of identifiers described in ITU-T Rec. X.200 | ISO/IEC 7498-1.

This Recommendation | International Standard states the architectural principles which are followed in the production of any Recommendation | International Standard which involves the identification (naming) and location (addressing) of objects for the purpose of interconnection within the Open System Interconnection Environment (OSIE).

This Recommendation | International Standard 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 1 – This Recommendation | International Standard is expected to be subject to future expansion, in particular with regard to Multi-Peer Data Transmission (MPDT).

The architectural principles stated within this Recommendation | International Standard will ensure that any ITU-T Recommendation 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 Recommendations | 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, i.e. 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 ITU-T Rec. X.200 | ISO/IEC 7498-1. 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 Recommendation | International Standard 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 Recommendation | International Standard is developed in stages.

NOTE 2 – This Recommendation | International Standard provides clarifications of the basic architecture defined in ITU-T Rec. X.200 | ISO/IEC 7498-1 where this is necessary for a full understanding of the naming and addressing requirements within the OSIE.

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ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – BASIC REFERENCE MODEL: NAMING AND ADDRESSING

1 Scope

This Recommendation | International Standard:

a) defines general mechanisms for the use of names and addresses to identify and locate objects in the OSIE; and

b) defines the use of these mechanisms within the layered structure of the Basic Reference Model.

This Recommendation | International Standard extends the concepts and principles defined in ITU-T Rec. X.200 | ISO/IEC 7498-1. This Recommendation | International Standard is not intended to be either an implementation specification or a basis for appraising the conformance of actual implementations.

The specific form of names and addresses is not within the scope of this Recommendation | International Standard.

2 Normative references

The following ITU-T Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations | International Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation X.25 (1996) | ISO/IEC 8208:1995, *Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for terminals operating in the packet mode and connected to public data networks by dedicated circuit.*
- ITU-T Recommendation X.200 (1994) | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model.*
- ITU-T Recommendation X.207 (1993) | ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application Layer structure.*
- ITU-T Recommendation X.210 (1993) | ISO/IEC 10731:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: Conventions for the definition of OSI services.*
- ITU-T Recommendation X.213 (1995) | ISO/IEC 8348:1996, *Information technology – Open Systems Interconnection – Network service definition.*
- ITU-T Recommendation X.224 (1995) | ISO/IEC 8073:(1997), *Information technology – Open Systems Interconnection – Protocol for providing the connection-mode transport service.*

2.2 Paired Recommendations | International Standards equivalent in technical content

- ITU-T Recommendation X.700 (1992), *Management Framework for Open System Interconnection (OSI) for CCITT Applications.*
- ISO/IEC 7498-4:1989, *Information processing systems – Open Systems Interconnection – Basic Reference Model – Part 4: Management framework.*

2.3 Additional references

- ISO/IEC 9545:1989, *Information technology – Open Systems Interconnection – Application Layer structure.*