

Australian Standard[®]

**Information technology—Open
Systems Interconnection—
Common management
information protocol**

Part 1: Specification

This Australian Standard was prepared by Committee IT/1, Information Systems—Interconnection. It was approved on behalf of the Council of Standards Australia on 2 March 1992 and published on 16 April 1992.

The following interests are represented on Committee IT/1:

AUSSAT
Australian Association of Permanent Building Societies
Australian Bankers Association
Australian Bureau of Statistics
Australian Committee of Directors and Principals
Australian Computer Society
Australian Computer Users Association
Australian Information Industry Association
Australian Telecommunications Users Group
Australian Vice Chancellors Committee
Confederation of Australian Industry
CSIRO—Institute of Information and Communication Technologies
Department of Defence
Department of Industry, Technology and Commerce
Information Exchange Steering Committee
Life Insurance Federation of Australia
OTC
Telecom Australia

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard[®]

**Information technology—Open
Systems Interconnection—
Common management
information protocol**

Part 1: Specification

First published as AS 3964—1991.
Revised and redesignated AS 3964.1—1992.

Incorporating:
Amdt 1—1996.

PREFACE

This Standard was prepared by the Standards Australia Committee on Information Technology—Interconnection to remedy defects in the first edition AS 3964—1991. It is identical with and has been reproduced from ISO/IEC 9596-1:1991, *Information technology—Open Systems Interconnection—Common management information protocol, Part 1: Specification*.

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, through the OSI Help Desk, a service to coordinate and disseminate information concerning difficulties which are identified in using this Standard.

Under arrangements made between Standards Australia and the international Standards bodies, ISO and IEC, as well as certain other Standards organizations, users of this Australian Standard are advised of the following:

- (a) Copyright is vested in Standards Australia.
- (b) The number of this Standard is not reproduced on each page; its identity is shown only on the cover and title pages.

For the purpose of this Australian Standard, the ISO/IEC text 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:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
8326	Information processing systems—Open Systems Interconnection—Basic connection oriented session service definition	3591	Information processing systems—Open Systems Interconnection—Basic connection oriented session service definition
8649	Information processing systems—Open Systems interconnection—Service definition for the Association Control Service Element	3683	Information processing systems—Open Systems Interconnection—Service definition for the Association Control Service Element
8650	Information processing systems—Open Systems Interconnection—Protocol specification for the Association Control Service Element	3684	Information processing systems—Open Systems Interconnection—Protocol specification for the Association Control Service Element
8822	Information processing systems—Open Systems Interconnection—Connection oriented presentation service definition	3615	Information processing systems—Open Systems Interconnection—Connection oriented presentation service definition
8823	Information processing systems—Open Systems Interconnection—Connection oriented presentation protocol specification	3616	Information processing systems—Open Systems Interconnection—Connection oriented presentation protocol specification
ISO/IEC			
7498	Information processing systems—Open Systems Interconnection—Basic Reference Model	2777	Information processing systems—Open Systems Interconnection—Basic reference model
7498-4	Part 4: Management Framework	2777.4	Part 4: Management framework
8824	Information technology—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)	3625	Information technology—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)
8825	Information technology—Open Systems Interconnection—Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)	3626	Information technology—Open Systems Interconnection Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)

9072	Information processing systems—Text Communication—Remote Operations	3893	Information processing systems—Text communication—Remote Operations
9072-1	Part 1: Model, Notation and Service Definition	3893.1	Part 1: Model, notation and service definition
9072-2	Part 2: Protocol Specification	3893.2	Part 2: Protocol specification
9595	Information technology—Open Systems Interconnection—Common Management Information Service Definition	3965	Information technology—Open Systems Interconnection—Common management information service definition

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	page
1 Scope	5
2 Normative references	5
3 Definitions	6
3.1 Basic Reference Model definitions	6
3.2 Management Framework definitions	6
3.3 Remote Operations definitions	6
3.4 CMIS definitions	6
3.5 ACSE definitions	6
3.6 Presentation definitions	7
4 Symbols and abbreviations	7
5 Overview	7
5.1 Service provided	7
5.2 Underlying services	7
5.3 Management information definitions	8
6 Elements of procedure	8
6.1 Association establishment	8
6.2 Remote operations	8
6.3 Event reporting procedure	9
6.4 Get procedure	10
6.5 Set procedure	11
6.6 Action procedure	12
6.7 Create procedure	13
6.8 Delete procedure	13
6.9 Association orderly release	14
6.10 Association orderly release	14
7 Abstract syntax	14
7.1 Conventions	14
7.2 Correspondence between CMISE primitives and CMIP operations	15
7.3 ACSE user data	15
7.4 CMIP data units	16
7.5 Definition of abstract syntax for CMIP	23
8 Conformance	24
8.1 Static requirements	24
8.2 Dynamic requirements	24
Annexes	
A (normative) Association rules for CMISE	25
B (informative) Expanded ASN. 1 syntax	28
C (informative) Examples of CMISE ROSE APDUs	37

Information technology—Open Systems Interconnection—Common management information protocol

Part 1: Specification

1 Scope

This part of ISO/IEC 9596 specifies a protocol which is used by application layer entities to exchange management information.

This part of ISO/IEC 9596 specifies

- procedures for the transmission of management information between application entities;
- the abstract syntax of the Common Management Information Protocol and the associated encoding rules to be applied;
- procedures for the correct interpretation of protocol control information;
- the conformance requirements to be met by implementation of this part of ISO/IEC 9596.

This part of ISO/IEC 9596 does not specify

- the structure or meaning of the management information that is transmitted by means of CMIP;
- the manner in which management is accomplished as a result of CMIP exchanges;
- the interactions which result in the use of CMIP.

2 Normative references

2.1 Identical CCITT Recommendations | International Standards

CCITT Recommendation X.712 (1992) | ISO/IEC 9596-2:1992, *Information technology - Open Systems Interconnection - Common management information protocol: Protocol implementation conformance statement (PICS) proforma*.

2.2 Additional references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9596. 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 9596 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7498:1984, *Information processing systems - Open Systems Interconnection - Basic Reference Model*.

ISO/IEC 7498-4: 1989, *Information processing systems - Open Systems Interconnection - Basic Reference Model - Part 4: Management Framework*.

ISO 8326:1987, *Information processing systems - Open Systems Interconnection - Basic connection oriented session service definition*.

ISO 8649:1987, *Information processing systems - Open Systems Interconnection - Service definition for the Association Control Service Element*.

ISO 8650:1987, *Information processing systems - Open systems Interconnection - Protocol specification for the Association Control Service Element*.

ISO 8822:1987, *Information processing systems - Open Systems Interconnection - Connection oriented presentation service definition*.

ISO 8823:1987, *Information processing systems - Open Systems Interconnection - Connection oriented presentation protocol specification*.

ISO/IEC 8824:1990, *Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)*.

ISO/IEC 8825:1990, *Information technology - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.