

AS 3893.1—1991

ISO/IEC 9072-1: 1989

Australian Standard[®]

**Information processing systems—
Text communication—Remote
Operations**

**Part 1: Model, notation and service
definition**

This Australian Standard was prepared by Committee IT/1, Information Systems—Interconnection. It was approved on behalf of the Council of Standards Australia on 8 March 1991 and published on 13 May 1991.

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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 processing systems—
Text communication—Remote
Operations**

**Part 1: Model, notation and service
definition.**

First published as AS 3893.1—1991.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 6841 0

PREFACE

This Standard was prepared by the Standards Australia Committee on Information Systems — Interconnection. It is identical with and has been reproduced from ISO/IEC 9072-1: 1989, *Information processing systems—Text communication —Remote Operations —Part 1: Model, notation and service definition*.

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	
7498	Information processing systems—Open Systems Interconnection — Basic Reference Model	2777	Information processing systems—Open Systems Interconnection — Basic Reference model
8059	Information processing systems—Open Systems Interconnection — Service Conventions	3620	Information processing systems—Open Systems Interconnection — Service conventions
8649	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	—	
8822	Information processing systems—Open Systems Interconnection—Connection oriented presentation service definition	3615	Information processing systems—Open Systems Interconnection— Connection oriented presentation service definition
8824	Information processing systems—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)	3625	Information processing systems—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)
8825	Information processing systems—Open Systems Interconnection—Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)	3626	Information processing systems—Open Systems Interconnection—Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)
ISO/IEC			
9066	Information processing systems —Text communication—Reliable Transfer		
9066-1	Part 1: Model and service definition	—	
9066-2	Part 2: Protocol specification	—	
9072	Information processing systems —Text communication—Remote Operations	3893	Information processing systems—Text communication—Remote Operations
9072-2	Part 2: Protocol specification	3893.2	Part 2: Protocol specification

CONTENTS

	<i>Page</i>
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Abbreviations	6
5 Conventions	7
6 Remote Operations Model	7
7 Overview of notation and service	11
8 Relationship with other ASEs and lower layer services	12
9 Remote Operations notation	13
10 Service definition	18
11 Mapping of notation on service	24
12 Sequencing information	26
Annexes	
A Notation supporting the specification of Application-service-element and application-contexts	29
B Guidelines for application protocol designers on the use of ROSE	33

© 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 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.

STANDARDS AUSTRALIA

Australian Standard

Information processing systems—Text communication—Remote Operations

Part 1: Model, notation and service definition

1 Scope

This part of ISO/IEC 9072 defines a Remote Operation (RO-) notation for defining the services provided to interactive applications. This part of ISO/IEC 9072 also defines the services provided by the Remote Operation Service Element (ROSE) services. The ROSE services are provided by the use of the ROSE protocol (part 2 of ISO/IEC 9072) in conjunction with the Association Control Service Element (ACSE) services (ISO 8649) and the ACSE protocol (ISO 8650), optionally the Reliable Transfer Service Element (RTSE) services (ISO/IEC 9066-1) and the RTSE protocol (ISO/IEC 9066-2), and the presentation-service (ISO 8822).

No requirement is made for conformance to this part of ISO/IEC 9072.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9072. At the time of publication, the editions were valid. All Standards are subject to revision, and parties to agreement based on this part of ISO/IEC 9072 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of ISO and IEC maintain Registers of currently valid International Standards.

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

ISO 8509: 1987, *Information processing systems - Open Systems Interconnection - Service Conventions*.

ISO 8649: 1988, *Information processing systems - Open Systems Interconnection - Service definition for the Association Control Service Element*.

ISO 8650: 1988, *Information processing systems - Open Systems Interconnection - Protocol specification for the Association Control Service Element*.

ISO 8822: 1988, *Information processing systems - Open Systems Interconnection - Connection oriented presentation service definition*.

ISO 8824: 1987, *Information processing systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)*.

ISO 8825: 1988, *Information processing systems - Open Systems Interconnection - Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)*.

ISO/IEC 9066-1: 1989, *Information processing systems - Text communication - Reliable Transfer - Part 1: Model and service definition*.

ISO/IEC 9066-2: 1989, *Information processing systems - Text communication - Reliable Transfer - Part 2: Protocol specification*.

ISO/IEC 9072-2: 1989, *Information processing systems - Text communication - Remote Operations - Part 2: Protocol specification*.

3 Definitions

3.1 Reference Model definitions

This part of ISO/IEC 9072 is based on the concepts developed in ISO 7498 and makes use of the following terms defined in it:

- a) Application Layer;
- b) application-process;
- c) application-entity;
- d) application-service-element;
- e) application-protocol-data-unit;
- f) application-protocol-control-information;
- g) Presentation Layer;