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Australian Standard®
2912—1986

INFORMATION PROCESSING SYSTEMS—
OPEN SYSTEMS INTERCONNECTION—CONNECTION ORIENTED TRANSPORT PROTOCOL SPECIFICATION (ISO 8073)

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AUSTRALIAN STANDARD

INFORMATION PROCESSING SYSTEMS – OPEN SYSTEMS INTERCONNECTION – CONNECTION ORIENTED TRANSPORT PROTOCOL SPECIFICATION (ISO 8073)

AS 2912—1986

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PREFACE

This standard was prepared by the Association's Committee on Information Processing Systems. It is identical with and has been reproduced from International Standard ISO 8073—1986; drawn up by ISO TC 97, Information Processing Systems.

This standard defines five classes of procedures which are for the connection-oriented transfer of data and control information from one transport entity to a peer transport entity, the means of negotiating the class of procedures to be used by the transport entities, and the structure and encoding of the transport protocol data units used for the transfer of data and control information.

The procedures are defined in terms of the interactions between—

(a) peer transport entities (through the exchange of transport protocol data units);

(b) a transport entity and the transport service user in the same system (through the exchange of transport service primitives); and

(c) a transport entity and the network service provider (through the exchange of network service primitives).

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

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

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

(b) *Cross-references.* The references to International Standards should be replaced by references to Australian Standards as follows:

Reference to International Standard	*Appropriate Australian Standard*
ISO 7498, Information processing systems—Open systems interconnection—Basic reference model	AS 2777, Information processing systems—Open systems interconnection—Basic reference model
ISO 8072, Information processing systems—Open systems interconnection—Transport service definition	AS 2911, Information processing systems—Open systems interconnection—Transport service definition (ISO 8072)
ISO 8348, Information processing systems—Data communications—Network service definition	AS YYYY, Information processing systems—Data communications—Network service definition (ISO 8348)*

* In course of preparation.

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Contents

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Information processing systems — Open Systems Interconnection — Connection oriented transport protocol specification

0 Introduction

This International Standard is one of a set of International Standards produced to facilitate the interconnection of information processing systems. This set of International Standards covers the services and protocols required to achieve such interconnection.

The Transport Protocol Standard is positioned with respect to other related International Standards by the layers defined in the Reference Model for Open Systems Interconnection (ISO 7498). It is most closely related to, and lies within the field of application of the Transport Service Standard (ISO 8072). It also uses and makes reference to the Network Service Standard (ISO 8348), whose provisions it assumes in order to accomplish the transport protocol's aims. The interrelationship of these International Standards is illustrated in figure 1.

This International Standard specifies a common encoding and a number of classes of transport protocol procedures to be used with different network qualities of service.

It is intended that the Transport Protocol should be simple but general enough to cater for the total range of Network Service qualities possible, without restricting future extensions.

The protocol is structured to give rise to classes of protocol which are designed to minimize possible incompatibilities and implementation costs.

The classes are selectable with respect to the Transport and Network Services in providing the required quality of service for the interconnection of two session entities (each class provides a different set of functions for enhancement of service qualities).

This International Standard defines mechanisms that can be used to optimize network tariffs and enhance the following qualities of service :

a) different throughput rates;

b) different error rates;

c) integrity of data requirements;

d) reliability requirements.

It does not require an implementation to use all of these mechanisms, nor does it define methods for measuring achieved quality of service or criteria for deciding when to release transport connections following quality of service degradation.

The primary aim of this International Standard is to provide a set of rules for communication expressed in terms of the procedures to be carried out by peer entities at the time of communication. These rules for communication are intended to provide a sound basis for development in order to serve a variety of purposes. i.e. :

a) as a guide for implementors and designers;

b) for use in the testing and procurement of equipment;

c) as part of an agreement for the admittance of systems into the open systems environment;

d) as a refinement of the understanding of OSI.

As it is expected that the initial users of this International Standard will be designers and implementors of equipment this International Standard contains, in notes or in annexes, guidance on the implementation of the procedures defined herein.

It should be noted that, as the number of valid protocol sequences is very large, it is not possible with current technology to verify that an implementation will operate the

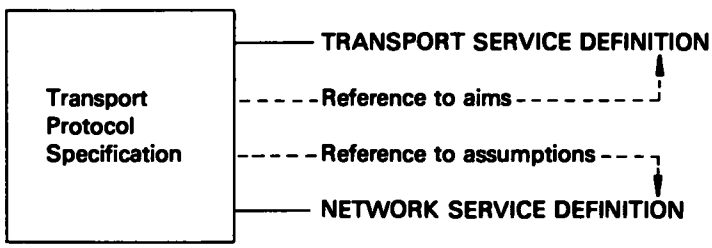

Figure 1 — Relationship between the Transport Protocol and adjacent services

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