

Australian/New Zealand Standard™

**Information and documentation—Open
Systems Interconnection—Interlibrary
Loan Application Service Definition**



AS/NZS ISO 10160:2015

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research. It was approved on behalf of the Council of Standards Australia on 26 August 2015 and on behalf of the Council of Standards New Zealand on 21 August 2015.
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Australian/New Zealand Standard™

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Systems Interconnection—Interlibrary
Loan Application Service Definition**

Originated in Australia as AS 4196—1994.
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and documentation—Open Systems Interconnection—Interlibrary loan application service definition, to supersede AS/NZS 4196:1999, *Information and documentation—Open Systems Interconnection—Interlibrary loan application service definition*.

The objective of this Standard is to define the services for Interlibrary Loans. These services are provided by the use of the ILL protocol in conjunction with the supporting telecommunications service which might be a store-and-forward messaging service, such as that provided by the MOTIS Standard, ISO/IEC 10021-4; or a direct connection-mode service using ISO 8822 and ISO 8649.

This Standard is identical with, and has been reproduced from ISO 10160:2015, *Information and documentation—Open Systems Interconnection—Interlibrary Loan Application Service Definition*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this International Standard’ should read ‘Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

The term ‘informative’ has been used in this Standard to define the application of the annexes to which it applies. An ‘informative’ annex is only for information and guidance.

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INTRODUCTION

The purpose of the Interlibrary Loan (ILL) standard is to provide a set of Application Layer services which can be used by libraries to perform loan-related activities in an Open Systems Interconnection (OSI) environment, as defined by ISO 7498.

The goal of Opens Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of information processing systems:

- from different manufacturers;
- under different managements;
- of different levels of complexity; and
- of different technologies.

The ILL service provides capabilities to request the loan of returnable bibliographic items, such as books, or to request non-returnable items, such as photocopies of journal articles. Related procedures, such as loan renewal, item recall, overdue notification, etc. are also supported by this service.

The purpose of the service definition is to define the communications aspects of ILL processing in terms of a set of services provided to a user by an application-service-element (ASE). Performing an ILL-transaction involves a user invoking the services in the prescribed order.

The focus of ILL activity is the bibliographic item, which may be a book, periodical, journal article, microform, etc. The ILL application is concerned with procedures relating to the loan of these items between libraries or to the interchange of copies thereof.

This service definition strives to satisfy a number of objectives, including:

- Control of ILL-transactions. The services must provide a means of controlling the ILL-transaction in terms of constraining allowable actions, exchanging information, tracking a borrowed item, and synchronizing the activity of the two or more sites involved in the ILL-transaction.
- Interworking of various systems. The ILL activity will continue to be performed using a combination of manual and automated systems. The ILL service and protocol must recognize this fact and allow systems with varying degrees of automation to be able to interwork, i.e. communicate with each other in a meaningful way.
- Minimizing the costs of ILL-transactions. The costs associated with an ILL-transaction include both operator costs and communications costs. An ILL protocol should attempt to minimize the costs incurred by implementations conforming to the protocol. This can be done by minimizing the operator intervention required by the protocol implementation, and by minimizing the number of messages sent between the sites involved in an ILL-transaction.
- Reflection of current ILL practices. The purpose of defining a protocol is not to introduce a new method for performing an ILL-transaction, but rather to formalize current practices in a way that allows existing systems to communicate with each other in a standardized way, as well as to allow newer automated systems to take full advantage of the protocol's potential. However, it is recognized that this International Standard may not be universally applicable to all existing ILL systems without some modification, due to the wide variation in their capabilities.

There is an inherent trade off in any attempt to reconcile these divergent objectives. For example, minimizing ILL-transaction costs may result in some loss of control over the ILL-transaction. Reducing the number of messages sent lowers the telecommunications cost and also lowers the operator costs as there is less need for the operator to initiate and control the communications operations. However, by reducing the total number of messages, some level of information regarding the ILL-transaction is lost as is the co-ordination between the requesting and responding libraries. By reducing the total number of stages through which an ILL-transaction must go (i.e. states), the operator interface of an automated system can be made simpler, with an associated reduction in requisite demands on the operator.

The approach taken in this International Standard is to set the mandatory requirements that all open systems must support in order to achieve an acceptable degree of coordination between automated parties to an ILL-transaction. Additional optional features are defined which allow implementors to achieve a greater degree of control if it is desired.

NOTE The mandatory requirements of this International Standard might however exceed the capabilities and/or needs of some existing manual or semi-automated ILL systems.

This International Standard is one of a number of related standards supporting the interconnection of library systems. These standards can be used by themselves or in a cooperative manner to support library applications requiring a mixture of communications services. For example, ISO 10163, which supports remote access to bibliographic databases, could be used in conjunction with the ILL protocol to obtain item identification information. The control and management of interactions among such bibliographic applications are outside the scope of this International Standard.

Security and accounting issues as they relate to ILL operations are for further study.

AUSTRALIAN/NEW ZEALAND STANDARD

**Information and documentation—Open Systems Interconnection—
Interlibrary Loan Application Service Definition****1 Scope**

This International Standard is an Application Layer standard within the Open Systems Interconnection framework defined by ISO 7498.

This International Standard defines the services for Interlibrary Loan. These services are provided by the use of the ILL protocol in conjunction with the supporting telecommunications service which might be a store-and-forward messaging service, such as that provided by the MOTIS Standard, ISO/IEC 10021-4; or a direct connection-mode service using ISO 8822 and ISO 8649.

This International Standard does not specify individual implementations or products, nor does it constrain the implementation of entities and interfaces within a computer system. Computer systems might range from stand-alone workstations to mainframes.

This International Standard is intended for use by libraries, information utilities such as union catalogue centres, and any other system which processes bibliographic information. These systems might participate in an interlibrary loan transaction in the role of requester (i.e. an initiator of ILL requests), responder (i.e. a provider of bibliographic material or information) and/or intermediary (i.e. an agent that acts on behalf of a requester to find suitable responders).

Various interworking topologies are supported, ranging from simple two-party interactions to multi-party interactions.

There is no requirement for conformance to this International Standard. Conformance is required only for the ILL protocol specification.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 10026-1, *Information technology — Open Systems Interconnection — Distributed Transaction Processing — Part 1: OSI TP Model*

3 Terms and definitions

For the purposes of this document, the following definitions apply.

3.1 Reference model definitions¹⁾**3.1.1****application-entry**

aspects of an application-process pertinent to OSI

1) This International Standard is based on the concepts developed in ISO 7498 (all parts) and makes use of the following terms found in it. These terms are replicated here as a convenience to the reader.