

Australian/New Zealand Standard™

**Information and documentation—Open
Systems Interconnection—Interlibrary
Loan Application Protocol Specification**

Part 1: Protocol specification



AS/NZS ISO 10161.1:2015

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 10 July 2015 and on behalf of the Council of Standards New Zealand on 8 July 2015.
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research, to supersede AS/NZS 4197.1:1999, *Information and documentation—Open Systems Interconnection—Interlibrary loan application protocol specification, Part 1: Protocol specification*.

The objective of this Standard is to provide libraries, information utilities such as union catalogue centres, and any other system which processes bibliographic information with a protocol specification for interlibrary loan communications.

This Standard is identical with, and has been reproduced from, ISO 10161-1:2014, *Information and documentation—Open Systems Interconnection—Interlibrary Loan Application Protocol Specification, Part 1: Protocol specification*.

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

- (a) In the source text ‘this part of ISO 10161’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
ISO		AS	
646	Information technology—ISO 7-bit coded character set for information interchange	1776	Information processing—7-bit coded character set for information interchange
		AS/NZS	
2108	Information and documentation—International Standard Book Number (ISBN)	1519	Information and documentation—International Standard Book Number (ISBN)
		AS ISO	
8601	Data elements and interchange formats—Information interchange—Representation of dates and times	8601	Data elements and interchange formats—Information interchange—Representation of dates and times
9735	Electronic data interchange for administration, commerce and transport (EDIFACT)—Application level syntax rules	9735	Electronic data interchange for administration, commerce and transport (EDIFACT)—Application level syntax rules (Syntax version number: 4, Syntax release number: 1)
		9735.1	Part 1: Syntax rules common to all parts

Only normative references that have been adopted as Australian or Australian/New Zealand Standard have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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INTRODUCTION

This part of ISO 10161 is one of a set of International Standards produced to facilitate the interconnection of computer systems. It is related to other international standards in the set as defined by the Reference Model for Open Systems Interconnection (ISO/IEC 7498). The Reference Model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size.

The aim of Open Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of computer systems

- a) from different manufacturers,
- b) under different managements,
- c) of different levels of complexity, and
- d) of different ages.

This part of ISO 10161 provides a protocol specification for Interlibrary Loan (ILL) communication. The ILL Protocol operates in the Application Layer and allows the parties involved in an ILL-transaction to progress through the ILL-transaction in an orderly and defined way.

The ILL Protocol has been designed to support the ILL services defined in ISO 10160, the ILL Application Service Definition, which generally requires invocation of external delivery services to fulfill an ILL request. The ILL Protocol carries information that permits both automatic and operator-mediated invocation of external delivery services.

This part of ISO 10161 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 23950, 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 local matters that are outside the scope of this International Standard.

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

The specification technique used in this part of ISO 10161 is consistent with techniques used in defining other OSI Protocols. Within most of this document, the technique is self-explanatory. The Abstract Syntax of the ILL Application Protocol Data Units (APDUs) is defined by means of the ASN.1 specification technique specified in ISO 8824.

This part of ISO 10161 contains seven annexes. [Annexes A to D](#) are normative. [Annex A](#) specifies the state tables for the ILL Protocol. [Annex B](#) specifies the encoding rules for generating a transfer syntax compatible with EDIFACT as defined in ISO 9735. [Annex C](#) specifies the object identifiers assigned in this standard and registration requirements. [Annex D](#) defines the registration procedures for ILL EXTERNAL data type definitions. [Annex E](#) is an example of an ILL EXTERNAL data type registry entry. [Annex F](#) describes the possible mappings of this protocol onto supporting services. [Annex G](#) describes possible methods of using a document delivery protocol in conjunction with the ILL Protocol.

AUSTRALIAN/NEW ZEALAND STANDARD

**Information and documentation—Open Systems Interconnection—
Interlibrary Loan Application Protocol Specification****Part 1:
Protocol specification****1 Scope**

This part of ISO 10161 defines the protocol for an ILL application-service-element (ASE). It specifies the behaviour which must be exhibited by a system in order to take part in the provision of the ISO interlibrary loan service.

It provides a formal statement of the rules of behaviour of each of the two or more entities participating in an ILL transaction. It specifies

- a) the actions to be taken on receiving request service primitives issued by an ILL service-user,
- b) the actions to be taken on receiving application-protocol-data-units (APDUs), and
- c) the actions to be taken as a result of events within the local system.

It provides a specification (in [Clause 9](#)) of the abstract syntax required to convey the ILL Protocol APDUs.

It states the conformance requirements to be met by implementors of this protocol (in [Clause 10](#)).

The scope of the ILL Protocol is restricted to the interconnection of systems; it does not specify or restrict the possible implementation of interfaces within a computer system. Computer systems can range from stand-alone workstations to mainframes.

This part of ISO 10161 is intended for use by libraries, information utilities such as union catalogue centres, and any other system which processes bibliographic information. These systems can 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.

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 646¹⁾, *Information processing — ISO 7-bit coded character set for information interchange*

ISO 2108:2005, *Information and documentation — International standard book number (ISBN)*

ISO 3297:2007, *Information and documentation — International standard serial number (ISSN)*

1) ISO/IEC 646:1991 supersedes ISO 646:1983. However, when this part of ISO 10161 was under development, the previous edition was valid and this part of ISO 10161 is therefore based on that edition.