

**SLOVENSKI
PREDSTANDARD**

oSIST ISO 10161-1:2005

september 2005

Information and documentation - Open Systems Interconnection - Interlibrary Loan
Application Protocol Specification - Part 1: Protocol specification

ICS 01.140.20; 35.240.30

Referenčna številka
oSIST ISO 10161-1:2005(en)

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

*Information et documentation — Interconnexion de systèmes ouverts
(OSI) — Spécification du protocole d'application pour les prêts entre
bibliothèques —*

Partie 1: Spécification du protocole



Contents

1 SCOPE 1

2 NORMATIVE REFERENCES 1

3 DEFINITIONS 2

3.1 REFERENCE MODEL DEFINITIONS 2

3.2 ABSTRACT SYNTAX NOTATION ONE DEFINITIONS 3

3.3 PRESENTATION SERVICE DEFINITION 3

3.4 APPLICATION LAYER STRUCTURE DEFINITIONS 3

3.5 SERVICE CONVENTION DEFINITIONS 3

3.6 ILL DEFINITIONS 4

4 ABBREVIATIONS 9

5 OVERVIEW OF THE PROTOCOL 10

5.1 SERVICE PROVISION 10

5.2 SUPPORTING SERVICES ASSUMED 10

5.3 MODEL 10

6 ILL APDUS 11

7 TRANSACTION INFORMATION 11

7.1 TRANSACTION IDENTIFICATION 12

7.2 PROTOCOL STATES 13

7.2.1 Requester States 13

7.2.2 Responder States 13

7.2.3 Terminal States 13

7.2.4 Intermediary States 14

7.3 PROTOCOL VARIABLES 14

7.4 EXPIRY TIMER 15

7.5 REQUEST INFORMATION 15

7.5.1 System-id 15

7.6 HISTORY INFORMATION 15

8 ELEMENTS OF PROCEDURE 16

8.1 EVENTS AND ACTIONS 16

8.1.1 Requester Events 16

8.1.2 Requester Actions 17

8.1.3 Responder Events 18

8.1.4 Responder Actions 19

8.1.5 Intermediary Events and Actions 20

8.2 PROCEDURAL RULES FOR ALL PARTIES 20

8.2.1 Sending and Receiving APDUs 20

8.2.2 Transaction Phases 20

8.2.3 Optional Messages 20

8.2.4 Send-to-list 21

8.2.5 Already-tried-list 21

8.2.6 Control of Renewals 22

8.2.7 APDU Sequence Validation 22

8.2.8 Repeated APDUs 22

8.2.9 Retries 23

8.2.10 Transaction Expiry 23

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

8.2.11	Transaction Cancellation	24
8.2.12	Lifetime of ILL-Transaction Information	24
8.2.13	Protocol Errors.....	24
8.2.14	Rules for Extensibility	24
8.2.15	Responder-specific Information.....	24
8.2.16	Account-number Information.....	25
8.2.17	Supplemental-item-description	25
8.2.18	Send Message	25
8.3	PROCEDURAL RULES FOR INTERMEDIARIES	25
8.3.1	Transaction Forwarding.....	25
8.3.2	Transaction Chaining.....	25
8.3.3	Transaction Partitioning.....	26
8.3.4	Mixed Forwarding, Chaining and Partitioning.....	27
9	ABSTRACT SYNTAX	28
9.1	ASN.1 SPECIFICATION OF ILL APDUS	28
9.1.1	ILL APDUs.....	29
9.1.2	Types	36
10	CONFORMANCE.....	48
10.1	STATIC CONFORMANCE.....	48
10.2	DYNAMIC CONFORMANCE	48
10.3	PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT REQUIREMENTS.....	49
Annexes		
A	ILL STATE TABLES.....	50
B	TRANSFER SYNTAX.....	79
C	OBJECT IDENTIFIERS ASSIGNED IN THIS PART OF ISO 10161 AND REGISTRATION REQUIREMENTS	102
D	REGISTRATION PROCEDURES FOR ILL EXTERNAL DATA TYPE DEFINITIONS	103
E	EXAMPLE OF ILL EXTERNAL DATA TYPE DEFINITION REGISTER ENTRY	105
F	USE OF SUPPORTING SERVICES	106
G	INVOCATION OF EXTERNAL DOCUMENT DELIVERY SERVICES	108
H	BIBLIOGRAPHY	109

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10161-1 was prepared by Technical Committee ISO/TC 46, *Information and Documentation*, Subcommittee SC 4, *Computer applications in information and documentation*.

This second edition cancels and replaces the first edition (ISO 10161-1:1993), which has been technically revised. It includes amendments specified in ISO 10161, DAM 1 and the corrections specified in Defect Reports 1-23.

ISO 10161 consists of the following parts, under the general title *Information and documentation — Open Systems Interconnection — Interlibrary Loan Application Protocol Specification*:

- *Part 1: Protocol specification*
- *Part 2: Protocol implementation conformance statement (PICS) proforma*

Annexes A to D form an integral part of this part of ISO 10161. Annexes E to H are for information only.

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 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,
- 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/IEC 8824.

This part of ISO 10161 contains eight 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 part of ISO 10161 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. Annex H is a bibliography.

This page intentionally left blank