
**Information technology — Open Systems
Interconnection — Remote Operations:
Protocol Implementation Conformance
Statement (PICS) proforma**

*Technologies de l'information — Interconnexion de systèmes ouverts
(OSI) — Opérations distantes: Formulaire de déclaration de conformité de
mise en œuvre du protocole (PICS)*

Contents

	<i>Page</i>
1 Scope	1
2 Normative references	1
2.1 Identical Recommendations International Standards	1
2.2 Paired Recommendations International Standards equivalent in technical content	1
2.3 Additional references	2
3 Definitions	2
4 Abbreviations	2
5 Conformance	2
Annex A – PICS proforma for the remote operations protocol	3
A.1 Identification of PICS proforma corrigenda	3
A.2 Instructions	3
A.2.1 Purpose and structure of the proforma	3
A.2.2 Symbols, terms and abbreviations	3
A.2.2.1 Introduction	3
A.2.2.2 Prerequisite notation	4
A.2.2.3 Item numbering	4
A.2.2.4 Status column	4
A.2.2.5 Support column	5
A.2.2.6 Definition of support	5
A.2.2.7 Predicate definitions	5
A.2.2.8 Range of values columns	5
A.2.2.9 Abbreviations	5
A.2.3 Instructions for completion	6
A.3 Identification of the implementation	6
A.3.1 Date of statement	6
A.3.2 Identification of the implementation and/or system	6
A.3.3 Identification of the system supplier and/or test laboratory client	6
A.4 Protocol identification	7
A.4.1 CCITT Rec. X.229 ISO/IEC 9072-2 protocol specification and amendments implemented	7
A.4.2 CCITT Rec. X.229 ISO/IEC 9072-2 technical corrigenda implemented	7
A.5 Global statement of conformance	7
A.6 Capabilities and options	7
A.6.1 Application entity requirements	7
A.6.2 Supported ROSE APDUs on origination	8
A.6.3 Supported ROSE APDUs on reception	8
A.6.4 ROIV (origination)	8
A.6.5 ROIV (reception)	8
A.6.6 RORS (origination)	9
A.6.7 RORS (reception)	9

© ISO/IEC 1996

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.

ISO/IEC Copyright Office • Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

A.6.8	ROER (origination).....	9
A.6.9	ROER (reception)	9
A.6.10	RORJ (origination).....	10
A.6.11	RORJ (reception)	10
A.6.12	General problem.....	10
A.6.13	Invoke problem	11
A.6.14	ReturnResult problem	11
A.6.15	ReturnError problem.....	11
A.6.16	Other information.....	12
A.7	Multi-layer dependencies	12
A.7.1	Upper layers	12
A.7.2	Lower layers.....	12

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 9072-3 was prepared by ITU-T (as CCITT Rec. X.249) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC. The identical text is published as ITU-T Recommendation X.249.

ISO/IEC 9072 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Remote Operations*:

- *Part 1: Model, notation and service definition*
- *Part 2: Protocol specification*
- *Part 3: Protocol Implementation Conformance Statement (PICS) proforma*

Annex A forms an integral part of this part of ISO/IEC 9072.

Introduction

This Recommendation | International Standard is one of a set of Recommendations | International Standards produced to facilitate the interconnection of information processing systems. It is related to other Recommendations and International Standards in the set as defined by the Reference Model for Open Systems Interconnection (see ITU-T Rec. X.200 | ISO/IEC 7498-1). The Reference Model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size.

The goal of Open 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 Remote Operations Service Element (ROSE) is an application-service-element commonly used by a number of applications. ROSE supports interactive applications in a distributed open systems environment. A Remote Operation is requested by one entity; the other entity attempts to perform the Remote Operation and then reports the outcome of the attempt.

To evaluate the conformance of a particular implementation, it is necessary to have a description of the capabilities and options which have been implemented. Such a description is called a Protocol Implementation Conformance Statement (PICS).

This Recommendation | International Standard includes the PICS proforma for the remote operations protocol as defined in CCITT Rec. X.229 (1988) | ISO/IEC 9072-2:1989.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
REMOTE OPERATIONS: PROTOCOL IMPLEMENTATION
CONFORMANCE STATEMENT (PICS) PROFORMA**

1 Scope

This Recommendation | International Standard provides the Protocol Implementation Conformance Statement (PICS) proforma for the Remote Operations protocol specified in the CCITT Rec. X.229 (1988) | ISO/IEC 9072-2:1989. This PICS proforma is in compliance with the relevant requirements, and in accordance with the relevant guidance given in ITU-T Rec. X.296 | ISO/IEC 9646-7. Detail of the use of this proforma is provided in this Recommendation | International Standard.

The supplier of an implementation which is claimed to conform to CCITT Rec. X.229 | ISO/IEC 9072-2 is required to complete a copy of the PICS proforma provided in Annex A, and is required to provide the information necessary to identify both the supplier and the implementation.

2 Normative references

The following Recommendations | International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and the parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation X.200 (1994) | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*.
- ITU-T Recommendation X.581 (1995) | ISO/IEC 14608-1:1996, *Information technology – Open Systems Interconnection – The Directory: Directory access protocol – Protocol Implementation Conformance Statement (PICS) proforma*.

2.2 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.219 (1988), *Remote operations: Model, notation and service definition*.
ISO/IEC 9072-1:1989, *Information processing systems – Text communication – Remote Operations – Part 1: Model, notation and service definition*.
- CCITT Recommendation X.229 (1988), *Remote operations: Protocol specification*.
ISO/IEC 9072-2:1989, *Information processing systems – Text communication – Remote Operations – Part 2: Protocol specification*.
- ITU-T Recommendation X.290 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – General concepts*.
ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts*.

- ITU-T Recommendation X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.*

ISO/IEC 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation Conformance Statements.*

2.3 Additional references

- CCITT Recommendation X.483 (1996), *Messaging handling systems – P3 Protocol PICS proforma.*
- CCITT Recommendation X.484 (1996), *Messaging handling systems – P7 Protocol PICS proforma.*