
**Information technology — Open Systems
Interconnection — Application Context for
Systems Management with Transaction
Processing**

*Technologies de l'information — Interconnexion de systèmes ouverts (OSI) —
Contexte d'application pour la gestion-systèmes avec traitement transactionnel*

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 Abbreviations	2
4 Application context name.....	3
5 Component ASEs and ASOs.....	3
5.1 ACSE	3
5.2 ROSE	4
5.3 CMISE	4
5.4 SMASE	4
5.5 TPASE	4
5.6 CCR	4
6 Persistent application context rules	5
7 Control function (SACF/MACF) rules	5
7.1 Objectives/summary	5
7.2 Temporal ordering rules.....	5
7.3 Concatenation rules.....	6
7.4 References to base standard rules	6
7.5 Other rules.....	6
8 Optional features	6
9 Error handling	6
10 Conformance.....	6
Annex A – Commentaries	8
Annex B – Scenarios	10
B.1 Example use of Handshake and Shared Control functional units	10
B.2 Example use of Commit functional unit for provider-supported transactions	10
B.3 Another example use of Commit functional unit for provider-supported transactions.....	10

© 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

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 11587 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 21, *Open systems interconnection, data management and open distributed processing*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.702.

Annexes A and B of this International Standard are for information only.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – APPLICATION CONTEXT FOR SYSTEMS MANAGEMENT WITH TRANSACTION PROCESSING

1 Scope

The application context, defined in this Recommendation | International Standard, is available for an association in the systems management environment. The application context provides a basic Systems Management context with TP and may be part of a family of contexts as additional requirements are defined for systems management.

The application context, defined in this Recommendation | International Standard, satisfies the following requirements:

- support for grouping CMIS requests so that consistency constraints can be satisfied by coordinated changes that, if done individually, would not satisfy the constraints, without requiring provisions for rollback or recovery; and
- support for atomic synchronization of a set of CMIS requests with provisions for commitment, rollback, and recovery so that either all the CMIS requests are satisfactorily performed or none are performed.

2 Normative references

The following Recommendations and 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 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 currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation X.207 (1993) | ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application Layer structure*.
- CCITT Recommendation X.701 (1992) | ISO/IEC 10040:1992, *Information technology – Open Systems Interconnection – Systems management overview*.

NOTE – The Systems management overview defines a systems management application context which is adequate when only SMASE and CMISE facilities are needed.

- ITU-T Recommendation X.851 (1993) | ISO/IEC 9804:1994, *Information technology – Open Systems Interconnection – Service definition for the commitment, concurrency and recovery service element*.
- ITU-T Recommendation X.852 (1993) | ISO/IEC 9805-1:1994, *Information technology – Open Systems Interconnection – Protocol for the commitment, concurrency and recovery service element: Protocol specification*.

2.2 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.208 (1988), *Specification of Abstract Syntax Notation One (ASN.1)*.
ISO/IEC 8824:1990, *Information technology – Open Systems Interconnection – Specification of Abstract Syntax Notation One (ASN.1)*.
- CCITT Recommendation X.209 (1988), *Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)*.

- ISO/IEC 8825:1990, *Information technology – Open Systems Interconnection – Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.
- CCITT Recommendation X.217 (1992), *Service definition for the Association Control Service Element*.
ISO 8649:1988, *Information processing systems – Open Systems Interconnection – Service Definition for the Association Control Service Element*.
 - 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.227 (1992), *Association Control Protocol Specification for Open Systems Interconnection for CCITT Applications*.
ISO 8650:1988, *Information processing systems – Open Systems Interconnection – Protocol specification for the Association Control Service Element*.
 - 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*.
 - CCITT Recommendation X.710 (1991), *Common management information service definition for CCITT applications*.
ISO/IEC 9595:1991, *Information technology – Open Systems Interconnection – Common management information service definition*.
 - CCITT Recommendation X.711 (1991), *Common management information protocol specification for CCITT applications*.
ISO/IEC 9596-1:1991, *Information technology – Open Systems Interconnection – Common management information protocol – Part 1: Specification*.
 - CCITT Recommendation X.860 (1992), *Open Systems Interconnection – Distributed Transaction Processing: Model*.
ISO/IEC 10026-1:1992, *Information technology – Open Systems Interconnection – Distributed Transaction Processing – Part 1: OSI TP Model*.
 - CCITT Recommendation X.861 (1992), *Open Systems Interconnection – Distributed Transaction Processing: Service definition*.
ISO/IEC 10026-2:1992, *Information technology – Open Systems Interconnection – Distributed Transaction Processing – Part 2: OSI TP Service*.
 - ITU-T Recommendation X.862 (1993), *Open Systems Interconnection – Distributed Transaction Processing: Protocol specification*.
ISO/IEC 10026-3:1992, *Information technology – Open Systems Interconnection – Distributed Transaction Processing – Part 3: Protocol specification*.

2.3 Additional references

- ISO/IEC 10026-5:…¹⁾, *Information technology – Open Systems Interconnection – Distributed Transaction Processing – Part 5: Application context proforma and guidelines when using OSI TP*.

¹⁾ To be published.