

Australian/New Zealand Standard™

**Information technology—Open  
distributed processing—Naming  
framework**

### **AS/NZS ISO/IEC 14771:2003**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-015, Software Engineering. It was approved on behalf of the Council of Standards Australia on 1 May 2003 and on behalf of the Council of Standards New Zealand on 22 April 2003. It was published on 4 June 2003.

---

The following are represented on Committee IT-015:

Australian Computer Society  
Australian Information Industry Association  
Australian Society for Technical Communication (NSW)  
Australian Software Metrics Association  
Griffith University  
New Zealand Organisation for Quality  
Quality Society of Australasia  
Software Engineering Australia (Qld)  
Software Quality Association (ACT)  
Software Quality Association (NSW)  
Software Verification Research Centre  
Sydney SPIN Group (Software Process Improvement Network)  
Systems Engineering Society of Australia  
University of New South Wales  
University of South Australia  
University of Technology, Sydney

---

#### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

---

Australian/New Zealand Standard™

**Information technology—Open  
distributed processing—Naming  
framework**

First published as AS/NZS ISO/IEC 14771:2003.

**COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5274 8

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software Engineering.

This Standard is identical with, and has been reproduced from ISO/IEC 14771:1999, *Information technology—Open distributed processing—Naming framework*.

The objective of this Standard is to provide a general framework for the naming of entities of interest in ODP systems, which includes naming in the infrastructure of an ODP system, naming in the applications built on the infrastructure, and naming in the enterprise the system serves.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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

- (a) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (b) In the source text 'this International Standard' should read 'this Australian/New Zealand Standard'.
- (c) 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.

## CONTENTS

*Page*

1	Scope .....	1
2	Normative references.....	1
	2.1 Identical Recommendations   International Standards.....	1
3	Definitions .....	1
	3.1 Terms defined in other International Standards .....	2
4	Abbreviations .....	2
5	Overview of ODP naming .....	2
	5.1 Introduction .....	2
	5.2 Structure of naming contexts.....	3
	5.3 Processes involving names.....	5
6	Basic Naming Concepts.....	5
7	Name resolution model.....	7
	7.1 The name resolution step.....	7
	7.2 The complete name resolution process.....	8
8	Name communication.....	9
9	Name comparison .....	10
10	Federation .....	10
	10.1 Controlling the names exported – export contexts .....	10
	10.2 Uniform naming of federation partners – federation contexts .....	11
	10.3 Providing a uniform user view of federated naming .....	12
	10.4 Joining a federation .....	13
	10.5 Evolution and optimization .....	13
11	Compliance.....	14
	11.1 Basis for compliance .....	14
	11.2 Compliance requirements.....	15
	Annex A – Relationship with Related Naming Services and Frameworks.....	16
	A.1 Relationship with OMG Object Naming Service .....	16
	A.2 Relationship with X/Open Federated Naming API .....	16
	A.3 Relationship with OSI Naming and Addressing .....	17
	Annex B – Configuring name services .....	18
	B.1 Quality of name service concerns.....	18
	B.2 Distributing the name service.....	18
	B.3 Configuring name servers .....	19
	Annex C – Application of Naming .....	23
	Annex D – Bibliography.....	24
	Index .....	25



## AUSTRALIAN/NEW ZEALAND STANDARD

# INFORMATION TECHNOLOGY – OPEN DISTRIBUTED PROCESSING – NAMING FRAMEWORK

## 1 Scope

This Recommendation | International Standard:

- defines a general framework for context-relative naming, refining and elaborating on the naming concepts defined in Part 2 of the ODP-RM;
- identifies and characterizes functions necessary to handle names in the context of a federation of different naming systems; and
- clarifies the relationship between the concepts of name management (i.e. federation and naming) in distributed computing systems.

It provides a general framework for the naming of entities of interest in ODP systems, which includes naming in the infrastructure of an ODP system, naming in the applications built on the infrastructure, and naming in the enterprise the system serves.

## 2 Normative references

The following ITU-T 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 Telecommunications Standards Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

### 2.1 Identical Recommendations | International Standards

- ITU-T Recommendations X.90x series | ISO/IEC 10746, *Open Distributed Processing*.
- ITU-T Recommendations X.500 series | ISO/IEC 9594 (all parts): *The Directory*.
- ITU-T Recommendation X.650 (1996) | ISO/IEC 7498-3:1997, *Information technology – Open Systems Interconnection – Basic reference model: Naming and addressing*.
- ITU-T Recommendation X.902 (1995) | ISO/IEC 10746-2:1996, *Information technology – Open Distributed Processing – Reference Model: Foundations*.
- ITU-T Recommendation X.903 (1995) | ISO/IEC 10746-3:1996, *Information technology – Open Distributed Processing – Reference Model: Architecture*.

## 3 Definitions

For the purposes of this Recommendation | International Standard, the following terms and definitions apply: