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# INTERNATIONAL STANDARD

# ISO/IEC 14771

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## Information technology — Open Distributed Processing — Naming framework

*Technologies de l'information — Traitement distribué ouvert — Cadre  
de dénomination*

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## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO/IEC 14771 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software engineering*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.910.

Annexes A to C of this International Standard are for information only.

## Introduction

Names and naming are central concepts for the design and construction of open distributed systems. Most existing systems are built upon the assumption of a naming scheme in which only one selected naming convention applies to all the entities of concern (a global naming scheme). This assumption proves unsatisfactory in the context of large, evolving, heterogeneous distributed systems, managed by different authorities. Therefore, ITU-T Recs. X.90x series | ISO/IEC 10746, the Reference Model for Open Distributed Processing (ODP-RM), defines names to be context-relative.

This Recommendation | International Standard expands on the naming concepts introduced in the ODP-RM. It provides a general framework for naming, giving concepts and procedures which support fully general context-relative naming. These concepts can be applied in any ODP viewpoint. They can be applied to any function which uses naming and is subject to distribution or federation.

**INTERNATIONAL STANDARD****ITU-T RECOMMENDATION****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*.