INTERNATIONAL STANDARD

ISO/IEC 9834-6

Second edition
2005-05-01

Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities: Registration of application processes and application entities

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Procédures pour le fonctionnement des autorités d'enregistrement OSI: Enregistrement des processus d'application (AP) et des entités d'application (AE)

Reference number
ISO/IEC 9834-6:2005(E)

© ISO/IEC 2005

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Not for Resale

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO/IEC 2005

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 either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS

© ISO/IEC 2005 — All rights reserved

Not for Resale

CONTENTS

		Page
1	Scope	1
2	Normative references	1
	2.1 Identical Recommendations | International Standards	1
	2.2 Additional references	1
3	Definitions	1
	3.1 OSI Reference Model terms	2
	3.2 Naming and addressing terms	2
	3.3 Application Layer Structure terms	2
	3.4 Registration-hierarchical-name-tree and object identifier tree terms	2
	3.5 Directory terms	2
	3.6 ASN.1 terms	2
4	Abbreviations	2
5	General considerations	3
	5.1 Introduction	3
	5.2 Requirements for registration authorities	3
6	Registration procedures	4
	6.1 AP registration procedures	4
	6.2 AE registration procedures	4
7	Minimum information requirements	4
8	Technical role	5
9	Maintenance procedures	5

© ISO/IEC 2003 – All rights reserved

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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 document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 9834-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems* in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.665.

This second edition cancels and replaces the first edition (ISO/IEC 9834-6:1993), which has been technically revised.

ISO/IEC 9834 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities:*

— *Part 1: General procedures and top arcs of the ASN.1 Object Identifier tree*

— *Part 2: Registration procedures for OSI document types*

— *Part 3: Registration of Object Identifier arcs beneath the top-level arc jointly administered by ISO and ITU-T*

— *Part 4: Register of VTE Profiles*

— *Part 5: Register of VT Control Object Definitions*

— *Part 6: Registration of application processes and application entities*

— *Part 7: Joint ISO and ITU-T Registration of International Organizations*

— *Part 8: Generation and registration of Universally Unique Identifiers (UUIDs) and their use as ASN.1 Object Identifier components*

--`,,`,`,-`-`,,`,,`,`,,`---

© ISO/IEC 2005 — All rights reserved
Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Introduction

This Recommendation | International Standard identifies an administrative role for Registration Authorities for application-process-titles and application-entity qualifiers, based on the procedures for the operation of OSI registration authorities contained in ITU-T Rec. X.660 | ISO/IEC 9834-1. No technical role is defined.

ITU-T Rec. X.650 | ISO/IEC 7498-3, 13.1, specifies the need to assign globally unambiguous names to application-processes and application-entities. The syntactic forms of these titles are specified in ITU-T Rec. X.227 | ISO/IEC 8650.

ITU-T Study Group 17 and ISO/IEC JTC 1/SC 6 are jointly responsible for the syntactic definition of application-processes and application-entities.

© ISO/IEC 2003 – All rights reserved

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities: Registration of application processes and application entities

1 Scope

This Recommendation | International Standard specifies the procedures applicable to the registration of application-processes and application-entities.

No requirement for an international registration authority has been identified; therefore these procedures apply to registration at any point in the ASN.1 object identifier tree.

This Recommendation | International Standard does not cover the registration of application-process types or application-entity types. No requirement for such registration has been identified.

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.200 (1994) | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The basic model*.
- ITU-T Recommendation X.207 (1993) | ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application layer structure*.
- ITU-T Recommendation X.227 (1995) | ISO/IEC 8650-1:1996, *Information technology – Open Systems Interconnection – Connection-oriented protocol for the Association Control Service Element: Protocol specification*.
- ITU-T Recommendation X.501 (2001) | ISO/IEC 9594-2:2001, *Information technology – Open Systems Interconnection – The Directory: Models*.
- 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.660 (2004) | ISO/IEC 9834-1:2004, *Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities: General procedures.*
- ITU-T Recommendation X.680 (2002) | ISO/IEC 8824-1:2002, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation.*

2.2 Additional references

- ISO/IEC 6523-1:1998, *Information technology – Structure for the identification of organizations and organization parts – Part 1: Identification of organization identification schemes.*
- ISO/IEC 6523-2:1998, *Information technology – Structure for the identification of organizations and organization parts – Part 2: Registration of organization identification schemes.*

3 Definitions

For the purposes of this Recommendation | International Standard, the following definitions apply.

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

3.1 OSI Reference Model terms

This Recommendation | International Standard uses the following terms defined in ITU-T Rec. X.200 | ISO/IEC 7498-1:

a) application-entity;

b) application-entity-type;

c) application-process;

d) Open Systems Interconnection environment.

3.2 Naming and addressing terms

This Recommendation | International Standard uses the following terms defined in ITU-T Rec. X.650 | ISO/IEC 7498-3:

a) application-entity-title;

b) application-process-title.

3.3 Application Layer Structure terms

This Recommendation | International Standard uses the following terms defined in ISO/IEC 9545:

a) application-entity-qualifier;

b) application-process-type.

3.4 Registration-hierarchical-name-tree and object identifier tree terms

This Recommendation | International Standard uses the following terms defined in ITU-T Rec. X.660 | ISO/IEC 9834-1:

a) International Registration Authority;

b) primary integer value;

c) registration;

d) Registration Authority;

e) registration-hierarchical-name (RH-name);

f) registration-hierarchical-name-tree (RH-name-tree);

g) sponsoring authority.

3.5 Directory terms

This Recommendation | International Standard uses the following terms defined in ITU-T Rec. X.501 | ISO/IEC 9594-2:

a) distinguished-name;

b) relative-distinguished-name.

3.6 ASN.1 terms

This Recommendation | International Standard uses the following term defined in ITU-T Rec. X.680 | ISO/IEC 8824-1:

– object identifier.

4 Abbreviations

For the purposes of this Recommendation | International Standard, the following abbreviations apply:

AE	Application-entity
AE-qualifier	Application-entity-qualifier
AE-title	Application-entity-title
AP	Application-process

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

AP-title	Application-process-title
ICD	International Code Designator (as defined in ISO/IEC 6523-1)
OSIE	Open Systems Interconnection Environment
RH-name	Registration Hierarchical name

5 General considerations

5.1 Introduction

5.1.1 ITU-T Rec. X.660 | ISO/IEC 9834-1 defines general procedures for registration that are independent of the object involved. It allows for other Recommendations | International Standards to define procedures that are specific to particular types of objects. This Recommendation | International Standard is concerned with the registration procedures for APs and AEs. All of the clauses of ITU-T Rec. X.660 | ISO/IEC 9834-1 apply to the specification of this Recommendation | International Standard with the exception of clause 7 (International Registration Authorities). ITU-T Rec. X.660 | ISO/IEC 9834-1, clause 7, does not apply because this Recommendation | International Standard does not address registration at the international level.

5.1.2 An AP is identified by an AP-title. An AP-title is a name that is unambiguous throughout the OSIE. The registration of an AP involves the assignment of an AP-title. The procedures defined herein enable the assignment of AP-titles that are unambiguous throughout the OSIE. An AP-title is an ASN.1 object identifier or a Directory Relative Distinguished Name.

5.1.3 Within an AP, an AE is identified by an AE-qualifier. An AE-qualifier is unambiguous within the scope of its AP. The registration of an AE involves the assignment of an AE-qualifier. The procedures defined herein enable the assignment of AE-qualifiers that are unambiguous within the scope of a particular AP. An AP-title is an ASN.1 object identifier or a Directory Relative Distinguished Name.

NOTE – Within the OSIE an AE is identified by an AE-title. An AE-title consists of an AP-title and an AE-qualifier. The registration of an AE does not involve the assignment of its AE-title. Annex A describes how an AE-title is formed from its constituent parts.

5.1.4 This Recommendation | International Standard contains no explicit provisions for the generation of AE-titles (see Annex A). However, an AE-title may be generated by the combination of an AP-title and an AE-qualifier, provided that these components have been assigned in accordance with the rules defined herein. An AE-title generated according to these rules is an instance of an RH-name.

5.1.5 The rules defined in this Recommendation | International Standard apply to registration authorities for (and within) countries and internationally recognized organizations (the latter are organizations which have been assigned an ICD). These rules describe an administrative role for such registration authorities.

NOTE 1 – No requirement has been identified either for a registration authority at the international level or for registration within International Standards.

NOTE 2 – The abstract syntaxes of AP-titles, AE-qualifiers and AE-titles are defined in ITU-T Rec. X.227 | ISO/IEC 8650-1. It defines two syntactic forms for each type of name: an object identifier form and a directory name form. The provisions of this Recommendation | International Standard are aligned with the definitions contained in ITU-T Rec. X.227 | ISO/IEC 8650-1.

5.2 Requirements for registration authorities

NOTE – This subclause describes general requirements applying to registration authorities that are responsible for the registration of either or both AP-titles and AE-qualifiers.

5.2.1 A registration authority which performs the registration of either or both AP-titles and AE-qualifiers in accordance with the procedures in this Recommendation | International Standard shall be either:

a) a member of a set of registration authorities that assign object identifiers in accordance with the provisions of ITU-T Rec. X.660 | ISO/IEC 9834-1 Annex A, and also a member of a set of registration authorities that assign directory names in accordance with the provisions of ITU-T Rec. X.660 | ISO/IEC 9834-1, Annex B; or

b) a member of a set of registration authorities that assign both object identifiers and directory names in accordance with the provisions of ITU-T Rec. X.660 | ISO/IEC 9834-1, Annex C.

5.2.2 A registration authority for the registration of an AP may also be responsible for the registration of AE-qualifiers of the AP; however, the latter responsibility may be delegated to subordinate registration authorities.

--`,,`,`,-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

6 Registration procedures

6.1 AP registration procedures

6.1.1 To register an AP, a registration authority shall assign both an object identifier form and a directory name form of AP-title. The applicant is given the assigned name forms. The registration authority places these names together with additional information as the AP register entry for this AP (see 7.1). This Recommendation | International Standard does not place any requirement on the applicant or the registration authority for propagating or notifying the existence of the register entry.

6.1.2 A registration authority shall assign the object identifier form of AP-titles in accordance with the following rules:

a) the general provisions for the management of an RH-name-tree which are defined in ITU-T Rec. X.660 | ISO/IEC 9834-1;

b) the specific provisions for the assignment of object identifiers corresponding to an RH-name-tree which are defined in ITU-T Rec. X.660 | ISO/IEC 9834-1, Annex A.

NOTE – A registration authority shall assign one (or more) object identifier components which, in combination with object identifier components assigned by superior registration authorities, form the object identifier component list for an AP-title.

6.1.3 A registration authority shall assign the directory name form of AP-titles in accordance with the following rules:

a) the general provisions for the management of an RH-name-tree which are defined in ITU-T Rec. X.660 | ISO/IEC 9834-1;

b) the specific provisions for the assignment of directory names corresponding to an RH-name-tree which are defined in ITU-T Rec. X.660 | ISO/IEC 9834-1, Annex B.

NOTE – A registration authority shall assign a relative distinguished name which, in combination with the set of relative distinguished names assigned by superior registration authorities, forms a directory name for an AP-title.

6.2 AE registration procedures

6.2.1 To register an AE, the AP that contains the AE must previously have been registered.

6.2.2 The AE registration authority shall assign both an object identifier component and a relative distinguished name form of AE-qualifier. The applicant is given the assigned name forms. The registration authority places these names together with the previously registered AP-title and additional information as the AE register entry for this AE (see 7.2). This Recommendation | International Standard does not place any requirement on the applicant or the registration authority for propagating or notifying the existence of the register entry.

6.2.3 A registration authority shall assign an object identifier component for an AE-qualifier by assigning a primary integer value, unambiguous within the scope of the associated application process: this primary integer value constitutes the object identifier component.

6.2.4 A registration authority shall assign a relative distinguished name form for an AE-qualifier, unambiguous within the scope of the associated application process.

7 Minimum information requirements

7.1 The following information is required for the registration of an application-process:

a) object identifier assigned to the application-process, as in clause 6;

NOTE – This is the AP-title.

b) name of applicant;

c) date of registration;

d) references to documentation of the application-process;

e) optionally, cross references to supporting AEs.

7.2 The following information is required for the registration of an application-entity:

a) AP-title, as in 7.1, for the AP to which the AE-qualifier applies;

b) qualifier assigned to the AE, as in clause 6;

NOTE – The AE-title is constructed from these two elements as specified in Annex A.

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

c) name of applicant;

d) date of registration;

e) references to documentation of the AE.

NOTE – The items in 7.1 and 7.2 express the logical requirements separately for clarity. The format of any actual register entry will be defined by the responsible registration authority. Registration authorities may create entries which combine the AP entry with those of all related AEs.

8 Technical role

No technical role is defined.

9 Maintenance procedures

No maintenance procedures have been identified at the international level.

NOTE – Such procedures will be included in the administrative arrangements required locally at or below the level of country or ICD nodes. Since globally unique identifiers may not be re-assigned, even when the associated entity becomes unused, the requirement for maintenance will be limited. Some examples of updating may be cross references between APs and new or discontinued AEs.

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Annex A

AE-title generation

(This annex does not form an integral part of this Recommendation | International Standard)

A.1 This Recommendation | International Standard contains no explicit provisions for assignment of AE-titles. An AE-title is generated by the combination of an AP-title and an AE-qualifier, provided that both of these components have been assigned in accordance with the procedures defined herein.

A.2 An object identifier form of AE-title may be constructed by appending the object identifier component form of AE-qualifier (an integer) to the sequence of object identifier components that comprise the object identifier of the associated AP-title. This extended sequence of object identifier components forms the object identifier component list of an object identifier for the AE-title.

A.3 A directory name form of AE-title may be constructed by appending the relative distinguished name form of AE-qualifier to the directory name of the associated AP-title.

A.4 For both forms, an AE-title can be decomposed into its AP-title and AE-qualifier. The final component of an AE-title is equal to the AE-qualifier; the remaining components of the AE-title form the AP-title.

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

ICS 35.100.01

Price based on 6 pages

--`,,`,`,-`-`,,`,,`,`,,`---

© ISO/IEC 2005 – All rights reserved
Copyright International Organization for Standardization
Reproduced by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Not for Resale