INTERNATIONAL STANDARD

ISO/IEC 9834-6

First edition
1993-11-01

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

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

Contents

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ISO/IEC 9834-6:1993
https://standards.iteh.ai/catalog/standards/sist/3386221c-62f3-4093-9654-
1f48f192a7ec/iso-iec-9834-6-1993

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 9834-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology,* in collaboration with the CCITT. The identical text is published as CCITT Recommendation X.665.

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*

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

— *Part 3: Registration of object identifier component values for joint ISO/CCITT use*

— *Part 4: Register of VTE profiles*

— *Part 5: Register of VT control object definitions*

— *Part 6: Application processes and application entities*

Annex A of this part of ISO/IEC 9834 is for information only.

Introduction

This specification 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 CCITT Rec. X.660 I ISO/IEC 9834-1. No technical role is defined.

CCITT Rec. X.200 I ISO 7498-3:1989, 13.1 specifies the need to assign globally unambiguous names to application-processes and application-entities. The syntactic forms of these names are specified in CCITT Rec. X.227 I ISO 8650.

CCITT Study Group VII and ISO/IEC JTC 1/SC 21 are jointly responsible for the syntactic definition of application-processes and application-entity qualifiers.

INTERNATIONAL STANDARD

CCITT RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –

PROCEDURES FOR THE OPERATION OF OSI REGISTRATION AUTHORITIES: 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 or below the nodes for countries or ICDs.

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 CCITT 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 International 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 editions of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The CCITT Secretariat maintains a list of currently valid CCITT Recommendations.

2.1 Identical Recommendations | International Standards

– CCITT Recommendation X.660 (1992) | ISO/IEC 9834-1:1993, *Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities: General procedures.*

2.2 Paired Recommendations | International Standards equivalent in technical content

– CCITT Recommendation X.200 (1988), *Reference Model of Open Systems Interconnection for CCITT applications.*

   ISO 7498:1984, *Information processing systems – Open Systems Interconnection – Basic Reference Model.*

– 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.227 (1992), *Information technology – Open Systems Interconnection – Protocol Specification for the association control service element.*

   ISO 8650:1988, *Information processing systems – Open Systems Interconnection – Protocol specification for the Association Control Service Element.*

- CCITT Recommendation X.501 (1988), *The Directory – Models.*

  ISO/IEC 9594-2:1990, *Information technology – Open Systems Interconnection – The Directory – Part 2: Models.*

- CCITT Recommendation X.650 (1992), *Open Systems Interconnection (OSI) – Reference Model for naming and addressing.*

  ISO/IEC 7498-3:1989, *Information processing systems – Open Systems Interconnection – Basic Reference Model – Part 3: Naming and addressing.*

2.3 Additional references

- ISO 6523:1984, *Data interchange – Structure for the identification of organizations.*

- ISO/IEC 9545:1989, *Information technology – Open Systems Interconnection – Application Layer structure.*

3 Definitions

3.1 The following terms are used in this Recommendation | International Standard, and are defined in CCITT Rec. X.200 | ISO 7498:

    a) application-entity;

    NOTE – The definition of this term in the current edition of CCITT Rec. X.200 | ISO 7498 is different from that in CCITT Rec. X.650 | ISO 7498-3. The definition in CCITT Rec. X.650 | ISO 7498-3 is the definitive one and will be moved to CCITT Rec. X.200 | ISO 7498 to replace the existing definition in the revision of CCITT Rec. X.200 | ISO 7498 which is currently being prepared.

    b) application-entity-type;

    c) application-process;

    d) Open Systems Interconnection environment.

    NOTE – This term is not formally defined in the current edition of CCITT Rec. X.200 | ISO 7498. A definition will be given in the revision which is currently being prepared.

3.2 The following terms are used in this Recommendation | International Standard, and are defined in CCITT Rec. X.650 | ISO/IEC 7498-3:

    a) application-entity;

    NOTE – The definition of this term in the current edition of CCITT Rec. X.200 | ISO 7498 is different from that in CCITT Rec. X.650 | ISO 7498-3. The definition in CCITT Rec. X.650 | ISO 7498-3 is the definitive one and will be moved to CCITT Rec. X.200 | ISO 7498 to replace the existing definition in the revision of CCITT Rec. X.200 | ISO 7498 which is currently being prepared.

    b) application-entity-title;

    c) application-process-title.

3.3 The following terms are used in this Recommendation | International Standard, and are defined in CCITT Rec. X.660 | ISO/IEC 9834-1:

    a) international registration authority;

    b) registration;

    c) registration authority;

    d) registration-hierarchical-name;

    e) registration-hierarchical-name-tree;

    f) Sponsoring authority.

3.4 The following terms are used in this Recommendation | International Standard, and are defined in CCITT Rec. X.501 | ISO/IEC 9594-2:

    a) distinguished-name;

    b) relative-distinguished-name.

3.5 The following terms are used in this Recommendation | International Standard, and are defined in ISO/IEC 9545:

a) application-entity-qualifier;

b) application-process-type.

3.6 The following term is used in this Recommendation | International Standard, and is defined in CCITT Rec. X.208 | ISO/IEC 8824:

– object identifier.

4 Symbols and abbreviations

AE   Application-entity

AE-qualifier   Application-entity-qualifier

AE-title   Application-entity-title

AP   Application-process

AP-title   Application-process-title

ICD   International Code Designator (as defined in ISO 6523)

OSIE   Open Systems Interconnection environment

RH-name   Registration hierarchical name

5 General considerations

5.1 Introduction

5.1.1 CCITT 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 that 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 CCITT 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). 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.

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.

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 later are organizations which have been assigned an ICD). These rules describe an administrative role for such registration authorities.

NOTES

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

2 The abstract syntaxes of AP-titles, AE-qualifiers and AE-titles are defined in CCITT Rec. X.227 | ISO 8650. 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 CCITT Rec. X.227 | ISO 8650.

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 CCITT 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 CCITT 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 CCITT 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.

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 CCITT 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 CCITT 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 CCITT 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 CCITT 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 I 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 an integer value, unambiguous within the scope of the associated application process: this 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) 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.

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.