INTERNATIONAL STANDARD

ISO/IEC 10164-19

First edition
1998-12-15

Information technology — Open Systems Interconnection — Systems Management: Management domain and management policy management function

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Gestion-systèmes: Fonction de gestion de police de gestion et de domaine de gestion



Reference number
ISO/IEC 10164-19:1998(E)

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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.

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 10164-19:1998 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 33, *Distributed application services*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.749.

ISO/IEC 10164 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Systems Management*:

— *Part 1: Object management function*

— *Part 2: State management function*

— *Part 3: Attributes for representing relationships*

— *Part 4: Alarm reporting function*

— *Part 5: Event report management function*

— *Part 6: Log control function*

— *Part 7: Security alarm reporting function*

— *Part 8: Security audit trail function*

— *Part 9: Objects and attributes for access control*

— *Part 10: Usage metering function for accounting purposes*

— *Part 11: Metric objects and attributes*

— *Part 12: Test management function*

— *Part 13: Summarization function*

— *Part 14: Confidence and diagnostic test categories*

— *Part 15: Scheduling function*

— *Part 16: Management knowledge management function*

— *Part 17: Change over function*

— *Part 18: Software management function*

— *Part 19: Management domain and management policy management function*

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— *Part 20: Time management function*

— *Part 21: Command sequencer*

— *Part 22: Response time monitoring function*

Annexes A to E form an integral part of this part of ISO/IEC 10164.

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – SYSTEMS MANAGEMENT: MANAGEMENT DOMAIN AND MANAGEMENT POLICY MANAGEMENT FUNCTION

1 Scope

This Recommendation | International Standard defines the management domain and management policy management function. This Management Function is a System Management function which may be used by an application process in a centralized or decentralized management environment to interact for the purpose of systems management, as defined by the OSI Management Framework, CCITT Rec. X.700 and ISO/IEC 7498-4. This Recommendation | International Standard defines a function which consists of generic definitions and services. This function is positioned in the application layer of the OSI reference model (ITU-T Rec. X.200 | ISO/IEC 7498-1) and is defined according to the model provided by ISO/IEC 9545. The role of systems management functions is described by CCITT Rec. X.701 | ISO/IEC 10040.

This Recommendation | International Standard:

- identifies the set of requirements satisfied by the function;
- provides a model for the behaviour of the management domain management objects;
- provides a model for the behaviour of the management policy management objects;
- specifies the management requirements of the function and how these are realized by specification of managed objects and their behaviour;
- specifies the mapping of these services onto the CMIS services;
- specifies the abstract syntax of the parameters of the MAPDUs that will be used to refer to managed objects and their characteristics;
- provides a model, in accordance with the Management Information Model and the General Relationship Model, for information associated with management domains, policies, and jurisdictions and for the behaviour of managed objects through which that information is accessed and manipulated;
- provides definitions of the information associated with management domains, policies, and jurisdictions, their representation and the operations which may be performed upon them in terms of managed object and management relationship templates.

This Recommendation | International Standard does not:

- define the nature of any implementation intended to provide the management domain and management policy management function;
- specify the manner in which management is to be accomplished by the user of the management domain and management policy management function;
- define the nature of any interactions which result in the use of the management domain and management policy management function;
- specify the services necessary for the establishment, normal and abnormal release of a management association;
- define the interactions which result by the simultaneous use of several management functions;
- define connection establishment or authorization requirements for the use of this function or for any associated activity;
- preclude the definition of further management domain, management policy, or management jurisdiction managed object classes.

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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.210 (1993) | ISO/IEC 10731:1994, *Information technology – Open Systems Interconnection – Basic Reference Model - Conventions for the definition of OSI services.*
- CCITT Recommendation X.701 (1992) | ISO/IEC 10040:1992, *Information technology – Open Systems Interconnection – Systems management overview.*
- CCITT Recommendation X.720 (1992) | ISO/IEC 10165-1:1993, *Information technology – Open Systems Interconnection – Structure of management information: Management information model.*
- CCITT Recommendation X.721 (1992) | ISO/IEC 10165-2:1992, *Information technology – Open Systems Interconnection – Structure of management information: Definition of management information.*
- CCITT Recommendation X.722 (1992) | ISO/IEC 10165-4:1992, *Information technology – Open Systems Interconnection – Structure of management information: Guidelines for the definition of managed objects*.
- ITU-T Recommendation X.724 (1993) | ISO/IEC 10165-6:1994, *Information technology – Open Systems Interconnection – Structure of management information: Requirements and guidelines for implementation conformance statement proformas associated with OSI management*.
- ITU-T Recommendation X.725 (1995) | ISO/IEC 10165-7:1996, *Information technology – Open Systems Interconnection – Structure of management information: General relationship model.*
- CCITT Recommendation X.730 (1992) | ISO/IEC 10164-1:1993, *Information technology – Open Systems Interconnection – Systems Management: Object management function.*
- CCITT Recommendation X.731 (1992) | ISO/IEC 10164-2:1992, *Information technology – Open Systems Interconnection – Systems Management: State management function.*
- CCITT Recommendation X.732 (1992) | ISO/IEC 10164-3:1993, *Information technology – Open Systems Interconnection – Systems Management: Attributes for representing relationships.*
- CCITT Recommendation X.734 (1992) | ISO/IEC 10164-5:1993, *Information technology – Open Systems Interconnection – Systems Management: Event report management function.*
- CCITT Recommendation X.735 (1992) | ISO/IEC 10164-6:1993, *Information technology – Open Systems Interconnection – Systems Management: Log control function.*
- ITU-T Recommendation X.743[1)] | ISO/IEC 10164-20[1)], *Information technology – Open Systems Interconnection – Systems Management: Time management function.*
- ITU-T Recommendation X.746 (1995) | ISO/IEC 10164-15:1995, *Information technology – Open Systems Interconnection – Systems Management: Scheduling function.*

1) Presently at the stage of draft.

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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 (ASN.1).*

ISO/IEC 8825:1990, *Information technology – Open Systems Interconnection – Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*

– ITU-T Recommendation X.290 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – General concepts.*

ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts.*

– ITU-T Recommendation X.291 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Abstract test suite specification.*

ISO/IEC 9646-2:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract Test Suite specification.*

– ITU-T Recommendation X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.*

ISO/IEC 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation conformance statements.*

– CCITT Recommendation X.700 (1992), *Management framework for Open Systems Interconnection (OSI) for CCITT applications*.

ISO/IEC 7498-4:1989, *Information processing systems – Open Systems Interconnection – Basic Reference Model – Part 4: Management framework.*

– 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.*

3 Definitions

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

3.1 Basic reference model definitions

This Recommendation | International Standard makes use of the following term defined in ITU-T Rec. X.200 | ISO/IEC 7498-1:

– systems management.

3.2 Management framework definitions

This Recommendation | International Standard makes use of the following terms defined in CCITT Rec. X.700 and ISO/IEC 7498-4:

a) management information;

b) managed object.

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3.3 Systems management overview definitions

This Recommendation | International Standard makes use of the following terms defined in CCITT Rec. X.701 | ISO/IEC 10040:

a) agent role;
b) agent;
c) generic definitions;
d) managed system;
e) management domain;
f) management jurisdiction;
g) management operation;
h) management policy violation;
i) management policy;
j) manager role;
k) manager;
l) managing system;
m) membership filter;
n) Managed Object Conformance Statement (MOCS);
o) Management Information Conformance Statement (MICS);
p) MOCS proforma;
q) MICS proforma;
r) notification;
s) systems management functional unit.

3.4 CMIS definitions

This Recommendation | International Standard makes use of the following terms defined in CCITT Rec. X.710 and ISO/IEC 9595:

a) attribute;
b) Common Management Information Service.

3.5 OSI conformance testing definitions

This Recommendation | International Standard makes use of the following term defined in ITU-T Rec. X.290 and ISO/IEC 9646-1:

– system conformance statement.

3.6 Implementation conformance statement proforma definitions

This Recommendation | International Standard makes use of the following terms defined in ITU-T Rec. X.724 | ISO/IEC 10165-6:

a) Managed Relationship Conformance Statement (MRCS);
b) Management Conformance Summary (MCS);
c) MCS proforma;
d) MRCS proforma.

3.7 Additional definitions

The following terms are defined in this Recommendation | International Standard:

3.7.1 domain managed object: A managed object that represents a domain for the purposes of managing the membership of that management domain.

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3.7.2 (systems management) policy managed object: A managed object that represents a (systems management) policy for the purpose of managing the policy.

3.7.3 violation detection: The activity which detects policy violations.

3.7.4 domain (membership specifier): A specification that, through explicit reference or predicates, serves to identify a set of managed objects for the purposes of management.

3.7.5 jurisdiction managed object: A managed object that represents the relationship between a policy and a domain to which it is to be applied.

3.7.6 administrative aspect managed object: A managed object used to represent non-procedural information relevant to the administration of domains, jurisdictions, and policies.

4 Symbols and abbreviations

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

ASN.1	Abstract Syntax Notation One
AVA	Attribute Value Assertion
CMIP	Common Management Information Protocol
CMIS	Common Management Information Service
CMISE	Common Management Information Service Element
Cnf	Confirm
GDMO	Guidelines for the Definition of Managed Objects
GRM	General Relationship Model
ICS	Implementation Conformance Statement
Id	Identifier
Ind	Indication
MAPDU	Management Application Protocol Data Unit
MCS	Management Conformance Summary
MICS	Management Information Conformance Statement
MIS-user	Management Information Service user
MOCS	Managed Object Conformance Statement
MRCS	Managed Relationship Conformance Statement
PICS	Protocol Implementation Conformance Statement
Req	request
Rsp	response
SMAPM	Systems Management Application Protocol Machine

5 Conventions

This Recommendation | International Standard defines services for the Management domain management function following the descriptive conventions defined in ITU-T Rec. X.210 | ISO/IEC 10731.

The following notation is used in the service parameter tables:

- **M** the parameter is mandatory;
- **C** the parameter is conditional;
- **(=)** the value of the parameter is identical to the corresponding parameter in the interaction described by the preceding related service primitive;
- **U** the use of the parameter is a service-user option;
- – the parameter is not present in the interaction described by the primitive concerned;
- **P** the parameter is subject to the constraints imposed by CCITT Rec. X.710 and ISO/IEC 9595.

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NOTE – The parameters which are marked "P" in service tables of this Recommendation | International Standard are mapped directly onto the corresponding parameters of the CMIS service primitive, without changing the semantics or syntax of the parameters. The remaining parameters are used to construct an MAPDU.

Throughout this Specification, GDMO and ASN.1 productions are printed using **Times New Roman** font.

6 Requirements

For logistic or other management reasons, there is a requirement to modularize management activities and groups of managed objects. The need to define groups of managed objects is associated with the concept of domains.

It may occur that there is a need to describe these activities so that they can be accessed by means of management operations. The definition of such management activities is associated with the concept of policies. A policy defines a set of management activities which apply to domains.

In the course of normal operations it may happen that the required operations or constraints on managed objects no longer match the operational requirements associated with the group (perhaps for reasons of failure or lack of integrity) however caused. It is therefore an essential management requirement that systems shall be able to recognize occasions when there are violations and to take steps to resolve them.

In response to such situations, management policies and the rules associated with them may be modified and new rules affirmed so that they might apply to new goals and to different managed objects. A minimal requirement of management is the action to be taken in the event of violation detection, this action is known as violation resolution and is for further study.

The requirements for management domain and management policy management are identified in the Systems Management Overview (see CCITT Rec. X.701 | ISO/IEC 10040). Additional functional requirements are identified below.

For management domains there are the requirements that:

- A mechanism shall be provided for managing the membership of a domain.
- There shall be mechanisms to generate a membership list for a given management domain (membership enumeration).
- It shall be possible to discover whether a given managed object is a member of a particular management domain (membership verification).
- It shall be possible to determine which management domain(s) a given managed object is a member of.

  NOTE 1 – Actually performing this discovery may require considerable time and resources.
- It shall be possible to determine which management policies apply to a management domain.
- It shall be possible to access a representation of management domains for the purpose of managing the domain.
- A member of one management domain may be a member of another management domain.

For management policies there are the requirements that:

- A mechanism shall be provided for managing the change of policies.
- It shall be possible to specify management policy violation detection and violation resolution.

  NOTE 2 – Violation resolution mechanisms to accomplish this are for further study.

7 Model

An MIS-user in the manager role (manager) interacts with a managed object via an MIS-user in the agent role (agent) over an interoperable interface.

A managed object may be subject to any number of policies; any number of policies may be of relevance to a given object.

A domain managed object is a support object which allows the specification of a set of objects of interest.

A policy managed object is a support object which represents a system management policy, encapsulating any rules and rule combination semantics used to construct that policy.

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A jurisdiction managed object is a support object which represents the relationship between a policy and a domain.

An administrative aspect is a support object which represents non-procedural aspects and descriptive information for domains, policies, and jurisdictions.

7.1 Domain

A domain allows the specification of a set of objects of interest. A domain permits the management of the specification of its membership. The set of members specified by a domain is the union of its set of direct members with its set of indirect members. Membership may change as objects are created or deleted.

The intersection of the set of objects described by a domain member selection list with the set of objects described by its member selection filter is its set of direct members. The member selection list is a set whose elements name managed object instances, which may or may not actually exist. If the member selection list is the empty set, it implies that all objects are identified. The member selection filter is a single valued attribute representing a logical predicate. If its value is empty, it evaluates to true for all objects.

A domain also allows reference by name to other domains. The union of the sets of members specified by the objects identified in this manner is a domain's set of indirect members. The ability to specify membership both directly and indirectly permits convenient grouping and representation of hierarchies of domains.

The management operations supported by a membership specifier include:

- list direct membership;
- list membership;
- verify membership of a given managed object instance.

Figure 1 illustrates how domain D1 describes a set which contains objects A, B, and C through direct membership. Domain D2 describes a set containing D, E, and F through direct membership. Domain D3 describes a set containing F and G through direct membership. Domain D4 has no direct members, but has A, B, C, D, E, and F as indirect members.

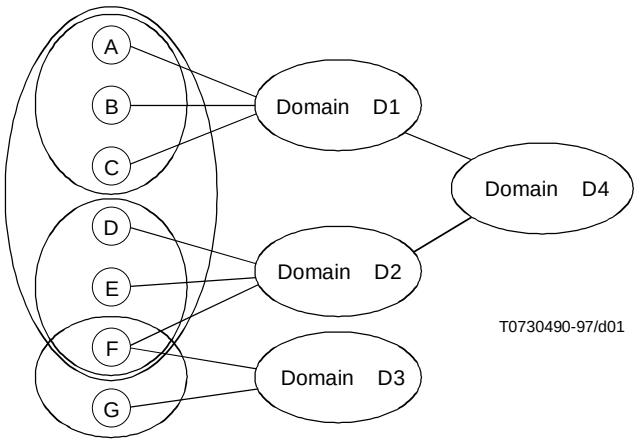


Figure 1 – Example of domain membership

7.2 Policy

A policy encapsulates a representation of system management goals. Policies reflect obligations, authorizations, and aspirations. Their representation may be transparent or opaque. A transparent policy does provide management access to the representation of its semantics. An opaque policy does not provide management access to the representation of its semantics.

This Recommendation | International Standard provides class definitions to support management of opaque policies.

Subclasses of policy may be defined to support capabilities such as scheduling, and the representation of policy semantics. This Recommendation | International Standard provides class definitions for a scheduled opaque policy.

This Recommendation | International Standard describes one means of representing policy semantics in support of a transparent policy class. The development of more powerful representations is for further study.

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7.3 Jurisdiction

A jurisdiction managed object serves to relate a policy and a domain.

The relationship defined by a jurisdiction managed object indicates to which managed objects, identified by the domain, the policy shall apply.

Figure 2 illustrates the following concepts:

- hierarchical domains for administrative convenience (domains D11 and D12 may be administered-separately);
- re-use of a domain for multiple jurisdictions (domain D12 is used for both jurisdiction J1 and jurisdiction J2);
- application of multiple policies to a single object (Object F is subject to policies P1, P2, and P3).

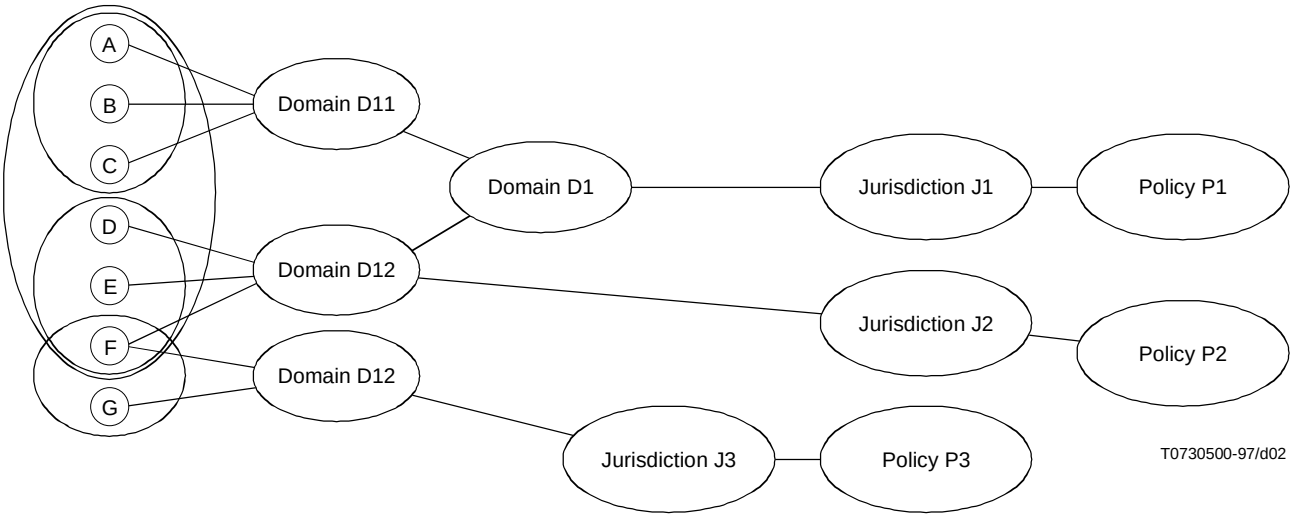


Figure 2 – Example of a jurisdiction

This example shows the following:

- jurisdiction J1 associates policy P1 with domain D1;
- this means that policy P1 applies to objects A, B, C, D, E, F, the members specified directly or indirectly by D1;
- jurisdiction J2 associates policy P2 with domain D12;
- this means that policy P2 applies to objects D, E, and F, the members specified directly or indirectly by D12;
- both policy P1 and P2 are applicable to Objects D, E, and F;
- a change to domain D12 can affect the applicability of both policy P1 and P2;
- jurisdiction J3 associates policy P3 with domain D13;
- objects F and G are subject to policy P3;
- object F is also subject to policy P1 and to P2.

An enhanced jurisdiction managed object provides the ability to request the application of an operation to the members of its domain.

7.4 Administrative aspects

The administrative aspects include identification of the authority responsible for setting the domain, the authority for setting the policy and the application of policy to the domain members. An authority may be a composite entity; such an entity must be identifiable. An authority may delegate some, or all, of its responsibilities to another authority.

Administrative aspects include non-procedural aspects for recording relevant descriptive information for objects.

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7.5 Procedural aspects of the model

The following subclauses demonstrate that this function's requirements are satisfied by this model.

7.5.1 Managing membership

A jurisdiction's membership is defined to be the membership of the domain referenced by that jurisdiction.

Membership is managed by means of domains. A domain's membership may be changed in two ways:

a) a managed object's membership status may change, through its creation, deletion, or a change in a value of one or more of its attributes;

b) attributes of the domain (or a domain to which it refers, at any level of indirection) may be modified.

7.5.2 Listing membership

The listing of a jurisdiction's membership is requested by directing a list membership request to the jurisdiction. The result obtained is effectively the same as would be obtained by directing a list membership request to that jurisdiction's domain.

7.5.3 Verifying membership

The verification of jurisdiction membership for an object is requested by directing a membership verification request to the jurisdiction. The result obtained is effectively the same as would be obtained by directing a membership verification request to that jurisdiction's domain.

7.5.4 Determining which jurisdictions a managed object is a member of

Determining which jurisdictions a managed object is a member of requires performing a membership verification operation (or list membership operation) for all known jurisdictions. The discovery of jurisdictions can be performed by directing an all-levels scoped get for objects of class jurisdiction to all relevant systems.

A similar procedure may be applied against domains to determine which domains a given managed object is a member of.

7.5.5 Determining which policy applies to the members of a jurisdiction

Determining which policies apply to the membership of a domain requires retrieving the attribute which names its policy from all jurisdictions that reference the domain in question.

7.5.6 Determining whether a given object violates a policy

Determining whether a given object violates a policy is accomplished by sending a determine violation status operation to the appropriate jurisdiction or policy managed object, supplying the name of the object instance in question as a parameter. The response will be the determination of whether the policy was applicable (always true when query directed to a policy object), and, if it was, the object's violation status.

7.5.7 Applying an operation to the membership of a domain

Applying an operation to membership of a domain can be accomplished by issuing an apply operation to membership request to the appropriate jurisdiction object.

7.5.8 Determining which policies apply to a given object

In order to determine the policies applying to a managed object, it is necessary to determine the jurisdictions of which it is a member. The object in question is not required by this model to have any knowledge of the set of applied policies. The set of relevant jurisdictions can be retrieved using the procedure outlined above in 7.5.4. For each jurisdiction of which the object in question is a member, the identity of the relevant policy may be retrieved using the procedures of 7.5.5.

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8 Generic definitions

8.1 Relationships

8.1.1 Jurisdiction relationship

8.1.1.1 Jurisdiction relationship class

The jurisdiction relationship class associates a set of roles with a jurisdiction. The roles in a jurisdiction relationship are policy role and domain role.

A jurisdiction managed object represents single jurisdiction relationship for the purposes of management. The information of an individual jurisdiction relationship mapping is stored in a jurisdiction managed object. In this clause, an object fulfilling role X will be referred to as X itself. For example, a domain is a managed object fulfilling the role of domain. For each jurisdiction, there is exactly one relationship to its members.

A member can participate in zero or more (member) relationships. The existence of a jurisdiction managed object is coupled to the existence of a jurisdiction relationship mapping. A policy or domain can change during the existence of the relationship with one exception: the name of the policy or domain cannot be changed.

A policy or domain may exist before it is mapped to in a jurisdiction relationship and it is not affected when this mapping is established or ceases to exist. A jurisdiction is created by an ESTABLISH operation and deleted with a TERMINATE operation.

8.1.1.2 Jurisdiction relationship mapping

The jurisdiction relationship mapping is a mapping of the jurisdiction relationship class. A jurisdiction is a relationship object that binds a single policy to a single domain. The identity of the policy of the jurisdiction is set when the relationship is created and cannot be modified during the lifetime of the relationship. The identity of the domain is set when the relationship is created and cannot be modified during the lifetime of the relationship.

8.1.2 Administrative aspect relationship

8.1.2.1 Administrative aspect relationship class

The administrative aspect relationship class associates an object in the administrative aspect role with another object. The roles in this relationship are the administrative aspect role and the administered object role.

An object in the administered object role can participate in at most one administrative aspect relationship in that role.

An object in the administrative aspect role can participate in any number of administrative aspect relationships in that role.

Objects in either role may be modified during the lifetime of the relationship. Objects in either role may exist before the establishment of the relationship, and may continue to exist after the termination of the relationship.

8.1.2.2 Administrative aspect relationship mapping

The administrative aspect relationship mapping is a mapping of the administrative aspect relationship class. An administrative aspect pointer is a relationship attribute that binds a single object in the administrative aspect. The relationship is established and terminated by setting the value of the administrative aspect pointer.

8.2 Managed objects

8.2.1 Jurisdiction managed object

The jurisdiction object class is a class of managed objects representing the functional aspects of a jurisdiction relationship. This managed object class, derived from the generic relationship class, is characterized by a single mandatory package, the jurisdiction package. This package adds the following mandatory characteristics:

- a jurisdiction identifier (a name);
- a policy pointer;
- a domain pointer;
- an administrative aspect pointer.

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The jurisdiction name is unique and may not be changed during the existence of the jurisdiction.

The policy pointer is a read-only attribute that refers to the managed object fulfilling the policy role in the jurisdiction relationship. Its value must be established when the jurisdiction is created.

The domain pointer is a read-only attribute that refers to the managed object that fulfils the domain role in the jurisdiction relationship. Its value must be established when the jurisdiction is created.

The administrative aspect pointer refers to the managed object fulfilling the administrative aspect role in the administrative aspect relationship. Its value may be established when the jurisdiction is created, and may be modified during the lifetime of the jurisdiction.

The jurisdiction supports the ability to determine members of the domain, and the applied policy, to which members of the domain are subject. The jurisdiction managed object references the policy, the domain and the administrative aspects.

The jurisdiction package also employs the following attributes from CCITT Rec. X.721 | ISO/IEC 10165-2:

- administrative state;
- operational state;
- availability status.

The following actions are supported by the jurisdiction:

- list membership;
- determine violation status;
- verify membership status.

The following notifications are emitted by the jurisdiction:

- object creation;
- object deletion;
- state change;
- policy violation.

The jurisdiction managed object supports object creation, object deletion, and state change notifications defined in CCITT Rec. X.721 | ISO/IEC 10165-2, and the policy violation notification defined within this Recommendation | International Standard. The policy violation notification is used to report the detection of the violation of a jurisdiction's policy by a member of that jurisdiction's domain. In order to simplify notification and event report filtering, this notification has only two parameters: the name of the violated policy and the name of the object in violation of the policy.

Further specialization of this class, in particular with regard to the circumstances under which the emission of the policy violation notification occurs, is possible.

8.2.2 Domain managed object

The domain object class is a class of managed objects representing the functional aspects of membership selection. It is a subclass of top. A domain has the following additional mandatory characteristics, provided by the domain package:

- a domain identifier (a name);
- a member selection list;
- a member selection filter;
- an administrative aspect pointer;
- an indirect membership specifier list.

The domain identifier is a read-only attribute whose value provides an identifier for the domain instance. This name is unique and may not be changed during the existence of the domain.

The administrative aspect pointer attribute refers to the administrative aspect for the domain. Its value may be established when the domain is created, and may be modified.

The following attributes may be modified, thus potentially affecting the set of managed objects that are members.

The member selection list is a set valued attribute that identifies a set of managed object(s).

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The member selection filter is a single valued attribute that provides a CMIS filter.

Evaluating the member selection filter for each object identified through the member selection list, yields the set of direct members for this domain.

The indirect membership specifier list references other domain(s). The membership of these referenced domains constitutes the set of indirect members for inclusion in the set of members for the referencing domain.

The union of the set of indirect members with the set of direct members yields the set of members of the domain.

The following actions are supported by the domain:

- list membership;
- list direct membership;
- verify membership status.

The following notifications are emitted by the domain:

- object creation;
- object deletion.

The domain managed object supports the object creation and object deletion notifications defined in CCITT Rec. X.721 | ISO/IEC 10165-2.

Further specialization of the defined domain managed object class into various types of domain is possible.

8.2.3 Policy managed object

The policy managed object class is a managed object class which represents the functional aspects of a policy. To allow management access to policy semantics (transparent policies) sub-classing is necessary. An example of this is in 8.2.8.

A policy has the following characteristics through a mandatory package, the policy package:

- a policy identifier (name);
- an administrative aspect pointer;
- administrative state;
- operational state;
- availability status.

The policy identifier is a read-only attribute whose value provides an identifier for the instance. Its value may not be changed during the existence of the policy.

The state attributes are specified in CCITT Rec. X.721 | ISO/IEC 10165-2.

The administration aspect pointer attribute references the administrative aspect for the policy.

The policy managed object supports the object creation, object deletion, and state change notifications defined in CCITT Rec. X.721 | ISO/IEC 10165-2.

A policy supports one action:

- determine violation status.

8.2.4 Administrative aspect managed object

The administrative aspect managed object is used to represent the descriptive aspects of a policy, domain or a jurisdiction.

The administrative aspect managed object class, derived from top, has the following characteristics through the mandatory administrative aspect package:

- administrative aspect identifier (a name);
- administrative authority;
- administrative contact information;
- administrative owner;

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- administrative specifier;
- creation time;
- last update time;
- version identifier.

The administrative aspect identifier is a read-only attribute whose value provides an identifier for the instance. Its value is established when the instance is created, and may not change.

The administrative authority attribute provides information about the authority controlling the object referring to the administrative aspect.

The administrative contact information provides contact information.

The administrative owner attribute provides information identifying the current owner of the object referring to the administrative aspect.

The administrative specifier is a read-only attribute whose value provides an identifier for the original specifier. This attributes value must be established when an instance of this class is created.

The creation time provides information identifying the time the administrative aspect object was created. To support applications of this function spanning multiple time zones, the time stamp representation from the Time management function (see ITU-T Rec. X.743 | ISO/IEC 10164-20) is used. Its value is established when the object is created, and does not change.

The last update time provides information identifying the time the administrative aspect object was last updated. To support applications of this function spanning multiple time zones, the time stamp representation from the Time management function (see ITU-T Rec. X.743 | ISO/IEC 10164-20) is used. Its initial value is the time of the object's creation.

The version identifier provides information identifying the version of the administrative aspects object.

The administrative aspects managed object supports the object creation and object deletion notifications defined in CCITT Rec. X.721 | ISO/IEC 10165-2.

8.2.5 Enhanced jurisdiction managed object

The enhanced jurisdiction managed object, derived from the jurisdiction managed object, represents the functional aspects of a jurisdiction relationship, with the additional capability of allowing an operation to be applied to its membership.

In addition to the characteristics inherited from the jurisdiction managed object class, the enhanced jurisdiction is characterized by two mandatory packages:

- duty schedule package;
- operation applier package.

The duty schedule package adds a single attribute:

- external scheduler name.

The following additional action is supported by the enhanced jurisdiction:

- apply operation to membership.

8.2.6 Scheduled policy managed object

The scheduled policy is a management support object which, for management purposes (and in accordance with CCITT Rec. 701 | ISO/IEC 10040), represents the functional aspects of a policy subject to scheduling. To allow management access to policy semantics (transparent policies) sub-classing is necessary.

A scheduled policy is derived from the policy managed object class, and is characterized by the addition of a mandatory package:

- duty schedule package.

The attributes of the duty schedule package are specified in ITU-T Rec. X.746 | ISO/IEC 10164-15:

- external scheduler name.

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8.2.7 Policy violation log record managed object

The policy violation log record managed object records a report of a policy violation.

A scheduled policy is derived from the event log record managed object class, and is characterized by the addition of a mandatory package:

– policy violation log record package.

The additional attributes of the policy violation log record package are:

– violator name;

– violated policy.

8.2.8 Value assertion policy managed object

The value assertion policy managed object class is derived from the policy class. It is based on the use of value assertions to specify rules. This clause defines:

– the structure and semantics of rules from which policies of this class are composed;

– the semantics of combining rules;

– the nature of conflict violation with respect to a policy of this class.

8.2.8.1 Assertion

An assertion may be one of the following four types:

a) (value) assertions specifying which operations may be performed on a managed object and the allowed parameter values for such operations;

b) (value) assertions specifying values of attributes within a managed object;

c) (value) assertions specifying parameter values in notifications emitted by a managed object;

d) (value) assertions specifying parameter values in replies to operations performed on a managed object.

Every assertion is thus a boolean expression which evaluates to *true* or *false*.

A value assertion is specified in terms of a pair consisting of an identifier identifying the information whose value is to be tested, followed by a value to be used in performing the test, in the same form as the attribute value assertions defined for use in a CMIS filter.

To specify identifiers of asserted values, the following object identifier values are allocated in Annex A:

– MDMPMF.operationType	Used to identify assertions on the value of an operation; the possible values are the values of the OPERATION MACRO as specified in CMIP [INTEGER (0..10)]
– MDMPMF.errorType	Used to identify assertions on the value of an error; the possible values are the values of the ERROR MACRO as specified in CMIP [INTEGER (0..23)]
– MDMPMF.notificationType	Used to identify assertions on the value of a notification type. The possible values are the object identifier values registered for the notification template.
– MDMPMF.actionType	Used to identify assertions on the value of an action type. The possible values are the object identifier values registered for the action template.
– MDMPMF.eventInfo	Used to identify assertions on the value of the content of the event info. Possible values are of the types defined for the relevant info.
– MDMPMF.eventReply	Used to identify assertions on the value of the content of the event reply. Possible values are of the types defined for the relevant reply.
– MDMPMF.actionInfo	Used to identify assertions on the value of the content of the action info. Possible values are of the types defined for the relevant info.
– MDMPMF.actionReply	Used to identify assertions on the value of the content of the action reply. Possible values are of the types defined for the relevant reply.

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All of the above should be treated as attribute value assertions with MATCHES FOR EQUALITY only.

In addition, attribute value assertions are specified in the usual form, applying both to attribute oriented operations and notifications (using the WITH ATTRIBUTE ID construct). Assertions on other items of information, contained in either event replies, action info, and action replies can be achieved if the information is properly registered by use of a PARAMETER template.

A policy is constructed from value assertions in the same way as filters are constructed from Attribute Value Assertions (AVA), using the **and**, the **or**, and the **not** operators to combine nested policies. See CCITT Rec. X.720 | ISO/IEC 10165-1, 5.4, for details.

8.2.8.2 Evaluation of assertions

Management policy include, but are not limited to, the following types: management policy of authorization and management policy of obligation. Management policies of authorization state what may be done. Management policies of obligation state what shall be done.

An assertion about a managed object may be either true or false at any moment. The truth of an assertion may change as a result of a change in state of the managed object or its attributes, the emission of a notification or a reply to a management operation. These changes might result from an event or from a state change in the real resource represented by the managed object, or as a side effect of some management operation on the managed object.

Constraints are logical statements about the operations and the parameters of operations that can be performed on managed objects. An operation shall not be applied to a managed object when that operation would violate any constraint applying to that managed object.

NOTE 1 – A policy may reference things such as managed object classes, managed object instances, attributes, sets of attributes, AE-titles, and management users.

Some assertions may only require evaluation in specific circumstances. For example, assertions of types (a), (c) and (d) need only be evaluated when operations are invoked on the managed object, when a notification is emitted or when the reply to an operation is produced. Assertions of type (b) may need evaluation at other times.

NOTE 2 – Assertions, or logical terms within the AVAs that constitute them, evaluate to *true* when the attributes they refer to do not exist.

8.2.8.3 Policy violation

A policy violation occurs when the policy evaluates to *false*. No policy violation is possible for a policy containing zero rules.

An agent may prevent policy violation resulting from falsification of rules of type (a) by rejecting an operation that would cause such a rule to evaluate to *false*. An attempt by a manager to perform an operation which would cause a type (a) rule to evaluate to *false* does not constitute a policy violation if that operation is rejected. This does not preclude the possibility of a notification being emitted to report the event.

In general, an agent may not be able to prevent violation of rules of types (b), (c) and (d). An agent may reject an operation where it can determine that this would violate a rule. For example, a rule of class (b) may specify that an attribute in a managed object must have a specific value. The agent may reject a SET operation which attempts to change the value of the attribute. Provided the rule still evaluates to true, no policy violation occurs. If the value of the attribute changes to reflect some change in the resource, then a policy violation does occur.

8.2.8.4 Management of value assertion policies

Since rules are boolean expressions, they may be combined with the basic logical operators: *and*, *or*, *not*. A policy composed of such rules is therefore a logical expression which evaluates to *true* or *false*.

A policy containing no rules always evaluates to *true*.

Any ordering in the actual evaluation of rules (e.g. for optimization purposes) is an implementation issue.

8.3 Notifications

8.3.1 Policy violation notification

The policy violation notification is used to report the detection of the violation of a jurisdiction's policy by a member of that jurisdiction's domain. In order to simplify notification and event report filtering, this notification has only two parameters: the name of the violated policy and the name of the object in violation of the policy.

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8.4 Actions

The following action types are defined within this Recommendation | International Standard:

- list membership;
- list direct membership;
- verify membership status;
- apply operation to membership;
- determine violation status.

A managed object class definition must describe any aspects of the processing of these operations that are specific to that class.

8.4.1 Action information for the list membership action

The list membership action has no parameters. The action reply contains two parameters. The membership list parameter is a set of names of managed object instances. All objects identified in this set of names must be members of the relevant domain. The list completeness parameter reports whether the membership list parameter is known to be a complete list, is known to be an incomplete list, or if the completeness of the membership list is not known.

8.4.2 Action information for the determine violation status action

The determine violation status action has a single parameter, the name of a managed object whose violation status is of interest. The action reply contains two parameters: the name of the managed object whose violation status was requested, and the results of the attempt to determine the violation status of that object.

8.4.3 Action information for the verify membership action

The verify membership action has a single parameter, the name of a managed object whose membership status is of interest. The action reply contains two parameters: the name of the managed object whose violation status was requested, and the results of the attempt to determine the membership status of that object.

8.4.4 Action information for the list direct membership action

The list direct membership action has no parameters. The action reply contains a single parameter, the direct membership list, a set of names of managed object instances which are direct members.

8.4.5 Action information for the apply operation to membership action

The apply operation to membership action has a single parameter, which describes the operation to be applied to the membership of the object receiving this action. The action reply contains a single parameter, the set of results of the application of the operation provided in the operation template parameter to the membership. Note that multiple replies may be necessary to convey all the results of this operation.

8.5 Attributes

8.5.1 Administrative aspect identifier

The administrative aspect identifier is the distinguishing attribute of an administrative aspect object. This attribute's value must be established when the object is created, and cannot be modified during the lifetime of the object.

8.5.2 Administrative aspect pointer

The administrative aspect pointer attribute represents the relationship between an object and its administrative aspects.

8.5.3 Administrative authority

The administrative authority attribute's value provides a description of an administrative authority.

8.5.4 Administrative contact information

The administrative contact information attribute's value provides contact information.

8.5.5 Administrative owner

The value of the administrative owner attribute provides ownership information.

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8.5.6 Administrative specifier

The value of the administrative specifier attribute identifies the entity responsible for the specification of a domain, policy, or jurisdiction.

8.5.7 Assertion

The assertion attribute represents a boolean expression for the purposes of determining policy violation.

8.5.8 Creation time

The creation time attribute records the time of an object's creation. Its value is established when the object is created, and cannot be modified.

8.5.9 Domain identifier

The domain identifier is the distinguishing attribute for a domain. Its value is established when the object is created, and cannot be modified.

8.5.10 Domain pointer

The domain pointer attribute identifies an object in the domain role in a jurisdiction relationship. Its value must be established when the jurisdiction is created, and cannot be modified.

8.5.11 Indirect membership specifier list

The indirect membership specifier list is a set-valued attribute whose value identifies objects whose membership should be included in an object's set of indirect members.

8.5.12 Jurisdiction identifier

The jurisdiction identifier serves as the distinguishing attribute for a jurisdiction. Its value must be established when the jurisdiction is created, and cannot be modified.

8.5.13 Last update time

The last update time attribute records the time of the most recent modification of an object, where what constitutes a modification is recorded in the class definition. This attribute is always read-only.

8.5.14 Member selection filter

The member selection filter attribute represents constraints on membership. It takes the form of a CMIS filter expression.

8.5.15 Member selection list

The member selection list is a set-valued attribute representing the names of managed objects that are of interest.

8.5.16 Policy identifier

The policy identifier attribute serves as the distinguishing attribute of a policy. Its value must be established at the time the object instance is created, and cannot be modified.

8.5.17 Policy pointer

The policy pointer attribute identifies an object in the policy role of a jurisdiction. The value of the attribute must be established when the jurisdiction is created, and cannot be modified.

8.5.18 Version identifier

The version identifier attribute's value identifies the version of an object.

8.5.19 Violated policy

The violated policy attribute identifies a policy which has been violated.

8.5.20 Violator name

The violator name attribute identifies an object which has violated a policy.

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8.6 Parameters

The apply operation action has a parameter, timeout error, which may be used in the action reply when a timeout error occurs.

8.7 Name bindings

8.7.1 Domain to system

The domain to system name binding supports the naming of domains with respect to a system object.

8.7.2 Policy to system

The policy to system name binding supports the naming of policies with respect to a system object.

8.7.3 Jurisdiction to system

The jurisdiction to system name binding supports the naming of jurisdictions with respect to a system object.

8.7.4 Administrative aspect to system

The administrative aspect to system name binding supports the naming of administrative aspects with respect to a system object.

9 Service definition

This clause defines the services provided by this function for the management of domains, policies, jurisdictions, and administrative aspects. This Recommendation | International Standard uses:

- the object creation reporting service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the object deletion reporting service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-ACTION service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-CREATE service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-DELETE service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-EVENT service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-GET service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the PT-SET service defined in CCITT Rec. X.730 | ISO/IEC 10164-1;
- the state change reporting service defined in CCITT Rec. X.731 | ISO/IEC 10164-2.

In addition to the above services the management domain and management policy management function supports the following services:

- direct membership listing service;
- membership listing service;
- membership status verification service;
- operation application service;
- policy violation notification service;
- violation status determination service.

9.1 Direct membership listing service

The direct membership listing service allows a manager to request that an open system (the managed system) determine the direct membership of a domain or jurisdiction. Table 1 lists the parameters for this service.

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Table 1 – Direct membership listing service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Linked Identifier	–	P
Mode	P	–
Base object class	P	–
Base object instance	P	–
Scope	P	–
Filter	P	–
Managed object class	–	P
Managed object instance	–	P
Access Control	P	–
Synchronization	P	–
Current time	–	P
List membership reply	–	C
…Completeness	–	M
…Membership	–	M
Errors	–	C

The direct membership listing service uses the parameters defined in clause 8 in addition to the general M-ACTION service parameters defined in CCITT Rec. X.710 and ISO/IEC 9595.

The list membership reply parameter shall be present in a positive response, otherwise the Errors parameter shall be present.

9.2 Membership listing service

The membership listing service allows a manager to request that an open system (the managed system) determine the membership of a domain or jurisdiction. Table 2 lists the parameters for this service.

Table 2 – Membership listing service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Linked Identifier	–	P
Mode	P	–
Base object class	P	–
Base object instance	P	–
Scope	P	–
Filter	P	–
Managed object class	–	P
Managed object instance	–	P
Access Control	P	–
Synchronization	P	–
Current time	–	P
List membership reply	–	C
…Completeness	–	M
…Membership	–	M
Errors	–	C

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The membership listing service uses the parameters defined in clause 8 in addition to the general M-ACTION service parameters defined in CCITT Rec. X.710 and ISO/IEC 9595.

The list membership reply parameter shall be present in a positive response, otherwise the Errors parameter shall be present.

9.3 Membership status verification service

The membership status verification service allows a manager to request that another open system (the managed system) attempt to determine whether a given object is a member of a given jurisdiction or domain. Table 3 lists the parameters for this service.

Table 3 – Membership status verification service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Linked Identifier	–	P
Mode	P	–
Base object class	P	–
Base object instance	P	–
Scope	P	–
Filter	P	–
Managed object class	–	P
Managed object instance	–	P
Access Control	P	–
Synchronization	P	–
Verify membership request	M	–
Current time	–	P
Verify membership reply	–	C
…Object name	–	M
…Membership status	–	M
Errors	–	C

The membership status verification service uses the parameters defined in clause 8 in addition to the general M-ACTION service parameters defined in CCITT Rec. X.710 | ISO/IEC 9595.

The membership status verification reply parameter shall be present in a positive response, otherwise the Errors parameter shall be present.

9.4 Operation application service

The operation application service allows a manager to request that another open system (the managed system) attempt to perform an operation on all members of a jurisdiction. Table 4 lists the parameters for this service.

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Table 4 – Operation application service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Linked Identifier	–	P
Mode	P	–
Base object class	P	–
Base object instance	P	–
Scope	P	–
Filter	P	–
Managed object class	–	P
Managed object instance	–	P
Access Control	P	–
Synchronization	P	–
Apply operation to membership request	M	–
Apply operation to membership reply	–	C
Timeout error	–	C
Errors	–	C

The operation application service uses the parameters defined in clause 8 in addition to the general M-ACTION service parameters defined in CCITT Rec. X.710 and ISO/IEC 9595.

The operation application reply parameter shall be present in a positive response, otherwise the Errors parameter shall be present.

9.5 Policy violation notification service

The policy violation notification service allows one open system (the managed system) to report the detection of a policy violation. Table 5 lists the parameters for this service.

Table 5 – Policy violation notification service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Mode	P	–
Managed object class	–	P
Managed object instance	–	P
Event time	P	–
Violated policy	M	–
Violator name	M	–

The policy violation notification service uses the parameters defined in clause 8 in addition to the general M-EVENT-REPORT service parameters defined in CCITT Rec. X.710 and ISO/IEC 9595.

9.6 Violation status determination service

The violation status determination service allows a manager to request that an open system (the managed system) attempt to determine the violation status of an object. Table 6 lists the parameters for this service.

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Table 6 – Violation status determination service parameters

Parameter Name	Req/Ind	Rsp/Conf
Invoke Identifier	P	P
Linked Identifier	–	P
Mode	P	–
Base object class	P	–
Base object instance	P	–
Scope	P	–
Filter	P	–
Managed object class	–	P
Managed object instance	–	P
Access Control	P	–
Synchronization	P	–
Determine violation status request	M	–
Determine violation status reply	–	C
Errors	–	C

The violation status determination service uses the parameters defined in clause 8 in addition to the general M-ACTION service parameters defined in CCITT Rec. X.710 and ISO/IEC 9595.

The violation status determination reply parameter shall be present in a positive response, otherwise the Errors parameter shall be present.

10 Systems management functional units

This function specifies three functional units: the membership query functional unit, policy violation functional unit, and the operation functional unit.

The following functional units defined within CCITT Rec. X.730 | ISO/IEC 10164-1 may be negotiated for the purpose of managing the managed objects defined in this Recommendation | International Standard:

- Control;
- Monitor; and
- ObjectEvents.

The following functional unit defined within CCITT Rec. X.731 | ISO/IEC 10164-2 may be negotiated for the purpose of managing the managed objects defined in this Recommendation | International Standard:

- State Change Reporting.

10.1 Membership query functional unit

The membership query functional unit provides the following services:

- membership listing service;
- direct membership listing service;
- membership verification service.

10.2 Policy violation functional unit

The policy violation functional unit provides the following services:

- violation status determination service;
- policy violation notification service.

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10.3 Operation functional unit

This functional unit provides the following service:

– apply operation to membership.

11 Protocol

11.1 Elements of procedure

11.1.1 Elements of procedure for the direct membership listing service

11.1.1.1 Manager role

11.1.1.1.1 Invocation

The direct membership listing procedures are initiated by the list direct membership primitive. On receipt of a list direct membership primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-ACTION request service primitive with parameters derived from the list direct membership primitive. The confirmed mode shall be used.

11.1.1.1.2 Receipt of response

On receipt of a CMIS M-ACTION confirm service primitive containing an MAPDU responding to a list direct membership operation, the SMAPM shall issue a list direct membership confirmation primitive to the direct membership listing service user with parameters derived from the CMIS M-ACTION confirm service primitive, thus completing the direct membership listing procedure.

11.1.1.2 Agent role

11.1.1.2.1 Receipt of request

On receipt of a CMIS M-ACTION indication service primitive containing an MAPDU requesting the direct membership listing service, the SMAPM shall, if the MAPDU is well formed, issue a list direct membership listing indication primitive to the direct membership listing service user with parameters derived from the CMIS M-ACTION indication service primitive. Otherwise, the SMAPM shall construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-ACTION response service primitive with an error parameter present.

11.1.1.2.2 Response

The SMAPM shall accept a direct membership listing response primitive and shall construct an MAPDU confirming the operation and issue a CMIS M-ACTION response service primitive with parameters derived from the direct membership listing response primitive.

11.1.2 Elements of procedure for the membership listing service

11.1.2.1 Manager role

11.1.2.1.1 Invocation

The membership listing procedures are initiated by the list membership primitive. On receipt of a list membership primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-ACTION request service primitive with parameters derived from the list membership primitive. The confirmed mode shall be used.

11.1.2.1.2 Receipt of response

On receipt of a CMIS M-ACTION confirm service primitive containing an MAPDU responding to a list membership operation, the SMAPM shall issue a list membership confirmation primitive to the membership listing service user with parameters derived from the CMIS M-ACTION confirm service primitive, thus completing the membership listing procedure.

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11.1.2.2 Agent role

11.1.2.2.1 Receipt of request

On receipt of a CMIS M-ACTION indication service primitive containing an MAPDU requesting the membership listing service, the SMAPM shall, if the MAPDU is well formed, issue a list membership listing indication primitive to the membership listing service user with parameters derived from the CMIS M-ACTION indication service primitive. Otherwise, the SMAPM shall construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-ACTION response service primitive with an error parameter present.

11.1.2.2.2 Response

The SMAPM shall accept a membership listing response primitive and shall construct an MAPDU confirming the operation and issue a CMIS M-ACTION response service primitive with parameters derived from the membership listing response primitive.

11.1.3 Elements of procedure for the membership status verification service

11.1.3.1 Manager role

11.1.3.1.1 Invocation

The membership status verification procedures are initiated by the verify membership status primitive. On receipt of a verify membership status primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-ACTION request service primitive with parameters derived from the verify membership status primitive. The confirmed mode shall be used.

11.1.3.1.2 Receipt of response

On receipt of a CMIS M-ACTION confirm service primitive containing an MAPDU responding to a verify membership status operation, the SMAPM shall issue a verify membership status confirmation primitive to the membership status verification service user with parameters derived from the CMIS M-ACTION confirm service primitive, thus completing the membership status verification procedure.

11.1.3.2 Agent role

11.1.3.2.1 Receipt of request

On receipt of a CMIS M-ACTION indication service primitive containing an MAPDU requesting the membership status verification service, the SMAPM shall, if the MAPDU is well formed, issue a verify membership status indication primitive to the membership status verification service user with parameters derived from the CMIS M-ACTION indication service primitive. Otherwise, the SMAPM shall construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-ACTION response service primitive with an error parameter present.

11.1.3.2.2 Response

The SMAPM shall accept a membership status verification response primitive and shall construct an MAPDU confirming the operation and issue a CMIS M-ACTION response service primitive with parameters derived from the membership status verification response primitive.

11.1.4 Elements of procedure for the operation application service

11.1.4.1 Manager role

11.1.4.1.1 Invocation

The operation application procedures are initiated by the apply operation to membership primitive. On receipt of this primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-ACTION request service primitive with parameters derived from the apply operation to membership primitive. The confirmed mode shall be used.

11.1.4.1.2 Receipt of response

On receipt of a CMIS M-ACTION confirm service primitive containing an MAPDU responding to an apply operation to membership operation, the SMAPM shall issue an apply operation to membership confirmation primitive to the operation application service user with parameters derived from the CMIS M-ACTION confirm service primitive, thus completing the operation application listing procedure.

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11.1.4.2 Agent role

11.1.4.2.1 Receipt of request

On receipt of a CMIS M-ACTION indication service primitive containing an MAPDU requesting the operation application service, the SMAPM shall, if the MAPDU is well formed, issue an apply operation to membership indication primitive to the operation application service user with parameters derived from the CMIS M-ACTION indication service primitive. Otherwise, the SMAPM shall construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-ACTION response service primitive with an error parameter present.

11.1.4.2.2 Response

The SMAPM shall accept an apply operation to membership response primitive and shall construct an MAPDU confirming the operation and issue a CMIS M-ACTION response service primitive with parameters derived from the operation application response primitive.

11.1.5 Elements of procedure for the policy violation notification service

11.1.5.1 Agent role

11.1.5.1.1 Invocation

The policy violation notification procedures are initiated by the policy violation notification request primitive. On receipt of a policy violation notification request primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-EVENT-REPORT request service primitive with parameters derived from the policy violation notification request primitive. In the non-confirmed mode, the procedure in 11.1.5.1.2 does not apply.

11.1.5.1.2 Receipt of response

On receipt of a CMIS M-EVENT-REPORT confirm service primitive containing an MAPDU responding to a policy violation notification, the SMAPM shall issue a policy violation notification confirmation primitive to the policy violation notification service user with parameters derived from the CMIS M-EVENT-REPORT confirm service primitive, thus completing the procedure.

11.1.5.2 Manager role

11.1.5.2.1 Receipt of request

On receipt of a CMIS M-EVENT-REPORT indication service primitive containing an MAPDU requesting the policy violation notification service, the SMAPM shall, if the MAPDU is well formed, issue a policy violation notification indication primitive to the policy violation notification service user with parameters derived from the CMIS M-EVENT-REPORT indication service primitive. Otherwise, the SMAPM shall, in the confirmed mode, construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-EVENT-REPORT response service primitive with an error parameter present. In the non-confirmed mode, the procedure in 11.1.5.2.2 does not apply.

11.1.5.2.2 Response

In the confirmed mode, the SMAPM shall accept a policy violation notification response primitive and shall construct an MAPDU confirming the notification and issue a CMIS M-EVENT-REPORT response service primitive with parameters derived from the policy violation notification response primitive.

11.1.6 Elements of procedure for the violation status determination service

11.1.6.1 Manager role

11.1.6.1.1 Invocation

The violation status determination procedures are initiated by the violation status determination primitive. On receipt of this primitive, the SMAPM shall construct an MAPDU and issue a CMIS M-ACTION request service primitive with parameters derived from the violation status determination primitive. The confirmed mode shall be used.

11.1.6.1.2 Receipt of response

On receipt of a CMIS M-ACTION confirm service primitive containing an MAPDU responding to a violation status determination operation, the SMAPM shall issue a determine violation status confirmation primitive to the operation application service user with parameters derived from the CMIS M-ACTION confirm service primitive, thus completing the violation status determination procedure.

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11.1.6.2 Agent role

11.1.6.2.1 Receipt of request

On receipt of a CMIS M-ACTION indication service primitive containing an MAPDU requesting the violation status determination service, the SMAPM shall, if the MAPDU is well formed, issue a violation status determination indication primitive to the operation application service user with parameters derived from the CMIS M-ACTION indication service primitive. Otherwise, the SMAPM shall construct an appropriate MAPDU indicating the error, and shall issue a CMIS M-ACTION response service primitive with an error parameter present.

11.1.6.2.2 Response

The SMAPM shall accept a violation status determination response primitive and shall construct an MAPDU confirming the operation and issue a CMIS M-ACTION response service primitive with parameters derived from the violation status determination response primitive.

11.2 Abstract syntax

11.2.1 Relationships

This Recommendation | International Standard references the following relationships whose ASN.1 value notation is specified in Annex A.

Table 7 – Mapping between relationship name and label

Relationship name	Relationship label
jurisdiction relationship	jurisdictionRelationship
administrative aspect relationship	administrativeAspectRelationship

11.2.2 Objects

This Recommendation | International Standard references attributes and packages of attributes, actions and notifications which can be used to construct object classes to support the management domain function. Annex A defines the following management domain managed objects:

Table 8 – Mapping between class name and class label

Class name	Class label
administrative aspect	administrativeAspect
domain	domain
enhanced jurisdiction	enhancedJurisdiction
jurisdiction	jurisdiction
policy	policy
policy violation log record	policyViolationLogRecord
scheduled policy	scheduledPolicy
value assertion policy	valueAssertionPolicy

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11.2.3 Packages

This Recommendation | International Standard references the following package definitions whose ASN.1 value notation is specified in Annex A.

Table 9 – Mapping between package name and package label

Package name	Package label
administrative aspect package	administrativeAspectPackage
domain package	domainPackage
duty schedule package	dutySchedulePackage
jurisdiction package	jurisdictionPackage
operation applier package	operationApplierPackage
policy package	policyPackage
policy violation log record package	policyViolationLogRecordPackage
value assertion policy package	valueAssertionPolicyPackage

11.2.4 Attributes

This Recommendation | International Standard references management attributes whose abstract syntax is specified in Annex A. The attribute names used in clause 8 are associated with the attribute labels specified in Annex A. For clarity, these are shown in Table 10.

Table 10 – Mapping between attribute name and attribute label

Attribute name	Attribute label
administrative aspect identifier	administrativeAspectId
administrative aspect pointer	administrativeAspectPointer
administrative authority	administrativeAuthority
administrative contact information	administrativeContactInformation
administrative owner	administrativeOwner
administrative specifier	administrativeSpecifier
assertion	assertion
creation time	creationTime
domain identifier	domainId
domain pointer	domainPointer
indirect membership specifier list	indirectMembershipSpecifierList
jurisdiction identifier	jurisdictionId
last update time	lastUpdateTime
member selection filter	memberSelectionFilter
member selection list	memberSelectionList
policy identifier	policyId
policy pointer	policyPointer
version identifier	versionIdentifier
violated policy	violatedPolicy
violator name	violatorName

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11.2.5 Notifications

This Recommendation | International Standard references the following specific notification types, the abstract syntax for which is specified in Annex A.

Table 11 – Notifications

Notification name	Notification type
policy violation	policyViolation

11.2.6 Actions

This Recommendation | International Standard references the following specific action types, the abstract syntax for which is specified in Annex A.

Table 12 – Actions

Action name	Action type
apply operation to membership	applyOperationToMembership
determine violation status	determineViolationStatus
list direct membership	listDirectMembership
list membership	listMembership
verify membership status	verifyMembershipStatus

Table 13 identifies the relationship between the parameters of notifications and the corresponding attributes.

Table 13 – Attribute mappings

Parameter	Attribute name
violated policy	violatedPolicy
violator name	violatorName

11.2.7 Name Bindings

This Recommendation | International Standard references the following specific name bindings, the abstract syntax for which is specified in Annex A.

Table 14 – Name bindings

Name binding name	Name binding label
administrative aspect to system name binding	administrativeAspect-System
domain to system name binding	domain-System
jurisdiction to system name binding	jurisdiction-System
policy to system name binding	policy-System

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11.2.8 Parameters

This Recommendation | International Standard references the following specific parameters, the abstract syntax for which is specified in Annex A.

Table 15 – Parameters

Parameter name	Parameter label
timeout error	timeoutError

11.3 Negotiation of functional units

This Recommendation | International Standard assigns the following object identifier value:

{joint-iso-itu-t ms(9) function(2) part19(19) functionalUnitPackage(1)}

as a value of the ASN.1 type FunctionalUnitPackage defined in Rec. X.701 | ISO/IEC 10040 for negotiating the availability of the following functional units:

0 Membership functional unit

1 Policy violation functional unit

2 Operation functional unit

where the numbers identify the bit positions in the BIT STRING assigned to the functional units and the names reference the functional units as defined in clause 10.

12 Relationships with other functions

The management domain and management policy management function uses the services defined in CCITT Rec. X.731 | ISO/IEC 10164-2 for the notification of state changes, the services defined in CCITT Rec. X.730 | ISO/IEC 10164-1 for the creation and deletion of managed objects, and the retrieval of attributes, and the services defined in CCITT Rec. X.735 | ISO/IEC 10164-6 for log records.

Control of event reporting for the policy violation notification service is provided by mechanisms specified in CCITT Rec. X.734 | ISO/IEC 10164-5. The policy violation notification service may exist independently of the control mechanisms of CCITT Rec. X.734 | ISO/IEC 10164-5.

13 Conformance

Implementations claiming to conform to this Recommendation | International Standard shall comply with the conformance requirements as defined in the following subclauses.

13.1 Static conformance

The implementation shall conform to the requirements of this Recommendation | International Standard in the manager role, the agent role, or both roles. A claim of conformance to at least one role shall be made in Table B.1. If a claim of conformance is made for support in the manager role, the implementation shall support at least one of the attributes, notifications, actions, or managed objects described in Table B.2. A claim of conformance in the manager role requires the support of at least one management operation or notification as specified by those management definitions.

If a claim of conformance is made for support in the agent role, the implementation shall support at least one of the attributes, actions, or managed objects described in Table B.3. A claim of conformance in the agent role requires the support of all the mandatory operations and mandatory notifications specified by those management definitions.

The implementation shall support the transfer syntax derived from the encoding rules specified in CCITT Rec. X.209 and ISO/IEC 8825 named **{joint-iso-itu-t asn1(1) basicEncoding(1)}** for the abstract data types referenced by the definitions for which support is claimed.

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13.2 Dynamic conformance

Implementations claiming to conform to this Recommendation | International Standard shall support the elements of procedure and definitions of semantics corresponding to the definitions for which support is claimed.

13.3 Management implementation conformance statement requirements

Any MCS proforma, MICS proforma, MOCS proforma, and MRCS proforma which conforms to this Recommendation | International Standard shall be technically identical to the proformas specified in Annexes B, C, D and E preserving table numbering and the index numbers of items, and differing only in pagination and page headers.

The supplier of an implementation which is claimed to conform to this Recommendation | International Standard shall complete a copy of the Management Conformance Summary (MCS) provided in Annex A as part of the conformance requirements together with any other ICS proformas referenced as applicable from that MCS. An ICS which conforms to this Recommendation | International Standard shall:

- describe an implementation which conforms to this Recommendation | International Standard;
- have been completed in accordance with the instructions for completion given in ITU-T Rec. X.724 | ISO/IEC 10165-6;
- include the information necessary to uniquely identify both the supplier and the implementation.

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Annex A

Definition of management information

(This annex forms an integral part of this Recommendation | International Standard)

A.1 Allocation of object identifiers

This Recommendation | International Standard allocates the following object identifiers:

```
MDMPMF { joint-iso-itu-t ms(9) function(2) part19(19) asn1Module(2) 1 }

DEFINITIONS ::= BEGIN

    mdmpmfFunctionalUnitPackage OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) functionalUnitPackage(1) }

    mdmpmfManagedObject OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) managedObject(3) }

    mdmpmfPackage OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) package(4) }

    mdmpmfParameter OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) parameter(5) }

    mdmpmfNameBinding OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) nameBinding(6) }

    mdmpmfAttribute OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) attribute(7) }

    mdmpmfAction OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) action(8) }

    mdmpmfNotification OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) notification(10) }

    mdmpmfRelationship OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) relationship (11) }

    mdmpmfRelationshipMapping OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) relationshipMapping(12) }

    --
    --      The following arcs support the defined policy classes.
    --

    assertedValueIdentifier OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13) }

    operationType OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          operationType(1) }

    errorType OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          errorType(2) }

    notificationType OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          notificationType(3) }

    actionType OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          actionType(4) }

    eventInfo OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          eventInfo(5) }

    eventReply OBJECT IDENTIFIER ::=
        { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
          eventReply(6) }
```

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```
        actionInfo OBJECT IDENTIFIER ::=
                { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
                  actionInfo(7) }

        actionReply OBJECT IDENTIFIER ::=
                { joint-iso-itu-t ms(9) function(2) part19(19) assertedValueIdentifier(13)
                  actionReply(8) }

        OneToOne ::= INTEGER (1 .. 1)

END
```

A.2 Definition of relationship classes

This Recommendation | International Standard defines the following relationship classes:

```
jurisdictionRelationship RELATIONSHIP CLASS
        BEHAVIOUR jurisdictionRelationshipBehaviour
                BEHAVIOUR DEFINED AS
                        "This relationship is the management view of a jurisdiction and identifies two roles: policy and domain.

                        A jurisdiction is created by an ESTABLISH operation and deleted with a TERMINATE operation. The
                        policy and domain of the jurisdiction are set when the relationship is established and cannot be modified
                        without terminating the relationship."
                ;
        ;
        ROLE policyRole
                COMPATIBLE-WITH policy
                PERMITTED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
                REQUIRED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
        ROLE domainRole
                COMPATIBLE-WITH domain
                PERMITTED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
                REQUIRED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
        ;
REGISTERED AS { MDMPMF.mdmpmfRelationship 1 };

administrativeAspectRelationship RELATIONSHIP CLASS
        BEHAVIOUR administrativeAspectRelationshipBehaviour
                BEHAVIOUR DEFINED AS
                        "This relationship is the management view of an administrative aspect relationship and identifies two
                        roles: administrative aspect and administered object.

                        An administrative aspect relationship is created by an ESTABLISH operation and deleted with a
                        TERMINATE operation. The administrative aspect and administered object of the administrative
                        aspect relationship are set when the relationship is established and cannot be modified without
                        terminating the relationship."
                ;
        ;
        ROLE administrativeAspectRole
                COMPATIBLE-WITH administrativeAspect
                PERMITTED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
                REQUIRED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
        ROLE administeredObjectRole
                COMPATIBLE-WITH "CCITT Rec. X.721 | ISO/IEC 10165-2":top
                PERMITTED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
                REQUIRED-ROLE-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
                PERMITTED-RELATIONSHIP-CARDINALITY-CONSTRAINT MDMPMF.OneToOne
        ;
REGISTERED AS { MDMPMF.mdmpmfRelationship 2 };
```

A.3 Definition of managed object classes

This Recommendation | International Standard defines the following managed object classes:

```
policy MANAGED OBJECT CLASS
        DERIVED FROM "CCITT Rec. X.721 | ISO/IEC 10165-2":top;
        CHARACTERIZED BY policyPackage
                PACKAGE
                        BEHAVIOUR policyPackageBehaviour
```


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```
                    BEHAVIOUR DEFINED AS
                        "See definition of (systems management) policy in PDAM2/SMO

                        An object creation notification is emitted when an instance of this class is created. An
                        object deletion notification is emitted when an instance of this class is deleted. A state
                        change notification is emitted when the administrative or operational state changes.

                        The determine violation status action is used to determine whether an object instance,
                        named as a parameter of the action, is in violation of this policy. If the policy's operational
                        state is disabled, or if the policy's administrative state is not unlocked, or if the availability
                        status includes the off-duty status value, the violation status action response will indicate
                        that no violation has been detected. Otherwise, the action response returns the result of
                        evaluating  this policy to determine the object's violation status, returning an indication of
                        violation, non-violation, or unknown status.

                        The administrative aspect pointer provides the name of any related object in the
                        administrative aspect role."
                    ;
                ;
                ATTRIBUTES
                    policyId                                    GET SET-BY-CREATE NO-MODIFY,
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":administrativeState
                                                                GET-REPLACE,
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":operationalState
                                                                GET,
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":availabilityStatus
                                                                GET,
                    administrativeAspectPointer                 GET-REPLACE;
                ATTRIBUTE GROUPS
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":state;
                ACTIONS
                    determineViolationStatus;
                NOTIFICATIONS
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":stateChange
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":stateChange,65-2":objectCreation,
                    "CCITT Rec. X.721 | ISO/IEC 10165-2":objectDeletion;
            ;
        ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 1 };

scheduledPolicy MANAGED OBJECT CLASS
        DERIVED FROM policy;
        CHARACTERIZED BY dutySchedulePackage
            PACKAGE
                BEHAVIOUR dutyScheduleBehaviour
                    BEHAVIOUR DEFINED AS
                        "This object's availability status is affected by the external scheduler referenced by its
                        external scheduler attribute. This scheduler controls whether the availability status
                        attribute includes the off-duty status value.
                        When off-duty, this object will not evaluate any object as being in violation of its policy."
                    ;
                ;
                ATTRIBUTES
                    "ITU-T Rec. X.746 | ISO/IEC 10164-15":externalSchedulerName
                                                                GET-REPLACE;
            ;
        ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 2 };

jurisdiction MANAGED OBJECT CLASS
        DERIVED FROM
            "ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7: 1996":genericRelationshipObject;
        CHARACTERIZED BY jurisdictionPackage
            PACKAGE
                BEHAVIOUR jurisdictionBehaviour
                    BEHAVIOUR DEFINED AS
                        "See definition of jurisdiction in PDAM2/SMO.

                        An objectCreation notification is emitted when an instance of this class is created. An
                        objectDeletion notification is emitted when an instance of this class is deleted. A
                        stateChange notification is emitted when the operational or administrative state changes.
```

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```
                    The list membership action is used to obtain a best-efforts listing of the membership of this
                    object's domain. The verify membership status action is used to determine whether a
                    given object instance is in the set of members of this object's domain. The determine
                    violation status action is used to determine whether a given object is in the set of members
                    of this object's domain, and, if it is, whether it is in violation of this object's policy.

                    If this object's operational state is disabled, a processing failure will be returned. If the
                    requested object is not among the members of this object's domain, or if the membership
                    status cannot be determined, the action reply will indicate this fact. Otherwise, if this
                    object's administrative state is locked or if its operational state is disabled or if its
                    availability status includes the off-duty status, the result will indicate that no policy
                    violation has been detected. Otherwise, the policy will be consulted, possibly resulting in
                    the detection of a policy violation. The result of the policy evaluation is returned in the
                    action reply.

                    When a policy violation is detected, a policy violation notification shall be emitted to
                    report the detected violation. A policy violation notification shall not be emitted unless a
                    policy violation has been detected. Subclasses may specify additional circumstances under
                    which policy violations are detected.

                    The administrative aspect pointer provides the name of an object fulfilling the
                    administrative aspect role. The value of this attribute has no effect on the operation of this
                    object."
                ;
            ;
            ATTRIBUTES
                jurisdictionId                              GET SET-BY-CREATE NO-MODIFY,
                domainPointer                               GET SET-BY-CREATE,
                policyPointer                               GET SET-BY-CREATE,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":administrativeState
                                                            GET-REPLACE,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":operationalState
                                                            GET,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":availabilityStatus
                                                            GET,
                administrativeAspectPointer                 GET-REPLACE;
            ATTRIBUTE GROUPS
                "CCITT Rec. X.721 | ISO/IEC 10165-2":state;
            ACTIONS
                listMembership,
                determineViolationStatus,
                verifyMembershipStatus;
            NOTIFICATIONS
                "CCITT Rec. X.721 | ISO/IEC 10165-2":stateChange,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectCreation,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectDeletion,
                policyViolation;
        ;
    ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 3 };

enhancedJurisdiction MANAGED OBJECT CLASS
    DERIVED FROM jurisdiction;
    CHARACTERIZED BY dutySchedulePackage, operationApplierPackage
        PACKAGE
            BEHAVIOUR operationApplierBehaviour
                BEHAVIOUR DEFINED AS
                    "If this object's operational state is disabled, or if its administrative state is locked, or if
                    its availability status includes the off-duty status value, the receipt of an apply operation
                    to membership action results in an error response.

                    Otherwise, receipt of the applyOperationToMembership action causes it to assess each
                    member of its domain for policy violation. For all policy violations detected, a policy
                    violation notification is emitted. For all members of the domain for which policy violations
                    are not detected, the operation is applied. The action result includes, for each member
                    object, the outcome of the policy violation assessment and any results from the operation if
                    applied."
                ;
            ;
            ACTIONS
```


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```
                    applyOperationToMembership;
            ;
        ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 4 };

domain MANAGED OBJECT CLASS
        DERIVED FROM "CCITT Rec. X.721 | ISO/IEC 10165-2":top;
        CHARACTERIZED BY domainPackage
                PACKAGE
                        BEHAVIOUR domainBehaviour
                                BEHAVIOUR DEFINED AS
                                        "This object allows specification of a set of members. This set is the union of this object's
                                        direct members and its indirect members. The set of indirect members is the union of the
                                        sets of members specified by the objects named in the indirect membership specifier list.

                                        The set of direct members is the intersection of the set of objects named in the member
                                        selection list with the set of objects for which the expression in the member selection filter
                                        evaluates to true. An empty member selection filter always evaluates to true; an empty
                                        member selection list is equivalent to specifying the set of all managed objects. If the
                                        member selection filter has a value which always evaluates to false, the set of direct
                                        members is empty.

                                        The verify membership status action request is evaluated on a best-effort basis, returning
                                        a result indicating whether the object for which membership status was requested was a
                                        member, was not a member, or could not be determined.

                                        The list membership action requests a best-effort determination of which object instances
                                        are members of this domain. The response contains the resulting list.

                                        The list direct membership action requests a best effort determination of which object
                                        instances are direct members of this domain. The response contains the resulting list.

                                        An object creation notification is emitted when an instance of this class is created.

                                        An object deletion notification is emitted when an instance of this class is deleted.

                                        The administrative aspect pointer provides the name of any related object in the
                                        administrative aspect role."
                                ;
                        ;
                        ATTRIBUTES
                                domainId                        GET SET-BY-CREATE NO-MODIFY,
                                memberSelectionList             GET ADD-REMOVE,
                                memberSelectionFilter           GET-REPLACE,
                                indirectMembershipSpecifierList GET ADD-REMOVE,
                                administrativeAspectPointer     GET-REPLACE;
                        ACTIONS
                                listDirectMembership,
                                listMembership,
                                verifyMembershipStatus;
                        NOTIFICATIONS
                                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectCreation,
                                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectDeletion;
                ;
        ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 5 };

administrativeAspect MANAGED OBJECT CLASS
        DERIVED FROM "CCITT Rec. X.721 | ISO/IEC 10165-2":top;
        CHARACTERIZED BY administrativeAspectPackage
                PACKAGE
                        BEHAVIOUR administrativeAspectBehaviour
                                BEHAVIOUR DEFINED AS
                                        "An instance of this class provides information describing administrative aspects of an
                                        object related to it.

                                        The administrative authority attribute describes the administrative authority responsible
                                        for the related object.

                                        The administrative contact information attribute describes the administrative contact
                                        associated with the related object.

                                        The administrative owner attribute describes the owner of the related object.
```

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```
                    The administrative specifier attribute describes the specifier of the related object, and
                    must be provided when an instance of this class is created.

                    The creation time attribute records the time at which this object was created.

                    The last update time attribute records the most recent time any of its administrative
                    authority, administrative contact information, administrative owner, or version identifier
                    attributes was modified. The initial value of the last update time attribute is the object's
                    time of creation.

                    The version identifier attribute provides version identification information for this object
                    instance.

                    The values of this object's attributes do not affect the operation of the related object
                    whose administrative aspects it describes.

                    An object creation notification is emitted when an instance of this class is created. An
                    object deletion notification is emitted when an instance of this class is deleted."
                ;
            ;
            ATTRIBUTES
                administrativeAspectId              GET SET-BY-CREATE NO-MODIFY,
                administrativeAuthority             GET-REPLACE,
                administrativeContactInformation    GET-REPLACE,
                administrativeOwner                 GET-REPLACE,
                administrativeSpecifier             GET SET-BY-CREATE,
                creationTime                        GET NO-MODIFY,
                lastUpdateTime                      GET NO-MODIFY,
                versionIdentifier                   GET-REPLACE;
            NOTIFICATIONS
                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectCreation,
                "CCITT Rec. X.721 | ISO/IEC 10165-2":objectDeletion;
        ;
    ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 6 };

policyViolationLogRecord MANAGED OBJECT CLASS
    DERIVED FROM "CCITT Rec. X.721 | ISO/IEC 10165-2":eventLogRecord;
    CHARACTERIZED BY policyViolationLogRecordPackage
        PACKAGE
            BEHAVIOUR policyViolationLogRecordBehaviour
                BEHAVIOUR DEFINED AS
                    "This log record records the receipt of a policy violation notification."
                ;
            ;
            ATTRIBUTES
                violatorName                GET,
                violatedPolicy              GET;
        ;
    ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 7 };

valueAssertionPolicy MANAGED OBJECT CLASS
    DERIVED FROM policy;
    CHARACTERIZED BY valueAsertionPolicyPackage
        PACKAGE
            BEHAVIOUR valueAssertionPolicyBehaviour
                BEHAVIOUR DEFINED AS
                    "This object class supports the ability to use value assertions specified like CMIS filters
                    to determine the policy.

                    The value of the policy is encapsulated in the assertion attribute, and the semantics of
                    specifying a policy in this mannner is described in the behaviour of the assertion
                    attribute."

                ;
            ;
            ATTRIBUTES
                assertion       GET-REPLACE;
        ;
    ;
REGISTERED AS { MDMPMF.mdmpmfManagedObject 8 };
```


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A.4 Definition of relationship mappings

This Recommendation | International Standard defines the following relationship mappings:

```
jurisdictionRelationshipMapping RELATIONSHIP MAPPING
        RELATIONSHIP CLASS jurisdictionRelationship;
        BEHAVIOUR domainRelationshipMappingBehaviour
                BEHAVIOUR DEFINED AS
                        "This is a mapping of the jurisdiction relationship class. A jurisdiction is a relationship object that binds
                        a single policy and a single domain. The existence of the jurisdiction is directly related to the existence of
                        the relationship object. The policy of the jurisdiction is set at creation time of the relationship object and
                        cannot be modified during the lifetime of the relationship object. The domain is set at the creation time
                        of the relationship object and cannot be modified during the lifetime of that object."
                ;
        ;
        RELATIONSHIP OBJECT jurisdiction;
                ROLE policyRole RELATED-CLASSES policy
                        REPRESENTED-BY RELATIONSHIP-OBJECT-USING-POINTER policyPointer,
                ROLE domainRole RELATED-CLASSES domain
                        REPRESENTED-BY RELATIONSHIP-OBJECT-USING-POINTER domainPointer;
                OPERATIONS MAPPING
                        ESTABLISH MAPS-TO-OPERATION CREATE OF RELATIONSHIP OBJECT,
                        TERMINATE MAPS-TO-OPERATION DELETE OF RELATIONSHIP OBJECT;
REGISTERED AS { MDMPMF.mdmpmfRelationshipMapping 1 };

administrativeAspectRelationshipMapping RELATIONSHIP MAPPING
        RELATIONSHIP CLASS administrativeAspectRelationship;
        BEHAVIOUR administrativeAspectRelationshipMappingBehaviour
                BEHAVIOUR DEFINED AS
                        "This is a mapping of the administrative aspect relationship class. The relationship is represented by a
                        relationship pointer, pointing from the administered object to the adminstrative aspect object. The
                        administered object role is not represented by any relationship representation, so there are no means of
                        inferring which administered objects are actually administered by the same administrative aspect
                        object."
                ;
        ;
        ROLE administrativeAspectRole RELATED-CLASSES administrativeAspect
                REPRESENTED-BY ATTRIBUTE administrativeAspectPointer,
        ROLE administeredObjectRole RELATED-CLASSES domain, jurisdiction, policy;
        OPERATIONS MAPPING
                ESTABLISH MAPS-TO-OPERATION ADD administrativeAspectPointer OF administeredObjectRole,
                TERMINATE MAPS-TO-OPERATION REMOVE administrativeAspectPointer OF
                        administeredObjectRole;
REGISTERED AS { MDMPMF.mdmpmfRelationshipMapping 2 };
```

A.5 Definition of attributes

This Recommendation | International Standard defines the following attributes:

```
administrativeAspectId ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.SimpleNameType;
        MATCHES FOR EQUALITY;
        BEHAVIOUR administrativeAspectIdBehaviour
                BEHAVIOUR DEFINED AS
                        "This is the distinguishing attribute of an administrative aspect object.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 1 };

administrativeAspectPointer ATTRIBUTE
        DERIVED FROM
                "ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996":participantPointer;
        BEHAVIOUR administrativeAspectPointerBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute represents the relationship between an object and its administrative aspects.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 2 };

administrativeAuthority ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.InformationString;
        BEHAVIOUR administrativeAuthorityBehaviour
                BEHAVIOUR DEFINED AS
```

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"This attribute provides a description of an administrative authority.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 3 };

administrativeContactInformation ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.InformationString;
BEHAVIOUR administrativeContactInformationBehaviour
BEHAVIOUR DEFINED AS
"This attribute provides contact information.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 4 };

administrativeOwner ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.InformationString;
BEHAVIOUR administrativeOwnerBehaviour
BEHAVIOUR DEFINED AS
"This attribute provides ownership information.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 5 };

administrativeSpecifier ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.InformationString;
BEHAVIOUR administrativeSpecifierBehaviour
BEHAVIOUR DEFINED AS
"This attribute provides a description of an administrative specifier.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 6 };

assertion ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.CMISFilter;
BEHAVIOUR assertionBehaviour
BEHAVIOUR DEFINED AS
"An assertion is specified in accordance with the description in 8.2.8

Every assertion is a boolean expression which evaluates to true or false.

A value assertion is specified in terms of a pair consisting of an identifier identifying the information whose value is to be tested, followed by a value to be used in performing the test, in the same form as the attribute value assertions defined for use in a CMIS filter.

To specify identifiers of asserted values, the following object identifier values are allocated in Annex A:

– operationType;
– errorType;
– notificationType;
– actionType;
– eventInfo;
– eventReply;
– actionInfo;
– actionReply.

Attribute value assertions are specified in the usual form, applying both to attribute oriented operations and notifications (using the WITH ATTRIBUTE ID construct). Assertions on other items of information, contained in either event replies, action info, and action replies can be achieved if the information is properly registered by use of a PARAMETER template.

A policy is constructed from value assertions in the same way as filters are constructed from Attribute Value Assertions (AVA), using the and, the or, and the not operators to combine nested policies. See CCITT Rec. X.720 | ISO/IEC 10165-1 (5.4) for details.

A policy violation occurs when the policy evaluates to *false*. No policy violation is possible for a policy containing zero rules.

An empty assertion always evaluates to *true*.

Any ordering in the actual evaluation of the filter items in the assertion (e.g. for optimization purposes) is an implementation issue."
;
;
REGISTERED AS { MDMPMF.mdmpmfAttribute 7 };

creationTime ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.TimeStamp;
BEHAVIOUR creationTimeBehaviour
BEHAVIOUR DEFINED AS
"This attribute records an object's time of creation. Its value is established when the object is created, and may not be modified.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 8 };

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```
domainId ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.SimpleNameType;
        MATCHES FOR EQUALITY;
        BEHAVIOUR domainIdBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute is the distinguishing attribute for a domain.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 9 };

domainPointer ATTRIBUTE
        DERIVED FROM
                "ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7: 1996":participantPointer;
        BEHAVIOUR domainPointerBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute represents the relationship between a jurisdiction and its domain.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 10 };

indirectMembershipSpecifierList ATTRIBUTE
        DERIVED FROM
                "ITU-T Rec. X.725 (1996) | ISO/IEC 10165-7: 1996":rolePointer;
        BEHAVIOUR indirectMembershipSpecifierListBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute lists the names of objects whose membership is of interest.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 11 };

jurisdictionId ATTRIBUTE
WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.SimpleNameType;
        MATCHES FOR EQUALITY;
        BEHAVIOUR jurisdictionIdBehaviour
                BEHAVIOUR DEFINED AS
                        "This is the distinguishing attribute of a jurisdiction object.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 12 };

lastUpdateTime ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.TimeStamp;
        BEHAVIOUR lastUpdateTimeBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute records the time of the most recent modification of an object, where what constitutes a
                        modification is recorded in the class definition. This attribute is always read-only.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 13 };

memberSelectionFilter ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.CMISFilter;
        BEHAVIOUR memberSelectionFilterBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute represents constraints on membership";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 14 };

memberSelectionList ATTRIBUTE
        DERIVED FROM "ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7: 1996":rolePointer;
        BEHAVIOUR memberSelectionListBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute names the members of a set of managed objects that are of potential interest.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 15 };

policyId ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.SimpleNameType;
        MATCHES FOR EQUALITY;
        BEHAVIOUR policyIdBehaviour
                BEHAVIOUR DEFINED AS
                        "This is the distinguishing attribute of a policy.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 16 };

policyPointer ATTRIBUTE
        DERIVED FROM
                "ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7: 1996":participantPointer;
        BEHAVIOUR policyPointerBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute represents the relationship between a jurisdiction and its policy.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 17 };
```

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

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```
versionIdentifier ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.InformationString;
        BEHAVIOUR versionIdentifierBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute describes the version of an object.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 18 };

violatedPolicy ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.ObjectInstance;
        MATCHES FOR EQUALITY;
        BEHAVIOUR violatedPolicyBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute identifies a policy which has been violated.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 19 };

violatorName ATTRIBUTE
        WITH ATTRIBUTE SYNTAX MdmpmfASN1Module.ObjectInstance;
        MATCHES FOR EQUALITY;
        BEHAVIOUR violatorNameBehaviour
                BEHAVIOUR DEFINED AS
                        "This attribute identifies an object which has violated a policy.";;
REGISTERED AS { MDMPMF.mdmpmfAttribute 20 };
```

A.6 Definition of notifications

This Recommendation | International Standard defines the following notifications:

```
policyViolation NOTIFICATION
        BEHAVIOUR policyViolationBehaviour
                BEHAVIOUR DEFINED AS
                        "The policy violation notification is emitted when a policy violation has been detected. The violated
                        policy component identifies the policy which has been violated; the violator name component identifies
                        the object which violated the policy.";;
        WITH INFORMATION SYNTAX MdmpmfASN1Module.PolicyViolation
                AND ATTRIBUTE IDS
                        violatorName        violatorName,
                        violatedPolicy      violatedPolicy;
REGISTERED AS { MDMPMF.mdmpmfNotification 1};
```

A.7 Definition of actions

This Recommendation | International Standard defines the following actions:

```
applyOperationToMembership ACTION
        BEHAVIOUR applyOperationToMembershipBehaviour
                BEHAVIOUR DEFINED AS
                        "This action is used to apply a specified operation on all the members of the domain participating in
                        the domainRole role in the jurisdictionRelationship represented by the enhancedJurisdiction.

                        The operation to be performed is specified in the request parameter, and can be either a get of attribute
                        value(s), a set of attribute value(s) (replace, addValues, removeValues or setToDefault) or an action. The
                        request parameter is structured to contain the relevant argument as carried in the CMIP protocol,
                        GetArgument, SetArgument or ActionArgument.

                        The results of applying the operation to the membership of the domain are collected and reported in the
                        reply. The applyOperationToMembership action is deemed to have failed only if performing of
                        operations on the membership has not been attempted, i.e. the action will report success even if all the
                        performed operations have failed.

                        The results of an attribute oriented applied operation are reported using one GetResult or SetResult
                        alternative component of the OperationResult for each of the objects where the applied operation has
                        succeeded, and one GetListError of SetListError alternative component for each object where the
                        applied operation has (partially) failed.

                        The results of an action are reported using the ActionResult alternative component of the
                        OperationResult, if the action succeeded. Actions that have failed (and failed attribute oriented
                        operations that cannot be appropriately reported using GetListError or SetListError) are reported
                        using the CommonError alternative component of the OperationResult. The result reported in the
                        CommonError is either the appropriate CMIP error or any specific error defined as applicable to the
                        operation and managed object in question.
```


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```
                    If one or more managed objects do not respond to the operation applied within reasonable time, a time-
                    out error as specified in the timeOutError parameter may be reported in the reply.";;
        MODE CONFIRMED;
        PARAMETERS timeOutError;
        WITH INFORMATION SYNTAX MdmpmfASN1Module.ApplyOperationToMembershipRequest;
        WITH REPLY SYNTAX MdmpmfASN1Module.ApplyOperationToMembershipReply;
REGISTERED AS { MDMPMF.mdmpmfAction 1 };
determineViolationStatus ACTION
        BEHAVIOUR determineViolationStatusBehaviour
                BEHAVIOUR DEFINED AS
                        "This action is used to request an assessment of the violation status of the object whose name is
                        provided as a parameter in the action request. The response contains the results of this assessment.";;
        MODE CONFIRMED;
        WITH INFORMATION SYNTAX MdmpmfASN1Module.DetermineViolationStatusRequest;
        WITH REPLY SYNTAX MdmpmfASN1Module.DetermineViolationStatusReply;
REGISTERED AS { MDMPMF.mdmpmfAction 2 };

listDirectMembership ACTION
        BEHAVIOUR listDirectMembershipBehaviour
                BEHAVIOUR DEFINED AS
                        "This action is used to request a list of the direct members of a domain. All objects identified in the
                        response must satisfy the criteria for direct membership in the domain.";;
        MODE CONFIRMED;
        WITH REPLY SYNTAX MdmpmfASN1Module.ListMembershipReply;
REGISTERED AS { MDMPMF.mdmpmfAction 3 };

listMembership ACTION
        BEHAVIOUR listMembershipBehaviour
                BEHAVIOUR DEFINED AS
                        "This action is used to request a list of the members of a domain. All objects identified in the
                        membership parameter of the response must satisfy the domain membership criteria. The
                completeness parameter of the response identifies whether the list of members is known to be a
                complete list, is known to be an incomplete list, or if the completeness of the list is not known.";;    MODE
CONFIRMED;
        WITH REPLY SYNTAX MdmpmfASN1Module.ListMembershipReply;
REGISTERED AS {MDMPMF.mdmpmfAction 4 };

verifyMembershipStatus ACTION
        BEHAVIOUR verifyMembershipBehaviour
                BEHAVIOUR DEFINED AS
                        "Requests a determination of the membership status of an object. The response indicates whether the
                        object in question is a member, is not a member, or its status could not be determined.";;
        MODE CONFIRMED;
        WITH INFORMATION SYNTAX MdmpmfASN1Module.VerifyMembershipStatusRequest;
        WITH REPLY SYNTAX MdmpmfASN1Module.VerifyMembershipStatusReply;
REGISTERED AS { MDMPMF.mdmpmfAction 5 };
```

A.8 Definition of Name Bindings

This Recommendation | International Standard defines the following name bindings:

```
domain-System NAME BINDING
        SUBORDINATE OBJECT CLASS domain AND SUBCLASSES;
                NAMED BY SUPERIOR OBJECT CLASS "CCITT Rec. X.721 | ISO/IEC 10165-2":system AND
                        SUBCLASSES;
        WITH ATTRIBUTE domainId;
        CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
        DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {MDMPMF.mdmpmfNameBinding 1};

policy-System NAME BINDING
        SUBORDINATE OBJECT CLASS policy AND SUBCLASSES;
        NAMED BY SUPERIOR OBJECT CLASS "CCITT Rec. X.721 | ISO/IEC 10165-2":system AND
                SUBCLASSES;
        WITH ATTRIBUTE policyId;
        CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
        DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {MDMPMF.mdmpmfNameBinding 2};
```

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```
jurisdiction-System NAME BINDING
        SUBORDINATE OBJECT CLASS jurisdiction AND SUBCLASSES;
        NAMED BY SUPERIOR OBJECT CLASS "CCITT Rec. X.721 | ISO/IEC 10165-2":system AND
                SUBCLASSES;
        WITH ATTRIBUTE jurisdictionId;
        CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
        DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {MDMPMF.mdmpmfNameBinding 3};

administrativeAspect-System NAME BINDING
        SUBORDINATE OBJECT CLASS administrativeAspect AND SUBCLASSES;
        NAMED BY SUPERIOR OBJECT CLASS "CCITT Rec. X.721 | ISO/IEC 10165-2":system AND
                SUBCLASSES;
        WITH ATTRIBUTE administrativeAspectId;
        CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
        DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {MDMPMF.mdmpmfNameBinding 4 };
```

A.9 Definition of parameters

This Recommendation | International Standard defines the following parameters:

```
timeoutError PARAMETER
        CONTEXT MdmpmfASN1Module.CommonError.errorValue;
        WITH SYNTAX MdmpmfASN1Module.Nothing;
        BEHAVIOUR timeoutErrorBehaviour
                BEHAVIOUR DEFINED AS
                        "The timeOut parameter registers a value to be reported in the CommonError reply of the
                        applyOperationToMembership, in cases where the reply to an operation does not arrive within
                        reasonable time.

                        Establishing of appropriate time-out periods is done by the implementation and may be specified in the
                        conformance claim associated with the timeOut parameter. Furthermore the enhancedJurisdiction
                        class may be specialized to provide the ability to manage time-out periods.

                        The syntax of the parameter is a NULL, and only used to allow registration of the parameter. It shall
                        not be transmitted in the CommonError";
        ;
REGISTERED AS { MDMPMF.mdmpmfParameter 1 };
```

A.10 ASN.1

This Recommendation | International Standard defines the following ASN.1 module:

```
MdmpmfASN1Module        { joint-iso-itu-t ms(9) function(2) part19(19) asn1Module(2) 2}

DEFINITIONS     ::=     BEGIN

        IMPORTS

        ObjectInstance, CMISFilter, ActionArgument, GetArgument, SetArgument
                FROM CMIP-1 {joint-iso-itu-t ms(9) cmip(1) modules(0) protocol(3) }

        SimpleNameType
                FROM Attribute-ASN1Module { joint-iso-itu-t ms(9) smi(3) part2(2) asn1Module(2) 1
                }

        CommonError, OperationResult
                FROM Schedule-ASN1Module { joint-iso-itu-t ms(9) function(2) part15(15) modules(1)}

        TimeStamp
                FROM Time-ASN1Module { joint-iso-itu-t ms(9) ms(9) smi(3) part20(20) asn1Module(2)
                1 };

        ApplyOperationToMembershipReply ::= SEQUENCE OF OperationResult

        ApplyOperationToMembershipRequest ::= CHOICE {

                                                set     [0] IMPLICIT SetArgument,
                                                action  [1] IMPLICIT ActionArgument,
                                                get     [2] IMPLICIT GetArgument }
```


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```
Completeness ::= ENUMERATED {          completenessUnknown (0),
                                       knownComplete (1),
                                       knownNotComplete (2) }

DetermineViolationStatusReply ::= ENUMERATED {     unknown (1),
                                                   no-violation (2),
                                                   violation-detected (3),
                                                   non-member (4) }

DetermineViolationStatusRequest ::= ObjectInstance

InformationString ::= GeneralString

ListMembershipReply ::= SEQUENCE {          completeness        Completeness,
                                            membership          Membership }

Membership    ::= SET OF ObjectInstance

MembershipStatus ::= ENUMERATED {          unknown (1),
                                           member (2),
                                           non-member (3) }

Nothing ::= NULL

PolicyViolation ::= SEQUENCE {             violatorName    ObjectInstance,
                                           violatedPolicy  ObjectInstance }

VerifyMembershipStatusReply ::= SEQUENCE {      objectName          ObjectInstance,
                                                membershipStatus    MembershipStatus
                                           }

VerifyMembershipStatusRequest ::= ObjectInstance

ViolationStatus ::= ENUMERATED {           unknown (1),
                                           no-violation (2),
                                           violation-detected (3) }

END
```


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Annex B

MCS proforma

(This annex forms an integral part of this Recommendation | International Standard)

B.1 Introduction

B.1.1 Purpose and structure

The Management Conformance Summary (MCS) is a statement by a supplier that identifies an implementation and provides information on whether the implementation claims conformance to any of the listed set of documents that specify conformance requirements to OSI management.

The MCS proforma is a document in the form of a questionnaire that when completed by the supplier of an implementation becomes the MCS.

B.1.2 Instructions for completing the MCS proforma to produce an MCS[2)]

The supplier of the implementation shall enter an explicit statement in each of the boxes provided. Specific instruction is provided in the text which precedes each table.

B.1.3 Symbols, abbreviations and terms

For all annexes of this Recommendation | International Standard, the following common notations, defined in ITU-T Rec. X.291 and ISO/IEC 9646-2 and ITU-T Rec. X.296 and ISO/IEC 9646-7, are used for the Status column:

- m Mandatory
- o Optional
- c Conditional
- x Prohibited
- – Not applicable or out of scope

NOTE 1 – 'c', 'm', and 'o' are prefixed by "c:" when nested under a conditional or optional item of the same table.

NOTE 2 – 'o' may be suffixed by ".N" (where N is a unique number) for selectable options among a set of status values. Support of at least one of the choices (from the items with the same value of N) is required.

For all annexes of this Recommendation | International Standard, the following common notations, defined in ITU-T Rec. X.291 and ISO/IEC 9646-2 and ITU-T Rec. X.296 and ISO/IEC 9646-7, are used for the Support column:

- Y Implemented
- N Not implemented
- – No answer required
- Ig The item is ignored (i.e. processed syntactically but not semantically)

B.1.4 Table format

Some of the tables in this Recommendation | International Standard have been split because the information is too wide to fit on the page. Where this occurs, the index numbers of the first block of columns are the index numbers of the corresponding rows of the remaining blocks of columns. A complete table reconstructed from the constituent parts should have the following layout:

Index	First block of columns	Second block of columns	Etc.

In this Recommendation | International Standard the constituent parts of the table appear consecutively, starting with the first block of columns.

2) Instructions for MCS proforma are specified in ITU-T Rec. X.724 x ISO 10165-6.

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When a table with subrows is too wide to fit on a page, the continuation table(s) have been constructed with index numbers identical to the index numbers in the corresponding rows of the first table, and with subindex numbers corresponding to the subrows within each indexed row. For example, if Table X.1 has 2 rows and the continuation of Table X.1 has 2 subrows for each row, the tables are presented as follows:

Table X.1 – Title

					Support		
Index	A	B	C	D	E	F	G
1	a	b	–				
2	a	b	–				

Table X.1 *(continued)*

Index	Subindex	H	I	J	K	L
1	1.1	h	i	j		
	1.2	h	i	j		
2	2.1	h	i	j		
	2.1	h	i	j		

A complete table reconstructed from the constituent parts should have the following layout:

					Support								
Index	A	B	C	D	E	F	G	Subindex	H	I	J	K	L
1	a	b	–					1.1	h	i	j		
								1.2	h	i	j		
2	a	b	–					2.1	h	i	j		
								2.2	h	i	j		

References made to cells within tables shall be interpreted as references within reconstructed tables. In the example above, the reference X.1/1d corresponds with the blank cell in column G for row with Index 1, and X.1/1.2b corresponds with the blank cell in column L for row with Subindex 1.2.

B.2 Identification of the implementation

B.2.1 Date of statement

The supplier of the implementation shall enter the date of this statement in the box below. Use the format DD-MM-YYYY.

Date of statement

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B.2.2 Identification of the implementation

The supplier of the implementation shall enter information necessary to uniquely identify the implementation and the system(s) in which it may reside, in the box below.

B.2.3 Contact

The supplier of the implementation shall provide information on whom to contact if there are any queries concerning the content of the MCS or any referenced conformance statement, in the box below.

B.3 Identification of the Recommendations | International Standards in which the management information is defined

The supplier of the implementation shall enter the title, reference number and date of the publication of the Recommendations | International Standards which specify the management information to which conformance is claimed, in the box below.

Recommendations | International Standards to which conformance is claimed

B.3.1 Technical corrigenda implemented

The supplier of the implementation shall enter the reference numbers of implemented technical corrigenda which modify the specification in the identified Recommendations | International Standards, in the box below.

B.3.2 Amendments implemented

The supplier of the implementation shall state the titles and reference numbers of implemented addenda to the identified Recommendations | International Standards, in the box below.

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B.4 Management conformance summary

The supplier of the implementation shall state the capabilities and features supported and provide a summary of conformance claims to Recommendations | International Standards using the tables in this annex.

The supplier of the implementation shall specify the roles that are supported, in Table B.1.

Table B.1 – Roles

Index	Roles supported	Status	Support	Additional information
1	Manager role support	o.1		
2	Agent role support	o.1		

The supplier of the implementation shall specify support for the systems management functional unit, in Table B.2.

Table B.2 — Systems management functional unit

		Manager		Agent		
Index	Systems management functional unit name	Status	Support	Status	Support	Additional information
1	Membership query functional unit	c1		c2		
2	Policy violation functional unit	c1		c2		
3	Operation functional unit	c1		c2		
c1: if B.1/1a then o else –. c2: if B.1/2a then o else –.						

The supplier of the implementation shall specify support for management information in the manager role, in Table B.3.

Table B.3 — Manager role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Membership listing service	c3		
2	Direct membership listing service	c3		
3	Membership verification service	c3		
4	Violation status determination service	c4		
5	Policy violation notification service	c4		
6	Apply operation to membership	c5		
7	Operations on managed objects	c6		
c3: if B.2/1a then m else (if B.1/1a then o.2 else –). c4: if B.2/2a then m else (if B.1/1a then o.2 else –). c5: if B.2/3a then m else (if B.1/1a then o.2 else –). c6: if B.1/1a then o.2 else – NOTE – Manager role minimum conformance requires support for at least one of the items identified in Table B.3. Support for the functional unit identified in Table B.2 mandates support for some of those items. Conditions c3 and c4 express both of these requirements.				

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The supplier of the implementation shall specify support for management information in the agent role, in Table B.4.

Table B.4 — Agent role minimum conformance requirement

Index	Item	Status	Support	Table reference	Additional information
1	policy	c7			
2	scheduledPolicy	c7			
3	jurisdiction	o			
4	enhancedJurisdiction	o			
5	domain	c8			
6	administrativeAspect	o			
7	policyViolationLogRecord	c9			
8	valueAssertionPolicy	c7			

c7: if B.4/3a or B.4/4a then o.4 else o.3.

c8: if B.4/3a or B.4/4a then m else o.3.

c9: if B.1/2a and B.5/1a then m else –.

NOTE 1 – Conditions c7 and c8 together implies that minimum conformance requires at least support for either the domain object or one of the policy objects (policy, scheduledPolicy or valueAssertionPolicy). Additionally if one of the jurisdiction objects is supported, both the domain and one of the policy objects must also be supported.

NOTE 2 – Condition c9 makes it mandatory, if logging is supported, to support the event log records associated with the notifications supported.

NOTE 3– The Table reference column in this table is the notification reference of the MOCS supplied by the supplier of the managed object which claims to import the notification from this Recommendation | International Standard.

Table B.5 – Logging of event records

Index		Status	Support	Additional information
1	Does the implementation support logging of event records in agent role?	c8		

c8: if B.1/2a then o else –.

NOTE 1 – Conformance to this Recommendation | International Standard does not require conformance to CCITT Rec. X.735 | ISO/IEC 10164-6.

The supplier of the implementation shall provide information on claims of conformance to any of the Recommenda-tions | International Standards summarized in the following tables. For each Recommendation | International Standard that the supplier of the implementation claims conformance to, the corresponding conformance statement(s) shall be completed, or referenced by, the MCS. The supplier of the implementation shall complete the Support, Table numbers and Additional information columns.

In Tables B.6 to B.9, the Status column is used to indicate whether the supplier of the implementation is required to complete the referenced tables or referenced items. Conformance requirements are as specified in the referenced tables or referenced items and are not changed by the value of the MCS Status column. Similarly, the Support column is used by the supplier of the implementation to indicate completion of the referenced tables or referenced items.

NOTE 2 – Conformance to the MAPDUs defined in this Recommendation | International Standard can be claimed by completing the corresponding tables in the MICS and MOCS annexes of the referenced standards.

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Table B.6 – PICS support summary

Index	Identification of the document that includes the PICS proforma	Table numbers of PICS proforma	Description	Constraints and values	Status	Support	Table numbers of PICS	Additional information
1	"CCITT Rec. X.730 (1992) | ISO/IEC 10164-1:1993"	Annex E all tables	SM application context	OBJECT IDENTIFIER	o			

Table B.7– MICS support summary

Index	Identification of the document that includes the MICS proforma	Table numbers of MICS proforma	Description	Constraints and values	Status	Support	Table numbers of MICS	Additional information
1	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	Table C.1	attributes	–				
2	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	Table C.2	notifications					
3	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	Table C.3	actions					

Table B.8 – MOCS support summary

Index	Identification of the document that includes the MOCS proforma	Table numbers of MOCS proforma	Description	Constraints and values	Status	Support	Table numbers of MOCS	Additional information
1	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.1.1 - D.1.9	policy				D.1.1 - D.1.9	
2	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.2.1 - D.2.9	scheduledPolicy				D.2.1 - D.2.9	
3	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.3.1 - D.3.9	jurisdiction				D.3.1 - D.3.9	
4	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.4.1 - D.4.9	enhancedJurisdiction				D.4.1 - D.4.9	
5	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.5.1 - D.5.9	domain				D.5.1 - D.5.9	
6	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.6.1 - D.6.9	administrativeAspect				D.6.1 - D.6.9	
7	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.7.1 - D.7.9	policyViolationLogRecord				D.7.1 - D.7.9	
8	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	D.8.1 - D.8.9	valueAssertionPolicy				D.8.1 - D.8.9	

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Table B.9 – MRCS support summary

Index	Identification of the document that includes the MRCS proforma	Table numbers of MRCS proforma	Description	Constraints and values	Status	Support	Table numbers of MRCS	Additional information
1	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.1	policy-System				E.1	
2	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.2	policy-System				E.2	
3	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.3	jurisdiction-System				E.3	
4	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996"	E.3	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": genericRelationship Object-system				E.3	
5	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.4	jurisdiction-System				E.4	
6	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996"	E.4	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": genericRelationship Object-system				E.4	
7	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.5	domain-System				E.5	
8	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.6	administrativeAspect-System				E.6	
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992"	E.7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": logRecord-log				E.7	
10	"ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"	E.8	policy-System				E.8	

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Annex C

MICS proforma

(This annex forms an integral part of this Recommendation | International Standard)

C.1 Introduction

The purpose of this MICS proforma is to provide a mechanism for a supplier of an implementation which claims conformance, in the manager role, to management information specified in this Recommendation | International Standard, to provide conformance information in a standard form.

C.2 Instructions for completing the MICS proforma to produce an MICS

The MICS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T Rec. X.724 | ISO/IEC 10165-6. In addition to the general guidance given in ITU-T Rec. X.724 | ISO/IEC 10165-6, the Additional information column shall be used to identify the object classes for which the management operations are supported. The supplier of the implementation shall state which items are supported in the tables below and if necessary, provide additional information.

C.3 Statement of conformance to the management information

C.3.1 Attributes

The specifier of a manager role implementation that claims to support the attributes specified in this Recommendation | International Standard shall import a copy of Table C.1 and complete it.

Table C.1 – Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		o		o		o		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	o		o		o		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	o		o		–		–		–		–		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		o		–		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		o		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		o		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		o		–		–		–		–		
9	"ITU-T Rec. X.746 (1995) | ISO/IEC 10164-15:1995": externalSchedulerName	(not registered)		o		o		o		–		–		–		
10	policyId	{2 9 2 19 7 16}	CHOICE NO-MODIFY	o		o		–		–		–		–		
11	domainPointer	{2 9 2 19 7 10}	SET OF CHOICE	o		o		–		–		–		–		
12	jurisdictionId	{2 9 2 19 7 12}	CHOICE NO-MODIFY	o		o		–		–		–		–		
13	policyPointer	{2 9 2 19 7 17}	SET OF CHOICE	o		o		–		–		–		–		

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Table C.1 (*concluded*)

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
14	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipClass	{2 9 3 7 7 2}	OBJECT IDENTIFIER	o		o		–		–		–		–		
15	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipMapping	{2 9 3 7 7 3}	OBJECT IDENTIFIER	o		o		–		–		–		–		
16	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipName	{2 9 3 7 7 1}	CHOICE	o		o		–		–		–		–		
17	domainId	{2 9 2 19 7 9}	CHOICE NO-MODIFY	o		o		–		–		–		–		
18	indirectMembershipSpecifierList	{2 9 2 19 7 11}		o		o		–		o		o		–		
19	memberSelectionFilter	{2 9 2 19 7 14}	CHOICE	o		o		o		–		–		–		
20	memberSelectionList	{2 9 2 19 7 15}		o		o		–		o		o		–		
21	administrativeAspectId	{2 9 2 19 7 1}	CHOICE NO-MODIFY	o		o		–		–		–		–		
22	administrativeAuthority	{2 9 2 19 7 3}	GeneralString	o		o		o		–		–		–		
23	administrativeContactInformation	{2 9 2 19 7 4}	GeneralString	o		o		o		–		–		–		
24	administrativeOwner	{2 9 2 19 7 5}	GeneralString	o		o		o		–		–		–		
25	administrativeSpecifier	{2 9 2 19 7 6}	GeneralString	o		o		–		–		–		–		
26	creationTime	{2 9 2 19 7 8}	TimeStamp NO-MODIFY	o		o		–		–		–		–		
27	lastUpdateTime	{2 9 2 19 7 13}	TimeStamp NO-MODIFY	o		o		–		–		–		–		
28	versionIdentifier	{2 9 2 19 7 18}	GeneralString	o		o		o		–		–		–		
29	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		o		–		–		–		–		
30	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalText	{2 9 3 2 7 7}	GraphicString	o		o		–		–		–		–		
31	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		o		–		–		–		–		
32	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventTime	{2 9 3 2 7 13}	GeneralizedTime	o		o		–		–		–		–		
33	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventType	{2 9 3 2 7 14}	CHOICE	o		o		–		–		–		–		
34	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": logRecordId	{2 9 3 2 7 3}	CHOICE	o		o		–		–		–		–		
35	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": loggingTime	{2 9 3 2 7 59}	GeneralizedTime	o		o		–		–		–		–		
36	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": managedObjectClass	{2 9 3 2 7 60}	CHOICE	o		o		–		–		–		–		
37	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": managedObjectInstance	{2 9 3 2 7 61}	CHOICE	o		o		–		–		–		–		
38	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		o		–		–		–		–		
39	violatedPolicy	{2 9 2 19 7 19}	CHOICE	o		o		–		–		–		–		
40	violatorName	{2 9 2 19 7 20}	CHOICE	o		o		–		–		–		–		
41	assertion	{2 9 2 19 7 7}	CHOICE	o		o		o		–		–		–		

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C.3.2 Notifications

The specifier of a manager role implementation that claims to support the notifications specified in this Recommen-dation | International Standard shall import a copy of Table C.2 and complete it.

Table C.2 – Notification support

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		o				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		o				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		

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Table C.2 (*continued*)

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	policyViolation	{2 9 2 19 10 1}		o				3.1	PolicyViolation		**Information Syntax** SEQUENCE	m		
								3.1.1	violatorName	{2 9 2 19 7 20}	CHOICE	m		
								3.1.1.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.1.2	value	–	ANY	c:m		
								3.1.1.2	nonSpecificForm	–	OCTET STRING	o.5		
								3.1.1.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.3.2	value	–	ANY	c:m		
								3.1.2	violatedPolicy	{2 9 2 19 7 19}	CHOICE	m		
								3.1.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.6		
								3.1.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.1.2	value	–	ANY	c:m		
								3.1.2.2	nonSpecificForm	–	OCTET STRING	o.6		
								3.1.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.6		
								3.1.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.3.2	value	–	ANY	c:m		

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Table C.2 (*concluded*)

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		o				4.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								4.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								4.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		
								4.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.5		
								4.1.2.2	localForm	–	INTEGER	c:o.5		
								4.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								4.1.4.1	attributeID	–	CHOICE	m		
								4.1.4.1.1	globalForm	–	OBJECT IDENTIFIER	o.6		
								4.1.4.1.2	localForm	–	INTEGER	o.6		
								4.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								4.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								4.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								4.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								4.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								4.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								4.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								4.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.1.2	value	–	ANY	c:m		
								4.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.7		
								4.1.5.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								4.1.5.2.4.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.3.2	value	–	ANY	c:m		
								4.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								4.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								4.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								4.1.7.2	significance	–	BOOLEAN	c:o		
								4.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

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C.3.3 Actions

The specifier of a manager role implementation that claims to support the actions specified in this Recommendation | International Standard shall import a copy of Table C.3 and complete it.

Table C.3 – Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	applyOperationToMembership	{2 9 2 19 8 1}	timeOutError	o			1.1	ApplyOperationToMembershipRequest	**Information Syntax** CHOICE	m		
							1.1.1	set	SetArgument	o.1		
							1.1.2	action	ActionArgument	o.1		
							1.1.3	get	GetArgument	o.1		
							1.2	ApplyOperationToMembershipReply	**Reply Syntax** SEQUENCE OF OperationResult	m		
2	determineViolationStatus	{2 9 2 19 8 2}		o			2.1	DetermineViolationStatusRequest	**Information Syntax** CHOICE	m		
							2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							2.1.1.1	type	OBJECT IDENTIFIER	c:m		
							2.1.1.2	value	ANY	c:m		
							2.1.2	nonSpecificForm	OCTET STRING	o.1		
							2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							2.1.3.2	value	ANY	c:m		
							2.2	DetermineViolationStatusReply	**Reply Syntax** ENUMERATED	m		
3	listMembership	{2 9 2 19 8 4}		o			3.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							3.1.1	completeness	ENUMERATED	m		
							3.1.2	membership	SET OF CHOICE	m		
							3.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							3.1.2.1.1	type	OBJECT IDENTIFIER	c:m		
							3.1.2.1.2	value	ANY	c:m		
							3.1.2.2	nonSpecificForm	OCTET STRING	o.2		
							3.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							3.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							3.1.2.3.2	value	ANY	c:m		

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Table C.3 (*concluded*)

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
4	verifyMembershipStatus	{2 9 2 19 8 5}		o			4.1	VerifyMembershipStatusRequest	**Information Syntax** CHOICE	m		
							4.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							4.1.1.1	type	OBJECT IDENTIFIER	c:m		
							4.1.1.2	value	ANY	c:m		
							4.1.2	nonSpecificForm	OCTET STRING	o.3		
							4.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							4.1.3.1	type	OBJECT IDENTIFIER	c:m		
							4.1.3.2	value	ANY	c:m		
							4.2	VerifyMembershipStatusReply	**Reply Syntax** SEQUENCE	m		
							4.2.1	objectName	CHOICE	m		
							4.2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							4.2.1.1.1	type	OBJECT IDENTIFIER	c:m		
							4.2.1.1.2	value	ANY	c:m		
							4.2.1.2	nonSpecificForm	OCTET STRING	o.4		
							4.2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							4.2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							4.2.1.3.2	value	ANY	c:m		
							4.2.2	membershipStatus	ENUMERATED	m		
5	listDirectMembership	{2 9 2 19 8 3}		o			5.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							5.1.1	completeness	ENUMERATED	m		
							5.1.2	membership	SET OF CHOICE	m		
							5.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							5.1.2.1.1	type	OBJECT IDENTIFIER	c:m		
							5.1.2.1.2	value	ANY	c:m		
							5.1.2.2	nonSpecificForm	OCTET STRING	o.1		
							5.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							5.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							5.1.2.3.2	value	ANY	c:m		

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Annex D

MOCS proforma

(This annex forms an integral part of this Recommendation | International Standard)

D.1 Introduction

The purpose of this MOCS proforma is to provide a mechanism for a supplier of an implementation which claims conformance to a managed object class to provide conformance information in a standard form.

D.2 Instructions for completing the MOCS proforma to produce a MOCS

The supplier of the implementation shall state which items are supported in the tables below and if necessary provide additional information.

D.2.1 Statement of conformance to the managed object class

The MOCS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T-Rec. X.724 | ISO/IEC 10165-6. The supplier of the implementation shall state which items are supported in tables below and if necessary, provide additional information.

These tables were generated mechanically from the GDMO templates, with additions and clarifications added by hand.

Tables are numbered consistently for all classes, that is Table D.x.1 for Managed object class support, D.x.3 for Package support, etc. To preserve this numbering scheme, table numbers are allocated, even if a particular class does not have any of the corresponding properties.

D.3 policy "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.1.1 to D.1.9.

Table D.1.1 – policy Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	policy	{2 9 2 19 3 1}		

Table D.1.2 – policy Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

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Table D.1.3 – policy Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
3	policyPackage		Mandatory	m		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

Table D.1.4 – policy Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	m		m		m		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	m		m		–		–		–		–		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
9	policyId	{2 9 2 19 7 16}	CHOICE NO-MODIFY	m		m		–		–		–		–		

Table D.1.5 – policy Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": state	{2 9 3 2 8 1}		m		–		

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Table D.1.6 – policy Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	determineViolationStatus	{2 9 2 19 8 2}		m			1.1	DetermineViolationStatusRequest	**Information Syntax** CHOICE	m		
							1.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.1.1	type	OBJECT IDENTIFIER	c:m		
							1.1.1.2	value	ANY	c:m		
							1.1.2	nonSpecificForm	OCTET STRING	o.1		
							1.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.3.1	type	OBJECT IDENTIFIER	c:m		
							1.1.3.2	value	ANY	c:m		
							1.2	DetermineViolationStatusReply	**Reply Syntax** ENUMERATED	m		

Table D.1.7 – policy Notification support

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		

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Table D.1.7 – policy Notification support *(continued)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		m				3.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								3.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								3.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		

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Table D.1.7 – policy Notification support *(concluded)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								3.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.5		
								3.1.2.2	localForm	–	INTEGER	c:o.5		
								3.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								3.1.3.1	attributeID	–	CHOICE	m		
								3.1.3.1.1	globalForm	–	OBJECT IDENTIFIER	o.6		
								3.1.3.1.2	localForm	–	INTEGER	o.6		
								3.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								3.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								3.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								3.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								3.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								3.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								3.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								3.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.1.2	value	–	ANY	c:m		
								3.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.7		
								3.1.5.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								3.1.5.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.3.2	value	–	ANY	c:m		
								3.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								3.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								3.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								3.1.7.2	significance	–	BOOLEAN	c:o		
								3.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

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Table D.1.8 – policy Parameter support

(There are no parameters specified for this managed object class.)

Table D.1.9 – policy Conditions

Condition number	Condition	Reference
c1	If D.1.3/2 then m else –	"any registered package, other than this package has been instantiated"

D.4 scheduledPolicy "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997" (partial)

Tables D.2.1 to D.2.9.

Table D.2.1 – scheduledPolicy Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	scheduledPolicy	{2 9 2 19 3 2}		

Table D.2.2 – scheduledPolicy Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

Table D.2.3 – scheduledPolicy Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	dutySchedulePackage		Mandatory	m		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
4	policyPackage		Mandatory	m		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

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Table D.2.4 – scheduledPolicy Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	m		m		m		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	m		m		–		–		–		–		
5	"ITU-T Rec. X.746 (1995) | ISO/IEC 10164-15:1995": externalSchedulerName	(not registered)		m		m		m		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
10	policyId	{2 9 2 19 7 16}	CHOICE NO-MODIFY	m		m		–		–		–		–		

Table D.2.5 – scheduledPolicy Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": state	{2 9 3 2 8 1}		m		–		

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Table D.2.6 – scheduledPolicy Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	determineViolation Status	{2 9 2 19 8 2}		m			1.1	DetermineViolationStatusRequest	**Information Syntax** CHOICE	m		
							1.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.1.1	type	OBJECT IDENTIFIER	c:m		
							1.1.1.2	value	ANY	c:m		
							1.1.2	nonSpecificForm	OCTET STRING	o.1		
							1.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.3.1	type	OBJECT IDENTIFIER	c:m		
							1.1.3.2	value	ANY	c:m		
							1.2	DetermineViolationStatusReply	**Reply Syntax** ENUMERATED	m		

Table D.2.7 – scheduledPolicy Notification support

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		

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Table D.2.7 – scheduledPolicy Notification support *(continued)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		m				3.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								3.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								3.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		
								3.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.5		
								3.1.2.2	localForm	–	INTEGER	c:o.5		
								3.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								3.1.3.1	attributeID	–	CHOICE	m		

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Table D.2.7 – scheduledPolicy Notification support *(concluded*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								3.1.3.1.1	globalForm	–	OBJECT IDENTIFIER	o.6		
								3.1.3.1.2	localForm	–	INTEGER	o.6		
								3.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								3.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								3.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								3.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								3.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								3.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								3.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								3.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.1.2	value	–	ANY	c:m		
								3.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.7		
								3.1.5.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								3.1.5.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.3.2	value	–	ANY	c:m		
								3.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								3.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								3.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								3.1.7.2	significance	–	BOOLEAN	c:o		
								3.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.2.8 – scheduledPolicy Parameter support

(There are no parameters specified for this managed object class.)

Table D.2.9 – scheduledPolicy Conditions

Condition number	Condition	Reference
c1	If D.2.3/3 then m else –	"any registered package, other than this package has been instantiated"

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D.5 jurisdiction "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.3.1 to D.3.9.

Table D.3.1 – jurisdiction Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	jurisdiction	{2 9 2 19 3 3}		

Table D.3.2 – jurisdiction Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

Table D.3.3 – jurisdiction Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": genericRelationshipObjectPackage		Mandatory	m		
3	jurisdictionPackage		Mandatory	m		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

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Table D.3.4 – jurisdiction Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	m		m		m		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	m		m		–		–		–		–		
5	domainPointer	{2 9 2 19 7 10}	SET OF CHOICE	m		m		–		–		–		–		
6	jurisdictionId	{2 9 2 19 7 12}	CHOICE NO-MODIFY	m		m		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		m		–		–		–		–		
10	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
11	policyPointer	{2 9 2 19 7 17}	SET OF CHOICE	m		m		–		–		–		–		
12	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipClass	{2 9 3 7 7 2}	OBJECT IDENTIFIER	m		m		–		–		–		–		
13	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipMapping	{2 9 3 7 7 3}	OBJECT IDENTIFIER	m		m		–		–		–		–		
14	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipName	{2 9 3 7 7 1}	CHOICE	m		m		–		–		–		–		

Table D.3.5 – jurisdiction Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": relationships	(not registered)		m		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": state	{2 9 3 2 8 1}		m		–		

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Table D.3.6 – jurisdiction Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	determineViolationStatus	{2 9 2 19 8 2}		m			1.1	DetermineViolationStatus Request	**Information Syntax** CHOICE	m		
							1.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.1.1	type	OBJECT IDENTIFIER	c:m		
							1.1.1.2	value	ANY	c:m		
							1.1.2	nonSpecificForm	OCTET STRING	o.1		
							1.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.3.1	type	OBJECT IDENTIFIER	c:m		
							1.1.3.2	value	ANY	c:m		
							1.2	DetermineViolationStatus Reply	**Reply Syntax** ENUMERATED	m		
2	listMembership	{2 9 2 19 8 4}		m			2.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							2.1.1	completeness	ENUMERATED	m		
							2.1.2	membership	SET OF CHOICE	m		
							2.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.2.1.1	type	OBJECT IDENTIFIER	c:m		
							2.1.2.1.2	value	ANY	c:m		
							2.1.2.2	nonSpecificForm	OCTET STRING	o.2		
							2.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							2.1.2.3.2	value	ANY	c:m		
3	verifyMembershipStatus	{2 9 2 19 8 5}		m			3.1	VerifyMembershipStatusRequest	**Information Syntax** CHOICE	m		
							3.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.1.1	type	OBJECT IDENTIFIER	c:m		
							3.1.1.2	value	ANY	c:m		
							3.1.2	nonSpecificForm	OCTET STRING	o.3		
							3.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.3.1	type	OBJECT IDENTIFIER	c:m		
							3.1.3.2	value	ANY	c:m		
							3.2	VerifyMembershipStatusReply	**Reply Syntax** SEQUENCE	m		
							3.2.1	objectName	CHOICE	m		
							3.2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							3.2.1.1.1	type	OBJECT IDENTIFIER	c:m		

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Table D.3.6 – jurisdiction Action support *(concluded)*

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
							3.2.1.1.2	value	ANY	c:m		
							3.2.1.2	nonSpecificForm	OCTET STRING	o.4		
							3.2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							3.2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							3.2.1.3.2	value	ANY	c:m		
							3.2.2	membershipStatus	ENUMERATED	m		

Table D.3.7 – jurisdiction Notification support

					Support										
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		

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Table D.3.7 – jurisdiction Notification support *(continued)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	policyViolation	{2 9 2 19 10 1}		m				3.1	PolicyViolation		**Information Syntax** SEQUENCE	m		
								3.1.1	violatorName	{2 9 2 19 7 20}	CHOICE	m		
								3.1.1.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.1.2	value	–	ANY	c:m		
								3.1.1.2	nonSpecificForm	–	OCTET STRING	o.5		
								3.1.1.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.3.2	value	–	ANY	c:m		
								3.1.2	violatedPolicy	{2 9 2 19 7 19}	CHOICE	m		
								3.1.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.6		
								3.1.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.1.2	value	–	ANY	c:m		
								3.1.2.2	nonSpecificForm	–	OCTET STRING	o.6		
								3.1.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.6		

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Table D.3.7 – jurisdiction Notification support *(concluded)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								3.1.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.3.2	value	–	ANY	c:m		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		m				4.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								4.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								4.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		
								4.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.7		
								4.1.2.2	localForm	–	INTEGER	c:o.7		
								4.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								4.1.3.1	attributeID	–	CHOICE	m		
								4.1.3.1.1	globalForm	–	OBJECT IDENTIFIER	o.8		
								4.1.3.1.2	localForm	–	INTEGER	o.8		
								4.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								4.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								4.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								4.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								4.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								4.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								4.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.9		
								4.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.1.2	value	–	ANY	c:m		
								4.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.9		
								4.1.5.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.9		
								4.1.5.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.3.2	value	–	ANY	c:m		
								4.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								4.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								4.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								4.1.7.2	significance	–	BOOLEAN	c:o		
								4.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.3.8 – jurisdiction Parameter support

(There are no parameters specified for this managed object class.)

Table D.3.9 – jurisdiction Conditions

Condition number	Condition	Reference
c1	If D.3.3/4 then m else –	"any registered package, other than this package has been instantiated"

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D.6 enhancedJurisdiction "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997" (partial)

Tables D.4.1 to D.4.9.

Table D.4.1 – enhancedJurisdiction Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	enhancedJurisdiction	{2 9 2 19 3 4}		

Table D.4.2 – enhancedJurisdiction Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

Table D.4.3 – enhancedJurisdiction Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	dutySchedulePackage		Mandatory	m		
3	"ITU-T Rec. X.725 | ISO/IEC 10165-7": genericRelationshipObjectPackage		Mandatory	m		
4	jurisdictionPackage		Mandatory	m		
5	operactionApplierPackage		Mandatory	m		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

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Table D.4.4 – enhancedJurisdiction Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	m		m		m		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		-		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	m		m		–		–		–		–		
5	domainPointer	{2 9 2 19 7 10}	SET OF CHOICE	m		m		–		–		–		–		
6	"ITU-T Rec. X.746 (1995) | ISO/IEC 10164-15:1995": externalSchedulerName	(not registered)		m		m		m		–		–		–		
7	jurisdictionId	{2 9 2 19 7 12}	CHOICE NO-MODIFY	m		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
10	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		m		–		–		–		–		
11	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
12	policyPointer	{2 9 2 19 7 17}	SET OF CHOICE	m		m		–		–		–		–		
13	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipClass	{2 9 3 7 7 2}	OBJECT IDENTIFIER	m		m		–		–		–		–		
14	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipMapping	{2 9 3 7 7 3}	OBJECT IDENTIFIER	m		m		–		–		–		–		
15	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": relationshipName	{2 9 3 7 7 1}	CHOICE	m		m		–		–		–		–		

Table D.4.5 – enhancedJurisdiction Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": relationships	(not registered)		m		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": state	{2 9 3 2 8 1}		m		–		

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Table D.4.6 – enhancedJurisdiction Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	applyOperationToMembership	{2 9 2 19 8 1}	timeOutError	m			1.1	ApplyOperationToMembershipRequest	**Information Syntax** CHOICE	m		
							1.1.1	set	SetArgument	o.1		
							1.1.2	action	ActionArgument	o.1		
							1.1.3	get	GetArgument	o.1		
							1.2	ApplyOperationToMembershipReply	**Reply Syntax** SEQUENCE OF OperationResult	m		
2	determineViolationStatus	{2 9 2 19 8 2}		m			2.1	DetermineViolationStatusRequest	**Information Syntax** CHOICE	m		
							2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.1.1	type	OBJECT IDENTIFIER	c:m		
							2.1.1.2	value	ANY	c:m		
							2.1.2	nonSpecificForm	OCTET STRING	o.2		
							2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							2.1.3.2	value	ANY	c:m		
							2.2	DetermineViolationStatusReply	**Reply Syntax** ENUMERATED	m		
3	listMembership	{2 9 2 19 8 4}		m			3.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							3.1.1	completeness	ENUMERATED	m		
							3.1.2	membership	SET OF CHOICE	m		
							3.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.2.1.1	type	OBJECT IDENTIFIER	c:m		
							3.1.2.1.2	value	ANY	c:m		
							3.1.2.2	nonSpecificForm	OCTET STRING	o.3		
							3.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							3.1.2.3.2	value	ANY	c:m		
4	verifyMembershipStatus	{2 9 2 19 8 5}		m			4.1	VerifyMembershipStatusRequest	**Information Syntax** CHOICE	m		
							4.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							4.1.1.1	type	OBJECT IDENTIFIER	c:m		
							4.1.1.2	value	ANY	c:m		
							4.1.2	nonSpecificForm	OCTET STRING	o.4		
							4.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							4.1.3.1	type	OBJECT IDENTIFIER	c:m		

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Table D.4.6 – enhancedJurisdiction Action support *(concluded)*

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
							4.1.3.2	value	ANY	c:m		
							4.2	VerifyMembershipStatus Reply	**Reply Syntax** SEQUENCE	m		
							4.2.1	objectName	CHOICE	m		
							4.2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.5		
							4.2.1.1.1	type	OBJECT IDENTIFIER	c:m		
							4.2.1.1.2	value	ANY	c:m		
							4.2.1.2	nonSpecificForm	OCTET STRING	o.5		
							4.2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.5		
							4.2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							4.2.1.3.2	value	ANY	c:m		
							4.2.2	membershipStatus	ENUMERATED	m		

Table D.4.7 – enhancedJurisdiction Notification support

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		

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Table D.4.7 – enhancedJurisdiction Notification support *(continued)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	policyViolation	{2 9 2 19 10 1}		m				3.1	PolicyViolation		**Information Syntax** SEQUENCE	m		
								3.1.1	violatorName	{2 9 2 19 7 20}	CHOICE	m		
								3.1.1.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.1.2	value	–	ANY	c:m		

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Table D.4.7 – enhancedJurisdiction Notification support *(continued)*

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								3.1.1.2	nonSpecificForm	–	OCTET STRING	o.5		
								3.1.1.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	o.5		
								3.1.1.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.1.3.2	value	–	ANY	c:m		
								3.1.2	violatedPolicy	{2 9 2 19 7 19}	CHOICE	m		
								3.1.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	o.6		
								3.1.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.1.2	value	–	ANY	c:m		
								3.1.2.2	nonSpecificForm	–	OCTET STRING	o.6		
								3.1.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	o.6		
								3.1.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.2.3.2	value	–	ANY	c:m		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		m				4.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								4.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								4.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		
								4.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.7		
								4.1.2.2	localForm	–	INTEGER	c:o.7		
								4.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								4.1.3.1	attributeID	–	CHOICE	m		
								4.1.3.1.1	globalForm	–	OBJECT IDENTIFIER	o.8		
								4.1.3.1.2	localForm	–	INTEGER	o.8		
								4.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								4.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								4.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								4.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								4.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								4.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								4.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.9		
								4.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.1.2	value	–	ANY	c:m		
								4.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.9		
								4.1.5.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	c:o.9		

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Table D.4.7 – enhancedJurisdiction Notification support *(concluded)*

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
					Confirmed	Non-confirmed								
								4.1.5.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								4.1.5.2.3.2	value	–	ANY	c:m		
								4.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								4.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								4.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								4.1.7.2	significance	–	BOOLEAN	c:o		
								4.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.4.8 – enhancedJurisdiction Parameter support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	timeootError	{2 9 3 2 5 1}		o		

Table D.4.9 – enhancedJurisdiction Conditions

Condition number	Condition	Reference
c1	If D.4.3/6 then m else –	"any registered package, other than this package has been instantiated"

D.7 domain "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.5.1 to D.5.9.

Table D.5.1 – domain Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	domain	{2 9 2 19 3 5}		

Table D.5.2 – domain Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

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Table D.5.3 – domain Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	domainPackage		Mandatory	m		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

Table D.5.4 – domain Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
3	domainId	{2 9 2 19 7 9}	CHOICE NO-MODIFY	m		m		–		–		–		–		
4	indirectMembershipSpecifierList	{2 9 2 19 7 11}		m		m		–		m		m		–		
5	memberSelectionFilter	{2 9 2 19 7 14}	CHOICE	m		m		m		–		–		–		
6	memberSelectionList	{2 9 2 19 7 15}		m		m		–		m		m		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		

Table D.5.5 – domain Attribute group support

(There are no attribute groups specified for this managed object class.)

Table D.5.6 – domain Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	listDirectMembership	{2 9 2 19 8 3}		m			1.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							1.1.1	completeness	ENUMERATED	m		
							1.1.2	membership	SET OF CHOICE	m		
							1.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.2.1.1	type	OBJECT IDENTIFIER	c:m		

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Table D.5.6 – domain Action support *(concluded)*

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
							1.1.2.1.2	value	ANY	c:m		
							1.1.2.2	nonSpecificForm	OCTET STRING	o.1		
							1.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							1.1.2.3.2	value	ANY	c:m		
2	listMembership	{2 9 2 19 8 4}		m			2.1	ListMembershipReply	**Reply Syntax** SEQUENCE	m		
							2.1.1	completeness	ENUMERATED	m		
							2.1.2	membership	SET OF CHOICE	m		
							2.1.2.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.2.1.1	type	OBJECT IDENTIFIER	c:m		
							2.1.2.1.2	value	ANY	c:m		
							2.1.2.2	nonSpecificForm	OCTET STRING	o.2		
							2.1.2.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.2		
							2.1.2.3.1	type	OBJECT IDENTIFIER	c:m		
							2.1.2.3.2	value	ANY	c:m		
3	verifyMembershipStatus	{2 9 2 19 8 5}		m			3.1	VerifyMembershipStatusRequest	**Information Syntax** CHOICE	m		
							3.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.1.1	type	OBJECT IDENTIFIER	c:m		
							3.1.1.2	value	ANY	c:m		
							3.1.2	nonSpecificForm	OCTET STRING	o.3		
							3.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.3		
							3.1.3.1	type	OBJECT IDENTIFIER	c:m		
							3.1.3.2	value	ANY	c:m		
							3.2	VerifyMembershipStatusReply	**Reply Syntax** SEQUENCE	m		
							3.2.1	objectName	CHOICE	m		
							3.2.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							3.2.1.1.1	type	OBJECT IDENTIFIER	c:m		
							3.2.1.1.2	value	ANY	c:m		
							3.2.1.2	nonSpecificForm	OCTET STRING	o.4		
							3.2.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.4		
							3.2.1.3.1	type	OBJECT IDENTIFIER	c:m		
							3.2.1.3.2	value	ANY	c:m		
							3.2.2	membershipStatus	ENUMERATED	m		

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Table D.5.7 – domain Notification support

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		

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Table D.5.7 – domain Notification support *(concluded)*

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.5.8 – domain Parameter support

(There are no parameters specified for this managed object class.)

Table D.5.9 – domain Conditions

Condition number	Condition	Reference
c1	If D.5.3/3 then m else –	"any registered package, other than this package has been instantiated"

D.8 administrativeAspect "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.6.1 to D.6.9.

Table D.6.1 – administrativeAspect Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	administrativeAspect	{2 9 2 19 3 6}		

Table D.6.2 – administrativeAspect Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

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Table D.6.3 – administrativeAspect Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	administrativeAspectPackage		Mandatory	m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

Table D.6.4 – administrativeAspect Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectId	{2 9 2 19 7 1}	CHOICE NO-MODIFY	m		m		–		–		–		–		
2	administrativeAuthority	{2 9 2 19 7 3}	GeneralString	m		m		m		–		–		–		
3	administrativeContactInformation	{2 9 2 19 7 4}	GeneralString	m		m		m		–		–		–		
4	administrativeOwner	{2 9 2 19 7 5}	GeneralString	m		m		m		–		–		–		
5	administrativeSpecifier	{2 9 2 19 7 6}	GeneralString	m		m		–		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
7	creationTime	{2 9 2 19 7 8}	TimeStamp NO-MODIFY	m		m		–		–		–		–		
8	lastUpdateTime	{2 9 2 19 7 13}	TimeStamp NO-MODIFY	m		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
10	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
11	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
12	versionIdentifier	{2 9 2 19 7 18}	GeneralString	m		m		m		–		–		–		

Table D.6.5 – administrativeAspect Attribute group support

(There are no attribute groups specified for this managed object class.)

Table D.6.6 – administrativeAspect Action support

(There are no actions specified for this managed object class.)

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Table D.6.7 – administrativeAspect Notification support

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Support: Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		

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Table D.6.7 – administrativeAspect Notification support *(concluded)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.6.8 – administrativeAspect Parameter support

(There are no parameters specified for this managed object class.)

Table D.6.9 – administrativeAspect Conditions

Condition number	Condition	Reference
c1	If D.6.3/3 then m else –	"any registered package, other than this package has been instantiated"

D.9 policyViolationLogRecord "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.7.1 to D.7.9.

Table D.7.1 – policyViolationLogRecord Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	policyViolationLogRecord	{2 9 2 19 3 7}		

Table D.7.2 – policyViolationLogRecord Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

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Table D.7.3 – policyViolationLogRecord Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalInformationPackage	{2 9 3 2 4 18}	"the Additional information parameter is present in the notification or report corresponding to the instance of event record or an instance of its subclasses"	c1		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalTextPackage	{2 9 3 2 4 19}	"the Additional text parameter is present in the notification or report corresponding to the instance of event record or an instance of its subclasses"	c2		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": correlatedNotificationsPackage	{2 9 3 2 4 23}	"the correlatedNotifications parameter is present in the notification or event report corresponding to the instance of an event record or an instance of its subclasses "	c3		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventLogRecordPackage		Mandatory	m		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventTimePackage	{2 9 3 2 4 11}	"the event time parameter was present in the received event report"	c4		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": logRecordPackage		Mandatory	m		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": notificationIdentifierPackage	{2 9 3 2 4 24}	"the notification Identifier parameter is present in the notification or event report corresponding to the instance of an event record or an instance of its subclasses"	c5		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c6		
10	policyViolationLogRecordPackage		Mandatory	m		
11	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		

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Table D.7.4 – policyViolationLogRecord Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	c1		c1		–		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": additionalText	{2 9 3 2 7 7}	GraphicString	c2		c2		–		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	c3		c3		–		–		–		–		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventTime	{2 9 3 2 7 13}	GeneralizedTime	c4		c4		–		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": eventType	{2 9 3 2 7 14}	CHOICE	m		m		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": logRecordId	{2 9 3 2 7 3}	CHOICE	m		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": loggingTime	{2 9 3 2 7 59}	GeneralizedTime	m		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": managedObjectClass	{2 9 3 2 7 60}	CHOICE	m		m		–		–		–		–		
10	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": managedObjectInstance	{2 9 3 2 7 61}	CHOICE	m		m		–		–		–		–		
11	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
12	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": notificationIdentifier	{2 9 3 2 7 16}	INTEGER	c5		c5		–		–		–		–		
13	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
14	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c6		–		–		–		–		
15	violatedPolicy	{2 9 2 19 7 19}	CHOICE	m		m		–		–		–		–		
16	violatorName	{2 9 2 19 7 20}	CHOICE	m		m		–		–		–		–		

Table D.7.5 – policyViolationLogRecord Attribute group support

(There are no attribute groups specified for this managed object class.)

Table D.7.6 – policyViolationLogRecord Action support

(There are no actions specified for this managed object class.)

Table D.7.7 – policyViolationLogRecord Notification support

(There are no notifications specified for this managed object class.)

Table D.7.8 – policyViolationLogRecord Parameter support

(There are no parameters specified for this managed object class.)

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Table D.7.9 – policyViolationLogRecord Conditions

Condition number	Condition	Reference
c1	If D.7.3/1 then m else –	"the Additional information parameter is present in the notification or report corresponding to the instance of event record or an instance of its subclasses"
c2	If D.7.3/2 then m else –	"the Additional text parameter is present in the notification or report corresponding to the instance of event record or an instance of its subclasses"
c3	If D.7.3/4 then m else –	"the correlatedNotifications parameter is present in the notification or event report corresponding to the instance of an event record or an instance of its subclasses "
c4	If D.7.3/6 then m else –	"the event time parameter was present in the received event report"
c5	If D.7.3/8 then m else –	"the notification Identifier parameter is present in the notification or event report corresponding to the instance of an event record or an instance of its subclasses"
c6	If D.7.3/9 then m else –	"any registered package, other than this package has been instantiated"

D.10 valueAssertionPolicy "ITU-T Rec. X.749 (1997) | ISO/IEC 10164-19:1997"

Tables D.8.1 to D.8.9.

Table D.8.1 – valueAssertionPolicy Managed object class support

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	valueAssertionPolicy	{2 9 2 19 3 8}		

Table D.8.2 – valueAssertionPolicy Actual class support

Index	Managed object class template for actual class	Value of object identifier for managed object class definition of actual class	Additional information

Table D.8.3 – valueAssertionPolicy Package support

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphicPackage	{2 9 3 2 4 17}	"if an object supports allomorphism"	o		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packagesPackage	{2 9 3 2 4 16}	"any registered package, other than this package has been instantiated"	c1		
3	policyPackage		Mandatory	m		
4	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": topPackage		Mandatory	m		
5	valueAsertionPolicyPackage		Mandatory	m		

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Table D.8.4 – valueAssertionPolicy Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	administrativeAspectPointer	{2 9 2 19 7 2}		m		m		m		–		–		–		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	m		m		m		–		–		–		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": allomorphs	{2 9 3 2 7 50}	SET OF CHOICE	–		o		–		–		–		–		
4	assertion	{2 9 2 19 7 7}	CHOICE	m		m		m		–		–		–		
5	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": availabilityStatus	{2 9 3 2 7 33}	SET OF INTEGER	m		m		–		–		–		–		
6	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o		m		–		–		–		–		
7	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectClass	{2 9 3 2 7 65}	CHOICE	–		m		–		–		–		–		
8	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	–		m		–		–		–		–		
9	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o		c1		–		–		–		–		
10	policyId	{2 9 2 19 7 16}	CHOICE NO-MODIFY	m		m		–		–		–		–		

Table D.8.5 – valueAssertionPolicy Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": state	{2 9 3 2 8 1}		m		–		

Table D.8.6 – valueAssertionPolicy Action support

Index	Action type template label	Value of object identifier for action type	Constraints and values	Status	Support	Additional information	Subindex	Action field name label	Constraints and values	Status	Support	Additional information
1	determineViolationStatus	{2 9 2 19 8 2}		m			1.1	DetermineViolationStatusRequest	**Information Syntax** CHOICE	m		
							1.1.1	distinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.1.1	type	OBJECT IDENTIFIER	c:m		
							1.1.1.2	value	ANY	c:m		
							1.1.2	nonSpecificForm	OCTET STRING	o.1		
							1.1.3	localDistinguishedName	SEQUENCE OF SET OF SEQUENCE	o.1		
							1.1.3.1	type	OBJECT IDENTIFIER	c:m		
							1.1.3.2	value	ANY	c:m		
							1.2	DetermineViolationStatusReply	**Reply Syntax** ENUMERATED	m		

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Table D.8.7 – valueAssertionPolicy Notification support

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectCreation	{2 9 3 2 10 6}		m				1.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								1.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								1.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								1.1.2.1	attributeId	–	CHOICE	c:m		
								1.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.1		
								1.1.2.1.2	localForm	–	INTEGER	c:o.1		
								1.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								1.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								1.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								1.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								1.1.4.2	sourceObjectInst	–	CHOICE	c:o		
								1.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.1.2	value	–	ANY	c:m		
								1.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.2		
								1.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.2		
								1.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								1.1.4.2.3.2	value	–	ANY	c:m		
								1.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								1.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								1.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								1.1.6.2	significance	–	BOOLEAN	c:o		
								1.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
2	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": objectDeletion	{2 9 3 2 10 7}		m				2.1	ObjectInfo		**Information Syntax** SEQUENCE	m		
								2.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								2.1.2	attributeList	{2 9 3 2 7 9}	SET OF SEQUENCE	o		
								2.1.2.1	attributeId	–	CHOICE	c:m		
								2.1.2.1.1	globalForm	–	OBJECT IDENTIFIER	c:o.3		
								2.1.2.1.2	localForm	–	INTEGER	c:o.3		
								2.1.2.2	attributeValue	–	ANY DEFINED BY attributeId	c:m		
								2.1.3	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								2.1.4	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								2.1.4.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								2.1.4.2	sourceObjectInst	–	CHOICE	c:o		

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Table D.8.7 – valueAssertionPolicy Notification support *(continued)*

					Support									
Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Confirmed	Non-confirmed	Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								2.1.4.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.1.2	value	–	ANY	c:m		
								2.1.4.2.2	nonSpecificForm	–	OCTET STRING	c:o.4		
								2.1.4.2.3	localDistinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.4		
								2.1.4.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								2.1.4.2.3.2	value	–	ANY	c:m		
								2.1.5	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								2.1.6	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								2.1.6.1	identifier	–	OBJECT IDENTIFIER	c:m		
								2.1.6.2	significance	–	BOOLEAN	c:o		
								2.1.6.3	information	–	ANY DEFINED BY identifier	c:m		
3	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": stateChange	{2 9 3 2 10 14}		m				3.1	StateChangeInfo		**Information Syntax** SEQUENCE	m		
								3.1.1	sourceIndicator	{2 9 3 2 7 26}	ENUMERATED	o		
								3.1.2	attributeIdentifierList	{2 9 3 2 7 8}	SET OF CHOICE	o		
								3.1.2.1	globalForm	–	OBJECT IDENTIFIER	c:o.5		
								3.1.2.2	localForm	–	INTEGER	c:o.5		
								3.1.3	stateChangeDefinition	{2 9 3 2 7 28}	SET OF SEQUENCE	m		
								3.1.3.1	attributeID	–	CHOICE	m		
								3.1.3.1.1	globalForm	–	OBJECT IDENTIFIER	o.6		
								3.1.3.1.2	localForm	–	INTEGER	o.6		
								3.1.3.2	oldAttributeValue	–	ANY DEFINED BY attributeID	o		
								3.1.3.3	newAttributeValue	–	ANY DEFINED BY attributeID	m		
								3.1.4	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	o		
								3.1.5	correlatedNotifications	{2 9 3 2 7 12}	SET OF SEQUENCE	o		
								3.1.5.1	correlatedNotifications	{2 9 3 2 7 12}	SET OF INTEGER	c:m		
								3.1.5.2	sourceObjectInst	–	CHOICE	c:o		
								3.1.5.2.1	distinguishedName	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		
								3.1.5.2.1.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.1.2	value	–	ANY	c:m		
								3.1.5.2.2	nonSpecificForm	–	OCTET STRING	c:o.7		
								3.1.5.2.3	localDistinguished Name	–	SEQUENCE OF SET OF SEQUENCE	c:o.7		

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Table D.8.7 – valueAssertionPolicy Notification support *(concluded)*

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Support: Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
								3.1.5.2.3.1	type	–	OBJECT IDENTIFIER	c:m		
								3.1.5.2.3.2	value	–	ANY	c:m		
								3.1.6	additionalText	{2 9 3 2 7 7}	GraphicString	o		
								3.1.7	additionalInformation	{2 9 3 2 7 6}	SET OF SEQUENCE	o		
								3.1.7.1	identifier	–	OBJECT IDENTIFIER	c:m		
								3.1.7.2	significance	–	BOOLEAN	c:o		
								3.1.7.3	information	–	ANY DEFINED BY identifier	c:m		

Table D.8.8 – valueAssertionPolicy Parameter support

(There are no parameters specified for this managed object class.)

Table D.8.9 – valueAssertionPolicy Conditions

Condition number	Condition	Reference
c1	If D.8.3/2 then m else –	"any registered package, other than this package has been instantiated"

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Annex E

MRCS proforma

(This annex forms an integral part of this Recommendation | International Standard)

E.1 Introduction

The purpose of this MRCS proforma for name bindings is to provide a mechanism for a supplier which claims conformance to a name binding to provide conformance information in a standard form.

E.2 Instructions for completing the MRCS proforma for name binding to produce an MRCS

The supplier of the implementation shall state which items are supported in the tables that follow and if necessary provide additional information.

E.3 Statement of conformance to the name binding

Tables E.1 to E.8.

Table E.1 – policy Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	policy-System	{2 9 2 19 6 2}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

Table E.2 – scheduledPolicy Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	policy-System	{2 9 2 19 6 2}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

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Table E.3 – jurisdiction Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	jurisdiction-System	{2 9 2 19 6 3}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		
2	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": genericRelationshipObject-system	{2 9 3 7 6 1}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			2.1	Create support		–		
							2.2	Create with reference object		–		
							2.3	Create with automatic instance naming		–		
							2.4	Delete support		–		
							2.5	Delete only if no contained objects		–		
							2.6	Delete contained objects		–		

Table E.4 – enhancedJurisdiction Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	jurisdiction-System	{2 9 2 19 6 3}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		
2	"ITU-T Rec. X.725 (1995) | ISO/IEC 10165-7:1996": genericRelationshipObject-system	{2 9 3 7 6 1}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			2.1	Create support		–		
							2.2	Create with reference object		–		
							2.3	Create with automatic instance naming		–		
							2.4	Delete support		–		
							2.5	Delete only if no contained objects		–		
							2.6	Delete contained objects		–		

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Table E.5 – domain Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	domain-System	{2 9 2 19 6 1}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

Table E.6 – administrativeAspect Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	administrativeAspect-System	{2 9 2 19 6 4}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

Table E.7 – policyViolationLogRecord Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": logRecord-log	{2 9 3 2 6 3}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": log AND SUBCLASSES	o			1.1	Create support		–		
							1.2	Create with reference object		–		
							1.3	Create with automatic instance naming		–		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

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Table E.8 – valueAssertionPolicy Name Binding support

Index	Name binding template label	Value of object identifier for name binding	Contraints and values	Status	Support	Additional information	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	policy-System	{2 9 2 19 6 2}	Superior class: "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2:1992": system AND SUBCLASSES	o			1.1	Create support		c:m		
							1.2	Create with reference object		c:m		
							1.3	Create with automatic instance naming		c:m		
							1.4	Delete support		c:m		
							1.5	Delete only if no contained objects		c:m		
							1.6	Delete contained objects		c:x		

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