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Information technology — Metadata registries (MDR) —

Part 6: Registration

Technologies de l'information — Registres de métadonnées (RM) — Partie 6: Enregistrement des données

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This third edition cancels and replaces the second edition (ISO/IEC 11179-6:2005), which has been technically revised.

ISO/IEC 11179 consists of the following parts, under the general title *Information technology — Metadata registries (MDR)*:

— *Part 1: Framework*

— *Part 2: Classification*

— *Part 3: Registry metamodel and basic attributes*

— *Part 4: Formulation of data definitions*

— *Part 5: Naming principles*

— *Part 6: Registration*

Introduction

This part of ISO/IEC 11179 describes the procedure by which *metadata items* required in various application areas could be assigned an internationally unique identifier and registered in a metadata registry maintained by one or more Registration Authorities. This edition of this part of ISO/IEC 11179 supports multiple schemes for ensuring the uniqueness of the identification.

The metamodel of a metadata registry defined in ISO/IEC 11179-3 allows a metadata item to simply be *identified* or to be both *identified* and *registered*. A *registered item* may either be an *administered item*, meaning it has its own *registration state*, or it may be an *attached item*, which means it is attached to an *administered item* and shares the latter's registration state. The registered items are included in Metadata Registries maintained by one or more Registration Authorities, to which the registered items logically and functionally belong. An organization wishing to become a Registration Authority may do so in accordance with the procedure prescribed in Annex A.

The registration process described in this part of ISO/IEC 11179 may be applied to any type of metadata item, such as those specified by ISO/IEC 11179-3: data elements, data element concepts, conceptual domains, value meanings, value domains, classification schemes, and concept systems; those specified by ISO/IEC 19763: ontologies, process models, service models, role and goal models, information models, mappings between models, and form designs; and/or custom types not specified by these standards. Each registered item is represented within a metadata registry by a registration record that documents the common administration and identification, naming and definition details together with their metadata item-specific details.

Within this part of ISO/IEC 11179, the use of "Metadata Registry" denotes an implementation of a metadata registry that is based upon ISO/IEC 11179 and that is managed by one or more Registration Authorities.

Information technology — Metadata registries (MDR) —

Part 6:
Registration

1 Scope

1.1 Statement of scope

This part of ISO/IEC 11179 defines the type of information to be specified, the conditions to be met, and the procedure(s) to be followed for each metadata item to be registered in a metadata registry. The requirements and procedures contained herein apply to all metadata items specified in ISO/IEC 11179-3 and those specified in ISO/IEC 19763. Some Registration Authorities may want to use this part of ISO/IEC 11179 to register and manage locally defined metadata item types that are not defined in ISO/IEC 11179-3 or ISO/IEC 19763.

This part of ISO/IEC 11179 addresses the common metadata that is used to document the common facilities of a metadata registry: administration, identification, naming and definition, details that can apply to any and all types of metadata items.

1.2 Exclusions

This part of ISO/IEC 11179 does not address the metadata that is specific to particular types of metadata items such as data elements and value domains. This part of ISO/IEC 11179 does NOT specify the registry's system design, file organization techniques, storage media, programming languages, etc. to be used in its implementation.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 11179-1, *Information technology — Metadata registries (MDR) — Part 1: Framework*

ISO/IEC 11179-3, *Information technology — Metadata registries (MDR) — Part 3: Registry metamodel and basic attributes*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
administered item
registered item (3.38) for which *administrative information* (3.2) is recorded

[SOURCE: ISO/IEC 11179-3:2013, 3.2.2]

3.2
administrative information
<metadata registry> information about the administration of an item in a *metadata registry* (3.26)

EXAMPLE Creation date, last change date, origin, change description, and explanatory comment.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.3]

3.3
administrative status
designation (3.10) of the status in the administrative process of a *Registration Authority* (3.42)

[SOURCE: ISO/IEC 11179-3:2013, 8.1.2.6.2.6]

Note 1 to entry: Administrative status is described in 4.4.3. Examples are provided in E.3.

3.4
attached item
registered item (3.38) for which *administrative information* (3.2) is recorded in another registered item

Note 1 to entry: This is often a member of a group of registered items that is managed as a whole.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.6]

3.5
classifiable item
metadata item (3.23) of a type for which classification is supported in a given *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.15]

3.6
classification scheme
descriptive information for an arrangement or division of objects into groups based on criteria such as characteristics, which the objects have in common

EXAMPLE Origin, composition, structure, application, function, etc.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.16]

3.7
contact
instance of a *role* (3.49) of an *individual* (3.16) or *organization* (3.30) or *organization part* (3.33) or *organization Person* (3.35) to or from whom an information item(s), a material object(s) and/or person(s) can be sent in a specified context

[SOURCE: ISO/IEC 11179-3:2013, 3.2.23]

3.8
data
re-interpretable representation of information in a formalized manner suitable for communication, interpretation, or processing

Note 1 to entry: Data can be processed by human or automatic means.

[SOURCE: ISO/IEC 2382-1:1993, 01.01.02]

3.9
data element
<organization of data> unit of *data* (3.8) that is considered in context to be indivisible

EXAMPLE The data element “age of a person” with values consisting of all combinations of three decimal digits.

[SOURCE: ISO/IEC 2382-4:1999, 04.07.01]

Note 1 to entry: The definition states that a data element is “indivisible” in some context. This means that it is possible that a data element considered indivisible in one context (e.g., telephone number) might be divisible in another context (e.g., country code, area code, local number).

3.10
designation
representation of a concept by a sign which denotes it

[SOURCE: ISO 1087-1:2000, 3.4.1]

3.11
designatable item
identified item (3.12) which can have designations and/or definitions

[SOURCE: ISO/IEC 11179-3:2013, 3.2.50]

3.12
identified item
metadata item (3.23) identified in a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.64]

3.13
identifier
<metadata registry> string used to unambiguously denote an *identified item* (3.12) within the scope of a specified *namespace* (3.27)

[SOURCE: ISO/IEC 11179-3:2013, 7.2.2.2.2.1]

3.14
identification
assignment of an unambiguous *identifier* (3.13) to an *identified item* (3.12) in a way that makes the assignment available to interested parties

3.15
identification scheme
system allocating *identifiers* (3.13) to registered objects

[SOURCE: ISO/IEC 6523:1998, 3.6]

3.16
individual
single human being

[SOURCE: ISO/IEC 11179-3:2013, 3.2.65]

3.17
International Code Designator
ICD
identifier (3.13) of an *organization identification scheme* (3.31)

[SOURCE: ISO/IEC 6523-1:1998, 3.8 — modified]

3.18
International Code Designator value
ICD value
identifier (3.13) allocated to a particular *organization identification scheme* (3.31)

[SOURCE: ISO/IEC 6523:1998, 3.9]

3.19
international registration data identifier
IRDI
internationally unique *identifier* (3.13) for a *identified item* (3.12) as defined in the framework of ISO/IEC 11179

3.20
item identifier
identifier (3.13) for an item

Note 1 to entry: ISO/IEC 11179-3:2013 uses the term *scoped identifier* (3.50) because each identifier is defined within the scope of a *namespace* (3.27).

3.21
item registration authority identifier
identifier (3.13) of the *Registration Authority* (3.42) registering the item

3.22
metadata
data (3.8) that defines and describes other data

[SOURCE: ISO/IEC 11179-3:2013, 3.2.74]

3.23
metadata item
instance of a *metadata object* (3.24)

Note 1 to entry: In all parts of ISO/IEC 11179, this term is applied only to instances of metadata objects described by the metamodel in ISO/IEC 11179-3:2013, Clause 5 to Clause 11. Examples include instances of data elements, data element concepts, permissible values, etc.

Note 2 to entry: A metadata item has associated attributes, as appropriate for the metadata object it instantiates.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.75]

3.24
metadata object
object type defined by a metamodel

Note 1 to entry: In all parts of ISO/IEC 11179, this term is applied to metadata objects described by the metamodel in ISO/IEC 11179-3:2013, Clause 5 to Clause 11. Examples include Data Elements, Data Element Concepts, Permissible Values, etc.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.76]

Note 2 to entry: The term also applies to instances of metadata objects described by the metamodels in the various parts of ISO/IEC 19763, which build upon the metamodel in ISO/IEC 11179-3:2013.

3.25
metadata register
information store or database maintained by a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.77]

3.26
metadata registry
MDR
information system for registering *metadata* (3.22)

Note 1 to entry: The associated information store or database is known as a *metadata register* (3.25).

[SOURCE: ISO/IEC 11179-3:2013, 3.2.78]

3.27
namespace
set of *designations* (3.10) and/or *scoped identifiers* (3.50) for a particular business need

Note 1 to entry: The term namespace is used in this International Standard because it is in common use even though the concept is being applied to identifiers, as well as names.

3.28
OPI Source Indicator
OPIS
data element (3.9) used to specify the source for the *organization part identifier* (3.34)

[SOURCE: ISO/IEC 6523:1998, 3.12]

3.29
OPIS value
particular value (digit or capital letter) taken by the *OPIS* (3.28) to designate the source of an *organization part identifier* (3.34)

[SOURCE: ISO/IEC 6523:1998, 3.13]

3.30
organization
unique framework of authority within which *individuals* (3.16) act, or are designated to act, towards some purpose

Note 1 to entry: The kinds of organizations covered by ISO/IEC 6523-1 include the following examples:

a) an organization incorporated under law;

b) an unincorporated organization or activity providing goods and/or services including the following:

   1) partnerships;

   2) social or other non-profit organizations or similar bodies in which ownership or control is vested in a group of individuals;

   3) sole proprietorships;

   4) governmental bodies;

c) groupings of the above types of organizations where there is a need to identify these in information interchange.

[SOURCE: ISO/IEC 6523-1:1998, 3.1 — modified]

3.31
organization identification scheme
identification scheme (3.15) dedicated to the unique identification of *organizations* (3.30)

3.32
organization identifier
identifier (3.13) assigned to an organization within an *organization identification scheme* (3.31) and unique within that scheme

[SOURCE: ISO/IEC 6523:1998, 3.10]

3.33
organization part
any department, service, or other entity within an *organization* (3.30) which needs to be identified for information exchange

[SOURCE: ISO/IEC 6523-1:1998, 3.2]

3.34
organization part identifier
OPI
identifier (3.13) allocated to a particular *organization part* (3.33)

[SOURCE: ISO/IEC 6523:1998, 3.11]

3.35
organization Person
organization part (3.33) which has the properties of a *Person* (3.36) and thus is able to make commitments on behalf of that *organization* (3.30)

Note 1 to entry: An organization can have one or more organization Persons.

Note 2 to entry: An organization Person is deemed to represent and act on behalf of the organization and to do so in a specified capacity.

Note 3 to entry: An organization Person can be a "natural person" such as an employee or officer of the organization.

Note 4 to entry: An organization Person can be a "legal person", i.e., another organization.

[SOURCE: ISO/IEC 15944-1:2002, 3.46]

3.36
Person
entity, i.e. a natural or legal person, recognized by law as having legal rights and duties, able to make commitment(s), assume and fulfil resulting obligation(s), and able of being held accountable for its action(s)

Note 1 to entry: Synonyms for "legal person" include "artificial person", "body corporate", etc., depending on the terminology used in competent jurisdictions.

Note 2 to entry: Person is capitalized to indicate that it is being utilized as formally defined in the standards and to differentiate it from its day-to-day use.

Note 3 to entry: Minimum and common external constraints applicable to a business transaction often require one to differentiate among three common subtypes of Person, namely "individual", "organization", and "public administration".

[SOURCE: ISO/IEC 15944-1:2002, 3.47]

3.37
register
information store or database maintained by a *registry* (3.46)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.104]

3.38
registered item
metadata item (3.23) that is recorded and managed in a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.105]

3.39
registrar
representative of a *Registration Authority* (3.42)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.106]

3.40
registration
<metadata registry> inclusion of a *metadata item* (3.23) in a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.108]

Note 1 to entry: In this part of ISO/IEC 11179, registration also requires that a minimum set of administrative information about the metadata item be specified, such that it becomes a *registered item* (3.38).

3.41
registration acting body
RAB
type of *organization* (3.30) participating in the *registration* (3.40) process of *administered items* (3.1)

Note 1 to entry: Currently, there are three RABs: *Registration Authority* (RA) (3.42), *Stewardship Organization* (StO) (3.53), and *Submitting Organization* (SuO) (3.56).

3.42
Registration Authority
RA
organization (3.30) responsible for maintaining a *register* (3.37)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.109]

3.43
registration authority identifier
identifier (3.11) assigned to a *Registration Authority* (3.8)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.110]

3.44
registration state
information about the *registration* (3.40) of an *administered item* (3.1)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.111]

3.45
registration status
designation (3.10) of the status in the registration life-cycle of an *administered item* (3.1)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.112]

Note 1 to entry: Registration status is described in 4.4.2.

3.46
registry
information system for *registration* (3.40)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.113]

3.47
registry item
<general> item recorded in a *registry* (3.46)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.115]

3.48
registry item
<metadata registry> *metadata item* (3.23) recorded in a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.115]

3.49
role
specified responsibilities

[SOURCE: ISO/IEC 11179-3:2013, 3.2.121]

3.50
scoped identifier
identifier (3.13) of an *identified item* (3.12) within a specified *namespace* (3.27)

Note 1 to entry: A *namespace* (3.27) provides the scope within which the scoped identifier uniquely identifies the identified item.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.122]

3.51
stewardship
<metadata> responsibility for the maintenance of *administrative information* (3.2) applicable to one or more *administered items* (3.1)

Note 1 to entry: The responsibility for the *registration* (3.40) of *metadata* (3.22) can be different from the responsibility for **stewardship** of **metadata**.

[SOURCE: ISO/IEC 11179-3:2013, 3.2.125]

3.52
stewardship contact
steward
contact (3.7) information associated with a *stewardship* (3.51)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.126]

3.53
stewardship organization
StO
organization (3.30) that maintains *stewardship* (3.51) of an *administered item* (3.1)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.127]

Note 1 to entry: In edition 2, this was called responsible organization.

3.54
submission
act of submitting a *metadata item* (3.23) for *registration* (3.40) in a *metadata registry* (3.26)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.130]

3.55
submission contact
submitter
contact (3.7) information associated with a *submission* (3.54)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.131]

3.56
submission organization
submitting organization
SuO
organization (3.30) that submits a *metadata item* (3.23) for *registration* (3.40)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.132]

Note 1 to entry: In edition 2, the abbreviation used was SO. It has been changed in this edition because *responsible organization* was renamed to *stewardship organization* (StO).

3.57
version
unique version *identifier* (3.11) of the *scoped identifier* (3.50)

[SOURCE: ISO/IEC 11179-3:2013, 3.2.142]

4 Concept of operation

4.1 Metamodel of a Metadata Registry

ISO/IEC 11179-3 provides a conceptual metamodel of a Metadata Registry for describing data. The metamodel specifies a number of metadata items, including: data element, data element concept, value domain, conceptual domain, concept system and others. ISO/IEC 11179-1 provides the means for understanding and associating the individual parts and is the foundation for a conceptual understanding of metadata and metadata registries.

This part of the ISO/IEC 11179 standard addresses the specifics that are common to registration of any metadata item. It is envisioned that an organization may extend its Metadata Registry with additional items that are to be registered. It is also envisioned that the standard may be extended at a later time to specify additional metadata items. Others may want to use this part of ISO/IEC 11179 to register and manage locally defined metadata item types that are not defined in Part 3. This part of ISO/IEC 11179 also applies to the registration of items specified in ISO/IEC 19763, such as models, model elements, and mappings.

4.2 Metadata Items

Figure 1 shows the types of items specified by ISO/IEC 11179-3:2013, 5.5. In the Figure, the notation <<type>> indicates the use of the <<type>> stereotype as specified in ISO/IEC 19505-2:2012 OMG UML Part 2: Superstructure Annex C.1 Standard Profile L2. The names in parentheses below the item names are the names of the region of the metamodel in which the items are defined in ISO/IEC 11179-3.

Any **metadata item** (3.23) entered into a **metadata registry** (3.26) may be extended by one or more of the types shown in Figure 1, and described in 4.3, Common facilities.

A **Registration Authority (RA)** (3.42) responsible for the registry shall determine which metadata items should become identified items, administered items, attached items, designatable items and/or classifiable items, within the constraints of any conformance claim that is made for the registry.

NOTE The precise mechanism by which metadata items are extended by the above types is implementation-defined.

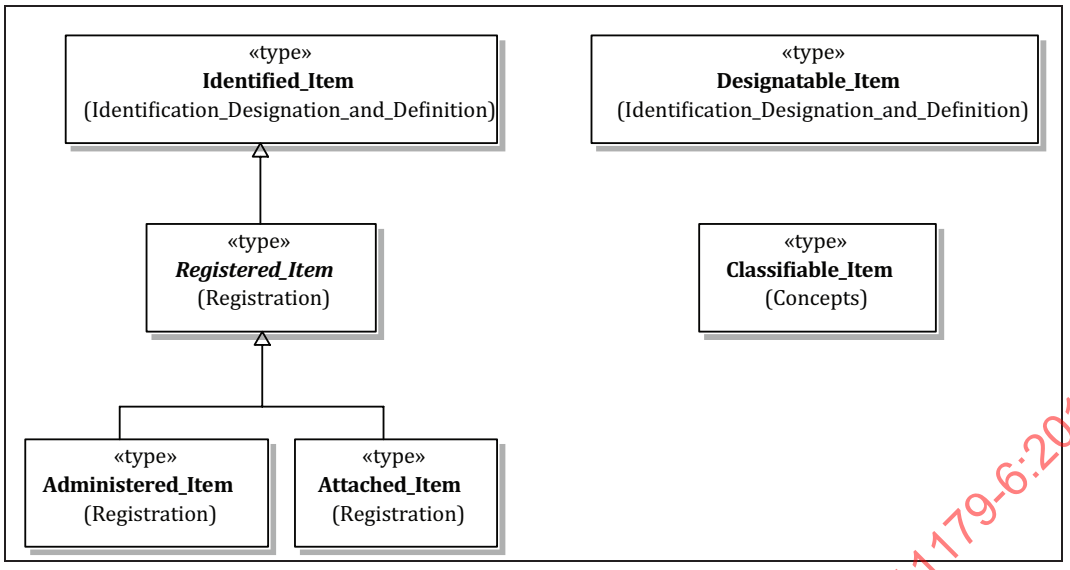


Figure 1 — Types of items

4.3 Common facilities

4.3.1 Identification

Any metadata item that is to be retrieved directly (as opposed to indirectly through a related item), shall be an **identified item** (3.12), so the item can be referenced. Each identified item shall have at least one **identifier** (3.13), and that identifier must be unique within a specified **namespace** (3.27). Prior editions of ISO/IEC 11179 mandated the identification scheme specified by ISO/IEC 6523. This third edition of ISO/IEC 11179 permits any identification scheme that can guarantee uniqueness (e.g. IETF RFC 4122).

Annex A describes the structure of the identifier if the identification scheme specified by ISO/IEC 6523 is used.

4.3.2 Designation and Definition

Any metadata item can be made a **designatable item** (3.11) to allow it to be designated (named) and/or defined in the metadata registry.

ISO/IEC 11179-4 provides guidelines for the formulation of data definitions.

ISO/IEC 11179-5 provides instructions for naming of the following items: concept, data element concept, conceptual domain, data element, and value domain, as defined in ISO/IEC 11179-3. Part 5 describes naming in an MDR; including principles and rules by which naming conventions can be developed; and provides examples of naming conventions.

NOTE The separation of designation and definition from identification has been made because Attached Items are not required to be designated or defined. However, best practice is for both designation and definition to be provided for any metadata item.

4.3.3 Classification

Any metadata item can be made a **classifiable item** (3.5) to allow it to be classified in a **classification scheme** (3.6).

ISO/IEC 11179-3:2013, clause 9.2 Classification Metamodel region describes the registration of classification schemes and their use in classifying metadata items in a metadata registry.

4.3.4 Registration

Any **identified item** (3.12) can be made a **registered item** (3.38) to allow it to be registered in a metadata registry. Each such item must be instantiated as one of the specializations: **administered item** (3.1), or **attached item** (3.4).

Registration is the primary topic of this part of ISO/IEC 11179.

4.4 Status categories

4.4.1 General

There are two types of status categories. The **registration status** (3.45) is a designation of the level of registration or quality of metadata or progression of an Administered Item. The **administrative status** (3.3) is a designation of the status in the administrative process of a Registration Authority for handling registration requests. Both status categories apply to individual Administered Items that have been registered in the metadata register. Attached Items do not have their own statuses. They inherit the status of the Administered Item to which they are attached.

An administrative status specifies the process that an Administered Item is undergoing within a Registration Status. It identifies the process that is taking place within a registration status. It is very probable that the permissible administrative status values will be dependent upon the current registration status that an Administered Item possesses. A Registration Authority will establish the focus of the use of administrative status. A Registration Authority determines the allowed values of this attribute. It is the responsibility of the Registration Authority to refine, publish, and implement this administrative feature.

Edition 3 of ISO/IEC 11179 allows multiple Registration Authorities to maintain their own **Registration State** (3.44) over a shared Administered Item. The registration state includes both the registration status and the administrative status assigned by the registration authority.

4.4.2 Summary of registration status categories

Registration status specifies the state of an Administered Item that is in the metadata register, in the view of the Registration Authority. Registration status categories shall apply to individual Administered Items that have been registered in the metadata register by the Registration Authority. Registration status categories are of two sub-types: lifecycle and documentation. The lifecycle registration status categories address improvement and progression towards levels of perfection of the quality of the metadata of the item and of the preferences of usage of the Administered Item. The documentation registration status categories are used to denote positions at which there will be no more progression in quality of metadata or use of the Administered Item. The relationships among these status categories, along with the requirements for an Administered Item to achieve a particular registration status level, are presented in Table 1.

Table 1 — Registration status levels and criteria

Administered Item registration status category	Status criteria
Lifecycle Statuses	
Preferred Standard	The Registration Authority confirms that the Administered Item is — preferred for use within the community that uses this metadata register.
Standard	The Registration Authority confirms that the Administered Item is — of sufficient quality and — of broad interest for use in the community that uses this metadata register.
Qualified	The Registration Authority has confirmed that — the mandatory metadata attributes are complete and — the mandatory metadata attributes conform to applicable quality requirements.
Recorded	The Registration Authority has confirmed that — all mandatory metadata attributes have been completed.
Candidate	The Administered Item has been proposed for progression through the registration levels.
Incomplete	Submitter wishes to make the community that uses this metadata register aware of the existence of an Administered Item in their local domain.
Retired	The Registration Authority has approved the Administered Item as — no longer recommended for use in the community that uses this metadata register and — should no longer be used.
Superseded	The Registration Authority determined that the Administered Item is — no longer recommended for use by the community that uses this metadata register, and — a successor Administered Item is now preferred for use.
Documentation Statuses	
Historical	The Submitter wishes to make the community that uses this metadata register aware of the existence of an Administered Item that was used in the past.
Application	The Registration Authority wishes to make the community that uses this metadata register aware of the existence of an Administered Item in their local domain that is in an application system and is not specified at the logical level. This item may be very well described.

While the general intent is to progress as many Administered Items as possible from "Incomplete" to the "Preferred Standard" registration status, progression to a status higher than "Recorded" or "Qualified" may not be appropriate. That is, necessary metadata attribute documentation for an Administered Item may not be available to establish required documentation for the "Recorded" status, may not be of the quality necessary for the "Qualified" status, or identification as "Preferred Standard" Administered Item may not be appropriate. Such Administered Items shall be held at their current status level in the metadata register to facilitate understanding of and access to these Administered Items by the community that uses this metadata register.

The lifecycle status category of an Administered Item entry shall be based upon the completeness of the data entered, its accuracy, and its conformance to the established format and syntax. For the documentation status categories, any state of completeness is possible. The registration status category shall be as listed below.

NOTE Since Attached Items do not have a registration status, the following rules do not apply to them, except that once the associated Administered Item reaches "Recorded Status" or above, all mandatory attributes and other constraints are enforced for the Attached Items as well as for the Administered Item.

a) Incomplete - An Administered Item with the "Incomplete" status shall indicate that the Submitter wishes to make the community that uses this metadata register aware of the existence of an Administered Item in their local domain. An Administered Item in the status of "Incomplete" in the metadata register shall not be maintained under version control. The minimum metadata attribute documentation for the "Incomplete" status in the metadata register shall be as follows:

   1) identifier,

   2) submitter organization name,

   3) submitter contact name, and

   4) submitter contact information.

   The registered Administered Item might not contain all mandatory attribute values, and other constraints specified for particular metadata objects in the ISO/IEC 11179-3 metamodel are not enforced.

b) Candidate - An Administered Item with the "Candidate" status shall indicate that it has been proposed for progression through the registration levels. Administered Items in the "Candidate" status are maintained under version control. The minimum metadata attribute documentation for the "Candidate" status includes all attributes required for "Incomplete" status, plus the following:

   1) designation,

   2) definition,

   3) stewardship organization name,

   4) stewardship contact name, and

   5) stewardship contact information.

   The registered Administered Item might not contain all mandatory attribute values, and other constraints specified for particular metadata objects in the ISO/IEC 11179-3 metamodel are not enforced.

c) Recorded - An Administered Item with the "Recorded" status shall mean that all mandatory metadata attributes have been completed, and all associated constraints are to be enforced. The preceding rule also applies to any and all Attached Items attached to the Administered Item. An Administered Item in the "Recorded" status implies that the Administered Item may be shared across domains. The contents of the mandatory metadata attributes may not conform to quality requirements. The Submitter may request the retirement of an Administered Item in the registration status of "Recorded" at any time. Administered Items in "Recorded" registration status or higher are maintained under version control.

d) Qualified - An Administered Item with the "Qualified" status shall mean that the Administration Item had a "Recorded" registration status and the Registration Authority has confirmed that the mandatory metadata attributes are complete and conform to applicable quality requirements. In the event that an Administered Item is not approved by the Registration Authority for the "Qualified" registration status level, it shall remain at the "Recorded" registration status level.

e) Standard - An Administered Item with the "Standard" status indicates that the Administration Item had a "Qualified" registration status and the Registration Authority confirms that the Administered Item is of sufficient quality and of broad interest for use in the community that uses this metadata register. There may be more than one "Standard" Administered Item that addresses the same function, concept etc.

f) Preferred Standard - An Administered Item with the "Preferred Standard" status means that the Registration Authority confirms that the Administered Item is preferred for use in the community that uses this metadata register.

g) Retired - An Administered Item with the "Retired" status indicates that the Registration Authority has determined the Administered Item is no longer recommended for use in the community that uses this metadata register. A "Retired" Administered Item should no longer be used. Such Administered Items are retained in the metadata register archival storage facility for historic reference and research purposes. "Retired" Administered Items should include a reference to replacement Administered Items when appropriate. Only editorial edits of "Retired" Administered Items are permitted. An Administered Item can move to "Retired" status from "Recorded" status or above, so the quality of the attribution might be no better than in "Recorded" status.

h) Superseded - An Administered Item with the "Superseded" status indicates that the Registration Authority has determined the Administered Item is no longer recommended for use in the community that uses this metadata register. A "Superseded" Administered Item may be used but the successor Administered Item is the preferred for use. Such Administered Items are retained in the metadata register archival storage facility for historic reference purposes. "Superseded" Administered Items should include a reference to replacement Administered Items when appropriate. Only editorial edits of "Superseded" Administered Items are permitted. An Administered Item can move to "Superseded" status from "Recorded" status or above, so the quality of the attribution might be no better than in "Recorded" status.

i) Historical - An Administered Item with the "Historical" status shall indicate that the Submitter wishes to make the community that uses this metadata register aware of the existence of an item that was used in the past and has not been used recently. It is important to record so that related items may be given additional perspective through knowledge of this item. A "Historical" Administered Item has not passed through the dynamic registration levels. The quality of the attribution might be no better than in "Incomplete" status.

j) Application - An Administered Item with the "Application" status shall mean that the Registration Authority wishes to make the community that uses this metadata register aware of the existence of an Administered Item in their local domain that is used by an application system. This item may be very well described. Items with the "Application" status may be from application systems that are in current development. The quality of the attribution might be no better than in "Incomplete" status.

4.4.3 Description of administrative status

There should be administrative statuses that denote the pending changes that are important to the community that uses this metadata register. These status levels forewarn the community that uses this metadata register of changes that may have an impact on their area of interest. The administrative status values are defined and controlled by the Registration Authority responsible for the metadata registry. Annex E.3 provides examples of possible administrative statuses used to record the progress of an Administered Item within each registration status. The example shown is not normative.

4.5 Procedures

The Registration Authority shall establish procedures for necessary activities of the Metadata Registry. Example functional activities that need procedures are:

a) Submission of metadata items for registration - Submitters shall submit metadata items for entry into the metadata register.

b) Entry of metadata items into the metadata registry - The metadata item must first be identified. This process makes it an Identified Item. The item may also be made a Designatable Item, so it can be designated and defined. Finally, the item may become an Administered Item by providing additional administrative information about the Submitting Organization and Submitter.

c) Specification of registration status - An Administered Item may be recorded as "Incomplete" or "Candidate" registration status, as the Submitter deems appropriate. A registration status of "Incomplete" implies usage restricted to the Submitter's domain while being posted for informational purposes. The "Candidate" status implies that the submitter intends to progress the Administered Item to higher registration status levels. Submitters or Stewards might progress Administered Items in the "Candidate" status to the "Recorded" registration status by completing all mandatory metadata attributes required of that Administered Item.

d) Progression of Administered Items - Submitters shall progress Administered Items to "Recorded" status. Progression of Administered Items to registration status of "Qualified" or higher shall require the sponsorship of a Steward and approval of the Registration Authority.

e) Harmonization of Administered Items - The objective of harmonization is to resolve any potential duplicate or overlapping of Administered Items and to understand the justifiable differences that might exist among the harmonized items. Procedures shall be established to facilitate Administered Item harmonization and reuse.

f) Modification of Administered Items - Procedures shall be established to change Administered Items.

g) Retirement of Administered Items - Procedures shall be established to retire Administered Items.

h) Administrative processing - The Registrar may assign administrative statuses in order to track an interim state of an Administered Item.

Functional operating procedures are needed for those that develop, operate, and/or maintain a Metadata Registry. The ISO/IEC 11179-3:2013 requires organizational participation of certain roles, such as Registration Authority, Registrar, Submission Contact, and Stewardship Contact. Annex C provides a suggested set of roles and responsibilities along with suggested functional operating procedures for the use of the Metadata Registry by role. Annex D provides a suggested concept of operations. Annex E provides suggested procedures to address these functional requirements and the concept of operations. Annex F provides suggested procedures for harmonization of Administered Items.

5 Metadata Registries of Administered Items

5.1 General

The Metadata Registry is for Administered Items that fall under its purview. The Metadata Registry is a system for registering metadata. A particular Metadata Registry may be used to manage any number of metadata registers, the information stores or databases of metadata. Each metadata register is maintained by one or more Registration Authorities. The number of metadata registers and Registration Authorities for any particular implementation of a Metadata Registry is a decision of the implementer and/or operator of a particular Metadata Registry.

Each Administered Item in any metadata register is associated with one or more Registration Authority through the Registration association class. (See ISO/IEC 11179-3:2013, 8.1.5.)

The principal participants of Metadata Registries are Registration Authorities, Submitting Organizations, and Stewardship Organizations. The Registration Authority has one or more Registrars as its contacts. Submitting Organizations submit items for metadata registers. A submitter is a contact for a Submitting Organization for a particular Administered Item. A Submitting Organization may utilize any number of submitters. Each Administered Item may be associated with one or more Submitting Organization, but with exactly one submitter at each organization. Stewardship Organizations are authoritative sources for the attributes of Administered items. A steward is a contact for a Stewardship Organization for an item

a particular Administered Item. A Stewardship Organization may utilize any number of stewards. Each Administered Item is associated with exactly one steward and exactly one Stewardship Organization once the Administered Item reaches Recorded status.

5.2 Contents

5.2.1 Metadata Registry Views

In the context of this Part of ISO/IEC 11179, the views on the contents of the metadata register may vary based upon of the roles of the participants in the metadata registry and the levels of conformance to which the registry ascribes.

5.2.2 Metadata Registry Contents and Levels of Conformance

Stewardship organizations may have an impact on the content of individual attributes of each Administered Item. Stewardship organizations do not have the purview on the composition of the registry itself, i.e., what specific metadata attributes to include with each Administered Item. The Registration Authority specifies the requirements. For example, while the Registration Authority determines, in accordance to this part of ISO/IEC 11179, each Administered Item must have a definition, the Stewardship Organization ensures that the definition of a metadata item is semantically correct.

A Registration Authority may adopt a stricter or less strict level of conformance, levying corresponding requirements on Submitting Organizations. The contents of a metadata register, therefore, may vary accordingly. ISO/IEC 11179-3:2013, Clause 4 specifies Conformance for Metadata Registries.

5.2.3 Metadata Registry Contents and Types of Administered Items

Not all Metadata Registries will have the need or the means to support all the types of metadata items specified in the metadata model described in ISO/IEC 11179-3. Some Metadata Registries may start with a metadata register of Data Element Concepts; some may start with Conceptual Domain, then, at a later time, implement Data Element and Value Domain. This part of ISO/IEC 11179 refers the reader to ISO/IEC 11179-3 for the registry metadata attributes that are for specific types of Administered Items. This part of ISO/IEC 11179 makes use of the registry metadata attributes that apply to all Administered Items.

A Metadata Registry, however, must not violate the business rules (as specified via associations and multiplicities) of the Registry Metamodel specified in ISO/IEC 11179 Part 3 of this international standard for Administered Items that have a registration status of “Recorded”.

5.3 Language(s)

The language(s) used by the Metadata Registry shall be documented by the Registration Authority.

5.4 Availability of the Metadata Registry of Administered Items

Access to the contents of the metadata register shall be governed in accordance with the procedure prescribed by the appropriate Registration Authority.

6 Conformance

A conforming implementation shall conform to Clause 4, Clause 5, and Annex B.

Annex A
(informative)

Identifiers based on ISO/IEC 6523

A.1 General

Metadata items identified under the provisions of this part of ISO/IEC 11179 are each assigned one or more unique identifiers. This Annex specifies the formation of identifier values based on ISO/IEC 6523. In this edition of this part of ISO/IEC 11179, the use of ISO/IEC 6523 is optional.

A.2 Components of International Registration Data Identifier (IRDI)

An Identified Item, as specified in ISO/IC 11179-3:2013, is uniquely identified by one or more Scoped Identifiers within a specified namespace. When a scoped identifier is developed based on ISO/IEC 6523, it is known as an International Registration Data Identifier (IRDI).

The uniqueness of an IRDI is determined by the combination of the values of three identifying attributes, as depicted in Figure A-1

a) An identifier assigned to a Registration Authority, hereafter called Registration Authority Identifier (RAI).

b) An identifier assigned to an Administered Item within a Registration Authority, hereafter called Data Identifier (DI).

c) An identifier assigned to a version under which an Administered Item registration is submitted or updated hereafter called version identifier (VI).

NOTE 1 Although the version may not necessarily be required to make an Identified Item unique within a metadata register, the inclusion of the version identifier in the International Registration Data Identifier would provide a unique reference point, should a conflict arise.

NOTE 2 OPI and OPIS are optional per ISO/IEC 6523. ISO/IEC 11179-6 uses the entire structure of ISO/IEC 6523 as a Registration Authority Identifier.

A.3 Assignment of Values to International Registration Data Identifier (IRDI) Components

A.3.1 Assignment

An International Registration Data Identifier will be assigned to an Administered Item submitted for registration. The values of each component of International Registration Data Identifier are assigned as follows.

A.3.2 Assignment of Registration Authority Identifier (RAI)

Every organization wishing to become a Registration Authority shall possess an internationally recognized organization code, assigned in accordance with the procedure prescribed in ISO/IEC 6523. The entire structure for identification of organizations, as described in Clause 4 of ISO/IEC 6523-1:1998, shall be the internationally unique Registration Authority Identifier for the purpose specified in this part of ISO/IEC 11179.

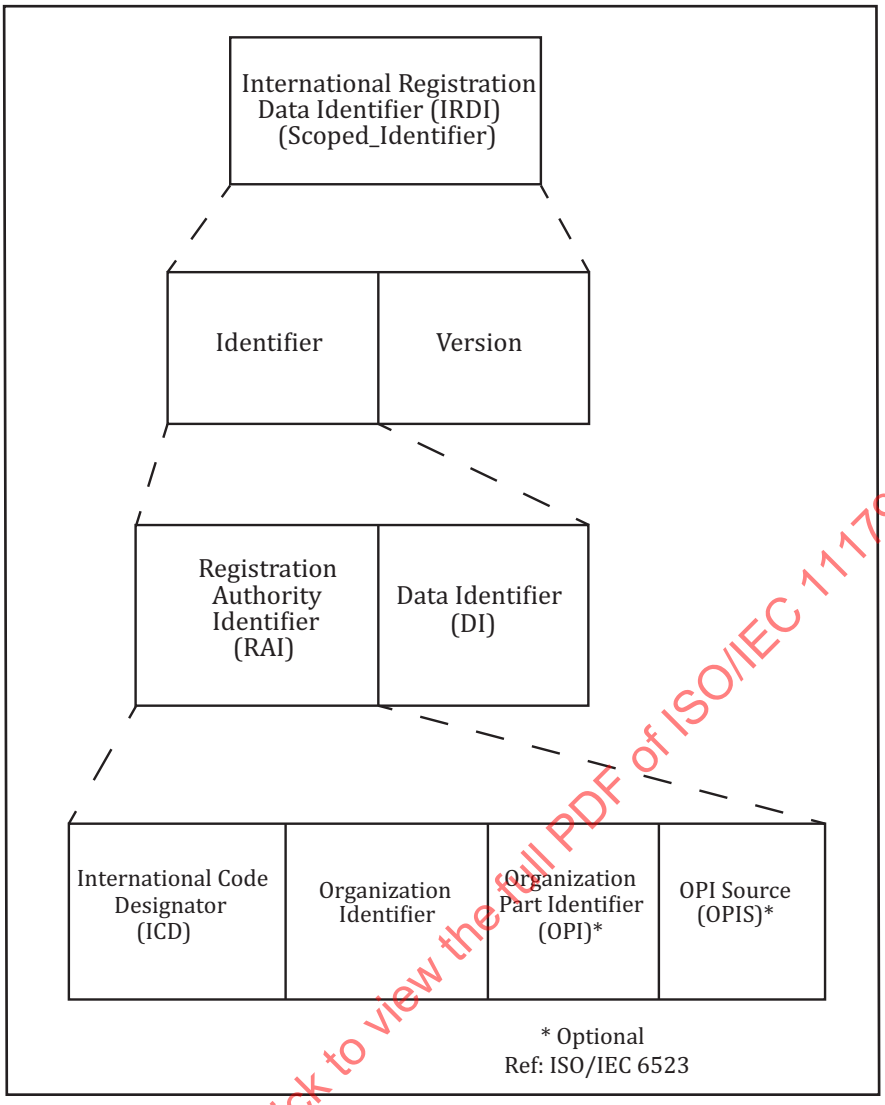


Figure A.1 — Structure of International Registration Data Identifier (IRDI)

A.3.3 Assignment of Data Identifier (DI)

Each new Administered Item accepted into the metadata register shall be assigned a new Data Identifier. A new Data Identifier shall also be assigned to an existing Administered Item when it is modified in such a way as to change the meaning of the Administered Item or the representation form of the potential values of the Administered Item. For example, changes to the mandatory attributes, Definition and/or Form of Representation would require the assignment of a new Data Identifier. Editorial changes to the definition, however, would not cause generation of a new Administered Item, as long as the essential meaning expressed by the definition remains the same. For example, the value of the administrative attributes listed in Annex B may change without causing generation of a new Data Identifier.

Based on the requirements of the subject matter included in its metadata register, each Registration Authority shall establish and publish as appropriate, specific guidelines for any additional conditions requiring assignment of a new Data Identifier (i.e., generation of a new Administered Item), due to changes in the values of mandatory attributes established for its metadata register.

Each Registration Authority shall establish and publish specific guidelines on the format, presentation, and generation of Data Identifiers that are used within the metadata register.

A.3.4 Assignment of Version Identifier (VI)

In general, a new Version Identifier may be generated when any attribute value (other than one requiring a new Data Identifier) changes. Each Administered Item, however, may require a different versioning treatment. For example, a change in Permissible Data Element Values for an Employee Name may not require a new version identifier, while a change of Permissible Values for Account Type will likely require a version identifier change. Each Registration Authority shall establish specific guidelines for the subject matters in which it specializes and for which it is responsible.

Each Registration Authority shall establish and publish specific guidelines on the format, presentation, and generation of version identifiers that are used within the metadata register.

A.4 Using ISO/IEC 6523 Organization Codes as Registration Authority Identifier.

A.4.1 Organization Code Structure

The following excerpts from ISO/IEC 6523-1:1998 are included here for convenience, since this ready reference can facilitate the understanding of the code structure.

"The structure for the identification of organizations and organization parts consists of the following four components:

a) the International Code Designator (ICD);

b) the identification of an organization within an identification scheme: a data containing an organization identifier;

c) the identification of an organization part: a data element containing an organization part identifier (OPI);

d) the OPI source indicator (OPIS): a data element containing a code value indicating the source of the OPI.

The third component, identification of an organization part, is optional. It is used when and only when one wants to designate a specific part within an organization.

The fourth component, the OPI source indicator (OPIS), shall not be used if the third component is not used; it is optional when the OPI is used.

The format of these data elements is the following:

— ICD: integer, variable length, up to 4 digits;

— Identification of an organization: variable length, up to 35 characters;

— OPI: variable length, up to 35 characters;

— OPIS: 1 character.

Note: No particular sequence of the four components is specified in either ISO/IEC 6523-1:1998 or in this part of this International Standard.

The structure is illustrated below:

ICD	Identification of an organization within an identification scheme	Identification of an organization part	OPIS
Variable length; integer; up to 4 digits.	Variable length up to 35 characters.	Optional; variable length up to 35 characters.	Optional; 1 character.

Source: ISO/IEC 6523-1:1998

Note: The sequence of the four components is not specified in either ISO/IEC 6523-1:1998 or in this part of this International Standard.

Figure A.2 — Structure for the identification of organizations and organization parts

A.4.2 Registration Authority for International Code Designators of ISO/IEC 6523 Registry

The registration authority (RA) for the above registry, at the date of publication of this part of ISO/IEC 11179 is:

Farance Inc. [on behalf of American National Standards Institute (ANSI)]

Contact info:

E-mail: info@farance.com

Web: http://www.farance.com/

Telephone: +1 212 486 4700

Fax: +1 212 759 1605

Postal:

Farance Inc.

PO Box 256

New York, NY

10044-0205, USA

Obtaining an RAI without obtaining an ICD: The Registration Authority of ISO/IEC 6523 maintains only ICDs. An organization that wants to obtain an organization code might not have to obtain an ICD. It can contact an organization/trade association such as DUNS or SIRENE, which already have their ICDs, and request an organization code under their respective ICDs. The concatenation of ICD and Organization code assigned by the ICD owner will constitute the organization code of the requester.

Example: Most organizations already have their international organization codes without realizing that fact. For example, most organizations have a DUNS code that can be concatenated with DUNS's ICD (0060) to form their own organization codes. The organization codes for subscribers of DUNS, under DUNS ICD will have the DUNS format and are assigned by Dun and Bradstreet. Below is the detail of DUNS entry in the "Numerical list of all ICDs that have been issued" maintained by BSI.

Table A.1 — DUNS Entry from the ISO/IEC 6523 Registry

ICD	**0060**
Name of coding system	Data Universal Numbering System (D-U-N-S Number)
Name & address of issuing organisation	Dun and Bradstreet Ltd Holmers Farm Way High Wycombe Bucks HP12 4UL United Kingdom
Structure of code	1) Eight identification digits and a check digit. A two-digit prefix will be added in the future but it will not be used to calculate the check digit. 2) The Organization name is not part of the D-U-N-S number
Display Requirements	IIIIIIIIC where all characters are the digits 0 to 9, I = an identification digit and C = the check digit. When the prefix (P) is added the display requirement will be eleven digits, PPIIIIIIIIC.
Description of organizations covered by the coding system	It is the objective of Dun and Bradstreet to allocate a D-U-N-S number to all businesses and institutions engaged in a specific business activity.
Notes on use of the code	The D-U-N-S Number originated to facilitate the compilation of financial status reports on those involved in business transactions but it is now widely used for other purposes also. The number has world wide recognition as a means of identifying businesses and institutions.
Sponsoring authority	BSI/DISC
Date of issue of ICD	JUNE 1993
Additional comments	A full specification of scheme has been deposited with the Registration Authority

Annex B
(normative)

Contents of the Metadata Registry: Metadata attributes required for Administered Items

B.1 Introduction

This annex presents tables that delineate the requirements for inclusion of metadata attributes in a metadata registry for each Administered Item. These do not specify any of the metadata attributes that are applicable to specific types of Administered Items but only those metadata attributes that are applicable to all Administered Items.

In all tables each row is an elementary attribute or a composite metadata attribute.

B.2 Metadata attributes in ISO/IEC 11179-3:2013

This clause provides a summary of the attributes from ISO/IEC 11179-3:2013 that are used for any Administered Item. Table B-1 provides the summary. The first column is the metadata attribute name. The indentation of the metadata attribute name denotes the sublevel of the attribute. Elementary metadata attributes that are mandatory are identified in the first column with an "*" in the far left side of the column. The second column is the definition of the metadata attribute from ISO/IEC 11179-3. The third column identifies the clause in ISO/IEC 11179-3 where the metadata attribute is defined. The fifth column identifies the maximum number of occurrences for the metadata attribute within its composite metadata attribute. The sixth column specifies the datatype of the elementary metadata attributes.

The fourth column specifies the obligation and conditionality for the metadata attribute. The following codes are used in column 4:

— "M" = mandatory. Mandatory metadata attributes are required for the Administered Item, without exception.

— "O" = optional. Optional metadata attributes may be used if desired by the steward of the Administered Item to provide additional documentation about the Administered Item.

— "C" = contingent. Contingent metadata attributes are those that depend upon either:

  a) the implementation of an optional metadata attribute –-they are required when the optional metadata attribute upon which they depend is implemented; or

  b) mutual exclusivity with one or more other contingent metadata attributes – only one of them may be implemented.

The constraints on minimum occurrences are to be enforced when the registration status for the metadata item is "Recorded" or higher. In other words, a registration status of "Recorded" indicates that all mandatory attributes have been documented.

Table B.1 — Common attributes for Metadata Items

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
Identified_Item (class/type)	metadata item identified in a metadata registry	7.2.2.1			
identifier (role) of identification (association)	scoped identifier which identifies the item	7.2.3.1	M	many	Scoped_Identifier
Scoped_Identifier (class)	identifier of an identified item within a specified namespace	7.2.2.2			
*identifier (attribute)	string used to unambiguously denote an identified item within the scope of a specified namespace	7.2.2.2.2.1	M	1	String
*version (attribute)	unique version identifier of the scoped identifier	7.2.2.2.2.2	M	1	String
identified_item (role) of identification (association)	item identified by the scoped identifier	7.2.2.1	O	1	Identified_Item
scope (role) of identifier_scope (association)	namespace which provides scope for the scoped identifier	7.2.3.2	M	1	Namespace
Namespace (class)	set of designations and/or scoped identifiers for a particular business need	7.2.2.3			
naming_authority (attribute)	organization that has the authority for naming in the namespace	7.2.2.3.2.1	O	1	Organization
one_name_per_item_indicator (attribute)	indicator that denotes whether more than one designation and/or scoped identifier within the namespace may be associated with any single item (designatable item and/or identified item). If the indicator is true, then at most one designation and/or scoped identifier within the namespace may be associated with any single item.	7.2.2.3.2.2	O	1	Boolean
one_item_per_name_indicator (attribute)	indicator that denotes whether the namespace may contain more than one designation and/or scoped identifier having the same sign and/or identifier. If the indicator is *true*, then at most one designation and/or scoped identifier having the same sign and/or identifier is permitted within the namespace	7.2.2.3.2.3	O	1	Boolean
mandatory_naming_convention_indicator (attribute)	indicator specifying whether all designations in this namespace shall conform to one of the acceptable naming conventions	7.2.2.3.2.4	O	1	Boolean
shorthand_prefix (attribute)	prefix conventionally used as shorthand for a namespace, for greater readability, in text for human consumption	7.2.2.3.2.5	O	1	String
scheme_reference (attribute)	reference identifying the type of the namespace specification	7.2.2.3.2.6	O	1	Sign

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
acceptable_convention (role) of naming_convention_ utilization (association)	naming convention used for designations within the namespace	7.3.4.6	O	many	Naming_ Convention
contained_identifier (role) of identifier_scope (association)	set of scoped identifiers whose scope is specified by the namespace	7.2.3.2	O	many	Scoped_Identifier
included_designation (role) of designation_ namespace (association)	set of designations whose scope is specified by the namespace	7.3.4.2	O	many	Designation
Identified_Item (type)	identification for the namespace	7.2.2.1	M	1	Identified_ Item
Designatable_Item (type)	designation and definition for the namespace	7.3.2.2	O	1	Designatable_Item
Classifiable_Item (type)	classification for the namespace	9.2.2.1	O	1	Classifiable_ Item
Designatable_Item (class/type)	identified item which can have designations and/or definitions	7.3.2.2			
designation (role) of item_designation (association)	designation for the designatable item	7.3.4.4	O	many	Designation
definition (role) of item_definition (association)	definition for the designatable item	7.3.4.3	O	many	Definition
Designation (class)	representation of a concept by a sign which denotes it	7.3.2.3			
sign (attribute)	sign of the designation	7.3.2.3.2.1	M	1	Sign
language (attribute)	language or dialect in which the sign (usually a name) is expressed	7.3.2.3.2.2	O	1	Language_ Identification
Designation_Context (association class)	context in which a designation is applicable	7.3.3.2	M	many	Designation_ Context
specific_definition (role) of designation_definition_ pairing (association)	binding of a designation to its definition	7.3.4.1	O	1	Definition
namespace (role) designation_namespace (association)	namespace in which the designation is valid	7.3.4.2	O	many	Namespace
item (role) of item_designation (association)	binding of a designation to a designatable item	7.3.4.4	M	1	Designatable_Item
convention (role) of naming_convention_ conformance (association)	naming convention to which the designation conforms	7.3.4.5	O	many	Naming_ Convention
Language Identification (class/ composite datatype)		6.3.5			
language_identifier (attribute)	identifies the language	6.3.5.2.1	M	1	String
script_identifier (attribute)	identifies the set of graphic characters used for the written form of the language.	6.3.5.2.2	O	1	String
geopolitical_territory identifier (attribute)	identifies the specific country, territory or region whose linguistic variations apply	6.3.5.2.3	O	1	String

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
variant_identifier (attribute)	identifies a language variant, which indicates additional, well-recognized variations that define a language or its dialects that are not covered by other available identifiers	6.3.5.2.4	O	many	String
extension_identifier (attribute)	identifies an extension to a language identifier	6.3.5.2.5	O	many	String
private_use_qualifier (attribute)	qualifier whose meaning is defined solely by private agreement	6.3.5.2.6	O	1	String
Designation_Context (association class)	context in which a designation is applicable	7.3.3.2			
acceptability (attribute)	acceptability rating of the designation in the specified context	7.3.3.2.2.1	O	1	Acceptability (enumeration)
scope (role)	setting in which the designation is used	7.3.2.5	M	1	Context
relevant_designation (role)	designation to which the context applies	7.3.2.3	O	1	Designation
Context (class)	setting in which a designation or definition is used	7.3.2.5			
Designation_Context (association class)	designation to which the context applies	7.3.3.2	O	many	Designation_Context
Definition_Context (association class)	definition to which the context applies	7.3.3.1	O	many	Definition_Context
Identified_Item (type)	identification for the context	7.2.2.1	M	many	Identified_Item
Designatable_Item (type)	designation and definition for the context	7.3.2.2	M	many	Designatable_Item
Classifiable_Item (type)	classification for the context	9.2.2.1	O	many	Classifiable_Item
Naming_Convention (class)	specification of how signs (names) of designations and/or scoped identifiers are formulated	7.3.2.7			
authority_rule (attribute)	rule identifying the authority that assigns signs (names) of designations, and/or enforces naming conventions	7.3.2.7.2.2	M	1	Text
lexical_rule (attribute)	rule specifying the appearance of signs (names) of designations: preferred and non-preferred terms, synonyms, abbreviations, part length, spelling, permissible character set, case sensitivity, etc	7.3.2.7.2.5	M	1	Text
scope_rule (attribute)	rule specifying the range within which the naming convention is in effect.	7.3.2.7.2.1	M	1	Text

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
semantic_rule (attribute)	rule specifying the meanings of parts of a sign (name) of a designation and possibly separators that delimit them in a naming convention	7.3.2.7.2.3	M	1	Text
syntactic_rule (attribute)	rule specifying the arrangement of parts of a sign (name) of a designation and the separators that delimit them in a naming convention	7.3.2.7.2.4	M	1	Text
conformant_designation (role) of naming_convention _conformance (association)	set of designations which conform to the naming convention	7.3.4.5	O	many	Designation
utilization (role) of naming_convention_utilization (association)	set of namespaces whose designations use the naming convention	7.3.4.6	O	many	Namespace
Identified_Item (type)	identification for the naming convention	7.2.2.1	M	many	Identified_Item
Designatable_Item (type)	designation and definition for the naming convention	7.3.2.2	O	many	Designatable_Item
Classifiable_Item (type)	classification for the naming convention	9.2.2.1	O	many	Classifiable_Item
Definition (class)	representation of a concept by a descriptive statement which serves to differentiate it from related concepts	7.3.2.4			
text (attribute)	text of the definition	7.3.2.4.2.1	M	1	Text
language (attribute)	language used to write the definition text	7.3.2.4.2.2	C (required if no default language specified)	1	
source (attribute)	reference to the source from which the definition text is taken	7.3.2.4.2.3	O	1	Reference_Document
item (role) of item_definition (association)	designatable item to which the definition applies	7.3.4.3	M	1	Designatable_Item
definition_context (association class)	context in which a definition is applicable	7.3.3.1	M	many	Definition_Context
definition_heading (role) of designation_definition_ pairing (association)	binding of a designation to its definition	7.3.4.1	O	1	Designation
Definition_Context (association class)	context in which a definition is applicable	7.3.3.1			
acceptability (attribute)	acceptability rating of the definition in the specified context	7.3.3.1.2.1	O	1	Acceptability (enumeration)
relevant_definition (role)	definition to which the context applies	7.3.2.4	O	1	Definition
scope (role)	setting in which a designation or definition is used	7.3.2.5	M	1	Context
Registered_Item (class/type)	identified item that is recorded and managed in a metadata registry	8.1.2.1			

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
Identified_Item (superclass)	identified item that is to be registered	7.2.2.1	M	1	Identified_Item
reference (association class)	association between a **reference document** and a **registered item**	8.1.5.2	O	many	Reference
submission_record (role) of submission (association)	record of the submission of the **registered item**	8.1.6.5	M	many	Submission_Record
Reference (association class)	association between a **reference document** and a **registered item**	8.1.5.2			
type (attribute)	specification of the type of Reference	8.1.5.2.2.1	O	1	String
document_reference (role)	document that provides pertinent details for consultation about a subject	6.3.7	O	1	Reference_Document
referencing_item (role)	registered item that references the document	8.1.2.1	O	1	Registered_Item
Reference_Document (class)	document that provides pertinent details for consultation about a subject	6.3.7			
identifier (attribute)	identifier for the reference document	6.3.7.2.1	M	1	String
type_description (attribute)	description of the type of reference document	6.3.7.2.2	M	1	Document-Type
language_identifier (attribute)	identifier of the natural language used in the reference document	6.3.7.2.3	C (required if no default language specified)	many	Language_Identification
notation (attribute)	formal syntax and semantics used within the reference document	6.3.7.2.4	O	1	Notation
title (attribute)	title of the reference document	6.3.7.2.5	O	1	Text
provider (attribute)	organization that maintains or carries an official copy of the **reference document**	6.3.7.2.6	O	many	Organization
uri (attribute)	uri for reference document	6.3.7.2.7	O	1	String
Document_Type (class/composite datatype)	specification of a type of reference document	6.3.3			
identifier (attribute)	identifies the document type	6.3.3.2.1	C (Either the identifier or the descript-ion or both must be present)	1	String
description (attribute)	describes the document type	6.3.3.2.2	C (Either the identifier or the descript-ion or both must be present)	1	Text

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/Condition	Maximum Occurrence	Datatype
scheme_reference (attribute)	identification scheme from which the identifier and/or description are drawn	6.3.3.2.3	O	1	Sign
Submission_Record (class)	record of a submission organization and a submission contact involved in the submission of a metadata item for registration)	8.1.2.8			
organization (attribute)	organization that submits a metadata item for registration	8.1.2.8.2.1	M	1	Organization
contact (attribute)	contact information associated with a submission	8.1.2.8.2.2	M	1	Contact
submitted_item (role) of submission (association)	registered item that has been submitted	8.1.6.5	M	many	Registered_Item
Administered Item (class/type)	registered item for which administrative information is recorded	8.1.2.2			
registered_item (superclass)	registered item to be administered	8.1.2.1	M	1	Registered_Item
creation_date (attribute)	date the administered item was created	8.1.2.2.3.1	M	1	Datetime
last_change_date (attribute)	date the administered item was last changed	8.1.2.2.3.2	O	1	Datetime
change_description (attribute)	description of what has changed in the administered item since the prior version of the Administered Item	8.1.2.2.3.3	O	1	Text
explanatory_comment (attribute)	descriptive comments about the administered item	8.1.2.2.3.4	O	1	Text
origin (attribute)	source (document, project, discipline or model) for the administered item	8.1.2.2.3.5	O	1	Text
registration (association class)	association between a registration authority and an administered item where the Registration Authority manages the Administered Item in a **metadata** register	8.1.5.1	M	many	Registration
stewardship_record (role) of stewardship (association)	relationship of an administered item, a contact, and an organization involved in the stewardship of the metadata	8.1.6.4	M	1	Stewardship_Record
attached_item (role) of attachment (association)	binding of exactly one **administered item** with zero or more **attached items** indicating the Attached Items share the **administrative information** of the Administered Item	8.1.6.1	O	many	Attached_Item
Registration (association class)	association between a Registration Authority and an Administered Item where the Registration Authority manages the Administered Item in a **metadata** register	8.1.5.1			

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
registration_state (attribute)	current collection of administrative data about registration	8.1.5.1.2.1	M	1	Registration_State
authority (role)	organization that maintains the registration of the administered item	8.1.2.5	M	1	Registration_Authority
administered_item (role)	administered Item to which the registration applies	8.1.2.2	M	1	Administered_Item
Registration_State (class/composite datatype)	collection of administrative information about the registration of an administered item	8.1.2.6			
registration_status (attribute)	designation of the status in the registration life-cycle of an administered item	8.1.2.6.2.1	M	1	String
administrative_status (attribute)	designation of the status in the administrative process of a registration authority for handling registration requests	8.1.2.6.2.6	M	1	String
effective_date (attribute)	date an administered item became/becomes available to registry users	8.1.2.6.2.2	M	1	Datetime
until_date (attribute)	date an administered item is no longer effective in the registry	8.1.2.6.2.3	O	1	Datetime
administrative_note (attribute)	any general note about the administered item	8.1.2.6.2.4	O	1	Text
unresolved_issue (attribute)	any problem that remains unresolved regarding proper documentation of the administered item	8.1.2.6.2.5	O	1	Text
previous state (attribute)	immediately prior collection of administrative information about registration	8.1.2.6.2.7	O	1	Registration_State
Registration_Authority (class)	organization responsible for maintaining a register	8.1.2.5			
registration_authority_identifier (attribute)	identifier assigned to a registration authority	8.1.2.5.3.1	M	1	Registration_Authority_Identifier
documentation_language_identifier (attribute)	identifier of the language used by the registration authority	8.1.2.5.3.2	M	many	Language_Identification
Registration_Authority_Identifier (composite datatype)	identifier assigned to a registration authority	6.3.8			
international_code_designator (attribute)	identifier of an organization identification scheme	6.3.8.2.1	M	1	String
organization_identifier (attribute)	identifier assigned to an organization within an organization identification scheme, and unique within that scheme	6.3.8.2.2	M	1	String
organization_part_identifier (attribute)	identifier allocated to a particular organization part	6.3.8.2.3	O	1	String

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
OPI_source (attribute)	source for the organization part identifier	6.3.8.2.4	C / required if organ-izat-ion_ part_-iden-tifier is used	1	String
Organization (class/composite datatype)	unique framework of authority within which a person or persons act, or are designated to act, towards some purpose	6.3.6			
*name (attribute)	sign that designates the organization	6.3.6.2.1	M	many	Sign
mail_address (attribute)	postal address of the organization	6.3.6.2.2	O	1	Postal_ Address
email_address (attribute)	email addresses of the organization	6.3.6.2.3	O	many	String
phone_number (attribute)	phone numbers for the organization	6.3.6.2.4	O	many	Phone_ Number
uri (attribute)	uri for the organization	6.3.6.2.5	O	1	String
Registrar (class)	representative of a registration authority	8.1.2.4			
contact (superclass)	contact information associated with a registrar	8.1.2.4.1, 8.1.3.1, 6.3.2	M	1	Contact
*identifier(attribute)	identifier for the registrar	8,1,2,4,3,1	M	1	String
authority (association role) of registration_authority_ registrar (association)	registration authority that the registrar represents	8.1.6.3	M	1	Registration _Authority
Contact (class)	role and/or individual within an organization	6.3.2			
individual (attribute)	individual that is the contact	6.3.2.2.1	C (either an individual or a role or both shall be specified)	1	Individual
organization (attribute)	organization for which the contact acts as representative	6.3.2.2.2	M	1	Organization
role (attribute)	specified responsibilities of the contact	6.3.2.2.3	C (either an individual or a role or both shall be specified)	1	Role
Individual (class/composite datatype)	single human being	6.3.4			
*name	sign that designates of the individual	6.3.4.2.1	M	1	Sign
title	name of the position held by the individual	6.3.4.2.2	O	1	Sign
mail_address (attribute)	postal address of the individual	6.3.4.2.3	O	1	Postal_ Address
email_address (attribute)	email addresses of the individual	6.3.4.2.4	O	many	String

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
phone_number (attribute)	phone numbers for the individual	6.3.4.2.5	O	many	Phone_ Number
role (attribute)	specified responsibilities of the individual	6.3.4.2.6	O	1	Role
Role (class/composite datatype)					
title	name of the position held by the role	6.3.4.2.2	O	1	Sign
mail_address (attribute)	postal address of the role	6.3.4.2.3	O	1	Postal_ Address
email_address (attribute)	email addresses of the role	6.3.4.2.4	O	many	String
phone_number (attribute)	phone numbers for the role	6.3.4.2.5	O	many	Phone_ Number
Stewardship_Record (class)	relationship of an administered Item, a contact, and an organization involved in the stewardship of the metadata	8.1.2.7			
organization (attribute)	organization that maintains stewardship of an administered item	8.1.2.7.2.1	M	one	Organization
contact (attribute)	contact information associated with a stewardship	8.1.2.7.2.2	M	one	Contact
Attached_Item (class)					
Registered_Item (superclass)	registered item to be attached	8.1.2.1	M	1	Registered_ Item
owner (role of attachment association)	administered item which holds the administrative information for the attached item	8.1.2.3	M	1	Administered_Item
Item (class)	abstract supertype of all metadata items which might be classified	9.2.2.1			
classification (association class)	inclusion of a classifiable item into a group designated by a concept in a concept system	9.2.3.1	O	many	Classification
Classification (association class)	inclusion of a classifiable item into a group designated by a concept in a concept system	9.2.3.1			
classified_item (role)	metadata item being classified	9.2.2.1	M	1	Classifiable_Item
classifier (role)	concept used to classify a classifiable item	9.1.2.1	M	1	Concept
scheme (role) of classification_ scheme (association)	concept system that provides the scheme for classification	9.2.4.1	M	1	Concept_ System
Concept_System (class)		9.1.2.2			
notation (attribute)	formal syntax and semantics used in the concept system	9.1.2.2.2.1	O	1	Notation
classification (role) of classification_ scheme (association)	inclusion of a classifiable item into a group designated by a concept in a concept system	9.2.3.1, 9.2.4.1	O	many	Classification
member_concept (role) of concept_ system_ membership (association)	set of concepts which are members of the concept system	9.1.2.1, 9.2.4.2	O	many	Concept

NOTE 1 * - A mandatory elementary metadata attribute

NOTE 2 M – mandatory; O – optional; C – contingent

NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.

Table B.1 *(continued)*

Metadata Class/Attribute/Association Name	Definition from ISO/IEC 11179-3:2013	Reference Clause in ISO/IEC 11179-3:2013	Obligation/ Condition	Maximum Occurrence	Datatype
Identified_Item (type)	identification for the naming convention	7.2.2.1	M	many	Identified_Item
Designatable_Item (type)	designation and definition for the naming convention	7.3.2.2	M	many	Designatable_item
Classifiable_Item (type)	classification for the naming convention	9.2.2.1	O	many	Classifiable_item
Concept (class)	unit of knowledge created by a unique combination of characteristics	9.1.2.1			
including_concept_system (role) of concept_system _membership (association)	concept system of which this concept is a member	9.1.2.2	M	many	Concept_System
classification (association class)	inclusion of a classifiable item into a group designated by a concept in a concept system	9.2.3.1	O	many	Classification
Identified_Item (type)	identification for the naming convention	7.2.2.1	M	many	Identified_Item
Designatable_Item (type)	designation and definition for the naming convention	7.3.2.2	M	many	Designatable_Item
Classifiable_Item (type)	classification for the naming convention	9.2.2.1	O	many	Classifiable_Item
NOTE 1 * - A mandatory elementary metadata attribute NOTE 2 M – mandatory; O – optional; C – contingent NOTE 3 In this table, items denoted by "C" are contingent upon the preceding optional item in the table unless otherwise specified.					

B.3 Metadata attribute requirements at each registration status

This clause associates the attributes from in ISO/IEC 11179-3:2003 that used for any Administered Item with the registration status values.

Table B-2 provides the requirements for each metadata attribute based upon the registration status values. The first column is the metadata attribute name. The indentation of the metadata attribute name denotes the sublevel of the attribute. The second column specifies the obligation and conditionality for the metadata attribute from ISO/IEC 11179-3:2003. The third through fourteenth columns specifies the obligation and conditionality for the metadata attribute metadata attributes at the respective registration statuses.

The following codes are used for obligation and conditionality:

— "M" = mandatory. Mandatory metadata attributes are required for the Administered Item, without exception.

— "O" = optional. Optional metadata attributes may be used if desired by the steward of the Administered Item to provide additional documentation about the Administered Item.

— "C" = contingent. Contingent metadata attributes are those that depend upon either:

  a) the implementation of an optional metadata attribute –-they are required when the optional metadata attribute upon which they depend is implemented; or

  b) mutual exclusivity with one or more other contingent metadata attributes – only one of them may be implemented.

— "D" = default. Mandatory, but using the registry default.

Table B.2 — Required elementary metadata attributes at each registration status

		Lifecycle Status								Documentation Status	
Metadata Attribute Name and Structure	Metamodel Obligation /Condition	Incomplete	Candidate	Recorded	Qualified	Standard	Preferred Standard	Retired	Superseded	Historical	Application
Identified_Item (class/type)											
identifier (role) of identification (association)	M	M	M	M	M	M	M	M	M	M	M
Scoped_Identifier (class)											
*identifier (attribute)	M	M	M	M	M	M	M	M	M	M	M
*version (attribute)	M	M	M	M	M	M	M	M	M	M	M
identified_item (role) of identification (association)	O	O	O	O	O	O	O	O	O	O	O
scope (role) of identifier_scope (association)	M	M	M	M	M	M	M	M	M	M	M
Namespace (class)											
naming_authority (attribute)	O	O	O	O	O	O	O	O	O	O	O
one_name_per_item_indicator (attribute)	O	O	O	O	O	O	O	O	O	O	O
one_item_per_name_indicator (attribute)	O	O	O	O	O	O	O	O	O	O	O
mandatory_naming_convention_indicator (attribute)	O	O	O	O	O	O	O	O	O	O	O
shorthand_prefix (attribute)	O	O	O	O	O	O	O	O	O	O	O
scheme_reference (attribute)	O	O	O	O	O	O	O	O	O	O	O
acceptable_convention (role) of naming_ convention_utilization (association)	O	O	O	O	O	O	O	O	O	O	O
contained_identifier (role) of identifier_scope (association)	O	O	O	O	O	O	O	O	O	O	O
included_designation (role) of designation_ namespace (association)	O	O	O	O	O	O	O	O	O	O	O
Identified_Item (type)	M	M	M	M	M	M	M	M	M	M	M
Designatable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Classifiable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Designatable_Item (class/type)											
designation (role) of item_designation (association)	O	O	O	O	O	O	O	O	O	O	O
definition (role) of item_definition (association)	O	O	O	O	O	O	O	O	O	O	O

Table B.2 *(continued)*

		Lifecycle Status								Documentation Status	
Metadata Attribute Name and Structure	**Metamodel Obligation /Condition**	**Incomplete**	**Candidate**	**Recorded**	**Qualified**	**Standard**	**Preferred Standard**	**Retired**	**Superseded**	**Historical**	**Application**
Designation (class)											
sign (attribute)	M	M	M	M	M	M	M	M	M	M	M
language (attribute)	O	O	O	O	O	O	O	O	O	O	O
designation_context (association class)	M	D	D	M	M	M	M	M	M	D	D
specific_definition (role) of designation_definition _pairing (association)	O	O	O	O	O	O	O	O	O	O	O
namespace (role) designation_namespace (association)	O	D	D	D	D	D	D	D	D	D	D
item (role) of item designation (association)	M	M	M	M	M	M	M	M	M	M	M
convention (role) of naming convention conformance (association)	O	O	O	O	O	O	O	O	O	O	O
Language_Identification (class/composite datatype)											
language_identifier (attribute)	M	M	M	M	M	M	M	M	M	M	M
script_identifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
geopolitical_territory_identifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
variant_identifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
extension_identifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
private_use_qualifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
Designation_Context (association class)											
acceptability (attribute)	O	O	O	O	O	O	O	O	O	O	O
scope (role)	M	D	D	M	M	M	M	M	M	D	D
relevant_designation (role)	O	O	O	O	O	O	O	O	O	O	O
Context (class)											
designation_context (association class)	O	O	O	O	O	O	O	O	O	O	O
definition_context (association class)	O	O	O	O	O	O	O	O	O	O	O
Identified_Item (type)	M	M	M	M	M	M	M	M	M	M	M

Table B.2 *(continued)*

Metadata Attribute Name and Structure	Metamodel Obligation /Condition	Lifecycle Status								Documentation Status	
		Incomplete	Candidate	Recorded	Qualified	Standard	Preferred Standard	Retired	Superseded	Historical	Application
Designatable_Item (type)	M	M	M	M	M	M	M	M	M	M	M
Classifiable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Naming Convention (class)											
authority_rule (attribute)	M	O	O	M	M	M	M	M	M	M	M
lexical_rule (attribute)	M	O	O	M	M	M	M	M	M	M	M
scope_rule (attribute)	M	O	O	M	M	M	M	M	M	M	M
semantic_rule (attribute)	M	O	O	M	M	M	M	M	M	M	M
syntactic_rule (attribute)	M	O	O	M	M	M	M	M	M	M	M
conformant_designation (role) of naming_ convention_ conformance (association)	O	O	O	O	O	O	O	O	O	O	O
utilization (role) of naming_convention_utilization (association)	O	O	O	O	O	O	O	O	O	O	O
Identified_Item (type)	M	M	M	M	M	M	M	M	M	M	M
Designatable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Classifiable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Definition (class)											
text (attribute)	M	M	M	M	M	M	M	M	M	M	M
language (attribute)	C	D	D	D	D	D	D	D	D	D	D
source (attribute)	O	O	O	O	O	O	O	O	O	O	O
item (role) of item_definition (association)	M	M	M	M	M	M	M	M	M	M	M
definition_context (association class)	M	D	D	M	M	M	M	M	M	D	D
definition_heading (role) of designation_definition _pairing (association)	O	O	O	O	O	O	O	O	O	O	O
Definition_Context (association class)											
acceptability (attribute)	O	O	O	O	O	O	O	O	O	O	O
relevant_definition (role)	O	O	O	O	O	O	O	O	O	O	O

Table B.2 *(continued)*

		Lifecycle Status								Documentation Status	
Metadata Attribute Name and Structure	**Metamodel Obligation /Condition**	**Incomplete**	**Candidate**	**Recorded**	**Qualified**	**Standard**	**Preferred Standard**	**Retired**	**Superseded**	**Historical**	**Application**
scope (role)	M	D	D	M	M	M	M	M	M	D	D
Registered_Item (class/type)											
Identified_Item (superclass)	M	M	M	M	M	M	M	M	M	M	M
reference (association class)	O	O	O	O	O	O	O	O	O	O	O
submission_record (role) of submission (association)	M	M	M	M	M	M	M	M	M	M	M
Reference (association class)											
type (attribute)	O	O	O	O	O	O	O	O	O	O	O
document_reference (role)	O	O	O	O	O	O	O	O	O	O	O
referencing_item (role)	O	O	O	O	O	O	O	O	O	O	O
Reference_Document (class)											
identifier (attribute)	M	M	M	M	M	M	M	M	M	M	M
type_description (attribute)	M	M	M	M	M	M	M	M	M	M	M
language_identifier (attribute)	C	D	D	D	D	D	D	D	D	D	D
notation (attribute)	O	O	O	O	O	O	O	O	O	O	O
title (attribute)	O	O	O	O	O	O	O	O	O	O	O
provider (attribute)	O	O	O	O	O	O	O	O	O	O	O
uri (attribute)	O	O	O	O	O	O	O	O	O	O	O
Document_Type (class/composite datatype)											
identifier (attribute)	C (Either the identifier or the description or both must be present)	C	C	C	C	C	C	C	C	C	C
description (attribute)	C (Either the identifier or the description or both must be present)	C	C	C	C	C	C	C	C	C	C

Table B.2 *(continued)*

Metadata Attribute Name and Structure	Metamodel Obligation /Condition	Lifecycle Status								Documentation Status	
		Incomplete	Candidate	Recorded	Qualified	Standard	Preferred Standard	Retired	Superseded	Historical	Application
scheme_reference (attribute)	O	O	O	O	O	O	O	O	O	O	O
Submission_Record (class)											
organization (attribute)	M	D	D	M	M	M	M	M	M	D	D
contact (attribute)	M	D	D	M	M	M	M	M	M	D	D
submitted_item (role) of submission (association)	M	M	M	M	M	M	M	M	M	M	M
Administered Item (class/type)											
Registered_Item (superclass)	M	M	M	M	M	M	M	M	M	M	M
creationIdate (attribute)	M	M	M	M	M	M	M	M	M	M	M
last_change_date (attribute)	O	O	O	O	O	O	O	O	O	O	O
change_description (attribute)	O	O	O	O	O	O	O	O	O	O	O
explanatory_comment (attribute)	O	O	O	O	O	O	O	O	O	M	O
origin (attribute)	O	O	O	O	O	O	O	O	O	O	O
registration (association class)	M	M	M	M	M	M	M	M	M	M	M
stewardship_record (role) of stewardship (association)	M	D	D	M	M	M	M	M	M	D	D
attached_item (role) of attachment (association)	O	O	O	O	O	O	O	O	O	O	O
Registration (association class)											
registration_state (attribute)	M	M	M	M	M	M	M	M	M	M	M
authority (role)	M	M	M	M	M	M	M	M	M	M	M
administered_item (role)	M	M	M	M	M	M	M	M	M	M	M
Registration_State (class/composite datatype)											
registration_status (attribute)	M	M	M	M	M	M	M	M	M	M	M
administrative_status (attribute)	M	D	D	M	M	M	M	M	M	M	M
effective_date (attribute)	M	D	M	M	M	M	M	M	M	M	O
until_date (attribute)	O	O	O	O	O	O	O	M	M	M	O
administrative_note (attribute)	O	O	O	O	O	O	O	O	O	O	O

Table B.2 *(continued)*

		Lifecycle Status								Documentation Status	
Metadata Attribute Name and Structure	**Metamodel Obligation /Condition**	**Incomplete**	**Candidate**	**Recorded**	**Qualified**	**Standard**	**Preferred Standard**	**Retired**	**Superseded**	**Historical**	**Application**
unresolved_issue (attribute)	O	O	O	O	O	O	O	O	O	O	O
previous_state (attribute)	O	O	O	O	M	M	M	M	M	M	O
Registration_Authority (class)											
registration_authority_identifier (attribute)	M	M	M	M	M	M	M	M	M	M	M
documentation_language_identifier (attribute)	M	M	M	M	M	M	M	M	M	M	M
Registration_Authority_Identifier (composite datatype)											
international_code_designator (attribute)	M	D	D	M	M	M	M	M	M	D	D
organization+identifier (attribute)	M	D	D	M	M	M	M	M	M	D	D
organization_part_identifier (attribute)	O	O	O	O	O	O	O	O	O	O	O
OPI_source (attribute)	C / If organization_part_identifier is used	C	C	C	C	C	C	C	C	C	C
Organization (class/composite datatype)											
*name (attribute)	M	D	D	M	M	M	M	M	M	D	D
mail_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
email_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
phone_number (attribute)	O	O	O	O	O	O	O	O	O	O	O
uri (attribute)	O	O	O	O	O	O	O	O	O	O	O
Registrar (class)											
Contact (superclass)	M	D	D	M	M	M	M	M	M	D	D
*identifier (attribute)	M	D	D	M	M	M	M	M	M	D	D
authority (association role) of registration_authority_registrar (association)	M	D	D	M	M	M	M	M	M	D	D
Contact (class)											

Table B.2 *(continued)*

Metadata Attribute Name and Structure	Metamodel Obligation /Condition	Lifecycle Status								Documentation Status	
		Incomplete	Candidate	Recorded	Qualified	Standard	Preferred Standard	Retired	Superseded	Historical	Application
individual (attribute)	C (either an individual or a role or bothg shall be specified)	C	C	C	C	C	C	C	C	C	C
organization (attribute)	M	M	M	M	M	M	M	M	M	M	M
role (attribute)	C (either an individual or a role or bothg shall be specified)	C	C	C	C	C	C	C	C	C	C
Individual (class/composite datatype)											
*name	M	M	M	M	M	M	M	M	M	M	M
title	O	O	O	O	O	O	O	O	O	O	O
mail_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
email_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
phone_number (attribute)	O	O	O	O	O	O	O	O	O	O	O
role (attribute)	O	O	O	O	O	O	O	O	O	O	O
Role (class/composite datatype)											
title (attribute)	O	O	O	O	O	O	O	O	O	O	O
mail_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
email_address (attribute)	O	O	O	O	O	O	O	O	O	O	O
phone_number (attribute)	O	O	O	O	O	O	O	O	O	O	O
Stewardship_Record (class)											
organization (attribute)	M	D	D	M	M	M	M	M	M	D	D
contact (attribute)	M	D	D	M	M	M	M	M	M	D	D
Attached_Item (class)											
Registered_Item (superclass)	M	M	M	M	M	M	M	M	M	M	M
owner (role of attachment association)	M	M	M	M	M	M	M	M	M	M	M

Table B.2 *(continued)*

Metadata Attribute Name and Structure	Metamodel Obligation /Condition	Lifecycle Status								Documentation Status	
		Incomplete	Candidate	Recorded	Qualified	Standard	Preferred Standard	Retired	Superseded	Historical	Application
Classifiable_Item (class)											
classification (association class)	O	O	O	O	O	O	O	O	O	O	O
Classification (association class)											
classified_item (role)	M	M	M	M	M	M	M	M	M	M	M
classifier (role)	M	M	M	M	M	M	M	M	M	M	M
scheme (role) of classification_scheme (association)	M	M	M	M	M	M	M	M	M	M	M
Concept_System (class)											
notation (attribute)	O	O	O	O	O	O	O	O	O	O	O
classification (role) of classification_scheme (association)	O	O	O	O	O	O	O	O	O	O	O
member concept (role) of concept system membership (association)	O	O	O	O	O	O	O	O	O	O	O
Identified_Item (type)	M	M	M	M	M	M	M	M	M	M	M
Designatable_Item (type)	M	O	M	M	M	M	M	M	M	O	M
Classifiable_Item (type)	O	O	O	O	O	O	O	O	O	O	O
Concept (class)											
including_concept_system (role) of concept_ system_ membership (association)	M	M	M	M	M	M	M	M	M	M	M
classification (association class)	O	O	O	O	O	O	O	O	O	O	O
Identified_Item (type)	M	M	M	M	M	M	M	M	M	M	M
Designatable_Item (type)	M	O	M	M	M	M	M	M	M	O	M
Classifiable_Item (type)	O	O	O	O	O	O	O	O	O	O	O

Annex C
(informative)

Suggested functional operating procedures — Roles and Responsibilities

C.1 Introduction

The ISO/IEC 11179 Metadata Registry family of standards and technical reports provides the specifications for establishing systems that support the dissemination and harmonization of Administered Items (e.g. data elements, data element concepts, value domains) from different stakeholder groups. Most often a stakeholder community is large and diverse. The definition of key data elements and data element concepts as well as other Administered Items will arise from numerous sources. Moreover different groups will have an interest in the definition of the same Administered Item, which could lead to the prospect of duplicate or similar definitions being developed.

This Annex identifies suggested roles and responsibilities and provides suggested functional operating procedures for the use of the Metadata Registry by role. These procedures support documentation, standardization, and harmonization processes that facilitate different working groups sharing Administered Items. Annex D details suggested procedures for organizational roles and responsibilities (and their relationships), and suggested procedures for registration status levels.

Organizational roles associated with the Administered Item registration process should be established. The organizational roles should include the, Registration Authority, Registrar, Stewards, Submitters, and Read-only users. A summary of each role is provided in this Annex. Annex D provides a description of the purpose, specific responsibilities, and membership or selection criteria for each role.

Figure C-1 provides a high level view of how these organizational roles are related within the context of a Metadata Registry.

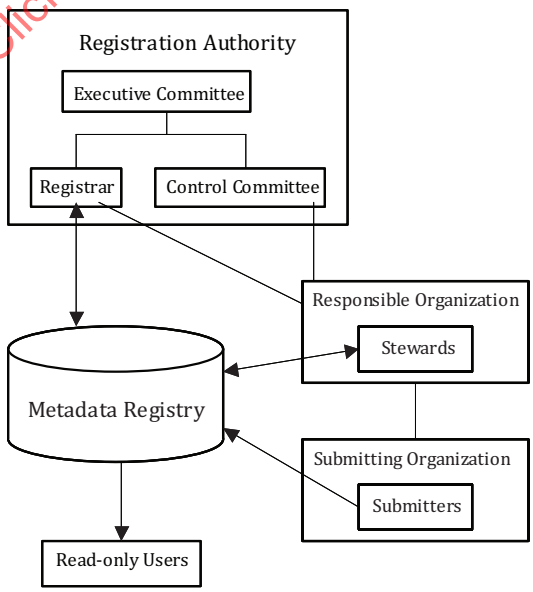


Figure C.1 — Organizational roles to the Metadata Registry and their relationships

C.2 Roles associated with the Metadata Registry

C.2.1 General

There are three types of Registration Acting Bodies (RAB) in the framework of this part of ISO/IEC 11179: Registration Authorities, Submitting Organizations, and Stewardship Organizations. Each type of Registration Acting Body should meet the criteria, fulfil the roles, and assume the responsibilities prescribed in the following clauses of this part of ISO/IEC 11179.

C.2.2 Role of Registration Authorities (RA)

C.2.2.1 Overall Registration Authority

The Metadata Registry Registration Authority should be an organizational unit that desires to operate and manage a Metadata Registry based upon the ISO/IEC 11179 Metadata Registry standard. . It is envisioned that any organization wishing to become a Registration Authority and establish a Metadata Registry for the purpose of registering Administered Items may do so.

A Registration Authority should establish and publish procedures for the operation of its Metadata Registry. A Registration Authority should receive and process proposals from Submitting Organizations for registration of Administered Items falling within its registration domain. A Registration Authority is responsible for maintaining the metadata register of Administered Items and issuing of international registration data identifiers (IRDIs).

C.2.2.2 Registrar

The Registrar should be an organizational unit within the Registration Authority, expert in registration processes, responsible for facilitating the registration of Administered Items and making those Administered Items widely accessible and available to the community. The Registrar may be viewed as the contact for the Registration Authority. The Registration Authority should appoint the Registrar.

C.2.2.3 Executive Committee

The Executive Committee should be an organizational unit established by the Registration Authority. It should be responsible for administering responsibilities and authority delegated by the Registration Authority. Responsibilities of the Executive Committee should include overall metadata registration policies and business direction of the Metadata Registry.

C.2.2.4 Control Committee

The Control Committee should be the organizational unit of the Registration Authority that is constituted to provide technical direction and harmonization of Administered Items for the metadata register. The structure, staffing, procedures, and membership of the Control Committee are determined by the Registration Authority. The membership of the Control Committee may include Registrars and Stewards.

C.2.3 Role of Stewardship Organizations (StO)

C.2.3.1 Overall Stewardship Organization

Stewardship Organizations are usually designated by an organizational unit to insure consistence of related Administered Items managed by its Submitting Organizations. In the absence of a designated Stewardship Organization, a Submitting Organization should act as a Stewardship Organization.

A Stewardship Organization is the organization, or part thereof, that is responsible for the integrity and accuracy of the attributes values of the Administered Item; e.g., the semantics of Administered Items maintained and controlled by a Registration Authority. The Stewardship Organization is the subject matter expert for the Administered Item.

The Stewardship Organization, at the Registration Authority's request, should review proposals from Submitting Organizations on relevant attributes, e.g., name, definition, and permissible values for the Administered Item's attributes. The Stewardship Organization should inform the Registration Authority of any essential modifications in the specification of the assigned Administered Items.

C.2.3.2 Steward

A Steward shall be an organizational unit of the Metadata Registry community. Stewards should be responsible for the accuracy, reliability, and currency of descriptive metadata for Administered Items at a registration status level of "Qualified" or above within an assigned area. A process defined by the Registration Authority approves stewards. Stewards should be responsible for metadata within specific areas and may have responsibilities that cut across multiple areas (e.g., value domains such as date, time, location, codes of the Countries of the World). The Steward can be viewed as a contact for the Stewardship Organization.

C.2.4 Role of Submitting Organizations (SuO)

C.2.4.1 Overall Submitting Organization

All Submitting Organizations wishing to register Administered Items should be able to do so in accordance with the procedures prescribed in this part of ISO/IEC 11179 and the procedures established by the Registration Authority. Each Registration Authority may establish its own criteria for registration eligibility.

A Submitting Organization wishing to register an Administered Item should follow the procedures and requirements prescribed in this part of ISO/IEC 11179 and in and the procedures established by the Registration Authority for submission to the appropriate Registration Authority.

C.2.4.2 Submitter

A Submitter should be an organizational unit approved by a process defined by the Registration Authority. A Submitter is authorized to identify and report Administered Items suitable for registration. The Submitter can be viewed as a contact for the Submitting Organization.

C.2.5 Role of Others

C.2.5.1 All others

A Registration Authority may establish guidelines on the use of their Metadata Registry by other users. The general goal should be to provide an open area that anyone may use to obtain and explore the metadata that is managed within the Metadata Registry.

C.2.5.2 Read-only user

A Read-only User should be an organizational unit or individual that is approved to review the contents of the metadata register. A read-only user has access to the contents in the metadata register, but is not permitted to submit, alter, or delete contents.

C.3 Responsibilities of Registration Acting Bodies (RAB)

C.3.1 Responsibilities of Registration Authorities (RA)

In order to establish itself as a Registration Authority, an organization should complete the following:

— Secure a Registration Authority Identifier in accordance with Clause A.3.1.

— Prescribe, amend, and interpret the procedures to be followed for the registration of Administered Items in accordance with this part of ISO/IEC 11179.

— Determine any additional conditions specifically required by its domain of registration within its Metadata Registry.

— Specify the format for each attribute listed in Annex B of this part of ISO/IEC 11179 and for any additional attributes that the Registration Authority may deem necessary, and specify the media by which an Administered Item may be submitted for registration. The registration form and accompanying procedure should be made available to requesting Submitting Organizations.

— Determine the format and media in which items for administration should be submitted. The Registration Authority should also provide Submitting Organizations with guidance on the submission of items for administration.

— Establish and publish the rules by which its metadata register should be made available. The Registration Authority shall specify the allowable users, the accessible contents, the frequency of availability, and the language(s), media, and format in which the information is provided for the Metadata Registry.

Regarding applications for registering Administered Items, a Registration Authority should fulfil the following responsibilities:

— Receive and process applications for the registration of Administered Items, assign international registration data identifier values, and maintain a metadata register in accordance with the following provisions.

— Consult the appropriate Stewardship Organizations when requests affect the mandatory attributes of the Administered Items being registered.

— Handle all aspects of the registration process in accordance with good business practice and, in particular, take all reasonable precautions to safeguard the metadata register. Specifically, the responsibilities of a Registration Authority are as follows:

— Receive applications for the registration of Administered Items from its Submitting Organizations.

— Review and facilitate the progression of the applications through the registration cycle.

— Assign appropriate Registration Status.

— Notify Submitting Organizations of its decisions according to the procedure specified in it rules.

C.3.2 Responsibilities of Stewardship Organizations (StO)

A Stewardship Organization should:

— At the Registration Authority's request, advise on the semantics, name, and permissible values for the Administered Item's attribute values submitted for registration.

— Notify the Registration Authority of any amendments to the Administered Items assigned to the Stewardship Organization.

— Decide, in case of confusion and/or conflict, on the attribute values of the assigned Administered Items.

C.3.3 Responsibilities of Submitting Organizations (SuO)

A Submitting Organization is responsible for the following activities:

— Providing the information specified in Annex B in the form required by the Registration Authority.

— Providing any additional information that may reasonably be required by the Registration Authority to enable it to perform its responsibilities.

— Ensuring that when an Administered Item has been registered, specification of the attribute values of the Administered Item is not changed without first advising the Registration Authority.

C.4 Responsibilities of Organizations within Registration Acting Bodies

C.4.1 Registrar

The Registrar provides a single individual point-of-contact responsible for managing and maintaining information about data in the metadata register, under the authority of the Registration Authority. The Registrar should be responsible for:

a) Monitoring and managing the Metadata Registry contents, i.e. the metadata register (Note: The Metadata Registry is established, operated, and maintained by the Registration Authority).

b) Enforcing policies, procedures, and formats for populating and using the Metadata Registry.

c) Proposing procedures and standard formats for the Metadata Registry to the Control Committee for consideration.

d) Recording current registration status for Administered Items in the metadata register.

e) Ensuring access for authorized users to contents in the Metadata Registry.

f) Assisting in the progression of Administered Items through the registration status levels.

g) Assisting in the identification and resolution of duplicate or overlapping semantics of Administered Items in the metadata register.

h) Acting on direction from the Registration Authority.

i) Effecting registration of Administered Items in external metadata registers or dictionaries.

j) Enforcing data registration procedures for submitting Administered Items to the Metadata Registry, e.g.,

   — How to prepare, submit, and process submissions of Administered Items.

   — How the Metadata Registry is used to avoid duplicate Administered Items submissions to the metadata register.

   — How the Metadata Registry is used to effect harmonization of data across metadata registers of participating organizations.

   — How external metadata registers are used as a source of Administered Items for reuse in the metadata register.

k) Maintaining a separate document recording the appropriate contact information for all members of the Control Committee and the Executive Committee.

l) Adding new users or organizational entities that may become authorized to access the metadata register.

m) Maintaining other controlled word lists of the Metadata Registry.

C.4.2 Stewards

Stewards provide specific expert points of contact responsible for coordinating the identification, organization, and establishment of registered data for use throughout the enterprise within an assigned functional area.

Stewards should be responsible for:

a) Co-ordinating the identification and documentation of Administered Items within their assigned functional area.

b) Ensuring that appropriate Administered Items in their assigned functional area are properly registered.

c) Co-ordinating with other Stewards to attempt to prevent or resolve duplicated efforts in defining Administered Items.

d) Reviewing all Administered Items once they are in the "Recorded" status to identify and attempt to resolve conflicts among Administered Items with other Stewards' assigned functional areas.

e) Ensuring the quality of metadata attribute values for Administered Items they propose for the "Qualified" registration status level, reusing standardized data from external metadata registrers where applicable.

f) Proposing "Standard" registration status level Administered Items in their assigned functional area.

g) Proposing "Preferred Standard" registration status level Administered Items in their assigned functional area.

h) Ensuring that data registration procedures and formats are followed within their assigned functional area.

i) Recommending Submitters to the Registration Authority.

C.4.3 Submitters

Submitters are organization elements that are familiar with or engaged in development and operational environments. Submitters maintain current Administered Items and are engaged to describe and submit new Administered Items following the registration requirements.

A Submitter should be responsible for:

a) Identifying himself to the Registrar.

b) Identifying and documenting Administered Items appropriate for registration in the metadata register.

c) Submitting Administered Items to the metadata register.

d) Ensuring the completeness of mandatory metadata attributes for Administered Items proposed for the "Recorded" registration status level.

C.4.4 Read-only users

A Read-only User is an organizational unit approved by the Registrar to review the contents of the metadata register. Read-only Users may not add to, delete from, or otherwise modify the contents of the metadata register.

C.4.5 Control Committee

The Control Committee provides overall technical direction of, and resolution of technical issues associated with, the Metadata Registry, its contents and its technical operations.

The Control Committee should be responsible for:

a) Overall conduct of registration operations.

b) Promoting the reuse and sharing of data in the metadata register within and across functional-areas, and among external interested parties to the enterprise.

c) Progressing Administered Items through "Qualified", "Standard", and "Preferred Standard" registration status levels.

d) Resolving semantical issues associated with registered Administered Items, e.g., overlap, duplication, etc.

e) Approving updates to Administered Items previously placed in the metadata register with the "Qualified", "Standard", or "Preferred Standard" registration status levels.

f) Proposing Metadata Registry policies to the Executive Committee for approval.

g) Approving authorized Submitters, Read-only Users, and types of users, of the Metadata Registry.

h) Approving Metadata Registry content, procedures, and formats.

i) Submitting management-related recommendations and issues to the Executive Committee.

j) Acting on directions from the Executive Committee.

k) Meeting periodically in face-to-face meetings, with additional meetings and teleconferences held as needed.

The Control Committee will normally fulfil its responsibilities via consensus building in accordance with an established procedure. Intractable issues may be resolved by an established procedure.

C.4.6 Executive Committee (ExCom)

The Executive Committee should be responsible for overall policy and business direction for the Metadata Registry, to include:

a) Establishing overall Metadata Registry policies.

b) Resolution of all business management issues pertaining to the Metadata Registry, e.g., copyrights, stewardship, Executive Committee membership, etc.

c) Ensuring the long-term success and performance of the Metadata Registry.

d) Establishing and updating the Metadata Registry charter and strategic plans.

e) Meeting periodically in face-to-face meetings, with additional meetings and/or teleconferences held as needed.

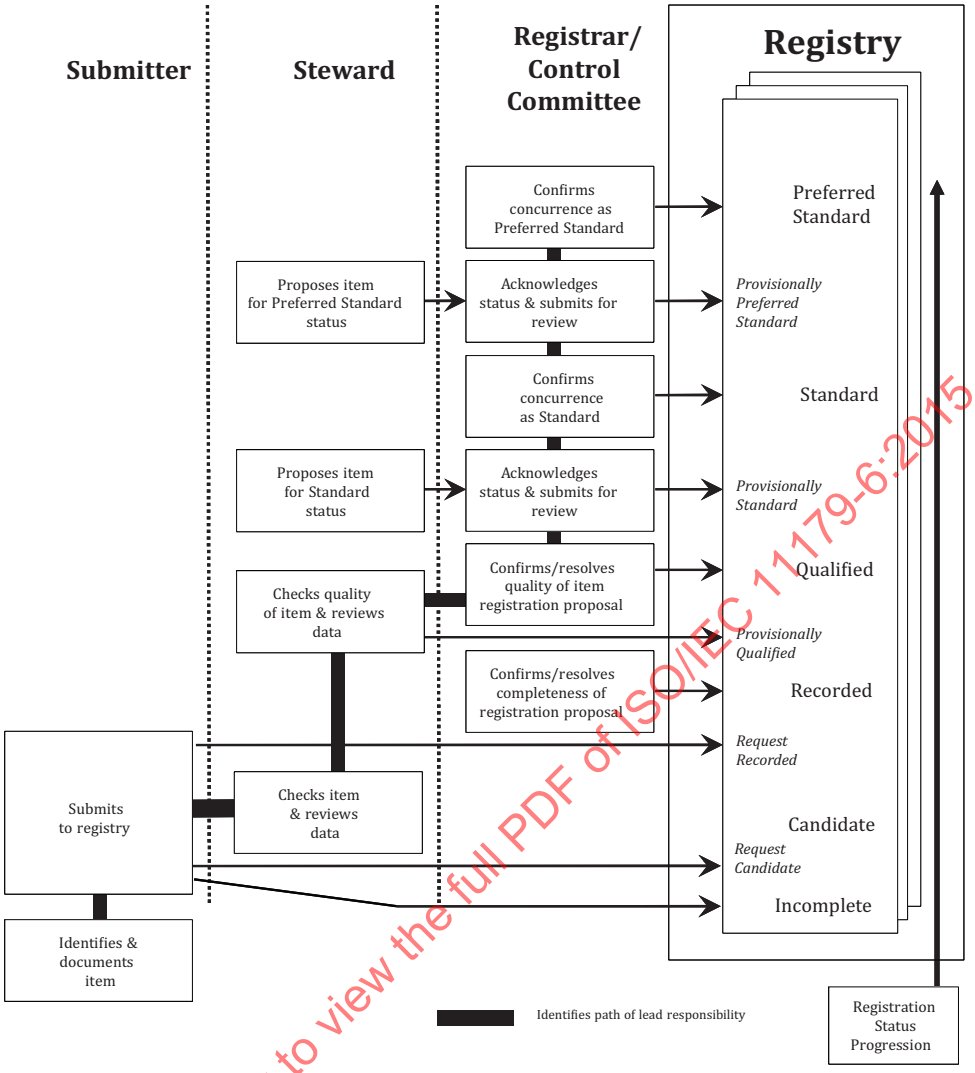
The Executive Committee will normally fulfil its responsibilities via consensus building. Intractable issues may be resolved by an established procedure.

Annex D
(informative)

Suggested functional operating procedures — Concept of operations

D.1 Registration concept of operations

This Annex defines the suggested overall concept of operations for the Metadata Registry. It shows suggested roles and responsibilities and shows suggested functional operating procedures for the use of the Metadata Registry. The suggested operational procedures for the Metadata Registry are summarized in this annex. These procedures describe registration and harmonization practices for the Metadata Registry. See Annex C for organizational roles and responsibilities (and their relationships) and Clause 4.1.3.2 for registration status level definitions. This annex describes the registration activities associated with Submitters, Stewards, and the registrar and roles of the Control Committee. Figure D.1 summarizes these functional activities.



NOTE Timing of registration status progression is entirely dependent upon the submitter/steward/registrar.

Figure D.1 — Registration functional activities

D.2 Registration initiation

All Submitters accomplish the Submitter registration activities in the same way in accordance with these functional operation procedures so that Administered Items are consistently and accurately registered. The responsibility of the Submitter is to propose and document Administered Items for registration with the registration status of “Incomplete”; and, if desired, propose Administered Items for the registration status of “Candidate” then “Recorded”. A Submitter acquires an understanding of Administered Items, their context and sources, and their significance in the course of accomplishing normal operational, design, development, or management activities.

D.3 Quality review

The responsibility of the Steward, for Administered Items in an assigned functional area, is to ensure that quality registration candidates are passed to the Registrar for presentation to the Control Committee. Presented candidates are evaluated to see if they meet the criteria for “”Qualified”” registration status. Stewards also may recommend Administered Items for “Standard” and “Preferred Standard” registration status.

D.4 Metadata Registry administration

The responsibility of the Registrar is to coordinate the Metadata Registry environment and manage the Metadata Registry, making its contents as widely accessible as feasible. Administrative levels may be established to track the progression of an Administered Item in the transition from one status level to the next. Some potential examples are:

a) Provisionally Qualified - An Administered Item with the "Provisionally Qualified" status means that a Steward has confirmed that the mandatory metadata attributes are complete and conform to applicable metadata attribute quality requirements. The Steward is authorized to promote Administered Items at the "Recorded" status to the administrative status of "Provisionally Qualified" at such time as the Steward believes that all quality requirements have been achieved.

b) Provisionally Standard - An Administered Item with the "Provisionally Standard" status means that a Steward proposes the Administered Item as "Standard" for general use in the registry community; however, certification of "Standard" status of the Administered Item by the Control Committee is not yet complete. The Steward is authorized to promote Administered Items from the "Qualified" level to the "Provisionally Standard" at such time as the Steward believes the Administered Item should be a "Standard" Administered Item.

c) Provisionally Preferred - An Administered Item with the "Provisionally Preferred" status means that a Steward proposes the Administered Item as "Preferred Standard" for preferred use in the registry community; however, certification of "Preferred Standard" status of the Administered Item by the Control Committee is not yet complete. The Steward is authorized to promote Administered Items from the "Standard" level to the "Provisionally Preferred" at such time as the Steward believes the Administered Item should be a "Preferred Standard" Administered Item.

Annex E
(informative)

Suggested functional operating procedures — Procedures

E.1 General procedures

E.1.1 Review and Response

Submissions shall be reviewed according to the following steps:

Step 1. Preliminary review to verify completeness of the submission;

Step 2. Applicant's review to authenticate the applicant's identity and supporting organizational and contact information;

Step 3. Technical review of the submission, if any;

Step 4. Processing the submission in the registry (e.g., making the additions, changes, deletions);

Step 5. Responding to the applicant in writing and/or E-mail;

Step 6. Publishing updates, if applicable.

E.1.2 Rejection Criteria

The submission may be rejected for any of the following reasons:

— If the submission does not provide the required (mandatory) information

— If the submission provides false or misleading information.

— If the applicant does not respond to questions about clarifications or ambiguities within the submission.

— If the submission is inconsistent with the requirements of the registration.

— If the registration requires a technical review and the submission fails the technical review.

In all cases, the applicant has Metadata Registry specific period of time to respond and remedy the issue before the submission is formally rejected.

E.1.3 Revision and review procedures

Once registered, an Administered Item may be revised and/or reviewed, or in special cases possibly withdrawn.

E.1.4 Revision procedures

E.1.4.1 General

Unless specified otherwise, the following revision procedures apply to all Administered Items.