

Australian Standard™

**Information technology—Metadata
registries (MDR)**

**Part 3: Registry metamodel and basic
attributes**



This Australian Standard was prepared by Committee IT-027, Data Management and Interchange. It was approved on behalf of the Council of Standards Australia on 21 April 2005. This Standard was published on 27 May 2005.

The following are represented on Committee IT-027:

Association of Superannuation Funds of Australia
Australia Post
Australia Bankers Association
Australian Bureau of Statistics
Australian Computer Society
Australian Customs Service
Australian Electoral Commission
Australian Electric and Electronic Manufacturers Association
Australian Industry Group
Australian Information Industry Association
Australian Institute of Health and Welfare
Australian Taxation Office
Centrelink
Data Management Association Australia
Department of Defence
Department of Immigration, Multicultural and Indigenous Affairs
Health Insurance Commission

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05121.

Australian Standard™

Information technology—Metadata registries (MDR)

Part 3: Registry metamodel and basic attributes

First published as AS ISO/IEC 11179.3—2005.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6726 5

PREFACE

This Standard was prepared by the Standards Australia Committee IT-027, Data Management and Interchange.

This Standard is identical with, and has been reproduced from, ISO/IEC 11179-3:2003, *Information technology—Metadata registries (MDR)—Part 3: Registry metamodel and basic attributes*.

The objective of this Standard is to define metadata registries to facilitate electronic data interchange and data sharing for use by electronic commerce and database designers.

This Standard is Part 3 of AS 11179, *Information technology—Metadata registries (MDR)*, which is published in parts as follows:

Part 1: Framework

Part 2: Classification for data elements

Part 3: Registry metamodel and basic attributes (this standard)

Part 4: Formulation of data definitions

Part 5: Naming and identification principles for data elements

Part 6: Registration

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

As this Standard is reproduced from an international standard, the following applies:

- (a) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (b) In the source text ‘this part of ISO/IEC 11179’ should read ‘this Australian Standard’.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian or Australian/New Zealand Standard</i>	
ISO		AS	
31	Quantities and units	2900	Quantities and units
31-0	Part 0: General principles	2900.0	Part 0: General principles
3166	Codes for the representation of names of countries and their subdivisions	2632	Codes for the representation of names of countries and their subdivisions
3166-1	Part 1: Country codes	2632.1	Part 1: Country codes
		AS/NZS ISO	
5127	Information and documentation—Vocabulary	5127	Information and documentation—Vocabulary
		AS ISO	
8601	Data elements and interchange formats—Information exchange—Representation of dates and times	8601	Data elements and interchange formats—Information exchange—Representation of dates and times

ISO/IEC		AS ISO/IEC	
6523	Information technology—Structure for the identification of organization and organization parts	6523	Information technology—Structure for the identification of organization and organization parts
6523-1	Part 1: Identification of organization identification schemes	6523.1	Part 1: Identification of organization identification schemes
6523-2	Part 2: Registration of organization identification schemes	6523.2	Part 2: Registration of organization identification schemes
11179	Information technology—Metadata registries (MDR)	11179	Information technology—Metadata registries (MDR)
11179-1	Part 1: Framework	11179.1	Part 1: Framework
11179-2	Part 2: Classification for data elements	11179.2	Part 2: Classification for data elements
11179-4	Part 4: Formulation of data definitions	11179.4	Part 4: Formulation of data definitions
11179-5	Part 5: Naming and identification principles for data elements	11179.5	Part 5: Naming and identification principles for data elements
11179-6	Part 6: Registration	11179.6	Part 6: Registration

Only referenced documents that have been adopted as Australian or Australian/New Zealand Standards have been listed.

CONTENTS

Page

1	Scope.....	1
1.1	Scope – Structure of a Metadata Registry.....	1
1.2	Scope – Basic attributes of metadata items.....	2
1.3	Scope – Aspects not currently addressed	2
1.4	Areas of Applicability	2
2	Normative references	2
3	Definitions.....	3
3.1	Definitions of Metamodel Constructs	3
3.2	Broad Terms used in this part of ISO/IEC 11179	5
3.3	Alphabetical list of metadata objects in the metamodel.....	8
3.4	List of Abbreviations	27
4	Structure of a Metadata Registry.....	27
4.1	Metamodel for a Metadata Registry	27
4.2	Application of the metamodel.....	28
4.3	Specification of the metamodel.....	28
4.4	Types, Instances and Values	29
4.5	Extensibility.....	29
4.6	Date References	29
4.7	Description of metamodel	29
4.8	Administration and Identification region.....	32
4.9	Naming and Definition Region.....	38
4.10	Classification Region.....	41
4.11	Data Element Concept Region.....	43
4.12	Conceptual and Value Domain Region	45
4.13	Data Element Region	49
4.14	Consolidated Metamodel.....	53
5	Basic attributes	55
5.1	Use of basic attributes.....	55
5.2	Common attributes	55
5.3	Attributes specific to Data Element Concepts.....	57
5.4	Attributes specific to Data Elements	58
5.5	Attributes specific to Conceptual Domains	58
5.6	Attributes specific to Value Domains	58
5.7	Attributes specific to Permissible Values	58
5.8	Attributes specific to Value Meanings	59
6	Conformance	59
6.1	Degree of Conformance	59
6.2	Levels of Conformance	60
6.3	Obligation.....	60
6.4	Conformance to prior editions of this Standard	60
6.5	Implementation Conformance Statement (ICS)	61
6.6	Roles and Responsibilities for Registration	61
Annex A (informative)	Alphabetical List of Terms	62

Annex B (informative) Modelling Notation	65
B.1 Modelling symbols	65
Annex C (informative) Mapping the ISO/IEC 11179-3:1994 basic attributes to the ISO/IEC 11179-3:2002 metamodel and basic attributes	69
C.1 Introduction.....	69
C.2 Mapping the Basic Attributes.....	72
Bibliography.....	99

TABLE OF FIGURES

Figure 1 — Common facilities for all Administered Items	30
Figure 2 — Types of Administered Items.....	31
Figure 3 — High-level metamodel.....	32
Figure 4 — Administration and identification metamodel region	33
Figure 5 — Administration and identification region – Classes used as Composite Datatypes	33
Figure 6 — Naming and Definition metamodel region	38
Figure 7 — Classification metamodel region	41
Figure 8 — Data Element Concept metamodel region	43
Figure 9 — Conceptual and value domain metamodel region.....	46
Figure 10 — Data Element metamodel region.....	51
Figure 11 — Consolidated metamodel	54
Figure B.1 — Sample modelling diagram	65
Figure B.2 — Notation for “Class”	65
Figure B.3 — Notation for “Association”	66
Figure B.4 — Notation for relationship between Classes	66
Figure B.5 — Notation for relationship with Cardinality	66
Figure B.6 — Notation for “Association Class”	66
Figure B.7 — Notation for Supertype / Subtypes.....	67
Figure B.8 — Notation for Aggregation.....	67
Figure B.9 — Notation for Composite Aggregation.....	68
Figure B.10 — Notation for Class with Attributes.....	68
Figure B.11 — Notation for Composite attributes	68
Figure C.1 — Basic Attributes of Data elements	69

INTRODUCTION

Data processing and electronic data interchange rely heavily on accurate, reliable, controllable and verifiable data recorded in databases. A prerequisite for correct and proper use and interpretation of data is that both users and owners of data have a common understanding of the meaning and representation of the data. To facilitate this common understanding, a number of characteristics, or attributes, of the data have to be defined. These characteristics of data are known as “metadata”, that is, “data that describes data”. This part of ISO/IEC 11179 provides for the attributes of data elements and associated metadata to be specified and registered as metadata items in a *Metadata Registry*.

The structure of a *Metadata Registry* is specified in the form of a conceptual data model. The *Metadata Registry* is used to keep information about data elements and associated concepts, such as “data element concepts”, “conceptual domains” and “value domains”. Generically, these are all referred to as “metadata items”. Such metadata are necessary to clearly describe, record, analyse, classify and administer data.

When considering data and metadata, it is important to distinguish between types of data/metadata, and instances of these types. Clause 4 of this part of ISO/IEC 11179 specifies the types of metadata objects that form the structure of a *Metadata Registry*. A *Metadata Registry* will be populated with instances of these metadata objects (metadata items), which in turn define types of data, e.g. in an application database. In other words, instances of metadata specify types of application level data. In turn, the application database will be populated by the real world data as instances of those defined data types.

NOTE ISO/IEC 10027:1990 IRDS Framework explains the concepts of different levels of modelling.

This part of ISO/IEC 11179 also describes the basic attributes of metadata items for purposes where a complete *Metadata Registry* is not appropriate.

This part of ISO/IEC 11179 is of interest to information developers, information managers, data administrators, standards developers and others who are responsible for making data understandable and shareable. ISO/IEC 11179 has broad applicability across subject area domains and information technologies.

NOTES

AUSTRALIAN STANDARD

Information technology—Metadata registries (MDR)

Part 3: Registry metamodel and basic attributes

1 Scope

The primary purpose of ISO/IEC 11179-3 is to specify the structure of a *Metadata Registry* (see 1.1). ISO/IEC 11179-3 also specifies basic attributes which are required to describe metadata items, and which may be used in situations where a complete metadata registry is not appropriate (e.g. in the specification of other International Standards) (see 1.2).

1.3 identifies aspects not currently addressed.

1.4 provides examples of activities where ISO/IEC 11179-3 may be applied.

1.1 Scope – Structure of a Metadata Registry

A comprehensive *Metadata Registry* management function requires a set of rules and procedures. These rules and procedures are set out in the following Clauses and Annexes and are complemented elsewhere in this document as follows:

- a) the definitions of metadata objects are in Clause 3.3 of this part of ISO/IEC 11179;
- b) the structure of the registry in the form of a conceptual data model is in Clause 4 of this part of ISO/IEC 11179;

Aspects of the registry are expanded on in other parts of ISO/IEC 11179, as follows:

- a) the overall framework for this family of International Standards is specified in ISO/IEC 11179-1;
- b) rules and guidelines for classifying metadata are in ISO/IEC 11179-2;
- c) rules and guidelines for the formulation of definitions are in ISO/IEC 11179-4;
- d) naming and identifying principles for metadata are in ISO/IEC 11179-5;
- e) rules and guidelines for registering metadata are in ISO/IEC 11179-6.

While the model diagrams are presented in UML notation, this part of ISO/IEC 11179 does not assume nor endorse any specific system environment, database management system, database design paradigm, system development methodology, data definition language, command language, system interface, user interface, computing platform, or any technology required for implementation. This part of ISO/IEC 11179 does not directly apply to the actual use of data in communications and information processing systems.

1.2 Scope – Basic attributes of metadata items

This part of ISO/IEC 11179 also specifies basic attributes which are required to describe metadata items, and which may be used in situations where a complete *Metadata Registry* is not appropriate (e.g. in the specification of other International Standards). These basic attributes are described in Clause 5.

1.3 Scope – Aspects not currently addressed

This part of ISO/IEC 11179 does not currently support the following requirements;

- a) Complex data structures, encapsulation, stereotyping and inheritance;
- b) Ability to enforce uniqueness of names within a Context;
- c) Specification of Naming Conventions for a Context;
- d) Designations other than names (e.g. icons);
- e) Specification of Time in addition to Date;
- f) Prescribed conceptual domains and value domains for the attributes in the metamodel;
- g) Registration of XML documents or XML schemas;
- h) Application Programming Interfaces (APIs) and associated bindings to access a registry;
- i) Multilingual support, except for names and definitions;
- j) Cultural adaptability.

It is anticipated that some or all of these requirements will be addressed in future editions of this part of ISO/IEC 11179, or in companion standards or technical reports.

1.4 Areas of Applicability

This part of ISO/IEC 11179 applies to activities including:

- a) the definition, specification and contents of metadata registries, including interchanging or referencing among various collections of data elements;
- b) the design and specification of application-oriented data models, databases and message types for data interchange;
- c) the actual use of data in communications and information processing systems;
- d) interchange or reference among various collections of metadata.

2 Normative references

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

ISO 31-0, *Quantities and units — Part 0: General principles*

ISO 639-2:1998, *Codes for the representation of the names of languages — Part 2: Alpha-3 code*

ISO 1087-1:2000, *Terminology work — Vocabulary — Part 1: Theory and application*

ISO/IEC 2382-1:1993, *Information technology — Vocabulary — Part 1: Fundamental terms*

ISO/IEC 2382-17:1999, *Information technology — Vocabulary — Part 17: Databases*

ISO 3166-1:1997, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 5127:2001, *Information and documentation — Vocabulary*

ISO/IEC 6523-1:1998, *Information technology — Structure for the identification of organization and organization parts — Part 1: Identification of organization identification schemes*

ISO/IEC 6523-2:1998, *Information technology — Structure for the identification of organization and organization parts — Part 2: Registration of organization identification schemes*

ISO 8601:2000, *Data elements and interchange formats — Information exchange — Representation of dates and times*

ISO/IEC 11179-1, *Information technology — Specification and standardization of data elements — Part 1: Framework for the specification and standardization of data elements*

ISO/IEC 11179-2, *Information technology — Specification and standardization of data elements — Part 2: Classification for data elements*

ISO/IEC 11179-4, *Information technology — Specification and standardization of data elements — Part 4: Rules and guidelines for the formulation of data definitions*

ISO/IEC 11179-5, *Information technology — Specification and standardization of data elements — Part 5: Naming and identification principles for data elements*

ISO/IEC 11179-6, *Information technology — Specification and standardization of data elements — Part 6: Registration of data elements*

ISO/IEC 11404:1996, *Information technology — Programming languages, their environments and system software interfaces — Language-independent datatypes*

ISO 12620:1999, *Computer applications in terminology — Data categories*

ISO/IEC 19501-1:2002, *Information technology — Unified Modeling Language (UML) — Part 1: Specification*

3 Definitions

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

3.1 defines metamodel constructs, used in specifying the registry metamodel.

3.2 lists broader terms, and their definitions, used in this document that are not included in either 3.1 or 3.3.

3.3 defines metadata objects prescribed by the metamodel itself.

An alphabetical list of terms from all three Clauses is provided in Annex A.

3.1 Definitions of Metamodel Constructs

This subclause defines the metamodel constructs used in specifying the registry metamodel in Clause 4.

3.1.1

association

⟨metamodel⟩ a semantic **relationship** between two **classes**

NOTE An **association** is a type of **relationship**.

[Adapted from ISO/IEC 19501-1:2001, 2.5.2.3]

3.1.2

association class

⟨metamodel⟩ an **association** that is also a **class**

NOTE It not only connects a set of **classes**, but also defines a set of features that belong to the **relationship** itself.

[Adapted from ISO/IEC 19501-1:2001, 2.5.2.4]

3.1.3

attribute

⟨metamodel⟩ a **characteristic** of an **object** or **entity**

3.1.4

class

⟨metamodel⟩ a description of a set of **objects** that share the same **attributes**, operations, methods, **relationships**, and semantics

[ISO/IEC 19501-1:2001, 2.5.2.9]

3.1.5

composite attribute

⟨metamodel⟩ an **attribute** whose **datatype** is non-atomic

3.1.6

composite datatype

⟨metamodel⟩ a **datatype** that is also a **class**

NOTE A **composite datatype** is used as a **datatype** for a **composite attribute**.

3.1.7

generalization

⟨metamodel⟩ a **relationship** between a more general **class** (the parent) and a more specific **class** (the child) that is fully consistent with the first **class** (i.e. it has all of its **attributes** and **relationships**) and that adds additional information.

NOTE A **generalization** is a type of **relationship**.

[Adapted from ISO/IEC 19501-1:2001, 2.5.2.24]

3.1.8

identifier (in Metadata Registry)

⟨metamodel⟩ a sequence of characters, capable of uniquely identifying that with which it is associated, within a specified context

NOTE A name should not be used as an identifier because it is not linguistically neutral.

3.1.9

relationship (in registry metamodel)

⟨metamodel⟩ a connection among model elements

NOTE In ISO/IEC 11179-3, a relationship is either an **association** or a **generalization**.

[ISO/IEC 19501-1:2001, 2.5.2.36]

3.2 Broad Terms used in this part of ISO/IEC 11179

3.2.1

attribute instance

a specific instance of an **attribute**

NOTE Amended from ISO 2382-17:1993 (17.02.13) to distinguish an instance of an attribute from its value.

3.2.2

attribute value

the value associated with an **attribute instance**

NOTE Amended from ISO 2382-17:1993 (17.02.13) to distinguish an instance of an attribute from its value.

3.2.3

basic attribute

an **attribute** of a **metadata item** commonly needed in its specification

3.2.4

binding

a mapping from one framework or specification to another

3.2.5

characteristic

abstraction of a property of an **object** or of a set of objects

NOTE Characteristics are used for describing **concepts**.

[ISO 1087-1:2000, 3.2.4]

3.2.6

common attribute

a **basic attribute** that is applicable to all types of metadata item

3.2.7

common facility (of Metadata Registry)

a facility provided by a **Metadata Registry** that is applicable to all types of **Administered Item** within the registry.

NOTE The common facilities specified in this edition of ISO/IEC 11179-3 are:

- Administration and identification (see 4.8)
- Naming and definition (see 4.9)
- Classification (see 4.10).

3.2.8

conceptual data model

a **data model** that represents an abstract view of the real world

3.2.9

conditional

required under certain specified conditions

NOTE 1 One of three obligation statuses applied to the attributes of metadata items, indicating the conditions under which the attribute is required. See also **mandatory** (3.2.17) and **optional** (3.2.28).

NOTE 2 Obligation statuses apply to metadata items with a Registration Status of "recorded" or higher.

3.2.10**data**

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

NOTE Data can be processed by human or automatic means.

[ISO/IEC 2382-1:1998, 01.01.02]

3.2.11**data model**

a graphical and/or lexical representation of data, specifying their properties, structure and inter-relationships

3.2.12**definition**

representation of a concept by a descriptive statement which serves to differentiate it from related concepts

[ISO 1087-1:2000, 3.3.1]

NOTE See also **Definition (of Administered Item)** (3.3.58).

3.2.13**designation**

representation of a concept by a sign which denotes it

[ISO 1087-1:2000, 3.4.1]

NOTE See also **Designation (of Administered Item)** (3.3.67) and **name** (3.2.27).

3.2.14**entity**

any concrete or abstract thing that exists, did exist, or might exist, including associations among these things

EXAMPLE A person, object, event, idea, process, etc...

NOTE Please observe that an entity exists whether data about it are available or not.

[ISO/IEC 2382-17:1999, 17.02.05]

3.2.15**extension**

<11179-3> a feature not defined by ISO/IEC 11179-3

<registry metamodel> a **class**, an **attribute** or a **relationship** that an implementation of a **Metadata Registry** provides that is not defined by ISO/IEC 11179-3

3.2.16**language**

system of signs for communication, usually consisting of a vocabulary and rules

[ISO 5127:2001, 1.1.2.01]

3.2.17**mandatory**

always required

NOTE 1 One of three obligation statuses applied to the attributes of metadata items, indicating the conditions under which the attribute is required. See also **conditional** (3.2.9) and **optional** (3.2.28).

NOTE 2 Obligation statuses apply to metadata items with a Registration Status of "recorded" or higher.

3.2.18**metadata**

data that defines and describes other **data**

3.2.19**metadata item**

an instance of a **metadata object**

NOTE 1 In all parts of ISO/IEC 11179, this term is applied only to instances of metadata objects described by the metamodel in Clause 4 of ISO/IEC 11179-3. Examples include instances of Data Elements, Data Element Concepts, Permissible Values etc.

NOTE 2 A metadata item has associated attributes, as appropriate for the metadata object it instantiates.

3.2.20**metadata object**

an object type defined by a metamodel

NOTE In all parts of ISO/IEC 11179, this term is applied only to metadata objects described by the metamodel in Clause 4 of ISO/IEC 11179-3. Examples include Data Elements, Data Element Concepts, Permissible Values etc. See 3.3 for a complete list.

3.2.21**metadata register**

the information store or database maintained by a **Metadata Registry**

3.2.22**Metadata Registry****MDR**

an information system for registering **metadata**

NOTE The associated information store or database is known as a **metadata register**.

3.2.23**metadata set**

any collection of **metadata**

3.2.24**metamodel**

a **data model** that specifies one or more other data models

3.2.25**metamodel construct**

a unit of notation for modelling

NOTE The metamodel constructs used in ISO/IEC 11179-3 are defined in 3.1.

3.2.26**name**

the **designation** of an object by a linguistic expression

NOTE See also **name (of Administered Item)** (3.3.83)

3.2.27**object**

anything perceivable or conceivable

NOTE Objects may also be material (e.g. an engine, a sheet of paper, a diamond), immaterial (e.g. a conversion ratio, a project plan) or imagined (e.g. a unicorn).

[Adapted from ISO 1087-1:2000, 3.1.1]

3.2.28**optional**

permitted but not required

NOTE 1 One of three obligation statuses applied to the attributes of metadata items, indicating the conditions under which the attribute is required. See also **conditional** (3.2.9) and **mandatory** (3.2.17).

NOTE 2 Obligation statuses apply to metadata items with a Registration Status of "recorded" or higher.

3.2.29**registry item**

a **metadata item** recorded in a **Metadata Registry**

3.2.30**registry metamodel**

a **metamodel** specifying a **Metadata Registry**

3.2.31**related metadata reference**

a **reference** from one **metadata item** to another

NOTE A **Registration Authority** could choose to use a **Reference Document**, an **administrative note** or an **explanatory comment** to record a **related metadata reference**.

3.2.32**stewardship** (of metadata)

the responsibility for the maintenance of **Administration Records** applicable to one or more **Administered Items**

NOTE 1 The responsibility for the registration of metadata may be different from the responsibility for stewardship of metadata.

NOTE 2 See also **Stewardship (of Administered Item)** (3.3.129).

3.3 Alphabetical list of metadata objects in the metamodel

This subclause provides definitions for terms which are the names of metadata objects in the metadata model in Clause 4. Each metadata object is modelled on one of the metamodel constructs from 3.1 (i.e. classes, attributes, composite attributes, relationships or association classes). The metamodel construct applicable to each metadata object is indicated after the definition. For attributes, the associated class is also identified.

This subclause follows the capitalization convention of the model, which is to capitalize the names of classes, association classes and composite datatypes, but not attributes or relationships.

3.3.1**Administered Item**

a **registry item** for which administrative information is recorded in an **Administration Record**

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 The types of *Administered Item* specified by ISO/IEC 11179-3 are listed in 4.7.2.

3.3.2**administered item classification**

the **relationship** where an **Administered Item** is classified based on a specified **Classification Scheme**

NOTE Metamodel construct is: *Relationship*.

3.3.3**administered item context**

the **relationship** that provides a **Context** for an **Administered Item**

NOTE Metamodel construct is: *Relationship*.

3.3.4**administered item identifier**

an **identifier** for an **administered item**

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.5**Administration Record**

a collection of administrative information for an **Administered Item**

NOTE Metamodel construct is: *Composite datatype*.

3.3.6**administrative note**

any general note about the **Administered Item**

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.7**administrative status**

a **designation** of the status in the administrative process of a **Registration Authority** for handling registration requests

NOTE 1 Metamodel construct is: *Attribute of Administration Record*.

NOTE 2 The values and associated meanings of “administrative status” are determined by each **Registration Authority**. C.f. “**registration status**”.

3.3.8**change description**

the description of what has changed in the **Administered Item** since the prior version of the **Administered Item**

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.9**Classification Scheme**

the descriptive information for an arrangement or division of **objects** into groups based on **characteristics**, which the objects have in common

EXAMPLE Origin, composition, structure, application, function, etc.; See ISO/IEC 11179-2.

NOTE Metamodel construct is: *Class*.

3.3.10**classification scheme administration record**

the **Administration Record** for a **Classification Scheme**

NOTE Metamodel construct is: *Attribute of Classification Scheme*.

3.3.11**Classification Scheme Item****CSI**

an item of content in a **Classification Scheme**.

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 This may be a node in a taxonomy or ontology, a term in a thesaurus, etc.

3.3.12

Classification Scheme Item Relationship

the **relationship** among items in a **Classification Scheme**

NOTE Metamodel construct is: *Association Class*.

3.3.13

classification scheme item relationship type description

a description of the type of **relationship** between a **Classification Scheme Item** and one or more other **Classification Scheme Items** in a **Classification Scheme**

NOTE Metamodel construct is: *Attribute of Classification Scheme Item Relationship*.

3.3.14

classification scheme item type name

the **name** of the type of the **Classification Scheme Item**

NOTE Metamodel construct is: *Attribute of Classification Scheme Item*.

3.3.15

classification scheme item value

an instance of a **Classification Scheme Item**

NOTE Metamodel construct is: *Attribute of Classification Scheme Item*.

3.3.16

classification scheme membership

the **relationship** of a **Classification Scheme** with its items

NOTE Metamodel construct is: *Relationship*.

3.3.17

classification scheme type name

the **name** of the type of **Classification Scheme**

NOTE Metamodel construct is: *Attribute of Classification Scheme*.

3.3.18

Concept

unit of knowledge created by a unique combination of **characteristics**

NOTE Metamodel construct is: *Class*.

[ISO 1087-1:2000, 3.2.1]

3.3.19

Concept Relationship

concept relationship

a semantic link among two or more **Concepts**

NOTE 1 Metamodel construct is: *Association Class*.

NOTE 2 An association class is both an association and a class. The name of the association uses lowercase. The name of the class is capitalized.

3.3.20**concept relationship type description**

a description of the type of **relationship** among two or more **Concepts**

NOTE Metamodel construct is: *Attribute of Concept Relationship*.

3.3.21**Conceptual Domain****CD**

a set of valid **Value Meanings**

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 The **Value Meanings** may either be enumerated or expressed via a description.

3.3.22**conceptual domain administration record**

the **Administration Record** for a **Conceptual Domain**

NOTE Metamodel construct is: *Attribute of Conceptual Domain*.

3.3.23**Conceptual Domain Relationship****conceptual domain relationship**

a **relationship** among two or more **Conceptual Domains**

NOTE 1 Metamodel construct is: *Association Class*.

NOTE 2 An association class is both an association and a class. The name of the association uses lowercase. The name of the class is capitalized.

3.3.24**conceptual domain relationship type description**

A description of the type of **relationship** among two or more **Conceptual Domains**.

NOTE Metamodel construct is: *Attribute of Conceptual Domain Relationship*.

3.3.25**conceptual domain representation**

a **relationship** between a **Conceptual Domain** and a **Value Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.26**Contact**

an instance of a role of an individual or an organization (or organization part or organization person) to whom an information item(s), a material object(s) and/or person(s) can be sent to or from in a specified context

NOTE Metamodel construct is: *Composite Datatype*.

3.3.27**contact information**

information to enable a **Contact** to be located or communicated with

NOTE Metamodel construct is: *Attribute of Contact*.

3.3.28**contact name**

the **name** of the **Contact**

NOTE Metamodel construct is: *Attribute of **Contact***.

3.3.29

contact title

the **name** of the position held by the **Contact**

NOTE Metamodel construct is: *Attribute of **Contact***.

3.3.30

Context (for administered item)

a universe of discourse in which a **name** or **definition** is used

NOTE Metamodel construct is: *Class*.

3.3.31

context administration record

the **Administration Record** for a **Context**

NOTE Metamodel construct is: *Attribute of **Context***.

3.3.32

context description

the textual description of the **Context**

NOTE Metamodel construct is: *Attribute of **Context***.

3.3.33

context description language identifier

the **identifier** of the **language** used in the **context description**

NOTE Metamodel construct is: *Attribute of **Context***.

3.3.34

country identifier

⟨*Language Identification*⟩ a country **identifier** further specifying the geopolitical area associated with the **language**

NOTE 1 Metamodel construct is: *Attribute of **Language Identification***.

NOTE 2 Use the three digit numeric codes from ISO 3166-1, with extensions if required.

3.3.35

creation date

the date the **Administered Item** was created

NOTE Metamodel construct is: *Attribute of **Administration Record***.

3.3.36

Data Element

DE

a unit of data for which the **definition**, identification, representation and **Permissible Values** are specified by means of a set of **attributes**

NOTE Metamodel construct is: *Class*.

3.3.37

data element administration record

the **Administration Record** for a **Data Element**

NOTE Metamodel construct is: *Attribute of **Data Element***.

3.3.38**Data Element Concept****DEC**

a concept that can be represented in the form of a **Data Element**, described independently of any particular representation

NOTE Metamodel construct is: *Class*.

3.3.39**data element concept administration record**

the **Administration Record** for a **Data Element Concept**

NOTE Metamodel construct is: *Attribute of Data Element Concept*.

3.3.40**data element concept conceptual domain relationship**

the **relationship** between a **Data Element Concept** and its **Conceptual Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.41**data element concept expression**

the **relationship** between a **Data Element** and a **Data Element Concept**

NOTE Metamodel construct is: *Relationship*.

3.3.42**data element concept object class**

the **designation** of an **Object Class** for a **Data Element Concept**

NOTE Metamodel construct is: *Attribute of Data Element Concept*.

3.3.43**data element concept property**

the **designation** of a **Property** for a **Data Element Concept**

NOTE Metamodel construct is: *Attribute of Data Element Concept*.

3.3.44**Data Element Concept Relationship****data element concept relationship**

the **relationship** among two or more **Data Element Concepts**

NOTE 1 Metamodel construct is: *Association Class*.

NOTE 2 An association class is both an association and a class. The name of the association uses lowercase. The name of the class is capitalized.

3.3.45**data element concept relationship type description**

the description of the type of **relationship** among two or more **Data Element Concepts**

NOTE Metamodel construct is: *Attribute of Data Element Concept Relationship*.

3.3.46**Data Element Derivation**

the **relationship** among a **Data Element** which is derived, the rule controlling its derivation, and the **Data Element(s)** from which it is derived

NOTE Metamodel construct is: *Association Class*.

3.3.47**Data Element Example**

representative illustration of the **Data Element**

NOTE Metamodel construct is: *Class*.

3.3.48**data element example item**

actual illustrative case of the **Data Element**

NOTE Metamodel construct is: *Attribute of Data Element Example*.

3.3.49**data element precision**

the degree of specificity for a **Data Element**

NOTE 1 Metamodel construct is: *Attribute of Data Element*.

NOTE 2 Expressed as a number of decimal places to be used in any associated **Data Element** values. If not specified, the default precision may be taken from the **unit of measure precision** on the associated **Value Domain**.

3.3.50**data element representation**

the **relationship** between a **Data Element** and its **Value Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.51**data element representation class**

the class of representation of a **Data Element**

NOTE Metamodel construct is: *Relationship*.

3.3.52**data identifier**

the unique **identifier** for an **Administered Item** within a **Registration Authority**

NOTE Metamodel construct is: *Attribute of Item Identifier*.

3.3.53**Datatype**

a set of distinct values, characterized by properties of those values and by operations on those values

NOTE Metamodel construct is: *Composite Datatype*.

[ISO/IEC 11404:1996, 4.11]

3.3.54**datatype annotation**

specifying information to further define the **Datatype**

NOTE Metamodel construct is: *Attribute of Datatype*.

3.3.55**datatype description**

descriptive information to further clarify the **Datatype**

NOTE Metamodel construct is: *Attribute of Datatype*.

3.3.56**datatype name**

a **designation** for the **Datatype**

NOTE Metamodel construct is: *Attribute of Datatype*.

3.3.57**datatype scheme reference**

a reference identifying the source of the **Datatype** specification

NOTE 1 In this edition of ISO/IEC 11179-3, the manner of reference is specified by the Registration Authority.

NOTE 2 Metamodel construct is: *Attribute of Datatype*.

3.3.58**Definition (of Administered Item)**

the definition of an **Administered Item** within a **Context**

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 See also **definition** (3.2.12).

3.3.59**definition source reference**

a reference to the source from which the **Definition** is taken

NOTE Metamodel construct is: *Attribute of Definition*.

3.3.60**definition text**

the text of the **Definition**

NOTE Metamodel construct is: *Attribute of Definition*.

3.3.61**derivation input**

the **relationship** specifying the source **Data Element(s)** for a **Data Element Derivation**

NOTE Metamodel construct is: *Relationship*.

3.3.62**derivation output**

the **relationship** denoting the result of a **Data Element Derivation**

NOTE Metamodel construct is: *Relationship*.

3.3.63**Derivation Rule**

the logical, mathematical, and/or other operations specifying derivation

NOTE Metamodel construct is: *Class*.

3.3.64**derivation rule administration record**

the **Administration Record** for a **Derivation Rule**

NOTE Metamodel construct is: *Attribute of Derivation Rule*.

3.3.65**derivation rule application**

the **relationship** specifying the **Derivation Rule** for a **Data Element Derivation**

NOTE Metamodel construct is: *Relationship*.

3.3.66**derivation rule specification**

the text of a specification of **Data Element Derivation**

NOTE Metamodel construct is: *Attribute of Derivation Rule*.

3.3.67**Designation (of Administered Item)**

the **designation** of an **Administered Item** within a **Context**

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 See also **designation** (3.2.13).

3.3.68**dimensionality**

⟨Conceptual Domain⟩ an expression of measurement without units

NOTE 1 Metamodel construct is: *Attribute of Conceptual Domain*.

NOTE 2 ISO 31-0 specifies physical dimensions (e.g. length, mass, velocity). ISO/IEC 11179-3 also allows non-physical dimensions (e.g. value dimensions such as: currency, quality indicator)

NOTE 3 See also **Unit of Measure** (3.3.134).

3.3.69**documentation language identifier**

the **identifier** of the **language** used for documentation by the **Registration Authority**

NOTE Metamodel construct is: *Attribute of Registration Authority*.

3.3.70**effective date**

the date an **administered item** became/becomes available to registry users

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.71**Enumerated Conceptual Domain**

a **Conceptual Domain** that is specified by a list of all its **Value Meanings**

NOTE Metamodel construct is: *Class*.

3.3.72**Enumerated Value Domain**

a **Value Domain** that is specified by a list of all its **Permissible Values**

NOTE Metamodel construct is: *Class*.

3.3.73**exemplification**

a **relationship** between a **Data Element Example** and its **Data Element**

NOTE Metamodel construct is: *Relationship*.

3.3.74**explanatory comment**

descriptive comments about the **Administered Item**

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.75**international code designator**

the **identifier** of an organization identification scheme

NOTE 1 Metamodel construct is: *Attribute of Registration Authority Identifier*.

NOTE 2 Based on ISO/IEC 6523-1:1998, 3.8.

NOTE 3 See also ISO/IEC 11179-6.

3.3.76**Item Identifier**

an **identifier** for an item

NOTE Metamodel construct is: *Composite datatype*.

3.3.77**item registration authority identifier**

the **identifier** of the **Registration Authority** registering the item

NOTE 1 Metamodel construct is: *Attribute of Item Identifier*.

NOTE 2 See also ISO/IEC 11179-6.

3.3.78**Language Identification**

the collection of **identifiers** required to identify a **language** or language variation for a particular purpose

NOTE Metamodel construct is: *Composite datatype*.

3.3.79**language identifier**

information in a **Terminological Entry** which indicates the **name** of a **language**

NOTE 1 Use the three character alphabetic codes and names from ISO 639-2/Terminology, with extensions if required.

NOTE 2 Metamodel construct is: *Attribute of Language Identification*.

3.3.80**Language Section**

the part of a **Terminological Entry** containing information related to one **language**

NOTE Metamodel construct is: *Class*.

3.3.81**language section language identifier**

the **identifier** of the **language** used to group a set of **Designations** and **Definitions**

NOTE Metamodel construct is: *Attribute of Language Section*.

3.3.82**last change date**

the date the **Administered Item** was last changed

NOTE Metamodel construct is: *Attribute of Administration Record.*

3.3.83

name

⟨Administered item⟩ a **name** by which an **Administered Item** is designated within a specific **Context**

NOTE 1 Metamodel construct is: *Attribute of Designation.*

NOTE 2 See also **name** (3.2.27).

3.3.84

Non-enumerated Conceptual Domain

a **Conceptual Domain** that is not specified by a list of all valid **Value Meanings**

NOTE Metamodel construct is: *Class.*

3.3.85

non-enumerated conceptual domain description

a description or specification of a rule, reference, or range for a set of all **Value Meanings** for the **Conceptual Domain**

NOTE Metamodel construct is: *Attribute of Non-enumerated Conceptual Domain.*

3.3.86

Non-enumerated Value Domain

a **Value Domain** that is specified by a description rather than a list of all **Permissible Values**

NOTE Metamodel construct is: *Class.*

3.3.87

non-enumerated value domain description

a description or specification of a rule, reference, or range for a set of all **Permissible Values** for the **Value Domain**

NOTE Metamodel construct is: *Attribute of Non-enumerated Value Domain.*

3.3.88

Object Class

a set of ideas, abstractions, or things in the real world that are identified with explicit boundaries and meaning and whose properties and behaviour follow the same rules

NOTE Metamodel construct is: *Class.*

3.3.89

object class administration record

the **Administration Record** for an **Object Class**

NOTE Metamodel construct is: *Attribute of Object Class.*

3.3.90

object class qualifier

a qualifier of the **Data Element Concept Object Class**

NOTE Metamodel construct is: *Attribute of Data Element Concept.*

3.3.91

Organization

a unique framework of authority within which a person or persons act, or are designated to act, towards some purpose

NOTE 1 Metamodel construct is: *Class*.

NOTE 2 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:
 - 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.

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

3.3.92

organization identifier

the **identifier** assigned to an **Organization** within an organization identification scheme, and unique within that scheme

NOTE Metamodel construct is: *Attribute of **Registration Authority Identifier***.

[ISO/IEC 6523-1:1998, 3.10]

3.3.93

organization mail address

the physical, postal or delivery address of the **Organization**

NOTE 1 Metamodel construct is: *Attribute of **Organization***.

NOTE 2 Includes civic street address as well as "P.O.Box" types of mailing addresses

3.3.94

organization name

a **designation** for the **Organization**

NOTE 1 Metamodel construct is: *Attribute of **Organization***.

NOTE 2 The **name** by which the **Organization** is known to the **Registration Authority**.

3.3.95

organization part

any department, service or other entity within an organization which needs to be identified for information exchange

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

3.3.96

organization part identifier

opi

an **identifier** allocated to a particular **organization part**

NOTE 1 Metamodel construct is: *Attribute of **Registration Authority Identifier***.

NOTE 2 See also ISO/IEC 11179-6.

[ISO/IEC 6523-1:1998, 3.11]

3.3.97

organization part identifier source

the source for the **organization part identifier**

NOTE 1 Metamodel construct is: *Attribute of **Registration Authority Identifier***.

NOTE 2 See also ISO/IEC 11179-6.

[Based on ISO/IEC 6523-1:1998, 3.12]

3.3.98

origin

⟨Administered item⟩ the source (document, project, discipline or model) for the **Administered Item**

NOTE Metamodel construct is: *Attribute of **Administration Record***.

3.3.99

Permissible Value

an expression of a **Value Meaning** allowed in a specific **Value Domain**

NOTE Metamodel construct is: *Class*.

3.3.100

permissible value begin date

the date this value became/becomes allowed in the **Value Domain**

NOTE 1 Metamodel construct is: *Attribute of **Permissible Value***.

NOTE 2 A Registration Authority may determine whether this date is the date the value becomes valid in a registry or the date the value becomes part of the source domain or some other date.

3.3.101

permissible value end date

the date this value became/becomes no longer allowed in the **Value Domain**

NOTE 1 Metamodel construct is: *Attribute of **Permissible Value***.

NOTE 2 A Registration Authority may determine whether this date is the date the value becomes no longer valid in a registry or the date the value becomes no longer part of the source domain or some other date.

3.3.102

permissible value meaning

the **relationship** of a **Value Meaning** from an **Enumerated Conceptual Domain** with a **Permissible Value** from an **Enumerated Value Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.103

permissible value set

the set of **Permissible Values** for an **Enumerated Value Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.104

permitted value

the use of a value as a **Permissible Value** in an **Enumerated Value Domain**

NOTE Metamodel construct is: *Relationship*.

3.3.105

preferred definition

an indicator that the **definition text** is a preferred **definition** for an **Administered Item** within a **language**

NOTE Metamodel construct is: *Attribute of Definition*.

3.3.106

preferred designation

an indicator that the **name** is a preferred term for an **Administered Item** within a **language**

NOTE 1 Metamodel construct is: *Attribute of Designation*.

NOTE 2 See “**main entry term**” in ISO 12620:1999.

3.3.107

Property

a **characteristic** common to all members of an **Object Class**

NOTE Metamodel construct is: *Class*.

3.3.108

property administration record

the **Administration Record** for a **Property**

NOTE Metamodel construct is: *Attribute of Property*.

3.3.109

property qualifier

a qualifier of the **Data Element Concept Property**

NOTE Metamodel construct is: *Attribute of Data Element Concept*.

3.3.110

reference

the **relationship** between a **Reference Document** and an **Administered Item**

NOTE Metamodel construct is: *Relationship*.

3.3.111

Reference Document

a document that provides pertinent details for consultation about a subject

NOTE Metamodel construct is: *Class*.

3.3.112

reference document identifier

an **identifier** for the **Reference Document**

NOTE Metamodel construct is: *Attribute of Reference Document*.

3.3.113

reference document language identifier

the **identifier** of the natural or special **language** used in the **Reference Document**

NOTE Metamodel construct is: *Attribute of Reference Document*.

3.3.114**reference document title**

the title of the **Reference Document**

NOTE Metamodel construct is: *Attribute of Reference Document*.

3.3.115**reference document type description**

a description of the type of **Reference Document**

NOTE Metamodel construct is: *Attribute of Reference Document*.

3.3.116**reference organization**

the **relationship** between a **Reference Document** and an **Organization**

NOTE Metamodel construct is: *Relationship*.

3.3.117**Registrar**

a representative of a **Registration Authority**

NOTE Metamodel construct is: *Class*.

3.3.118**registrar contact**

the contact information associated with a **Registrar**

NOTE Metamodel construct is: *Attribute of Registrar*.

3.3.119**registrar identifier**

an **identifier** for the **Registrar**

NOTE Metamodel construct is: *Attribute of Registrar*.

3.3.120**registration**

the **relationship** between an **Administered Item** and the **Registration Authority**

NOTE Metamodel construct is: *Relationship*.

3.3.121**Registration Authority****RA**

an **Organization** responsible for maintaining a register

NOTE Metamodel construct is: *Class*.

3.3.122**registration authority identifier**

an **identifier** assigned to a **Registration Authority**

NOTE 1 Metamodel construct is: *Attribute of Registration Authority*.

NOTE 2 See ISO/IEC 11179-6 and ISO/IEC 6523-2.

3.3.123**Registration Authority Identifier**

an **identifier** assigned to a **Registration Authority**

NOTE 1 Metamodel construct is: *Composite datatype*.

NOTE 2 See ISO/IEC 11179-6 and ISO/IEC 6523-2.

3.3.124

registration authority registrar

the **relationship** between a **Registration Authority** and a **Registrar**

NOTE Metamodel construct is: *Relationship*.

3.3.125

registration status

a **designation** of the status in the registration life-cycle of an **Administered Item**

NOTE 1 Metamodel construct is: *Attribute of Administration Record*.

NOTE 2 Designation values are described in ISO/IEC 11179-6.

3.3.126

Representation Class

the classification of types of representations

NOTE Metamodel construct is: *Class*.

3.3.127

representation class administration record

the **Administration Record** for a **Representation Class**

NOTE Metamodel construct is: *Attribute of Representation Class*.

3.3.128

representation class qualifier

a qualifier to the **Representation Class** used in naming **Data Elements** and **Value Domains**

NOTE Metamodel construct is: *Attribute of Data Element*.

3.3.129

Stewardship (of Administered Item)

the **relationship** of an **Administered Item**, a **Contact**, and an **Organization** involved in the **stewardship** of the **metadata**

NOTE 1 Metamodel construct is: *Association Class*.

NOTE 2 See also 3.2.32 **stewardship** (of metadata).

3.3.130

stewardship contact

the contact information associated with a **Stewardship**

NOTE Metamodel construct is: *Attribute of Stewardship*.

3.3.131

Submission (of Administered Item)

the **relationship** of an **Administered Item**, a **Contact**, and an **Organization** involved in a submission of metadata

NOTE Metamodel construct is: *Association Class*.

3.3.132**submission contact**

the contact information associated with a **Submission**

NOTE Metamodel construct is: *Attribute of Submission*.

3.3.133**Terminological Entry**

an entry containing information on terminological units for a specific **Administered Item** within a **Context** (subject field)

NOTE Metamodel construct is: *Class*.

3.3.134**Unit of Measure**

⟨Value Domain⟩ the actual units in which the associated values are measured

NOTE 1 Metamodel construct is: *Composite Datatype*.

NOTE 2 ISO 31-0:1982 specifies a system of physical measurement (the International System of Units, SI). Physical measurement is only one type of measurement. Value measurement is another type of measurement. ISO/IEC 11179-3 allows the use of any appropriate system of measurement.

NOTE 3 The **dimensionality** (3.3.68) of the associated **Conceptual Domain** (3.3.21) must be appropriate for the specified **Unit of Measure**.

3.3.135**unit of measure name**

the **name** of a **Unit of Measure**

NOTE Metamodel construct is: *Attribute of Unit of Measure*.

3.3.136**unit of measure precision**

the degree of specificity for a **Unit of Measure**

NOTE 1 Metamodel construct is: *Attribute of Unit of Measure*.

NOTE 2 Expressed as a number of decimal places to be used in any associated **Data Element** values. To be used as a default if no precision is specified on the **Data Element** itself.

3.3.137**unresolved issue**

any problem that remains unresolved regarding proper documentation of the **Administered Item**

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.138**until date**

the date an **Administered Item** is no longer effective in the registry

NOTE Metamodel construct is: *Attribute of Administration Record*.

3.3.139**Value**

a data value

NOTE Metamodel construct is: *Class*.