BS ISO/IEC 19763-6:2015+A1:2024

BSI Standards Publication

Information technology — Metamodel framework for interoperability (MFI)

Part 6: Registry Summary

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National foreword

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The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO/IEC text carry the number of the ISO/IEC amendment. For example, text altered by ISO/IEC amendment 1 is indicated by A1 A1.

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Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Conformance 1
2.1 General 1
2.2 Degree of conformance 1
2.2.1 General 1
2.2.2 Strictly conforming 2
2.2.3 Conforming implementation 2
2.3 Implementation Conformance Statement (ICS) 2

3 Normative references 2

4 Terms, definitions and abbreviated item 2
4.1 Terms and definitions 2
4.2 Terms for concepts used in this part of 19763 2
4.3 Abbreviate terms 3

5 Background and purpose 4
5.1 General 4
5.2 Role of the Registry Summary 4

6 Struct of Registry Summary 5
6.1 Overview of Registry Summary 5
6.2 Associations between Registry Summary and Core_Model package from MFI-10 6
6.3 Metaclasses in the Registry_Summary package 7
6.3.1 Classification metaclass 7
6.3.2 Contact metaclass 8
6.3.3 Contents metaclass 8
6.3.4 Document metaclass 8
6.3.5 Interface metaclass 9
6.3.6 Organization metaclass 10
6.3.7 Other_Standard_Model metaclass 11
6.3.8 Registry metaclass 11
6.3.9 Registry_Component metaclass 13
6.3.10 Related_Registry metaclass 14
6.3.11 Registry_Summary_Language 15

Annex A (informative) Types of a registry system for Registry Summary 16
A.1 Introduction 16
A.2 Types of a registry system for Registry Summary 16
A.2.1 General 16
A.2.2 Independent Registry 16
A.2.3 Replicated Registry 16
A.2.4 Federated Registry 17

Annex B (informative) Example of using models of other standard in Registry Summary 18
B.1 Introduction 18
B.2 Adaptation method of model of other standard 18
B.2.1 General 18
B.2.2 〚A1〛 Example of using ISO/IEC 11179-3:2023 classes 〚A1〛 19
B.2.3 Example of using UN/CEFACT Core Component Library classes 19

Annex C (informative) Example of XML Schema for Registry Summary 20

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Documents
Document Sharing Hub
Full document details: BS ISO/IEC 19763-6:2015+A1:2024

C.1 Introduction **20**
C.2 XML Schema definition **20**
C.2.1 General **20**
C.2.2 ComplexType definition **20**
C.2.3 Sample element definition **24**

Annex D (informative) Example of indicator of Registry Summary **25**
D.1 Introduction **25**
D.2 Location of Registry Summary in META tag **25**

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Document Sharing Hub
Full document details: BS ISO/IEC 19763-6:2015+A1:2024

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 19763-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data Management and Interchange*.

ISO/IEC 19763 consists of the following parts, under the general title *Information Technology — Metamodel framework for interoperability (MFI)*:

— *Part 1: Framework*

— *Part 3: Metamodel for ontology registration*

— *Part 5: Metamodel for process model registration*

— *Part 6: Registry Summary (this document)*

— *Part 7: Metamodel for service model registration*

— *Part 8: Metamodel for role and goal model registration*

— *Part 9: On demand model selection [Technical Report]*

— *Part 10: Core model and basic mapping*

— *Part 12: Metamodel for information model registration*

— *Part 13: Metamodel for form design registration*

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Introduction

The effective interchange of information across business domains, countries and cultures is an important concern for people in both the IT industry and non-IT industries.

To follow the current trends, industrial consortia have engaged in the standardization of domain-specific business objects, including business process models and software components using common modelling tools and interchange facilities such as UML and XML. They are very active in standardizing domain-specific business process models and standard modelling constructs such as data elements, entity profiles and value domains.

The ISO/IEC 19763 family of standards defines normative metamodels for the registration of models (including information models and process models), ontologies, services and roles & goals. Items or objects specified by those metamodels have been registered into particular registry systems. In order to perform effective exchange of pertinent information smoothly, individual registry systems need to interoperate with other registry systems.

This part of ISO/IEC 19763 defines a metamodel for the use case in which registry systems of different kinds must share information.

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Information Technology — Metamodel framework for interoperability (MFI) — Part 6: Registry Summary

1 Scope

The ISO/IEC 19763 family of standards defines normative metamodels for the registration of models (including information models and process models), ontologies, services and roles & goals. Currently a lot of metadata registries or model registries were constructed and utilized in many different business domains, such as e-business, healthcare, automobile, electronics devices and civil construction.

One of the key issues for the cross domain data or services integration must be enabling the easy discovery of metadata that are stored in the different registries that were scattered over different domains. Therefore, it is necessary to provide specific metadata that describes the registry itself in order to enable interoperation among different registries that were built following different standards.

This part of the ISO/IEC 19763 family of standards specifies an information artefact called the Registry Summary. The Registry Summary consists of information that describes administrative aspects, the summary of contents and the technical access method of the registry.

A collection of multiple Registry Summary information is called a “Registry of Registries” or RoR, however, this standard does not mandate a particular implementation. Also, any specific protocol between Registry Summaries and RoR, such as creation of RoR and synchronization of RoR, would not be specified in this standard. Those are to be specified by other standards.

The Registry Summary and RoR concept should be applied to all Metamodel Framework for Interoperability (MFI) registries, but its use may be applied to any kind of registries.

2 Conformance

2.1 General

An implementation claiming conformance with this part of ISO/IEC 19763 shall support the metamodel specified in clause 6, depending on a degree of conformance as described below.

2.2 Degree of conformance

2.2.1 General

The distinction between "strictly conforming" and "conforming" implementations is necessary to address the simultaneous needs for interoperability and extensions. This part of ISO/IEC 19763 describes specifications that promote interoperability. Extensions are motivated by needs of users, vendors, institutions and industries, but are not specified by this part of ISO/IEC 19763.

A strictly conforming implementation may be limited in usefulness but is maximally interoperable with respect to this part of ISO/IEC 19763. A conforming implementation may be more useful, but may be less interoperable with respect to this part of ISO/IEC 19763.

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2.2.2 Strictly conforming

A strictly conforming implementation

a) shall support the metamodel specified in clause 6;

b) shall not support any extensions to the metamodel specified in clause 6.

2.2.3 Conforming implementation

A conforming implementation

a) shall support the metamodel specified in clause 6;

b) may support extensions to the metamodel specified in clause 6 that are consistent with the metamodel specified in clause 6.

2.3 Implementation Conformance Statement (ICS)

An implementation claiming conformance with this part of ISO/IEC 19763 shall include an Implementation Conformance Statement stating.

a) whether it is a strictly conforming implementation or a conforming implementation (see 2.2)

b) what extensions are supported if it is a conforming implementation.

3 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/IEC 19763-1, *Information technology — Metamodel framework for interoperability (MFI) — Part 1: Framework*

ISO/IEC 19763-10, *Information technology — Metamodel framework for interoperability (MFI) — Part 10: Core model and basic mapping*

〚A1〛 ISO/IEC 11179-3, *Information technology — Metadata registries (MDR) — Part 3: Metamodel for registry common facilities* 〚A1〛

ISO/IEC 11179-6, *Information technology — Metadata registries (MDR) — Part 6: Registration*

4 Terms, definitions and abbreviated item

4.1 Terms and definitions

For the purposes of this document, the items and definitions given in ISO/IEC 19763-1, ISO/IEC 11179-3, ISO/IEC 11179-6 and the following apply.

4.2 Terms for concepts used in this part of 19763

〚A1〛 **4.2.1** 〚A1〛
attribute
⟨metamodel⟩ characteristic of an object or set of objects

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[〉A1 ISO/IEC 11179-3:2023, 3.1.11 〈A1]

〉A1 **4.2.2** 〈A1
class
⟨metamodel⟩ description of a set of objects that share the same attributes, operations, methods, relationships, and semantics

[〉A1 ISO/IEC 11179-3:2023, 3.1.1 〈A1]

〉A1 **4.2.3** 〈A1
metadata
data that defines and describes other data

[〉A1 ISO/IEC 11179-3:2023, 3.2.30 〈A1]

〉A1 **4.2.4** 〈A1
metadata registry
MDR
registry system
information system for registering metadata,

NOTE 1 The associated information store or database is known as a metadata register.

[〉A1 ISO/IEC 11179-3:2023, 3.2.55 〈A1]

NOTE 2 registry system has been added as a new synonym,

〉A1 **4.2.5** 〈A1
registry of registries
RoR
registry that stores Registry Summary data showing an individual registry system

〉A1 **4.2.6** 〈A1
registry summary
registry summary is metadata which refers to an individual registry system or an aggregate of registry systems

4.3 Abbreviate terms

MDR	Metadata Registry
MFI	Metamodel Framework for Interoperability
RoR	Registry of Registries
RS	Registry Summary
SLA	Service Level Agreement
UML	Unified Modeling Language
URL	Uniform Resource Locator
XML	Extensible Markup Language
WSDL	Web Service Description Language

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