



**International
Standard**

ISO/IEC 19763-7

**Information technology —
Metamodel framework for
interoperability (MFI) —**

**Part 7:
Metamodel for service model
registration**

*Technologies de l'information — Cadre du métamodèle pour
l'interopérabilité (MFI) —*

Partie 7: Métamodèle pour l'enregistrement du modèle de service

**Second edition
2026-10**

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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.

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 or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology, Subcommittee SC 32, Data management and interchange*.

This second edition cancels and replaces the first edition (ISO/IEC 19763-7:2015), which has been technically revised.

The main changes are as follows:

- Additional metaclasses and enumerated datatypes have been introduced in the metamodel of MFI service model registration to support registration of heterogeneous services using multiple protocols, including *Invocation_Way*, *Message_Exchange_Pattern*, *Protocol*, and *Message_Data_Format*.
- Additional metaclasses and enumerated datatypes have been introduced in the metamodel of MFI service model registration to support registration of service evolution, including *Service_Evolution*, *Service_Change*, *Change_Type*, and *Change_Impact*.
- [Annex B](#) has been updated, providing registration examples, including an OpenAPI service registration example and a PROTO service registration example.

A list of all parts in the ISO/IEC 19763 series can be found on the ISO and IEC websites.

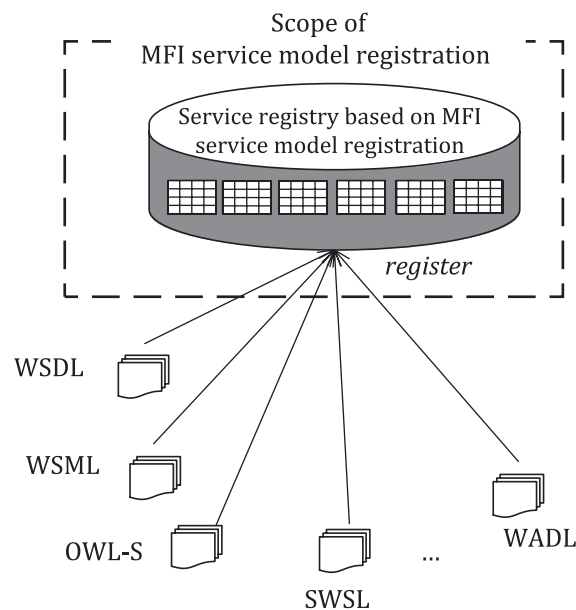
Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

With the rapid development of Service Oriented Computing (SOC), more and more computing resources are presented in the form of web services. Meanwhile, business integration based on web services is becoming a popular application development method. A web service is a kind of Web based application that encapsulates one or more computing modules and is designed to support interoperable machine-to-machine interaction over a network.

In Web Service registration and management, ebXML RegRep is a standard defining the Service interface, protocols and information model for an integrated registry and repository, which provides basic support for publishing and discovering Web Services within and across enterprises. Nevertheless, keyword matching is the basic service discovery method in ebXML RegRep, thus the discovery results will be inevitably inaccurate, and the discovery process will be time-consuming. When business information interchange and integration becomes increasingly frequent, major work in web service discovery should be processed by machine. This shift necessitates the semantic description of administrative and evolution-related metadata of services, along with the provision of corresponding registration and management mechanisms. Moreover, with the rapid growth of service networks and service ecosystems, where large numbers of heterogeneous services coexist and dynamically evolve, the demand for interoperability becomes increasingly critical. Services characterized by more diverse communication protocols, description languages, message exchange patterns, and data formats must be capable of sharing and interaction. To support this, service registration frameworks must be enhanced to ensure that services can be discovered, composed, and evolved within highly dynamic and diverse digital ecosystems.

This document intends to provide a generic framework for registering administrative and evolution information about web services in an explicit way. The relationship between MFI service model registration, the service registry, and service models expressed in different service description languages is illustrated in [Figure 1](#).



Key



service model



metadata about service

NOTE

Not every model needs to exist in a repository before registration

Figure 1 — Scope of MFI Service model registration

Information technology — Metamodel framework for interoperability (MFI) —

Part 7: Metamodel for service model registration

1 Scope

The primary purpose of the ISO/IEC 19763 series is to specify a metamodel framework for interoperability. This document specifies a metamodel for registering administrative and evolution information of models of services, facilitating interoperability through the reuse of services.

This document is only applicable to web services whose capabilities are described by some web service description language (see [Annex A](#) for examples of such languages). [Figure 1](#) shows the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 19763-3, *Information technology — Metamodel framework for interoperability (MFI) — Part 3: Metamodel for ontology registration*

ISO/IEC 19763-5, *Information technology — Metamodel framework for interoperability (MFI) — Part 5: Metamodel for process model registration*

ISO/IEC 19763-8, *Information technology — Metamodel framework for interoperability (MFI) — Part 8: Metamodel for role and goal model registration*

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

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