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Information technology — Concepts and usage of metadata —

Part 26: XML for representation of ISO/IEC 11179-3:2013 content

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Foreword

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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*.

A list of all parts in the ISO/IEC 19583 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

The ISO/IEC 11179 series addresses the semantics of data, the representation of data, and the registration of the descriptions of that data. At the time of the publication of ISO/IEC 11179-3:2013 to which this document refers, ISO/IEC 11179 was a six-part series of standards, whose conceptual model was specified in ISO/IEC 11179-3. Since this time, part three has continued to be refined, developed and factorized.

ISO/IEC 11179-3:2013 does not define a physical implementation and thus need not be implemented as specified, which makes exchanging content between even compliant registries difficult. A common physical implementation is required if automatic content exchange is to be achieved.

ISO/IEC 11179-3:2013 representation in W3C XML Schema is such a physical representation. It also provides a potential model for its implementation as an XML database focused on units of content that are readily created and maintained – particularly if reasoning over the 'meaning' of that content can be delegated to an accompanying RDF database as described in ISO/IEC TR 19583-24.

As the adoption of 11179 MDRs expands, metadata registries will need to reuse and extend definitions from other MDRs, together with definitions reflecting local information types. The schema allows metadata registry content to be exchanged in a standard format regardless of the kind of registry software in use.

The schema is presented in 'Venetian Blind' style, where each of the components of the model are rendered as reusable types. These types are assembled into discrete documents suitable for creation and exchange. The main body of the document describes the schema together with the principles and conventions that were followed to map classes, attributes, and associations of the conceptual model into an acyclic, directed graph suitable for an unambiguous document-based representation. The schema is specified in three parts in Annex B, C and D. Additionally, Annex A describes the relationship between the 2013 and current editions of ISO/IEC 11179-3, ISO/IEC 11179-31 and ISO/IEC 11179-32; Annex E suggests a schema derived from Annex B and C to support a XML database system holding ISO/IEC 11179 content; Annex F contains a compliant, example message communicating data elements between two registries.

Where direct reference is made to class, attribute and relationship names from models described in parts of ISO/IEC 11179, class names are emboldened with initial capital letters and have spaces replaced by underscore characters, attribute names are enboldened in lower case and have spaces replaced by underscore characters, and relationship names are italicised in lower case with spaces replaced by underscore characters.

Information technology — Concepts and usage of metadata —

Part 26:
XML for representation of ISO/IEC 11179-3:2013 content

1 Scope

This document specifies the structure of ISO/IEC 11179-3:2013 representation in W3C XML Schema suitable for communication of content between compliant registries. The schema described in this document will implement a class and attribute vocabulary that matches the conceptual model presented in ISO/IEC 11179-3:2013 in W3C XML Schema format. The purpose of the schema is for the exchange of compliant metadata, and to support the validation of messages exchanged between registries. It is not intended for the communication of data element metadata alongside the data to which the metadata refers.

The document specifes the schema and the principles and conventions that were followed to map classes, attributes, and associations of the conceptual model into an acyclic, directed graph suitable for an unambiguous document-based representation.

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 11179-3:2013[1)], *Information technology — Metadata registries (MDR) Part 3: Registry metamodel and basic attributes*

ISO/IEC 11179-6:2015[2)], *Information technology — Metadata registries (MDR) Part 6: Registration*

W3C XML Schema https://www.w3.org/XML/Schema

1) Withdrawn and replaced by ISO/IEC 11179-3:2023.

2) Withdrawn and replaced by ISO/IEC 11179-6:2023.

Bibliography

[1] ISO/IEC TR 19583-24:2025, *Information technology — Concepts and usage of metadata — Part 24: 11179-3:2013 Metamodel in RDF*

[2] ISO 11615, *Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated medicinal product information*

[3] ISO 11616, *Health informatics — Identification of medicinal products — Data elements and structures for unique identification and exchange of regulated pharmaceutical product information*

[4] ISO 11238, *Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated information on substances*