SLOVENSKI STANDARD
SIST EN ISO/IEC 19788-1:2014

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Informacijska tehnologija - Učenje, izobraževanje in usposabljanje - Metapodatki za učne vire - 1. del: Okvir (ISO/IEC 19788-1:2011)

Information technology - Learning, education and training - Metadata for learning resources - Part 1: Framework (ISO/IEC 19788-1:2011)

Informationstechnik - Lernen, Ausbilden und Weiterbilden - Metadaten für Lernressourcen - Teil 1: Das Rahmenwerk (ISO/IEC 19788-1:2011)

Technologies de l'information - Apprentissage, éducation et formation - Métadonnées pour ressources d'apprentissage - Partie 1: Charpente (ISO/IEC 19788-1:2011)

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Information technology - Learning, education and training - Metadata for learning resources - Part 1: Framework (ISO/IEC 19788-1:2011)

Technologies de l'information - Apprentissage, éducation et formation - Métadonnées pour ressources d'apprentissage - Partie 1: Charpente (ISO/IEC 19788-1:2011)

Informationstechnik - Lernen, Ausbilden und Weiterbilden - Metadaten für Lernressourcen - Teil 1: Das Rahmenwerk (ISO/IEC 19788-1:2011)

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Foreword

The text of ISO/IEC 19788-1:2011 has been prepared by Technical Committee JTC 1 “Information technology” of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and has been taken over as EN ISO/IEC 19788-1:2012 by Technical Committee CEN/TC 353 “Information and Communication Technologies for Learning, Education and Training” the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.

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INTERNATIONAL STANDARD

ISO/IEC 19788-1

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Information technology — Learning, education and training — Metadata for learning resources —

Part 1: Framework

Technologies de l'information — Apprentissage, éducation et formation — Métadonnées pour ressources d'apprentissage — Partie 1: Charpente

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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.

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.

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ISO/IEC 19788-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

ISO/IEC 19788 consists of the following parts, under the general title *Information technology — Learning, education and training — Metadata for learning resources*:

— *Part 1: Framework*

— *Part 2: Dublin Core elements*

The following parts are under preparation:

— *Part 3: Basic application profile*

— *Part 5: Educational elements*

— *Part 6: Availability, distribution, and intellectual property elements*

Technical elements will form the subject of a future Part 4.

Introduction

The primary purpose of ISO/IEC 19788 is to facilitate: (1) the description of a learning resource by providing a standards-based approach to the identification and specification of the metadata elements required to describe a learning resource, e.g. as a metadata learning resource (MLR) record; and (2) the search, discovery, acquisition, evaluation, and use of learning resources, for instance by learners, instructors or automated software processes. The interoperability of these functions can be achieved through harvesting or federated search processes, among other technologies and solutions. ISO/IEC 19788 is based on identified user requirements.

This part of ISO/IEC 19788 includes rules for the assignment and management of identifiers, and the development of subsequent parts fulfilling specific user needs.

Additionally, this part of ISO/IEC 19788 specifies how to define application profiles.

At the same time, ISO/IEC 19788 takes into account the diversity of cultural and linguistic contexts in which learning resources and their metadata are likely to be created and exploited. ISO/IEC 19788 also facilitates the sharing and reuse of learning resource descriptions by providing specific elements to support metadata harvesting.

ISO/IEC 19788 aims to specify data elements relating to learning resources to be expressed in a range of established formats, providing optimal compatibility with IEEE 1484.12.1-2002 and ISO 15836:2009 (see Bibliography), while also addressing user-driven requirements and uses not explicitly addressed in those two standards. These data elements are used to form the description of a learning resource.

In addition to this part of ISO/IEC 19788, ISO/IEC 19788-2 and ISO/IEC 19788-3, ISO/IEC 19788 is modularly structured with all subsequent parts having a distinct scope. Each of these parts represents a specified set of user requirements for the identification and specification of data elements having a particular focus and intended use in the description of a learning resource. This includes categories of data elements focused on technical perspectives, educational (pedagogical) aspects, availability and intellectual property aspects, classification schemes, life cycle management, registration, etc. This also includes the use of application profiles stating the rules for combining metadata elements from various parts of ISO/IEC 19788 and other specifications to support the description of a learning resource, e.g. a MLR record, in a particular context, as well as that of a particular jurisdictional domain, organization, public administration, etc.

The identification and specification of particular metadata elements are not included in this part of ISO/IEC 19788 but in subsequent parts. Also excluded from this part of ISO/IEC 19788 are the specification of bindings for data elements (e.g. XML bindings) and the description of particular application profiles. These will be considered in subsequent parts. Nevertheless, XML snippets can be used in an informal way in examples.

The following aspects might be addressed in a subsequent edition of ISO/IEC 19788-1 or in another part of ISO/IEC 19788:

- additional data element specification attributes;
- registration of MLR records (see 3.23) and assignment of their unique identifiers;
- detailed rules governing coded domains;
- Person as a learning resource.

Information technology — Learning, education and training — Metadata for learning resources —

Part 1: Framework

1 Scope

The primary purpose of ISO/IEC 19788 is to specify metadata elements and their attributes for the description of learning resources. This includes the rules governing the identification of data elements and the specification of their attributes.

NOTE All concepts are defined in Clause 3.

ISO/IEC 19788 provides data elements for the description of learning resources and resources directly related to learning resources.

This part of ISO/IEC 19788 provides principles, rules and structures for the specification of the description of a learning resource; it identifies and specifies the attributes of a data element as well as the rules governing their use. The key principles stated in this part of ISO/IEC 19788 are informed by a user requirements-driven context with the aim of supporting multilingual and cultural adaptability requirements from a global perspective.

This part of ISO/IEC 19788 is information-technology-neutral and defines a set of common approaches, i.e. methodologies and constructs, which apply to the development of the subsequent parts of ISO/IEC 19788.

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 639-2:1998(E/F), *Codes for the representation of names of languages — Part 2: Alpha-3 code/Codes pour la représentation des noms de langue — Partie 2: Code alpha-3*

ISO 639-3:2007(E), *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

ISO 8601:2004(E), *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 10646:2003(E), *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

3 Terms and definitions

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

3.1
application profile
defined structured collection of **data element specification**s (3.14) chosen to satisfy the particular needs of a community or communities

NOTE The data element specifications are from the various parts of ISO/IEC 19788 and from other sources.

3.2
application profile record
specified set of **data element**s (3.11) describing a specific **learning resource** (3.20) and obeying the **rule**s (3.32) of a specific **application profile** (3.1)

3.3
application profile specification
description of an **application profile** (3.1) by providing its **attribute value**s (3.5) and a description of its underlying **data element group specification** (3.13)

3.4
attribute
characteristic of an object or **entity** (3.17)

[ISO/IEC 11179-1:2004, 3.1.1]

3.5
attribute value
information recorded as the content of an **attribute** (3.4) in a **data element specification** (3.14), **data element group specification** (3.13) or **application profile specification** (3.3)

3.6
conditional
required under certain specified conditions

[ISO/IEC 11179-3:2003, 3.2.9]

NOTE One of the obligation statuses applied to the attributes of a data element (in a data element specification), indicating the conditions under which an attribute value is required.

3.7
conformant data element
data element (3.11) that obeys the **rule**s (3.32) of its **data element specification** (3.14)

3.8
conforming MLR record
MLR record (3.24) in which all the **data element**s (3.11) are **conformant data element**s (3.7)

3.9
conforming MLR record relative to an application profile
conforming MLR record (3.8) for which the additional conditions specified in the **application profile specification** (3.3) are satisfied by all the **data elements** (3.11) in the MLR record

3.10
content value
information recorded as the content of the **data element** (3.11), in compliance with its **data element specification** (3.14)

3.11
data element
unit of data described in a **data element specification** (3.14)

[ISO 9735-1:2002, 4.28]

3.12
data element group
identified, named set of related **data element**s (3.11) and/or **data element group**s (3.12) as described in a **data element group specification** (3.13)

NOTE A data element group is a structured set of data elements.

3.13
data element group specification
description of the **data element**s (3.11) or **data element group**s (3.12) constituting the data element group under consideration

3.14
data element specification
set of **attribute**s (3.4) and **attribute value** (3.5) rules characterizing a set of **data element**s (3.11)

NOTE Adapted from the definition of "simple data element specification" in ISO/IEC 9735-1:2002, 4.106.

3.15
definition
representation of a concept by a descriptive statement which serves to differentiate it from related concepts

[ISO 1087-1:2000, 3.3.1]

3.16
domain
⟨data element⟩ **resource class** (3.31) whose **resource**s (3.30) are described by the **data element** (3.11) under consideration

NOTE A central resource class for ISO/IEC 19788 is *Learning Resource* (the set of all learning resources).

3.17
entity
any concrete or abstract thing that exists, did exist, or might exist, including associations among these things

NOTE An entity exists whether data about it are available or not.

EXAMPLE Person, object, event, idea, process, etc.

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

3.18
extension
⟨rule set⟩ set of all **strings** (3.35) satisfying all the lexical rules in the **rule set** (3.33) under consideration

3.19
identifier
sequence of characters capable of uniquely identifying an **entity** (3.17)

NOTE 1 An identifier is linguistically neutral, with no translation provided.

NOTE 2 An identifier may be of the nature of a composite identifier, i.e. a unique identifier, consisting of two or more identifiers and/or other data elements, whose inter-workings are rule-based and which together serve as a "single" identifier.