AS/NZS ISO/IEC 19788.3:2013
ISO/IEC 19788-3:2011

AS/NZS ISO/IEC 19788.3:2013

Australian/New Zealand Standard™

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

Part 3: Basic application profile

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research.

The objective of this Standard 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.

This Standard is identical with, and has been reproduced from ISO/IEC 19788-3:2011, *Information technology—Learning, education and training—Metadata for learning resources,* Part 3: *Basic application profile.*

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

(a) In the source text 'this part of ISO/IEC 19788' should read 'this Australian/New Zealand Standard'.

(b) 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:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO		AS ISO	
8601	Data elements and interchange formats—Information interchange—Representation of dates and times	8601	Data elements and interchange formats—Information interchange—Representation of dates and times
ISO/IEC		AS/NZS ISO/IEC	
19788	Information technology—Learning, education and training—Metadata for learning resources	19788	Information technology—Learning, education and training—Metadata for learning resources
19788-1	Part 1: Framework	19788.1	Part 1: Framework
19788-2	Part 2: Dublin Core elements	19788.2	Part 2: Dublin Core elements

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

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INTRODUCTION

0.1 Overall purpose of ISO/IEC 19788

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.

ISO/IEC 19788 is modularly structured with all subsequent parts corresponding to a specified set of user requirements for the identification and specification of metadata elements having a particular focus and intended use in the description of a learning resource. This includes categories of metadata elements focused on technical perspectives, pedagogical aspects, availability and intellectual property aspects, bindings, etc.

0.2 Purpose and overview of this part of ISO/IEC 19788

This part of ISO/IEC 19788 provides a basic application profile as a recommended approach to enhance interoperability through an application profile with attributes such as presence type indicator, repeatability indicator and order indicator, applied to the Dublin Core elements specified in ISO/IEC 19788-2. Whenever learning resource descriptions are exchanged across repositories, interoperability issues are raised. For example, processing a query for learning resources in a given format requires that format information be available in all descriptions being searched. Likewise, searching or sorting based on date can only be done when a common format such as ISO 8601 is used in all sets.

This application profile is an ISO/IEC 19788 Type 2[1] standard. It is recommended that it be used as a best practice guide that can be further refined by communities with data elements additions from other authorities or communities, including the *IEEE Standard for Learning Object Metadata* (LOM) [4]. However, there is no obligation for MLR stakeholders to use this application profile.

This application profile provides records of metadata elements promoting best practices based on an international survey[2] of commonly used data elements in an ITLET (information technology for learning, education and training) context. It also reflects the actual practices of both the Dublin Core Metadata Initiative (DCMI) and the *IEEE Standard for Learning Object Metadata* (LOM) [4].

As further Type 1 parts of ISO/IEC 19788 become available, it is likely that future editions of this part of ISO/IEC 19788 will be updated to include additional data element specifications, such as Technical data elements or Educational data elements.

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1 For meaning of a Type 1 MLR standard versus a Type 2 MLR standard, etc., see 13.2 *Categorization of ISO/IEC 19788 Parts* in ISO/IEC 19788-1:2011.

2 *Final Report on the "International LOM Survey"* [17].

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AUSTRALIAN/NEW ZEALAND STANDARD

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

Part 3:
Basic application profile

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.

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 is designed to help implementers with a starting point for adopting ISO/IEC 19788, defining an application profile that specifies, through adding constraints to the use of some data elements, how the ISO/IEC 19788-2 element set can be used.

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, *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, *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

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

ISO/IEC 10646:2011, *Information technology — Universal Coded Character Set (UCS)*

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

ISO/IEC 19788-2:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19788-1 apply.

NOTE For the convenience of the user, the terms and definitions from ISO/IEC 19788-1 that are the most important for the comprehension of this document are given below.

3.1
application profile
defined structured collection of **data element specification**s (3.6) 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.

[ISO/IEC 19788-1:2011, 3.1]

3.2
attribute
characteristic of an object or **entity** (ISO/IEC 19788-1:2011, 3.17)

[ISO/IEC 19788-1:2011, 3.4]

3.3
attribute value
information recorded as the content of an **attribute** (3.2) in a **data element specification** (3.6), **data element group specification** (ISO/IEC 19788-1:2011, 3.13) or **application profile specification** (ISO/IEC 19788-1:2011, 3.3)

[ISO/IEC 19788-1:2011, 3.5]

3.4
data element group
identified, named set of related **data element**s (3.5) and/or **data element group**s (3.4) as described in a **data element group specification** (ISO/IEC 19788-1:2011, 3.13)

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

[ISO/IEC 19788-1:2011, 3.12]

3.5
data element
unit of data described in a **data element specification** (3.6)

[ISO/IEC 19788-1:2011, 3.11]

3.6
data element specification
set of **attribute**s (3.2) and **attribute value** (3.3) rules characterizing a set of **data element**s (3.5)

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

[ISO/IEC 19788-1:2011, 3.14]

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4 Symbols and abbreviations

DC	Dublin Core
DCMI	Dublin Core Metadata Initiative
DEGS	data element group specification
DES	data element specification
DOI	Digital Object Identifier
IEEE	Institute of Electrical and Electronics Engineers
ISAN	International Standard Audiovisual Number
ISBN	International Standard Book Number
ISIN	International Securities Identification Number
ISMN	International Standard Music Number
ISSN	International Standard Serial Number
LOM	Learning Object Metadata
MLR	Metadata for Learning Resources
PRS	predefined rule set
PURL	Persistent Uniform Resource Locator
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
URN	Uniform Resource Name
UUID	Universally Unique IDentifier

5 Specification of the Application profile

The four mandatory attributes for the specification of an application profile are provided in the table below. The definitions and rules of clause 12 *Specification of application profile* stated in ISO/IEC 19788-1:2011 apply.

Application profile specification	
Application profile Identifier (AP_Identifier)	ISO_IEC_19788-3:2011::AP0001
Name (ISO English)	MLR Basic Application Profile
Description	MLR entry level element set, based on Dublin Core
Underlying data element group specification	ISO_IEC_19788-3:2011::DEGS0001

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6 Data element group specifications

6.1 The application profile underlying data element group specification (top level)[3]

Data element group specification	
Identifier (DEGS_Identifier)	ISO_IEC_19788-3:2011::DEGS0001
Name (ISO English)	MLR Basic data element group specification
Description	MLR entry level element set[4] designed to provide basic interoperability among catalogs or repositories

Position	DES_Identifier/ DEGS_Identifier	Name (ISO English)	Presence type indicator	Repeatability indicator	Order indicator	Order semantic
(01)	(02)	(03)	(04)	(05)	(06)	(07)
1	ISO_IEC_19788-2:2011::DES0100	title	conditional C0001	repeatable	unordered	-
2	ISO_IEC_19788-2:2011::DES0200	creator	conditional C0002	repeatable	ordered	entities listed by importance of contributions, primary entity first
3	ISO_IEC_19788-2:2011::DES0300	subject	conditional C0001	repeatable	unordered	-
4	ISO_IEC_19788-3:2011::DES0200	description	conditional C0001	repeatable	unordered	-
5	ISO_IEC_19788-2:2011::DES0500	publisher	conditional C0002	repeatable	unordered	-
6	ISO_IEC_19788-2:2011::DES0600	contributor	conditional C0002	repeatable	ordered	entities listed by importance of contributions, primary entity first
7	ISO_IEC_19788-3:2011::DES0100	date	optional	repeatable	unordered	-
8	ISO_IEC_19788-3:2011::DES0700	type	optional	repeatable	unordered	-
9	ISO_IEC_19788-3:2011::DES0300	format	optional	repeatable	unordered	-
10	ISO_IEC_19788-3:2011::DES0400	identifier	mandatory	repeatable	unordered	-
11	ISO_IEC_19788-3:2011::DES0600	source	optional	repeatable	unordered	-
12	ISO_IEC_19788-3:2011::DES0500	language	optional	repeatable	unordered	-

[3] For the rules governing a data element group specification (DEGS), see clause 11 in ISO/IEC 19788-1:2011 and in particular its subclause 11.4 *Specification of a data element group*.

[4] While this edition of the MLR Basic application profile is based on ISO/IEC 19788-2:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements*, further editions are likely to include data elements from other parts.

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13	ISO_IEC_19788-2:2011::DES1300	relation	optional	repeatable	unordered	-
14	ISO_IEC_19788-2:2011::DES1400	coverage	optional	repeatable	unordered	-
15	ISO_IEC_19788-2:2011::DES1500	rights	mandatory	repeatable	unordered	-

Conditions Table

Code ID	Conditions
C0001	A value must be provided at least for one of these data elements: **title, subject** or **description**.
C0002	A value must be provided at least for one of these data elements: **creator, publisher** or **contributor**.

6.2 Component data element group specifications

N/A

7 Data element specifications from other parts of the MLR standard

7.1 Title (MLR-2/DES0100)

Data element specification	
Identifier	ISO_IEC_19788-2:2011::DES0100
Data element attributes	
Property name	title
Definition	name given to the learning resource
Linguistic indicator	linguistic
Domain	*Learning Resource (ISO_IEC_19788-1:2011::RC0002)*
Range	*literal*
Content value rules	MLR String (ISO_IEC_19788-1:2011::PRS0001)
Refines	-
Example(s)	Example 1 金葉和歌集 (jpn) Example 2 Collection of Golden Leaves (eng)
Note(s)	The set of values of this data element is a subset of the values of the element *title* described in Table 1 of ISO 15836:2009(E) Information and documentation — The Dublin Core metadata element set [15].

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7.2 Creator (MLR-2/DES0200)

Data element specification	
Identifier	ISO_IEC_19788-2:2011::DES0200
Data element attributes	
Property name	creator
Definition	entity primarily responsible for making the learning resource
Linguistic indicator	linguistic
Domain	*Learning Resource (ISO_IEC_19788-1:2011::RC0002)*
Range	*literal*
Content value rules	MLR String (ISO_IEC_19788-1:2011::PRS0001)
Refines	-
Example(s)	John Doe
Note(s)	1. The set of values of this data element is a subset of the values of the element *creator* described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set* [15]. 2. Examples of creator include a person, an organization, or a service. Typically, the name of a creator should be used to indicate the entity.

[R0001] The content value of element instances of this data element specification is the name of a natural person or a legal person.

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