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

Part 1: **Framework**

AMENDMENT 1

Technologies de l'information — Métadonnées pour ressources d'apprentissage —

Partie 1: Charpente

AMENDEMENT 1

Reference number
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Foreword

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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).

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The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

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

Part 1: Framework

AMENDMENT 1

Page 3, replace ISO/IEC 19788-1:2011, subclause 3.16 with

3.16
domain
<data element specification> **resource class** (3.31) whose **resource**s (3.30) may be described by the property related to the **data element specification** (3.14) under consideration

NOTE The information concerning the domain of a data element specification is provided as the value of its attribute “Domain”.

Page 4, replace ISO/IEC 19788-1:2011, subclause 3.28 with

3.28
codomain
<data element specification> **resource class** (3.31) to which the **content value**s (3.10) of the **data element** (3.11) instances of the **data element specification** (3.14) under consideration belong, or set of **literal**s (3.21) comprising the **string** (3.35) representations of the permissible values of the data element instances of the data element specification under consideration

NOTE The information concerning the codomain of a data element specification is provided as the values of its attributes “Codomain” and “Content value rules”.

Page 5, replace ISO/IEC 19788-1:2011, subclause 3.29 with

3.29
refine
<data element specification> has an associated property which is a sub-property of the property associated with

EXAMPLE 1 Property “is son of” refines property “is child of”.

EXAMPLE 2 Property “has mother” refines property “has parent”.

NOTE 1 Data element specification DES1 refines data element specification DES2 if the extension of the property (say p1) related to DES1 is a subset of the extension of the property (say p2) related to DES2. This condition can be expressed as “p1(x,y) implies p2(x,y)”, that is “if x and y are p1-related, then x and y are p2-related”.

NOTE 2 If data element specification DES1 refines data element specification DES2, then the property (or relation) associated with DES1 is said to refine the property (or relation) associated with DES2.

Page 6, in clause 4 replace

MLR-1 ISO/IEC 19788-1:2010(E), *Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework* (this document)

with

MLR-1 ISO/IEC 19788-1:2011(E), *Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework* (this document)

Page 8, in subclause 6.2 replace

• **Range** (data element range)

with

• **Codomain** (data element codomain)

Page 9, delete rule [R0003].

Page 9, in subclause 6.2.2.1, replace

[R0007] Each data element property name assigned to data elements in ISO/IEC 19788 shall be unique (considering all parts of ISO/IEC 19788), although it may have multiple equivalent names in different languages.

with

[R0007] In any language: For all DESs the values of the “Property name” attribute shall be unique across all DESs (from all parts of ISO/IEC 19788, all editions) with the same values for the attributes “Domain” and “Codomain”. Note: Said otherwise: In any given language, for any DES the triple (property name, domain, codomain) associated with the DES constitutes a global (within ISO/IEC 19788) appellation of the DES (the primary global identifier being provided by the DES attribute “Identifier”)

Page 10, replace the title of subclause 6.2.6 with

Data element specification attribute Codomain

Page 10, in subclause 6.2.6, replace

Attribute that serves to specify the **range** of **data element**s obeying this specification.

with

Attribute that serves to specify the **codomain** of **data element**s obeying this specification.

Page 10, replace the title of subclause 6.2.6.1 with

Rule set for the attribute “Codomain”

Page 10, in subclause 6.2.7, replace

When the range of a data element is a set of literals

with

When the codomain of a data element is a set of literals

Page 10, in rule [R0016] replace

Condition: When the range of a data element

with

Condition: When the codomain of a data element

Page 10, replace [R0017] with

[R0017] The value of this attribute is a **rule set**. Rules of the form indicated below are examples. • The codomain of the **data element** is the set of all **literals** denoting values of a given datatype. • The codomain of the data elements is the set of all literals that conform to a datatype provided in ISO/IEC 11404:2007

Page 11, in subclause 6.2.8.1, replace

[R0018] The obligation status of this attribute is **conditional**. Condition: If the data element specification is a refinement of another data element specification, then a value has to be provided for this attribute.

with

[R0018] The obligation status of this attribute is **conditional**. Condition: If the data element specification is a refinement of another data element specification from the ISO/IEC 19788 multipart Standard, then the identifier of that DES has to be provided with this attribute.

Page 12, in subclause 6.3 and 6.4, replace

Range (mandatory)

with

Codomain (mandatory)

Page 12, add the following text and rules below the table, at the end of subclause 6.3:

DES attributes are either essential or non-essential. The essential attributes being those that are essential to capture the “essence” of the DES. Two DESs are considered identical when they have the same values for their essential attributes. Minor changes that do not change the meaning are allowed, that is, they don’t require the creation of a new DES. For DESs (subclause 6.2 and 6.3), the essential attributes are: - Identifier - Property name

- Definition
- Linguistic indicator
- Domain
- Codomain
- Content value rules

The non-essential attributes are:

- Refines
- Example(s)
- Note(s)

Any Type 1 MLR Part or Type 2 MLR Part reusing DESs from other parts can add non-essential attributes to those.

[**R0055**] The value of attribute “Property name” shall be provided in French, English and Russian.

[**R0056**] The value of attribute “Definition” shall be provided in French, English and Russian.

Page 12, in subclause 6.4, replace

Domain (mandatory)	*Learning Resource* *(ISO_IEC_19788-1:2010::RC0002)*

with

Domain (mandatory)	*Learning Resource* (ISO_IEC_19788-1:2011::RC0002)

Page 12, in subclause 6.4, replace

Refines (conditional)	ISO_IEC_19788-2:2010::DES0900

with

Refines (conditional)	ISO_IEC_19788-2:2011::DES0900

Page 13, in subclause 7.1 replace

(3) *contentValue* is the actual information recorded as the content of the data element (its **content value**) that belongs to the **range** of the data element (as given in the data element specification);

with

(3) *contentValue* is the actual information recorded as the content of the data element (its **content value**) that belongs to the **codomain** of the data element (as given in the data element specification);

Page 13, Example 1, subclause 7.1, replace

ISO_IEC_19788-2:2010::DES0300

with

ISO_IEC_19788-2:2011::DES0100

Page 14, Example 2, 1st line of table, replace

ISO_IEC_19788-2:2010::DES0300

with

ISO_IEC_19788-2:2011::DES0100

Page 14, Example 3, 1st line of table, replace

ISO_IEC_19788-2:2010::DES0020

with

http:// standards.iso.org/iso-iec/19788/-2/ed-1/en/clause/5.1/ (or urn:iso:std:iso-iec:19788:-2:ed-1:en:clause:5.1)

Page 14, Example3, transpose, in the table, the Predicate Line and the Subject Line

Page 15, in subclause 8.3, 1st line of table, replace

ISO_IEC_19788-2:2010::RC0004

with

ISO_IEC_19788-99:2099::RC0099

Page 15, in subclause 8.3, 4th line of table, replace

ISO_IEC_19788-2:2010::RC0001 (*Learning Resource*)

with

ISO_IEC_19788-1:2011::RC0002 (*Learning Resource*)

Page 15, in subclause 8.4.1 replace

Identifier ISO_IEC_19788-1:2010::RC0001

with

Identifier ISO_IEC_19788-1:2011::RC0001

Page 15, in subclause 8.4.2 replace

Identifier ISO_IEC_19788-1:2010::RC0002

with

Identifier ISO_IEC_19788-1:2011::RC0002

Page 15, in subclause 8.4.2, replace

SubclassOf ISO_IEC_19788-1:2010::RC0001 (Resource)

with

SubclassOf ISO_IEC_19788-1:2011::RC0001 (Resource)

Page 16, in subclause 8.4.3, replace

Identifier ISO_IEC_19788-1:2010::RC0003

with

Identifier ISO_IEC_19788-1:2011::RC0003

Page 16, in subclause 8.4.3 replace

SubclassOf ISO_IEC_19788-1:2010::RC0001 (Resource)

with

SubclassOf ISO_IEC_19788-1:2011::RC0001 (Resource)

Page 20, delete rule [R0029]

Page 23, in the table (position 1, column 2) replace

ISO_IEC_19788-1:2010::DESO100

with

ISO_IEC_19788-1:2011::DES0100

Page 25, delete rule [R0040]

Page 28, in the Table of Contents template (ISO/IEC 19788-1:2010) add, before the line containing “X Clause title”, the following:

8. Predefined Data Element Group Specification (DEGS) 8.1 Data element group specification <DEGS1> (one subclause per data element group specification) 8.2 Data element group specification <DEGS2> …

Page 28, at the end of ISO/IEC 19788-1:2010, subclause 13.3 (outside of the table), add the following rules:

[**R0059**] The data element group specifications to be included in the Table of Contents, clause 8 shall not contain embedded DEGS. That is, only lines containing DES identifiers are allowed in that clause 8 DEGS. [**R0060**] The use of DEGS is optional and not encouraged. If possible, use resource classes instead of DEGS.

Page 33, in the table, replace row

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).	**domaine**	<élément de donnée> **classe de ressources** (3.31) dont les **ressource**s (3.30) sont décrites par l'**élément de donnée** (3.11) sous considération NOTE D'importance pour la norme ISO/CEI 19788 est la classe de ressources *Ressource Pédagogique* (l'ensemble de toutes les ressources pédagogiques).

with

3.16	**domain**	<data element specification> **resource class** (3.31) whose **resource**s (3.30) may be described by the property related to the **data element specification** (3.14) under consideration NOTE The information concerning the domain of a data element specification is provided as the value of its attribute "Domain".	**domaine**	<spécification d'un élément de donnée> **classe de ressources** (3.31) dont les **ressource**s (3.30) peuvent être décrites par la propriété associée à la **spécification d'élément de donnée** (3.14) sous considération NOTE L'information concernant le domaine d'une spécification d'élément de donnée est fournie par la valeur de son attribut « Domaine »

Page 36, in the table, replace row

3.28	**range**	<data element> **resource class** (3.31) to which the **content value**s (3.10) of the **data element** (3.11) belong, or set of **literal**s (3.21) comprising the string representations of the permissible values of the data element under consideration	**image**	<élément de donnée> soit une **classe de ressource**s (3.31) à laquelle les **valeurs** (3.10) de l'**élément de donné**e (3.11) appartiennent soit un ensemble de **littéraux (**3.21**)** (comprenant les chaînes de caractères représentant les valeurs permises pour l'élément de donnée sous considération)

with

3.28	**codomain**	<data element specification**> resource class** (3.31) to which the **content value**s (3.10) of the **data element** (3.11) instances of the **data element specification** (3.14) under consideration belong, or set of **literal**s (3.21) comprising the **string** (3.35) representations of the permissible values of the data element instances of the data element specification under consideration NOTE The information concerning the codomain of a data element specification is provided as the values of its attributes "Codomain" and "Content value rules"	**codomaine**	<spécification d'un élément de donnée> **classe de ressources** (3.31) contenant les **valeur**s (3.10) des **élément**s **de donnée**s (3.11) instances de la **spécification d'élément de donnée** (3.14) sous considération, ou un ensemble **de littéraux** (3.21) comprenant les **chaînes de caractères** (3.35) représentant les valeurs permises pour les éléments de donnée instance de la spécification d'élément de donnée sous considération NOTE L'information concernant le codomaine d'une spécification d'élément de donnée est fournie par les valeurs de ses attributs « Codomaine » et « Règles de valeurs du contenu »

Page 36, in the table, replace row

3.29	**refine**	<data element specification> have an associated property which is a sub-property of the property associated with NOTE 1 This implies that the value of the domain attribute of the first data element specification is identical to or a proper subset of the value of the domain attribute of the second data element specification and that the value of the codomain attribute of the first data element specification is identical to or a proper subset of the value of the codomain attribute of the second data element specification. NOTE 2 Data element instances of the first data element specification are said to refine data element instances of the second data element specification. EXAMPLE 1 Property "is son of" refines property "is child of". EXAMPLE 2 Property "has mother" refines property "has parent".	**raffiner**	une spécification d'**élément de donnée** (3.14) raffine une seconde spécification d'élément de donnée si la propriété associée à la spécification du premier élément de donnée est une sous- propriété de la propriété associée à la seconde spécification d'élément de donnée NOTE 1 Ceci implique que la valeur de l'attribut domaine de la spécification du premier élément de donnée est identique ou est un sous-ensemble propre de la valeur de l'attribut domaine de la spécification du deuxième élément de donnée et que la valeur de l'attribut codomaine de la spécification du premier élément de donnée est identique ou est un sous-ensemble propre de la valeur de l'attribut codomaine de la spécification du deuxième élément de donnée. NOTE 2 Les éléments de données, instances de la première spécification d'éléments de données sont dits raffiner les éléments de données instances de la seconde spécification d'éléments de données. EXEMPLE 1 La propriété "est fils de" raffine la propriété "est enfant de". EXEMPLE 2 La propriété "à pour mère" raffine la propriété "à pour parent".

with

3.29	**refine**	<data element specification> has an associated property which is a sub-property of the property associated with EXAMPLE 1 Property "is son of" refines property "is child of". EXAMPLE 2 Property "has mother" refines property "has	**raffiner**	<spécification d'un élément de données> une spécification d'**élément de donnée** (3.14) raffine une seconde spécification d'élément de donnée si la propriété associée à la spécification du premier élément de donnée est une sous- propriété de la propriété associée à la seconde spécification d'élément de donnée

		parent". NOTE 1 Data element specification DES1 refines data element specification DES2 if the extension of the property (say p1) related to DES1 is a subset of the extension of the property (say p2) related to DES2. This condition can be expressed as “p1(x,y) implies p2(x,y)”, that is “if x and y are p1-related, then x and y are p2- related”. NOTE 2 If data element specification DES1 refines data element specification DES2, then the property (or relation) associated with DES1 is said to refine the property (or relation) associated with DES2.		EXEMPLE 1 La propriété "est fils de" raffine la propriété "est enfant de". EXEMPLE 2 La propriété "à pour mère" raffine la propriété "à pour parent". NOTE 1 Une spécification d’élément de données DES1 raffine une spécification d’élément de données DES2 si l’extension de la propriété p1 correspondant à DES1 est un sous-ensemble de l’extension de la propriété p2 correspondant à DES2. Cette condition peut aussi être exprimée de la façon suivante : « p1(x,y) implique p2(x,y) », c’est-à-dire que si x et y sont reliés par p1, alors ils le sont aussi par p2. NOTE 2 Si une spécification d’élément de données DES1 raffine une spécification d’élément de données DES2, alors la propriété (ou la relation) correspondant à DES1 est dite raffiner la propriété (ou la relation) correspondant à DES2.

Page 41, in the table, replace row

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).	域	〈数据元素〉当中的资源（3.30）都是由可以考虑到的数据元素（3.11）描述的资源类（3.31） 注：ISO/IEC 19788 标准的一个核心资源类是Learning Resource（所有学习资源的集合）

with

3.16	**domain**	<data element specification> **resource class** (3.31) whose **resource**s (3.30) may be described by the property related to the **data element specification** (3.14) under consideration NOTE The information concerning the domain of a data element specification is provided	域	<数据元素规范>描述的是一种资源类（3.31），其资源（3.30）可以由当前的数据元素规范（3.14）的相关属性描述。 注：一个数据元素规范的域相关信息的值是由属性“域”提供的。

		as the value of its attribute “Domain”.		

Page 43, in the table, replace row

3.28	**range**	<data element>□**resource class** (3.31) to which the **content value**s (3.10) of the **data element** (3.11) belong, or set of **literal**s (3.21) comprising the string representations of the permissible values of the data element under consideration	**值域**	代表**数据元素**（3.11）的**内容值**（3.10）所属的**资源类**（3.31）或者**文字**的集合（3.21）,代表当前数据元素允许值的字符串

with

3.28	**codomain**	<data element specification> **resource class** (3.31) to which the **content value**s (3.10) of the **data element** (3.11) instances of the **data element specification** (3.14) under consideration belong, or set of **literal**s (3.21) comprising the **string** (3.35) representations of the permissible values of the data element instances of the data element specification under consideration NOTE The information concerning the codomain of a data element specification is provided as the values of its attributes “Codomain” and “Content value rules”	对应域	<数据元素规范>描述的是一种资源类（3.31），代表符合该数据元素规范（3.14）规定的数据元素实例的内容值（3.10）或字符（3.21）串的表示值集合。 注：数据元素规范中关于取值范围的信息由“对应域”和“取值范围”属性提供。