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Dr. Timothy Schoechle, Secretary, ISO/IEC JTC 1/SC 32
Farance Inc *, 3066 Sixth Street, Boulder, CO, United States of America
Telephone: +1 303-443-5490; E-mail: Timothy@Schoechle.org
available from the JTC 1/SC 32 WebSite http://www.jtc1sc32.org/
*Farance Inc. administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI

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Information technology — Metadata for technical standards and specification documents

Warning

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 24706 was prepared by Technical Committee ISO/IEC JTC1, *Information Technology*, Subcommittee SC32, *Data Management and Interchange*.

Introduction

This International Standard, ISO/IEC 24707 - *Metadata for technical standards and specification documents* - addresses the metadata needed to describe standards and other technical documents. Of course, no "meta" description will substitute for the document itself, the metadata data elements defined here serve as a substitute.

Metadata is often defined as data that describes oher data, i.e., descriptions of other data. Here, we take a more liberal approach to the concept by saying that metadata is data used to describe resources. In this more general case, a resource may be data, documents, museum pieces, or any class of objects whose descriptions are required for some purpose.

The purpose of ISO/IEC 24706 is to provide standards developers and users interested in finding relevant standards a tool that provides an overview of each. Overviews are required since many standards are not freely available to the public. ISO/IEC 24706 specifies data elements that include the scope, normative references, and terms and definitions in technical documents.

Another potential problem is that proposed standards are reinventions of previously published work. ISO/IEC 24706 provides the means for standards developers to search for relevant standards before embarking on new projects. If a project exists that answers many of the technical quesitons before a committee, then they should develop a new project building on the provisions that exist in the older one. Time, redundancy, and overhead are thus reduced.

ISO/IEC 24706 contains a list of relevant data elements for describing standards. It does not specify any implementation details. This is purposeful. For interoperability, an implementation of this standard must conform to it. However, there are many ways to implement this, and the standard is agnostic in this regard.

Editors Note - This section needs some expansion. A discussion of registration and registries is required.

Information technology — Metadata for technical standards and specification documents

1 Scope

This International Standard specifies a set of data elements needed to describe and register technical standards or other specification documents. The set of data elements and relationships is known as a Standards Registry.

The data elements are divided into two main categories: those needed to describe the contents of a standard or document; and those needed to register a standard or document in a Standards Registry. The data elements are described via provisions rather than in some Information Technology modeling paradigm. As a consequence of this, no implementation details are implied.

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/IEC Guide 2, *Standardization and related activities — General vocabulary*

ISO 704:1999 *Terminology work — Principles and methods*

ISO 1087-1:2000, *Terminology work – Vocabulary* – Part 1: *Theory and application*

ISO/IEC 11179 (all parts), *Information technology — Metadata registries (MDR)*

ISO/IEC CD 19773-11:2005, *Information technology — Metadata modules (MM),* Part 11: *Contact information*

3 Terms and definitions

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

3.1
concept
unit of knowledge created by a unique combination of characteristics

[ISO 1087-1:2000, 3.2.1]

3.2
concept system
set of **concept**s structured according to the relations among them

[ISO 1087-1:2000, 3.2.11]

3.3
designation
representation of a **concept** by a sign which denotes it

[ISO 1087-1:2000, 3.4.1]

3.4
data element
DE
unit of **data** for which the **definition**, identification, representation and **permissible value**s are specified by means of a set of **attribute**s

[ISO/IEC 11179-1:2004, 3.3.8]

3.5
metadata
data that defines and describes a resource

3.4
standards development orgainzation
SDO
organization responsible for developing standards

4 Metadata

For the purposes of this International Standard, metadata is defined as data that defines and describes a resource. An essential characteristic is that it is data. This means that metadata are data, and data become metadata when they are used in this way. This happens under particular circumstances, for particular purposes, and with certain perspectives, as no data are always metadata. The set of circumstances, purposes, or perspectives for which some data are used as metadata is called the context. So, metadata are data about a resource in some context.

Since metadata are data, then metadata are stored and managed in any way data can and organized through the use of a model. Some models are very application specific, and others are more general. The model presented and described here is general. It is presented as a set of provisions. A conformant application (Clause

5 Data elements and relationships for standards content

This clause contains a series of subclauses. Each contains a description of a data element used for describing the content of a standard or technical specification.

5.1 Designation

An unambiguous identifier for the standard determined by the SDO for use by the public.

Datatype: character string

Obligation: mandatory

Occurrence: one or more

Example: ISO/IEC 24706

Note: Some standards are known by more than one designation, because they fall under the purview of more than one SDO.

5.2 Title

Name by which the standard is formally known.

Datatype: character string

Obligation: mandatory

Occurrence: one

Example: Metadata for technical standards and specification documents

5.3 Introduction

The Introduction contained in the standard.

Datatype: reference

Note: The reference might be a URL (Uniform Resource Locator) to a document containing the relevant text.

Obligation: optional

Occurrence: one

5.4 Contents

The table of contents contained in the standard.

Datatype: reference

Note: The reference might be a URL (Uniform Resource Locator) to a document containing the relevant text.

Obligation: mandatory

Occurrence: one

5.5 Scope

The scope contained in the standard.

Datatype: reference

Note: The reference might be a URL (Uniform Resource Locator) to a document containing the relevant text.

Obligation: mandatory

Occurrence: one

5.6 Normative references

References to other standards.

Datatype: reference

Note: The reference is to another standard described in this system.

Obligation: optional

Occurrence: one or more

5.7 Informative references

References to other resources.

Datatype: reference

Note: The reference is to another resource, such as books, periodicals, documents, or other standards.

Obligation: optional

Occurrence: one or more

5.8 Definitions

Definition of a term used in the standard.

Note 1: Sometimes this definition already exists in the system, i.e., it is the defintion of the same or another term used in another standard. ISO and IEC standards contain a reference to terms and definitions used in other standards.

Example: [ISO/IEC 11179-1:2004, 3.3.8]

Note 2: This data element corresponds to a concept in the terminological sense. One represents a concept through its definition.

Datatype: character string

Obligation: optional

Occurrence: one or more

Example: unit of data for which the definition, identification, representation and permissible values are specified by means of a set of attributes (see clause 3.4)

5.9 Terms

Term used and defined in a standard.

Note: Sometimes this term already exists in the system, though it may not have the same definition as any other occurence.

Datatype: character string

Obligation: optional

Occurrence: one or more

Example: data element or DE

5.10 Term reference

Reference from Term to its Definition.

Note: Sometimes a term is a synonym for another term. Linking a terms to its definition allows one to find all syonyms.

Datatype: reference

Obligation: optional

Occurrence: one

5.11 SDO name

Name of the SDO under which the standard is being developed.

Note: Sometimes there are more than one relevant SDO.

Datatype: character string

Obligation: mandatory

Occurrence: one or more

Example: ISO and IEC

5.12 SDO committee

Name of the SDO technical committee under which the standard is being developed.

Note: Even though there is more than one relevant SDO, there is one technical committee responsible for the standard.

Datatype: character string

Obligation: mandatory

Occurrence: one

Example: ISO/IEC JTC1 / SC32 / WG2

5.13 SDO contact

Contact information for the technical committee under the SDO responsible for the standard.

Datatype: See CD ISO/IEC 19773-11

Obligation: mandatory

Occurrence: one or more

5.14 Project editors

Contact information for the editors of the project.

Datatype: Character string

Obligation: mandatory

Occurrence: one or more

5.15 Current status

Current document development status of the standard.

Datatype: character string

Obligation: mandatory

Occurrence: one

Example: Preparatory stage

5.16 Date - most rcent action

Date the document achieved Current Status.

Datatype: date

Obligation: mandatory

Occurrence: one

Example: 2005-03-30

5.17 Replaces

Standard this standard replaces.

Datatype: reference

Note: This is a reference to other described standards the current standard replaces.

Obligation: optional

Occurrence: one or more

5.18 Format

Formats the standard is available in.

Datatype: character string

Obligation: optional

Occurrence: one or more

Example: Paper, MS-Word™, PDF™, HTML, or others

5.19 Language

Language the standard is available in.

Datatype: character string

Obligation: optional

Occurrence: one or more

Example: English, French, Russian, or other

5.20 Rights management

Information on rights held in and over the standard.

Datatype: reference

Note: Refernce to a rights statement. If absent, so rights may be assumed.

Obligation: optional

Occurrence: one or more

6 Data elements and relationships for registration

This clause contains a series of subclauses. Each contains a description of a data element used for describing the registration of a standard or technical specification.

6.1 Identifier

An identifier for the standard determined by the registration authority.

Datatype: character string

Obligation: mandatory

Occurrence: one

Example: ISO/IEC 11179 registration identifier for data elements

6.2 Identifier convention

Documentation of the rules used by the registration authority for specifying identifiers.

Note: This is applicable to describing how to form the content for the elements described in subclauses 5.1 and 6.1.

Datatype: document

Obligation: optional

Occurrence: one or more

Example: Format given in ISO/IEC 11179-5 (Ed 3) draft proposal for designaiton conventions

6.3 Submitter

Contact information for the person or organization responsible for submitting the standard or technical specification to the registry.

Datatype: Character string

Obligation: mandatory

Occurrence: one or more

6.4 Date of submission

Date the standard or technical specification was submitted to the registration authority for registration.

Datatype: Date

Obligation: mandatory

Occurrence: one

6.5 Date of registration

Date the standard or technical specification was registered by the registration authority.

Datatype: Date

Obligation: mandatory

Occurrence: one

6.6 Registration status

Status associated with the registration - one of the following values: Submitted, Under review, Established.

Note: The statuses shall be interpreted in the following way: Submitted means information about the document was received; Under review means the information is being evaluated; Established means the information is complete.

Datatype: Character string

Obligation: mandatory

Occurrence: one

7 Conformance

Editor's Note - Equivalent wording as contained in ISO/IEC 11179-3 Clause 6 (conformance) will be used and modified as appropriate. I want to keep the ideas of strictly conformant versus conformant implementations.

Bibliography