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Information and documentation — The Dublin Core metadata element set

Information et documentation — Éléments fondamentaux de métadonnées appelés

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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 3.

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.

ISO 15836 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 4, *Technical interoperability*.

Introduction

The Dublin Core Metadata Initiative (DCMI) began in 1995 with an invitational workshop in Dublin, Ohio that brought together librarians, digital library researchers, content providers, and text markup experts to improve discovery standards for information resources. The original Dublin Core emerged as a small set of descriptors that quickly drew global interest from a wide variety of information providers in the arts, sciences, education, business, and government sectors.

Since the original workshop there has been steadily growing interest in resource descriptions that are easy to create and that almost anyone can understand. The potential to increase visibility of resources in a collection across sectors and subject domains, and to do so at low cost, is broadly appealing. Services needing semantically rich descriptions would continue to provide them, but would attract cross-disciplinary discovery by also providing universally understandable descriptions common across disciplines. The digital tourist metaphor is apt. Internet travellers seeking information in foreign disciplines can use the Dublin Core's constrained vocabulary to obtain basic guidance in a language that they understand. Full accessibility to the culture and its services still requires mastery of the local vocabulary and environment, but a set of simple facts inscribed in Dublin Core can bring to the tourist's attention a foreign information portal that might otherwise have escaped notice.

The interest in cross-domain discovery fueled growing participation in a series of subsequent DCMI workshops. The Dublin Core metadata element set described here is a set of 15 descriptors that resulted from this effort in interdisciplinary and international consensus building. The Dublin Core now exists in over 20 translations, has been adopted by CEN/ISSS (European Committee for Standardization / Information Society Standardization System), and is documented in two Internet RFCs (Requests for Comments). It also has official standing within the WWW Consortium and the Z39.50 standard. Dublin Core metadata has been approved as a U.S. National Standard (ANSI/NISO Z39.85), formally endorsed by over seven governments for promoting discovery of government information in electronic form, and adopted by a number of supranational agencies such as the World Health Organization (WHO). Numerous community-specific metadata initiatives in library, archival, educational, and governmental applications are using the Dublin Core as their basis.

The Dublin Core is not intended to displace any other metadata standard. Rather it is intended to co-exist — often in the same resource description — with metadata standards that offer other semantics. It is fully expected that descriptive records will contain a mix of elements drawn from various metadata standards, both simple and complex. Examples of this kind of mixing and of HTML encoding of Dublin Core in general are given in RFC 2731 [RFC2731].

The simplicity of Dublin Core can be both a strength and a weakness. Simplicity lowers the cost of creating metadata and promotes interoperability. On the other hand, simplicity does not accommodate the semantic and functional richness supported by complex metadata schemes. In effect, the Dublin Core element set trades richness for wide visibility. The design of Dublin Core mitigates this loss by encouraging the use of richer metadata schemes in combination with Dublin Core. Richer schemes can also be mapped to Dublin Core for export or for cross-system searching. Conversely, simple Dublin Core records can be used as a starting point for the creation of more complex descriptions.

Information and documentation — The Dublin Core metadata element set

1 Scope

The Dublin Core metadata element set is a standard for cross-domain information resource description. Here an information resource is defined to be anything that has identity; this is the definition used in Internet RFC 2396, “Uniform Resource Identifiers (URI): Generic Syntax,” by Tim Berners-Lee et al. For Dublin Core applications a resource will typically be an electronic document.

This standard is for the element set only, which is generally used in the context of a specific project or application. Local or community based requirements and policies may impose additional restrictions, rules, and interpretations. It is not the purpose of this standard to define the detailed criteria by which the element set will be used with specific projects and applications. This standard supersedes Internet RFC 2413, which was the first published version of the Dublin Core.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

The abbreviation in brackets at the end of each citation is how the document is referenced in the text of the standard.

DCMI Type Vocabulary. DCMI Recommendation, 11 July 2000.
<<http://dublincore.org/documents/dcmi-type-vocabulary/>> [DCT]

ISO 3166 — *Codes for the representation of names of countries*.
<<http://www.din.de/gremien/nas/nabd/iso3166ma/>> [ISO3166]

ISO 639-2 — *Codes for the representation of names of languages, Alpha-3 code*.
<<http://www.loc.gov/standards/iso639-2/langhome.html>> [ISO639]

Internet Media Types.
<<http://www.isi.edu/in-notes/iana/assignments/media-types/media-types>> [MIME]

Tags for the Identification of Languages, Internet RFC 3066.
<<http://www.ietf.org/rfc/rfc3066.txt>> [RFC3066]

Uniform Resource Identifiers (URI): Generic Syntax, Internet RFC 2396.
<<http://www.ietf.org/rfc/rfc2396.txt>> [RFC2396]

Dublin Core Metadata for Resource Discovery. Internet RFC 2413.
<<http://www.ietf.org/rfc/rfc2413.txt>> [RFC2413]

Encoding Dublin Core Metadata in HTML, Internet RFC 2731.
<<http://www.ietf.org/rfc/rfc2731.txt>> [RFC2731]

Getty Thesaurus of Geographic Names.
<<http://www.getty.edu/research/tools/vocabulary/tgn/index.html>> [TGN]

Date and Time Formats, W3C Note. <<http://www.w3.org/TR/NOTE-datetime>> [W3CDTF]

Extensible Markup Language. <<http://www.w3.org/TR/REC-xml>> [XML]

3 Terms and definitions

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

3.1

DCMI — Dublin Core Metadata Initiative

the maintenance agency for the Dublin Core

3.2

Information resource

anything that has identity (the same definition as in Internet RFC 2396)

3.3

Lifecycle of an information resource

a sequence of events that mark the development and use of an information resource. Some examples of events in a lifecycle are: Conception of an invention, Creation of a draft, Revision of an article, Publication of a book, Acquisition by a library, Transcription to magnetic disk, Migration to optical storage, Translation into English, and Derivation of a new work (e.g., a movie)

4 The Element Set

In the element descriptions below, each element has a descriptive label intended to convey a common semantic understanding of the element, as well as a unique, machine-understandable, single-word name intended to make the syntactic specification of elements simpler for encoding schemes.

Although some environments, such as HTML, are not case-sensitive, it is recommended best practice always to adhere to the case conventions in the element names given below to avoid conflicts in the event that the metadata is subsequently extracted or converted to a case-sensitive environment, such as XML (Extensible Markup Language) [XML].

Each element is optional and repeatable. Metadata elements may appear in any order. The ordering of multiple occurrences of the same element (e.g., Creator) may have a significance intended by the provider, but ordering is not guaranteed to be preserved in every system.

To promote global interoperability, a number of the element descriptions suggest a controlled vocabulary for the respective element values. It is assumed that other controlled vocabularies will be developed for interoperability within certain local domains.

5 The Elements

5.1 Title

Element Name: Title

Label: Title

Definition: A name given to the resource.

Comment: Typically, Title will be a name by which the resource is formally known.

5.2 Creator

Element Name: Creator

Label: Creator

Definition: An entity primarily responsible for making the content of the resource.

Comment: Examples of Creator include a person, an organization, or a service. Typically, the name of a Creator should be used to indicate the entity.

5.3 Subject

Element Name: Subject

Label: Subject and Keywords

Definition: A topic of the content of the resource.

Comment: Typically, Subject will be expressed as keywords, key phrases, or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.

5.4 Description

Element Name: Description

Label: Description

Definition: An account of the content of the resource.

Comment: Examples of Description include, but are not limited to, an abstract, table of contents, reference to a graphical representation of content, or free-text account of the content.

5.5 Publisher

Element Name: Publisher

Label: Publisher

Definition: An entity responsible for making the resource available.

Comment: Examples of Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.

5.6 Contributor

Element Name: Contributor

Label: Contributor

Definition: An entity responsible for making contributions to the content of the resource.

Comment: Examples of Contributor include a person, an organization, or a service. Typically, the name of a Contributor should be used to indicate the entity.

5.7 Date

Element Name: Date

Label: Date

Definition: A date of an event in the lifecycle of the resource.

Comment: Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and includes (among others) dates of the form YYYY-MM-DD.

5.8 Type

Element Name: Type

Label: Resource Type

Definition: The nature or genre of the content of the resource.

Comment: Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMI Type Vocabulary [DCT]). To describe the physical or digital manifestation of the resource, use the Format element.

5.9 Format

Element Name: Format

Label: Format

Definition: The physical or digital manifestation of the resource.

Comment: Typically, Format will include the media-type or dimensions of the resource. Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource. Examples of dimensions include size and duration. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).

5.10 Identifier

Element Name: Identifier

Label: Resource Identifier

Definition: An unambiguous reference to the resource within a given context.

Comment: Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Formal identification systems include but are not limited to the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL)), the Digital Object Identifier (DOI), and the International Standard Book Number (ISBN).

5.11 Source

Element Name: Source

Label: Source

Definition: A reference to a resource from which the present resource is derived.

Comment: The present resource may be derived from the Source resource in whole or in part. Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system.

5.12 Language

Element Name: Language

Label: Language

Definition: A language of the intellectual content of the resource.

Comment: Recommended best practice is to use RFC 3066 [RFC3066], which, in conjunction with ISO 639 [ISO639], defines two- and three-letter primary language tags with optional subtags. Examples include “en” or “eng” for English, “akk” for Akkadian, and “en-GB” for English used in the United Kingdom.

5.13 Relation

Element Name: Relation

Label: Relation

Definition: A reference to a related resource.

Comment: Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system.

5.14 Coverage

Element Name: Coverage

Label: Coverage

Definition: The extent or scope of the content of the resource.

Comment: Typically, Coverage will include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range), or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and to use, where appropriate, named places or time periods in preference to numeric identifiers such as sets of coordinates or date ranges.

5.15 Rights

Element Name: Rights

Label: Rights Management

Definition: Information about rights held in and over the resource.

Comment: Typically, Rights will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the Rights element is absent, no assumptions may be made about any rights held in or over the resource.

Annex A (informative)

Further Reading

Further information about the Dublin Core metadata element set is available at the URL:

<http://dublincore.org/>

This web site contains information about workshops, reports, working group papers, projects, and new developments concerning the Dublin Core Metadata Initiative (DCMI).

Annex B
(informative)

Maintenance Agency

The Dublin Core Metadata Initiative (DCMI) is responsible for the development, standardization and promotion of the Dublin Core metadata element set. Information on DCMI is available at the URL:

<http://dublincore.org/>