
Dublin Core Metadata

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What Is Metadata?

Metadata describes an information resource. The term *meta* derives from the Greek. It means "denoting a nature of a higher order or more fundamental kind," such as *metalanguage* or *metatheory*. *Metadata*, then, is data about other data.

A metadata record consists of a set of attributes, or elements, necessary to describe a resource. For example, a metadata system common in libraries, the library catalog, contains a set of metadata records with elements that describe a book or other library item: author, title, date of creation or publication, subject coverage, and the call number specifying location of the item on the shelf.

The linkage between a metadata record and the resource it describes may take one of two forms:

- the metadata may be embedded in the resource itself, as in the case of webpages containing HTML metadata in the header;
- elements may be contained in a record separate from the item, as in the case of the library's catalog record.

The association of standardized descriptive metadata with objects has the potential for substantially improving resource discovery capabilities by enabling field-based (e.g., author, title) searches, permitting indexing of non-textual objects, and allowing access to the surrogate content that is distinct from access to the content of the resource itself.

What is Dublin Core?

The Dublin Core metadata standard is a simple yet effective element set for describing a wide range of networked resources. The Dublin Core standard comprises fifteen elements, the semantics of which have been established through consensus by an international, cross-disciplinary group of professionals from the scholarly fields of librarianship, information science, text encoding, museum and archive management, among others.

Dublin Core has as its goals the following characteristics:

- *Simplicity of creation and maintenance*

The Dublin Core element set has been kept as small and simple as possible to allow a non-specialist to create simple descriptive records for information resources easily and inexpensively, while providing for effective retrieval of those resources in the networked environment.

- *Commonly understood semantics*

Discovery of information across the vast commons of the Internet is hindered by differences in terminology and descriptive practices from one field of knowledge to the next. The Dublin Core can help the digital tourist - a non-specialist searcher --

find his or her way by supporting a common set of elements, the semantics of which are universally understood and supported. For example, scientists concerned with locating articles by a particular author, and art scholars interested in works by a particular artist, can agree on the importance of a CREATOR element. Convergence on a common, if slightly more generic element set, increases the visibility and accessibility of all resources, both within a given discipline and beyond.

- *International scope*

Although the specific linguistic challenges of the Web have not been directly addressed by the Dublin Core development community, the involvement of representatives from almost every continent has ensured that the development of the standard considers the multilingual and multicultural nature of the electronic information universe.

- *Extensibility*

While balancing the needs for simplicity in describing digital resources with the need for precise retrieval, Dublin Core developers have recognized the importance of providing a mechanism for extending the DC element set for additional discovery needs. Other communities of metadata experts will create and administer additional metadata sets. Metadata elements from these sets could be linked with Dublin Core metadata to meet the need for extensibility. This model allows different communities to use the DC elements for core descriptive information which will be usable across the Internet, while allowing domain specific additions which make sense within a more limited arena.

The 15 Dublin Core Elements

This section lists each Core element by its full name and label. For each element there is a reference description (taken from the RFC) and there are guidelines to assist in creating metadata content, whether it is done from scratch or by converting an existing record in another format.

In the following table, you can see that some elements relate to the content of the item, some to the item as intellectual property, still others to the particular instantiation, or version, of the item.

Content	Intellectual Property	Instantiation
Title	Creator	Date
Description	Contributor	Format
Subject [keyword]	Publisher	Identifier
Type	Rights	Language
Relations		
Source		
Coverage		

In the element descriptions below, a formal single-word label makes 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 converted to a case-sensitive environment, such as XML/RDF. Some information may appear to belong in more than one metadata element. While there will normally be a clear preferred choice, there is potential semantic overlap between some elements. Consequently, some judgment is required from the person assigning the metadata.

Required DC elements: TITLE, SUBJECT(s), DESCRIPTION, DATE(s) (creation, modified)
Highly desirable elements: CREATOR, PUBLISHER, TYPE, FORMAT, LANGUAGE

TITLE

Element description: The name given to the resource by the CREATOR or PUBLISHER.

Guidelines for creation of content:

Omit beginning articles.

Examples: [note - appropriate coding will be automatically provided upon publishing]

```
<meta name="DC.Title" CONTENT="Pilot's Guide to Aircraft Insurance">  
<meta name="DC.Title" CONTENT="Sound of Music">  
<meta name="DC.Title" CONTENT="Green on Greens">  
<meta name="DC.Title" CONTENT="AOPA's Tips on Buying Used Aircraft">
```

SUBJECT and KEYWORDS

Element description: The topic of the resource. Typically, the subject will be expressed as nouns or noun phrases that describe the subject or content of the resource. Best practice is to select a term from a controlled vocabulary.

Guidelines for creation of content:

Select subject terms from either the TITLE or DESCRIPTION information. If the subject of the item is a person or an organization, use the same form of the name as you would if the person or organization were a CREATOR, but do not repeat the name in the CREATOR element.

For DC SUBJECT keywords (uncontrolled vocabulary), choose the most significant and unique terms, avoiding those too general to describe a particular item.

Example:

```
<meta name="DC.Subject" content="web services">
```

For DC SUBJECT element from controlled vocabulary, choose 3-5 precise terms.

Example:

```
<meta name="DC.Subject" content="Environmental research - Minnesota">
```

DESCRIPTION

Element description: A textual description of the content of the resource, including abstracts in the case of document-like objects or content descriptions in the case of visual resources.

Guidelines for creation of content:

Since the description field is a potentially rich source of indexable vocabulary, care should be taken to provide this element when possible. Some metadata collections could include content descriptions (spectral analysis of a visual resource, for example) that current network systems may not be able to embed. In such a case, this field might contain a link to a description rather than the description itself.

Descriptive information can be taken from the item itself if there is no abstract or other structured description available. If a description cannot be found in the introductory or front matter, or in the first few paragraphs of a page, it may be created by the metadata provider. A DESCRIPTION should usually be limited to one or two concise sentences. Include important keywords, not necessarily terms from the thesaurus. Look at the title of the page as well as the entire page to get the sense of its purpose.

Example:

```
<meta name="DC.Description" CONTENT="Illustrated guide to airport markings and lighting signals, with particular reference to SMGCS (Surface Movement Guidance and Control System) for airports with low visibility conditions.">
```

DATE

Element Description: A date associated with the creation or availability of the resource. Such a date is not to be confused with one belonging to the COVERAGE element, which would be associated with the resource only insofar as the intellectual content is somehow about that date. Recommended best practice is defined in a profile of ISO 8601 [Date and Time Formats (based on ISO 8601), W3C Technical Note <http://www.w3.org/TR/NOTE-datetime>] that includes (among others) dates of the forms YYYY and YYYY-MM-DD. In this scheme, the date 1994-11-05 corresponds to November 5, 1994.

Guidelines for content creation:

Dates on the page have top priority. If there is both a creation date and last modified date, put both on the record, with appropriate modifiers. If there is only one of these dates, use it only.

Examples (shown in html):

```
<meta name="DC.Date.Creation" scheme="ISO 8601" content="1997-11-20">  
<meta name="DC.Date.Modified" scheme="ISO 8601" content="1998-06-10">
```

If there is a copyright date of a year only, use the CREATION modifier with double zeroes for the month and day.

Example:

```
<meta name="DC.Date.Creation" scheme="ISO 8601" content="1998-00-00">
```

Schemes:

ISO 8601 (yyyy-mm-dd) is the preferred DC form

Modifiers:

Creation

Modified

Others can be created as desired, e.g. Published

CREATOR

Element description: The person or organization primarily responsible for creating the intellectual content of the resource. For example, authors in the case of written documents, artists, photographers, or illustrators in the case of visual resources.

Guidelines for creation of content:

CREATORS should be listed separately in the same order that they appear in the publication. Personal names should be listed last name first, followed by first name. When in doubt, give the name as it appears, and do not invert. Spell out state name and abbreviate Dept.

Examples:

```
<meta name="DC.Creator" CONTENT="Duncan, Phyllis-Anne">
```

```
<meta name="DC.Creator" CONTENT="Melendez Santiago, Maria Luz ">
```

```
<meta name="DC.Creator" CONTENT="Maimonides ">
```

In the case of organizations where there is clearly a hierarchy present, list the parts of the hierarchy from largest to smallest, separated by full stops.

Example:

```
<meta name="DC.Creator" CONTENT="United States. Internal Revenue Service"
```

```
<meta name="DC.Creator" CONTENT="Federal Aviation Administration. Aviation Safety Program.">
```

NOT

```
<meta name="DC.Creator" CONTENT="Aviation Safety Program of the Federal Aviation Administration">
```

If it is not clear whether there is a hierarchy present, or unclear which is the larger or smaller portion of the body, give the name as it appears in the item.

```
<meta name="DC.Creator" CONTENT="Art Institute of Chicago">
```

```
<meta name="DC.Creator" CONTENT="Association of the Bar of the City of New York"
```

```
<meta name="DC.Creator" CONTENT="Baltimore County Medical Society"
```

If the nature of the responsibility is ambiguous, the recommended practice is to use PUBLISHER for organizations and CREATOR for individuals. In cases of lesser responsibility, use CONTRIBUTOR.

PUBLISHER

Element Description: The entity responsible for making the resource available in its present form, such as a publishing house, a university department, or a corporate entity.

Guidelines for content creation:

The intent of specifying this field is to identify the entity that provides access to the resource. If the CREATOR and PUBLISHER are the same, do not repeat the name in the PUBLISHER area. If the nature of the responsibility is ambiguous, the recommended practice is to use PUBLISHER for organizations and CREATOR for individuals. In cases of lesser responsibility, other than creation, use CONTRIBUTOR. Follow Library of Congress interpretation of AACR2 as identified in their authority records for form of corporate entity. This includes spelling out state name and abbreviating Dept.

Examples:

```
<meta name="DC.Publisher" CONTENT="Moguls Anonymous">  
<meta name="DC.Publisher" CONTENT="University of Miami. Dept. of  
Economics"  
<meta name="DC.Publisher" CONTENT="Minnesota Office of Enterprise  
Technology"
```

CONTRIBUTOR

Element Description: A person or organization not specified in a CREATOR element who has made significant intellectual contributions to the resource but whose contribution is secondary to any person or organization specified in the CREATOR element (for example, editor, transcriber, and illustrator).

Guideline for content creation:

The same general guidelines for using names of persons or organizations as CREATORS apply here.

Modifiers:

Editor
Page designer
Photographer
Others can be created as desired

RESOURCE TYPE

Element Description: The category of the resource, such as home page, novel, poem, working paper, technical report, essay, dictionary. For the sake of interoperability, TYPE should be selected from an enumerated list.

Guidelines for content creation:

This element should describe the genre of the content of the resource.

Text

Resources in which the content is mainly words for reading, for example: books, letters, dissertations, poems, newspapers, archives of mailing lists.

Image

The content is primarily visual in two dimensions and is not text, for example: images, paintings, animations, diagrams.

Sound

The content is primarily audio, for example: music, speech, recorded sounds.

Data

Information encoded in lists, tables, databases, etc., which will often be in a format ready for direct machine processing, for example: spreadsheets, databases, GIS data. See TagGen pull-down menu for complete listing.

Examples:

```
<meta name="DC.Type" CONTENT="image">  
Type="sound"  
Type="text"
```

FORMAT

Element Description: The data format of the resource, used to identify the software and possibly hardware that might be needed to display or operate the resource. For the sake of interoperability, Format should be selected from an enumerated list that is currently under development in the workshop series.

Guidelines for content creation:

Formats, such as text/html, ASCII, Postscript file, executable application, or JPEG image may be included in this area. Assign a Format from Internet Media Types (MIME types). In principle, FORMAT can include physical media such as books, serials, or other non-electronic media. Information concerning the size of a resource may be included in the content of the FORMAT element. In resource discovery this might be used as a criterion to select resources of interest, since a user may need to evaluate whether they can make use of the resource within the infrastructure available to them.

Examples:

```
<meta name="DC.Format" CONTENT="image/gif">
```

Format="image/gif 4kB"
Format="bronze 22 in."

IDENTIFIER

Element Description: A string or number used to uniquely identify the resource. Examples for networked resources include URLs and URNs (when implemented). Other globally-unique identifiers, such as International Standard Book Numbers (ISBN) or other formal names are also candidates for this element.

Schemes:

URL (most common), ISBN, PURL, URN, ISSN

RELATION

Element Description: An identifier of a second resource and its relationship to the present resource. This element permits links between related resources and resource descriptions to be indicated.

Examples include an edition of a work (IsVersionOf), a translation of a work (IsBasedOn), a chapter of a book (IsPartOf), and a mechanical transformation of a dataset into an image (IsFormatOf). For the sake of interoperability, relationships should be selected from an enumerated list.

Modifiers:

IsPartOf HasPart
IsVersionOf HasVersion
IsFormatOf HasFormat
References IsReferencedBy
IsBasedOn IsBasisFor
Requires IsRequiredBy

SOURCE

Element Description: Information about a second resource from which the present resource is derived. While it is generally recommended that elements contain information about the present resource only, this element may contain a DATE, CREATOR, FORMAT, IDENTIFIER, or other metadata for the second resource when it is considered important for the discovery of the present resource. Recommended best practice is to use the RELATION element instead. SOURCE is not applicable if the present resource is in its original form.

Guidelines for content creation: In general, include in this area information which does not fit easily into RELATION.

Example:

```
<meta name="DC.Source" CONTENT="RC607.A26W574 1996">  
[where "RC607.A26W574 1996" is the call number of the print version of the  
resource, from which the present version was scanned]
```

RIGHTS MANAGEMENT

Element Description: A rights management statement, an identifier that links to a rights management statement, or an identifier that links to a service providing information about rights management for the resource.

Guidelines for content creation:
URL preferred

Example:

```
<meta name="DC.Rights" CONTENT=  
"http://cs-tr.cs.cornell.edu/Dienst/Repository/2.0/Terms">
```

LANGUAGE

Element Description: The LANGUAGE of the intellectual content of the resource. Where practical, the content of this field should coincide with RFC 1766 [“Tags for the Identification of Languages” <http://ds.internic.net/rfc/rfc1766.txt>]

Guidelines for content creation:
Coded or textual information can be represented here. If the content is in more than one language, the element may be repeated.

Schemes:

ISO 639-2 is the preferred scheme; English is "eng"

Examples:

```
Language=eng  
Language=fre
```

OR,

```
<meta name="DC.Language" CONTENT="eng;fre">
```

OR,

```
<meta name="DC.Language" CONTENT="Primarily English, with some abstracts  
also in French.">  
<meta name="DC.Language" CONTENT="eng-US">
```

COVERAGE

Element Description: The spatial or temporal characteristics of the intellectual content of the resource. Spatial COVERAGE refers to a physical region (e.g., celestial sector); use coordinates (e.g. longitude and latitude) or place names that are from a controlled list or are fully spelled out. Temporal COVERAGE refers to what the resource is about rather than when it was created or made available (the latter belonging in the DATE element); use the same date/time format (often a range) [Date and Time Formats (based on ISO8601), W3C Technical Note <http://www.w3.org/TR/NOTE-datetime>] as recommended for the DATE element or time periods that are from a controlled list or are fully spelled out.

Guidelines for content creation:

Whether this element is used for spatial or temporal information, care should be taken to provide consistent information that can be interpreted by users. For most simple applications, where place names or coverage dates might be useful, whether the information is numeric or alphabetical may be enough to differentiate. For more complex applications, consideration should be given to additional qualification.

Schemes:

ANSI.X3.30-1985: A date/time range in a format specified in ANSI X3.30-1985 standard. Must be used in conjunction with the modifier "temporal."

LatLong: Latitude / Longitude coordinates for the COVERAGE of the resource. Must be used in conjunction with the modifier "spatial."

OSGB: Specifies an Ordinance Survey National Grid Reference.

Modifiers:

Spatial

Temporal

Examples:

Coverage=1995-1996

Coverage=Boston, MA

OR,

<meta name="DC.Coverage.temporal" CONTENT="17th century">

<meta name="DC.Coverage" CONTENT="Upstate New York">

C. Punctuation

Avoid extraneous punctuation, or ending punctuation in all elements except DESCRIPTION, where a closing period is used. Quote marks within elements, such as DESCRIPTION, must be omitted to avoid confusion with HTML coding. Personal names are entered last name first. Corporate names follow Anglo-American Cataloging Rules, 2nd edition (AACR2). See Library of Congress Name Authority File for correct form. State names are spelled out; department is abbreviated as Dept.

Example:

```
<meta name="DC.Publisher.CorporateName" scheme="AACR2" content= "Minnesota  
Dept. of Natural Resources. Division of Forestry">
```

D. Capitalization

Capitalize TITLE and SUBJECT terms according to AACR2 format; that is, capitalize first word and proper names only. Do not alter general meta title tag; the above rule is for Dublin Core titles. Capitalize DESCRIPTION element according to normal rules of writing. If copy and paste has been used, correct capitalization. No elements should be left in all capital letters except acronyms.

Dublin Core Glossary

Adapted from the *Glossary for A User Guide for Simple Dublin Core* / Gail Clement & Pete Winn.

Anglo-American Cataloguing Rules (AACR2)

The dominant bibliographic standard regulating descriptive cataloging in the English-speaking world. AACR2 represents a set of rules for the standard description of all materials which a library holds or to which it has access.

American Standard Code for Information Interchange (ASCII)

A scheme that provides standard numeric values to represent letters, numbers, punctuation marks, and other characters. The use of standard values allows computers and computer programs to exchange data.

Author

The Dublin Core element **Creator** is used to designate the person(s) or organization(s) primarily responsible for the intellectual content.

Best practice

The set of processes and function designs that best fit a given set of circumstances.

Case-sensitive

Lower and upper case letters are not treated as being the same; e.g. 'a' is not the same as 'A.'

Controlled vocabulary

A prescribed set of consistently used and carefully defined terms.

Contributor

The Dublin Core element used to designate Person(s) or organization(s) in addition to those specified in the **CREATOR** element who have made significant intellectual contributions to the resource.

Coverage

The Dublin Core element used to designate spatial and/or temporal characteristics of the intellectual content of the resource.

Creator

The Dublin Core element used to designate the person(s) or organization(s) primarily responsible for intellectual content; the author.

Crosswalk

A table that maps the relationships and equivalencies between two or more metadata formats.

Date

The Dublin Core element used to designate the date the resource was made available in its present form.

Description

The Dublin Core element used to designate a textual description of the content of the resource.

Digital tourist

An inexperienced computer user; in the context of resource discovery, an inexperienced searcher.

Discovery software

A computer application designed to simplify, assist, and expedite the process of finding information resources.

Document Type Definition (DTD)

- A description the components of a specific document or class of documents. A DTD description includes:
- The containers or elements that make up the document, e.g., headings, list items, figures, tables, etc.
- The logical structure of the document, e.g. chapters containing sections, etc.
- Additional information associated with elements (known as attributes), e.g. identifiers, date, stamps, etc.

Document-like object

An entity the resembles a document from the standpoint that it is substantially text-based and shares other properties of a document; e.g., electronic mail messages or spreadsheets.

DTD. *See* Document Type Definition

Dublin Core

The Dublin Core is a 15-element metadata element set intended to facilitate discovery of electronic resources. The Dublin Core has been in development since 1995 through a series of focused invitational workshops that gather experts from the library world, the networking and digital library research communities, and a variety of content specialties.

Electronic information resource

An information resource that is maintained in electronic, or computerized format, and may be accessed, searched and retrieved via electronic networks or other electronic data processing technologies (e.g., CD-ROM)

Embedded metadata

Metadata that is created, maintained and stored within the object it describes; the opposite of stand-alone metadata.

Encoding scheme

A pre-defined way for converting information into code or machine intelligible language.

Extensible

Having the potential to be expanded or stretched in scope, area or size. In the case of Dublin Core, the ability to extend a core set of metadata with additional elements.

Extensible Markup Language (XML)

A subset of Standard Generalized Markup Language (SGML), a widely used international text processing standard. XML is being designed to bring the power and flexibility of generic SGML to the Web, while maintaining interoperability with full SGML and HTML. For more information, see <http://www.w3.org/XML>.

Format

The Dublin Core element used to designate the data representation of the resource.

GIF. See Graphics Interchange Format

Government (or Global) Information Locator Service (GILS)

GILS embraces open standards to implement interoperable searching across diverse, decentralized information 'locators' to return references to all kinds of electronic and nonelectronic information resources. Locators are implemented as common semantics for characterizing information resources, i.e. common metadata semantics.

Graphics Interchange Format (GIF)

A graphics format on the Web.

Granularity

The degree to which something is composed of small pieces.

Hypertext Markup Language (HTML)

The standard text-formatting language for documents on the World Wide Web. HTML text files contain content that is rendered on a computer screen and markup, or tags, which can be used to tell the computer how to format that content. HTML tags can also be used to encode metadata and to tell the computer how to respond to certain user actions, such as a mouse click. For more information, see <http://www.w3.org/MarkUp/>.

Identifier

The Dublin Core element used to designate a string or number that uniquely identifies the resource.

IMT. *See Internet Media Type*

Indexing program

Computer software used to order things; frequently used to refer to software which alphabetizes some or all of the terms in one or more electronic documents.

Information resource

Any entity, electronic or otherwise, capable of conveying or supporting intelligence or knowledge; e.g. a book, a letter, a picture, a sculpture, a database, a person.

Instantiation

An identifiable occurrence or occasion of something; in the case of Dublin Core, a specific occurrence of an information resource.

Internet Media Type (IMT)

A set of terms that describe types of resources on the Internet.

Joint Photographic Experts Group (JPEG)

A standard for compressing digital images. The advantage of JPEG is that it uses compression to make graphics files smaller, making them faster to transfer and view over the World Wide Web. The disadvantage is some loss of image quality due to data loss during compression.

Keywords. *See Subject*

Language

The Dublin Core element used to designate the Language(s) of the intellectual content of the resource.

MARC (USMARC)

National standard for library holdings' database descriptions. Stores a given holding's metadata in one record with a flat structure. This record comprises four components: a leader, a record directory, control files and variable fields. An implementation of ANSI/NISO Z39.2 the American National Standard for Bibliographic Information interchange. The USMARC format documents the designations and content designators for the fields that are to be carried in records structured according to Z39.2.

META tag

The process of applying metadata to an information resource; the HTML element used to demarcate metadata: <META>, </META>.

Metadata

Descriptive information about an information resource. In the case of Dublin Core, information that expresses the knowledge content, intellectual property and/or instantiation characteristics of an information resource.

Metadata record

A syntactically correct representation of the descriptive information (metadata) for an information resource. In the case of Dublin Core, a representation of the Dublin Core elements that has been defined for the resource. The majority of metadata records and record fragments in this document are presented in HTML syntax.

Metadata registry

A publicly accessible system that records the semantics, structure and interchange formats of any type of metadata. A formal authority, or agency, maintains and manages the development and evolution of a metadata registry. The authority is responsible for policies pertaining to registry contents and operation.

Multipurpose Internet Mail Extensions (MIME)

The standard for attaching files to Internet e-mail messages. Attached files may be text, graphics, spreadsheets, documents, sound files, etc.

Networked resource

An object which is available electronically via a network.

Online Computer Library Center (OCLC)

The major source of cataloging data for libraries around the world located in Dublin, Ohio.

Publisher

The Dublin Core element used to designate the entity responsible for making the resource available in its present form.

Qualifier

Something that describes or characterizes an object. In the case of Dublin Core, attributes refine or characterize interpretation of an element's content.

RDF. *See* Resource Description Framework.

Relation

The Dublin Core element used to designate the identifier of a second resource and its relationship to the first resource.

Request for Comment (RFC)

A Request for Comment (RFC) is a note about the Internet. The note may discuss any aspect of computing and computer communication. All specification documents for the Internet are published as RFCs. For more information, see <http://www.isi.edu/rfc-editor/>.

Resource Description Framework (RDF)

The basic language for writing metadata; a foundation which provides a robust flexible architecture for processing metadata on the Internet. RDF will retain the capability to exchange metadata between application communities, while allowing each community to define and use the metadata that best serves their needs. For more information see <http://www.w3.org/RDF/>.

Resource discovery

The process through which one obtains knowledge of an information resource.

Resource Type. *See* **Type**.

Resource Description. *See* **Description**.

Resource Identifier. *See* **Identifier**

RFC. *See* **Request for Comment**

Rights

The Dublin Core element used to provide a link to a copyright notice, to a rights-management statement, or to a service that would provide information about terms of access to the resource.

ROADS

An UK funded project whose aim is to develop discovery software for Internet resources.

Scheme

A systematic, orderly design or combination of elements. In the case of the HTML META tag attribute, SCHEME is any recognized coding system used to interpret the meaning of an element.

Search engine

Utility capable of returning references to relevant information resources in response to a query.

Semantics

Significance or meaning. In the case of Dublin Core, the significance or intended meaning of individual metadata elements and their components.

SGML. *See* **Standard Generalized Markup Language**

Software agent

A computer program that carries out tasks on behalf of another entity. Frequently used to reference a program which searches the Internet for information meeting the specified requirements of an individual user.

Source

The Dublin Core element used to designate information about a second resource from which this resource is derived.

Standard Generalized Markup Language (SGML)

A non-proprietary language/enabling technology for describing information. Information in SGML is structured like a database, supporting rendering in and conversion between different formats. Both XML and later versions of HTML instances of SGML. For more information see <http://www.w3.org/SGML>.

Stand-alone metadata

Metadata that is created, maintained and stored independently of the object it describes. Compare to embedded metadata.

Subject

The Dublin Core element used to designate the topic of the resource, or keywords or phrases that describe the subject or content of the resource.

Surrogate content

Metadata as a substitute for an actual resource.

Syntax

The form and structure with which elements are combined. In the case of Dublin Core, the form and structure of how metadata elements and their components are combined to form a metadata record.

TEI . *See* Text Encoding Initiative

Temporal

Limited by or in regard to time.

Text Encoding Initiative (TEI)

An international project to develop guidelines for the preparation and interchange of electronic texts for scholarly research as well as a broad range of other language industry uses. The TEI DTD is an SGML Document Type Definition for encoding literary works. For more information, see <http://www-tei.uic.edu/orgs/tei/info/teij16.html>.

Title

The Dublin Core element used to designate the name given to the resource.

Type

The Dublin Core element used to designate the category of the resource.

ULAN. *See* Union Lists of Artists' Names

Unicode

A registered trademark of Unicode, Inc. Unicode refers to a universal encoding scheme designed to allow interchange, processing and display of the world's principal languages, as well as many historic and archaic scripts. Unicode supports and fosters a multilingual computing world community by allowing computers using one language to "talk" to computers using a different language.

Unicode Transformation Format, 8-bit (UTF-8)

Unicode Transformation Format, 8-bit. UTF-8 is a temporary form of Unicode that is well suited for routing data through systems which are not designed for Unicode, such as some email servers and web clients. UTF-8 is an attractive way of storing multilingual data on the Internet, without requiring full Unicode compliance.

Uniform Resource Identifier (URI)

The syntax for all names/addresses that refer to resources on the World Wide Web. For information about Internet addressing, *see* <http://www.w3.org/Addressing/Addressing.html>.

Uniform Resource Locator (URL)

A technique for indicating the name and location of Internet resources. The URL specifies the name and type of the resource, as well as the computer, device, and directory where the resource may be found. The URL for Dublin Core is http://purl.oclc.org/metadata.dublin_core. For information about Internet addressing, *see* <http://www.w3.org/Addressing/Addressing.html>.

Uniform Resource Name (URN)

A URI (name and address of an object on the Internet) that has some assurance of persistence beyond that normally associated with an Internet domain or host name. For information about Internet addressing, *see* <http://www.w3.org/Addressing/Addressing.html>.

Union Lists of Artists' Names (ULAN)

Artists' names listing from Getty Information Institute.

URI. *See* Uniform Resource Identifier

URL. *See* Uniform Resource Locator

URN. *See* Uniform Resource Name

USMARC. *See* MARC

UTF-8. *See* Unicode Transformation Format, 8-bit.

World Wide Web Consortium (W3C)

The W3C is an international industry consortium founded in October 1994 to lead the World Wide Web to its full potential by developing common protocols that promote its evolution and ensure its interoperability. For more information see <http://www.w3.org/Consortium/>.

XML. *See* Extensible Markup Language.

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Transfer protocol for bibliographic information in a networked environment.