DARE use of Dublin Core

Version 1.0, October 2003

Metadata for this document

Title	DARE use of Dublin Core
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Subject	DARE repositories; metadata; Dublin Core
Description	Guidelines for the use of qualified Dublin Core within the Dare Programme, based on UKOLN guidelines for preprints
Publisher	Stichting SURF
Date	2003-10-25; Date_valid: 2003-11-01 / 2004-04-30
Type	Internal report
Format	Text/richtext
Identifier	SURF 03.2979
Language	Eng
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Document history

Version	Remarks
August 2003	First internal version presented to project manangers
September 2003	Second internal version presented to project managers
1.0 (October 2003)	Third version to be used starting from November 1 2003

Acknowledgements This document is largely based on the recommendations for the use of simple Dublin Core metadata as described in: USING SIMPLE DUBLIN CORE TO DESCRIBE EPRINTS, by Andy Powell, Michael Day and Peter Cliff, UKOLN, University of Bath, Version 1.2 [see also: http:/ www.rdn.ac.uk/projects/eprints-uk/docs/simpledc-guidelines/]

Definitions: "A DARE institutional repository is a facility, consisting of hardware, software, data and procedures, that contains digital resources representing any type of scientific output…"[1]
"digital resources = any bit stream, independent of content or format, which has been marked as scientific output by an approved person…"
Within this document we use the word "resource" to describe the instance of scientific output, and the word "object" to refer to the digital bit stream.

Introductory remarks

Scope These guidelines are written primarily to facilitate the exchange of metadata between Dare partners and exchange with non-Dare partners, in compliance with the OAI-PMH definitions as distributed by DCMI. Basically these guidelines describe the **mapping** from an internal[2] format to qualified DC to support harvesting. The guidelines are **not to be used as cataloguing instructions**.

Within Dare we use qualified DC. Only those refinements that have been added by DCMI are to be used as refinements within Dare. These refinements have also been added in the text of the guidelines below. If a Dare partner has implemented any other (not DCMI endorsed) elements or refinements, he is obliged to eliminate these elements from the metadata during the harvesting process.
Dare partners will implement two XML schemas: one for qualified DC for use within Dare, and one for unqualified DC for OAI compatible harvesting outside Dare.

Language of the metadata is at the discretion of the local Dare partner.

The use of **Unicode** is mandatory.

Only one metadata record should be used for different **versions** of a digital object (e.g. a postscript and a pdf version), unless the intellectual content of the versions is different. The rule of thumb is to create a new metadata record when the metadata of a version is different. This happens for instance when a new version of the resource with modifications is created and in that case recommended best practice is to use the relation element to link the newer version to the older.

In some cases (DC element 'subject' and 'type') **additional information** may be useful for the harvesting party and service provider. A DARE compliant data provider releases this type of information via the 'Identify request' – not on the metadata level. Additional information can also be given in the form of textual documentation about the use metadata elements subject and type, e.g. to give information on the local classification or keywords, or information on local review policies.

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[1] Specifications for a Networked Repository for Dutch Universities, version 3.0, p 6
[2] E.g. a Dare partner might use Marc 21 as internal format

The **values** (i.e. actual content) of the elements given below must not contain any HTML (or XML) markup. They may contain LaTeX commands, but there is no mechanism for explicitly indicating that LaTeX is being used.

Within DARE the **use of elements** is either:
- mandatory = the element must always be present in the metadata record
- mandatory when applicable = when the element can be obtained it should be added to the metadata record (this refers more to the input of metadata, not so much to the harvesting)
- recommended = the use of the element is recommended
- optional = it is not important whether the element is used or not

The "mandatory when applicable" status is stronger then the recommended one and this distinction is made primarily to encourage users to input certain elements when creating a metadata record to enhance services.

Some words on the use of **refinements (qualifiers)**. When mapping to unqualified DC the IR manager has to make choices when the internal format is "richer" than unqualified DC. For only one element a default has been assigned to make this choice: the default for element Date is the qualifier Created. This means that whenever possible the mapping should give the date of creation in the date element. For other elements where a refinement can be given, such as title or relation, no defaults have been assigned. This means that during the mapping process all refinements are simply dropped (the DCMI dumb down principle). The effect of the dumb down principle is that the simple form of the element, i.e. without the refinement, is the default one. E.g. when the internal format distinguishes between main title and parallel title this would show as follows in DC:

Internal format
245 $aMain title$pParallel title

Qualified DC
<dc:title>Main title</dc:title>
<dcterms:alternative>Parallel title</dcterms:alternative>

Simple DC
<dc:title>Main title</dc:title>
<dc:title>Parallel title</dc:title>

The Elements: short description

Basic element	Refinement	Status	Encoding schemes
Title	-	M	None
	Alternative	MA	
Creator	-	M	None
Subject	GOO, NBC, LCSH, MESH, DDC, LCC, UDC, LOCAL	M	Choice of keywords and classifications is free. Use refinements when appropriate.
Description	-	MA	None
	TableOfContents	R	
	Abstract	R	
Publisher	-	MA	None
Contributor	-	O	None
Date	-	M	Date | ISO 8601 W3C-DTF
	dateAccepted	R	
	dateCopyrighted	R	
	Created	R	Created is default in mapping
	Valid	R	
	Available	R	
	Issued	R	
	Modified	R	
	dateSubmitted	R	
Type	-	M	METIS-list with additional DCMI types. Use the element also for status and review indicator.
Format	-	R	IANA list of MIME types
	Extent	R	
	Medium	R	
Identifier	-	M	A persistent URL
	Bibl. citation	R	
Source	-	O	None
Language	-	R	ISO 639-2 RFC 1766 RFC 3066

Relation	-	R	none
	Isversionof	R	
	Hasversion	R	
	Replacedby	R	
	Replaces	R	
	Requiredby	R	
	Requires	R	
	Ispartof	R	
	Haspart	R	
	Isreferredby	R	
	References	R	
	Isformatof	R	
	hasFormat	R	
	Conformsto	R	
Coverage	-	O	
	Spatial	R	Point ISO 3166 Box TGN
	Temporal	R	Period
Rights	-	M	None
	Access rights	MA	
Audience	-	O	None
	Mediator	O	
	Education level	O	

The Elements: full description (based on UKOLN)

This section lists each of the Dublin Core elements. For each element, a DARE-specific user istruction is provided followed by the authoritative definitions and comments from the Dublin Core Metadata Initiative

Title

Element name	Title
Definition	A name given to the resource.
Mandatory	Mandatory
Purpose / **Service**	Textual identification of a given resource.
User instruction	Preserve the original wording, order and spelling of the resource title. Only capitalize proper nouns. Punctuation need not reflect the usage of the original. Subtitles should be separated from the title by a colon. If necessary, repeat this element for multiple titles.
Do not confuse with	-
Refinements	Alternative (Mandatory if present)
Examples	<dc:title>Initial sequencing and analysis of the human genome</dc:title> <dc:title>The new nationalism and the old history: perspectives on the West German Historikerstreit</dc:title>
Scheme	Not applicable

Creator

Element name	Creator
Definition	The name(s) of the creator(s) of the resource, as mentioned in the resource. An entity primarily responsible for making the content of the resource.
Mandatory	Mandatory
Purpose / **Service**	Textual identification of the creator of the given resource.

User instruction	If necessary, repeat this element for multiple authors.
	Personal names should be listed surname or family name first, followed by fore-name or given name or initial followed by a full stop. Separate the surname (or family name) from the forenames, given names or initials with a comma. Generational suffixes (Jr., Sr., etc.) should follow the family name. When in doubt, give the name as it appears, and do not invert. Omit titles (like "dr", "ir" etc.)
	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. 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 resource.
	Only encode organisations in this element to indicate corporate authorship, not to indicate the affiliation of an individual.
	The inclusion of personal and corporate name headings from authority lists constructed according to local or national thesaurus files is optional.
	In cases of lesser responsibility, other than authorship, use dc:contributor. If the nature of the responsibility is ambiguous, recommended best practice is to use dc:publisher for organizations, and dc:creator for individuals.
Do not confuse with	Contributor (see also *User instruction* above).
	Publisher.
	The DC element 'creator' describes the name(s) of the creator(s) of the resource, as mentioned in the resource, whereas the DC element 'contributor' describes the scientist(s) that has/have made contributions to the given scientific output, not as a primary creator or (commercial) publisher.
Refinements	-
Examples	<dc:creator>Sulston, John E.</dc:creator>
	<dc:creator>Evans, R.J.</dc:creator>
	<dc:creator>Ng, Tze Beng</dc:creator>
	<dc:creator>Walker Jnr., John</dc:creator>
	<dc:creator>International Human Genome Sequencing Consortium</dc:creator>
	<dc:creator>Loughborough University. Department of Computer Science</dc:creator>
Scheme	Not applicable

Subject

Element name	Subject
Definition	The topic of the resource. Typically, a *Subject* will be expressed as keyword, key phrases or classification codes that describe the intellectual content of the resource.
Mandatory	At least one keyword is mandatory. The use of additional keywords or classification codes is optional.
Purpose / Service	Textual (or coded) identification of the subject content of the given resource.
User instruction	In the DC subject element two kinds of values are possible. The first – the use of keywords - is mandatory. The second - the use of a classification - is optional. Use the first occurrence of the DC element 'subject' for a keyword. In general, choose the most significant and unique words for keywords, avoiding those too general to describe a particular resource. If the subject of the resource is a person or an organization, use the same form of the name as you would if the person or organization were an author, but do not repeat the name in the dc:creator element. For free-text keywords either encode multiple terms with a semi-colon separating each keyword; or repeat the element for each term. There are no requirements regarding the capitalization of keywords though internal (within archive) consistency is recommended. Where terms are taken from a standard classification scheme: encode each term in a separate element. Encode the complete subject descriptor according to the relevant scheme. Use the capitalisation and punctuation used in the original scheme. Use a separate occurence of the DC element 'subject' for the classification code. When appropriate use the standard DC refinements LCSH, MESH, DDC, LCC or UDC. When GOO or NBC is used use "GOO" or "NBC" as refinement. In all other cases use "LOCAL" as refinement.
Do not confuse with	Type. DC element 'subject' describes the topic(s) of an resource; DC element 'type' describes the kind of academic output the resource is a representation of.
Refinements	LCSH, MESH, DDC, LCC, UDC, GOO, NBC and LOCAL
Examples	<dc:subject>polar oceanography; boundary current; mass transport; water masses; halocline; mesoscale eddies</dc:subject>

	<dc:subject>World War, 1939-1945--Germany</dc:subject> <dc:subject>Germany--History--1933-1945</dc:subject> <dc:subject>Hitler, Adolf, 1889-45</dc:subject>
Scheme	LCSH, MESH, DDC, LCC, UDC, NBC and GOO

Description

Element name	Description
Definition	A summary of the content of the resource, typically in the form of an abstract.
Mandatory	Mandatory if applicable
Purpose / Service	Textual identification of the description of the given resource.
User instruction	Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content
Do not confuse with	-
Refinements	Tableofcontent (recommended) Abstract (recommended)
Examples	<dc:description>Inleiding; 5 hoofdstukken over geschiedenis; 2 hoofdstukken met praktische tips; index</dc:description> <dcterms:tableofcontent>Foreword [by] Hazel Anderson; Introduction; The scientific heresy: transformation of a society; Consciousness as causal reality [etc]</dcterms:tableofcontent> <dcterms:abstract>This article gives an overview of the latest developments in…</dcterms:abstract>
Scheme	Not applicable

Publisher

Element name	Publisher
Definition	The (commercial or non-commercial) publisher of the resource; not the (sub)institution the author is affiliated with. Publisher is used only in the bibliographic / functional sense, not an organisational one.
Mandatory	Mandatory if applicable
Purpose / Service	Textual identification of the publisher of the given resource.
User instruction	Use only the full name of the given (commercial) publisher, not the name of an

	organization or institute that is otherwise [in a broader sense] associated with the creator. For example: <dc:publisher>Oxford University Press</dc:publisher> 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. 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 eprint. The use of publisher names from authority lists constructed according to local or national thesaurus files is optional.
Do not confuse with	- Contributor - Creator In most cases the publisher and the creator are not the same.
Refinements	-
Examples	<dc:publisher>Loughborough University. Department of Computer Science</dc:publisher> <dc:publisher>University of Cambridge. Department of Earth Sciences</dc:publisher> <dc:publisher>University of Oxford. Museum of the History of Science</dc:publisher> <dc:publisher>University of Reading. Rural History Centre</dc:publisher> <dc:publisher>University of Exeter. Institute of Cornish Studies</dc:publisher> <dc:publisher>European Bioinformatics Institute</dc:publisher> <dc:publisher>John Wiley & Sons, Inc. (US)</dc:publisher>
Scheme	Not applicable

Contributor

Element name	Contributor
Definition	A contributor to the resource, not one of the primary authors. Examples: a supervisor, editor, technician or data collector.
Mandatory	Optional
Purpose / service	Textual identification of the contributor of the given resource. Well-formulated values in the DC contributor element are the basis for effective selective harvesting and services built upon this.
User instruction	Personal names should be listed surname or family name first, followed by forename or given name or initial followed by a full stop. Separate the surname (or

	family name) from the forenames, given names or initials with a comma. Generational suffixes (Jr., Sr., etc.) should follow the family name. When in doubt, give the name as it appears, and do not invert. Titles like "dr" etc. are omitted. A "promotor", i.e. a professor supervising a student's work for a doctor's degree - is considered a contributor of a dissertation in his or her role as promotor / examiner. 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. 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 resource. Only encode organisations in this element to indicate a corporate contribution, not to indicate the affiliation of an individual. The inclusion of personal and corporate name headings from authority lists constructed according to local or national thesaurus files is optional.
Do not confuse with	- Creator - Publisher The DC element contributor describes the scientist(s) that has/have made contributions to the given scientific output, not as a primary creator or (commercial) publisher.
Refinements	-
Examples	\<dc:contributor\>Sulston, John E.\</dc:contributor\> \<dc:contributor\>Evans, R.J.\</dc:contributor\> \<dc:contributor\>Ng, Tze Beng\</dc:contributor\> \<dc:creator\>Walker Jnr., John\</dc:creator\> \<dc:contributor\>International Human Genome Sequencing Consortium\</dc:contributor\> \<dc:contributor\>Loughborough University. Department of Computer Science\</dc:contributor\>
Scheme	Not applicable

Date

Element name	Date
Definition	The date of creation of the resource.

Mandatory	Mandatory
Purpose / service	Textual identification of the creation date of the given resource. Well-formulated values in the DC date element are the basis for effective selective harvesting and services built upon this, as, for example, selective harvesting of recent scientific ouput or scientific output of a given period.

User instruction	The date should be formatted according to the <u>W3C encoding rules for dates and times</u> :
	
	  Complete date:
	    YYYY-MM-DD (eg 1997-07-16)
	
	where:
	    YYYY [four-digit year] is mandatory
	    MM [two-digit month (01=January, etc.)] is optional
	    DD [two-digit day of month (01 through 31)] is optional
	
	In the DC element 'date' the most notable differences occur between acting as a data provider based on basic DC unqualified and DC qualified. Where values in other DC elements could – within reason – be interpreted by the user, the values in the date element are exactly similar and context (provided by the DC refine-ments) is necessary to interpret the values. Based on these observations the fol-lowing is stated.
	
	Basic DC unqualified: use the DC element 'date' for the value [of the refine-ment]: 'date created'.
	DC qualified: Use of all refinements is permitted / optional, depending of and according to the level of distinction the data provider can make and is willing to offer in harvesting.

Do not confuse with	-
Refinements	DateAccepted (Optional) DateCopyrighted (Optional) Created (Optional) Valid (Optional) Available (Optional) Issued (Optional) Modified (Optional) DateSubmitted (Optional)

Examples	<dc:date>2000-12-25</dc:date>
	<dc:date>1999</dc:date>
	`<dc:date>2003-01</dc:date>`
Schema	Date | ISO 8601 W3C-DTF

Type

Element name	Type
Definition	The type of scientific output the resource is a manifestation of. In the DC element type the kind of dissemination, or the intellectual and/or content type of the resource is described. It is used to explain to the user what kind of resource he is looking at. Is it a book or an article. Was it written for internal or external use. Etc.
Mandatory	Mandatory. In every metadata record the DC element 'type' should be used three times: once for the *type* indication, the second time for the *review* status and a third time for the *status* indication.
Purpose / service	Textual identification of the type of the given resource. Well-formulated values in the DC type element are the basis for effective selective harvesting and services built upon this, as, for example, a specific search for resources that represent articles that are in final stage and reviewed.
User instruction	1) Use the first occurrence of the DC element 'type' for the *type* indication of the scientific output. Repeat if applicable. 1. Annotation 2. Article - letter to the editor 3. Article in monograph - proceedings 4. Book - monograph - editorial book 5. Book review 6. Book editorial 7. Collection 8. Commission report or memorandum 9. Conference lecture 10. Conference report 11. Contribution for newspaper or weekly magazine 12. Dataset 13. Dissertation 14. Documentation for grant request 15. Educational material

16. Event

17. External research report

18. Inaugural lecture

19. Interactive resource

20. Internal report

21. Newsletter

22. Newspaper article

23. Part of book - chapter

24. Patent

25. Physical resource

26. Preprint

27. Report for financing agency (grants)

28. Research paper

29. Service

30. Set of images

31. Software

32. Sound

33. Statistical report

34. Still image (photo, video, movie)

35. Student thesis

36. Technical documentation

37. Working material

2) Use the second occurence of the DC element 'type' to indicate the *reviewed status* of the resource, using one of the following values:

- R = Reviewed
- N = NonReviwed

The reviewed status can be appointed when one of three conditions is met: (1) the scientific output is a dissertation; (2) the scientific output is (peer-)reviewed externally or (3) the scientific output is (peer-)reviewed internally.

The methods and types of internal and external (peer-)review should be described in the documentation [outside the scope of metadata] in order to provide the necessary context to third parties who (intend to) harvest your data provider.

3) Use the DC element 'type' to indicate the *status* of the resource, using one of

	the following indications:
	• D = Draft
	• F = Final
	Coded information. Within DARE codes can be used in dc:type instead of textual information. In the identifier record of the repository (part of the OAI protocol) this usage should be explained.
Do not confuse with	Format
	DC element 'type' describes the kind of academic output the resource is a representation of. DC element 'format' describes the media type of this resource.
Refinements	-
Examples	<dc:type>preprint</dc:type> or <dc:type>26</dc:type> <dc:type>draft</dc:type> or <dc:type>D</dc:type> <dc:type>NonReviewed</dc:type> or <dc:type>N</dc:type>
Scheme	- Metis - Publicatie typen - DCMI-Type (collection, dataset, event, image, interactiveResource, service, software, sound, text, physicalResource)

Format

Element name	Format
Definition	The media-type of the resource
Mandatory	Recommended
Purpose / service	Textual identification of the format of the given resource. Well-formulated values in the DC type element are the basis for effective selective harvesting and services built upon this, as, for example, a specific search for resources that can be viewed with certain viewers or applications.
User instruction	The DC element 'format' is used in order to give DARE partners the necessary context to base services on. A DARE partner can selectively harvest those records that link to resources that use or operate on software, hardware or other equipment that is supported by the DARE partner's institute. **More than one object linked to one specific scientific resource.** If one specific resource (an instance of scientific output) has more then one physical formats (e.g. postscript and pdf) stored as different object files, all formats are mentioned in the DC element 'format', for example:

<dc:format>application/pdf</dc:format>

<dc:format>application/postscript</dc:format>

In this specific instance the DC element 'identifier' links to a local resolving mechanism (e.g. a'jump off page'), that contains urls that link to all digital manifestations of the specific instance of scientific output– in our example: two objectfiles. Note that the DC element 'format' does not contain the values for xml or html. Also note that the local resolving mechanism (e.g. 'jump off page') itself is stored on a local server in the same way the resources are stored and the requirements for the persistent url for this mechanism are the same as for the DC:identifier element (local responsibility for persistence and resolving).

Based on best practice, the IANA registered list of Internet Media Types (MIME types) is used to select a term from. A subset of this MIME type list will suffice for DARE purposes. In the near future a small subset of these MIME types will be formulated within the DARE community to restrict the types provided by the DARE data providers.

Type	Subtype
text	plain
	richtext
	enriched
	tab-separated-values
	html
	sgml
	xml
application	octet-stream
	postscript
	rtf
	applefile
	mac-binhex40
	wordperfect5.1
	pdf
	zip

		macwriteii
		msword
		sgml
		ms-excel
		ms-powerpoint
		ms-project
		ms-works
	image	jpeg
		gif
		ief
		g3fax
		tiff
		png
	audio	wav
		mp3
	video	quicktime
		mpeg1
		mpeg2
		mpeg3
Do not confuse with	Type DC element 'format' describes the media type of this resource. DC element 'type' describes the kind of academic output the resource is a representation of.	
Refinements	Extent (Optional) Medium (Optional)	
Examples	<dc:format>application/pdf</dc:format> <dc:format>video/quicktime</dc:format>	
Scheme	the IANA registered list of Internet Media Types (MIME types)	

Identifier

Element name	Identifier
Definition	A persistent url (purl) that links to either one or to more resources. In the first case the url links to the object itself and in the latter case the url links to a local resolving mechanism (e.g.'jump off page', most likely a xml page or a html

	page), that links to all objectfiles directly.
Mandatory	Mandatory
Purpose / service	Well-formulated urls in the DC type identifier are the basis for the functionality of linking a given (metadata)record to one or more resources. It gives the user one or more digital manifestations of the described instance of scientific output.
User instruction	Use a persistent URL. There is no further definition of the word persistent. It is a local responsibility to make a choice for a technique or solution to ensures the persistency of the identifier. There is no general Dare recommendation on what technique or solution should be used. Any harvester or service provider has no need to know what the local solution is, but persistency must be guaranteed.
Do not confuse with	-
Refinements	Bibl. Citation (Optional)
Example	Open URL syntax example: <dc:identifier>openurl:?sid=ukoln:&genre=article&sid=ukoln:&atitle=Information%20gateways:%20collaboration%20on%20content&title=Online%20Information%20Review&issn=1468-4527&volume=24 &spage=40&epage=45&artnum=1&aulast=Heery&aufirst=Rachel</dc:identifier> where 'openurl' represents the 'base url'-part and 'sid' the 'source id'-part. A somewhat similar example would be: <dc:identifier>http://ram47:8881/OAI-script?verb+GetRecord&identifier=DTL01-200&metadataPrefix=oai_dc</dc:identifier>
Scheme	Local identifier syntax

Source

Element name	Source
Definition	The URI, title or bibliographic citation for a resource from which the resource is derived. Or: a Reference to a resource from which the present resource is derived.
Mandatory	Optional
Purpose / service	Textual identification of the source of the given resource. Well-formulated values in the DC source element are the basis for effective selective harvesting and services built upon this, as, for example, linking a given resource (an instance of

	scientific output) –described in DC metadata- to the scientific source it is based upon.
User instruction	Do not use this element
Do not confuse with	-
Refinements	-
Example	
Scheme	-

Language

Element name	Language
Definition	The human readable language in which a specific resource (an instance of scientific output) is written.
Mandatory	Recommended
Purpose / service	Textual identification of the language of the given resource.
User instruction	A specific resource (an instance of scientific output) is either written in one human readable language or more. In these cases all used languages are used in the DC element 'language'. If a specific resource (an instance of scientific output) is written in one human readable language and is translated into other human readable languages, these translations are distinguished from the original version and therefore described separately.
	Recommended best practice is to use RFC 3066 which, in conjunction with ISO 639, 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.
	Use the language codes defined in <u>RFC 3066</u> [12], for example:
	<dc:language>en-GB</dc:language>
	If necessary, repeat this element to indicate multiple languages.
	Recommended value for the Dutch language [ISO 639-2]: "nld".
Do not confuse with	-
Refinements	-
Examples	<dc:language>en-GB</dc:language> <dc:language>nld</dc:language>

Scheme	ISO 639-2
	RFC 1766
	RFC 3066

Relation

Element name	Relation
Definition	The reference to a related resource.
Mandatory	Recommended
Purpose / service	Textual identification of a related resource.
User instruction	The DC element 'relation' can be used to indicate different kinds of relations between several metadata records

If relations between metadata records are made visible by using metadata the following holds for the distinction between versions.
- A metadata record is self-contained
- Different manifestations of one and the same resource (an instance of scientific output) [that can be described with exactly the same biblio-graphic metadata, except for the DC element 'format'] are linked to one single metadata record
- Changes in the metadata other than the DC element 'format' leads to creating a new metadata record of this new instance of scientific output, which is meets all requirements formulated in this document and has a value in the DC element 'relation', with one of the refinements below, e.g.:

<dcterms:hasversion>previousversion</dcterms:hasversion>

where url is the value of the DC element 'identifier' of the referenced metadata record. |
| Do not confuse with | - |
| Refinements | Isversionof (recommended)

Hasversion (recommended)

Replacedby (recommended)

Replaces (recommended)

Requiredby (recommended)

Requires (recommended) |

	Ispartof (recommended)
	Haspart (recommended)
	Isreferredby (recommended)
	References (recommended)
	Isformatof (recommended)
	HasFormat (recommended)
	Conformsto (recommended)
Example	\<dc:relation:haspreviousversion\>purl\</dc:relation:haspreviousversion\> where url is the value of the DC element 'identifier' of the referenced metadata record.
Scheme	-

Coverage

Element name	Coverage
Definition	The extent or scope of the content of the resource. The geographic location or temporal period that the resource is about.
Mandatory	Optional
Purpose/service	Textual identification of the scope of the given resource.
User instruction	Recommended best practice is to select the value from a controlled vocabulary (for example, the Getty Thesaurus of Geographic Names or TGN) and that, where appropriate, named places or time periods be used in preference to numeric identifiers as, for example, sets of co-ordinates or date ranges. If necessary, repeat this element to encode multiple locations or periods.
Do not confuse with	-
Refinements	Spatial (Optional) Temporal (Optional)

Examples	Example Spatial – ISO 3166 <dc: coverage >NL</dc:coverage> Example Spatial – BOX <dc: coverage > name=Western Australia; northlimit=-13.5; southlimit=-35.5; westlimit=112.5; eastlimit=129</dc:coverage> Note ad BOX: The syntax used here is provisional, and is currently under review as part of the DCMI work on recommending coordinated syntax recommendations for HTML, XML, and RDF. These recommendations and minor editorial changes in this document can be expected to take place in the near future.
Scheme	Point http:/ dublincore.org/documents/dcmi-point/ ISO 3166 http:/ www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/index.html Box http:/ dublincore.org/documents/dcmi-box/ TGN http:/ www.getty.edu/research/tools/vocabulary/tgn/ Period

Rights

Element name	Rights
Definition	A human-readable statement about rights held in and over the resources.
Mandatory	Mandatory
Purpose/service	Textual identification of the (access) rights of the given resource.
User instruction	Typically, a Rights element will contain a rights management statement for the access or use of the object, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights.
Do not confuse with	-
Refinements	Access rights (Mandatory if formulated)
Examples	<dc:rights>(c) University of Bath, 2003</dc:rights> <dc:rights>(c) Andrew Smith, 2003</dc:rights>
Scheme	-

Additional fields (in accordance with DCMI)

Audience

Element name	Audience
Definition	A class of entity for whom the resource is intended or useful.
Mandatory	Optional
Purpose/service	Textual identification of the audience the given resource is suitable for.
User instruction	A class of entity may be determined by the creator or the publisher or by a third party. On the U.S. Department of Education, Metadata Reference site, an example is given of audiences: http:/ www.ed.gov/admin/reference/index.jsp : Administrators Community Groups Counsellors Federal Funds Recipients and Applicants Librarians News Media Other Parents and Families Policymakers Researchers School Support Staff Student Financial Aid Providers Students Teachers
Do not confuse with	-
Refinements	Mediator (Optional) Education level (Optional)
Examples	<dc: audience>Researchers</dc: audience> <dc: audience> Students </dc: audience>
Scheme	-