

DDF-MXD

Danish Research Database

Metadata Exchange Format for Documents

31 May 2022

Version 1.4.3

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0.1 Preface to version 1.0.0

Version 1 of the exchange format for documents was developed as an initiative of the DEFF E-publishing Programme Area.

The primary motivation was to contribute to the organisation and dissemination of Danish research by establishing an infrastructure, where DDF, the Danish Research Database, automatically may harvest local research databases and institutional repositories and build a national database and search engine in an efficient and quality assured fashion.

The format may well prove useful in a number of other use-cases related to research publications and documentation.

The work started in August 2004 and has entailed analysis of the current formats of DDF and the emerging institutional repositories of Danish universities as well as the ongoing university initiative to standardise the categorisation of research documents in order to produce better research output statistics.

The standards for XML and XML-schema used as basis for this document and schema are:
- XML 1.0: Third Edition - <http://www.w3.org/TR/2004/REC-xml-20040204/>
- XML Schema: Second Edition (Part 1 & 2) - <http://www.w3.org/TR/xmlschema-1/> and <http://www.w3.org/TR/xmlschema-2/>

The current document metadata of the Danish Research Database will be converted to the exchange format shortly.

Similar formats for the exchange of metadata for projects, organisations and persons will follow.

Version 1.0.0,
8 November, 2005

Mogens Sandfær, editor

0.2 Preface to version 1.1.0

A new release (v.1.1.0) of the MXD-documentation was decided upon the first experience and usage of the initial corresponding schema. Some fields had been interpreted too restrictive in the schema and thus needed relaxations to comply better with real data. Additionally an extra document type as well as a couple of new supplier names and person roles have been added to the format. We refer further to the changelog from the schema for details in the changes.

Please note that there has been an equivalent new release of the schema and the corresponding stylesheet for sorting elements - more information available on this in section 2.

Version 1.1.0
18 May, 2006

Liv Fugl, editor

0.3 Preface to version 1.2.0

Version 1.2.0 of the MXD-documentation has been released to comply with the demands of the DASTI (Danish Agency for Science, Technology and Innovation) Bibliographic Research Indicator model. Thus elements for unique identification of authors, publishing channels and national research areas have been added in addition to a required create date for each document and type definitions for ISSN and ISBN. Furthermore MXDs document types have been modified to handle the new requirements.

In addition to the demands of DASTI the publication element in the MXD-schema has been expanded with a digital object container that handles the increasing number of full-text documents in managed institutional repositories. Moreover, a few elements and minor changes to the publication container and updates to the enumerated lists have been added. In particular an access attribute to the URI element has been added, to make it easier to promote Open Access in the Danish National Research Database. Changes are explained in detail in the changelog from the schema.

The version number definition has been changed, such that adding backward-compatible changes (like new non-mandatory elements) does not require a new namespace definition in the document.

The version numbering of this format follows a 3-digit numbering scheme, where digit:

1. Represents a major version - an increment would require a thorough study of the new version and subsequent changes of style sheets and other programs. Changes in major version always imply both a new release of the schema, AND a change in the namespace declaration. The new version of the schema will therefore NOT validate older documents.
2. Represents a revision, which modifies some definitions of the previous version in a way that is not backward compatible with older version. An increment of the revision number would most likely require the update of XSLT style sheets for presentation or similar purposes.

Changes in revision always imply both a new release of the schema, AND a change in the namespace declaration. The new version of the schema will therefore NOT validate older documents.

3. Represents a minor revision, which either only contains changes in wording or clarifications, OR expands the vocabulary of certain elements, OR which adds new non-mandatory data elements in a way which still validates older documents with the same version and revision.

An increment in minor revision number may require updates of XSLT style sheets and similar in order to reflect newly-added elements.

Version 1.2.0
19 June, 2008

Mikael K. Elbæk, editor

0.4 Preface to version 1.2.1

Version 1.2.1 of the MXD-documentation has been released to comply with the additional demands of the DASTI (Danish Agency for Science, Technology and Innovation) Bibliographic Research Indicator model. Following the first release (1.2.0) complying with the Bibliographic Research Indicator model there has been identified a need to add the DASTI publisher number in the publication elements report and in_report.

Moreover the data provider READ - Arkitekt- og designskolerne has been added in the documentation of exporting institutions @rec_source.

Version 1.2.1
22 December 2009

Mikael K. Elbæk, editor

0.5 Preface to version 1.2.2

Version 1.2.2 of the MXD-documentation has been released to enable compliancy with the OpenAIRE Guidelines 1.1 (www.openaire.eu). The OpenAIRE Guidelines explicitly requires the declaration of an EC grant agreement number, if the access is embargoed and date stamp indicating the end of the embargo period.

In addition small changes have been adopted to accommodate the requests received from DDF-MXD stakeholders since the last version (1.2.1). The changes includes: the addition of a new state of publication – unpublished related to unpublished material i.e. grey literature. A new <series> field in <report> and <in_report> to accommodate the need to express series titles in the two publication forms. And finally the inclusion of <vol> and <issue> in_report series.

Version 1.2.2
9 May 2011

Mikael K. Elbæk, editor

0.6 Preface to version 1.3.0

Version 1.3.0 of the MXD-documentation has been released to simplify the use of BFI indicators, by moving bfi_journal_no and bfi_publishers_no from a granular level to the higher *Publication* container level. The *DASTI* notion has been replace by *BFI* generally. Bfi_conference_no has been added as an attribute to *Event*. Sub_event has been added to *Event* to enable description of sub event types like Conference track, Lectures and similar and vocabulary for sub event types has been in note 32.

The Namespace has changed to <http://mx.forskningsdatabasen.dk/ns/documents/1.3> where documents replaces MXD.

Version 1.3.0
12 March 2012

Mikael K. Elbæk, editor

0.7 Preface to version 1.3.1

Version 1.3.1 of the MXD-documentation has been released to encompass the need to specify global identifiers for organisations and researchers, hence the inclusion of ORCID (www.orcid.org) and Ringgold (www.ringgold.com). To conform with the practical needs of the exchange format the publication type elements *in_report*, *report*, *in_book* and *book* has been harmonized so that all types includes the elements: <doi>, <issn>, <vol> and <issue>. Three new codes for exporting database/institutions have been added. A new element <oa_link> has been created to define the URL to the electronic Open Access version of the document. Finally two new document (publication) types have been included, in order to accommodate the needs of university colleges in Denmark e.g.: *Bachelor thesis* and *Diploma Bachelor thesis*.

Version 1.3.1
8 June 2015

Birthe Krog, editor

0.8 Preface to version 1.3.1.1

Version 1.3.1.1 of the MXD-documentation has been released to adjust the requirement for the attribute @url in element <oa_link>. @url is changed from '(§) mandatory- when its parent element is used.' to '! Required - whenever it applies and data is available'.

Version 1.3.1.1
3 August, 2015

Birthe Krog, editor

0.9 Preface to version 1.3.2

Version 1.3.2 of the MXD-documentation has been released to add a new data provider code ucv = Professionshøjskolerne to @rec_source. Additionally an extra document type (Case Report) has been added to the format.

Version 1.3.2
23 February, 2016

Birthe Krog, editor

1.0 Preface to version 1.4.0

Version 1.4.0 of the MXD-format includes four changes to the format. A new code “oth” has been added to the attribute @pers_role to contain person roles created locally. New elements - <text> and <year> have been added to the <other>-element to minimise the number of BFI-screening errors. The <editor>-element has been deleted in the <in_book> and <in_report> document types and a new code for @pers_role “pedh” in the <person>-element has been added to replace the previous <editor>-elements.

Lately external identifiers have been added to metadata in the CRIS-systems, so to accommodate the wish for exchanging external identifiers, a new <identifier>-element has been added.

Version 1.4.0
1 August, 2016

Birthe Krog, editor

1.1 Preface to version 1.4.1

Version 1.4.1 of the MXD-format includes two changes to the format.

A new element <related_object> with the attributes @managed ; @rel_type and @obj_type. The element describes the relation between two objects.

A new attribute @total_authors is added to the root-element <ddf_doc>. The attribute contains the total number of authors in the document. The number can differ from the number of registered authors.

Version 1.4.1
15 July, 2018

Birthe Krog, editor

1.2 Preface to version 1.4.2

Version 1.4.2 of the MXD-format includes one changes to the format.

The [person/@aff_no](#) which used to be an interger is now a space separated list of integers (e.g. aff_no="1 6") to allow linking of one person to multiple organisations.

Version 1.4.2
31 January, 2022

Franck Falcoz, editor

1.3 Preface to version 1.4.3

Version 1.4.3 of the MXD-format includes one changes to the format.

The /ddf_doc/rec_source can now have the following additional values:

- kp
- pha
- ucl
- ucn
- ucsyd
- via

See note 6 for details.

Version 1.4.3
31 May, 2022

Franck Falcoz, editor

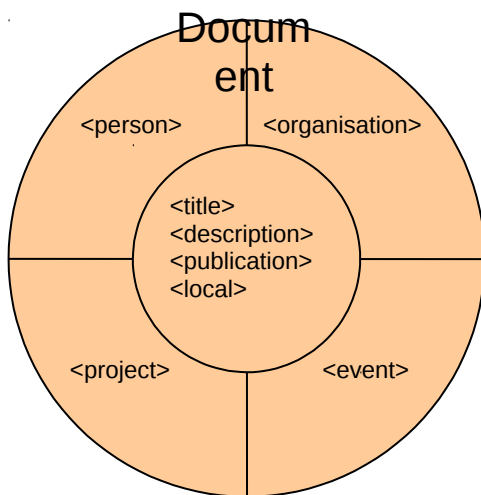
1. Introduction

DDF MXD, the Danish Research Database Metadata Exchange Format for Documents, is intended for the exchange of document metadata between institutional research databases (Institutional Repositories etc.) and the national index and search engine for research information, the Danish Research Database (Den Danske Forskningsdatabase - DDF).

DDF MXD has a simple yet flexible design, intended to cater equally well for the simplest minimum-level metadata as for more detailed and sophisticated cataloguing practises.

DDF MXD may be transported using OAI PMH, the Open Archives Initiative Protocol for Metadata Harvesting, and mapped to OAI DC, the simple Dublin Core format used as default in OAI PMH.

DDF MXD is organised in 8 elements, which may be broken down using sub-elements. The diagram below illustrates the data model and the 8 main elements:



The 4 elements in the centre describe the document itself

- **title**
- **description**
- **publication** information
- **local** information

The surrounding 4 elements, which may be repeated, represent entities related to the document:

- **person**
- **organisation**
- **project**
- **event**

Title

Contains the document title and optional translated title.

Description

Contains a variety of descriptive data types that deal with the content of the document, such as notes, abstracts, subject classifications and keywords etc.

Publication

Contains all the information about how the document was published in the widest sense of the word, including electronic availability via personal homepages, institutional repositories and similar web sites.

Local

Contains additional local information, which may be formatted according to local preferences.

Person

Contains information about any person related to the creation of the document - like authors, editors, composers, publishers, illustrators etc.

Organisation

Contains information about any organisation related to the document, whether it be as the affiliation of an author, as a corporative author or in any other capacity of importance for the document.

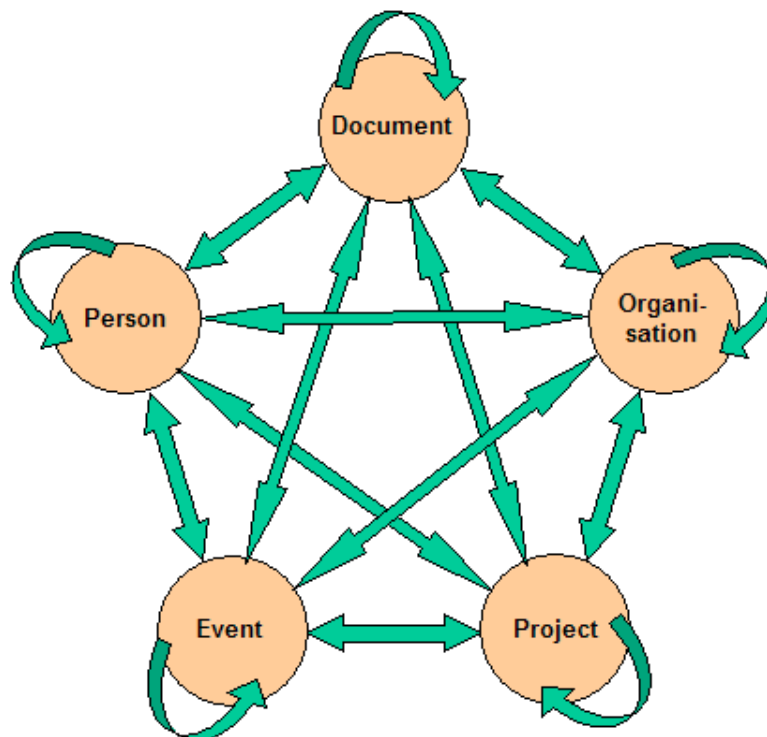
Project

Contains information about any project related to the document.

Event

Contains information about any event (conference, seminar, workshop, meeting, course, etc.) related to the document.

The Exchange Format for Documents is fully compatible with the general data model for the Danish Research Database, illustrated by the diagram below.



As DDF-MXD only serves to describe documents (one of the five DDF information objects above) it has a simple architecture with a few elements describing the document itself and four elements describing the relations to the four other information objects of the model.

Other DDF exchange formats with similar architectures are planned for projects, persons, organisations, etc.

2. Overview of format

The table below is only intended to provide a quick overview.

- For full details please consult to section 3.
- The numbers at the right hand side of the page refer to the notes in section 4.
- Examples illustrating the use of the format may be found at:
<http://mx.forskningsdatabasen.dk/mxd/current/> or in the sub directories of
<http://mx.forskningsdatabasen.dk/mxd/>

General specifications

- UTF-8 is mandatory character encoding for all data
- Whenever an element contains sub-elements, all data must be placed in these sub-elements, rather than in the element itself.
- The latest corresponding XML schema for validation of MXD v.1.3.0 can be found at <http://mx.forskningsdatabasen.dk/ns/documents/1.3>
Please note the sequence of elements in the schema must be obeyed - A stylesheet for sorting can be found at the same address.
- The namespace for the schema is set to <http://mx.forskningsdatabasen.dk/ns/documents/1.3>

Explanation of codes used in the first two columns of the list below

| | |
|-----|---|
| § | Mandatory - in all cases. Records without this element or attribute will be rejected. |
| (§) | Mandatory - when its parent element is used. In such cases, records without this element or attribute will be rejected |
| [§] | Mandatory - when its parent element is used and another specified condition is met. In such cases, records without this element or attribute will be rejected |
| ! | Required - whenever it applies and data is available. These elements or attributes are required to establish a fully functional DDF record, which may be successfully searched, displayed and used for statistics. They cannot, however, be made mandatory, as they do not apply in all cases (e.g. not all publications have a personal author, but if such exists it must be recorded). |

Table of elements and attributes

| | | | |
|----------------------|-----|--|-----|
| Root element: | | | |
| <ddf_doc> | § | | |
| @format_version | § | Exchange format version used - "1.3.1" for current version | |
| @total_authors | ! | Total number of authors if different from no. of persons in the person-element | |
| @doc_type | § | Type of document | 1) |
| @doc_lang | § | Language of document | 2) |
| @doc_year | § | Annual report year of the document (may differ from publication year) | 3) |
| @doc_review | § | Document review process type like "peer-review", "no review" | 4) |
| @doc_level | § | Indicating purpose/audience like "scientific", "educational", "popular" | 5) |
| @rec_source | § | Code of exporting database/institution | 6) |
| @rec_id | § | Data supplier's local record ID - must be unique for supplier | |
| @rec_created | § | Date when the record was first created in the local database, in yyyy-mm-dd | |
| @rec_upd | § | Last update date in format yyyy-mm-dd | |
| @rec_status | § | Whether the record is to be considered as "new", "updated" or "deleted" | 7) |
| Sub-elements: | | | |
| <title> | § | Title of the work in focus | |
| <original> | § | The title in the original language | |
| @xml:lang | ? | Language of title | 2) |
| <main> | § | Main title | |
| <sub> | ! ® | Sub title | |
| <part> | + | Part designation of a multipart work ("Vol. 1", "Bind 1" etc) | |
| <other> | ? | Any other title information | |
| <translated> | ? ® | The title translated to another language | |
| @xml:lang | (§) | Language of title | 2) |
| <main> | (§) | Main title | |
| <sub> | ? ® | Sub title | |
| <part> | ? | Part designation of a multipart work ("Vol. 1", "Bind 1" etc) | |
| <other> | ? | Any other title information | |
| <description> | ! | | |
| <abstract> | ! ® | Summary of content | |
| @xml:lang | ? | Language of abstract | 2) |
| <note> | ? ® | Any descriptive note | |
| @xml:lang | ? | Language of note | 2) |
| <thesis> | ! | Special thesis note | |
| <institution> | ! | Name of the academic institution awarding the degree | |
| <advisor> | + | Name of the academic advisor/supervisor | |
| <aw_date> | + | Date of awarded degree in format yyyy-mm-dd | |
| <other> | ? | Any other information | |
| <subject> | ! | Subject description | |
| <keyword> | ! ® | | |
| @key_type | (§) | Vocabulary/theasurus used, like "EUDISED", "INSPEC" or "free" | 8) |
| @xml:lang | ? | Language of keyword | 2) |
| <class> | ! ® | | |
| @class_type | (§) | Classification system used, like "DDC", "UDC", "DEF", "DK5" | 9) |
| @xml:lang | ? | Language of classification | 2) |
| <research_area> | ! | Special national research area, used by DASTI | |
| @area_code | (§) | One of four national research areas. | 31) |
| @xml:lang | ? | Language of research area | 2) |
| <identifier> | ! ® | Any external identifier | |
| @type | (§) | Code for type of external identifier | 36) |

| | | | |
|-----------------------------|-------|---|-----|
| <person> | ! ® | Person related to the document (in the same sequence as in document) | |
| @pers_role | (§) | Role of the person in relation to the document (see note) | 10) |
| @aff_no | ! | Reference no. of the affiliation within the record (links person to organisation) | 11) |
| <name> | (§) | | |
| <first> | (§) | First name (personal name) or initials | |
| <last> | (§) | Last name (family name) | |
| <id> | ? ® | Identification number or code | |
| @id_type | (§) | Type of ID, registered with DDF - like the international ORCID | 12) |
| @id_source | + | Source of the person-ID, i.e. aau, cbs etc. only for use with the Danish DNFD | 6) |
| <title> | ? | Title | |
| <birthdate> | ? | In format yyyy-mm-dd | |
| <country> | ? | Country of citizenship using ISO country codes | 13) |
| <address> | ? | Postal address | |
| <email> | ? | Email address | |
| <uri> | ? | URI (URL) link to web page | |
| <organisation> | § ® | Organisation related to the document, information formatted as below | |
| @org_role | § | Role of the organisation in relation to the document (see note) | |
| @aff_no | § | Reference no. of the affiliation within the record (links person to organisation) | |
| <name> | § ® | Name - only repeatable in case of language variants | |
| @xml:lang | [§] | Language of organisation name (mandatory if name is repeated) | |
| <level1> | § | Name of highest organisational level (example: university) | |
| <level2> | ! | Name of second organisational level (example: faculty) | |
| <level3> | ! | Name of third organisational level (example: institute, department) | |
| <level4> | ! | Name of fourth organisational level (example: section, center, division) | |
| <acronym> | ! | Acronym | |
| <id> | ? ® | Identification number or code | |
| @id_type | (§) | Type of ID, registered with DDF - like Danish CVR no. | |
| <country> | + | Country of legal residence using ISO country codes | |
| <uri> | ? | URI (URL) link to web page | |
| <project> | ! ® | Project related to the document, information formatted as below | |
| @proj_role | (§) | Role of the project in relation to the document (see note) | |
| <title> | (§) ® | Title - only repeatable in case of language variants | |
| @xml:lang | [§] | Language of project title (mandatory if title is repeated) | |
| <main> | (§) | Main title | |
| <sub> | ! | Sub title | |
| <acronym> | ! | Acronym | |
| <id> | ? ® | Identification number or code | |
| @id_type | (§) | Type of ID, registered with DDF - like local project number | |
| <uri> | ? | URI (URL) link to web page | |
| <event> | ! ® | Event (like conference) related to the document | |
| @event_role | (§) | Role of the event in relation to the document (see note) | |
| @bfi_conference_no | ! | BFI conference number from the BFI conference database | |
| <title> | (§) ® | Title - only repeatable in case of language variants | |
| @xml:lang | [§] | Language of the event title (mandatory if title is repeated) | |
| <full> | (§) | Full title, like "European Conference on Digital Libraries" | |
| <acronym> | ! | Acronym title, like "ECDL" | |
| <year> | ! | Year of the event | |
| <number> | ! | Number in series of recurrent events, like "8" | |
| <dates> | ! | | |
| <start> | (§) | First day of the event in format yyyy-mm-dd, or yyyy-mm, or yyyy | |
| <end> | (§) | Last day of the event in format yyyy-mm-dd, or yyyy-mm, or yyyy | |
| <place> | ! | Place (city, country) of the event/conference | |
| <sub_event> | ! ® | Sub event (like track or lecture) related to the main event and the document | |
| @event_type | (§) | Sub event type in relation to the main event (see note) | |
| <title> | (§) | Title of sub event like "User Group Session 2C (Fedora): Search and Metadata" | |
| @xml:lang | [§] | Language of the sub event title (mandatory if title is repeated) | |
| <acronym> | ! | Acronym title, or call name like "Fedora" | |
| <id> | ? ® | Identification number or code | |
| @id_type | (§) | Type of ID, registered with DDF - like local course id | |
| <uri> | ? | URI (URL) link to web page | |
| <local_field> | ? ® | Locally defined field with optional subfield | |
| @tag_type | (§) | Defining if/how field should be indexed and displayed | |
| @xml:lang | ? | Language of field | |
| <code> | (§) | Field code (tag) using a-z (upper or lower case) and 0-9 only | |
| <data> | (§) | Field data | |
| <subfield> | ? ® | Sub tag | |
| <code> | (§) | Subfield code (tag) using a-z (upper or lower case) and 0-9 only | |
| <data> | (§) | Subfield data | |

| | | | |
|---------------------|-----|---|-----|
| <publication> | § | Use one (minimum) or more of the cases below | |
| @bfi_publisher_no | | BFI publisher number from the authoritative BFI publisher database | 28) |
| @bfi_serial_no | ! | BFI serial number from the authoritative BFI serials database | 28) |
| <in_journal> | ! | Use for articles, papers published in a journal (incl. proceedings issues) | |
| @pub_status | (§) | Status of publication, like "submitted", "accepted", "published" | 18) |
| <title> | (§) | Journal title | |
| <title_alternative> | ! ® | Alternative journal title, i.e. former title, title from other data sources and languages | |
| <issn> | ! ® | ISSN no. without dashes | 23) |
| @type | ! | Defining electronic or print ISSN | |
| <year> | ! | Year of publication in format yyyy | |
| <vol> | ! | Volume no. | |
| <issue> | ! | Issue no. | |
| <pages> | ! | In the format Firstpage-Lastpage (when Paper ID, the number of pages) | 22) |
| <paperid> | ! | Paper ID | |
| <doi> | ! | DOI no. | |
| <uri> | + | URI (URL) link to article on journal web site | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |
| <in_book> | ! | Use for chapters, papers published as a part of a book (incl. proceedings) | |
| @pub_status | (§) | Status of publication, like "submitted", "accepted", "published" | 18) |
| <title> | (§) | Book title | |
| <sub_title> | + | Book sub title | |
| <part> | ! | Part designation of a multipart work ("Vol. 1", "Bind 4: Middelalderen" etc) | |
| <edition> | ! | Book edition, like "2. rev. udg." | |
| <isbn> | ! ® | ISBN no. without dashes | 24) |
| @type | ! | Defining electronic or print ISBN | 29) |
| <series> | ! ® | Book series title | |
| <issn> | ! ® | ISSN no. without dashes | 23) |
| @type | ! | Defining electronic or print ISSN | 29) |
| <place> | ! | Place of publication | |
| <publisher> | ! | Name of publisher | |
| <year> | ! | Year of publication in format yyyy | |
| <vol> | ! | Volume no. | |
| <issue> | ! | Issue no. | |
| <doi> | ! | DOI no. | |
| <pages> | ! | In the format Firstpage-Lastpage | 22) |
| <uri> | + | URI (URL) link to web site of book | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |
| <in_report> | ! | Use for chapters, papers etc published as a part of a report | |
| @pub_status | + | Status of publication, like "submitted", "accepted", "published" | 18) |
| <title> | (§) | Report title | |
| <sub_title> | + | Report sub title | |
| <part> | ! | Part designation of a multipart work ("Vol. 1", "Bind 4: Middelalderen" etc) | |
| <isbn> | ! ® | ISBN no. without dashes | 24) |
| @type | ! | Defining electronic or print ISBN | |
| <series> | ! ® | Report series title | |
| <issn> | ! | ISSN no. without dashes | 23) |
| @type | ! | Defining electronic or print ISSN | 29) |
| <rep_no> | ! ® | Report number | |
| <place> | ! | Place of publication | |
| <publisher> | ! | Name of publisher | |
| <year> | ! | Year of publication in format yyyy | |
| <vol> | ! | Volume no. | |
| <issue> | ! | Issue no. | |
| <pages> | ! | In the format Firstpage-Lastpage | 22) |
| <paperid> | ! | Paper ID | |
| <doi> | ! | DOI no. | |
| <uri> | + | URI (URL) link to web site of report | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |

DDF-MXD - Danish Research Database - Metadata Exchange Format for Documents

| | | | |
|------------------|-----|--|-----|
| <book> | ! | Use when the document is an entire book | |
| @pub_status | (S) | Status of publication, like "submitted", "accepted", "published" | 18) |
| <edition> | ! | Book edition, like "2. rev. udg." | |
| <isbn> | ! ® | ISBN no. without dashes | 24) |
| @type | ! | Defining electronic or print ISBN | |
| <place> | ! | Place of publication | |
| <publisher> | ! | Name of publisher | |
| <year> | ! | Year of publication in format yyyy | |
| <vol> | ! | Volume no. | |
| <issue> | ! | Issue no. | |
| <pages> | ! | Total no. of pages | |
| <doi> | ! | DOI no. | |
| <series> | ! ® | Name of publisher | |
| <issn> | ! ® | ISSN no. without dashes | 23) |
| @type | ! | Defining electronic or print ISSN | 29) |
| <uri> | + | URI (URL) link to web site of book | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |
| <report> | ! | Use when the document is an entire report | |
| @pub_status | + | Status of publication, like "submitted", "accepted", "published" | 18) |
| <isbn> | ! ® | ISBN no. without dashes | 24) |
| @type | ! | Defining electronic or print ISBN | |
| <series> | ! ® | Report series title | |
| <issn> | ! ® | ISSN no. without dashes | 23) |
| @type | ! | Defining electronic or print ISSN | 29) |
| <rep_no> | ! ® | Report number | |
| <place> | ! | Place of publication | |
| <publisher> | ! | Name of publisher | |
| <year> | ! | Year of publication in format yyyy | |
| <vol> | ! | Volume no. | |
| <issue> | ! | Issue no. | |
| <pages> | ! | Total no. of pages | |
| <doi> | ! | DOI no. | |
| <uri> | + | URI (URL) link to web site of book | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |
| <patent> | ! | Use when the document is a patent (application) | |
| @pub_status | (S) | Status of publication, like "submitted", "accepted", "published" | 18) |
| <country> | ! | Country of patent issue using ISO country codes | 13) |
| <ipc> | ! | International Patent Classification | 20) |
| <number> | ! | Patent no. | |
| <date> | ! | Date of status above in format yyyy-mm-dd | |
| <uri> | + | URI (URL) link to web site of patent | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | |
| <inetpub> | ! ® | Use when epublished on the net (web page, preprint server) | |
| <text> | (S) | Text describing the file and service: "PDF on personal home page" | |
| <uri> | (S) | The URI (URL) | |
| @access | + | Use to state the accessibility of the linked article, i.e. "Open Access" | 27) |
| <digital_object> | ! ® | Digital object - typically a full text | |
| @id | (S) | Unique id for the parent record | |
| @role | ! | What is the role of the object in relation to the record ie. Postprint | 30) |
| @access | (S) | Use for stating the access rights for the object ie. "Open Access" | 27) |
| <description> | ! | Description of the specific digital object | |
| <embargo_end> | [S] | Embargo end date in the format yyyy-mm-dd | |
| <file> | (S) | System generated description of the digital_object | |
| @lang | ! | Language of the file | 2) |
| @size | [S] | The size of the file | |
| @mime_type | ! | Mime type for the file must comply with the IANA specifications | 25) |
| @timestamp | [S] | Timestamp given when the file was change or uploaded | 26) |
| @filename | [S] | Name of the file when uploaded | |
| <description> | ! | Description of the specific version | |
| <uri> | ! | URI (URL) to the digital object ie. in the local repository | |

| | | | |
|------------------|-----|--|-----|
| <other> | + | Use for any other form of publication if none of the above apply | |
| <text> | (§) | Any text | |
| <year> | ! | Year of publication in format yyyy | |
| <oa link> | ! ® | URL to the electronic Open Access version of the document | |
| @type | (§) | Defines if the URL points to a local- or remote repository or to a DOI resolver | 33) |
| @version | (§) | Document version of the document the URL points to. Preprint etc. | 34) |
| @public access | (§) | Access rights to the document the URL points to. Open Access etc. | 35) |
| @license | ! | License attached to the file | |
| @embargo start | ! | Embargo start date, if applied - using ISO8601 (yyyy-mm-dd) | |
| @embargo end | ! | Embargo end date, if applied - using ISO8601 (yyyy-mm-dd) | |
| @url | ! | The URL pointing directly to the electronic file | |
| <related_object> | ! ® | An identifier, identifying an object related to the document | |
| @managed | (§) | Indicate if the related object is managed (true) in the same information system as the document or elsewhere in a different system (false) | 37) |
| @rel type | (§) | The type of the relation identifier (id, uri) | 38) |
| @obj type | (§) | The type of the related object eg. Dataset, activity, project etc. | 39) |

3. Annotated list of elements and attributes

This section contains a complete listing of the elements and attributes of the format.

- The numbers at the right hand side of the page refer to the notes in section 4.
- Examples illustrating the use of the format may be found at:
<http://mx.forskningsdatabasen.dk/mxd/current/> or in the sub directories of
<http://mx.forskningsdatabasen.dk/mxd/>
- A more condensed overview table is provided in section 2.

General specifications

- UTF-8 is mandatory character encoding for all data
- Whenever an element contains sub-elements, all data must be placed in these sub-elements, rather than in the element itself.
- The latest corresponding XML schema for validation of MXD v.1.2.0 can be found at
<http://mx.forskningsdatabasen.dk/mxd/1.2.0>
Please note the sequence of elements in the schema must be obeyed - A stylesheet for sorting can be found at the same address.
- The namespace for the schema is set to <http://mx.forskningsdatabasen.dk/mxd/1.2>

Explanation of codes used in the first two columns of the list below

- § **Mandatory** - in all cases.
Records without this element or attribute will be rejected.
- (§) **Mandatory** - when its parent element is used.
In such cases, records without this element or attribute will be rejected
- [§] **Mandatory** - when its parent element is used and another specified condition is met
In such cases, records without this element or attribute will be rejected
- ! **Required** - whenever it applies and data is available.
These elements or attributes are required to establish a fully functional DDF record, which may be successfully searched, displayed and used for statistics. They cannot, however, be made mandatory, as they do not apply in all cases (e.g. not all publications have a personal

author, but if such exists it must be recorded).

- + **Recommended** - whenever it applies and data is available.
These elements or attributes are recommended, as they substantially enhance the functionality and usability of the record.
- ? **Optional** - these elements or attributes are entirely optional. They primarily serve the needs of data suppliers that want to preserve the finer details of their local data – for example to use the DDF data as a backup copy or similar.
- ® **Repeatable** - the element may be repeated

Root element

Notes

- § **ddf_doc**
Root element of one document record. Other DDF record types similarly have type-specific root elements, ddf_pro for projects, ddf_org for organisations, ddf_per for persons, etc.
The element is organised in 8 sub-elements, described on the following pages:
 - ddf_doc/title
 - ddf_doc/description
 - ddf_doc/person
 - ddf_doc/organisation
 - ddf_doc/project
 - ddf_doc/event
 - ddf_doc/local
 - ddf_doc/publication
 - ddf_doc/oa_link
 - ddf_doc/related_object
and the mandatory attributes described below:
- § **ddf_doc/@format_version**
The particular version of the exchange format used, for the current version check the cover. As subsequent versions have now been issued, this aids the schema validation and other applications parsing the XML.
- ! **ddf_doc/@total_authors**
Number of total authors (integer) if different from the number of authors registered in the document.
- § **ddf_doc/@doc_type**
Code for type of document (like "dja" for "journal article") according to the DDF list of types and their codes (see note). Code is used for various retrieval and sorting purposes, see Annex 1. 1)
- § **ddf_doc/@doc_lang**
Code for language of the document itself. Codes must follow the W3C rules for xml:lang, which means complying with IETF RFC 1766 and ISO 639. 2)
- § **ddf_doc/@doc_year**
Annual report year of the document (may differ from publication year) in the format yyyy. This is used for various sorting and searching purposes as well as for data management. 3)
- § **ddf_doc/@doc_review**
Code indicating the type of review the document has been subject to like "peer-review" or "no review". See note for DDF list of review types and their codes. Code is used for various retrieval and sorting purposes, see Annex 1. 4)
- § **ddf_doc/@doc_level**
Code indicating literary scope or level of the document, like "scientific", "educational", "popular". See note for DDF list of levels and their codes. Code is used for various retrieval and sorting purposes, see Annex 1. 5)
- § **ddf_doc/@rec_source**
Code of exporting database/institution. Each organisation/database acting as a source and exporting records to DDF is registered with a unique code. See note for DDF list of source database codes. 6)

§ **ddf_doc/@rec_id**
The data supplier's local/original ID of the record – must be unique per data supplier. In case supplier is exporting from more than one local database, which may use the same IDs, these must be prefixed (with database name or similar) to become unique within the supplier's data.

§ **ddf_doc/@rec_created**
Date when the record was first created in the local database in the format yyyy-mm-dd

§ **ddf_doc/@rec_upd**
Last update date of the exporting database in the format yyyy-mm-dd

§ **ddf_doc/@rec_status**
Code indicating whether the record is to be considered as "new", "updated" or "deleted". Since data is gathered via OAI harvesting "new" records must be set as "updated". See note for DDF list of record status codes.

7)

Title element

| | | | |
|-----|---|---|--|
| § | | ddf_doc/title | |
| | | | Title of the work in focus. Other titles such as conference titles and titles of host publications (journals, books) are recorded in other elements, ddf_doc/event and ddf_doc/publication respectively. The element is organised in the following 2 sub-elements: title/original (mandatory) title/translated (optional and repeatable) |
| § | | ddf_doc/title/original | |
| | | | The title in the original language – use sub-elements below |
| ? | | ddf_doc/title/original/@xml:lang | |
| | | | Language of title 2) |
| § | | ddf_doc/title/original/main | |
| | | | Main title |
| + | ® | ddf_doc/title/original/sub | |
| | | | Sub title |
| + | | ddf_doc/title/original/part | |
| | | | Part designation of a multipart work ("Vol. 1", "Bind 1" etc) |
| ? | | ddf_doc/title/original/other | |
| | | | Any other title information |
| ? | ® | ddf_doc/title/translated | |
| | | | The title translated to another language – use sub-elements below |
| (§) | | ddf_doc/title/translated/@xml:lang | |
| | | | Language of title 2) |
| (§) | | ddf_doc/title/translated/main | |
| | | | Main title |
| ? | ® | ddf_doc/title/translated/sub | |
| | | | Sub title |
| ? | | ddf_doc/title/translated/part | |
| | | | Part designation of a multipart work ("Vol. 1", "Bind 1" etc) |
| ? | | ddf_doc/title/translated/other | |
| | | | Any other title information |

Description element

| | | | |
|-----|---|--|----|
| ! | | ddf_doc/description | |
| | | The description element is the common container for a variety of descriptive data types that deal with the content of the document, such as notes, abstracts, subject classifications and keywords etc. The description element is not mandatory but should be used whenever such data is available. | |
| | | The element is organised in the following sub-elements: | |
| | | description/abstract (summary of the content), | |
| | | description/note (other descriptive notes), | |
| | | description/thesis (special structured note for academic thesis), | |
| | | description/subject/keyword (free or controlled keywords), | |
| | | description/subject/class (classification system codes). | |
| | | description/research_area (special national Danish research areas). | |
| | | Description/identifier (external identifiers) | |
| ! | ® | ddf_doc/description/abstract | |
| | | Summary of content | |
| ? | | ddf_doc/description/abstract/@xml:lang | |
| | | Language of abstract | 2) |
| ? | ® | ddf_doc/description/note | |
| | | Any descriptive note | |
| ? | | ddf_doc/description/note/@xml:lang | |
| | | Language of note | 2) |
| ! | | ddf_doc/description/thesis | |
| | | Special thesis note – use sub-elements below. The attribute ddf_doc/@doc_type is used to differentiate between different types/levels of thesis | 1) |
| ! | | ddf_doc/description/thesis/institution | |
| | | Name of the academic institution awarding the degree | |
| + | | ddf_doc/description/thesis/advisor | |
| | | Name of the academic advisor/supervisor | |
| + | | ddf_doc/description/thesis/aw_date | |
| | | Date of awarded degree in format yyyy-mm-dd | |
| ? | | ddf_doc/description/thesis/other | |
| | | Any other information | |
| ! | | ddf_doc/description/subject | |
| | | Subject description – use sub-elements below. | |
| ! | ® | ddf_doc/description/subject/keyword | |
| | | Keywords – whether free or controlled. | |
| (§) | | ddf_doc/description/subject/keyword/@key_type | |
| | | Vocabulary/thesaurus used, like "EUDISED", "INSPEC" or "free" | 8) |
| ? | | ddf_doc/description/subject/keyword/@xml:lang | |
| | | Language of keyword | 2) |
| ! | ® | ddf_doc/description/subject/class | |
| | | Classification codes according to the system declared in the attribute below. | |
| (§) | | ddf_doc/description/subject/class/@class_type | |
| | | Classification system used, like "DDC", "UDC", "DEF", "DK5" | 9) |
| ? | | ddf_doc/description/subject/class/@xml:lang | |

Language of classification

2)

- !** **ddf_doc/description/research_area**
Special national research area used by the Danish Agency for Science, Technology and Innovation.
- (§)** **ddf_doc/description/research_area/@area_code** 31)
Code for one of the four national research areas, i.e.: Science/technology, Social science, Humanities and Medical science.
- !** **ddf_doc/description/research_area/@xml:lang**
Language of the research area
- !** **@** **ddf_doc/description/identifier**
External identifier according to the type declared in the attribute below
- (§)** **ddf_doc/description/identifier/@type** 36)
Code for type of identifier

Person element

- !** **@** **ddf_doc/person**
This repeatable element is used to record information about any person related to the creation of the document (like authors, editors, composers, publishers, illustrators etc.). Each person and the corresponding role are recorded in a separate instance of the element and the sequence should follow that of the document title page. The correct attribution of persons to documents is essential for any statistical purposes.
The element is organised in the following sub-elements of which most are optional:
person/name (split in first and last name),
person/id (various forms of identification numbers - optional),
person/title (personal title - optional),
person/birthdate (optional),
person/country (of citizenship - recommended),
person/address (postal - optional),
person/email (optional),
person/uri (link to web page - optional)
- (§)** **ddf_doc/person/@pers_role** 10)
Role of the person in relation to the document (see note for authorised values)
- !** **ddf_doc/person/@aff_no** 11)
Internal reference no. of the organisation(s) (ddf_doc/organisation/@aff_no) to which the person was affiliated while creating/contributing to this document.. If a person is affiliated to more than one organisation, the @aff_no should be a space separated list of organisation numbers. e.g. one affiliation aff_no="23", multiple affiliations aff_no="23 6".
- (§)** **ddf_doc/person/name**
Personal name – use sub-elements below
- (§)** **ddf_doc/person/name/first**
First name (personal name) or initials
- (§)** **ddf_doc/person/name/last**
Last name (family name)
- ?** **@** **ddf_doc/person/id**
Identification number or code
- (§)** **ddf_doc/person/@id_type**

| | | |
|---|--|-----|
| | Type of ID, registered with DDF - like ORCID | 12) |
| ! | ddf_doc/person/@id_source Source of the NFDB Person-ID, i.e. aau, cbs etc. A combination of local id and prefix will create a unique id for each author. | 6) |
| ? | ddf_doc/person/title Personal title related to academic degree and/or job function. | |
| ? | ddf_doc/person/birthdate In format yyyy-mm-dd | |
| ? | ddf_doc/person/country Country of citizenship using ISO country codes | 13) |
| ? | ddf_doc/person/address Postal address | |
| ? | ddf_doc/person/email Email address | |
| ? | ddf_doc/person/uri URI (URL) link to web page | |

Organisation element

| | | | |
|-----|---|--|-----|
| § | @ | ddf_doc/organisation | |
| | | This repeatable element is used to record information about any organisation related to the document, whether it be as the affiliation of an author, as a corporative author or in any other capacity of importance for the document. Each organisation and the corresponding role is recorded in a separate instance of the element. The correct attribution of organisations to documents is essential for any statistical purposes. The element is organised in the following sub-elements: organisation/name (split in up to 4 hierarchical levels and acronym), organisation/id (optional), organisation/country (recommended), organisation/uri (link to web page - optional) | |
| § | | ddf_doc/organisation/@org_role | |
| | | Role of the organisation in relation to the document (see note for authorised values) | 14) |
| § | | ddf_doc/organisation/@aff_no | |
| | | Internal reference no. of the organisation. Is used to link persons with the right affiliation. | 11) |
| § | @ | ddf_doc/organisation/name | |
| | | Name - only repeatable in case of language variants - use sub-elements below | |
| [§] | | ddf_doc/organisation/name/@xml:lang | |
| | | Language of organisation name (mandatory if name is repeated) | 2) |
| § | | ddf_doc/organisation/name/level1 | |
| | | Name of highest organisational level (example: university) In cases where the name cannot be split in several hierarchical levels, this sub-element contains the entire name. | |
| ! | | ddf_doc/organisation/name/level2 | |
| | | Name of second organisational level (example: faculty) | |
| ! | | ddf_doc/organisation/name/level3 | |

| | | | |
|-----|---|---|-----|
| | | Name of third organisational level (example: institute, department) | |
| ! | | ddf_doc/organisation/name/level14 | |
| | | Name of fourth organisational level (example: section, division, group) | |
| ! | | ddf_doc/organisation/name/acronym | |
| | | Acronym. Whenever possible, the acronym should reflect the same organisational hierarchy as the levels of the full name, for example UNIV.FACU.INST.GRP | |
| ? | ® | ddf_doc/organisation/id | |
| | | Identification number or code | |
| (S) | | ddf_doc/organisation/id/@id_type | |
| | | Type of ID, registered with DDF - like Danish CVR no. | 12) |
| + | | ddf_doc/organisation/country | |
| | | Country of legal residence using ISO country codes | 13) |
| ? | | ddf_doc/organisation/uri | |
| | | URI (URL) link to web page | |

Project element

| | | | |
|-----|---|---|-----|
| ! | ® | ddf_doc/project | |
| | | This repeatable element is used to record information about any project related to the document. Each project and the corresponding role are recorded in a separate instance of the element. The attribution of projects to documents will allow users to jump easily between projects and their documents. | |
| | | The element is organised in the following sub-elements: | |
| | | project/title (split in main and sub and acronym), | |
| | | project/id (optional) | |
| | | project/uri (link to web page - optional) | |
| (S) | | ddf_doc/project/@proj_role | |
| | | Role of the project in relation to the document (see note for authorised values) | 15) |
| (S) | ® | ddf_doc/project/title | |
| | | Title - only repeatable in case of language variants – use sub-elements below | |
| [S] | | ddf_doc/project/title/@xml:lang | |
| | | Language of project title (mandatory if title is repeated) | 2) |
| (S) | | ddf_doc/project/title/main | |
| | | Main title | |
| ! | | ddf_doc/project/title/sub | |
| | | Sub title | |
| ! | | ddf_doc/project/title/acronym | |
| | | Acronym | |
| ? | ® | ddf_doc/project/id | |
| | | Identification number or code | |
| (S) | | ddf_doc/project/id/@id_type | |
| | | Type of ID, registered with DDF - like local project number | 12) |
| ? | | ddf_doc/project/uri | |
| | | URI (URL) link to web page | |

Event element

| | | | |
|-----|---|--|---|
| ! | ® | ddf_doc/event | |
| | | | This repeatable element is used to record information about any event (conference, seminar, workshop, meeting, course, etc.) related to the document. Each event and its corresponding role are recorded in a separate instance of the element. The element is organised in the following sub-elements: event/title (split in full, acronym and number), event/dates (split in start and end), event/place (split in start and end), event/sub_event (Sub event like track or lecture related to the main event and the document) event/id (Identification number or code) event/uri (link to web page - optional) |
| (§) | | ddf_doc/event/@event_role | |
| | | | Role of the event in relation to the document (see note for authorised values) 16) |
| ! | | ddf_doc/event/@bfi_conference_no | |
| | | | BFI conference number from the BFI conference database 28) |
| (§) | ® | ddf_doc/event/title | |
| | | | Title - only repeatable in case of language variants – use sub-elements below |
| [§] | | ddf_doc/event/title/@xml:lang | |
| | | | Language of the event title (mandatory if title is repeated) 2) |
| (§) | | ddf_doc/event/title/full | |
| | | | Full event title, like "European Conference on Digital Libraries" |
| ! | | ddf_doc/event/title/acronym | |
| | | | Acronym event title, like "ECDL" |
| ! | | ddf_doc/event/title/number | |
| | | | Number in series of recurrent events, like "8" |
| ! | | ddf_doc/event/dates | |
| | | | Start and end dates of event – use sub-elements below: |
| (§) | | ddf_doc/event/dates/start | |
| | | | First day of the event in format yyyy-mm-dd, or yyyy-mm, or yyyy 19) |
| (§) | | ddf_doc/event/dates/end | |
| | | | Last day of the event in format yyyy-mm-dd, or yyyy-mm, or yyyy 19) |
| ! | | ddf_doc/event/place | |
| | | | Place (city, country) of the event/conference |
| (§) | | ddf_doc/event/sub_event/ | |
| | | | Sub event (like track or lecture) related to the main event and the document |
| (§) | | ddf_doc/event/sub_event/@event_role | |
| | | | Role of the sub_event in relation to the main event (see note for authorised values) 32) |
| (§) | ® | ddf_doc/sub_event/title | |
| | | | Title of sub event like "User Group Session 2C (Fedora): Search and Metadata |
| [§] | | ddf_doc/event/sub_event/title/@xml:lang | |

Language of the event title (mandatory if title is repeated)

2)

!

ddf_doc/event/sub_event/title/acronym

Acronym title or call name, like "Fedora"

| | | | |
|-----|---|---|-----|
| ! | ® | ddf_doc/event/sub_event/id Identification number or code | 12) |
| ? | | ddf_doc/event/sub_event/@id_type Type of ID, registered with DDF – like local course ID | |
| (§) | | ddf_doc/event/uri URI (URL) link to web page | |

Local field element

| | | | |
|-----|---|--|-----|
| ? | ® | ddf_doc/local_field This repeatable and optional element is used to handle additional information using a locally defined two-level field structure, where a local field may have one or more parallel subfields. The local_field/@tag_type attribute is used to pass instructions on how to index and display the field and its subfields in the receiving system. The element is organised in the following sub-elements: local_field/code (field code), local_field/data (field data), local_field/subfield (subfield likewise split in code and data) | |
| (§) | | ddf_doc/local_field/@tag_type Defining if/how field and should be indexed and displayed, see note | 17) |
| ? | | ddf_doc/local_field/@xml:lang Language of field | 2) |
| (§) | | ddf_doc/local_field/code Field code (tag) using a-z and 0-9 only | |
| (§) | | ddf_doc/local_field/data Field data | |
| ? | ® | ddf_doc/local_field/subfield Repeatable subfield likewise split in code and data | |
| (§) | | ddf_doc/local_field/subfield/code Subfield code (tag) using a-z and 0-9 only | |
| (§) | | ddf_doc/local_field/subfield/data Subfield data | |

Publication element

§

ddf_doc/publication

The mandatory publication element carries all the information about how the document was published in the widest sense of the word, including electronic availability via personal homepages, institutional repositories and similar web sites.

The publication element is structured in 9 publication cases, each with its own repertoire of sub-elements:

- In a journal (as an article or similar)
- In a book (as a chapter or similar)
- In a report (as a chapter or similar)
- As a book (the book as a whole)
- As a report (the report as a whole)
- As a patent (or patent application)
- As an Internet publication (institutional repository, preprint archive, home page etc.)
- As a Digital object (in a managed institutional repository, preprint archive etc.)
- Any other form of publication

These cases correspond to the sub-elements: `in_journal`, `in_book`, `in_report`, `book`, `report`, `patent`, `digital_object`, `inetpub` and `other`.

At least one of these cases must be applied, but often two or more cases may be applied concurrently. For example, a journal article may be published "In a journal" and at the same be available at the author's institutional repository "As an Internet publication" or "Digital object".

(§)

ddf_doc/publication/@bfi_publisher_no

BFI publisher number from the authoritative BFI publisher database

28)

!

ddf_doc/publication/@bfi_serial_no

BFI serial number from the authoritative BFI serials database

28)

Publication case - In a journal

!

ddf_doc/publication/in_journal

Use for articles, papers, etc. published in a journal (or submitted to a journal for publication)
All data is placed in the sub-elements: `title`, `title_alternative`, `issn`, `year`, `vol`, `issue`, `pages`, `paperid`, `doi`, `journal_no`, `uri`.

(§)

ddf_doc/publication/in_journal/@pub_status

Status of publication, like "submitted", "accepted", "published" – see note.
Is mandatory for in-journal publications because the time from "submitted" to "published" is often long and may cross year boundaries.

18)

(§)

ddf_doc/publication/in_journal/title

Journal title

!

ddf_doc/publication/in_journal/title_alternative

Alternative title of the journal, i.e. former title, title in other languages, title from different data sources.

!

@

ddf_doc/publication/in_journal/issn

Journal ISSN no. without dashes

23)

!

@

ddf_doc/publication/in_journal/issn/@type

Defining type of ISSN, i.e. electronic or primary etc.

29)

!

ddf_doc/publication/in_journal/year

Year of publication in format yyyy

!

ddf_doc/publication/in_journal/vol

Volume number

!

ddf_doc/publication/in_journal/issue

| | | |
|---|--|-----|
| | Issue number | |
| ! | ddf_doc/publication/in_journal/pages | 22) |
| | In the format Firstpage-Lastpage (or in case of Paper ID, the number of pages) | |
| ! | ddf_doc/publication/in_journal/paperid | |
| | Paper ID, an alternative to page numbers, typically used by e-journals | |
| ! | ddf_doc/publication/in_journal/doi | |
| | Digital Object Identifier | |
| + | ddf_doc/publication/in_journal/uri | |
| | URI (URL) link to article on the journal's web site. Information about availability at preprint servers, web sites belonging to author or author's institution or similar should be recorded using the publication case "As an Internet publication" | |
| + | ddf_doc/publication/in_journal/uri/@access | 27) |
| | Use to state the accessibility of the linked article, i.e. "Open Access" | |

Publication case - In a book

| | | |
|-------|--|-----|
| ! | ddf_doc/publication/in_book | |
| | Use for chapters, papers, etc. published as a part of a book (incl. proceedings in book form) All data is placed in the sub-elements: title, sub_title, part, edition, isbn, series, issn, place, publisher, year, vol, issue, doi, pages, uri. | |
| (§) | ddf_doc/publication/in_book/@pub_status | 18) |
| | Status of publication, like "submitted", "accepted", "published" Is mandatory for in-book publications because the time from "submitted" to "published" is often long and may cross year boundaries. | |
| (§) | ddf_doc/publication/in_book/title | |
| | Book title | |
| + | ddf_doc/publication/in_book/sub_title | |
| | Sub title of the host publication/book | |
| ! | ddf_doc/publication/in_book/part | |
| | Part designation of a multipart work ("Vol. 1", "Bind 4: Middelalderen" etc.) | |
| ! | ddf_doc/publication/in_book/edition | |
| | Book edition, like "2nd rev. ed." | |
| ! ® | ddf_doc/publication/in_book/isbn | 24) |
| | ISBN no. without dashes | |
| ! ® | ddf_doc/publication/in_book/isbn/@type | 29) |
| | Defining type of ISBN, i.e. electronic or primary etc. | |
| ! ® | ddf_doc/publication/in_book/series | |
| | Book series information (like "Progress in Nanotechnology, vol. 14") | |
| ! ® | ddf_doc/publication/in_book/issn | 23) |
| | Journal ISSN no. without dashes | |
| ! ® | ddf_doc/publication/in_book/issn/@type | 29) |
| | Defining type of ISSN, i.e. electronic or primary etc. | |
| ! | ddf_doc/publication/in_book/place | |
| | Place of publication | |
| ! | ddf_doc/publication/in_book/publisher | |
| | Name of publisher | |
| ! | ddf_doc/publication/in_book/year | |
| | Year of publication in format yyyy | |

| | | | |
|---|--|---|-----|
| ! | ddf_doc/publication/in_book/vol | Volume number | |
| ! | ddf_doc/publication/in_book/issue | Issue number | |
| ! | ddf_doc/publication/in_book/pages | In the format Firstpage-Lastpage | 22) |
| ! | ddf_doc/publication/in_book/doi | Digital Object Identifier | |
| + | ddf_doc/publication/in_book/uri | URI (URL) link to web site of book | |
| + | ddf_doc/publication/in_book/uri/@access | Use to state the accessibility of the linked web site of the book, i.e. "Open Access" | 27) |

Publication case - In a report

| | | | |
|-----|---|--|-----|
| ! | ddf_doc/publication/in_report | Use for chapters, papers, etc. published as a part of a report. All data is placed in the sub-elements: title, sub_title, part, isbn, series, issn, rep_no, place, publisher, year, vol, issue, pages, papered, doi, uri. | |
| + | ddf_doc/publication/in_report/@pub_status | Status of publication, like "submitted", "accepted", "published" | 18) |
| (§) | ddf_doc/publication/in_report/title | Report title | |
| + | ddf_doc/publication/in_report/sub_title | Sub title of the host publication/report | |
| + | ddf_doc/publication/in_report/part | Part designation of a multipart work ("Vol. 1", "Bind 4: Middelalderen" etc.) | |
| ! | ® ddf_doc/publication/in_report/isbn | ISBN no. without dashes | 24) |
| ! | ® ddf_doc/publication/in_report/isbn/@type | Defining type of ISBN, i.e. electronic or primary etc. | 29) |
| ! | ® ddf_doc/publication/in_report/series | Report series title | |
| ! | ® ddf_doc/publication/in_report/issn | Journal ISSN no. without dashes | 23) |
| ! | ® ddf_doc/publication/in_report/issn/@type | Defining type of ISSN, i.e. electronic or primary etc. | 29) |
| ! | ddf_doc/publication/in_report/rep_no | Report number | |
| ! | ddf_doc/publication/in_report/place | Place of publication | |
| ! | ddf_doc/publication/in_report/publisher | Name of publisher | |
| ! | ddf_doc/publication/in_report/year | Year of publication in format yyyy | |

| | | | |
|---|--|---|-----|
| ! | ddf_doc/publication/in_report/vol | Volume number | |
| ! | ddf_doc/publication/in_report/issue | Issue number | |
| ! | ddf_doc/publication/in_report/pages | In the format Firstpage-Lastpage | 22) |
| ! | ddf_doc/publication/in_report/paperid | Paper ID | |
| ! | ddf_doc/publication/in_report/doi | Digital Object Identifier | |
| + | ddf_doc/publication/in_report/uri | URI (URL) link to web site of report | |
| + | ddf_doc/publication/in_report/uri/@access | Use to state the accessibility of the linked web site of the report, i.e. "Open Access" | 27) |

Publication case – As a book

| | | | |
|-----|--|--|-----|
| ! | ddf_doc/publication/book | Use when the document is an entire book All data is placed in the sub-elements: <i>edition, isbn, place, publisher, year, vol, issue, pages, doi, series, issn, uri.</i> Note that in this case, the book title information is placed in <i>ddf_doc/title.</i> | |
| (§) | ddf_doc/publication/book/@pub_status | Status of publication, like "submitted", "accepted", "published" | 18) |
| ! | ddf_doc/publication/book/edition | Book edition, like "2nd rev. ed." | |
| ! | ® ddf_doc/publication/book/isbn | ISBN no. without dashes | 24) |
| ! | ® ddf_doc/publication/book/isbn/@type | Defining type of ISBN, i.e. electronic or primary etc. | 29) |
| ! | ddf_doc/publication/book/place | Place of publication | |
| ! | ddf_doc/publication/book/publisher | Name of publisher | |
| ! | ddf_doc/publication/book/year | Year of publication in format yyyy | |
| ! | ddf_doc/publication/book/vol | Volume number | |
| ! | ddf_doc/publication/book/issue | Issue number | |
| ! | ddf_doc/publication/book/pages | Total no. of pages | |
| ! | ddf_doc/publication/book/doi | Digital Object Identifier | |
| ! | ® ddf_doc/publication/book/series | Book series information (like "Progress in Nanotechnology, vol. 14") | |

| | | | |
|---|---|---|-----|
| ! | ® | ddf_doc/publication/book/issn | 23) |
| | | Journal ISSN no. without dashes | |
| ! | ® | ddf_doc/publication/book/issn/@type | 29) |
| | | Defining type of ISSN, i.e. electronic or primary etc. | |
| + | | ddf_doc/publication/book/uri | |
| | | URI (URL) link to web site of book | |
| + | | ddf_doc/publication/book/uri/@access | 27) |
| | | Use to state the accessibility of the linked web site of the book, i.e. "Open Access" | |

Publication case – As a report

| | | | |
|---|---|---|-----|
| ! | | ddf_doc/publication/report | |
| | | Use when the document is an entire report All data is placed in the sub-elements: isbn, series, issn, rep_no, place, publisher, year, vol, issue, pages, doi, uri. Note that in this case, the report title information is placed in ddf_doc/title. | |
| + | | ddf_doc/publication/report/@pub_status | 18) |
| | | Status of publication, like "submitted", "accepted", "published" | |
| ! | ® | ddf_doc/publication/report/isbn | 24) |
| | | ISBN no. without dashes | |
| ! | | ddf_doc/publication/report/isbn/@type | 29) |
| | | Defining type of ISBN, i.e. electronic or primary etc. | |
| ! | ® | ddf_doc/publication/report/series | |
| | | Report series title | |
| ! | ® | ddf_doc/publication/report/issn | 23) |
| | | Journal ISSN no. without dashes | |
| ! | | ddf_doc/publication/report/issn/@type | 29) |
| | | Defining type of ISSN, i.e. electronic or primary etc. | |
| ! | ® | ddf_doc/publication/report/rep_no | |
| | | Report series and number | |
| ! | | ddf_doc/publication/report/place | |
| | | Place of publication | |
| ! | | ddf_doc/publication/report/publisher | |
| | | Name of publisher | |
| ! | | ddf_doc/publication/report/year | |
| | | Year of publication in format yyyy | |
| ! | | ddf_doc/publication/report/vol | |
| | | Volume number | |
| ! | | ddf_doc/publication/report/issue | |
| | | Issue number | |
| ! | | ddf_doc/publication/report/pages | |
| | | Total no. of pages | |
| ! | | ddf_doc/publication/report/doi | |
| | | Digital Object Identifier | |
| + | | ddf_doc/publication/report/uri | |
| | | URI (URL) link to web site of report | |

- + **ddf_doc/publication/report/uri/@access** 27)
Use to state the accessibility of the linked web site of the record, i.e. "Open Access"

Publication case – As a patent

- ! **ddf_doc/publication/patent**
Use when the document is a patent (or a patent application)
All data is placed in the sub-elements: country, ipc, number, date, uri.
- (§) **ddf_doc/publication/patent/@pub_status** 18)
Status of publication, like "submitted", "accepted", "published"
Is mandatory for patent publications because the time from "submitted" to "published" is often long and may cross year boundaries.
- ! **ddf_doc/publication/patent/country** 13)
Country of patent issue using ISO country codes
- ! **ddf_doc/publication/patent/ipc** 20)
International Patent Classification
- ! **ddf_doc/publication/patent/number**
Patent no.
- ! **ddf_doc/publication/patent/date**
Date of status above in format yyyy-mm-dd
- + **ddf_doc/publication/patent/uri**
URI (URL) link to web site of patent
- + **ddf_doc/publication/patent/uri/@access** 27)
Use to state the accessibility of linked web site of the patent, i.e. "Open Access"

Publication case – As an Internet publication

- ! ® **ddf_doc/publication/inetpub**
Use when published electronically on the net (institutional repository, author's homepage, preprint server, etc.) If the document is also published in a journal, book or report, the corresponding publication cases should be used in addition.
All data is placed in the sub-elements: text and uri.
- (§) **ddf_doc/publication/inetpub/text**
Text describing the service/file behind the URI like "PDF on personal home page", "PDF in institutional repository", "LaTeX at arXiv preprint server".
- (§) **ddf_doc/publication/inetpub/uri**
The URI (URL)
- + **ddf_doc/publication/inetpub/uri/@access** 27)
Use to stat the accessibility of the service/file, i.e. "Open Access"

Publication case – Digital object

- ! **ddf_doc/publication/digital_object**
Use when published in repository managed by the data provider. Typically an institutional repository integrated into a CRIS. If the document is also published on the net in an unmanaged/external repository or website the Internet publication case should be used in addition. A typical case is that to submit a post print to an institutional repository you must also link to the publisher version, i.e. inetpub.

All data is placed in the sub-elements: description, embargo_end, file, uri
- (§) **ddf_doc/publication/digital_object/@id**

| | | |
|------|--|-----|
| | Unique id for the parent record | |
| ! | ddf_doc/publication/digital_object/@role What is the role of the object in relation to the record, i.e. full text "preprint", "postprint", or "publisher version". | 30) |
| (\$) | ddf_doc/publication/digital_object/@access Use for stating the access rights for the object i.e. "Open Access", campus access etc. | 27) |
| ! | ddf_doc/publication/digital_object/description Description of the digital object | |
| [\$] | ddf_doc/publication/digital_object/embargo_end Embargo end date in the format yyyy-mm-dd | |
| (\$) | ddf_doc/publication/digital_object/file System generated description of the digital object | |
| ! | ddf_doc/publication/digital_object/file/@lang Language of the file | 2) |
| [\$] | ddf_doc/publication/digital_object/file/@size The size of the file | |
| ! | ddf_doc/publication/digital_object/file/@mime_type Mime type for the file must comply with the IANA specifications | 25) |
| [\$] | ddf_doc/publication/digital_object/file/@timestamp Timestamp given when the file was change or uploaded | 26) |
| [\$] | ddf_doc/publication/digital_object/file/@file Name of the file when it was uploaded | |
| ! | ddf_doc/publication/digital_object/file/description Description of the specific version | |
| ! | ddf_doc/publication/digital_object/uri URI (URL) to the digital object, i.e. in the local repository | |

Publication case – Other

| | | |
|------|--|--|
| + | ddf_doc/publication/other Use for any other form of publication - if none of the above apply | |
| (\$) | ddf_doc/publication/other/text Any text describing the publication | |
| ! | ddf_doc/publication/other/year Year of publication in format yyyy. | |

OA Link element

| | | |
|------|--|-----|
| ! | @ ddf_doc/oa_link This repeatable element is used to define the direct URL to the electronic Open Access version of the document. The oa_link element is not mandatory but should be used whenever such data is available. | |
| (\$) | ddf_doc/oa_link/@type Defines the type of the repository / resolver the URL points to, like "loc", "rem" and "doi" – see note. | 33) |
| (\$) | ddf_doc/oa_link/@version Describes the version of the document the URL points to, like "pre", "afv", "pub" and "oth" – see | 34) |

note.

- (§) **ddf_doc/oa_link/@public_access** 35)
 Describes the access rights to the document the URL points to, "oa", "ea", "ra", "ca" and "und" – see note.
- ! **ddf_doc/oa_link/@license**
 Describes the license attached to the document, if applied, like "cc-by"
- ! **ddf_doc/oa_link/@embargo_start**
 Embargo start date, if applied. In the format yyyy-mm-dd
- ! **ddf_doc/oa_link/@embargo_end**
 Embargo end date, if applied. In the format yyyy-mm-dd
- ! **ddf_doc/oa_link/@url**
 The URL pointing directly to the electronic file.

Related Object element

- ! @ **ddf_doc/related_object**
 This repeatable element is used to define the relation between objects. The element is not mandatory but should be used whenever such data is available.
- (§) **ddf_doc/related_object/@managed** 37)
 Indicates if the related objects are managed in the same system or in separate systems
- (§) **ddf_doc/related_object/@rel_type** 38)
 Describes the relation type eg. "uri", "doi" or "id" – see note.
- (§) **ddf_doc/related_object/@obj_type** 39)
 Describes the type of the object eg. "dataset", "publication", "activity" etc. – see note.

4. Notes

The notes in this section are referred to in section 2 and 3. They primarily consist of authoritative lists of codes and corresponding display values, which define the controlled vocabularies of a number of key attributes.

In many cases, these vocabularies may be extended by the DDF secretariat, acting as the DDF-MXD maintenance agency. DDF data suppliers needing such extensions should contact the DDF secretariat.

1) Type of document - codes and display text (for @doc_type)

| Code | Danish text | English text | Comment |
|------|--------------------------------|-----------------------------|--|
| dja | Tidsskrift-artikel | Journal article | Full article |
| djl | Tidsskrift-brev til redaktøren | Letter to the editor | Journal letters, letters to editor |
| djc | Tidsskrift-kommentar | Journal comment | Comments to the journal |
| djr | Tidsskrifts-review artikel | Journal review article | Review in journal |
| djb | Tidsskrifts-anmeldelse | Journal book review | Book review |
| dna | Avis-artikel | Newspaper article | |
| db | Bog | Book | An entire book |
| dba | Bog-kapitel | Book chapter | A chapter or article in a book |
| dbp | Bog forord, leksikonartikel | Book preface, encycl. entry | Entry in encyclopedia, preface to book |
| dr | Rapport | Report | |
| dra | Rapport-kapitel | Report chapter | |
| dcp | Konference-paper | Conference paper | Full paper |
| dca | Konference-abstract | Conference abstract | Abstract only |
| dco | Konference-plakat | Conference poster | |
| dcr | Case report | Case report | |
| dct | Konference-foredrag | Conference talk | Slides, video, audio of talk |
| dw | Arbejdsrapport, (pr)eprint | Working paper, (pr)eprint | Informal print or Internet publication |
| dln | Undervisning-noter | Lecture notes | |
| dl | Undervisning-forelæsning | Lecture | Slides, video, audio of lecture |
| dp | Patent | Patent | |
| dtd | Afhandling-Doktor | Thesis Doctoral | |
| dtp | Afhandling-Ph.D. | Thesis PhD | |
| dtm | Afhandling-Kandidat | Thesis Master | |
| dtb | Afhandling-Bachelor | Thesis Bachelor | |
| dtdb | Afhandling-Diploma Bachelor | Thesis Diploma Bachelor | |
| dts | Studenterrapport | Student report | |
| dso | Software | Software | |
| dd | Datasæt | Data set | |
| drt | Radio/TV-udsendelse | Radio/TV broadcast | Public broadcast |
| dx | Udstillingskatalog | Exhibition catalogue | |
| do | Andet | Other | |

See note 21) for valid combinations of @doc_type, @doc_review and @doc_level and comments on the use of these attributes for statistical purposes.

2) Language codes (for @doc_lang and @xml:lang)

Codes must comply with the W3C rules for xml:lang, namely IETF RFC 3066 and ISO 639.

See <http://www.ietf.org/rfc/rfc3066.txt>
and <http://www.w3.org/WAI/ER/IG/ert/iso639.htm>
and <http://www.loc.gov/standards/iso639-2/>

In practice this provides for the use of 2-letter (ISO 639-1) as well as 3-letter codes (ISO 639-2). As the 3-letter codes are the most common in the bibliographical context, some illustrative examples (including mappings) are

listed below. Please note the extra available codes “mul” and “und” for multiple languages and undetermined language respectively in ISO 639-2.

► As an example:

| | | | |
|--------------|--------------------|---------------------|-----------------------|
| 639-2 | Danish text | English text | (639-1 equiv.) |
| dan | Dansk | Danish | da |

3) Annual report year of document (for @doc_year)

A 4-digit year indicating which annual report year ("indberetningsår") the document belongs to. In most cases this will be the same as the publication year, but (formal) publishing sometimes is not completed before the following calendar year or even later – a process outside the control of the author and the institution and a process which sometimes is repeated for the same document. The annual report year, on the other hand, documents when the institution considered the document to be completed and ready for listing in the annual report – a process under the control of the institution and which cannot be repeated for the same document. Thus the annual report year may be used for statistical purposes.

4) Indicator for document review process (quality control) (for @doc_review)

| Code | Danish text | English text | Comment |
|------|--------------|--------------|---|
| pr | Peer review | Peer review | |
| or | Andet review | Other review | Editorial, institutional review etc. |
| nr | Intet review | No review | |
| und | Ubestemt | Undetermined | The nature of the review process (if any) could not be determined |

See note 21) for valid combinations of @doc_type, @doc_review and @doc_level and comments on the use of these attributes for statistical purposes.

5) Indicator for literary scope/level of document (for @doc_level)

| Code | Danish text | English text | Comment |
|------|-----------------------|----------------|--|
| sci | Videnskabelig | Scientific | |
| edu | Undervisningsrettet | Educational | |
| pop | Populærvideenskabelig | Popular | |
| adm | Administrativ | Administrative | Progress reports, Annual reports, etc |
| und | Ubestemt | Undetermined | The literary scope/level could not be determined |

See note 21) for valid combinations of @doc_type, @doc_review and @doc_level and comments on the use of these attributes for statistical purposes.

6) Codes for exporting database/institution (for @rec_source)

Codes in alphabetical order:

| Code | Danish text |
|--------|--|
| aaa | Arkitektskolen i Aarhus |
| aardas | Århus Dag- og Aftenseminarium |
| aas | Aalborg Sygehus |
| afg | Dansk Institut for Klinisk Epidemiologi |
| agri | Danmarks JordbrugsForskning |
| ai | Arbejds miljø Information |
| akf | Amternes og kommunernes forskningsinstitut |

| | |
|-----------|---|
| ami | Det nationale forskningscenter for Arbejdsmiljø |
| amr | Arbejdsmiljørådets Service Center |
| ark | READ - Arkitekt- og designskolerne |
| au | Aarhus Universitet |
| aau | Aalborg Universitet |
| bio | Det Bioteknologiske Forsknings- og Udviklingsprogram |
| bioteknik | Teknologisk Institut. Bioteknik |
| can | Kræftens Bekæmpelse |
| cbs | Copenhagen Business School |
| cemtv | Center for Evaluering af Medicinsk Teknologivurering |
| cfb | Center for Børnelitteratur |
| cuf | Dansk Center for Internationale Studier og Menneskerettigheder |
| dbi | Danmarks Biblioteksskole |
| dds | Danmarks Designskole |
| dfs | Dansk Folkemindesamling |
| diis | DIIS - Dansk Institut for Internationale Studier |
| dlh | Danmarks Lærerhøjskole |
| dmf | Dansk Matematisk Forening |
| dmu | Danmarks Miljøundersøgelser |
| dpi | Danmarks Pædagogiske Institut |
| dpu | Danmarks Pædagogiske Universitet |
| dss | Dansk Institut for Sundheds- og Sygeplejeforskning |
| dtf | Danmarks Transport Forskning |
| dtu | Danmarks Tekniske Universitet |
| ens | Energistyrelsen |
| fak | Forsvarsakademiet |
| far | Danmarks Farmaceutiske Universitet |
| for | Forskningsstyrelsen |
| fou | Forsknings- og udviklingscentret for Hjælpemidler og Rehabilitering |
| fri | Forskningscenter Risø |
| fsl | Forskningscenter for Skov og Landskab |
| ftu | FTU-programmet |
| geus | Danmarks og Grønlands Geologiske Undersøgelse |
| hha | Handelshøjskolen i Århus |
| hhs | Handelshøjskole Syd |
| hvhosp | Hvidovre Hospital |
| ifg | Institut for grænseregionsforskning |
| ifo | Institut for Forskning i Idræt og Folkelig Oplysning |
| itu | IT-universitetet i København |
| jpsem | Jydsk Pædagogseminarium |
| ka | Kunstakademiets Arkitektskole |
| kab | Danmarks Kunstbibliotek |
| kas | Københavns Amts Sygehusvæsen |
| kib | Kunstindustrimuseets Bibliotek |
| kp | Københavns Professionshøjskole |
| ku | Københavns Universitet |
| kvl | Københavns Universitet Det Biovidenskabelige Fakultet |
| mup | Det Materiale teknologiske Udviklingsprogram |
| nlb | Danmarks Natur- og Lægevidenskabelige Bibliotek |
| pha | Professionshøjskolen Absalon |
| regionh | Region Hovedstadens Hospitaler |
| ruc | Roskilde Universitet |
| sbi | By og Byg. Statens Byggeforskningsinstitut |
| sdu | Syddansk Universitet |
| seb | Sekretariat for Børnekultur netværk |

| | |
|-------|--|
| sfi | SFI – Det Nationale Forskningscenter for Velfærd |
| shu | Statens Husdyrbrugsforsøg |
| sjj | Statens Jordbrugs- og Fiskeriøkonomiske Institut |
| sp | Statens Planteavlslaboratorium |
| ssl | Statens Skadedyrslaboratorium |
| suc | Sydjysk Universitetscenter |
| svs | Statens Veterinære Serumlab. og Statens Veterinære. Inst. for Virusforskning |
| ucl | UCL Erhvervsakademi og Professionshøjskole |
| ucn | Professionshøjskolen UCN |
| ucsyd | UC SYD |
| ucv | Professionshøjskolerne |
| via | VIA University College |
| ▶ | Further codes may be registered with DDF |

7) Record status codes (for @rec_status)

| Code | Danish text | English text | Comment |
|------|--------------|--------------------------|---------|
| n | Ny post | New record | |
| c | Rettet post | Corrected/updated record | |
| d | Slettet post | Deleted record | |

Note: Since data is gathered via OAI harvesting, 'new' (n) records should be set as 'updated' (c).

8) Keyword vocabulary/thesaurus (for @key_type)

| Code | Danish text | English text | Comment |
|------|-------------------|-------------------|---------|
| fre | Fri/ukontrolleret | Free/uncontrolled | |
| ini | INIS | INIS | |
| eud | EUDISED | EUDISED | |
| ins | INSPEC | INSPEC | |
| loc | Lokal | Local | |

▶ Further codes may be registered with DDF

9) Classification system (for @class_type)

| Code | Danish text | English text | Comment |
|------|-------------|--------------|---------|
| ddc | Dewey | Dewey | |
| udc | UDK | UDC | |
| dk5 | DK5 | DK5 | |
| def | DEF | DEF | |
| loc | Lokal | Local | |

▶ Further codes may be registered with DDF

10) Person roles in relation to document (for @pers_role)

| Code | Danish text | English text | Comment |
|------|------------------------------|----------------------------|---------------------------------------|
| pau | Forfatter | Author | |
| pa1 | Primær forfatter | Primary author | Optional – if needed to differentiate |
| pa2 | Sekundær forfatter | Secondary author | Optional – if needed to differentiate |
| ped | Redaktør | Editor | |
| pedh | Redaktør af værtspublikation | Editor of host publication | |
| ppu | Udgiver | Publisher | |

| | | |
|-----|-------------|-------------|
| ptr | Oversætter | Translator |
| pil | Illustrator | Illustrator |
| inv | Opfinder | Inventor |
| sup | Vejleder | Supervisor |
| oth | Andet | Other |

- ▶ Further codes may be registered with DDF

11) Affiliation reference key (for @aff_no)

For the organisation, the reference key is a simple number “0”-“999” which uniquely identifies organisations within the document record. For the person, the reference key is a list (space separated) of numbers which are used to associate a person unambiguously with one or more organisations to which s/he is affiliated. The reference key is not intended to carry any meaning outside the context of the document record.

12) Identification system codes (for @id_type)

| Code | Danish text | English text | Comment |
|-----------|------------------------------|----------------------------|---|
| cpr | CPR nr. | CPR no. | Danish national person identification |
| cvr | CVR nr. | CVR no. | Danish national enterprise identification |
| orcid | ORCID ID | ORCID ID | Open Researcher and Contributor ID |
| ddf_rec | DDF post ID | DDF record ID | Danish Research Database record ID |
| loc_rec | Lokal post ID | Local record ID | Local (data supplier) record ID* |
| loc_per | Lokal person ID | Local person ID | Local (data supplier) person ID* |
| loc_pro | Lokal project ID | Local project ID | Local (data supplier) project ID* |
| loc_org | Lokal organisations-ID | Local organisation ID | Local (data supplier) organisation ID* |
| loc_eve | Lokal event-ID | Local event ID | Local (data supplier) event ID* |
| ringgold | Ringgold ID | Ringgold ID | Institutional identifiers provided by Ringgold.com |
| fi_nfdb | FI national forsker database | FI national researcher DB | For use with the Danish researcher DB |
| ec_ga_fp7 | EU FP7 Bevillingsaftale nr. | EC FP7 Grant Agreement No. | For use with OpenAIRE compliance and EC Grant Agreement numbers |

► Further codes may be registered with DDF

* The local IDs are defined by the data supplying organisations see note 6).

A local ID prefixed with the code of the data-supplying organisation becomes nationally unique.

13) Countries - codes and names

| Code | Danish text | English text | Comment |
|------|----------------|---------------|---------|
| au | Australien | Australia | |
| at | Østrig | Austria | |
| ca | Canada | Canada | |
| ch | Schweiz | Switzerland | |
| cn | Kina | China | |
| de | Tyskland | Germany | |
| dk | Danmark | Denmark | |
| es | Spanien | Spain | |
| fi | Finland | Finland | |
| fr | Frankrig | France | |
| gb | Storbritannien | Great Britain | |
| gr | Grækenland | Greece | |
| hu | Ungarn | Hungary | |
| ie | Irland | Ireland | |
| in | Indien | India | |
| is | Island | Iceland | |
| it | Italien | Italia | |
| jp | Japan | Japan | |
| nl | Nederlandene | Netherlands | |
| no | Norge | Norway | |
| rs | Serbien | Serbia | |
| ru | Rusland | Russia | |
| pl | Polen | Poland | |
| pt | Portugal | Portugal | |
| se | Sverige | Sweden | |
| th | Thailand | Thailand | |
| us | USA | USA | |

za Sydafrika South Africa
...

- Further country codes may be added according to ISO 3166
See <http://www.iso.org/iso/en/prods-services/iso3166ma/index.html>

14) Organisation roles in relation to document (for @org_role)

| Code | Danish text | English text | Comment |
|------|-------------------------|------------------|---------|
| oau | Korporativ forfatter | Corporate author | |
| oaf | Institutionstilknytning | Affiliation | |
| opu | Udgiver | Publisher | |

- Further codes may be registered with DDF

15) Project roles in relation to document (for @proj_role)

| Code | Danish text | English text | Comment |
|------|---------------|----------------|---------|
| pd | Leverance fra | Deliverable of | |
| pr | Relateret til | Related to | |

- Further codes may be registered with DDF

16) Event roles in relation to document (for @event_role)

| Code | Danish text | English text | Comment |
|------|-----------------|--------------|---------|
| ep | Præsenteret ved | Presented at | |
| er | Relateret til | Related to | |

- Further codes may be registered with DDF

17) Local field types (for @tag_type)

| Code | Field treatment in DDF |
|------|---|
| 1 | Field is neither indexed nor displayed in search module |
| 2 | Field may be displayed in search module |
| 3 | Field may be indexed in search module |
| 4 | Field may be indexed and displayed in search module |

18) Status of publication (for @pub_status)

| Code | Danish text | English text | Comment |
|------|-------------------------|------------------------------|----------------------|
| s | Indsendt | Submitted | |
| a | Accepteret | Accepted | |
| i | I trykken | In press | |
| e | E-publiceret (før tryk) | E-published (ahead of print) | |
| p | Publiceret | Published | |
| u | Upubliceret | Unpublished | e.g. grey literature |

19) Date format for events

The start and end dates of events may be recorded as a year (yyyy e.g. "2004"), as a month (yyyy-mm e.g. "2004-11") or as a day (yyyy-mm-dd e.g. "2004-11-03")

20) International Patent Classification

The Strasbourg Agreement (of 1971) concerning the International Patent Classification provides for a common classification for patents for invention including published patent applications, utility models and utility certificates. The International Patent Classification (IPC) is a hierarchical system in which the whole area of technology is divided into a range of sections, classes, subclasses and groups.

See <http://www.wipo.int/classifications/ipc/en/>

21) Valid combinations of values of the 3 attributes @doc_type, @doc_review and @doc_level

| @doc_type | | @doc_review | | | | @doc_level | | | | |
|------------------------------------|------|-------------|----|----|-----|------------|-----|-----|-----|-----|
| English display text | code | pr | or | nr | und | sci | edu | pop | adm | und |
| Journal article | dja | pr | or | nr | und | sci | edu | pop | | und |
| Journal letter (to the editor) | djl | pr | or | nr | und | sci | edu | pop | | und |
| Journal comment | djc | pr | or | nr | und | sci | edu | pop | | und |
| Journal review article | djr | pr | or | nr | und | sci | edu | pop | | und |
| Journal book review | djb | pr | or | nr | und | sci | edu | pop | | und |
| Newspaper article | dna | | or | nr | und | | | pop | | Und |
| Book | db | pr | or | nr | und | sci | edu | pop | | und |
| Book chapter | dba | pr | or | nr | und | sci | edu | pop | | und |
| Book preface, encyclopedia article | dbp | pr | or | nr | und | sci | edu | pop | | und |
| Report | dr | pr | or | nr | und | sci | edu | | adm | und |
| Report chapter | dra | pr | or | nr | und | sci | edu | | adm | und |
| Conference paper | dcp | pr | or | nr | und | sci | edu | | | und |
| Conference abstract | dca | pr | or | nr | und | sci | edu | | | und |
| Conference poster | dco | pr | or | nr | und | sci | edu | | | und |
| Conference talk/presentation | dct | pr | or | nr | und | sci | edu | | | und |
| Working paper, (pr)epprint, ... | dw | | or | nr | und | sci | edu | pop | adm | und |
| Lecture notes | dln | | | nr | und | | edu | | | und |
| Lecture | dl | | | nr | und | | edu | | | und |
| Patent | dp | | | nr | und | sci | | | | und |
| Thesis Doctoral | dtd | | | nr | und | sci | | | | und |
| Thesis Ph.D. | dtp | | | nr | und | sci | | | | und |
| Thesis Master | dtm | | | nr | und | | edu | | | und |
| Thesis Bachelor | dtb | | | nr | und | | edu | | | und |
| Thesis Diploma Bachelor | dtdb | | | nr | und | | edu | | | und |
| Student report | dts | | | nr | und | | edu | | | und |
| Software | dso | | | nr | und | sci | edu | | adm | und |
| Data set | dd | | | nr | und | sci | edu | | adm | und |
| Radio/TV broadcast | drt | | | nr | und | | edu | pop | | und |
| Other | do | pr | or | nr | und | sci | edu | pop | adm | und |

The table above specifies for each @doc_type value the allowed values of @doc_review and @doc_level. For example: "dna" (newspaper article) may be combined with either "or" or "nr" and with "pop".

One may retrieve documents (and statistical figures) using these three attributes in combination. In a number of cases a fourth attribute, @doc_lang, may be added in order to distinguish between documents in national languages (Danish etc.) and documents in an international language (generally English).

22) Valid page numbering for Firstpage-Lastpage

Format Firstpage-Lastpage must be a range in format of "optional letter+1-6 digits - optional letter+1-6 digits" E.g. S17-S24 and 354-376 are both valid while SS45, S.86, SS97-SS103 are non-valid ranges.

23) Valid ISSN format

Format for ISSN is without dashes and should follow: 7 digits plus one digit or x - e.g. 0173083x or 00280453

24) Valid ISBN format

Format for ISBN is without dashes and should follow: '9 digits plus digit or x' OR '12 digits plus digit or x'
e.g. 0201694972 ; 040669694x ; 0236496273554 ; 026496273556x

25) Mime_types (for @mime_types)

Mime_types must comply with the definitions specified by IANA (Internet Assigned Numbers Authority).
See <http://www.iana.org/assignments/media-types/>

26) Timestamp

Timestamp must comply with ISO 8601, i.e. YYYY-MM-DDThh:mm:ssTZD
See <http://www.w3.org/TR/NOTE-datetime>

27) Access definitions (for @access)

| Code | Danish text | English text | Comment |
|------|--|------------------|--|
| oa | Open access | Open access | For use free and open access to resource. |
| ca | Campus adgang | Campus access | For use with campus only access. |
| ea | Foreløbig lukket adgang | Embargoed access | For use with publications under an embargo. |
| na | Ingen offentlig adgang | No public access | For use with non-public and owner only access. |
| ▶ | Embargo periods in regards to Open Access must be managed by the data provider, i.e. the access status must be changed locally when the embargo period is ended. | | |

28) bfi_conference_no, bfi_journal_no and bfi_publisher_no (unique IDs from BFI databases)

Unique IDs used to identify Conference, Journal or Publisher titles in the Danish Agency for Science, Technology and Innovation/Styrelsen for Forskning og Innovation's Bibliometric Research Indicator authoritative databases.

29) ISSN/ISBN type definition (for @type)

| Code | Danish text | English text | Comment |
|------|---------------|---------------|--|
| pri | ISSN/ISBN | ISSN/ISBN | For use with primary ISSN/ISBN |
| ele | E-ISSN/E-ISBN | E-ISSN/E-ISBN | For use with ISSN/ISBN for electronic resources. |
| alt | ISSN/ISBN | ISSN/ISBN | For use with alternative ISSN/ISBN |
| und | ISSN/ISBN | ISSN/ISBN | For use with undefined ISSN/ISBN |

30) Digital object definition (for @role)

| Code | Danish text | English text | Comment |
|------|-------------|--------------|---|
| pre | Preprint | Preprint | Draft before refereeing and publication |
| pos | Postprint | Postprint | The refereed, accepted final draft |

| | | | |
|-----|-------------------|-------------------|---|
| pub | Forlagsversion | Publisher version | Version as published by publisher |
| rev | Revideret version | Revised version | Any revisions after the published version |

31) National research area (for @role)

| Code | Danish text | English text | Comment |
|------|-----------------------|--------------------|---------|
| sci | Teknik/naturvidenskab | Science/technology | |
| soc | Samfundsvidenskab | Social science | |
| hum | Humaniora | Humanities | |
| med | Sundhedsvidenskab | Medical science | |

32) Sub event types (for @event_type)

| Code | Danish text | English text | Comment |
|------|-------------------|------------------|---------|
| lec | Forelæsning | Lecture | |
| cla | Undervisningstime | Class | |
| ses | Session | Session | |
| tra | Konferencespor | Conference track | |
| wor | Workshop | Work shop | |

33) Type of OA link (for @type)

| Code | Danish text | English text | Comment |
|------|------------------|-------------------|---|
| loc | Lokal database | Local repository | For use with URL pointing to a local repository |
| rem | Ekstern database | Remote repository | For use with URL pointing to a remote repository |
| doi | doi | doi | For use with URL pointing to a DOI resolver. The DOI name of the entity is represented in the URL |

34) Version of entity in relation to OA link (for @version)

| Code | Danish text | English text | Comment |
|------|-----------------------------|-----------------------|---------|
| pre | Pre-print | Preprint | |
| afv | Forfatters endelige version | Authors final version | |
| pub | Udgivet version | Published version | |
| oth | Anden version | Other version | |

35) Access to the entity in relation to OA link (for @public_access)

| Code | Danish text | English text | Comment |
|------|-------------------|-------------------|---------|
| oa | Open Access | Open Access | |
| ea | Embargo periode | Embargoed Access | |
| ra | Begrænset tilgang | Restricted Access | |
| ca | Utilgængelig | Closed Access | |
| und | Ikke angivet | Not Set | |

36) Code for type of external identifier (for @type)

| Code | Text |
|-------|----------------|
| pmid | PubMed |
| pmcid | PubMed Central |

wos Web of Science
scopus Scopus

► Further codes may be registered

37) Management of object (for @managed)

| Code | Danish text | English text | Comment |
|-------|-------------|--------------|--|
| true | Internt | Internally | Managed in the same system as the document |
| false | Eksternt | Externally | Not managed in the same system as the document |

38) Type of relation (for @rel_type)

| Code | Danish text | English text | Comment |
|------|-------------|--------------|---------|
| uri | uri | uri | |
| id | id | id | |
| doi | doi | doi | |

39) Type of object (for @obj_type)

| Code | Danish text | English text | Comment |
|--------------|--------------|------------------|-------------------------------|
| dataset | Datasæt | Dataset | |
| publication | Publikation | Publication | |
| activity | Aktivitet | Activity | prize Prize |
| | media | Presse / Medie | Press / Media project Projekt |
| | Project | event Begivenhed | Event |
| person | Person | Person | |
| organisation | Organisation | Organisation | |
| publisher | Forlag | Publisher | |
| other | Andet | Other | award Bevilling |
| | Award | | |
| course | Kursus | Course | |
| application | Ansøgning | Application | |

► Further object types may be registered