

DDF-MXD

Danish Research Database

Metadata Exchange Format for Documents

4 March 2024

Version 1.4.4

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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:

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

See note 6 for details.

Version 1.4.3
31 May, 2022

Franck Falcoz, editor

1.4 Preface to version 1.4.4

Version 1.4.4 of the MXD-format includes nine changes to the format.

- Added /ddf_doc/person/@corresponding attribute which is a boolean defining if the person is a corresponding author.
- Added new person role (@pers_role) *group*, for member of author collaboration.
- Added a new code to /ddf_doc/@doc_level for commissioned work (see Notes 5)
- Added /ddf_doc/publication/in_journal/publisher
- Note 12 (@id_type) has been redesigned to be split between the fields using it (person, organisation, project, event). Codes rsid, scid and openalexa have been added for person/id/@id_type. Codes ror, grid and openalexi have been added for organisation/id/@id_type.
- Added new values for /description/identifier/@type, doi is now the record level DOI, pxa is a Pure specific record identifier, openalexw is an Open Alex record identifier and finally we have moved ddf_rec and loc_rec from //id/@id_type where they did not belong. See note 36 for details. Note that the ddf_doc/publication/*/doi which were previously used for the record level or source level DOI should now only be used for source DOI.
- Added new /ddf_doc/@doc_type, dpr which splits preprints and eprints from dw, dje for editorials, dma for newsletter and magazine, dme for memorandum or exposition, dnt for non-textual item and pod for podcast (see Note 1 for details).
- A number of source have been added to /ddf_doc/@rec_source and some old codes have been spit off to show they are still valid but not active, see Note 6 for details.
- Added /ddf_doc/description/funding_acknowledgement, as a new descriptive field.

Version 1.4.4
4 March, 2024

Franck Falcoz, editor

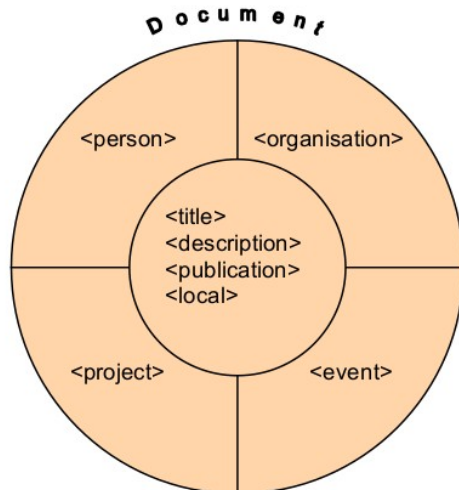
1. Introduction

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.

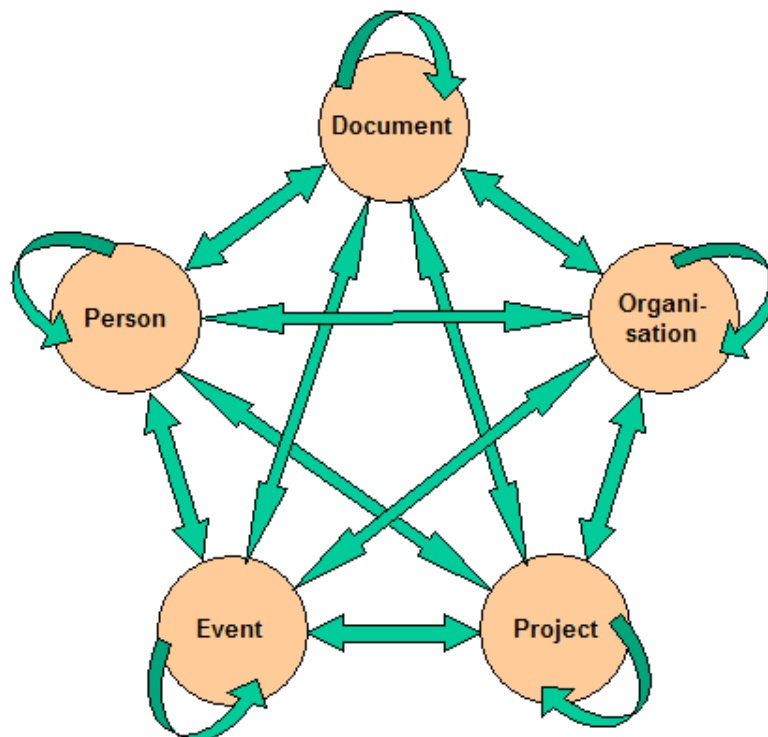
Project

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: <https://mx.forskningsdatabasen.dk/mxd/current/> or in the sub directories of <https://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.1.4.4 can be found at <https://mx.forskningsdatabasen.dk/mxd/1.4>
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/1.4>

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

Table of elements and attributes

Root element:

<ddf_doc>	§		
@format_version	§	Exchange format version used – "1.4.4" 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", "commissioned"	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)
<funding_acknowledgement>	! ®	Summary of content (raw text)	
@xml:lang	?	Language of acknowledgement	
<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/theaurus 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)
@corresponding	!	If "true" the person is considered a corresponding author.	
<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.	12)
<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)	15)
<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	12)
<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)	16)
@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	12)
<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	

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<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	
<publisher>	!	Name of journal publisher	
<doi>	!	DOI no. for the journal	
<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. for the book	
<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. for the report	
<uri>	+	URI (URL) link to web site of report	
@access	+	Use to state the accessibility of the linked article, i.e. "Open Access"	27)
<book>	!	Use when the document is an entire book	
@pub_status	(§)	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. for the book. In this case, this DOI should be the same as /ddf_doc/description/identifier/@type=doi which is the preferred location for a publication level DOI.	
<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. for the report. In this case, this DOI should be the same as /ddf_doc/description/identifier/@type=doi which is the preferred location for a publication level DOI.	
<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	30)
@role	!	What is the role of the object in relation to the record ie. Postprint	
@access	(S)	Use for stating t+F119he 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>	(S)	Any text	
<year>	!	Year of publication in format yyyy	
<oa_link>	! ®	URL to the electronic Open Access version of the document	
@type	(S)	Defines if the URL points to a local- or remote repository or to a DOI resolver	33)
@version	(S)	Document version of the document the URL points to. Preprint etc.	34)
@public_access	(S)	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	(S)	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	(S)	The type of the relation identifier (id, uri)	38)
@obj_type	(S)	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: <https://mx.forskningsdatabasen.dk/mxd/current/> or in the sub directories of <https://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.1.4.4 can be found at <https://mx.forskningsdatabasen.dk/mxd/1.4>
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/1.4>

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", "commissioned". 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	<p>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)</p>	
§	ddf_doc/title/original	<p>The title in the original language – use sub-elements below</p>	
?	ddf_doc/title/original/@xml:lang	<p>Language of title</p>	2)
§	ddf_doc/title/original/main	<p>Main title</p>	
+	ddf_doc/title/original/sub	<p>Sub title</p>	
+	ddf_doc/title/original/part	<p>Part designation of a multipart work ("Vol. 1", "Bind 1" etc)</p>	
?	ddf_doc/title/original/other	<p>Any other title information</p>	
?	ddf_doc/title/translated	<p>The title translated to another language – use sub-elements below</p>	
(§)	ddf_doc/title/translated/@xml:lang	<p>Language of title</p>	2)
(§)	ddf_doc/title/translated/main	<p>Main title</p>	
?	ddf_doc/title/translated/sub	<p>Sub title</p>	
?	ddf_doc/title/translated/part	<p>Part designation of a multipart work ("Vol. 1", "Bind 1" etc)</p>	
?	ddf_doc/title/translated/other	<p>Any other title information</p>	

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/funding_acknowledgement	
		Summary of content (raw text)	
?		ddf_doc/description/funding_acknowledgement/@xml:lang	
		Language of funding acknowledgement	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.	
(S)		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.	
(S)		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	Code for one of the four national research areas, i.e.: Science/technology, Social science, Humanities and Medical science.	31)
!	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	Code for type of identifier	36)

Person element

!	® ddf_doc/person	<p>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.</p> <p>The element is organised in the following sub-elements of which most are optional:</p> <ul style="list-style-type: none"> 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	Role of the person in relation to the document (see note for authorised values)	10)
!	ddf_doc/person/@aff_no	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".	11)
!	ddf_doc/person/@corresponding	If "true" the person is considered a corresponding author. If "false" or missing, no additional value is added to the person.	
(\$)	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/level4	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	
(§)		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)	
(§)		ddf_doc/project/@proj_role Role of the project in relation to the document (see note for authorised values)	15)
(§)	®	ddf_doc/project/title Title - only repeatable in case of language variants – use sub-elements below	
[§]		ddf_doc/project/title/@xml:lang Language of project title (mandatory if title is repeated)	2)
(§)		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	
(§)		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/tit le (split in full, acronym and number), event/dates (split in start and end), event/p lace (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/ur i (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)	
!		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 <code>local_field/@tag_type</code> 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: <ul style="list-style-type: none"> <code>local_field/code</code> (field code), <code>local_field/data</code> (field data), <code>local_field/subfield</code> (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** 28)
 BFI publisher number from the authoritative BFI publisher database
- ! **ddf_doc/publication/@bfi_serial_no** 28)
 BFI serial number from the authoritative BFI serials database
- 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** 18)
 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.
- (§) **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** 23)
 Journal ISSN no. without dashes
- ! ® **ddf_doc/publication/in_journal/issn/@type** 29)
 Defining type of ISSN, i.e. electronic or primary etc.
- ! **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/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. In this case, this DOI should be the same as /ddf_doc/description/identifier/@type=doi which is the preferred location for a publication level DOI.
- + **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	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.	18)
!	ddf_doc/publication/patent/country	Country of patent issue using ISO country codes	13)
!	ddf_doc/publication/patent/ipc	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	Use to state the accessibility of linked web site of the patent, i.e. "Open Access"	27)

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	Use to stat the accessibility of the service/file, i.e. "Open Access"	27)

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	2)
	Language of the file	
[§]	ddf_doc/publication/digital_object/file/@size	
	The size of the file	
!	ddf_doc/publication/digital_object/file/@mime_type	25)
	Mime type for the file must comply with the IANA specifications	
[§]	ddf_doc/publication/digital_object/file/@timestamp	26)
	Timestamp given when the file was change or uploaded	
[§]	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	33)
		Defines the type of the repository / resolver the URL points to, like "loc", "rem" and "doi" – see note.	
(§)		ddf_doc/oa_link/@version	34)
		Describes the version of the document the URL points to, like "pre", "afv", "pub" and "oth" – see 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	

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
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
dca	Konference-abstract	Conference abstract	Abstract only
dco	Konference-plakat	Conference poster	
dcp	Konference-paper	Conference paper	Full paper
dcr	Case report	Case report	
dct	Konference-foredrag	Conference talk	Slides, video, audio of talk
dd	Datasæt	Data set	
dja	Tidsskrift-artikel	Journal article	Full article
djb	Tidsskrifts-anmeldelse	Journal book review	Book review
djc	Tidsskrift-kommentar	Journal comment	Comments to the journal
dje	Redaktionel	Editorial	
djl	Tidsskrift-brev til redaktøren	Letter to the editor	Journal letters, letters to editor
djr	Tidsskrifts-review article	Journal review article	Review in journal
dl	Undervisning-forelæsning	Lecture	Slides, video, audio of lecture
dln	Undervisning-noter	Lecture notes	
dma	Nyhedsbrev, Magasin	Newsletter, Magazine	
dme	Udredning, Notat	Memorandum, Exposition	
dna	Avis-artikel	Newspaper article	
dnt	Ikke-Skriftlig Produktion	Non-Textual Item	
do	Andet	Other	
dp	Patent	Patent	
dpr	(Pr)eprint	(Pr)eprint	Preprint or Internet publication
dr	Rapport	Report	
dra	Rapport-kapitel	Report chapter	
drt	Radio/TV-udsendelse	Radio/TV broadcast	Public broadcast
dso	Software	Software	
dtb	Afhandling-Bachelor	Thesis Bachelor	
dtd	Afhandling-Doktor	Thesis Doctoral	
dtb	Afhandling-Diploma Bachelor	Thesis Diploma Bachelor	
dtm	Afhandling-Kandidat	Thesis Master	
dtp	Afhandling-Ph.D.	Thesis PhD	
dts	Studenterrapport	Student report	
dw	Arbejdsrapport	Working paper	Informal print
dx	Udstillingskatalog	Exhibition catalogue	
pod	Podcast	Podcast	

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
com	Rådgivning	Commissioned	
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)**Active codes in alphabetical order:**

Code	Danish text
aaU	Aalborg Universitet
arka	Arkitektskolen Aarhus
arkc	Det Kongelige Akademi - Arkitektur, Design, Konservering
arkk	Designskolen Kolding
au	Aarhus Universitet
cbs	Copenhagen Business School
diis	DIIS Dansk Institut for Internationale Studier
dmjx	DMJX Danmarks Medie- og Journalisthøjskole
dtu	Danmarks Tekniske Universitet
fak	Forsvarsakademiet
fsk	Forsvarets Sanitetskommando
geus	GEUS De Nationale Geologiske Undersøgelser for Danmark og Grønland
itu	IT-universitetet i København
kp	Københavns Professionshøjskole
ku	Københavns Universitet
kum	Kulturministeriets arkiver, biblioteker og museer
nfa	NFA Det Nationale Forskningscenter For Arbejdsmiljø
pha	Professionshøjskolen Absalon
regionh	Region Hovedstaden
regm	Region Midtjylland
regn	Region Nordjylland
regsj	Region Sjælland
regsyd	Region Syddanmark
ruc	Roskilde Universitet
sdu	Syddansk Universitet
ucl	UCL Erhvervsakademi og Professionshøjskole
ucn	Professionshøjskolen UCN
ucsyd	UC SYD
vetc	Veterancentret
via	VIA University College
vive	VIVE Det Nationale Forsknings- og Analysecenter for Velfærd

Historical 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	Arbejdsmiljø Information
akf	Amternes og kommunernes forskningsinstitut
ami	Det nationale forskningscenter for Arbejdsmiljø
amr	Arbejdsmiljørådets Service Center
ark	READ - Arkitekt- og designskolerne

bio	Det Bioteknologiske Forsknings- og Udviklingsprogram
bioteknik	Teknologisk Institut. Bioteknik
can	Kræftens Bekæmpelse
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
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
ens	Energistyrelsen
far	Danmarks Farmaceutiske Universitet
for	Forskningsstyrelsen
fou	Forsknings- og udviklingscentret for Hjælpe midler og Rehabilitering
fri	Forskningscenter Risø
fsl	Forskningscenter for Skov og Landskab
ftu	FTU-programmet
hha	Handelshøjskolen i Århus
hhs	Handelshøjskole Syd
hvhosp	Hvidovre Hospital
ifg	Institut for grænseregionsforskning
ifo	Institut for Forskning i Idræt og Folkelig Oplysning
jpsem	Jydsk Pædagogseminarium
ka	Kunstakademiets Arkitektskole
kab	Danmarks Kunstbibliotek
kas	Københavns Amts Sygehusvæsen
kib	Kunstindustrimuseets Bibliotek
kvl	Københavns Universitet Det Biovidenskabelige Fakultet
mup	Det Materiale teknologiske Udviklingsprogram
nlb	Danmarks Natur- og Lægevidenskabelige Bibliotek
sbi	By og Byg. Statens Byggeforskningsinstitut
seb	Sekretariat for Børnekultur netværk
sfi	SFI – Det Nationale Forskningscenter for Velfærd
shu	Statens Husdyrbrugsforsøg
sji	Statens Jordbrugs- og Fiskeriøkonomiske Institut
sp	Statens Planteavlsvforsøg
ssl	Statens Skadedyrslaboratorium
suc	Sydjysk Universitetscenter
svs	Statens Veterinære Serumlab. og Statens Veterinære. Inst. for Virusforskning
ucv	Professionshøjskolerne

► 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	
group	Medlem af forfattergruppering	Member of author collaboration	
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)**Person** (/ddf_doc/person/@id_type)

Code	Danish text	English text	Comment
cpr	CPR nr.	CPR no.	Danish national person identification
orcid	ORCID ID	ORCID ID	Open Researcher and Contributor ID
loc_per	Lokal person ID	Local person ID	Local (data supplier) person ID*
fi_nfdb	FI national forsker database	FI national researcher DB	For use with the Danish researcher DB
rsid	WoS Researcher ID	WoS Researcher ID	
scid	Scopus Author ID	Scopus Author ID	
openalexa	Open Alex Author ID	Open Alex Author ID	

Organisation (/ddf_doc/organisation/@id_type)

Code	Danish text	English text	Comment
cvr	CVR nr.	CVR no.	Danish national enterprise identification
loc_org	Lokal organisations-ID	Local organisation ID	Local (data supplier) organisation ID*
ringgold	Ringgold ID	Ringgold ID	Institutional identifiers provided by Ringgold.com
ror	ROR ID	ROR ID	
grid	GRID ID	GRID ID	
openalexi	Open Alex Institution ID	Open Alex Institution ID	

Project (/ddf_doc/project/@id_type)

Code	Danish text	English text	Comment
loc_pro	Lokal project ID	Local project ID	Local (data supplier) project ID*

Event (/ddf_doc/event/@id_type)

Code	Danish text	English text	Comment
loc_eve	Lokal event-ID	Local event ID	Local (data supplier) event ID*

Others (not currently used)

Code	Danish text	English text	Comment
ec_ga_fp7	EU FP7 Bevillingsaftale nr.	EC FP7 Grant Agreement No.	For use with OpenAIRE compliance and EC Grant Agreement numbers

Note: two other @id_type codes were defined though to our knowledge never used (ddf_rec and loc_rec). These are record level identifiers and have therefore been moved to /ddf_doc/description/identifier/@type, see note 36 for details. They will however be supported in the schema for this version and future 1.4.* versions but we discourage you from using them.

- ▶ 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	Acceperet	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

English display text	@doc_type	@doc_review				@doc_level					
	code	pr	or	nr	und	sci	pop	com	edu	adm	und
Book	db	pr	or	nr	und	sci	pop		edu		und
Book chapter	dba	pr	or	nr	und	sci	pop		edu		und
Book preface, encyclopedia article	dbp	pr	or	nr	und	sci	pop	com	edu		und
Conference abstract	dca	pr	or	nr	und	sci	pop	com	edu		und
Conference poster	dco	pr	or	nr	und	sci	pop	com	edu		und
Conference paper	dcp	pr	or	nr	und	sci	pop	com	edu		und
Case report	dcr	pr	or	nr	und	sci	pop		edu	adm	und
Conference talk/presentation	dct	pr	or	nr	und	sci	pop	com	edu		und
Data set	dd	pr	or	nr	und	sci			edu	adm	und
Journal article	dja	pr	or	nr	und	sci	pop	com	edu		und
Journal book review	djb	pr	or	nr	und	sci	pop	com	edu		und
Journal comment	djc	pr	or	nr	und	sci	pop	com	edu		und
Editorial	dje	pr	or	nr	und	sci	pop	com	edu		und

Journal letter (to the editor)	djl	pr	or	nr	und	sci	pop	com	edu		und
Journal review article	djr	pr	or	nr	und	sci	pop	com	edu		und
Lecture	dl			nr	und				edu		und
Lecture notes	dln			nr	und				edu		und
Newsletter, magazine	dma			nr	und		pop				und
Memorandum, exposition	dme	pr	or	nr	und			com		adm	und
Newspaper article	dna			nr	und		pop				und
Non-textual item	dnt	pr	or	nr	und	sci	pop	com	edu	adm	und
Other	do	pr	or	nr	und	sci	pop	com	edu	adm	und
Patent	dp				und	sci					und
(Pr)eprint	dpr		or	nr	und	sci	pop	com	edu	adm	und
Report	dr	pr	or	nr	und	sci	pop	com		adm	und
Report chapter	dra	pr	or	nr	und	sci	pop	com			und
Radio/TV broadcast	drt			nr	und		pop		edu		und
Software	dso			nr	und	sci			edu	adm	und
Thesis Bachelor	dtb			nr	und				edu		und
Thesis Doctoral	dtd			nr	und	sci					und
Thesis Diploma Bachelor	dtdb			nr	und	sci			edu		und
Thesis Master	dtm			nr	und				edu		und
Thesis PhD	dtp			nr	und	sci					und
Student report	dts			nr	und				edu		und
Working paper	dw		or	nr	und	sci	pop	com	edu	adm	und
Exhibition catalogue	dx		or	nr	und	sci	pop		edu		und
Podcast	pod			nr	und		pop		edu		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-datettime>

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
ddf_rec	DDF Record ID
doi	The DOI for the publication described by this record
loc_rec	A local record ID
openalexw	Open Alex Work ID
pmid	PubMed
pmcid	PubMed Central
pxa	A Pure exchange ID
scopus	Scopus
wos	Web of Science

► 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
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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	Pris	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