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Use of MODS for institutional repositories

version 1
history:

| 2009-06-19 | 1.1 | download PDF |
| 2008-05-29 | 1.0 | download PDF |

Scope

These guidelines are written primarily to facilitate the exchange of metadata of academic publications of which the full text is stored in institutional repositories. The exchange format for the bibliographical metadata is MODS. It is assumed that the metadata are parts of containers that have separate sections for bibliographical metadata and for descriptions of the files stored in the repository. Because the guidelines focus on the use of MODS in containers with detailed information about the files, file information is not included in the MODS record. An exception is the information about the files at the site of the original publisher of the publication. For these a doi or another identifier can be included in the MODS record; these identifiers can be resolved to the original files of the publisher.
These guidelines are restricted to text material being academic publications.

Introductory remarks

Granularity

The default format for exchanging metadata between institutional repositories and service providers is simple Dublin Core (DC). For many services based on harvesting repositories, this format has significant limitations. A well-known problem of simple Dublin Core is its lack of detail or granularity. Granularity is mentioned as the first of three requirements for metadata schemes by Beth Goldsmith and Frances Knudson in D-Lib Magazine of September 2006 (doi:10.1045/september2006-goldsmith). They introduce granularity as follows. "Widely considered the bedrock for metadata storage, granularity insures lossless data mapping without blurring the finer shades of meaning intrinsic to the original data. A granular standard must provide the ability to differentiate formats of description (e.g. different types of authors) and to maintain context and linkages among data elements." Some examples of granularity problems with (Simple) Dublin Core are the following. The first example is that there are no separate elements for volume, issue and page; in order to identify them, a string has to be parsed. Second, it is not possible to describe in the same DC record the item of which a publication, e.g., a book chapter, is a part. A third example is that it is not possible to indicate the exact role of a creator or contributor. A last example is that it is not possible to include Digital Author Identifiers. This is necessary information for services that, e.g., want to offer OpenURL links or generate high quality publication lists. MODS (http://www.loc.gov/standards/mods/), that is the subject of this document, is a international standard that allows for describing publications at a much deeper level of detail than DC. It is especially suited for describing "traditional" publications like journal articles, books, book chapters, patents and reports Although MODS can also be used for materials other than publications, this document is restricted to the use of MODS for describing publications. For a detailed description of other material like data sets different metadata standards have to be used.

Identifying files in the repository

Another problem with DC is that it is not possible to express in an unambiguous way the identifiers that point to the object files in the repository. It is not possible to distinguish between an identifier that points to the file of the publisher, an identifier of a splash page and an identifier that points to the object that is stored in the repository. To solve this problem, it has been proposed to use a container that consists of one or more (references to) metadata records that describe the publication, (references to) the object files in the repository and an optional reference to a splash page. DIDL is a well known way of implementing this container. But there are other ways to do this. e.g., the OAI-ORE project will result in an alternative way of representing this notion of a container or complex object. This document offers guidelines for the use of MODS metadata as part of such container. There is a division of work between the components that contain the metadata and the components that give information about the object files. The components specifically meant for the object files contains the identifiers of and/or the links to the files, information about the files like their size, mime type and use rights, and the semantic roles of the files. A metadata record that is part of the container doesn't describe the files as such but the publication that is instantiated by the object files. It is the publication that has a title, authors, a publisher, etc. So this bibliographical information is provided by the metadata record of the container.

File descriptions

MODS also allows for the description of files. The consequence is that the metadata record can contain the same information as the container components for the files in the repository. Moreover, the MODS record can contain information about the file(s) at the site of the publisher (or in a different institutional repository of a co-author). It is recommended to avoid this kind of redundancy and not to include the file information that is already in other components of the container. In the case of a journal article, the MODS record can contain the doi of the article as assigned by the publisher of the journal. But the identifier and/or URL of the post print and/or of the publisher version that is stored in the institutional repository is not included in the MODS record, but can be found in the file component of the container. When the MODS record is exchanged independently from the container, it could be wise to include in the MODS a reference to the container, but for the present guidelines this is out of scope.

Versions

Another issue is the way versions are handled. Versions pose a lot of problems for repositories. This document has chosen a pragmatic approach. Only those versions are exchanged between repository and service provider that would become separate entries in a publication list or reference list. In the same way that entries in such a list are independent of each other, the metadata or containers that are exchanged are independent. This doesn't mean that version information cannot be included, but only as pointers from one metadata record or container to another; in MODS this is done with the relatedItem element. In economics, the paper published in a working or discussion papers series and the journal article will be exchanged separately. In the same way, a repository will make the preprint paper version as published in arXiv and the article published in a physics journal available as distinct publications. But when a repository contains both the author version and the publisher version of a journal article, this is treated as one publication. Information about the author version and the publisher version is in the container, not in the MODS record.

Recommended MODS elements and guidelines for their use

The following guidelines are in addition to the MODS User Guidelines Version 3, see http://www.loc.gov/standards/mods/v3/mods-userguide.html. These additions are specializations for the use of MODS in the context of institutional repositories. The MODS User Guidelines are not repeated here. The following guidelines are only complete when combined with the MODS User Guidelines.
Only the elements and attributes that are recommended for exchanging information between repositories and service providers are listed here. This doesn't preclude that other elements are used, but there is no guarantee that a service provider that follows these guidelines will interpret them correctly.

Use of the attributes *authority, encoding* and *type*

To specify the values of these attributes, there are two possibilities. The first option is to use the alpha strings that are mentioned in the MODS User Guidelines. When these values are applicable they must be used. In other cases, it is recommended to use URIs to indicate the authority, the encoding or the type. The URIs should be officially registered. SURF is in the process of registering an info-namespace (info:eu-repo) that can be used for info-URIs of authorities, encoding formats and types.

Language codes

For language codes, the guidelines of RFC 3066 (http://www.ietf.org/rfc/rfc3066.txt) must be followed. This means that the two-character ISO 639-1 codes are used; for those languages not in ISO 639-1, the three-character ISO 639-2 codes must be used. A complete list of these codes is available at http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes.
To indicate the language of the content of the elements the *xml:lang* attribute must be used and not the *lang* attribute. For each MODS element it is defined whether the language attribute *xml:lang* can be used. According to the XML standard *xml:lang* follows RFC 3066.
In the <language> element, the authority="rfc3066" indicates that RFC 3066 is applied.
Example: the language of the publication is Dutch
```
<language>
  <languageTerm type="code" authority="rfc3066">nl</languageTerm>
</language>
```

Date format

For dates, iso8601 is the recommended standard. More in particular, the W3C profile should be used, see http://www.w3.org/TR/NOTE-datetime. A complete date has the form YYYY-MM-DD. Use the encoding attribute with value 'iso8601' to indicate the date format.
Example: date of promotion that a doctoral thesis is issued
```
<dateIssued encoding="iso8601">2007-03-09</dateIssued>
```

Root Element

mods
A single MODS record; the element modsCollection as wrapper of several MODS records must not be used
*Attributes:***version**
the MODS version, e.g., version="3.2"

Subelements:
See: Top Level Elements

Top Level Elements

titleInfo
This element is required and is a wrapper for information about the title of a publication. This is also used for the title of an host item like a journal or a series. There is at least one subelement title.

Attributes:

xml:lang
type
use only for the translated title, in that case the value is *translated***displayLabel**
can be used for the number of a report. Don't use for the number of a report in a series.

*Subelements:***title**
Required. Sub title can be included in this element and separated by a colon from the main title; it is recommended to use subTitle.
subTitle

name
This element contains information about the author or editor of the publication. It can also be used to give the name of the thesis advisor, a patent holder, a patent applicant or the sponsor. <name> is a

wrapper element and has at least one namePart subelement. In most cases there will be at least two namePart elements; one for the family name and one for the given name.

In the case of theses for acquiring a degree, the name of the institution has to be included (use the same formatting as for affiliation, see name/affiliation below): `<name type="corporate"><namePart>`the granting university`</namePart>`
`<role><roleTerm authority="marcrelator" type="code">`dgg`</roleTerm></role></name>`

*Attributes:***ID**
use this ID to refer to the /mods/extension/daiList/idenifier element for the DAI of the author, see [Annex:DAI schema](#). The ID must be a NCName: start with a letter or underscore, followed by zero or more characters (but no colons).
type
values: *personal*, *corporate*, *conference*

*Subelements:***namePart**
*Attributes:***type**
values: *family*, *given*, *termsOfAddress.* 'infix' will be proposed as a valid value to the MODS maintenance agency. The intended use of 'infix' is for what is called in Dutch "het tussenvoegsel"; in 'Jan van de Meer' is 'Jan' the given name, 'van de' the infix and 'Meer' the family name. For the time being, it is advised to add the infix at the end of the family name, separated from the family name by a comma, e.g., `<namePart type="family">`Meer, van de`</namePart>`. For Belgian authors the infix ("tussenvoegsel") is part of the family name: `<namePart type="family">`Van de Meer`</namePart>`
When initial and full name are both available use this formatting:
`<namePart type="given">`J. (John)`</namePart>`
Use the value *termsOfAddress* only for generational suffixes like Jr. or Sr. Omit titles (like "prof" or "dr").
affiliation
Affiliation at the time of publication. Represented as a dot limited list starting with the name of the institution followed by organizational sub-units. The list follows the organizational hierarchy.
In the case of a conference, use affiliation for describing the location of the conference.
role
*Subelements:***roleTerm**
use one of the three letter-codes of http://www.loc.gov/marc/sourcecode/relator/relatorlist.html#codes.
The most relevant codes are *aut* (author), *edt* (editor), *dgg* (degree grantor), *pta* (patent applicant), *pth* (patent holder), *spn* (sponsor) and *ths* (thesis advisor)
*Attributes:***type**
value: *code***authority**
value: *marcrelator*

typeOfResource
Use the value 'text' for publications: `<typeOfResource>`text`</typeOfResource>`
genre
An URI from the *info:eu-repo/semantics/* namespace-- see [Annex: Publication types](#)

originInfo
`<originInfo>` contains information about date and place of publication and the publisher. When the originInfo applies to the host item or the series, and not to the publication itself, `<originInfo>` must be used as a subelement of `<relatedItem>`. The originInfo that applies to the publication itself and not to the host item of the series, must be placed at the top level. This is especially relevant for originInfo/ dateIssued that is used for the publication date. The publication date of an article is different from the publication date of the journal in which it appears, while the publication date of a book chapter or a conference paper can be the same as that of the book or the proceedings of which it is a chapter. It is recommended to put originInfo/dateIssued always at the top level; in the case of book chapter or confrence paper the originInfo/dataIssued must also be placed at the level of the relatedItem describing the book.
*Attributes:***xml:lang**
*Subelements:***place**
*Subelements:***placeTerm**
place of publication: `<originInfo><place><placeTerm type="text">`Amsterdam`</placeTerm></place>`...`</originInfo>`
Attributes:
type
value: *text***publisher**
dateIssued
use this element for the publication date. For a doctoral thesis, the dateIssued is the date that the PhD student got his or her doctorate. See also section on date format

Attributes:_
encoding
value: *iso8601***edition**

language
Language of the publication. See also section on language codes.
*Subelements:***languageTerm**
*Attributes:***type**
value: *code***authority**
value: *rfc3066*
physicalDescription
*Attributes:***xml:lang**
*Subelements:***extent**
the number of pages of a book, thesis or report

abstract
*Attributes:***xml:lang**
the language of the abstract; see also section on language codes

subject
<subject> contains one or more subelements to express what the publication is about. Normally only <topic> will be used as subelement. <topic> can be repeated. Note, however, that for each authority, the subject element has to be repeated because authority is an attribute of <subject>, not of <topic>.
*Attributes:***xml:lang**
authority
an URI, e.g., from the *info:eu-repo/authority/* namespace or a string listed in www.loc.gov/marc/sourcecode/subject/subjectsource.html
*Subelements:***topic**

classification
*Attributes:***xml:lang**
authority
an URI, e.g., from the *info:eu-repo/authority/* namespace or a string listed in www.loc.gov/marc/sourcecode/classification/classificationsource.html

relatedItem
*Attributes:***type**
values:
preceding: earlier version
succeeding: later version
host: journal, book, of which publication is part; subelement <part> is used for locating publication in the host item (volume, issue, page)
series: most important use is for describing the series of a working paper (research paper, discussion paper); can also be used for books that are part of a series.
otherVersion: published also as, e.g., journal article later published as book chapter
_Subelements:_Any MODS element may be used as defined in the schema with appropriate subelements.

identifier
This element contains a unique standard number or code which distinctively identifies the publication or the host item of which the publication is a part. Examples of registered URN namespaces: URN:ISSN, URN:ISBN, URN:NBN, URN:UUID. For the complete and up-to-date list see http://www.iana.org/assignments/urn-namespaces.

Examples of registered info namespaces: info:hdl, info:doi, info:lccn, info:sici; see http://info-uri.info/
*Attributes:***type**
Use *uri* if the identifier is an URI; using URIs is the preferred way. Otherwise use one of the values suggested the MODS User Guidelines: *isrc*, *ismn*, *issue number*, *istc*, *upc*

location
*Subelements:***url**
Use only URLs that point to versions of the publication outside the repository. An example is the URL of the publication at the site of the publisher. This should only be used if there is no DOI or other identifier supplied by the publisher (see identifier element). The location within the repository is in the object file section of the container of which the MODS record is also part.

part

Can only be used as subelement of <relatedItem type="host"> or of <relatedItem type="series">. The subelement date is not used. For publication date, use <dateIssued> within originInfo of the publication itself (not of the host item).

*Subelements:***detail**

ex: <detail type="volume"><number>30</number></detail>

Use type="volume" for the number of a report, research paper etc. in a series.

*Attributes:***type**

values: *part*, *volume*, *issue*, *chapter*, *section*

volume and *issue* have the normal meaning in relation to journal articles.

volume is also used for the number under which a working paper is published in a series.

*Subelements:***number**

extent

*Attributes:***unit**

value: *pageSubelements:***start**

end

total

list

extension

*Subelements:***dai:daiList**

see Annex: DAI schema

dai:identifier

*Attributes:***IDref**

The value of IDref must be the same as the value of the corresponding ID attribute of the referencing name element.

Note that the value of the ID/IDref attribute must be unique in an OAI response. This response can contain several MODS records. Most repository applications number the author IDs/IDrefs per metadata record. To make the ID/IDref unique within an OAI response, it is advised to pre-pend it with the local identifier of the record.

authority

The value of authority is preferably an URI. The Dutch repositories have a national digital author identifier; the namespace of the authority is info:eu-repo/dai/nl. For authorities that are not registered, a local URI must be used.

Using MODS for describing other material?

The question is whether, in the context of the SURFSHARE program, there is a need for agreements on descriptions of other material than publications. If so, is there a task for MODS here?

For datasets, the answer to the first question is likely to be positive. The question is whether MODS is the most appropriate standard. http://tardis.edu.au/wiki/index.php/DEVPLAN is an example of use of MODS in the context of datasets. In general, specialised standards such as DDI and xfdu will be preferred.

> ⚠ link werkt niet

For describing material such as photos, films, music sheets and sound recordings the MODS guidelines of the Digital Library Federation (Aquifer project) can be of use: http://www.diglib.org/aquifer/dlfmodsimplementationguidelines_finalnov2006.pdf

For reasons of interoperability the recommendation is always to use MODS next to potential other metadata formats.

Annex

DAI schema

The target name space is not formalised.

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsd:schema
```

```
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="info:eu-repo/dai"
targetNamespace="info:eu-repo/dai"
elementFormDefault="qualified"
attributeFormDefault="unqualified">
<xsd:import
  namespace="http://www.w3.org/XML/1998/namespace"
  schemaLocation="http://www.w3.org/2001/xml.xsd"/>
<xsd:element name="daiList" type="daiListType"/>
<xsd:complexType name="daiListType">
  <xsd:sequence>
    <xsd:element
      name="identifier"
      type="identifierType"
      minOccurs="1"
      maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType
  name="identifierType">
  <xsd:simpleContent>
    <xsd:extension
      base="xsd:anyURI">
      <xsd:attribute
        name="IDref"
        type="xsd:IDREF"
        use="required"/>
      <xsd:attribute
        name="authority"
        type="xsd:string"
        use="optional" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
</xsd:schema>
```

Publication types

For publication types, see [Namespace info:eu-repo](#)

Mandatory and Recommended elements per publication type

M=mandatory A=If applicable or information available

Top level elements	Subelements	article	book	thesis	bookPart	working Paper	lecture	preprint	patent	conference Paper
titleInfo										
	title	M	M	M	M	M	M	M	M	M
	subTitle	A	A	A	A	A	A	A	A	A
	partNumber	A								

		article	book	thesis	bookPart	working Paper	lecture	preprint	patent	conference Paper
	partName	A								
name										
	namePart	M	M	M	M	M	M	M	M	M
	affiliation	A	A	A	A	A	A	A	A	A
	role	M	M	M	M	M	M	M	M	M
typeOfResource		M	M	M	M	M	M	M	M	M
genre		M	M	M	M	M	M	M	M	M
originInfo										
	place		A	A		A	A	A	A	
	publisher		M	M		M	M			
	dateIssued	M	M	M	M	M	M	M	M	M
	edition		A							
language										
	languageTerm		A	A	A	A	A	A	A	A

		article	book	thesis	bookPart	working Paper	lecture	preprint	patent	conference Paper
physicalDescription										
	extent		A	A		A	A	A	A	
abstract		A	A	A	A	A	A	A	A	A
note										
subject										
	topic	A	A	A	A	A	A	A	A	A

classification		A	A	A	A	A	A	A	A	A
relatedItem	Any MODS element may be used as defined in the schema with appropriate subelements									
	titleInfo	M			M	M				M
	name				A					A
	originInfo				M					M
	reviewOf		A							
identifier		A	A	A	A	A	A	A	A	A
location										
	url	A	A	A	A	A	A	A	A	A
part										
	detail	M								
	extent	A								
extension		A	A	A	A	A	A	A	A	A

Examples

⚠ missing: example of conference paper

Article

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!-- file: mods_article.xml -->
<mods
 version="3.2"
 xmlns="http://www.loc.gov/mods/v3"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
```

```xml
      http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

  <titleInfo xml:lang="en">
    <title>Angioplasty of chronic total coronary occlusions with the
      use of six French guiding catheters</title>
  </titleInfo>

  <typeOfResource>text</typeOfResource>
  <genre>info:eu-repo/semantics/article</genre>

  <subject xml:lang="en">
    <topic>coronary occlusion</topic>
    <topic>angioplasty</topic>
    <topic>French guiding catheters</topic>
  </subject>

  <abstract xml:lang="en">The efficacy of 6 French guiding catheters...</abstract>

  <name type="personal" ID="n1">
    <namePart type="family">Koch</namePart>
    <namePart type="given">K.T.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
    </role>
  </name>

  <name type="personal" ID="n2">
    <namePart type="family">Winter, de</namePart>
    <namePart type="given">R.J.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
    </role>
  </name>

  <extension>
    <daiList
      xmlns:dai="info:eu-repo/dai"
      xsi:schemaLocation="info:eu-repo/dai
  http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai-extension.xsd">
      <identifier
        IDref="n2"
        authority="info:eu-repo/dai/nl">157455590</identifier>
      <identifier
        IDref="n1"
        authority="info:eu-repo/dai/nl">123456678</identifier>
    </daiList>
  </extension>

  <originInfo>
    <dateIssued encoding="iso8601">1997</dateIssued>
  </originInfo>

  <relatedItem type="host">
    <identifier type="uri">URN:ISSN:00986569</identifier>
    <titleInfo>
      <title>Cathet. Cardiovasc. Diag.</title>
    </titleInfo>
    <part>
      <detail type="volume"><number>40</number></detail>
      <extent unit="page">
        <start>255</start>
        <end>260</end>
      </extent>
    </part>
  </relatedItem>
```

```
    </mods>
```

Article

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- file: artikel1_ubu_uitgebreid.xml -->
<mods
 xmlns="http://www.loc.gov/mods/v3"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

 <titleInfo>
   <title>Grooming behavior of spontaneously hypertensive rats</title>
 </titleInfo>

 <name type="personal">
   <namePart type="given">M.</namePart>
   <namePart type="family">Buuse</namePart>
   <role>
     <roleTerm authority="marcrelator" type="code">aut</roleTerm>
   </role>
 </name>
 <name type="personal">
   <namePart type="given">W.</namePart>
   <namePart type="family">Jong, de</namePart>
   <role>
     <roleTerm authority="marcrelator" type="code">aut</roleTerm>
   </role>
 </name>

 <typeOfResource>text</typeOfResource>
 <genre>info:eu-repo/semantics/article/</genre>

 <originInfo>
   <dateIssued encoding="iso8601">1987</dateIssued>
 </originInfo>

 <language>
   <languageTerm authority="rfc3066" type="code">en</languageTerm>
 </language>

 <abstract>In an open field spontaneously hypertensive rats (SHR) exhibited lower
    scores for grooming when compared to their normotensive controls, the Wistar
    Kyoto rats (WKY). After i.c.v. injection of 1 µg ACTH1-24 cumulative 50-min
    grooming scores were lower in SHR. Analysis of subscores indicated that the
    lesser effect of ACTH in SHR was especially prominent for headwashing and
    anogenital grooming. Moreover, a time course study revealed that the difference
    between SHR and WKY occurred in the first 6 observation periods of 5 min and
    thereafter disappeared. The results are discussed in the light of behavioral
    and central neurochemical differences between SHR and WKY.
 </abstract>

 <subject>
   <topic>grooming</topic>
   <topic>hypertension</topic>
 </subject>
 <classification>Farmacie</classification>

 <relatedItem type="host">
   <identifier type="uri">URN:ISSN:0304-3940</identifier>
   <titleInfo>
```

```xml
      <title>Neuroscience Letter</title>
    </titleInfo>
    <part>
      <detail type="volume">
        <number>77</number>
      </detail>
      <detail type="issue">
        <number>1</number>
      </detail>
      <extent unit="page">
        <start>71</start>
        <end>75</end>
      </extent>
    </part>
  </relatedItem>
  <identifier type="uri">info:doi/10.1016/0304-3940(87)90609-4</identifier>
</mods>
```

Book

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<mods version="3.2"
 xmlns="http://www.loc.gov/mods/v3"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
 <titleInfo xml:lang="nl">
  <title>Leer het brein kennen</title>
  <subTitle>
    Over een New Learning Science op het kruispunt van neurowetenschap,
    cognitiewetenschap en onderwijswetenschap: resultaat van een
    invitational conference georganiseerd door NWO op 5 februari 2004
  </subTitle>
 </titleInfo>
 <name type="personal" ID="n1">
  <namePart type="family">Jolles</namePart>
  <namePart type="given">J.</namePart>
  <role>
    <roleTerm authority="marcrelator" type="code">aut</roleTerm>
  </role>
  <affiliation>Universiteit Maastricht. METRO</affiliation>
 </name>
 <name type="personal" ID="n2">
  <namePart type="family">Groot, de</namePart>
  <namePart type="given">R.</namePart>
  <role>
    <roleTerm authority="marcrelator" type="code">aut</roleTerm>
  </role>
 </name>
 <name type="personal">
  <namePart type="family"> Benthem, van </namePart>
  <namePart type="given">J.</namePart>
  <role>
    <roleTerm authority="marcrelator" type="code">aut</roleTerm>
  </role>
 </name>
 <name type="personal">
  <namePart type="family">Dekkers</namePart>
  <namePart type="given">H.</namePart>
  <role>
    <roleTerm authority="marcrelator" type="code">aut</roleTerm>
```

```xml
      </role>
     </name>
    <name type="personal">
     <namePart type="family">Glopper, de</namePart>
     <namePart type="given">C.</namePart>
     <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
     </role>
    </name>
    <name type="personal">
     <namePart type="family">Uijlings</namePart>
     <namePart type="given">H.</namePart>
     <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
     </role>
    </name>
    <name type="personal" ID="n3">
     <namePart type="family">Wolff-Albers</namePart>
     <namePart type="given">A.</namePart>
     <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
     </role>
    </name>
    <extension>
     <daiList
      xmlns:dai="info:eu-repo/dai"
      xsi:schemaLocation="info:eu-repo/dai
        http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai
        extension.xsd">
      <identifier IDref="n3"
       authority="info:eu repo/dai/nl">069028273</identifier>
      <identifier IDref="n2"
       authority="info:eu repo/dai/nl">256949042</identifier>
      <identifier IDref="n1"
       authority="info:eu repo/dai/nl">068415931</identifier>
     </daiList>
    </extension>
    <typeOfResource>text</typeOfResource>
    <genre>info:eu-repo/semantics/book"</genre>
    <originInfo>
     <publisher>
       Netherlands Organization for Scientific Research (NWO)</publisher>
     <dateIssued encoding="iso8601">2005</dateIssued>
    </originInfo>
    <language>
     <languageTerm authority="rfc3066" type="code">nl</languageTerm>
    </language>
    <physicalDescription>
     <extent>52 pages</extent>
    </physicalDescription>
    <subject xml:lang="nl">
     <topic>neurologie</topic>
     <topic>brein</topic>
     <topic>onderwijswetenschap</topic>
    </subject>
    <abstract xml:lang="nl">
      Voorliggend rapport beschrijft de doelen, de gevolgde aanpak en de
      resultaten van de conferentie. Daarna wordende aanbevelingen van de
      Commissie Hersenen en Leren gegeven voor een mogelijk vervolgtraject
    </abstract>
    <identifier type="uri">URN:ISBN:90-77875-04-2</identifier>
   </mods>
```

Chapter

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="http://www.loc.gov/mods/v3"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

 <titleInfo>
   <title>The provisions of the Corpus Juris on community fraud</title>
   <subTitle>a Belgian and Dutch perspective</subTitle>
 </titleInfo>

 <name type="personal" ID="n1">
   <namePart type="given">Michael G.</namePart>
   <namePart type="family">Faure</namePart>
   <role>
    <roleTerm authority="marcrelator" type="code">aut</roleTerm>
   </role>

   <affiliation>Universiteit Maastricht. METRO</affiliation>
 </name>

 <extension>
   <daiList
    xmlns:dai="info:eu-repo/dai"
    xsi:schemaLocation="info:eu-repo/dai
    http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai
      extension.xsd">
    <identifier IDref="n1">069999546</identifier>
   </daiList>
 </extension>

 <typeOfResource>text</typeOfResource>

 <genre>info:eu-repo/semantics/bookPart</genre>

 <language>
   <languageTerm authority="rfc3066" type="code">en</languageTerm>
 </language>

 <subject xml:lang="nl">
   <topic>Rechten</topic>
 </subject>

 <relatedItem type="host">
   <titleInfo>
     <title>Das Corpus Juris als Grundlage eines europaeischen Strafrechts :
       Europaeisches Kolloquium, Trier, 4.-6. Maerz 1999 </title>
   </titleInfo>
   <name type="personal">
     <namePart type="given">Barbara</namePart>
     <namePart type="family">Huber</namePart>
     <role>
       <roleTerm authority="marcrelator" type="code">edt</roleTerm>
     </role>
     <affiliation>Max-Planck-Institut</affiliation>
   </name>

   <originInfo>
     <place>
       <placeTerm>Freiburg im Breisgau</placeTerm>
     </place>
```

```xml
      <publisher>Ed. Iuscrim</publisher>
      <dateIssued encoding="iso8601">2000</dateIssued>
    </originInfo>

    <identifier type="uri">URN:ISBN:3-86113-932-4</identifier>
    <part>
      <extent unit="page">
        <start>163</start>
        <end>175</end>
      </extent>
    </part>
  </relatedItem>
</mods>
```

Conference Paper

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods xmlns="http://www.loc.gov/mods/v3" version="3.2"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.loc.gov/mods/v3
      http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
      <titleInfo>
            <title>A tale of two partnerships: Socialization in the development of
                  buyer-supplier relationships</title>
      </titleInfo>
      <name type="personal" ID="vijvermarvande3276657112275">
            <namePart type="family">Vijver</namePart>
            <namePart type="given">M.A.R. van de</namePart>
            <role>
                  <roleTerm type="code" authority="marcrelator">aut</roleTerm>
            </role>
            <affiliation>Tilburg University</affiliation>
      </name>
      <name type="personal" ID="vosgcjm3276657316458">
            <namePart type="family">Vos</namePart>
            <namePart type="given">G.C.J.M.</namePart>
            <role>
                  <roleTerm type="code" authority="marcrelator">aut</roleTerm>
            </role>
            <affiliation>Tilburg University</affiliation>
      </name>
      <name type="personal" ID="akkermansha3276657437700">
            <namePart type="family">Akkermans</namePart>
            <namePart type="given">H.A.</namePart>
            <role>
                  <roleTerm type="code" authority="marcrelator">aut</roleTerm>
            </role>
            <affiliation>Tilburg University</affiliation>
      </name>
      <extension>
            <dai:daiList xmlns:dai="info:eu-repo/dai">
                  <dai:identifier IDref="vijvermarvande3276657112275">
            http://www.tilburguniversity.nl/dai/112275</dai:identifier>
                  <dai:identifier IDref="vosgcjm3276657316458">
            http://www.tilburguniversity.nl/dai/316458</dai:identifier>
                  <dai:identifier IDref="akkermansha3276657437700">
            http://www.tilburguniversity.nl/dai/437700</dai:identifier>
            </dai:daiList>
      </extension>
      <typeOfResource>text</typeOfResource>
      <genre>info:eu-repo/semantics/conferencePaper</genre>
```

```xml
    <originInfo>
        <dateIssued encoding="iso8601">2008</dateIssued>
    </originInfo>
    <relatedItem type="host">
        <titleInfo>
            <title>Tradition and Innovation in Operations
              Management. Proceedinference (Egs of the
              15th International EurOMA ConurOMA 2008)
            </title>
        </titleInfo>
        <name type="personal">
          <namePart type="family">Vaart</namePart>
            <namePart type="given">T. van de</namePart>
              <role>
                <roleTerm type="code" authority="marcrelator">edt</roleTerm>
              </role>
        </name>
        <name type="personal">
          <namePart type="family">Donk</namePart>
            <namePart type="given">D.P. van de</namePart>
              <role>
                <roleTerm type="code" authority="marcrelator">edt</roleTerm>
              </role>
        </name>
        <name type="personal">
          <namePart type="family">Wezel</namePart>
            <namePart type="given">W. van</namePart>
              <role>
                <roleTerm type="code" authority="marcrelator">edt</roleTerm>
              </role>
        </name>
        <name type="personal">
          <namePart type="family">Welker</namePart>
            <namePart type="given">G.</namePart>
              <role>
                <roleTerm type="code" authority="marcrelator">edt</roleTerm>
              </role>
        </name>
        <name type="personal">
          <namePart type="family">Wijngaard</namePart>
            <namePart type="given">J.</namePart>
              <role>
                <roleTerm type="code" authority="marcrelator">edt</roleTerm>
              </role>
        </name>
        <originInfo>
          <place>
            <placeTerm type="text">Groningen</placeTerm>
          </place>
            <publisher>Groningen University</publisher>
            <dateIssued encoding="iso8601">2008</dateIssued>
        </originInfo>
        <part>
            <extent unit="page">
                <start/>
                <end/>
            </extent>
        </part>
    </relatedItem>
</mods>
```

Copyright

Schema

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
   xmlns:xs="http://www.w3.org/2001/XMLSchema"
   xmlns:dc="http://purl.org/dc/elements/1.1/"
   targetNamespace="http://www.surfgroepen.nl/werkgroepmetadataplus"
   elementFormDefault="qualified">
 <xs:import
namespace=http://purl.org/dc/elements/1.1/
schemaLocation="http://dublincore.org/schemas/xmls/simpledc20021212.xsd"/>
  <xs:element name="rights">
   <xs:annotation>
    <xs:documentation xml:lang="nl">
          Het rights element kent 2 subelementen:
          dc:description en
          dc:rights
          Gebruik de eerste om een beschrijvend
          (copy)rights statement te maken en de
          tweede voor een URI.
          Beide elementen zijn optioneel
     </xs:documentation>
     <xs:documentation xml:lang="nl">
          Voorbeeld:
          &lt;dc:description&gt;© 2008 Royal Tropical Institute.
           This work is licensed under a Creative
           Commons Attribution-Noncommercial-No Derivative
           Works 3.0 Unported License.
          &lt;/dc:description&gt; &lt;dc:rights&gt;
           http://creativecommons.org/licenses/by-nc-nd/3.0/
          &lt;/dc:rights&gt;
     </xs:documentation>
   </xs:annotation>

   <xs:complexType>
    <xs:sequence>
      <xs:element ref="dc:description" minOccurs="0" maxOccurs="1"/>
      <xs:element ref="dc:rights" minOccurs="0" maxOccurs="1"/>
     </xs:sequence>
   </xs:complexType>

  </xs:element>
</xs:schema>
```

Example MODS

```xml
<mods xmlns="http://www.loc.gov/mods/v3"
  xsi:schemaLocation="http://www.loc.gov/mods/v3
  http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
 ...
 ...
 ...
 <extension>
  <wmp:rights
    xmlns:wmp=http://www.surfgroepen.nl/werkgroepmetadataplus
    xmlns:dc="http://purl.org/dc/elements/1.1/"
    xsi:schemaLocation="http://www.surfgroepen.nl/werkgroepmetadataplus rights.xsd">
     <dc:description>© 2008 Royal Tropical Institute.
       This work is licensed under a Creative Commons
```

```
            Attribution-Noncommercial-No Derivative Works 3.0 Unported License.
        </dc:description>
        <dc:rights>http://creativecommons.org/licenses/by-nc-nd/3.0/</dc:rights>
      </wmp:rights>
    </extension>
  </mods>
```

Example OAI-PMH response with DIDL, MODS and rights statements

```
    <?xml version="1.0" encoding="UTF-8" ?>
    <OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/
        http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
     <responseDate>2009-04-16T08:11:22Z</responseDate>
     <request verb="GetRecord" metadataPrefix="nl_didl"
        identifier="urn:nbn:nl:ui:34-292090">
       http://dare.uva.nl/cgi/arno/oai/dprn</request>
    <GetRecord>
    <record>
    <header>
     <identifier>oai:search4dev.nl:292090</identifier>
     <datestamp>2009-04-09</datestamp>
     <setSpec>kit-withfulltext:yes</setSpec>
     <setSpec>kit-withfulltext</setSpec>
     <setSpec>withfulltext:yes</setSpec>
     <setSpec>withfulltext</setSpec>
     </header>
    <metadata>
    <didl:DIDL xmlns:didl="urn:mpeg:mpeg21:2002:02-DIDL-NS"
      xmlns:dii="urn:mpeg:mpeg21:2002:01-DII-NS"
        xmlns:dip="urn:mpeg:mpeg21:2005:01-DIP-NS"
        xmlns:dcterms="http://purl.org/dc/terms/"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="urn:mpeg:mpeg21:2002:02-DIDL-NS
      http://standards.iso.org/ittf/PubliclyAvailableStandards/
            MPEG-21_schema_files/did/didl.xsd
        urn:mpeg:mpeg21:2002:01-DII-NS
      http://standards.iso.org/ittf/PubliclyAvailableStandards/
            MPEG-21_schema_files/dii/dii.xsd
        urn:mpeg:mpeg21:2005:01-DIP-NS
      http://standards.iso.org/ittf/PubliclyAvailableStandards/
            MPEG-21_schema_files/dip/dip.xsd">
    <didl:Item>
    <didl:Descriptor>
    <didl:Statement mimeType="application/xml">
     <dii:Identifier>urn:nbn:nl:ui:34-292090</dii:Identifier>
     </didl:Statement>
     </didl:Descriptor>
    <didl:Descriptor>
    <didl:Statement mimeType="text/xml">
     <dcterms:modified>2009-03-03</dcterms:modified>
     </didl:Statement>
     </didl:Descriptor>
    <didl:Component>
     <didl:Resource mimeType="text/html" ref="http://www.search4dev.nl/record/292090" />
     </didl:Component>
    <!-- Item [1..n] of type = metadata
     -->
    <!-- Introducing MODS
     -->
    <didl:Item>
    <didl:Descriptor>
```

```xml
<didl:Statement mimeType="application/xml">
<dip:ObjectType>info:eu-repo/semantics/descriptiveMetadata</dip:ObjectType>
</didl:Statement>
</didl:Descriptor>
<didl:Component>
<didl:Resource mimeType="application/xml">
<!-- dprn
-->
<mods xmlns="http://www.loc.gov/mods/v3" xmlns:uba="uba.uva.nl"
    xmlns:m="http://www.loc.gov/mods/v3" version="3.2"
    xsi:schemaLocation="http://www.loc.gov/mods/v3
    http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
<!-- report
-->
<titleInfo>
<title>Branding for development : desk research
    into the value of branding for development</title>
</titleInfo>
<name ID="AU292090_1" type="personal">
<namePart type="family">Boomsma</namePart>
<namePart type="given">M.</namePart>
<role>
<roleTerm authority="marcrelator" type="code">aut</roleTerm>
</role>
</name>
<name ID="AU292090_2" type="personal">
<namePart type="family">Arnoldus</namePart>
<namePart type="given">M.</namePart>
<role>
<roleTerm authority="marcrelator" type="code">aut</roleTerm>
</role>
</name>
<name>
<affiliation>KIT - Royal Tropical Institute</affiliation>
</name>
<subject>
<topic>capacity building</topic>
<topic>economic development</topic>
<topic>Economic Development and Trade</topic>
<geographic>Viet Nam</geographic>
<geographic>Philippines</geographic>
<geographic>Burkina Faso</geographic>
<genre>Practice</genre>
</subject>
<typeOfResource>text</typeOfResource>
<genre>report</genre>
<originInfo>
<place>
<placeTerm>Amsterdam</placeTerm>
</place>
<publisher>KIT</publisher>
<dateIssued encoding="iso8601">2008</dateIssued>
</originInfo>
<relatedItem type="series">
<identifier type="uri">URN:ISSN:1876-4142</identifier>
<titleInfo>
<title>KIT Working Papers Series</title>
</titleInfo>
<part>
<detail type="issue">
<number>WPS.C2</number>
</detail>
</part>
</relatedItem>
<physicalDescription>
<extent>iv, 23</extent>
```

```xml
        </physicalDescription>
      <abstract>Branding as a solution ...</abstract>
    <language>
    <languageTerm type="code" authority="rfc3066">en</languageTerm>
    </language>
    <note />
    <extension>
    <wmp:rights xmlns:wmp="http://www.surfgroepen.nl/werkgroepmetadataplus"
        xmlns:dc="http://purl.org/dc/elements/1.1/"
        xsi:schemaLocation="http://www.surfgroepen.nl/werkgroepmetadataplus rights.xsd">
      <dc:description>© 2008 Royal Tropical Institute. This work is licensed under a
        Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 Unported
        License.</dc:description>
    <dc:rights>http://creativecommons.org/licenses/by-nc-nd/3.0/</dc:rights>
    </wmp:rights>
    </extension>
    </mods>
    </didl:Resource>
    </didl:Component>
    </didl:Item>
  <!-- Item [1..n] of type = objects
  -->
  <didl:Item>
  <didl:Descriptor>
  <didl:Statement mimeType="application/xml">
    <dip:ObjectType>info:eu-repo/semantics/objectFile</dip:ObjectType>
    </didl:Statement>
    </didl:Descriptor>
  <didl:Component>
    <didl:Resource mimeType="application/pdf"
        ref="http://www.search4dev.nl/document/122243" />
    </didl:Component>
    </didl:Item>
  <!-- Item [0..1] of type = jump-off page
  -->
  <didl:Item>
  <didl:Descriptor>
  <didl:Statement mimeType="application/xml">
    <dip:ObjectType>info:eu-repo/semantics/humanStartPage</dip:ObjectType>
    </didl:Statement>
    </didl:Descriptor>
  <didl:Component>
    <didl:Resource mimeType="text/html" ref="http://www.search4dev.nl/record/292090" />
    </didl:Component>
    </didl:Item>
    </didl:Item>
    </didl:DIDL>
    </metadata>
    </record>
    </GetRecord>
    </OAI-PMH>
```

ConferenceItemNotInProceedings

```xml
  <?xml version="1.0" encoding="UTF-8"?>
  <mods:mods xmlns:mods="http://www.loc.gov/mods/v3" version="3.2"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.loc.gov/mods/v3
        http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
      <mods:titleInfo xml:lang="en">
        <mods:title>What have we learnt from fifteen years of transition in
            Central and Eastern Europe?</mods:title>
```

```xml
        </mods:titleInfo>
        <mods:typeOfResource>text</mods:typeOfResource>
        <mods:genre>info:eu-repo/semantics/conferenceItemNotInProceedins</mods:genre>
        <mods:name type="personal" ID="_719n1">
             <mods:namePart type="family">Buiter</mods:namePart>
             <mods:namePart type="given">Willem H.</mods:namePart>
             <mods:role>
                  <mods:roleTerm type="code" authority="marcrelator"
                  >aut</mods:roleTerm>
             </mods:role>
        </mods:name>
        <mods:extension>
             <dai:daiList xmlns:dai="info:eu-repo/dai">
                  <dai:identifier IDref="_719n1" authority="http://lse.ac.uk/dai"
                       >0000227616</dai:identifier>
             </dai:daiList>
        </mods:extension>
        <mods:classification authority="lcc">H Social Sciences
          (General)</mods:classification>
        <mods:originInfo>
             <mods:dateIssued encoding="iso8601">2004-05-31</mods:dateIssued>
        </mods:originInfo>
        <mods:language>
             <mods:languageTerm type="code" authority="rfc3066"
             >en</mods:languageTerm>
        </mods:language>
        <mods:relatedItem type="host">
             <mods:name type="conference">
                  <mods:namePart>International Policy Conference
                  on Transition Economies (31 May - 01 June 2004 :
                  Hanoi, Vietnam)</mods:namePart>
             </mods:name>
             <mods:originInfo>
                  <mods:place>
                     <mods:placeTerm type="text">Hanoi, Vietnam</mods:placeTerm>
                  </mods:place>
             </mods:originInfo>
        </mods:relatedItem>
   </mods:mods>
```

Conference Proceedings

```xml
  <?xml version="1.0" encoding="UTF-8"?>
<mods:mods xmlns:mods="http://www.loc.gov/mods/v3" version="3.2"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.loc.gov/mods/v3
       http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
      <mods:titleInfo>
           <mods:title>Advances in economics and econometrics</mods:title>
           <mods:subTitle>the eighth world congress</mods:subTitle>
      </mods:titleInfo>
      <mods:name type="personal" ID="n-2013-9557-1">
           <mods:namePart type="family">Dewatripont</mods:namePart>
           <mods:namePart type="given">Mathias</mods:namePart>
           <mods:role>
                <mods:roleTerm type="code" authority="marcrelator"
                >edt</mods:roleTerm>
           </mods:role>
      </mods:name>
      <mods:name type="personal" ID="n-2013-9557-2">
           <mods:namePart type="family">Hansen</mods:namePart>
```

```xml
                <mods:namePart type="given">Lars Peter</mods:namePart>
                <mods:role>
                        <mods:roleTerm type="code" authority="marcrelator"
                        >edt</mods:roleTerm>
                </mods:role>
        </mods:name>
        <mods:name type="personal" ID="n-2013-9557-3">
                <mods:namePart type="family">Turnovsky</mods:namePart>
                <mods:namePart type="given">Stephen</mods:namePart>
                <mods:role>
                        <mods:roleTerm type="code" authority="marcrelator"
                        >edt</mods:roleTerm>
                </mods:role>
        </mods:name>
        <mods:typeOfResource>text</mods:typeOfResource>
        <mods:genre>info:eu-repo/semantics/conferenceProceedings</mods:genre>
        <mods:originInfo>
                <mods:publisher>Cambridge University Press</mods:publisher>
                <mods:place>
                        <mods:placeTerm type="text">Cambridge</mods:placeTerm>
                </mods:place>
                <mods:dateIssued encoding="iso8601">2003</mods:dateIssued>
        </mods:originInfo>
        <mods:language>
                <mods:languageTerm type="code" authority="rfc3066"
                >en</mods:languageTerm>
        </mods:language>
        <mods:physicalDescription>
                <mods:extent>3 v.</mods:extent>
        </mods:physicalDescription> <mods:extension>
                <dai:daiList xmlns:dai="info:eu-repo/dai"
                        xsi:schemaLocation="info:eu-repo/dai
        https://www.surfgroepen.nl/sites/surfshare/standards/lib/dai-extension.xsd">
                        <dai:identifier IDref="n-2013-9557-1"
        authority="http://difusion.ulb.ac.be/dai">14129</dai:identifier>
                        <dai:identifier IDref="n-2013-9557-2"
        authority="http://difusion.ulb.ac.be/dai">E19099</dai:identifier>
                        <dai:identifier IDref="n-2013-9557-3"
        authority="http://difusion.ulb.ac.be/dai"
                        >E19101</dai:identifier>
                </dai:daiList>
        </mods:extension>
</mods:mods>
```

Doctoral thesis

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods
 version="3.2"
 xmlns="http://www.loc.gov/mods/v3"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
  http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
 <titleInfo>
  <title>Accounting information for changing business needs</title>
  <subTitle>concepts of business logistics applied
      to treasury management decisions</subTitle>
 </titleInfo>

 <name type="personal" ID="A1">
 <namePart type="given">Piet Erik Adolf</namePart>
 <namePart type="family">Vandenbossche</namePart>
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```xml
    <role>
     <roleTerm authority="marcrelator" type="code">aut</roleTerm>
    </role>
    <affiliation>
      Rijksuniversiteit Groningen. Faculteit Bedrijfskunde.
      SOM Research School
    </affiliation>
   </name>

   <extension>
    <daiList
     xmlns:dai="info:eu-repo/dai"
     xsi:schemaLocation="info:eu-repo/dai
http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai extension.xsd">
      <identifier
       IDref="A1"
       authority="info:eu-repo/dai/nl">157455599</identifier>
    </daiList>
   </extension>

   <name type="personal">
    <namePart type="family">Wortmann</namePart>
    <namePart type="given">J.C.</namePart>
    <role>
      <!-- promotor -->
      <roleTerm authority="marcrelator" type="code">ths</roleTerm>
    </role>
    <affiliation>
      Rijksuniversiteit Groningen.
      Faculteit Bedrijfskunde
    </affiliation>
   </name>

   <name type="personal">
    <namePart>Meer-Kooistra, J. van der</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">ths</roleTerm>
    </role>
    <affiliation>
      Rijksuniversiteit Groningen.
      Faculteit Bedrijfskunde
    </affiliation>
   </name>

   <name type="corporate">
    <namePart>Rijksuniversiteit Groningen</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">dgg</roleTerm>
    </role>
   </name>

   <typeOfResource>text</typeOfResource>

   <genre>info:eu-repo/semantics/doctoralThesis<genre>

   <originInfo>
    <place>
      <placeTerm type="text">Groningen</placeTerm>
    </place>
    <publisher>Rijksuniversiteit Groningen</publisher>
    <dateIssued encoding="iso8601">2005</dateIssued>
   </originInfo>

   <language>
    <languageTerm authority="rfc3066" type="code">en</languageTerm>
   </language>
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    <physicalDescription>
     <extent>322 p.</extent>
    </physicalDescription>

    <abstract>
       This work is about the transfer and contextual constitution of
       organisational forms (specifically of production systems) in
       the subsidiaries of multinational enterprises (MNEs). The work
       suggests that subsidiaries are simultaneously embedded in a host
       country and parent company context as well as in a strategic and
       institutional context. It is argued that only if we consider
       strategic choices at the corporate and subsidiary level as well
       as the institutional and strategic context can we understand the
       contextual constitution of subsidiary production systems in MNEs.
       Empirically the work asks how and why the contextual constitution
       - i.e. the hybridization profile - of four MNE automobile
       subsidiaries in India differs.
    </abstract>

    <subject authority="info:eu-repo/authority/goo">
     <topic>Internationale ondernemingen</topic>
     <topic>Hybride organisaties</topic>
     <topic>Personeelsmanagement</topic>
     <topic>Productiemanagement</topic>
     <genre>Proefschriften (vorm)</genre>
    </subject>
   </mods>
```

Doctoral thesis

```xml
 <?xml version="1.0" encoding="UTF-8" ?>
<!-- file: ModsUMDissertatie.xml
     based on:
http://arno.unimaas.nl/oai/dare.cgi?verb=
GetRecord&metadataPrefix=oai_dc&identifier=oai:dare:10859
    -->
<mods
 version="3.2"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="http://www.loc.gov/mods/v3"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

   <titleInfo>
     <title>Osteoporosis in inflammatory bowel disease </title>
     <subTitle>epidemiological, pathophysiological and clinical studies</subTitle>
   </titleInfo>

   <name type="personal" ID="n1">
    <namePart type="given">Jan Erik</namePart>
    <namePart type="family">Schoon</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
    </role>
    <affiliation>Universiteit Maastricht. Faculteit der Geneeskunde</affiliation>
   </name>

   <name type="personal">
    <namePart type="given">R.W.</namePart>
    <namePart type="family">StockBr&#252;gger</namePart>
```

```xml
      <role>
        <roleTerm authority="marcrelator" type="code">ths</roleTerm>
      </role>
      <affiliation>Universiteit Maastricht. Interne geneeskunde</affiliation>
    </name>
    <name type="personal">
      <namePart type="given">R.J.M.</namePart>
      <namePart type="family">Brummer</namePart>
      <role>
        <roleTerm authority="marcrelator" type="code">ths</roleTerm>
      </role>
      <affiliation>Universiteit Maastricht. Interne geneeskunde</affiliation>
    </name>
    <name type="personal">
      <namePart type="given">M.G.V.M.</namePart>
      <namePart type="family">Russell</namePart>
      <role>
        <roleTerm authority="marcrelator" type="code">ths</roleTerm>
      </role>
    </name>
    <name type="corporate">
      <namePart>Universiteit Maastricht</namePart>
      <role>
        <roleTerm authority="marcrelator" type="code">dgg</roleTerm>
      </role>
    </name>

    <extension>
      <daiList
        xmlns="info:eu-repo/dai"
        xsi:schemaLocation="info:eu-repo/dai
  http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai extension.xsd">
        <identifier
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          authority="info:eu-repo/dai/nl">232674051</identifier>
      </daiList>
    </extension>

    <typeOfResource>text</typeOfResource>
    <genre>info:eu-repo/pubtype/doctoralThesis"</genre>

    <originInfo>
      <place>
        <placeTerm>Maastricht</placeTerm>
      </place>
      <publisher>Universitaire pers</publisher>
      <dateIssued encoding="iso8601">2001-11</dateIssued>
    </originInfo>

    <language>
      <languageTerm authority="rfc3066" type="code">en</languageTerm>
    </language>

    <physicalDescription>
      <extent>158 pages</extent>
    </physicalDescription>

    <subject xml:lang="nl">
      <topic>Geneeskunde</topic>
    </subject>

    <classification>WE 250</classification>

    <identifier type="uri">URN:ISBN:90-5278-327-6</identifier>
```

```
    </mods>
```

Patent (NL)

⚠️ there are two examples of patents one from NL and one from the US. Apart from this difference in countries, it is unclear what the other differences are. Better to have an example of a patent and a patent application? An expert on patents must review this.

```
<?xml version="1.0" encoding="UTF-8"?>
<mods xmlns:xlink="http://www.w3.org/1999/xlink"
      xmlns="http://www.loc.gov/mods/v3"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.loc.gov/mods/v3
        http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
  <titleInfo xml:lang="nl">
    <title>
     Inrichting en werkwijze voor de scheiding van mengsels van chemische
     substanties
    </title>
  </titleInfo>

  <name type="personal" ID="n1">
    <namePart type="given">Jan Cornelis</namePart>
    <namePart type="family">Hummelen</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
      <!—- pth = patent holder  -->
    </role>
  </name>

  <!-- DAI -->
  <extension>
    <daiList
     xmlns:dai="info:eu-repo/dai"
     xsi:schemaLocation="info:eu-repo/dai
  http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai extension.xsd">
      <identifier
        IDref="n1"
        authority="info:eu-repo/dai/nl">070951144</identifier>
    </daiList>
  </extension>

  <typeOfResource>text</typeOfResource>

  <genre>info:eu-repo/semantics/patent</genre>

  <identifier type="octrooiraad">9200341</identifier>
===== Not according to these guidelines !!
  <!-- type van identifier is naam van uitgevende instantie -->
  <!--
    # country code of the filing country
    # publication number
    # filing number
    # kind of document
    # filing date
    # publication date
    # applicant
    # inventor
    # International Patent Classification (IPC)
    # title
    # priorities
    # abstract (searchable fulltext)
```

```
      # claims (searchable fulltext)
      # description (searchable fulltext)
      # Inpadoc legal status data (oppositions, cancellations...)
      -->

   <originInfo>
    <place>
       <placeTerm authority="marccountry" type="code">nl</placeTerm>
    </place>
    <publisher>Octrooiraad</publisher>
    <!-- verplicht veld, maar uitgever staat niet in publicatie vermeld -->
    <dateIssued encoding="iso8601">1992</dateIssued>
   </originInfo>

   <language>
    <languageTerm authority="rfc3066" type="code">nl</languageTerm>
   </language>

   <physicalDescription>
    <extent>10 p.</extent>
   </physicalDescription>
  </mods>
```

Patent (US)

```
  <?xml version="1.0" encoding="UTF-8"?>
 <mods
  version="3.2"
  xmlns="http://www.loc.gov/mods/v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.loc.gov/mods/v3
    http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

  <titleInfo>
     <title>Optical limiting materials</title>
  </titleInfo>

  <name type="personal" ID="n1">
    <namePart type="family">McBranch</namePart>
    <namePart type="given">Duncan W.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n2">
    <namePart type="family">Mattes</namePart>
    <namePart type="given">Benjamin R.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n3">
    <namePart type="family">Koskelo</namePart>
    <namePart type="given">Aaron C.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n4">
    <namePart type="family">Heeger</namePart>
    <namePart type="given">Alan J.</namePart>
```

```xml
      <role>
        <roleTerm authority="marcrelator" type="code">pth</roleTerm>
      </role>
    </name>
  <name type="personal" ID="n5">
    <namePart type="family">Robinson</namePart>
    <namePart type="given">Jeanne M.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n6">
    <namePart type="family">Smilowitz</namePart>
    <namePart type="given">Laura B.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n7">
    <namePart type="family">Klimov</namePart>
    <namePart type="given">Victor L.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n8">
    <namePart type="family">Cha</namePart>
    <namePart type="given">Myoungsik</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n9">
    <namePart type="family">Serdar Sarifici</namePart>
    <namePart type="given">N.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>
  <name type="personal" ID="n10">
    <namePart type="family">Hummelen</namePart>
    <namePart type="given">Jan C.</namePart>
    <role>
      <roleTerm authority="marcrelator" type="code">pth</roleTerm>
    </role>
  </name>

  <!-- DAI -->
  <extension>
    <daiList
      xmlns:dai="info:eu-repo/dai"
      xsi:schemaLocation="info:eu-repo/dai
http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai-extension.xsd">
      <identifier
       IDref="n10" authority="info:eu-repo/dai/n1">070951144</identifier>
    </daiList>
  </extension>

  <typeOfResource>text</typeOfResource>

  <genre>info:eu-repo/semantics/patent</genre>

  <identifier type="United States patent">5,741,442</identifier>
== this is not according to these guidelines !
  <!-- type van identifier is naam van uitgevende instantie -->
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```xml
  <originInfo>
   <place>
    <placeTerm authority="marccountry" type="code">us</placeTerm>
   </place>
   <publisher>United States Patent ???</publisher>
   <!-- verplicht veld, maar uitgever staat niet in publicatie vermeld -->
   <dateIssued encoding="iso8601">1998</dateIssued>
   <
  </originInfo>

  <language>
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  </language>

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   <extent>11 p.</extent>
  </physicalDescription>

  <recordInfo>
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   <recordChangeDate encoding="iso8601">2007-11-19</recordChangeDate>
   <recordIdentifier>4357afd8d5b13</recordIdentifier>
  </recordInfo>
 </mods>
```

Working Paper

⚠️ this is also an example of how to refer to another version; in this case the other version has other co-authors; which identifiier has to be used for referring to the other version?

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<!-- file: ModsUMWorkingPaper.xml -->
<mods
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="http://www.loc.gov/mods/v3"
 xsi:schemaLocation="http://www.loc.gov/mods/v3
   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">

 <titleInfo>
  <title>Good and bad objects</title>
  <subTitle>cardinality-based rules</subTitle>
 </titleInfo>

 <name type="personal">
  <namePart type="given">D.A.</namePart>
  <namePart type="family">Dimitrov</namePart>
  <role>
   <roleTerm authority="marcrelator" type="code">aut</roleTerm>
  </role>
  <affiliation>Universiteit van Tilburg</affiliation>
 </name>

 <name type="personal" ID="n1">
  <namePart type="given">P.E.M.</namePart>
  <namePart type="family">Borm</namePart>
  <role>
   <roleTerm authority="marcrelator" type="code">aut</roleTerm>
  </role>
  <affiliation>Universiteit van Tilburg</affiliation>
 </name>
```

```xml
<name type="personal" ID="n2">
 <namePart type="given">R.L.P.</namePart>
 <namePart type="family">Hendrickx</namePart>
 <role>
  <roleTerm authority="marcrelator" type="code">aut</roleTerm>
 </role>
 <affiliation>Universiteit van Tilburg</affiliation>
</name>

<extension>
 <daiList
  xmlns:dai="http://eu-repo/dai"
  xsi:schemaLocation="http://eu-repo/dai
http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai extension.xsd">
   <identifier
    IDref="n1"
    authority="info:eu-repo/dai/nl">075062763</identifier>
   <identifier
    IDref="n1"
    authority="info:eu-repo/dai/nl">254984509</identifier>
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</extension>

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<genre>info:eu-repo/semantics/workingPaper</genre>

<originInfo>
 <dateIssued encoding="iso8601">2003</dateIssued>
</originInfo>

<language>
 <languageTerm authority="rfc3066" type="code">en</languageTerm>
</language>

<physicalDescription>
 <extent>14 pages</extent>
</physicalDescription>

<abstract xml:lang="en">
  We consider the problem of ranking sets of objects, the members of
  which are mutually compatible. Assuming that each object is either
  good or bad, we axiomatically characterize three cardinality-based
  rules which arise naturally in this dichotomous setting. They are
  what we call the symmetric di.erence rule, the lexicographic good-bad
  rule, and the lexicographic bad-good rule. Each of these rules
  induces a unique additive separable preference relation over the
  set of all groups of objects.
</abstract>

<subject xml:lang="en" authority="local">
 <topic>welfare economics</topic>
</subject>

<classification
 authority="info:eu repo/authority/jel">D63</classification>
<classification
 authority="info:eu repo/authority/jel">D71</classification>

<relatedItem type="series">
 <titleInfo>
  <title>Discussion Paper</title>
 </titleInfo>
 <identifier type="issn">0924-7815</identifier>
 <originInfo>
  <publisher>
   Tilburg University. Center for Economic Research
```

```xml
        </publisher>
      </originInfo>
      <part>
        <detail type="volume">
          <number>2003-49</number>
        </detail>
      </part>
    </relatedItem>

    <!-- add co-authors; in this case they differ from the working paper !!-->
    <relatedItem type="succeeding">
      <titleInfo>
        <title>Good and bad objects</title>
        <subTitle>the symmetric difference rule</subTitle>
      </titleInfo>
      <relatedItem type="host">
        <titleInfo>
          <title>Economics bulletin</title>
        </titleInfo>
        <part>
          <detail type="volume">
            <number>4</number>
          </detail>
          <detail type="issue">
            <number>11</number>
          </detail>
          <extent unit="page">
            <start>1</start>
            <end>7</end>
          </extent>
          <date>2004</date>
        </part>
      </relatedItem>
    </relatedItem>
  </mods>
```