Use of MODS for institutional repositories

version 1

history:		
2008-05-29	1.0	

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 granularity¹. 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 reports². 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

¹ 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."

² Although MODS can also be used for materials other than publications, this document is restricted to the use of MODS for describing publications.

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</pre>

```
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 <u>Annex: DAI schema</u>. 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>.

Attributes:

xml:lang

Subelements:

place

Subelements:

placeTerm

```
place of publication: <originInfo><place><placeTerm
type="text">Amsterdam</placeTerm></place>...</originInfo>
```

Attributes:

type

value: text

publisher

datelssued

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: page Subelements:

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.

Annex

DAI schema

The schema can also be found at

http://www.surfgroepen.nl/sites/oai/metadata/Shared%20Documents/dai-extension.xsd. Watch out: this is a temporary location for the schema. The target name space is also 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</pre>
    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</pre>
        name="identifier"
        type="identifierType"
        minOccurs="1"
        maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType</pre>
    name="identifierType">
    <xsd:simpleContent>
      <xsd:extension</pre>
        base="xsd:anyURI">
        <xsd:attribute</pre>
          name="IDref"
          type="xsd:IDREF"
          use="required"/>
        <xsd:attribute</pre>
          name="authority"
          type="xsd:string"
          use="optional" />
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
</xsd:schema>
```

Publication types

Use for publication types identifiers from the *info:eu-repo/semantics/* namespace, see the first column of the following table. E.g., the URI for articles is *info:eu-repo/semantics/article*. The second column contains the vocabulary of the Eprints Application Profile (also known as Scholarly Works Application Profile - SWAP) (http://www.ukoln.ac.uk/repositories/digirep/index/Eprints_Type_Vocabulary_Encoding_Scheme). This vocabulary is included only for comparison reasons.

info, ou rong/somentice/	http://purl.org/oprint/ty/	Description
info:eu-repo/semantics/	http://purl.org/eprint/type/	Description
annotation		note to a logal judgment
article	JournalArticle	note to a legal judgment article in a journal
bachelorThesis	Thesis (broader)	bachelor thesis
book	Book	
bookPart	BookItem	book or monograph. part or chapter of a book
bookReview	BookReview	book review
conferencePaper	ConferencePaper	paper published in conference proceedings
contributionToPeriodical		contribution to a newspaper, weekly
Contribution Feriodical		magazine or another non-academic
		periodical
doctoralThesis	Thesis (broader)	PhD dissertation
researchProposal	modis (brodder)	documentation for grant request
lecture		Published lecture presented during an
		academic event, e.g., inaugural
		lecture
masterThesis	Thesis (broader)	10000.0
patent	Patent	patent
preprint	Report (broader)	like a research paper this is a
p. op	(2.23.3.)	preliminary scientific or technical
		paper, but it is not published in a
		institutional series. The paper is
		intended to be published in a scientific
		journal or as a chapter in a book.
report	Report (broader)	this is a more or less a rest category
		and covers commission reports,
		memoranda, conference reports,
		external research reports, internal
		reports, statistical report, reports to
		funding agency, etc.
studentThesis	Thesis (broader)	this refers to theses of the pre-
		Bologna period for degrees that are at
		the same level as what now is known
		as a master degree
technicalDocumentation		technical documentation
workingPaper	WorkingPaper	a preliminary scientific or technical
		paper that is published in a series of
		the institution where the research is
		done. Also known as research paper, research memorandum or discussion
		paper. The difference with a preprint
		is that a workingPaper is published in
		a institutional series.
	ScholarlyText	all the other types are a sub-classe of
	Goriolariy rext	this type
		l una ràbe

ConferenceItem	covers conference papers and conference posters
ConferencePoster	poster presented at a conference
JournalItem	a contribution to a journal; includes articles, editorials, conference reports, etc.
NewsItem	news item
SubmittedJournalArticle	the author's original manuscript submitted to and/or accepted by a journal. When not accepted it is a info:eu-repo/semantics/preprint or a info:eu-repo/semantics/workingPaper and when accepted it is a info:eu-repo/semantics/article

Mandatory and Recommended elements per publication type

M=mandatory A=If applicable or information available

Top level elements	Subelements								
						working			
		article	book	thesis	bookPart	Paper	lecture	preprint	patent
titleInfo									
	title	M	M	M	M	M	M	M	M
	subTitle	Α	Α	Α	Α	Α	Α	Α	Α
	partNumber		Α						
	partName		Α						
	'								
name									
	namePart	М	М	M	M	M	М	М	М
	affiliation	Α	A	A	A	A	A	A	A
	role	М	M	M	M	M	M	M	M
	1010		141	141	141	141		141	
typeOfResource		М	М	M	M	M	М	М	М
typeontesource		141	171	141	141	141	141	141	141
genre		М	М	M	M	М	М	М	М
geriie		IVI	IVI	IVI	IVI	IVI	IVI	IVI	IVI
originInfo									
originino	place		Α	Α		Α	Α	Α	Α
	publisher		M	M		M	M	^	^
		N 4				M			
	datelssued	M	M	M		IVI	M		
	edition		Α						
language	_		_	_	_			_	_
	languageTerm	Α	Α	Α	Α	Α	Α	Α	Α

physicalDescription		article	book	thesis	bookPart	working Paper	lecture	preprint	patent
priysicalDescription	extent		Α	Α		Α	Α	Α	Α
abstract		Α	Α	А	Α	Α	Α	Α	
note									
subject	topic	Α	Α	Α	А	Α	Α	Α	А
classification		Α	Α	Α	Α	Α	Α	Α	Α
relatedItem	Any MODS element may be used as defined in the schema with appropriate subelements titleInfo name originInfo	M			M A M	M			
identifier		Α	Α	А	Α	Α	Α	Α	Α
location	url	А	Α	Α	А	Α	А	А	Α
part	detail extent	M A							

					working	l		
	article	book	thesis	bookPart	Paper	lecture	preprint	patent
extension	Α	Α	Α	Α	Α	Α	Α	Α

Examples

== missing: example of conference paper ==

Article

```
<?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
   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>
      <roleTerm authority="marcrelator" type="code">aut</roleTerm>
    </role>
  </name>
 <extension>
     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>
    <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 -->
  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

</abstract>

and WKY.

```
<subject>
    <topic>grooming</topic>
    <topic>hypertension</topic>
  </subject>
  <classification>Farmacie</classification>
  <relatedItem type="host">
    <identifier type="uri">URN:ISSN:0304-3940</identifier>
    <titleInfo>
      <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 version="1.0" encoding="UTF-8" ?>
<mods version="3.2"</pre>
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    <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
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    <namePart type="given">J.</namePart>
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    <namePart type="given">R.</namePart>
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    <namePart type="given">J.</namePart>
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    <namePart type="given">H.</namePart>
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  </physicalDescription>
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    <topic>brein</topic>
    <topic>onderwijswetenschap</topic>
  </subject>
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   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
  <identifier type="uri">URN:ISBN:90-77875-04-2</identifier>
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Chapter
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Doctoral thesis
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 xsi:schemaLocation="http://www.loc.gov/mods/v3
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     SOM Research School
    </affiliation>
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    <namePart type="given">J.C.</namePart>
    <role>
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      <roleTerm authority="marcrelator" type="code">ths</roleTerm>
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       Faculteit Bedrijfskunde
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Rijksuniversiteit Groningen. Faculteit Bedrijfskunde

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  </physicalDescription>
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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 \stackrel{-}{\text{MNE}} automobile subsidiaries in
India differs.
  </abstract>
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    <topic>Personeelsmanagement</topic>
    <topic>Productiemanagement</topic>
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  </subject>
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Doctoral thesis
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<!-- file: ModsUMDissertatie.xml
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http://arno.unimaas.nl/oai/dare.cgi?verb=GetRecord&metadataPrefix=oai dc&ide
ntifier=oai:dare:10859
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    <namePart type="family">Schoon</namePart>
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    </role>
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Geneeskunde</affiliation>
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  <name type="personal">
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    <namePart type="family">StockBr&#252;gger</namePart>
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</dentifier type="uri">URN:ISBN:90-5278-327-6</ddentifier>
</mods>
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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. ==

```
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      xsi:schemaLocation="http://www.loc.gov/mods/v3
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    </title>
  </titleInfo>
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    <namePart type="given">Jan Cornelis/namePart>
    <namePart type="family">Hummelen/namePart>
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      <!-- pth = patent holder -->
    </role>
  </name>
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===== Not according to these guidelines !!
 <!-- type van identifier is naam van uitgevende instantie -->
 < 1 --
    # 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>
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    </place>
    <publisher>Octrooiraad</publisher>
    <!-- verplicht veld, maar uitgever staat niet in publicatie vermeld -->
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 xsi:schemaLocation="http://www.loc.gov/mods/v3
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    <namePart type="given">Duncan W.</namePart>
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    </role>
  </name>
  <name type="personal" ID="n2">
    <namePart type="family">Mattes/namePart>
    <namePart type="given">Benjamin R.</namePart>
    <role>
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    </role>
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  <name type="personal" ID="n3">
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    <namePart type="given">Aaron C.</namePart>
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    <namePart type="given">Alan J./namePart>
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    <namePart type="given">Jeanne M.</namePart>
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  </name>
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    <namePart type="given">Laura B.</namePart>
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  </name>
  <name type="personal" ID="n7">
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    <namePart type="given">Myoungsik</namePart>
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  </recordInfo>
</mods>
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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 identifier has to be used for referring to the other version? ==

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<?xml version="1.0" encoding="UTF-8" ?>
<!-- file: ModsUMWorkingPaper.xml -->
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   http://www.loc.gov/standards/mods/v3/mods-3-2.xsd">
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   <title>Good and bad objects</title>
   <subTitle>cardinality-based rules</subTitle>
 </titleInfo>
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  <namePart type="family">Dimitrov</namePart>
  <role>
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  </role>
  <affiliation>Universiteit van Tilburg</affiliation>
  </name>
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   <namePart type="given">P.E.M.</namePart>
   <namePart type="family">Borm</namePart>
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  </originInfo>
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  </language>
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  </physicalDescription>
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   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.
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    <identifier type="issn">0924-7815</identifier>
    <originInfo>
      <publisher>
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      </publisher>
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```

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 <!-- add co-authors; in this case they differ from the working paper !!-->
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     <subTitle>the symmetric difference rule</subTitle>
   </titleInfo>
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