

Abstract

This application profile describes the use of METS Version 1.10 in combination with MODS 3.5 and PREMIS 2.3 by the German Literature Archive in Marbach. The metadata schemata are used to describe individual works of electronic literature and their archived versions in the project called “Preserving German Net Literature and Making It Long-Term Available”. The intellectual works are exclusively described in the MODS segment, viz. primarily bibliographically, while the individual representations (the archived versions) are described technically. The goal is to create a foundation on which the individual archived versions can be presented in an emulated environment.

This document first describes the data model that has been established and then explains the elements used in the application profile.

URI

https://wwik-prod.dla-marbach.de/line/index.php/Datei:Application_profile_V3_en.pdf

Date

July 2016

Contact

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Associated Application Profiles

This profile is based on the British Library DOM Legal Deposit eJournal METS Application Profiles, Version 1.6.9 (<http://www.bl.uk/profiles/ejournal/>). The British Library’s application profile refers to metadata for archiving e-journals.

The ELAN application profile: metadata for electronic teaching and textbook material Version 1.0 by the Deutschen Initiative für Netzwerkinformation e.V. has also been used as a template (<http://edoc.hu-berlin.de/series/dini-schriften/2005-6-de/PDF/6-de.pdf>).

Versions

The indicated numbering corresponds to the version valid at the given time.

Version 0.1. November 2013

Version 0.2. 15 November 2013

Changes:

- Naming of hardware and software (hwName/swName)
- Naming of formats (formatName)
- Introduction of UUID for identifying objects (objectIdentifierType)

Version 0.3. 29 November 2013

Changes:

- Data model integrated
- Glossary expanded
- Element “Hardware version” added (self-defined)
- Defined the attribute “type” for element “objectCategory” (self-defined)

Version 0.4. 4 December 2013

Changes:

- Data model adjustment

Version 0.5. 18 December 2013

Changes:

- Minor change in the area of the MODS elements
- Addition of creator in MODS area
- Creation of an overview of all elements
- Examples of elements added

Version 0.6 16/01/2014

Changes:

- Minor changes in the area of the administrative metadata
- Establishment of a controlled vocabulary for 3.1.3.1.1. “Instructions for use – restriction on access”; for more information, see Annex 1

Version 0.7 24/01/2014

Changes:

- Corrections to repeatability of elements
- Name of element 3.2.3.2 changed to “Object category”
- More precise definition of the “website” value in element 3.2.3.2.

Version 0.8 30/01/2014

Changes:

- Revision of elements 3.2.3.3.3.(“Software”) and 3.2.3.3.4.(“Hardware”) and their sub-elements
- Revision of element 3.2.3.4 (“Relationships”)
- Minor updates and corrections

Version 0.9 11/02/2014

Changes:

- Addition of the section “Relationship of website in the live web to archived versions”
- Revision of the example of crawl
- Deletion of the “type” attribute in Element 5
- Addition of examples for screencast and other files

Version 0.10 13/02/2014

Changes:

- Fundamental changes to element 3.1.3.1.1. “Instructions for use”; entries were shifted completely to the rights management group
- Addition of the “bitstream” type in PREMIS; this type is used for the objects located in the warc file.
- Removal of the “fileSec” element in METS; the storage location will be indicated as a relative path in the “premis:storage” element in the future.
- Restriction of the “storage” type to the “file” type; “representation” and “bitstream” receive no reference to the storage location.

Version 0.11 25/02/2014

Changes:

- Insertion of the “Supplementary literature” section
- Addition of the original English title of the MARC lists

Version 0.12 28/02/2014

Changes:

- Changes to the name of element 1.1.1
- Addition of a metsDocumentID (element 1.2.)
- Allocation of IDs for amdSec and structMap
- In the future, all IDs will be generated Version 4 UUIDs – for more information, see The Internet Society (2005) under Supplementary literature

Version 0.13 07/03/2014

Changes:

- Minor error corrections
- Missing “nonsort” element added
- Addition of “authorityURI” and “valueURI” to element “name”
- Re-admission of “FileSec” because of the “MIMETYPE” and “CREATED” attributes it contains
- Removal of the element 2.2.1.5.2 “mime type”
- Removal of element 2.2.1.3.2. “Date of archiving”, instead of which we use the “CREATED” attribute in the Element 4.1.1 “file”

Version 0.14 24/03/2014

Changes:

- Bitstream is once again removed from PREMIS; in the future, only files will be described
- The information about the work in the live web is removed

DLA - Application Profile, Version 1 15/04/2014

Changes:

- precise definition of the times to be indicated
- Element 2.2.1.2. “Naming” is linked to the GND
- Element 2.2.1.2.3. GND removed
- Element 3.1.3.1.1. Instructions for use and the subordinated elements are restructured
- For Element 3.2.3.5.4.1.1. A decreasing prioritization is introduced to the format name and following elements
- Element 3.2.3.6.1. “Storage” and subordinate elements were changed

Version 2 12/06/2014

Changes:

- Definition of Element 3.1.3.5. “Environment” and following elements for files as well (see Annex 1 for more information), with an analogous change to the data model on p. 11
- Introduction of an external structMD (for more information, see Annex 3)
- more precise definition of time entries
- Reversal of the sequence of “techMD” and “rightsMD”
- Environment information was defined for files as well and moved down somewhat in the sorting
- Reduction of element 3.1.3.3.1. “environmentCharacteristics” to the “known to work” value
- Reduction of element 3.1.3.3.2. “environmentPurpose” to the “render” value
- Reduction of element 3.1.3.6.1.1. “environmentLocation” type to the “path” value (analogous to Element 4.1.1. “Flocat”)

Version 2.1 12/06/2014

Changes:

- Supplement to Annex 3
- Update of the link in element 2.2.1.2. “Naming”
- Update of the link in element 3.1.3.3.4.1.1. “Format Name” and 3.1.3.3.4.1.2. “Format Version”
- Addition of element 2.2. 1.5.1 “Form”

Version 2.2. 22/08/2014

Changes:

- Element 2.2.1.2.1. “namePart” allows special characters
- Element 2.2.1.4.1. “URL” is no longer mandatory
- New instructions on the selection of a version during format designation in Element 3.1.3.3.4.1.2. “Formate Version” : when there is doubt, the oldest version is always selected

Version 2.3. 15/09/2014

Changes:

- The divisions in the structMap were embedded differently (see Element 5.1)
- Removal of Annex 3: struc_MD. In the future, it will not be noted in metadata-xml

Version 3 06/11/2014

Changes:

- Renouncement of self-defined elements for software and hardware; in the future, the information will be contained completely in the PREMIS elements that follow 1.3.1.1.1.4 “environment”
- Renouncement of copyrightMD in element 1.3.2.1.1.1.1. “Instructions for use”; instead, the information about the rights holder will be contained in MODS in the future
- Correction to numbering
- Addition of the “server” software type to element 1.3.1.1.1.4.3.3. “Software type”

Version 3.1. 21/11/2014

Changes:

- Note on “Intellectual Entity”
- Correction to the namespaces in Element 1.3.1.1.1.1. PREMIS section
- Element 1.3.1. “Technical metadata” becomes repeatable, as well as the adaptation of the repeatability of the following elements
- Addition of the “ADMID” attribute to element 1.5.1. “Division”
- Addition of the “ADMID” attribute to element 1.4.1.1. “File information”
- Correction to numbering

Version 3.2. 02/12/2014

Changes:

- Revision of the note on “Intellectual Entity”
- Name of element 1.3.1.1.1.1. changed to PREMIS object
- Revision of the definition of element 1.5.1.1. “Division”
- Correction to the example in elements 1.5.1.1 “Division” and 1.4.1.1. “File information”
- Revision of the definition of element 1.4.1.1. “File information”
- Clarification of the fact that the individual div elements in the structMap must be encompassed by a superordinate div element.

Schemata used

Metadata Encoding & Transmission Standard (METS), Version 1.10

<http://www.loc.gov/standards/mets/version110/mets.xsd>

Metadata Object Description Schema (MODS), Version 3.5

<http://www.loc.gov/standards/mods/v3/mods-3-5.xsd>

PREMIS, Version 2.3

<http://www.loc.gov/standards/premis/v2/premis-v2-2.xsd>

Controlled vocabulary

ISO 639-2B language coding system

Library of Congress

<http://www.loc.gov/standards/iso639-2/>

The language codes must comply with ISO 639-2B.

ISO 8601 time format

<http://www.w3.org/TR/NOTE-datetime>

Time codes must comply with ISO 8601.

MARC role designation – MARC Code List for Relators

Library of Congress

<http://www.loc.gov/marc/relators/>

Role designations must comply with the MARC relator list.

MARC form designation – MARC Form of Item Term List

Library of Congress

<http://www.loc.gov/standards/valuelist/marcform.html>

Form designation must conform to the MARC Form of Item Term List.

MARC Genre Term List

Library of Congress

<http://www.loc.gov/standards/valuelist/marctgt.html>

Genre designation must conform with the MARC Genre Term List

Integrated Authority File (Gemeinsame Normdatei, or GND)

German National Library

<http://www.dnb.de/gnd/>

The author names should be recorded in accordance with the GND.

Media Types

Assigned Numbers Authority

<http://www.iana.org/assignments/media-types>

The MIME types contained in FileSec must conform with the IANA media types.

Supplementary literature

PREMIS (2012): Data Dictionary for Preservation Metadata, Version 2.2, online at:
<http://www.loc.gov/standards/premis/v2/premis-2-2.pdf>, last accessed: 21/02/2014

International Federation of Library Associations and Institutions (2009):
Functional Requirements For Bibliographic Records. Final Report, online at:
http://www.ifla.org/files/assets/cataloguing/frbr/frbr_2008.pdf, last accessed:
21/02/2014

The Internet Society (2005): A Universally Unique Identifier (UUID) URN
Namespace, online at: <http://tools.ietf.org/html/rfc4122>, last accessed: 28/02/2014

Glossary

Container file

This is a file which in turn can contain various files and file types. Examples are files in the zip or tar formats.

File

This designates individual files from which a representation emerges, such as html pages, graphics, or flash applications.

Container files, such as zip files or tar archives, are treated as files in the project; their content is not included in the metadata. Instead, such files will be assigned a so-called structMD.xml that describes the content and the folder structure. For more information, see Annex 3: Container files and structMD.xml

Intellectual Entity

This designates the work to be archived at a defined point in time x. It can be the work in the live web, but it can also be a storage medium that contains the website.

„A set of content that is considered a single intellectual unit for purposes of management and description: for example, a particular book, map, photograph, or database. An Intellectual Entity can include other Intellectual Entities; for example, a Web site can include a Web page; a Web page can include an image. An Intellectual Entity may have one or more digital representations“

(Source: PREMIS: Data Dictionary, Version 2.2, p. 5)

This application profile does not treat the Intellectual Entity as a separate object, as PREMIS 3.0 allows.

Representation

This designates a manifestation of an Intellectual Entity, such as a crawl, a screencast, a file, or a group of files that are intended for archiving.

„A representation is the set of files, including structural metadata, needed for a complete and reasonable rendition of an Intellectual Entity. For example, a journal article may be complete in one PDF file; this single file constitutes the representation. Another journal article may consist of one SGML file and two image files; these three files constitute the representation. A third article may be represented by one TIFF image for each of 12 pages plus an XML file of structural metadata showing the order of the pages; these 13 files constitute the representation.“

(Source: PREMIS: Data Dictionary, Version 2.2, p. 6)

In this case, this representation corresponds to a **manifestation** according to FRBR:

“When a *work* is realized, the resulting *expression* of the *work* may be physically embodied on or in a medium such as paper, audio tape, video tape, canvas, plaster, etc. That physical embodiment constitutes a *manifestation* of the work. “

(Source: International Federation of Library Associations and Institutions (2009):
Functional Requirements For Bibliographic Records. Final Report, p. 21)

Work according to FRBR:

“A *work* is an abstract entity; there is no single material object one can point to as the *work*. We recognize the *work* through individual realizations or *expressions* of the *work*, but the *work* itself exists only in the commonality of content between and among the various *expressions* of the *work*.”

(Source: International Federation of Library Associations and Institutions (2009):
Functional Requirements For Bibliographic Records. Final Report, p. 17)¹

¹ There is some uncertainty as to whether “Intellectual Entity” (PREMIS) is the same thing as “work” (FRBR). That is why this application profile will refrain from an unambiguous categorization until further notice.

Data model

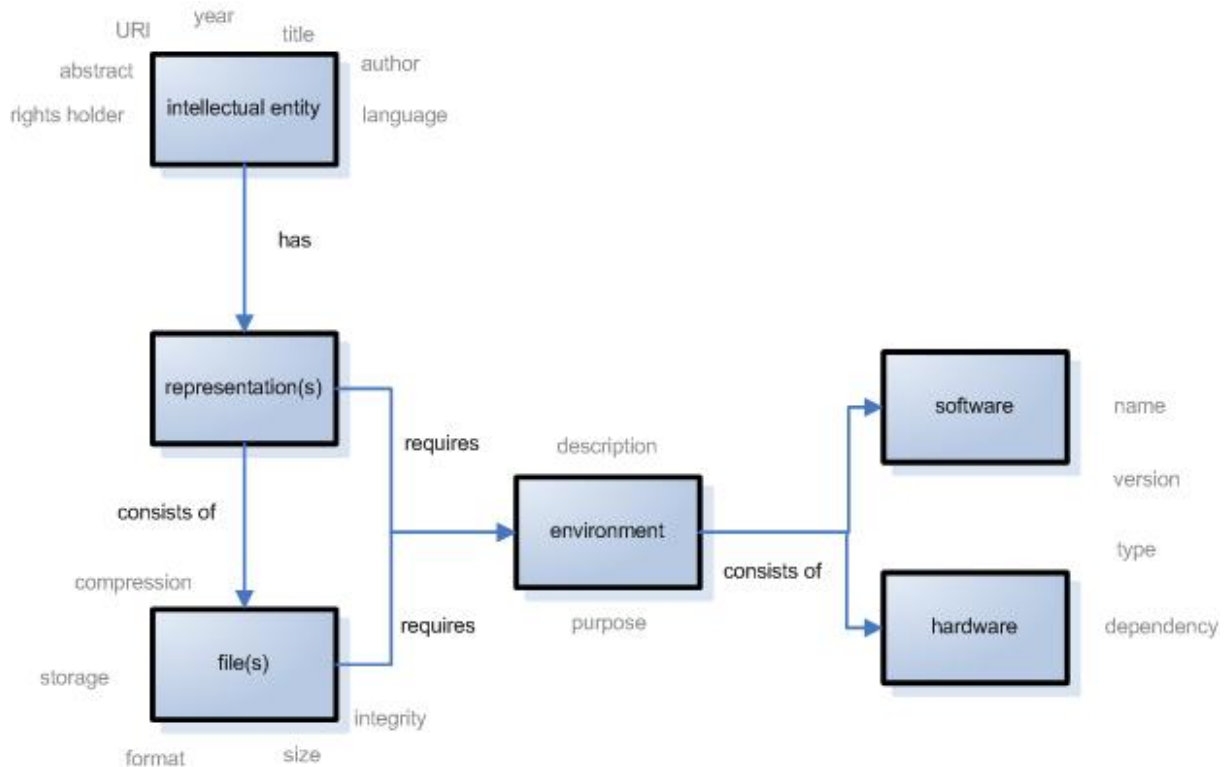


Figure 1: Data model

In this data model, an **Intellectual Entity** is represented by one or more manifestations or representations.

The Intellectual Entity can be described with the usual bibliographical data and also has a rights holder who may or may not be the author.

The Intellectual Entity is archived by the DLA Marbach in at least one representation. This can be a crawl or a screencast.

A representation needs a given **environment** for rendering composed of software and hardware.

The **software and hardware** can be described with name, version, type, and dependencies.

A **representation** is composed of one or more **files** that can be characterized by degree of compression, size, format, and storage location. Integrity is ensured by hashes.

An example:

Intellectual Entity “Abstract” work of electronic literature

Representation: archived versions, such as screencasts and/or crawls

Files: Individual files belonging to the representation in question

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Root element

1. METS root element	
Element name	METS root element
Label	mets
Defined by	METS 1.10
Definition	Root element of the METS document
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:mets>
Sub-elements	metsHdr dmdSec amdSec fileSec structMap
Attributes	no

METS Header Element

The information about the creation of the given METS document is noted in the metsHdr.
 The METS header must have an attribute named CREATEDATE in which the time of creation of the METS document is documented.

The institution that created the document must also be recorded.

1.1. METS Header	
Element name	METS Header
Label	metsHdr
Defined by	METS 1.10
Definition	contains the description of the METS document
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:metsHdr CREATEDATE="2013-10-15T14:15:00.234000">
Sub-elements	agent metsDocumentID
Attributes	CREATEDATE
	Label CREATEDATE
	Definition time of creation to the second with at least three decimal places for fractions of a second; separated by a point.
	Specification coded in ISO 8601

1.1.1. Processor		
Element name	Processor	
Label	agent	
Defined by	METS 1.10	
Definition	Information about the document processors	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:agent ROLE="CREATOR" TYPE="ORGANIZATION">	
Sub-elements	name	
Attributes	ROLE	
	Label	ROLE
	Definition	Naming of processor's role
	Specification	Only the following values can be assigned: <ul style="list-style-type: none"> CREATOR
	TYPE	
	Label	TYPE
	Definition	Type of processor
	Specification	Only the following values can be assigned: <ul style="list-style-type: none"> ORGANIZATION (in terms of institution)

1.1.1.1. Institution name	
Element name	Name
Label	name
Defined by	METS 1.10
Definition	Name of the creating institution
Specifications	Must be "Deutsches Literaturarchiv Marbach"
repeatable	no
mandatory	yes
Example	<mets:name>Deutsches Literaturarchiv Marbach</mets:name>
Sub-elements	no
Attributes	no

1.1.2. Document ID	
Element name	Document ID
Label	metsDocumentID
Defined by	METS 1.10
Definition	ID of the entire METS document
Specifications	preceded by an underline + generated UUID, Version 4
repeatable	no
mandatory	yes
Example	<mets:metsDocumentID>_9bcff5fd-20c1-40b8-a202-23e2a305c5f4</mets:metsDocumentID>
Sub-elements	no
Attributes	no
Note	xsd:ID requires an underline or a letter at the beginning of an ID

DmdSec: Bibliographical metadata

The dmdSec Element is used for bibliographical description of the Intellectual Entity in question. The MODS schema is used for the description.

1.2. Bibliographical description	
Element name	Bibliographical description
Label	dmdSec
Defined by	METS 1.10
Definition	contains the bibliographical description
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:dmdSec ID="_f3287e75-942e-4f9a-9fa1-25a735b0bde0">
Sub-elements	mdWrap
Attributes	ID
	Label ID
	Definition indicates the dmdsec ID
	Specification preceded by an underline + generated UUID, Version 4
	Note xsd:ID requires an underline or a letter at the beginning of an ID

1.2.1. Metadata embedding	
Element name	Metadata embedding
Label	mdWrap
Defined by	METS 1.10
Definition	embeds another metadata schema
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:mdWrap MDTYPE="MODS">
Sub-elements	xmlData
Attributes	MDTYPE
	Label MDTYPE
	Definition Indicates what metadata follow
	Specification In the case of bibliographical metadata, it must take the value "MODS".

1.2.1.1. XML data	
Element name	XML data
Label	xmlData
Defined by	METS 1.10
Definition	Contains the bibliographical description data in XML format
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:xmlData>
Sub-elements	mods
Attributes	no

1.2.1.1.1. MODS section	
Element name	MODS section
Label	mods
Defined by	MODS 3.5
Definition	Contains the elements of the MODS section
Specifications	-
repeatable	no
mandatory	yes
Example	<mods:mods version="3.5">
Sub-elements	titleInfo name originInfo location physicalDescription abstract typeOfResource genre language
Attributes	version
	Label version
	Definition Indicates the version of the MODS schema used
	Specification based on the application profile, the value must be “3.5”

1.2.1.1.1.1. Title information	
Element name	Title information
Label	titleInfo
Defined by	MODS 3.5
Definition	Contains information about the title of the work
Specifications	-
repeatable	no
mandatory	yes
Example	<mods:titleInfo>
Sub-elements	nonSort title subTitle partName partNumber
Attributes	no

1.2.1.1.1.1. Non-sorting title portion

Element name	Non-sorting title portion	
Label	nonSort	
Defined by	MODS 3.5	
Definition	Contains the non-sorting portion of the work title that can be skipped during indexing	
Specifications	Can precede either the title or the volume title	
repeatable	no	
mandatory	no	
Example	<mods:nonSort lang="ger">Der</mods:nonSort>	
Sub-elements	no	
Attributes	lang	
	Label	lang
	Definition	Indicates the language of the non-sorting portion of the title
	Specification	coded in ISO 639-2B

1.2.1.1.1.1.2. Title

Element name	Title	
Label	title	
Defined by	MODS 3.5	
Definition	Contains the title of the work	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mods:title lang="eng">Senghor on the Rocks</mods:title>	
Sub-elements	no	
Attributes	lang	
	Label	lang
	Definition	Indicates the language of the title
	Specification	coded in ISO 639-2B

1.2.1.1.1.1.3. Subtitle

Element name	Subtitle	
Label	subTitle	
Defined by	MODS 3.5	
Definition	Contains the subtitle of the work	
Specifications	-	
repeatable	no	
mandatory	no	
Example	<mods:subtitle lang="eng">Adventure in Space</mods:subtitle>	
Sub-elements	no	
Attributes	lang	
	Label	lang
	Definition	Indicates the language of the subtitle
	Specification	coded in ISO 639-2B

1.2.1.1.1.1.4. Volume number

Element name	Volume number
Label	partNumber
Defined by	MODS 3.5
Definition	Contains the number of the volume or part
Specifications	-
repeatable	no
mandatory	no
Example	<mods:partNumber>1</mods:partNumber>
Sub-elements	no
Attributes	no

1.2.1.1.1.1.5. Volume title

Element name	Volume title
Label	partName
Defined by	MODS 3.5
Definition	Contains the name of the volume or part
Specifications	-
repeatable	no
mandatory	no
Example	<mods:partName>Coupe du Monde</mods:partName>
Sub-elements	no
Attributes	no

1.2.1.1.1.2. Naming		
Element name	Naming	
Label	name	
Defined by	MODS 3.5	
Definition	The name of a person, institution, or even (conference, work group, etc.) that has some relation to the resource.	
Specifications	-	
repeatable	yes	
mandatory	yes	
Example	<mods:name type="personal" authorityURI="http://www.dnb.de/gnd" valueURI="http://d-nb.info/gnd/129938262">	
Sub-elements	namePart role	
Attributes	type	
	Label	type
	Definition	Indicates the type of the creator
	Specification	Can take the following values: <ul style="list-style-type: none"> • personal • corporate • conference
	authorityURI	
	Label	authorityURI
	Definition	Indicates the URI of the standard file used
	Specification	http://www.dnb.de/gnd
	valueURI	
	Label	valueURI
	Definition	Indicates the URI of the entry in the standard data
	Specification	http://d-nb.info/gnd/ + number of the entry in the GND

1.2.1.1.1.2.1. Specification of the name	
Element name	Specification of the name
Label	namePart
Defined by	MODS 3.5
Definition	Contains the name of the creator
Specifications	Expansion of the preferred name from the GND (usually in the following format: last name, first name)
repeatable	no
mandatory	yes
Example	<mods:namePart>Klötgen, Frank</mods:namePart>
Sub-elements	no
Attributes	no

1.2.1.1.1.2.2. Role

Element name	Role
Label	role
Defined by	MODS 3.5
Definition	Contains information about the role of the person named
Specifications	-
repeatable	no
mandatory	yes
Example	<mods:role>
Sub-elements	roleTerm
Attributes	no

1.2.1.1.1.2.2.1. Role designation

Element name	Role designation	
Label	roleTerm	
Defined by	MODS 3.5	
Definition	Contains the designation of the role of the creator	
Specifications	Value must be taken from the MARC Code List for Relators http://www.loc.gov/marc/relators/relaterm.html	
repeatable	no	
mandatory	yes	
Example	<mods:roleTerm type="text">creator</mods:roleTerm>	
Sub-elements	no	
Attributes	type	
	Label	type
	Definition	Indicates the type of coding
	Specification	Must take the following value: <ul style="list-style-type: none"> • text

1.2.1.1.1.3. Information about origin

Element name	Information about origin
Label	originInfo
Defined by	MODS 3.5
Definition	Contains information about the origin of the work
Specifications	-
repeatable	no
mandatory	yes
Example	<mods:originInfo>
Sub-elements	dateCreated
Attributes	no

1.2.1.1.1.3.1. Year of creation

Element name	Year of creation	
Label	dateCreated	
Defined by	MODS 3.5	
Definition	Indicates the time period precisely in years or the exact year in which the work was created	
Specifications	coded in ISO 8601	
repeatable	yes	
mandatory	yes	
Example	<mods:dateCreated encoding="iso8601">1997</mods:dateCreated>	
Sub-elements	no	
Attributes	encoding	
	Label	encoding
	Definition	Indicates the coding of the date
	Specification	based on the application profile, the value must be "iso8601"
	point	
	Label	point
	Definition	specifies the date
	mandatory	no
	Specification	Can take the following values: <ul style="list-style-type: none"> • start • end

1.2.1.1.1.4. Location designation

Element name	Location designation	
Label	location	
Defined by	MODS 3.5	
Definition	Contains information about where the work is located (such as a URL to a page in the live web or to SWBcontent)	
Specifications	-	
repeatable	no	
mandatory	no	
Example	<mods:location>	
Sub-elements	url	
Attributes	no	

1.2.1.1.1.4.1. URL	
Element name	URL
Label	url
Defined by	MODS 3.5
Definition	Contains information about the URL at which the work can be found
Specifications	-
repeatable	yes
mandatory	no
Example	<mods:url displayLabel="liveweb">http://www.aaleskorte.de/</mods:url>
Sub-elements	no
Attributes	displayLabel
	Label
	displayLabel
	Definition
	specifies the URL
	Specifications
	Can take the following values:
	<ul style="list-style-type: none"> • liveweb • archived

1.2.1.1.1.5. Physical description	
Element name	physical description
Label	physicalDescription
Defined by	MODS 3.5,
Definition	Contains information about the physical characteristics of the work
Specifications	-
repeatable	no
mandatory	yes
Example	<mods:physicalDescription>
Sub-elements	form digitalOrigin
Attributes	no

1.2.1.1.1.5.1. Form	
Element name	Form
Label	form
Defined by	corresponds to MODS 3.5
Definition	Contains information about the form of the work
Specifications	In this case, it must take the “electronic” value
repeatable	no
mandatory	yes
Example	<form authority="marcform">electronic</form>
Sub-elements	no
Attributes	authority
	Label
	authority
	Definition
	Specifies the controlled vocabulary
	Specification
	marcform

1.2.1.1.1.5.2. Origin

Element name	Origin
Label	digitalOrigin
Defined by	corresponds to MODS 3.5
Definition	Contains information about the origin of the work
Specifications	In this case, it must take the value “born digital”
repeatable	no
mandatory	yes
Example	<mods:digitalOrigin>born digital</mods:digitalOrigin>
Sub-elements	no
Attributes	no

1.2.1.1.1.6. Abstract

Element name	Abstract								
Label	abstract								
Defined by	MODS 3.5								
Definition	Provides a summary of the work								
Specifications	Contains texts that have been generated in the Wiki								
repeatable	yes								
mandatory	yes								
Example	<mods:abstract type="descriptionByAuthor">xxxxxx</mods:abstract>								
Sub-elements	no								
Attributes	<table border="1"> <tr> <td>type</td> <td></td> </tr> <tr> <td>Label</td> <td>type</td> </tr> <tr> <td>Definition</td> <td>indicates the type of abstract</td> </tr> <tr> <td>Specification</td> <td> Can take the following values: <ul style="list-style-type: none"> • descriptionByAuthor • reflectiveDescription </td> </tr> </table>	type		Label	type	Definition	indicates the type of abstract	Specification	Can take the following values: <ul style="list-style-type: none"> • descriptionByAuthor • reflectiveDescription
type									
Label	type								
Definition	indicates the type of abstract								
Specification	Can take the following values: <ul style="list-style-type: none"> • descriptionByAuthor • reflectiveDescription 								

1.2.1.1.1.7. Media type

Element name	Media type
Label	typeOfResource
Defined by	MODS 3.5
Definition	Indicates the media type of the work
Specifications	Can take the following values: <ul style="list-style-type: none"> • text • sound recording • still image • moving image • software, multimedia • mixed material A regular website is categorized as “mixed material”
repeatable	no
mandatory	yes
Example	<mods:typeOfResource>text</mods:typeOfResource>
Sub-elements	no
Attributes	no

1.2.1.1.1.8. Genre

Element name	Genre	
Label	genre	
Defined by	MODS 3.5	
Definition	Indicates the genre of the work	
Specifications	Values must be taken from the MARC Genre Term List: http://www.loc.gov/standards/valuelist/marcgt.html	
repeatable	no	
mandatory	yes	
Example	<mods:genre authority="marcgt">web site</mods:genre>	
Sub-elements	no	
Attributes	authority	
	Label	authority
	Definition	indicates which list the genre has been taken from
	Specification	Must take the value "marcgt"

1.2.1.1.1.9. Language information

Element name	Language information	
Label	language	
Defined by	MODS 3.5	
Definition	Contains information about the language of the work	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mods:language>	
Sub-elements	languageTerm	
Attributes	no	

1.2.1.1.1.9.1. Language

Element name	Language	
Label	languageTerm	
Defined by	MODS 3.5	
Definition	Indicates what language the work uses	
Specifications	coded in ISO 639-2B	
repeatable	yes	
mandatory	yes	
Example	<mods:languageTerm type="code" authority="iso639-2b">ger</mods:languageTerm>	
Sub-elements	no	
Attributes	type	
	Label	type
	Definition	Provides information about the coding of the value
	Specification	Must take the value "code"
	authority	
	Label	authority
	Definition	indicates which list the genre has been taken from
	Specification	Must take the value "iso639-2b"

AmdSec: Administrative metadata

The administrative metadata are used for the legal and technical description of the work. The legal description is performed in MODS (Point 3.1.) and applies to all representations equally, while the technical description of the individual representations is performed in PREMIS (Point 3.2.).

1.3. Administrative metadata	
Element name	Administrative metadata
Label	amdSec
Defined by	METS 1.10
Definition	Contains the administrative metadata
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:amdSec>
Sub-elements	techMD (legal metadata; see Point 3.1.f) rightsMD (technical metadata; see Point 3.2f)
Attributes	no

1.3.1. Technical metadata		
Element name	Technical metadata	
Label	techMD	
Defined by	METS 1.10	
Definition	contains the technical metadata	
Specifications	Must be repeated for each <premis:object> The Premis objects of the representation type are referenced using their ADMIDs in <mets:structMap>, division element (<mets:div>); the Premis objects of the file type are referenced using their ADMIDs in <mets:fileSec>, data information element (<mets:file>)	
repeatable	yes	
mandatory	yes	
Example	<mets:techMD ID=" _9128b0b8-2fb2-48fd-a6a2-e1f49ccae4ec">	
Sub-elements	mdWrap	
Attributes	ID	
	Label	ID
	Definition	identifies the techMD
	Specification	preceded by an underline + generated UUID, Version 4
	Note	METS requires an underline or a letter at the beginning of an ID

1.3.1.1. Metadata embedding

Element name	Metadata embedding	
Label	mdWrap	
Defined by	METS 1.10	
Definition	embeds a different metadata schema	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:mdWrap MDTYPE="PREMIS:OBJECT">	
Sub-elements	xmlData	
Attributes	MDTYPE	
	Label	MDTYPE
	Definition	Indicates what metadata follow
	Specification	In the case of technical metadata, it must take the value "PREMIS:OBJECT".

1.3.1.1.1. XML data

Element name	XML data
Label	xmlData
Defined by	METS 1.10
Definition	Contains the technical description data in XML format
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:xmlData>
Sub-elements	premis:object
Attributes	no

1.3.1.1.1.1. PREMIS object

Element name	PREMIS object	
Label	premis:object	
Defined by	PREMIS 2.3	
Definition	Contains a PREMIS object	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<premis:object xsi:type="premis:file">	
Sub-elements	objectIdentifier environment relationship objectCharacteristics storage	
Attributes	type	
	Label	type
	Definition	indicates whether a representation or a file follows
	Specification	Must take the value "representation" or "file"

1.3.1.1.1.1. Object identifier

Element name	Object identifier
Label	objectIdentifier
Defined by	PREMIS 2.3
Definition	Contains the identifier of the object in question
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:objectIdentifier>
Applicable to	representation, file
Sub-elements	objectIdentifierType objectIdentifierValue
Attributes	no

1.3.1.1.1.1.1. Object identifier type

Element name	Object identifier type
Label	objectIdentifierType
Defined by	PREMIS 2.3
Definition	Contains the type of the identifier of the object in question
Specifications	Must take the following value: <ul style="list-style-type: none"> • UUID
repeatable	no
mandatory	yes
Example	<premis:objectIdentifierType>UUID</premis:objectIdentifierType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.1.2. Object identifier value

Element name	Object identifier value
Label	objectIdentifierValue
Defined by	PREMIS 2.3
Definition	Contains the value of the identifier of the object in question
Specifications	preceded by an underline + generated UUID, Version 4
repeatable	no
mandatory	yes
Example	<premis:objectIdentifierValue>_46a36a07-ac55-4d2e-a8b1-072b1c04be74</premis:objectIdentifierValue>
Applicable to	representation, file
Sub-elements	no
Attributes	no
Note	xsd:ID requires an underline or a letter at the beginning of an ID

1.3.1.1.1.1.2. Object description

Element name	Object description
Label	objectCharacteristics
Defined by	PREMIS 2.3
Definition	contains the technical description of the object
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:objectCharacteristics>
Applicable to	file
Sub-elements	compositionLevel fixity size format
Attributes	no

1.3.1.1.1.1.2.1. Object compression

Element name	Object compression
Label	compositionLevel
Defined by	PREMIS 2.3
Definition	Contains information about the compression of the object
Specifications	Is to be reflected in numeric values: an uncompressed object receives a 0, an object compressed by one software receives a “1”, and so on.
repeatable	no
mandatory	yes
Example	<premis:compositionLevel>0</premis:compositionLevel>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.1.2.2. Object integrity

Element name	Object integrity
Label	fixity
Defined by	PREMIS 2.3
Definition	Contains information about the integrity of the object
Specifications	-
repeatable	yes
mandatory	yes
Example	<premis:fixity>
Applicable to	file
Sub-elements	messageDigestAlgorithm messageDigest
Attributes	no

1.3.1.1.1.2.2.1. Hash function

Element name	Hash function
Label	messageDigestAlgorithm
Defined by	PREMIS 2.3
Definition	Indicates the algorithm used
Specifications	SHA-256 and MD5 are used; MD5 must receive the note “(deprecated)”
repeatable	no
mandatory	yes
Example	<premis:messageDigestAlgorithm>MD5 (deprecated)</premis:messageDigestAlgorithm>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.2.2. Hash value

Element name	Hash value
Label	messageDigest
Defined by	PREMIS 2.3
Definition	contains the hash value
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:messageDigest>df7t8cs2e6x97</premis:messageDigest>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.3. Size

Element name	Size
Label	size
Defined by	PREMIS 2.3
Definition	contains the file size
Specifications	in bytes
repeatable	no
mandatory	yes
Example	<premis:size>1656</premis:size>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.4. Format

Element name	Format
Label	format
Defined by	PREMIS 2.3
Definition	Contains information about the format
Specifications	If available, the information from PRONOM is used
repeatable	no
mandatory	yes
Example	<premis:format>
Applicable to	file
Sub-elements	formatDesignation formatRegistry
Attributes	no

1.3.1.1.1.2.4.1. Format designation

Element name	Format designation
Label	formatDesignation
Defined by	PREMIS 2.3
Definition	Contains precise information about the format
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:formatDesignation>
Applicable to	file
Sub-elements	formatName formatVersion
Attributes	no

1.3.1.1.1.2.4.1.1. Format name

Element name	Format name
Label	formatName
Defined by	PREMIS 2.3
Definition	Contains the name of the format
Specifications	The designation must be taken from: <ul style="list-style-type: none"> • PRONOM • Format Descriptions of the Library of Congress (http://www.digitalpreservation.gov/formats/fdd/browse_list.shtml) • Unified Digital Format Registry (http://udfr.org/ontowiki/) The first location of a designation in this sequence of resources is determines the correct from.
repeatable	no
mandatory	yes
Example	<premis:formatName>Hypertext Markup Language</premis:formatName>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.4.1.2. Format version

Element name	Format version
Label	format version
Defined by	PREMIS 2.3
Definition	Contains the version of the format
Specifications	<p>The designation must be taken from:</p> <ul style="list-style-type: none"> • PRONOM • Format Descriptions of the Library of Congress (http://www.digitalpreservation.gov/formats/fdd/browse_list.shtml) • Unified Digital Format Registry (http://udfr.org/ontowiki/) <p>The first location of a designation in this sequence of resources determines the correct from.</p> <p>If the version cannot unambiguously determined, the oldest is selected.</p>
repeatable	no
mandatory	no
Example	<premis:formatVersion>5</premis:formatVersion>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.4.2. Format designation in the registry

Element name	Format designation in the registry
Label	formatRegistry
Defined by	PREMIS 2.3
Definition	Contains information about the format in a registry
Specifications	<p>If possible, two entries should be made:</p> <ul style="list-style-type: none"> • the registry used in formatDesignation • The MediaTypes of the Assigned Numbers Authority (http://www.iana.org/assignments/media-types) <p>For the second entry, a new Element 3.2.3.5. 4.format must be created.</p>
repeatable	yes
mandatory	yes
Example	<premis:formatRegistry>
Applicable to	file
Sub-elements	formatRegistryName formatRegistryKey
Attributes	no

1.3.1.1.1.2.4.2.1. Name of the registry

Element name	Name of the registry
Label	formatRegistryName
Defined by	PREMIS 2.3
Definition	Contains the name of the registry used
Specifications	Can take the following values: <ul style="list-style-type: none"> • PRONOM • FDD • UDFR • Media types
repeatable	no
mandatory	yes
Example	<premis:formatRegistryName>PRONOM</premis:formatRegistryName>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.2.4.2.2. Registry key

Element name	Registry key
Label	formatRegistryKey
Defined by	PREMIS 2.3
Definition	Contains the key of the registry used
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:formatRegistryKey>PUID: fmt/471</premis:formatRegistryKey>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.3. Storage

Element name	Storage
Label	storage
Defined by	PREMIS 2.3
Definition	Contains information about the storage of the object
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:storage>
Applicable to	file
Sub-elements	contentLocation
Attributes	no

1.3.1.1.1.3.1. Location

Element name	Location
Label	contentLocation
Defined by	PREMIS 2.3
Definition	Contains information about the location of the object
Specifications	-
repeatable	no
mandatory	yes
Example	<premis:contentLocation>
Applicable to	file
Sub-elements	contentLocationType contentLocationValue
Attributes	no

1.3.1.1.1.3.1.1. Designation of the location

Element name	Designation of the location
Label	contentLocationType
Defined by	PREMIS 2.3
Definition	Contains information about the designation of the object
Specifications	Can take the following values: <ul style="list-style-type: none"> • Path
repeatable	no
mandatory	yes
Example	<premis:contentLocationType>Path</premis:contentLocationType>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.3.1.2. Location of the object

Element name	Location of the object
Label	contentLocationValue
Defined by	PREMIS 2.3
Definition	Reference to the location of the object
Specifications	Path to the object
repeatable	no
mandatory	yes
Example	<premis:contentLocationValue>./data/screenshot.jpg</premis:contentLocationValue>
Applicable to	file
Sub-elements	no
Attributes	no

1.3.1.1.1.4. Environment

Element name	Environment
Label	environment
Defined by	PREMIS 2.3
Definition	Contains the environment required for the file
Specifications	See Annex 1: Guidelines for environment description
repeatable	no
mandatory	yes
Example	<premis:environment>
Applicable to	representation, file
Sub-elements	environmentCharacteristic environmentPurpose software hardware
Attributes	no

1.3.1.1.1.4.1. Environment description

Element name	Environment description
Label	environmentCharacteristic
Defined by	PREMIS 2.3
Definition	Contains the description of the environment required for the file
Specifications	Can take the following values: <ul style="list-style-type: none"> known to work
repeatable	no
mandatory	yes
Example	<premis:environmentCharacteristics>known to work</premis:environmentCharacteristics>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.2. Purpose of the environment

Element name	Purpose of the environment
Label	environmentPurpose
Defined by	PREMIS 2.3
Definition	Contains the purpose of the environment necessary for the work
Specifications	Can take the following values: <ul style="list-style-type: none"> render The environment is exclusively for rendering the work. extract This environment is for extracting compressed archives (such as zip files)
repeatable	no
mandatory	yes
Example	<premis:environmentPurpose>render</premis:environmentPurpose>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.3. Software

Element name	Software
Label	software
Defined by	PREMIS 2.3
Definition	Contains information about the required software
Specifications	-
repeatable	yes
mandatory	yes
Example	<premis:software>
Applicable to	representation, file
Sub-elements	swName swVersion swType swDependency
Attributes	no

1.3.1.1.1.4.3.1. Software name

Element name	Software name
Label	swName
Defined by	PREMIS 2.3
Definition	Contains the name and manufacturer of the required software separated by a space
Specifications	The designation must be taken from: <ul style="list-style-type: none"> • PRONOM • National Software Reference Library (http://www.nsrn.nist.gov/) • Product website The first location of a designation in this sequence of sources is determines the correct from.
repeatable	no
mandatory	yes
Example	<premis:swName>Mozilla Firefox</premis:swName>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.3.2. Software version

Element name	Software version
Label	swVersion
Defined by	PREMIS 2.3
Definition	Contains the version of the required software
Specifications	The designation must be taken from: <ul style="list-style-type: none"> • PRONOM • National Software Reference Library (http://www.nsrn.nist.gov/) • Product website The first location of a designation in this sequence of resources is determines the correct from.
repeatable	no
mandatory	yes
Example	<premis:swVersion>17.0.1</premis:swVersion>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.3.3. Software type

Element name	Software type
Label	swType
Defined by	PREMIS 2.3
Definition	Contains the type of the required software
Specifications	Can take the following values: <ul style="list-style-type: none"> • renderer • ancillary (in terms of peripheral software) • operating system • driver • server
repeatable	no
mandatory	yes
Example	<premis:swType>renderer</premis:swType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.3.4. Software dependency

Element name	Software dependency
Label	swDependency
Defined by	PREMIS 2.3
Definition	Contains the required components of the software
Specifications	-
repeatable	yes
mandatory	no
Example	<premis:swDependency>Javascript Plugin</premis:swDependency>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.4. Hardware

Element name	Hardware
Label	hardware
Defined by	PREMIS 2.3
Definition	Contains information about the required hardware
Specifications	-
repeatable	yes
mandatory	yes
Example	<premis:hardware>
Applicable to	representation, file
Sub-elements	hwName hwType hwOtherInformation
Attributes	no

1.3.1.1.1.4.4.1. Hardware name

Element name	Hardware name
Label	hwName
Defined by	PREMIS 2.3
Definition	Contains the name and manufacturer of the required hardware separated by a space
Specifications	Name as found on the product page
repeatable	no
mandatory	yes
Example	<premis:hwName>Intel Pentium II Processor</premis:hwName>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.4.2. Hardware type

Element name	Hardware type
Label	hwType
Defined by	PREMIS 2.3
Definition	Contains the type of the required hardware
Specifications	Cantake the following values: <ul style="list-style-type: none"> • processor • memory • input/output device • storage device • other
repeatable	no
mandatory	yes
Example	<premis:hwType>processor</premis:hwType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.4.4.3. Hardware – other

Element name	Hardware – other
Label	hwOtherInformation
Defined by	PREMIS 2.3
Definition	Contains further information about the required hardware
Specifications	serves to indicate additional information, such as charge number, etc.
repeatable	yes
mandatory	yes
Example	<premis:hwOtherInformation>WD-WXCY07097559</premis:hwOtherInformation>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.1.5. Relationships

Element name	Relationships
Label	relationship
Defined by	PREMIS 2.3
Definition	Contains information about related files
Specifications	-
repeatable	yes
mandatory	yes
Example	<premis:relationship>
Applicable to	representation, file
Sub-elements	relationshipType relationshipSubType relatedObjectIdentification
Attributes	no

1.3.1.1.1.1.5.1. Relationship type

Element name	Relationship type
Label	relationshipType
Defined by	PREMIS 2.3
Definition	Contains the relationship type
Specifications	Can only take the following value: <ul style="list-style-type: none"> • structural This value is used for structural relationships between objects, such as that between an html page and a related image in jpg format.
repeatable	no
mandatory	yes
Example	<premis:relationshipType>structural</premis:relationshipType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.1.5.2. Relationship sub-type

Element name	Relationship sub-type
Label	relationshipSubType
Defined by	PREMIS 2.3
Definition	Contains the relationship sub-type
Specifications	Can take the following values: <ul style="list-style-type: none"> • is part of • has part
repeatable	no
mandatory	yes
Example	<premis:relationshipSubType>has part</premis:relationshipSubType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.5.3. Identification of the related object

Element name	Identification of the related object
Label	relatedObjectIdentification
Defined by	PREMIS 2.3
Definition	Contains information for identification of the related object
Specifications	-
repeatable	yes
mandatory	yes
Example	<premis:relatedObjectIdentification>
Applicable to	representation, file
Sub-elements	relatedObjectIdentifierType relatedObjectIdentifierValue

1.3.1.1.1.5.3.1. Identification type of the related object

Attributes	no
Element name	Object identifier type
Label	relatedObjectIdentifierType
Defined by	PREMIS 2.3
Definition	Contains the type of the identifier of the related object
Specifications	Must take the following value: <ul style="list-style-type: none"> • UUID
repeatable	no
mandatory	yes
Example	<premis:relatedObjectIdentifierType>UUID</premis:relatedObjectIdentifierType>
Applicable to	representation, file
Sub-elements	no
Attributes	no

1.3.1.1.1.5.3.2. Identifier value of the related object

Element name	Object identifier value
Label	relatedObjectIdentifierValue
Defined by	PREMIS 2.3
Definition	Contains the value of the identifier of the related object
Specifications	preceded by an underline + generated UUID, Version 4
repeatable	no
mandatory	yes
Example	<premis:relatedObjectIdentifierValue>_a4da5671-5588-489b-aec1-abb5b5cfc520</premis:relatedObjectIdentifierValue>
Applicable to	representation, file
Sub-elements	no
Attributes	no
Note	xsd:ID requires an underline or a letter at the beginning of an ID

1.3.2. Rights metadata

Element name	Rights metadata	
Label	rightsMD	
Defined by	METS 1.10	
Definition	Contains rights metadata	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:rightsMD ID="_f47c0d88-76ab-48d4-91bc-c34facbeedb2">	
Sub-elements	mdWrap	
Attributes	ID	
	Label	ID
	Definition	identifies the rightsMD
	Specification	preceded by an underline + generated UUID, Version 4
	Note	METS requires an underline or a letter at the beginning of an ID

1.3.2.1. Metadata embedding

Element name	Metadata embedding	
Label	mdWrap	
Defined by	METS 1.10	
Definition	embeds a different metadata schema	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:mdWrap MDTYPE="MODS">	
Sub-elements	xmlData	
Attributes	MDTYPE	
	Label	MDTYPE
	Definition	Indicates what metadata follow
	Specification	In case of legal metadata, it must take the value "MODS".

1.3.2.1.1. XML data

Element name	XML data	
Label	xmlData	
Defined by	METS 1.10	
Definition	Contains the administrative description data in XML format	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:xmlData>	
Sub-elements	mods	
Attributes	no	

1.3.2.1.1.1. MODS section

Element name	MODS section	
Label	mods	
Defined by	MODS 3.5	
Definition	Contains the elements of the MODS section	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mods:mods version="3.5">	
Sub-elements	accessCondition	
Attributes	version	
	Label	version
	Definition	Indicates the version of the MODS schema used
	Specification	based on the application profile, the value must be “3.5”

1.3.2.1.1.1.1. Instructions for use	
Element name	Instructions for use
Label	accessCondition
Defined by	MODS 3.5
Definition	Contains legal information about the rights holder and the use of the work
Specifications	<p>The element must be repeated When it first appears, the rights granted are documented– the type is “restriction on access”.</p> <p>It can take one of the following values:</p> <ul style="list-style-type: none"> • Free • Recent • Moving Wall • Domain • on Demand • Blocked <p>For an explanation of terminology, see Annex 2.</p> <p>The appropriate term is taken from the consent form signed by the author. If the “Moving Wall” value has been assigned, the date of the release must be added. The format is as follows: “Moving Wall released from YYYY-MM-DD”.</p> <p>At each successive appearance, the rights holder is named – the type is “use and reproduction”. The names of the right holders are to be given in the GND format.</p>
repeatable	yes
mandatory	yes
Example	<pre><mods:accessCondition type="restriction on access">Moving Wall released from 2020-12-31</accessCondition> <mods:accessCondition type="use and reproduction">Berkenheger, Susanne</accessCondition></pre>
Sub-elements	
Attributes	type
	Label type
	Definition Indicates the type of the instructions for use
	Specification Can take the values “restriction on access” or “use and reproduction”

fileSec: List of all associated files

A list of all files associated with the work is given in METS.

1.4. List of all associated files	
Element name	List of all associated files
Label	fileSec
Defined by	METS 1.10
Definition	Contains a list of all associated files
Specifications	-
repeatable	no
mandatory	yes
Example	<mets:fileSec ID="_47ee76f5-33ed-46af-860a-5e704bc81b0b">
Sub-elements	fileGrp
Attributes	ID
	Label ID
	Definition identifies the fileSec
	Specification preceded by an underline + generated UUID, Version 4
	Note xsd:ID requires an underline or a letter at the beginning of an ID

1.4.1. File grouping	
Element name	File grouping
Label	fileGrp
Defined by	METS 1.10
Definition	Groups the files according to the type of representation
Specifications	Follows Element 3.2.3.2.
repeatable	yes
mandatory	yes
Example	<mets:fileGrp USE="crawl">
Sub-elements	file
Attributes	USE
	Label USE
	Definition More specific designation of the grouping
	Specification Can only take the following values: <ul style="list-style-type: none"> • crawl • screencast • screenshot • source code

1.4.1.1. File information

Element name	File information	
Label	file	
Defined by	METS 1.10	
Definition	Describes individual files	
Specifications	-	
repeatable	yes	
mandatory	yes	
Example	<mets:file ID="_05b83106-c526-4d5f-a465-dedf1f8a21ad" ADMID="_9128b0b8-2fb2-48fd-a6a2-e1f49ccae4fc" CREATED="2013-10-14T12:45:00.235000">	
Sub-elements	FLocat	
Attributes	ADMID	
	Label	ADMID
	Definition	ID of the techMD allocated to the file
	Specification	links to the associated techMD
	ID	
	Label	ID
	Definition	identifies the file in question
	Specification	The generated UUID, Version 4
	Note	xsd:ID requires an underline or a letter at the beginning of the ID
	CREATED	
	Label	CREATED
	Definition	indicates the time of file creation to the second with at least three decimal places for fractions of a second; separated by a point.
	Specification	coded in ISO 8601

1.4.1.1.1. Location of the file

Element name	Location of the file	
Label	FLocat	
Defined by	METS 1.10	
Definition	Refers to the file's storage location within the bag.	
Specifications	-	
repeatable	no	
mandatory	yes	
Example	<mets:FLocat LOCTYPE="OTHER" OTHERLOCTYPE="Path" xlink:href="/data/screenshot.jpg" />	
Sub-elements	no	
Attributes	LOCTYPE	
	Label	LOCTYPE
	Definition	indicates the type of reference
	Specification	Can only take the following value: <ul style="list-style-type: none"> • OTHER
	OTHERLOCTYPE	
	Label	OTHERLOCTYPE
	Definition	Indicates what other reference is used
	Specification	Can only take the following value: <ul style="list-style-type: none"> • Path
	xlink:href	
	Label	xlink:href
	Definition	Contains the reference to the document's path; identical to element 3.2.3.6.2.1.
	Specification	no

structMap: structured summary of all files

The last METS part represents a reproduction of the structure of the individual files.

1.5. Structured summary of all files		
Element name	structured summary of all files	
Label	structMap	
Defined by	METS 1.10	
Definition	Contains a list of all associated files	
Specifications	-	
repeatable	yes	
mandatory	yes	
Example	<mets:structMap ID="_43d54111-e5c7-48e7-adc1-4331d9019b40">	
Sub-elements	div	
Attributes	ID	
	Label	ID
	Definition	identifies the structMap
	Specification	preceded by an underline + generated UUID, Version 4
	Note	xsd:ID requires an underline or a letter at the beginning of an ID

1.5.1. Division		
Element name	Division	
Label	div	
Defined by	METS 1.10	
Definition	Opens an overarching division that contains the subsequent logical divisions or describes a representation as a logical division within the superordinate division.	
Specifications	If <div> is used as a superordinate division, it is not attributed.	
repeatable	yes	
mandatory	yes	
Example	<mets:div> or <mets:div TYPE="crawl" ADMID="_9128b0b8-2fb2-48fd-a6a2-e1f49ccae4ec">	
Sub-elements	div fptr	
Attributes	TYPE	
	Label	TYPE
	Definition	Indicates the summary type
	Specification	Can take the following values: <ul style="list-style-type: none"> • crawl • screencast • screenshot • source code Mandatory for the labelling of a logical division (representation).
	ADMID	
	Label	ADMID
	Definition	ID for representation of pertinent techMD
	Specification	links to the associated techMD; mandatory for the labelling of a logical division (representation).

1.5.1.1.1. Reference to file		
Element name	Reference to file	
Label	fptr	
Defined by	METS 1.10	
Definition	Contains the file ID and file pointer	
Specifications	-	
repeatable	yes	
mandatory	yes	
Example	<mets:fptr FILEID="_05b83106-c526-4d5f-a465-dedf1f8a21ad"/>	
Sub-elements	div	
Attributes	FILEID	
	Label	ID
	Definition	Identifies a file unambiguously
	Specification	The FILEID must be identical with the ID in <mets:file>

Annex 1: Guidelines for environment description

According to PREMIS Version 2.2., a description of the environment necessary for rendering can be made at both the file level and the representation level. The description should be made primarily on the file level. A description at the representation level is only desirable if it is valid for all files associated with that representation.²

In the area of archiving electronic literature, the description of the rendering environment is very complex, especially when the work is no longer online and the author therefore delivers files that are to be archived. The generation of the entire work from these files often takes place dynamically, meaning that an exclusive description at the file level is no longer exhaustive.

An example:

An index.php and a database in SQL format are associated with a work. By means of a description of the environment at the file level, it can be determined what software and hardware are necessary to make both components operational. However, what cannot be described is the fact that the index.php uses a database to generate an HTML page that the user must render in a browser.

This HTML file only exists at the time of its generation and thus cannot be described as a file in the metadata.

In order to describe this process nevertheless, the information about the environment that goes beyond information about software and hardware necessary for individual files is noted at the representation level.

For the example described above, it would look like this:

- Representation – type= sourcecode
 - Software: Mozilla Firefox
 - Software: Apache Tomcat
 - Software: Open Linux
 - Software: MySQL
 - Software: Open Linux
- File index.php:
 - Software: Apache Tomcat
 - Software: Open Linux
- File: Datenbank.sql
 - Software: MySQL
 - Software: Open Linux

² PREMIS (2012): Data Dictionary for Preservation Metadata, Version 2.2, p. 80, online at: <http://www.loc.gov/standards/premis/v2/premis-2-2.pdf>, last accessed: 21/02/2014 21/02/2014

Annex 2: Controlled vocabulary for 3.1.3.1.1. Instructions for use – “Restriction on access”

The terms used are primarily based on “Rights administration and IP monitoring in SWBContent”, a paper published on 26/08/2011 and henceforth referred to as “2011 paper”; they thus follow the SWB Pica field 7133. In the 2011 paper, implementation recommendations are also noted.

Abbreviation	Description	Formulation in the release form	Source
Free	Unlimited access is possible	Unlimited	2011 paper
Recent	Only the most recent crawl is released; older ones are not accessible; performed manually using Blocked/free.	Release only of the most recent crawl	redefined
Moving Wall	Unlimited access to everyone after a set time period	After the expiration of an agreed-upon period that runs until xx.xx.xxxx	2011 paper
Domain	Only internal access is possible	Only on the Marbach campus	2011 paper
Blocked	No access is possible	Without publication; for archiving purposes only	2011 paper

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