

# CONSERVATION METADATA DATA DICTIONARY

VERSION 3.0

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## Content

|  |    |
|--|----|
| Abbreviations & Definitions .....  | 3  |
| 1. Purpose and Structure .....   | 4  |
| 2. Elements of the Conservation Metadata Scheme .....                                | 5  |
| 2.1. element metadata.....   | 6  |
| 2.1.1. attribute ie/@version.....  | 7  |
| 2.2. element metadata/ie .....   | 8  |
| 2.2.1. element metadata/ie/identifier .....  | 9  |
| 2.2.1.1. element metadata/ie/identifier/mamid .....                                  | 10 |
| 2.2.1.2. element metadata/ie/identifier/signature .....                              | 11 |
| 2.2.2. element metadata/ie/representation.....                                       | 12 |
| 2.2.3. element metadata/ie/representation/total_parts .....                          | 13 |
| 2.2.4. element metadata/ie/representation/reel.....                                  | 14 |
| 2.2.4.1. element metadata/ie/representation/reel/part_no .....                       | 16 |
| 2.2.4.2. element metadata/ie/representation/reel/copy .....                          | 17 |
| 2.2.4.3. element metadata/ie/representation/reel/carrier_material..                  | 18 |
| 2.2.4.4. element<br>metadata/ie/representation/reel/information_film_container ..... | 19 |
| 2.2.4.5. element metadata/ie/representation/reel/deformation.....                    | 20 |
| 2.2.4.6. element metadata/ie/representation/reel/shrinkage .....                     | 21 |
| 2.2.4.6.1. element metadata/ie/representation/reel/<br>shrinkage/date_measured ..... | 22 |
| 2.2.4.6.2. element metadata/ie/representation/reel/<br>shrinkage/min_value.....      | 22 |
| 2.2.4.6.3. element metadata/ie/representation/reel/<br>shrinkage/max_value .....     | 23 |
| 2.2.4.6.4. element metadata/ie/representation/reel/<br>shrinkage/average.....        | 23 |

|            |  |    |
|------------|--|----|
| 2.2.4.7.   | element metadata/ie/representation/reel/ph_test.....                         | 24 |
| 2.2.4.7.1. | element metadata/ie/representation/reel/<br>ph_test/date_measured .....      | 25 |
| 2.2.4.7.2. | element metadata/ie/representation/reel/ ph_test/value.                      | 25 |
| 2.2.4.8.   | element metadata/ie/representation/reel/<br>perforation_damage .....         | 26 |
| 2.2.4.9.   | element metadata/ie/representation/reel /splice_count.....                   | 27 |
| 2.2.5.     | element metadata/ie/representation/audio.....                                | 28 |
| 2.2.5.1.   | element metadata/ie/representation/audio/ audio_stream_no<br>29              |    |
| 2.2.5.2.   | element metadata/ie/representation/audio/ signal_base.....                   | 30 |
| 2.2.5.3.   | element<br>metadata/ie/representation/audio/information_audio_container..... | 31 |
| 3.         | Changelog.....   | 32 |
|            | Changes from Version 2 to Version 3.....                                     | 32 |
|            | Changes from Version 1 to Version 2.....                                     | 32 |
|            | Publication bibliography.....  | 32 |

## ABBREVIATIONS & DEFINITIONS

### IE – Intellectual Entity

“An Intellectual Entity is a distinct intellectual or artistic creation that is considered relevant to a designated community in the context of digital preservation: for example, a particular book, map, photograph, database, or hardware or software. An Intellectual Entity can include other Intellectual Entities; for example, a web site can include a web page and a web page can include an image. An Intellectual Entity may have one or more digital or non-digital Representations.”

PREMIS Data Dictionary for Preservation Metadata, version 3.0  
June 2015, p. 18, <http://www.loc.gov/standards/premis/v3/premis-3-0-final.pdf>

## 1. PURPOSE AND STRUCTURE

During the project “Digitalisierung EthnoLogischer FilmbesTand” (DELFT)<sup>1</sup> we searched for a standardized way to record and store the finding of an inspection of an analogue film in order to document the state of the analogue object at the moment of digitization. We found out that usually existing reports follow certain rules, but are written as freetext in a not standardized way. They come in the form of a word-file, or a description field in a database.

Transferring the findings of an inspection into XML which follows a metadata scheme comes with advantages. The report can be checked for completeness as certain fields are declared as mandatory. For certain metadata a fixed set of possible answers are defined. Furthermore the schematic way of capturing the metadata allows a faster way of searching e.g. finding all copies which have a high pH-value.

The data dictionary describes each element and gives more information of the structure of the xml. For each element a table with the following rows describes the components:

| definition     | Definition of the element   |
|----------------|---|
| rationale      | Why is there a need for the element?  |
| diagram        | A diagram of the element and subelements  |
| properties     | Cardinality (if defined), content (complex if element consists of child elements, simple if no child elements), necessity (mandatory, required, optional) |
| children       | Child elements  |
| attributes     | Attributes, their type and necessity (mandatory, required, optional)  |
| annotation     | Documentation in German   |
| source         | Section of the xsd-scheme   |
| example in XML | Example   |

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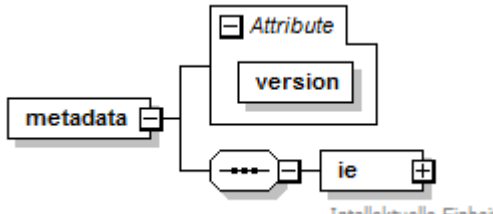
<sup>1</sup> <https://projects.tib.eu/delft/>

## 2. ELEMENTS OF THE CONSERVATION METADATA SCHEME

Schema **TIBFilmConservationMetadata.xsd**

|                       |  |
|-----------------------|--|
| schema location:      | <b><a href="https://github.com/TIB-Digital-Preservation/FilmConservationMetadata/blob/main/TIBFilmConservationMetadata.xsd">https://github.com/TIB-Digital-Preservation/FilmConservationMetadata/blob/main/TIBFilmConservationMetadata.xsd</a></b> |
| attributeFormDefault: | <b>unqualified</b>   |
| elementFormDefault:   | <b>qualified</b>   |

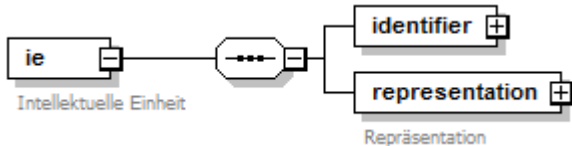
## 2.1. ELEMENT METADATA

| definition     | Groups all metadata   |          |      |     |         |                   |          |
|----------------|---|----------|------|-----|---------|-------------------|----------|
| rationale      | A set of content that is considered a single intellectual unit for purposes of management and description (PREMIS Editorial Committee, p. 33)   |          |      |     |         |                   |          |
| diagram        |    |          |      |     |         |                   |          |
| properties     | content / complex / mandatory   |          |      |     |         |                   |          |
| children       | <b>ie</b>   |          |      |     |         |                   |          |
| attributes     | <table><tr><th>Name</th><th>Type</th><th>Use</th></tr><tr><td>version</td><td><b>xs:decimal</b></td><td>required</td></tr></table>  | Name     | Type | Use | version | <b>xs:decimal</b> | required |
| Name           | Type  | Use      |      |     |         |                   |          |
| version        | <b>xs:decimal</b>   | required |      |     |         |                   |          |
| source         | <pre>&lt;xs:element name="metadata"&gt;   &lt;xs:complexType&gt;     &lt;xs:sequence&gt;       &lt;/xs:sequence&gt;     [...]     &lt;xs:attribute name="version" type="xs:decimal"       use="required"/&gt;   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre> |          |      |     |         |                   |          |
| example in XML | <pre>&lt;ie xsi:noNamespaceSchemaLocation="https://github.com/TIB-Digital- Preservation/FilmConservationMetadata/blob/main/TIB FilmConservationMetadata.xsd" version="3.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema- instance"&gt;</pre>                       |          |      |     |         |                   |          |

### 2.1.1. ATTRIBUTE IE/@VERSION

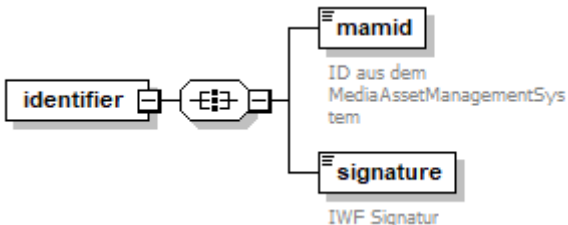
|                |   |
|----------------|---|
| definition     | describes the version of the metadata scheme which is applicable.   |
| rationale      | Changes in the metadata scheme lead to a new version of it. The metadata can be validated against the applicable metadata scheme.   |
| type           | xs:decimal  |
| properties     | use / - / required  |
| source         | <xs:attribute name="version" type="xs:decimal" use="required"/>   |
| example in XML | <pre>&lt;ie xsi:noNamespaceSchemaLocation="https://github.com/TIB- Digital-Preservation/FilmConservationMetadata/blob/main/TIB FilmConservationMetadata.xsd" version="3.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema- instance"&gt;</pre> |

## 2.2. ELEMENT METADATA/IE

| definition     | describes an intellectual entity (IE).   |          |      |     |         |                   |          |
|----------------|--|----------|------|-----|---------|-------------------|----------|
| rationale      | A set of content that is considered a single intellectual unit for purposes of management and description (PREMIS Editorial Committee, p. 33)  |          |      |     |         |                   |          |
| diagram        |   |          |      |     |         |                   |          |
| properties     | content / complex / mandatory  |          |      |     |         |                   |          |
| children       | <b>Identifier, total_parts, reel</b>   |          |      |     |         |                   |          |
| attributes     | <table><tr><th>Name</th><th>Type</th><th>Use</th></tr><tr><td>version</td><td><b>xs:decimal</b></td><td>required</td></tr></table>   | Name     | Type | Use | version | <b>xs:decimal</b> | required |
| Name           | Type   | Use      |      |     |         |                   |          |
| version        | <b>xs:decimal</b>  | required |      |     |         |                   |          |
| source         | <pre>&lt;xs:element name="ie"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Intellectuelle     Einheit&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;intellectual     entity&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     [...]   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre> |          |      |     |         |                   |          |
| example in XML | <pre>&lt;ie xsi:noNamespaceSchemaLocation="https://projects.tib.eu /fileadmin/data/delft/img/DelftConservationMetadata.xsd" version="2.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema- instance"&gt;</pre>   |          |      |     |         |                   |          |



### 2.2.1. ELEMENT METADATA/IE/IDENTIFIER

|                |   |
|----------------|---|
| definition     | contains internal identifiers of the intellectual entity.   |
| rationale      | The identifier is unique to the intellectual entity therefore the relation between metadata concerning the intellectual entity from different systems is maintained.  |
| diagram        |    |
| properties     | content / complex / mandatory   |
| children       | mamid, signature  |
| source         | <pre> &lt;xs:element name="identifier"&gt;   &lt;xs:complexType&gt;     &lt;xs:all&gt;       &lt;xs:element name="mamid" type="xs:integer"&gt;         &lt;xs:annotation&gt;           &lt;xs:documentation&gt;ID aus dem MediaAssetManagementSystem&lt;/xs:documentation&gt;         &lt;/xs:annotation&gt;       &lt;/xs:element&gt;       &lt;xs:element name="signature" type="xs:string"&gt;         &lt;xs:annotation&gt;           &lt;xs:documentation&gt;IWF Signatur&lt;/xs:documentation&gt;         &lt;/xs:annotation&gt;       &lt;/xs:element&gt;     &lt;/xs:all&gt;   &lt;/xs:complexType&gt; &lt;/xs:element&gt; </pre> |
| example in XML | <pre> &lt;identifier&gt;   &lt;mamid&gt;16605&lt;/mamid&gt;   &lt;signature&gt;E 1399&lt;/signature&gt; &lt;/identifier&gt; </pre>  |

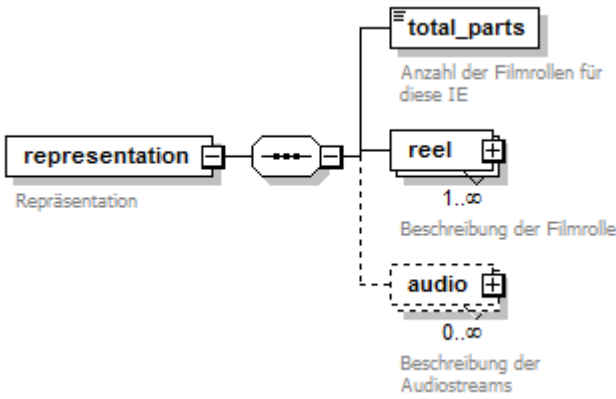
#### 2.2.1.1. ELEMENT METADATA/IE/IDENTIFIER/MAMID

|                |  |
|----------------|--|
| definition     | contains the Media Asset Management Identifier (MAMID). The MAMID is a running number and identifies a particular language version of the intellectual entity inside the Media Asset Management System of TIB.   |
| rationale      | The MAMID is the identifier which is used in the Media Asset Management System.  |
| type           | xs:integer   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>ID aus dem MediaAssetManagementSystem   |
| source         | <pre>&lt;xs:element name="mamid" type="xs:integer"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Identifier aus dem MediaAssetManagementSystem&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Identifier from MediaAssetManagementSystem&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;identifier&gt;   &lt;mamid&gt;16605&lt;/mamid&gt;   &lt;signature&gt;E 1399&lt;/signature&gt; &lt;/identifier&gt;</pre>   |

#### 2.2.1.2. ELEMENT METADATA/IE/IDENTIFIER/SIGNATURE

|                |   |
|----------------|---|
| definition     | contains the signature of the intellectual entity   |
| rationale      | The Signature is an identifier for the intellectual entity regardless the language version. It can be found on the physical item. For holdings of the TIB the Signature was assigned by the IWF and is furthermore searchable in the backend of the Media Asset Management System of TIB.                     |
| type           | xs:string   |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>IWF Signatur   |
| source         | <pre>&lt;xs:element name="signature" type="xs:string"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;IWF     Signatur&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;IWF     signature&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;identifier&gt;   &lt;mamid&gt;16605&lt;/mamid&gt;   &lt;signature&gt;E 1399&lt;/signature&gt; &lt;/identifier&gt;</pre>  |

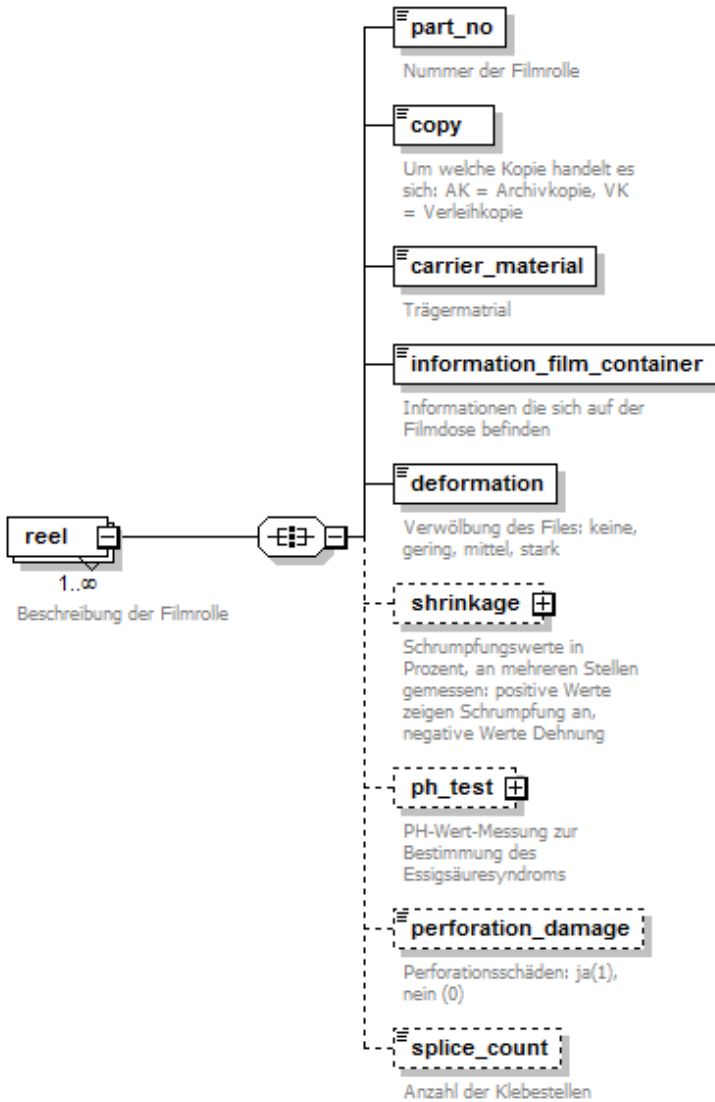
## 2.2.2. ELEMENT METADATA/IE/ REPRESENTATION

|                |  |
|----------------|--|
| definition     | Contains information on the representation of the ie   |
| rationale      | The analogue representation of the film may be divided into several parts and includes one or more reels and might include different audio streams.  |
| diagram        |   |
| properties     | content / complex / mandatory  |
| children       | total parts, reel, audio   |
| source         | <pre>&lt;xs:element name="representation"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation       xml:lang="de"&gt;Repräsentation&lt;/xs:documentation&gt;     &lt;xs:documentation       xml:lang="en"&gt;representation&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     &lt;xs:sequence&gt;       [...]     &lt;/xs:sequence&gt;   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt; representation &gt; [...] &lt;/ representation &gt;</pre>  |

### 2.2.3. ELEMENT METADATA/IE/REPRESENTATION/TOTAL\_PARTS

|                |   |
|----------------|---|
| definition     | describes of how many reels the film consists.  |
| rationale      | A film might be spread over more than one reel, and for each reel the conditions are reported individually.   |
| type           | xs:integer  |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Anzahl der Filmrollen für diese IE   |
| source         | <pre>&lt;xs:element name="total_parts" type="xs:integer"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Anzahl der     Filmrollen für diese IE&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Total number of     filmreels for the given IE&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;total_parts&gt;1&lt;/total_parts&gt;</pre>   |

#### 2.2.4. ELEMENT METADATA/IE/REPRESENTATION/REEL

|            |   |        |   |        |           |            |  |
|------------|---|--------|---|--------|-----------|------------|--|
| definition | describes the conditions of the reel at the time of digitization.   |        |   |        |           |            |  |
| rationale  | The conditions offer an inside on the state of the material.  |        |   |        |           |            |  |
| diagram    |    |        |   |        |           |            |  |
| properties | <p>content / complex / mandatory</p> <table border="1"> <tr> <td>minOcc</td><td>1</td></tr> <tr> <td>maxOcc</td><td>unbounded</td></tr> <tr> <td>repeatable</td><td></td></tr> </table> | minOcc | 1 | maxOcc | unbounded | repeatable |  |
| minOcc     | 1   |        |   |        |           |            |  |
| maxOcc     | unbounded   |        |   |        |           |            |  |
| repeatable |   |        |   |        |           |            |  |
| children   | part_no, copy, file_base, shrinkage, ph_test, perforation_damage, splice_count, deformation, information_film_container   |        |   |        |           |            |  |

|                |   |
|----------------|---|
| annotation     | documentation<br>Beschreibung der Filmrolle   |
| source         | <pre>&lt;xs:element name="reel" maxOccurs="unbounded"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Beschreibung der     Filmrolle&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Description of the     filmreel&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     [...]   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre>  |
| example in XML | <pre>&lt;reel&gt;   &lt;part_no&gt;1&lt;/part_no&gt;   &lt;copy&gt;AK&lt;/copy&gt;   &lt;file_base&gt;Azetat&lt;/file_base&gt;   &lt;shrinkage&gt;     &lt;date_measured&gt;2019-12-17&lt;/date_measured&gt;     &lt;min_value&gt;-0.5705680000&lt;/min_value&gt;     &lt;max_value&gt;-0.4813880000&lt;/max_value&gt;     &lt;average&gt;-0.530762516491065&lt;/average&gt;   &lt;/shrinkage&gt;   &lt;perforation_damage&gt;0&lt;/perforation_damage&gt;   &lt;splice_count&gt;0&lt;/splice_count&gt;   &lt;deformation&gt;gering&lt;/deformation&gt;   &lt;information_film_container&gt;neue Testkopie v IN   abgenommen Firma Atlantik Film Hamburg   22.2.90&lt;/information_film_container&gt; &lt;/reel&gt;</pre> |

#### 2.2.4.1. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/PART\_NO

|                |   |
|----------------|---|
| definition     | describes the number of the part. Each film begins with part/reel number one and may have more than one part/reel.  |
| rationale      | The conditions of the reels are recorded individually.  |
| type           | xs:integer  |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Nummer der Filmrolle   |
| source         | <pre>&lt;xs:element name="part_no" type="xs:integer"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Nummer der     Filmrolle&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Number of     filmreel&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;part_no&gt;1&lt;/part_no&gt;</pre>   |



#### 2.2.4.2. ELEMENT METADATA/IE/REPRESENTATION/REEL/COPY

|                |  |
|----------------|--|
| definition     | describes the copy which was chosen for digitization. Each intellectual entity is available in different copies.   |
| rationale      | Different copies are available, the chosen copy is documented in order to identify the copy at a later point in time. Possible abbreviations:<br>AK -> Archivkopie, was a reference copy where chroma is determined.<br>VK -> Verleihkopie, copy for rental services, usually there was more than one rental copy                                  |
| type           | xs:string  |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Um welche Kopie handelt es sich: AK = Archivkopie, VK = Verleihkopie  |
| source         | <xs:element name="copy" type="xs:string"><br><xs:annotation><br><xs:documentation xml:lang="de">Um welche Kopie handelt es sich: AK = Archivkopie, VK = Verleihkopie</xs:documentation><br><xs:documentation xml:lang="en">Which copy is described: AK = archival copy, VK = copy for rent</xs:documentation><br></xs:annotation><br></xs:element> |
| example in XML | <copy>AK</copy>  |

#### 2.2.4.3. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/CARRIER\_MATERIAL

|                |   |
|----------------|---|
| definition     | describes the carrier material.   |
| rationale      | The carrier material is an important information for the conservation of the material.  |
| type           | xs:string   |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Trägermaterial   |
| source         | <pre>&lt;xs:element name=" carrier_material " type="xs:string"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Trägermaterial&lt;/xs:documentation&gt; &lt;xs:documentation xml:lang="en"&gt;Carrier material&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt; carrier_material &gt;Azetat&lt;/ carrier_material &gt;</pre>  |

#### 2.2.4.4. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/INFORMATION\_FILM \_CONTAINER

|                |  |
|----------------|--|
| definition     | contains the text from film container  |
| rationale      | The text contains important information, e.g. year of copy process, processing laboratory, remarks.  |
| type           | xs:string  |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Informationen die sich auf der Filmdose befinden  |
| source         | <pre>&lt;xs:element name="information_film_container" type="xs:string"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Informationen die sich auf der Filmdose befinden&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Information on the film container&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;information_film_container&gt;neue Testkopie v IN abgenommen Firma Atlantik Film Hamburg 22.2.90&lt;/information_film_container&gt;</pre>   |

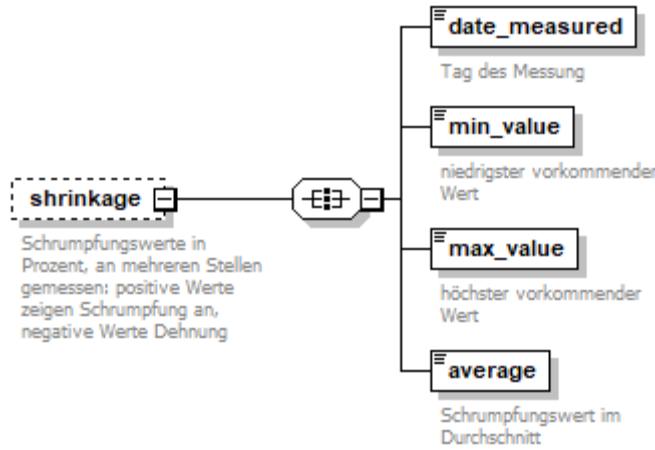
#### 2.2.4.5. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/DEFORMATION

|                |  |        |            |
|----------------|--|--------|------------|
| definition     | describes the deformation of the film at the time of digitization  |        |            |
| rationale      | A deformed film leads to a more difficult process of digitization and may lead to blurriness in the resulting digital file.  |        |            |
| type           | restriction of xs:string   |        |            |
| properties     | content / simple / mandatory   |        |            |
| facets         | kind   | Value  | Annotation |
|                | enumeration  | keine  |            |
|                | enumeration  | gering |            |
|                | enumeration  | mittel |            |
|                | enumeration  | stark  |            |
| annotation     | documentation<br>Verwölbung des Files: keine, gering, mittel, stark  |        |            |
| source         | <pre>&lt;xs:element name="deformation" block="restriction"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Verwölbung des Files: keine, gering, mittel, stark&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Deformation of film: no, low, medium, high&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:simpleType&gt;     &lt;xs:restriction base="xs:string"&gt;       &lt;xs:enumeration value="keine"/&gt;       &lt;xs:enumeration value="gering"/&gt;       &lt;xs:enumeration value="mittel"/&gt;       &lt;xs:enumeration value="stark"/&gt;     &lt;/xs:restriction&gt;   &lt;/xs:simpleType&gt; &lt;/xs:element&gt;</pre> |        |            |
| example in XML | <deformation>gering</deformation>  |        |            |

#### 2.2.4.6. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/SHRINKAGE

|                |  |
|----------------|--|
| definition     | describes the shrinkage in percent.  |
| rationale      | Shrinkage effects the possibilities of digitization.   |
| diagram        |   |
| properties     | content / complex / optional   |
| children       | date_measured, min_value, max_value, average   |
| annotation     | <p>documentation</p> <p>Schrumpfungswerte in Prozent, an mehreren Stellen gemessen: positive Werte zeigen Schrumpfung an, negative Werte Dehnung</p>   |
| source         | <pre> &lt;xs:element name="shrinkage"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Schrumpfungswerte in Prozent, an mehreren Stellen gemessen: positive Werte zeigen Schrumpfung an, negative Werte Dehnung&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Values of shrinkage in percent, measured on several point: positive value show a shrinkage, negative values distension&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     [...]   &lt;/xs:complexType&gt; &lt;/xs:element&gt; </pre> |
| example in XML | <pre> &lt;shrinkage&gt;   &lt;date_measured&gt;2019-12-17&lt;/date_measured&gt;   &lt;min_value&gt;-0.5705680000&lt;/min_value&gt;   &lt;max_value&gt;-0.4813880000&lt;/max_value&gt;   &lt;average&gt;-0.530762516491065&lt;/average&gt; &lt;/shrinkage&gt; </pre>  |

2.2.4.6.1. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
SHRINKAGE/DATE\_MEASURED

|                |   |
|----------------|---|
| definition     | describes the date the shrinkage was measured.  |
| rationale      | Contextualizes the value, and allows comparison of shrinkage over time.   |
| type           | xs:date   |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Tag des Messung  |
| source         | <pre>&lt;xs:element name="date_measured" type="xs:date"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Tag des     Messung&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Day of     measurement&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;date_measured&gt;2019-12-17&lt;/date_measured&gt;</pre>  |

2.2.4.6.2. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
SHRINKAGE/MIN\_VALUE

|                |  |
|----------------|--|
| definition     | describes the minimal measured shrinkage of the material.  |
| rationale      | The information from the scanning process measures shrinkage at different positions of the film.   |
| type           | xs:decimal   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>niedrigster vorkommender Wert   |
| source         | <pre>&lt;xs:element name="min_value" type="xs:decimal"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;niedrigster     vorkommender Wert&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;minimum measured     value&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;min_value&gt;-0.5705680000&lt;/min_value&gt;</pre>  |

2.2.4.6.3. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
SHRINKAGE/MAX\_VALUE

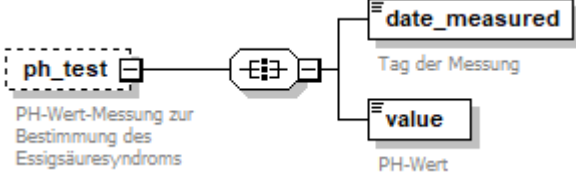
|                |   |
|----------------|---|
| definition     | describes the maximal measured shrinkage of the material.   |
| rationale      | The information from the scanning process measures shrinkage at different positions of the film.  |
| type           | xs:decimal  |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>höchster vorkommender Wert   |
| source         | <pre>&lt;xs:element name="max_value" type="xs:decimal"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;höchster vorkommender Wert&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;maximum measured value&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;max_value&gt;-0.481388000&lt;/max_value&gt;</pre>  |

2.2.4.6.4. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
SHRINKAGE/AVERAGE

|                |  |
|----------------|--|
| definition     | describes the average measured shrinkage of the material.  |
| rationale      | The information from the scanning process measures shrinkage at different positions of the film. The average allows an interpretation of the the tendency of shrinkage.  |
| type           | xs:decimal   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Schrumpfungswert im Durchschnitt  |
| source         | <pre>&lt;xs:element name="average" type="xs:decimal"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Schrumpfungswert im Durchschnitt&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Average shrinkage&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;average&gt;-0.530762516491065&lt;/average&gt;</pre>   |

#### 2.2.4.7. ELEMENT

##### METADATA/IE/REPRESENTATION/REEL/PH\_TEST

|                   |   |
|-------------------|---|
| definition        | describes the outcome of an Ph-Test, is not mandatory   |
| rationale         | Measuring the Ph-value leads to information on vinegar syndrome.  |
| diagram           |    |
| properties        | content / complex / optional  |
| children          | date_measured, value  |
| source            | <pre>&lt;xs:element name="ph_test" minOccurs="0"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;PH-Wert-Messung zur Bestimmung des Essigsäuresyndroms&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;pH-value measurement in order to detect vinegar syndrome&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     [...]   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre> |
| example<br>in XML | <pre>&lt;ph_test&gt;   &lt;date_measured&gt;02.03.2018&lt;/date_measured&gt;   &lt;value&gt;4,8&lt;/value&gt; &lt;/ph_test&gt;</pre>  |



2.2.4.7.1. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
PH\_TEST/DATE\_MEASURED

|                |   |
|----------------|---|
| definition     | describes the date the Ph-value was measured.   |
| rationale      | Contextualizes the value, and allows comparison of Ph-values over time.   |
| type           | xs:date   |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Tag der Messung  |
| source         | <pre>&lt;xs:element name="date_measured" type="xs:date"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Tag der     Messung&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Day of     measurement&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;date_measured&gt;02.03.2018&lt;/date_measured&gt;</pre>  |

2.2.4.7.2. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
PH\_TEST/VALUE

|                |  |
|----------------|--|
| definition     | describes the Ph-Value of the material.  |
| rationale      | Measuring the Ph-value leads to information on vinegar syndrome.   |
| type           | xs:decimal   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>PH-Wert   |
| source         | <pre>&lt;xs:element name="value" type="xs:decimal"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;PH-     Wert&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;PH-     value&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;value&gt;4,8&lt;/value&gt;</pre>  |

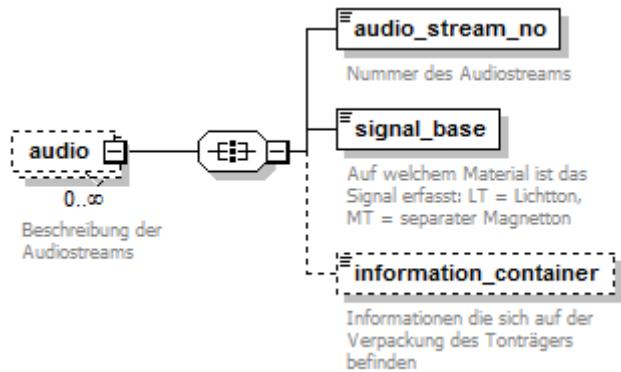
2.2.4.8. ELEMENT METADATA/IE/REPRESENTATION/REEL/  
PERFORATION\_DAMAGE

|                |  |
|----------------|--|
| definition     | describes if the perforation is damaged. 1 for true (the perforation is damaged), 0 for false (the perforation is not damaged)   |
| rationale      | A filmreel with damaged perforation leads to a more difficult process of digitization and may lead to blurriness or unsteadiness in the resulting digital file.  |
| type           | xs:boolean   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Perforationsschäden: ja(1), nein (0)  |
| source         | <pre>&lt;xs:element name="perforation_damage" type="xs:boolean"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Perforationsschäden: ja(1), nein (0)&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Perforation damage: yes(1), no (0)&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;perforation_damage&gt;0&lt;/perforation_damage&gt;</pre>  |

2.2.4.9. ELEMENT METADATA/IE/REPRESENTATION/REEL  
/SPICE\_COUNT

|                |  |
|----------------|--|
| definition     | describes the number of splices in the filmreel  |
| rationale      | Splices may lead to difficulties during digitization and may result in unsteadiness of frames in the digital file.   |
| type           | xs:integer   |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Anzahl der Klebestellen   |
| source         | <pre>&lt;xs:element name="splice_count" type="xs:integer"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Anzahl der     Klebestellen&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Number of     Splices&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;splice_count&gt;0&lt;/splice_count&gt;</pre>  |

## 2.2.5. ELEMENT METADATA/IE/REPRESENTATION/AUDIO

|                |   |        |   |        |           |            |  |
|----------------|---|--------|---|--------|-----------|------------|--|
| definition     | describes the source material of the audio streams  |        |   |        |           |            |  |
| rationale      | The source material offers an inside on the quality of the audio streams.   |        |   |        |           |            |  |
| diagram        |   |        |   |        |           |            |  |
| properties     | content / comlex / optional<br><table border="1"> <tr> <td>minOcc</td><td>0</td></tr> <tr> <td>maxOcc</td><td>unbounded</td></tr> <tr> <td>repeatable</td><td></td></tr> </table>   | minOcc | 0 | maxOcc | unbounded | repeatable |  |
| minOcc         | 0   |        |   |        |           |            |  |
| maxOcc         | unbounded   |        |   |        |           |            |  |
| repeatable     |   |        |   |        |           |            |  |
| children       | audio_stream_no, signal_base, information_container   |        |   |        |           |            |  |
| annotation     | documentation<br>Beschreibung der Audiostreams  |        |   |        |           |            |  |
| source         | <pre>&lt;xs:element name="audio" minOccurs="0" maxOccurs="unbounded"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Beschreibung der Audiostreams&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Description of the audio streams&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt;   &lt;xs:complexType&gt;     [...]   &lt;/xs:complexType&gt; &lt;/xs:element&gt;</pre> |        |   |        |           |            |  |
| example in XML | <pre>&lt;audio&gt;   &lt;audio_stream_no&gt;1&lt;/ audio_stream_no&gt;   &lt;signal_base &gt;LT&lt;/ signal_base&gt; &lt;/audio&gt; &lt;audio&gt;   &lt;audio_stream_no&gt;2&lt;/ audio_stream_no&gt;   &lt;signal_base&gt;MT&lt;/signal_base&gt; &lt;/audio&gt;</pre>  |        |   |        |           |            |  |

2.2.5.1. ELEMENT METADATA/IE/REPRESENTATION/AUDIO/  
AUDIO\_STREAM\_NO

|                |  |
|----------------|--|
| definition     | describes the number of the audio stream   |
| rationale      | The number refers to the audio stream number in the preservation master.   |
| type           | xs:string  |
| properties     | content / simple / mandatory   |
| annotation     | documentation<br>Nummer des Audiostreams   |
| source         | <pre>&lt;xs:element name="audio_stream_no" type="xs:integer"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Nummer des Audiostreams&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;Number of audio stream&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;audio_stream_no&gt;1&lt;/ audio_stream_no&gt;</pre>   |

2.2.5.2. ELEMENT METADATA/IE/REPRESENTATION/AUDIO/  
SIGNAL\_BASE

|                |   |
|----------------|---|
| definition     | describes the signal base or carrier material.  |
| rationale      | The carrier material is an important information for the conservation of the material.  |
| type           | xs:string   |
| properties     | content / simple / mandatory  |
| annotation     | documentation<br>Um welchen Ton handelt es sich: LT = Lichtton, MT = separater Magnetton  |
| source         | <pre>&lt;xs:element name="signal_base" type="xs:string"&gt;   &lt;xs:annotation&gt;     &lt;xs:documentation xml:lang="de"&gt;Auf welchem     Material ist das Signal erfasst: LT = Lichtton, MT =     separater Magnetton&lt;/xs:documentation&gt;     &lt;xs:documentation xml:lang="en"&gt;An which material is     the signal saved: LT = optical sound, MT = separate     magnetic sound&lt;/xs:documentation&gt;   &lt;/xs:annotation&gt; &lt;/xs:element&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt;signal_base&gt;MT&lt;/signal_base&gt;</pre>  |

### 2.2.5.3. ELEMENT

METADATA/IE/REPRESENTATION/AUDIO/INFORMATION\_AUDIO\_CONTAINER

|                |  |
|----------------|--|
| definition     | contains the text from audio container   |
| rationale      | The text contains important information e.g. language, and serves as identification method for the analogue original.  |
| type           | xs:string  |
| properties     | content / simple / optional  |
| annotation     | documentation<br>Informationen die sich auf der Verpackung des Tonträgers befinden   |
| source         | <pre>&lt;xs:element name="information_audio_container" type="xs:string" minOccurs="0"&gt; &lt;xs:annotation&gt; &lt;xs:documentation xml:lang="de"&gt;Informationen die sich auf der Verpackung des Tonträgers befinden&lt;/xs:documentation&gt; &lt;xs:documentation xml:lang="en"&gt;Information on the audio container&lt;/xs:documentation&gt;&lt;/xs:annotation&gt; &lt;/xs:element&gt;</pre> |
| example in XML | <pre>&lt; information_audio_container &gt; Hauptmix deutsch Kopie&lt;/ information_audio_container &gt;</pre>  |

### 3. CHANGELOG

#### CHANGES FROM VERSION 2 TO VERSION 3

- Added element  
metadata/ie/representation/audio/information\_audio\_container

#### CHANGES FROM VERSION 1 TO VERSION 2

- Schema name changed from DelftConservationMetadata.xsd to TIBFilmConservationMetadata.xsd
- added namespace:  
xmlns:xs="http://www.w3.org/2001/XMLSchema"
- shrinkage: was mandatory, is now optional, changed spelling error in description
- perforation\_damage: was monitored during first digitization project, but holdings are homogenously not damaged, therefore not monitored in following projects.
- splice\_count: was monitored during first digitization project, but holdings are homogenously not damaged, therefore not monitored in following projects.
- added optional information on audio streams: number of streams and source material

### PUBLICATION BIBLIOGRAPHY

PREMIS Editorial Committee: PREMIS Data Dictionary for Preservation Metadata, Version 3.0, checked on 11/5/2020.