MODS and the Digital Repository of Ireland
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DRI may update its guidelines documentation from time to time as the Repository develops. Please ensure that you are using the most up-to-date version of our documentation by checking our DRI Publications page.
Foreword

The Digital Repository of Ireland (DRI) has been built to serve the digital preservation needs of the social sciences and humanities in Ireland, by combining a grassroots approach to community requirements with extensive research into international best practices. Our work on metadata began in 2011 with a broad and deep consultation of key institutions across Ireland to understand existing archival practices and metadata usage, and we are grateful to these institutions for their expertise and engagement with our research. Following this study, we conducted research into international best practices in digital archiving. The results of this foundational work can be found in Digital Archiving in Ireland: National Survey of the Humanities and Social Sciences (2012)\(^1\) and Caring for Digital Content: Mapping International Approaches (2013).\(^2\) In 2013 we established a multidisciplinary task force to consolidate our national and international findings, and to begin the process of developing guidelines for metadata creation for different data types and sectors within the broad realm of social and cultural data. Our first set of guidelines, Dublin Core and the Digital Repository of Ireland were published in 2015, followed by Qualified Dublin Core and the Digital Repository of Ireland.

The purpose of publishing this series is both practical and aspirational. On the one hand, the documents provide guidelines for preparing metadata for ingestion into the Digital Repository of Ireland for the mostly widely used metadata standards in our community. On the other hand, we hope that their reach will go beyond DRI, providing the basis for a standardised approach to metadata preparation in Ireland’s social sciences and humanities domains. If we adopt common standards, and approach metadata preparation in similar ways, we will create greater interoperability between our data collections, which will in turn enable improved and enhanced discovery and richer contextualised cross-collection narratives.

I would like to express our deepest thanks to all the individuals and institutions who have collaborated and communicated with us in developing these guidelines, and who have provided feedback on their implementation. We welcome you to test this latest set of guidelines, and equally welcome and encourage any feedback you have to share.

Dr. Natalie Harrower
Acting Director, Digital Repository of Ireland

\(^1\) http://dx.doi.org/10.3318/DRI.2012.1
\(^2\) http://dx.doi.org/10.3318/DRI.2013.1
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Orna Roche, Assistant Librarian, Research & Innovation/Collection Services, James Joyce Library, University College Dublin
Introduction

These guidelines are aimed at anyone using the MODS metadata standard to prepare content which will be deposited with the Digital Repository of Ireland (“the Repository”). These metadata guidelines do not contradict, or indeed replace, the MODS metadata standard, but should be used in tandem with it to ensure that the metadata can be ingested and searched in the Repository.

Although MODS 3.6 has now been approved by the MODS Editorial Committee, these guidelines refer to MODS 3.5 which will continue to be supported by the Repository. These guidelines may be updated to reference MODS 3.6 when further guidance from the Library of Congress becomes available.

By following these guidelines, which include mandatory and recommended elements for ingestion of metadata into the Repository, you will be making your collections more easily searchable in the Repository, and cross-searchable with other DRI collections.

Mandatory and Recommended Elements

Data must be provided for Mandatory elements to enable metadata to be ingested by the Repository; metadata will be automatically rejected by the system if Mandatory elements are not included. Recommended elements do not have to be included, but DRI strongly advises that they are completed if possible in order to facilitate searching. The remaining MODS elements are Optional. All submitted elements, whether Mandatory, Recommended or Optional, will be stored and available in the Repository.

What to Catalogue

DRI recommends following the “one to one” principle of Dublin Core: the principle whereby related but conceptually different entities, for example a painting and a digital image of the painting, are described by separate metadata records3. Metadata for a given object can refer to either the physical object or to the digital surrogate, but the information entered should not be a mixture of both.

Controlled Vocabularies

Controlled vocabularies are recommended in order to enhance the Repository’s search function. Although specific controlled vocabularies are recommended in the tables below, they are not mandatory.

---

MODS records for ingestion in DRI should be encoded in XML using the MODS XML Schema (XSD) in its version 3.5. As the MODS schema supports the use of a wrapper for grouping together a set of MODS records (via the `<modsCollection>` element), two different types of XML-encoded MODS records are supported for ingest. The first of these is a collection of MODS records, encoded as a single XML file. This type of XML would look as follows (with relevant header lines shown in bold):

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods:modsCollection xmlns:mods="http://www.loc.gov/mods/v3"
    xmlns:copyrightMD="http://www.cdlib.org/inside/diglib/copyrightMD"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.loc.gov/mods/v3 mods-3-5.xsd">
    <mods:mods>
        <mods:identifier>…</mods:identifier>
        ...
    </mods:mods>
    <mods:mods>
        <mods:identifier>…</mods:identifier>
        ...
    </mods:mods>
</mods:modsCollection>
```

If encoding the MODS records individually, each of the records would look like this:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods:mods xmlns:mods="http://www.loc.gov/mods/v3"
    xmlns:copyrightMD="http://www.cdlib.org/inside/diglib/copyrightMD"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.loc.gov/mods/v3 mods-3-5.xsd">
    <mods:identifier>…</mods:identifier>
    ...
</mods:mods>
```

Note: Please note that the system is expecting qualified XML for ingest, that is, namespace prefixes must be used throughout the XML. The following namespace prefixes are required:

- mods for the MODS namespace (xmlns:mods="http://www.loc.gov/mods/v3" declaration in the XML root element)
- copyrightMD for the Copyright Metadata Schema namespace (xmlns:copyrightMD="http://www.cdlib.org/inside/diglib/copyrightMD" declaration in the XML root element)

Ingesting into the Repository

MODS metadata is ingested into the Repository in XML format. In order to match the metadata with its file, the metadata file and digital asset file should use the same filename, e.g. object1.xml and object1.tif

If there are multiple digital assets associated with the metadata file, follow the filename with an underscore and an alphanumeric sequence, e.g. object2.xml with three digital asset files associated with it (object2_001.tif, object2_002.tif, object2_003.tif).

When ingesting a collection of MODS metadata records (as described in the previous section), in order to match the metadata with its digital asset file(s), the <mods:identifier> element is used, with a value for the type attribute specified as “asset”. For example, for a MODS record with digital asset files named object1_01.jpeg and object1_02.tif, the <mods:identifier> element would be as follows:

<mods:mods>
  <mods:identifier type="asset">object1</mods:identifier>
  ...
</mods:record>

Please note that the value of <mods:identifier> does not include the file extension.

Please see the DRI Resources page for further information on ingestion.6

6 http://www.dri.ie/resources-0, last accessed 10 December 2015.
MODS Resources

The MODS element set version 3.5 is currently available here.\(^7\)

Guidance on using MODS for cataloguing is available here: Outline of Elements and Attributes in MODS Version 3.5.\(^8\)

DRI also recommends that depositors follow the DLF/Aquifer Implementation Guidelines for Shareable MODS Records in their implementation of the MODS standard: Digital Library Federation / Aquifer Implementation Guidelines for Shareable MODS Records Version 1.1 March 2009.\(^9\)

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\(^7\) http://www.loc.gov/standards/mods/v3/mods-3-5.xsd, last accessed 10 December 2015.
\(^8\) http://www.loc.gov/standards/mods/mods-outline-3-5.html, last accessed 10 December 2015.
## Table of mandatory and recommended elements, and suggested controlled vocabularies/standards for DRI

<table>
<thead>
<tr>
<th>Element</th>
<th>Obligation</th>
<th>Controlled vocabulary</th>
<th>Page reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Mandatory</td>
<td>No</td>
<td>11</td>
</tr>
<tr>
<td>Name</td>
<td>Mandatory</td>
<td>Yes</td>
<td>11</td>
</tr>
<tr>
<td>Origin Info: Date Created</td>
<td>Mandatory if Origin Info: Date Issued and Origin Info: Date Captured not used</td>
<td>Yes</td>
<td>13</td>
</tr>
<tr>
<td>Origin Info: Date Issued</td>
<td>Mandatory if Origin Info: Date Created and Origin Info: Date Captured not used</td>
<td>Yes</td>
<td>14</td>
</tr>
<tr>
<td>Origin Info: Date Captured</td>
<td>Mandatory if Origin Info: Date Issued and Origin Info: Date Created not used</td>
<td>Yes</td>
<td>16</td>
</tr>
<tr>
<td>Abstract</td>
<td>Mandatory if Note and Table of Contents not used</td>
<td>No</td>
<td>17</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>Mandatory if Abstract and Note not used</td>
<td>No</td>
<td>17</td>
</tr>
<tr>
<td>Note</td>
<td>Mandatory if Abstract and Table of Contents not used</td>
<td>No</td>
<td>18</td>
</tr>
<tr>
<td>Access Condition</td>
<td>Mandatory</td>
<td>No</td>
<td>19</td>
</tr>
<tr>
<td>Type of Resource</td>
<td>Mandatory</td>
<td>Yes</td>
<td>21</td>
</tr>
<tr>
<td>Subtitle</td>
<td>Recommended</td>
<td>No</td>
<td>22</td>
</tr>
<tr>
<td>Language</td>
<td>Recommended</td>
<td>Yes</td>
<td>22</td>
</tr>
<tr>
<td>Related item</td>
<td>Recommended</td>
<td>No</td>
<td>24</td>
</tr>
<tr>
<td>Subject: Topic</td>
<td>Recommended</td>
<td>Yes</td>
<td>26</td>
</tr>
<tr>
<td>Subject: Name</td>
<td>Recommended</td>
<td>Yes</td>
<td>26</td>
</tr>
<tr>
<td>Subject: Geographic</td>
<td>Recommended</td>
<td>No</td>
<td>28</td>
</tr>
<tr>
<td>Subject: Hierarchical Geographic</td>
<td>Recommended</td>
<td>Yes</td>
<td>28</td>
</tr>
<tr>
<td>Subject: Geographic Code</td>
<td>Recommended</td>
<td>Yes</td>
<td>29</td>
</tr>
<tr>
<td>Subject: Cartographics</td>
<td>Recommended</td>
<td>Yes</td>
<td>30</td>
</tr>
<tr>
<td>Subject: Temporal</td>
<td>Recommended</td>
<td>Yes</td>
<td>31</td>
</tr>
<tr>
<td>Identifier</td>
<td>Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Description</td>
<td>Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Origin Info: Publisher</td>
<td>Optional</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample DRI-compliant MODS XML record

```xml
<?xml version="1.0" encoding="UTF-8"?>
<mods:mods version="3.5"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mods="http://www.loc.gov/mods/v3"
    xmlns:copyrightMD="http://www.cdlib.org/inside/diglib/copyrightMD"
    xsi:schemaLocation="http://www.loc.gov/mods/v3 mods-3-5.xsd">
    <mods:titleInfo>
        <mods:title>St Brendan the navigator holding his church</mods:title>
    </mods:titleInfo>
    <mods:name type="personal">
        <mods:namePart type="family">King</mods:namePart>
        <mods:namePart type="given">Richard</mods:namePart>
        <mods:namePart type="date">1907-1974</mods:namePart>
        <mods:role>
            <mods:roleTerm type="code" authority="marcrelator">att</mods:roleTerm>
            <mods:roleTerm type="text" authority="marcrelator">Attributed name</mods:roleTerm>
        </mods:role>
    </mods:name>
    <mods:originInfo>
        <mods:dateCreated encoding="w3cdtf" point="start">1931-01-01</mods:dateCreated>
        <mods:dateCreated encoding="w3cdtf" point="end">1973-12-31</mods:dateCreated>
    </mods:originInfo>
    <mods:abstract>Colour scheme for a single light stained glass window featuring St. Brendan holding his church, with his ship depicted in a lozenge to his left, and a sea monster entwined around his legs.</mods:abstract>
    <mods:accessCondition>
        <copyrightMD:copyright copyright.status="copyrighted">
            <copyrightMD:rights.holder>Copyright 2014 The Board of Trinity College Dublin.</copyrightMD:rights.holder>
            <copyrightMD:general.note>Images are available for single-use academic application only. Publication, transmission or display is prohibited without formal written approval of Trinity College Library, Dublin.</copyrightMD:general.note>
        </copyrightMD:copyright>
    </mods:accessCondition>
</mods:mods>
```
Key to the Tables:

<table>
<thead>
<tr>
<th>Label</th>
<th>This is the name of the metadata field taken from the MODS documentation, for example “Title Info”.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata Element</td>
<td>This is the namespaced, MODS XML encoding of the metadata field; for example, <code>&lt;mods:titleInfo&gt;</code>&lt;br&gt;The elements described in these guidelines use the namespace prefix <code>mods</code>.</td>
</tr>
<tr>
<td>Definition</td>
<td>This is the formal definition of the element, taken from the MODS user guidelines.</td>
</tr>
<tr>
<td>Format of content</td>
<td>This is the type of data entered in the metadata element, for example free text, or a suggested controlled vocabulary.</td>
</tr>
<tr>
<td>Obligation</td>
<td>This field details whether or not the element is a required field for ingest into the Repository. Elements are designated as either Mandatory or Recommended. Optional elements are not detailed in this document as they do not have DRI-specific recommendations associated with them.</td>
</tr>
<tr>
<td>Repeatable</td>
<td>This field details whether or not the metadata standard allows more than one use of the metadata field. For example, if it is possible to enter more than one Subject the element is repeatable, e.g.</td>
</tr>
<tr>
<td>Values (examples)</td>
<td>This field gives example instances of the types of values that might be entered in the element.</td>
</tr>
</tbody>
</table>

```
<mods:subject>
  <mods:topic>Cow</topic>
</mods:subject>

< mods:subject>
  <mods:topic>Mammal</mods:topic>
</mods:subject>
```
MODS 3.5 Elements for DRI

<table>
<thead>
<tr>
<th>Label</th>
<th>Title$^{10}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:titleInfo&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:title/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;/mods:titleInfo&gt;</code></td>
</tr>
<tr>
<td>Definition</td>
<td>A word, phrase, character, or group of characters that constitutes the chief title of a resource, i.e., the title normally used when citing the resource.</td>
</tr>
<tr>
<td>Format of content</td>
<td>Free text</td>
</tr>
<tr>
<td>Obligation</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td><code>&lt;mods:titleInfo&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:title&gt;</code>Ulysses<code>&lt;/mods:title&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;/mods:titleInfo&gt;</code></td>
</tr>
<tr>
<td>Notes</td>
<td>The <code>&lt;mods:titleInfo&gt;</code> element is a container element that contains all subelements related to title information, with their corresponding attributes. Do not include punctuation intended to delineate parts of titles that are separated into sub-elements of <code>&lt;mods:titleInfo&gt;</code>.</td>
</tr>
<tr>
<td></td>
<td>If multiple titles are recorded, repeat <code>&lt;mods:titleInfo&gt;&lt;mods:title&gt;</code> for each. <code>&lt;mods:titleInfo&gt;</code> is also repeated for each type attribute value.</td>
</tr>
<tr>
<td></td>
<td>The language of the title may be indicated if desired using the <code>xml:lang</code> or <code>lang</code> attributes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Label</th>
<th>Name$^{11}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:name&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:namePart/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:displayForm/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:affiliation/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:role/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:roleTerm/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;/mods:role&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:description/&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;/mods:name&gt;</code></td>
</tr>
<tr>
<td>Definition</td>
<td>The name of a person, organisation, or event (conference, meeting, etc.) associated in some way with the resource.</td>
</tr>
</tbody>
</table>


$^{11}$ http://www.loc.gov/standards/mods/userguide/name.html, last accessed 10 December 2015.
Format of content  
Personal, family and corporate names should preferably be formatted according to the Irish Guidelines for Indexing Archives.12

Obligation  
<mods:name>, <mods:namePart> and <mods:role> are Mandatory. All other subelements are Optional.

Repeatable  
Yes

Values (examples)  

<mods:name type="personal">  
<mods:namePart>Scott, Patrick</mods:namePart>  
<mods:namePart type="date">1921-2014</mods:namePart>  
<mods:description>Irish artist</mods:description>  
<mods:displayForm>Patrick Scott (Irish artist, 1921-2014)</mods:displayForm>

<mods:name type="personal">  
<mods:namePart type="family">Joyce</mods:namePart>  
<mods:namePart type="given">James</mods:namePart>

<mods:name type="corporate" authority="naf">  
<mods:namePart>Trinity College (Dublin, Ireland)</mods:namePart>

<mods:name>

Surname and forename can be recorded as:
<namePart>lastname, firstname</namePart>
or separated as:
<namePart type="family">
<namePart type="given">
Use the <mods:role/> subelement to clarify the relationship of the
named person or organisation to the resource. See the MODS user guide
lines for further information. It is recommended to use the MARC relator terms to identify role.

For Irish family names, such as Mary Choilm a’ tSeaimpín, where Colm an
tSeaimpín is a family identifier rather than a surname and cannot precede
Mary, DRI suggests that the family identifier should follow the first name.

If the creator is unknown, a term should be entered in the
<mods:namePart> subelement to indicate this, such as “Unknown” or
“Anonymous”.

Label | Date Created
--- | ---
Metadata element | <mods:originInfo>
 | <mods:dateCreated>
Definition | The date of creation of the original resource.
Format of content | The content of the element is free text, but it should preferably be
formatted according to w3cdtf or ISO 8601. If doing so, the attribute “encoding” should be used, with a value of “w3cdtf” or “iso8601”, depending on the choice of encoding.

---

In DRI, dates not formatted according to w3cdtf or ISO 8601 will not be searchable by date range, nor displayed in the timeline visualisation tool.

Attributes: See definitions for the attributes used throughout the MODS schema.

Obligation
Mandatory if Date Issued or Date Captured is not used.

Repeatable
Yes

Values (examples)

<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes">19721008</mods:dateCreated>
</mods:originInfo>

Notes
Examples of encoded dates that are searchable by date range:

Individual date:

<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf">20150323</mods:dateCreated>
</mods:originInfo>

Date range:

<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" point="start">2010</mods:dateCreated>
  <mods:dateCreated encoding="w3cdtf" point="end">2015</mods:dateCreated>
</mods:originInfo>

Attributes: See definitions for the attributes used throughout the MODS schema.¹⁸

<table>
<thead>
<tr>
<th>Label</th>
<th>Metadata element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued</td>
<td><a href="">mods:originInfo</a> <a href="">mods:dateIssued</a> &lt;/mods:originInfo&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Definition</th>
<th>Information about the date when the resource was published, released or issued.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format of content</td>
<td>The content of the element is free text, but it should preferably be formatted according to w3cdtf or ISO 8601. If doing so, the attribute “encoding” should be used, with a value of “w3cdtf” or “iso8601”, depending on the choice of encoding. In DRI, dates not formatted according to w3cdtf or ISO 8601 will not be searchable by date range, nor displayed in the timeline visualisation tool. Attributes: See definitions for the attributes used throughout the MODS schema.</td>
</tr>
<tr>
<td>Obligation</td>
<td>Mandatory if <a href="">mods:dateCreated</a> or <a href="">mods:dateCaptured</a> are not used.</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="">mods:originInfo</a></td>
</tr>
<tr>
<td></td>
<td>&lt;mods:dateIssued encoding=&quot;iso8601&quot;&gt;</td>
</tr>
<tr>
<td></td>
<td>19310101</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:dateIssued&gt;</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:originInfo&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="">mods:originInfo</a></td>
</tr>
<tr>
<td></td>
<td>&lt;mods:dateIssued keyDate=&quot;yes&quot;&gt;</td>
</tr>
<tr>
<td></td>
<td>1931</td>
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<tr>
<td></td>
<td>&lt;/mods:dateIssued&gt;</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:originInfo&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="">mods:originInfo</a></td>
</tr>
<tr>
<td></td>
<td>&lt;mods:dateIssued encoding=&quot;w3cdtf&quot; point=&quot;start&quot;&gt;</td>
</tr>
<tr>
<td></td>
<td>1931</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:dateIssued&gt;</td>
</tr>
<tr>
<td></td>
<td>&lt;mods:dateIssued encoding=&quot;w3cdtf&quot; point=&quot;end&quot;&gt;</td>
</tr>
<tr>
<td></td>
<td>1973</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:dateIssued&gt;</td>
</tr>
<tr>
<td></td>
<td>&lt;/mods:originInfo&gt;</td>
</tr>
<tr>
<td>Notes</td>
<td>DRI has separate internal metadata that automatically stores and saves the date and time when the DRI record was created and published on the DRI repository. This Date Issued element is more useful to describe issue/publication dates that are not handled by the DRI system, e.g. the actual issue/publication date of the item being described not DRI’s digital representation of the item.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Label</th>
<th>Date Captured&lt;sup&gt;22&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:originInfo&gt;</code>&lt;br&gt;<code>&lt;mods:dateCaptured&gt;</code>&lt;br&gt;<code>&lt;/mods:originInfo&gt;</code></td>
</tr>
<tr>
<td>Definition</td>
<td>The date on which the resource was digitised or a subsequent snapshot was taken</td>
</tr>
<tr>
<td>Format of content</td>
<td>The content of the element is free text, but it should preferably be formatted according to w3cdtf&lt;sup&gt;23&lt;/sup&gt; or ISO 8601&lt;sup&gt;24&lt;/sup&gt;. If doing so, the attribute “encoding” should be used, with a value of “w3cdtf” or “iso8601”, depending on the choice of encoding. In DRI, dates not formatted according to w3cdtf or ISO 8601 will not be searchable by date range, nor displayed in the timeline visualisation tool. Attributes: See definitions for the attributes used throughout the MODS schema&lt;sup&gt;25&lt;/sup&gt;.</td>
</tr>
<tr>
<td>Obligation</td>
<td>Mandatory if <code>&lt;dateIssued&gt;</code> or <code>&lt;dateCreated&gt;</code> is not used.</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td><code>&lt;mods:originInfo&gt;</code>&lt;br&gt;<code>&lt;mods:dateCaptured&gt;</code>2008-2014<code>&lt;br&gt;</code>&lt;/mods:originInfo&gt;<code>&lt;br&gt;</code><a href="">mods:originInfo</a><code>&lt;br&gt;</code>&lt;mods:dateCaptured encoding=&quot;iso8601&quot; point=&quot;start&quot;&gt;2008<code>&lt;br&gt;</code>&lt;/mods:dateCaptured&gt;<code>&lt;br&gt;</code>&lt;mods:dateCaptured encoding=&quot;iso8601&quot; point=&quot;end&quot;&gt;2014<code>&lt;br&gt;</code>&lt;/mods:dateCaptured&gt;<code>&lt;br&gt;</code>&lt;/mods:originInfo&gt;`</td>
</tr>
<tr>
<td>Notes</td>
<td>DRI has separate internal metadata that automatically stores and saves the date and time when the DRI record was created and published on the Repository. This <code>&lt;dateCaptured&gt;</code> element is more useful to describe the actual date when the item being described was digitised, not DRI’s digital representation of the item.</td>
</tr>
</tbody>
</table>

---

<sup>22</sup> http://www.loc.gov/standards/mods/userguide/origininfo.html#datecaptured, last accessed 10 December 2015.<br>
<sup>23</sup> http://www.w3.org/TR/NOTE-datetime, last accessed 10 December 2015.<br>
<sup>24</sup> http://www.iso.org/iso/home/standards/iso8601.htm, last accessed 10 December 2015.<br>
Abstract

Definition
A summary of the content of the resource.

Format of content
Free text

Obligation
Mandatory if <mods:note/>, or <mods:tableOfContents/>, or <mods:physicalDescription><mods:note/></mods:physicalDescription> not used

Repeatable
Yes

Values (examples)

A novel about the fictional character Leopold Bloom in turn of the century Dublin that mirrors the wanderings of the Ulysses epic.

Note
For long abstracts, the Repository supports the inclusion of paragraphs and line breaks.

When creating XML metadata, &xD; may be used to create a carriage return, while &xA; will create a line break. The inclusion of two carriage returns or line breaks consecutively, for example &xA;&xA;, will create a paragraph break.

Table of Contents

Definition
A description of the contents of the resource. Use of <mods:tableOfContents/> should be determined by the complexity of the resource and whether or not the information is readily available.

Format of content
Free text; URI

Obligation
Mandatory if <mods:note/>, or <mods:tableOfContents/>, or <mods:physicalDescription><mods:note/></mods:physicalDescription> not used

Repeatable
No

Values (examples)

A suitable tone ; Left hand colouring ; Rhythm and accent ; Tempo ; Flexibility ; Ornaments – Sonata in D major, op. V, no. 1 / Corelli – Sonata in G minor / Purcell (with Robert Donington, gamba) – Forlane from Concert royal no. 3 / Couperin
For long tables of contents, the Repository supports the inclusion of paragraphs and line breaks. When creating XML metadata, &lt;D; may be used to create a carriage return, while &lt;A; will create a line break. The inclusion of two carriage returns or line breaks consecutively, for example &lt;A; &lt;A; will create a paragraph break.

<table>
<thead>
<tr>
<th>Label</th>
<th>Note[^28]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td>&lt;mods:note&gt; or &lt;mods:physicalDescription&gt; &lt;mods:note&gt; &lt;/mods:physicalDescription&gt;</td>
</tr>
<tr>
<td>Definition</td>
<td>General textual information relating to a resource. &lt;note&gt; is used for information that is not encoded in another, more specific MODS element.</td>
</tr>
<tr>
<td>Format of content</td>
<td>Free text. Each note should be entered in a separate &lt;mods:note&gt; element and the note given a type value if possible.</td>
</tr>
<tr>
<td>Obligation</td>
<td>Mandatory if &lt;mods:note&gt;, or &lt;mods:tableOfContents&gt;, or &lt;mods:physicalDescription&gt;&lt;mods:note&gt;&lt;/mods:physicalDescription&gt; not used</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td>&lt;mods:physicalDescription&gt; &lt;mods:note&gt; Perspective map not drawn to scale. &lt;/mods:note&gt; &lt;/mods:physicalDescription&gt;</td>
</tr>
<tr>
<td></td>
<td>&lt;mods:note type=&quot;performers&quot;&gt; Anne Baxter (Louise), Maria Perschy (Angela), Gustavo Rojo (Bill), Reginald Gilliam (Mr. Johnson), [Catherine Elliot?] (Aunt Sallie), Ben Tatar (waiter) &lt;/mods:note&gt;</td>
</tr>
</tbody>
</table>

Note

For long Notes, the Repository supports the inclusion of paragraphs and line breaks. When creating XML metadata, \&#xD; may be used to create a carriage return, while \&#xA; will create a line break. The inclusion of two carriage returns or line breaks consecutively, for example \&#xA;\&#xA;, will create a paragraph break.

Notes relating to physical description aspects of a resource should be recorded in the <mods:note> subelement of <mods:physicalDescription>.

---

**Label**

**Access Condition**

**Metadata Element**

<mods:accessCondition>

**Definition**

Information about restrictions imposed on access to and use of a resource.

**Format of content**

Free text

**Obligation**

Mandatory

**Repeatable**

Yes

**Values (examples)**

<mods:accessCondition type="use and reproduction">
  <copyrightMD:copyright copyright.
    copyright.status = "copyrighted"> Copyright Radio na Gaeltachta.
  </copyrightMD:copyright>
  <copyrightMD:general.note>
    This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Ireland License. Please use the following attribution when citing this work: Copyright Radio na Gaeltachta, digital surrogate created by the DRI NUI Galway Demonstrator Project
  </copyrightMD:general.note>
</mods:accessCondition>

---

<mods:accessCondition
type="use and reproduction"
xlink:href="http://creativecommons.org/licenses/by-nc-nd/4.0">
This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
</mods:accessCondition>

**Note**

There are no subelements defined in MODS for `<mods:accessCondition>`. However, this element is extensible to allow for the use of an established XML schema outside of MODS for the information, e.g. the CDL Copyright schema. When used in this manner, `<mods:accessCondition>` becomes a container element.

DRI requires the use of the `type` attribute with a value of “use and reproduction” as mandatory to indicate the type of restrictions (or lack thereof) on use of the resource and/or restrictions on access to the material. While there is no controlled list of values for the `type` attribute for `<mods:accessCondition>`, suggested values are “restriction on access” (if the information is about restrictions imposed on access to the described materials) and “use and reproduction” (if the information refers to terms governing the use of the materials after access has been provided).

One use of `<mods:accessCondition>` is to indicate rights relating to access and use of a resource, particularly digital resources. The audience for such rights information is the end user, so rights information should be as free of legalese and technical jargon as possible. State clearly any restrictions on use of the resource, including explicitly mentioning lack of copyright restrictions when the resource is in the public domain. Also provide contact information for use by end users who wish to pursue required permissions for publication, exhibit, or other types of dissemination.

A link may be supplied in lieu of or in addition to the content. If, for example, you maintain rights information relating to specific resources on a website, you may wish to provide a URL for that website in lieu of a textual rights statement. When doing so, you should provide enough textual explanation, along with the URL, to make the purpose of the URL clear to end users. In addition, if you are using a specific type of licence, such as Creative Commons, the text and link to that licence should be included here.

---

<table>
<thead>
<tr>
<th>Label</th>
<th>Type of Resource[^32]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:typeOfResource&gt;</code></td>
</tr>
<tr>
<td>Definition</td>
<td>A term that specifies the characteristics and general type of content of the resource.</td>
</tr>
<tr>
<td>Format of content</td>
<td>Controlled vocabulary [MODS values for <code>&lt;typeOfResource&gt;</code>][^33]</td>
</tr>
<tr>
<td>Obligation</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td><code>&lt;mods:typeOfResource&gt;</code></td>
</tr>
<tr>
<td></td>
<td>moving image</td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:typeOfResource&gt;</code></td>
</tr>
<tr>
<td></td>
<td>cartographic</td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:typeOfResource&gt;</code></td>
</tr>
<tr>
<td></td>
<td>sound recording non-musical</td>
</tr>
<tr>
<td>Notes</td>
<td>The attribute collection for <code>&lt;mods:typeOfResource&gt;</code>, with a value of “yes”, should be used if describing a collection resource[^34]. This attribute is only present if this is the case. Information in <code>&lt;mods:typeOfResource&gt;</code> is about the original item. For example, in the case of a digitised photograph, <code>&lt;mods:typeOfResource&gt;</code> would apply to the analogue original; in born-digital materials, it would apply to the original digital format.</td>
</tr>
</tbody>
</table>

## Recommended Elements

<table>
<thead>
<tr>
<th>Label</th>
<th>Subtitle&lt;sup&gt;35&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:titleInfo&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:title&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>&lt;mods:subTitle&gt;</code></td>
</tr>
<tr>
<td></td>
<td><code>/mods:titleInfo</code></td>
</tr>
</tbody>
</table>
| Definition | A word, phrase, character, or group of characters that contains the remainder of the title information after the title proper. `<mods:titleInfo>` is a container element that contains all subelements related to title information. Data content is contained in subelements. Do not include punctuation intended to delineate parts of titles that are separated into subelements of `<mods:titleInfo>`.
| Format of content | Free Text |
| Obligation | Recommended |
| Repeatable | Yes |
| Values (examples) | `<mods:titleInfo>` |
|            | `<mods:title>The Age of Migrating Ideas</mods:title>` |
|            | `<mods:subTitle>` |
|            | Early Medieval Art in Northern Britain and Ireland |
|            | `/mods:subTitle` |
|            | `/mods:titleInfo` |

<table>
<thead>
<tr>
<th>Label</th>
<th>Language&lt;sup&gt;36&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata element</td>
<td><code>&lt;mods:language&gt;</code></td>
</tr>
<tr>
<td>Definition</td>
<td>A designation of the language in which the content of a resource is expressed. Language codes should be formatted according to ISO639&lt;sup&gt;37&lt;/sup&gt; or RFC5646&lt;sup&gt;38&lt;/sup&gt;</td>
</tr>
<tr>
<td>Format of Content</td>
<td>Recommended</td>
</tr>
<tr>
<td>Obligation</td>
<td>Yes</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Yes</td>
</tr>
<tr>
<td>Values (examples)</td>
<td><code>&lt;mods:language&gt;</code></td>
</tr>
</tbody>
</table>

---

<sup>35</sup> http://www.loc.gov/standards/mods/userguide/titleinfo.html#subtitle, last accessed 10 December 2015.
<mods:languageTerm type="code" authority="iso639-2b">fre</mods:languageTerm>
</mods:language>

<mods:language>
  <mods:languageTerm type="code" authority="rfc5646">fr</mods:languageTerm>
</mods:language>

<mods:language>
  <mods:languageTerm type="code" authority="iso639-2b">Eng</mods:languageTerm>
</mods:language>

<mods:language objectPart="abstract">
  <mods:languageTerm type="code" authority="rfc5646">En</mods:languageTerm>
</mods:language>

**Notes**

<mods:language> is a container element; the actual language values are recorded in the sub-element <mods:languageTerm>. The `type` attribute indicates whether the language is expressed in a coded or textual form.

If the content of the resource is in more than one language, the `objectPart` attribute for <mods:language> is used to indicate which language is used for each part of the resource, and the <mods:language> element is repeated.

If you are not using the language code recommended above, the language will not be indexed.
Regardless of the vocabulary used, all language codes will be indexed as three-letter ISO 639-2 codes. For example, items with language codes “en”, “eng”, “en_IE”, “en_US” or “en_UK” will be recognised as using a common language and indexed together as “eng”.

The language code will also be converted into English and Irish and indexed. So a search for “english” will find records containing “en”, “eng”, “en_IE” etc. as their language.

### Related Item[^39]

**Metadata element**

<mods:relatedItem>

**Definition**

Information that identifies other resources related to the one being described.

It can be used to describe a constituent part of a multi-part resource which is considered intellectually one object (e.g. a book with several chapters, a painting consisting of several panels).

All other MODS elements can appear as subelements of <mods:relatedItem>.

**Format of content**

Free text, bibliographic citation, URL.

<mods:relatedItem> includes a designation of the specific type of relationship as a value of the “type” attribute. This is a controlled list of types enumerated in the schema, including, for instance, ‘original’ and ‘isReferencedBy’.[^40] DRI recommends that users follow the [Digital Library Federation / Aquifer Implementation Guidelines for Shareable MODS Records][^41] as they apply to the <mods:relatedItem/> element, which make type a required attribute.[^42]

**Obligation**

Recommended

**Repeatable**

Yes

**Values (examples)**

<mods:relatedItem type="original">

<mods:titleInfo>

<mods:title>

Bust of Shakespeare set in decorative Cartouche

If the field includes a URL (nested within `<mods:location><mods:url>`), then it will become a clickable link when viewed in the repository. See example below.

```xml
<mods:relatedItem type="original">
  <mods:location>
  </mods:location>
</mods:relatedItem>
```
### Subject: Topic

**Metadata element**

```
<mods:subject>
  <mods:topic>
  </mods:topic>
</mods:subject>
```

**Definition**

"Topic" is used as the tag for any topical subjects that are not appropriate in the `<mods:geographic>`, `<mods:temporal>`, `<mods:titleInfo>`, `<mods:name>`, `<mods:genre>`, `<mods:hierarchicalGeographic>`, or `<mods:occupation>` subelements.

**Format of content**

Free text. Use of controlled vocabularies recommended:

- Irish Public Service Thesaurus
- HASSET Keywords
- Library of Congress Subject Headings

**Obligation**

Recommended

**Repeatable**

Yes

**Values (examples)**

```
<mods:subject authority="lcsh">
  <mods:topic>Musicology</mods:topic>
</mods:subject>
```

```
<mods:subject authority="ipst">
  <mods:topic>cultural heritage</mods:topic>
</mods:subject>
```

**Notes**

If uncontrolled keywords or subject terms are included, then the authority attribute should not be used.

---

### Subject: Name

**Metadata element**

```
<mods:subject>
  <mods:name>
  </mods:name>
</mods:subject>
```

**Definition**

The `<mods:name>` sub-element for `<mods:subject>` includes a name used as a subject.

**Format of content**

Free text. Use of controlled vocabularies recommended:

- Getty Union List of Artists Names
- Dictionary of Irish Biography
- Library of Congress Subject Headings

---

National Register for Archives\textsuperscript{51}

Personal, family and corporate names should be formatted according to the Irish Guidelines for Indexing Archives.\textsuperscript{52}

Obligation
Recommended
Repeatable
Yes

Values (examples)

\begin{verbatim}
<mods:subject authority="lcsh">
  <mods:name authority="naf">
    <mods:namePart>Joyce, James</mods:namePart>
    <mods:namePart type="date">1882–1941</mods:namePart>
  </mods:name>
</mods:subject>

<mods:subject type="corporate">
  <mods:name>
    Irish Qualitative Data Archive, 2010
  </mods:name>
</mods:subject>

<mods:subject type="corporate">
  <mods:name>
    Radio na Gaeltachta
    <mods:namePart type="date">1972</mods:namePart>
  </mods:name>
</mods:subject>
\end{verbatim}

Notes

All subelements and attributes used under the top-level element may be used. An authority attribute may also be used at this level in addition to at the highest level (under \texttt{<mods:subject>>}). Equivalent to MARC 21 fields \texttt{600}\textsuperscript{53}, \texttt{610}\textsuperscript{54}, \texttt{611}\textsuperscript{55}.

For Irish family names, such as Mary Cholm a’ tSeaimpín, where Colm an tSeaimpín is a family identifier rather than a surname and cannot precede Mary, DRI suggests that the family identifier should follow the first name.

\begin{footnotes}
\footnote{51 http://discovery.nationalarchives.gov.uk/, last accessed 10 December 2015.}
\footnote{52 http://www.learnaboutarchives.ie/~learnabo/images/documents/ARAIndexing.pdf, last accessed 10 December 2015.}
\footnote{53 http://www.loc.gov/marc/bibliographic/bd600.html, last accessed 10 December 2015.}
\footnote{54 http://www.loc.gov/marc/bibliographic/bd610.html, last accessed 10 December 2015.}
\footnote{55 http://www.loc.gov/marc/bibliographic/bd611.html, last accessed 10 December 2015.}
\end{footnotes}
Label | Subject: Geographic
---|---
Metadata Element | `<mods:subject>
  <mods:geographic>
</mods:subject>`
Definition | “Geographic” is used for geographic subject terms that are not parsed as hierarchical geographics. If the geographic name is part of a corporate body (i.e., United States. Senate), it is coded as `<mods:name>`, not `<mods:geographic>`. `<mods:geographic>` is equivalent to MARC 21 element 651 and 6XX subfield $z$.
Format of content | Free text. If a controlled vocabulary is used, the source can be captured as an attribute of `<mods:geographic> e.g. authority.
Obligation | Recommended
Repeatable | Yes
Values (examples) | `<mods:subject> 
  <mods:geographic>Ireland</mods:geographic>
</mods:subject>`

Label | Subject: Hierarchical Geographic
---|---
Metadata element | `<mods:subject>
  <mods:hierarchicalGeographic>
</mods:subject>`
Definition | A geographic name given in a hierarchical form relating to the resource.
The `<mods:hierarchicalGeographic>` is a wrapper element that contains a number of sub-elements.
Format of content | Free text. Use of a controlled vocabulary is recommended. A good example of a controlled vocabulary for hierarchical geographic terms is the Getty Thesaurus of Geographic Names.
Obligation | Recommended
Repeatable | Yes
Values (examples) | `<mods:subject authority="tgn">
  <mods:hierarchicalGeographic>
    <mods:country>Ireland</mods:country>
    <mods:province>Leinster</mods:province>
    <mods:county>Kildare</mods:county>
    <mods:inhabitedPlace>Maynooth</mods:inhabitedPlace>
  </mods:hierarchicalGeographic>
</mods:subject>`

---

Label | **Subject: Geographic Code**
--- | ---
Metadata Element | <mods:subject>
 |  
 | <mods:geographicCode>
 | </mods:subject>
Definition | A geographic area code associated with a resource. This subelement can only be used in conjunction with the `<mods:geographic/>` subelement, as part of the same `<mods:subject/>` element. The geographic code must represent the same entity as the term in the `<mods:geographic>` sub-element.
Format of content | Free text. Use of controlled vocabularies recommended e.g. ISO 3166, MARC Code List for Geographic Areas, MARC Code List for Countries.
Obligation | Recommended
Repeatable | Yes
Values (examples) | <mods:subject>
 |  
 | <mods:geographic>Ireland</mods:geographic>
 |  
 | <mods:geographicCode authority="iso3166">
 |  
 | ISO 3166-2:IE
 |  
 | </mods:geographicCode>
 | </mods:subject>

---

64 http://loc.gov/marc/countries/countries_name.html, last accessed 10 December 2015.
Subject: Cartographics\textsuperscript{65}

Metadata element

\begin{verbatim}
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>
    <mods:scale>
    <mods:projection>
  </mods:cartographics>
</mods:subject>
\end{verbatim}

Definition

Cartographic (maps or charts) data indicating spatial coverage.

The `<mods:cartographics>` element is a container element that includes cartographic data indicating spatial coverage. Data content is entered in the subelements.

Format of content

Free text. Recommended use of \textit{W3c Geo (Longlat) vocabulary}.\textsuperscript{66}

For the `<mods:coordinates>` element, one or more statements may be supplied. If one is supplied, it is a point (i.e., a single location); if two, it is a line; if more than two, it is an n-sided polygon where n-number of coordinates assigned. No three points should be co-linear, and coordinates should be supplied in polygon-traversal order.

`<mods:scale>` may include any equivalency statements, vertical scales, or vertical exaggeration statements for relief models and other three-dimensional items.

`<mods:projection>` includes the name of the projection and any associated information related to the properties of the projection, where applicable.

Obligation

Recommended

Repeatable

Yes

Values (examples)

\begin{verbatim}
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>E 72°–E 148°/N 13°–N 18°
    </mods:coordinates>
    <mods:scale>1:22,000,000</mods:scale>
    <mods:projection>Conic proj</mods:projection>
  </mods:cartographics>
</mods:subject>
\end{verbatim}

\textsuperscript{65} http://www.loc.gov/standards/mods/userguide/subject.html#cartographics, last accessed 10 December 2015.

\textsuperscript{66} http://www.w3.org/2003/01/geo/#vocabulary, last accessed 10 December 2015.
### Notes
Cartographics is equivalent to MARC 21 fields 034\(^{67}\) and 255\(^{68}\). If desired, cartographic elements may be bound together with a geographic name (hierarchical or otherwise) within a `<mods:subject>` element.

### Label
**Subject: Temporal**\(^{69}\)

### Metadata element
```xml
<mods:subject>
  <mods:temporal>
  </mods:temporal>
</mods:subject>
```

### Definition
Used for chronological subject terms or temporal coverage.

### Format of content
May be expressed as a controlled subject term or as a structured date with an encoding attribute.

If a controlled subject term is used, indicate authority using the `authority` attribute at the `<mods:subject>` level. Controlled vocabulary: [Library of Congress Subject Headings](http://authorities.loc.gov/), last accessed 10 December 2015.\(^{70}\)

If a structured date is used, indicate the formatting source using the `encoding` attribute. May be entered as free text or in structured form. In DRI, dates should be formatted according to [w3cdtf](http://www.w3.org/TR/NOTE-datetime), last accessed 10 December 2015\(^{71}\) or [ISO 8601](http://www.iso.org/iso/home/standards/iso8601.htm), last accessed 10 December 2015\(^{72}\) to allow for the information to be searchable by date range, and displayed in the timeline visualisation tool.

### Obligation
Recommended

### Repeatable
Yes

### Values (examples)
```xml
<mods:subject authority="lcsh">
  <mods:temporal>
    World War, 1914-1918
  </mods:temporal>
</mods:subject>
```

```xml
<mods:subject>
  <mods:temporal encoding="w3cdtf" point="start">
    1914-07-28
  </mods:temporal>
</mods:subject>
```

```xml
<mods:subject>
  <mods:temporal encoding="w3cdtf" point="end">
    1918-11-11
  </mods:temporal>
</mods:subject>
```

### Notes
For guidelines about the attributes of the `<mods:temporal>` subelement, see the [MODS User Guide](http://www.loc.gov/standards/mods/userguide/subject.html#temporal), last accessed 10 December 2015.\(^{73}\).