Metadata Mapping & Normalisation Guidelines for the Europeana Prototype

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Europeana v1.0

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1. Introduction

Europeana provides integrated access to digital objects from the cultural heritage organisations of all the nations of the European Union. It encompasses material from museums, libraries, archives and audio-visual archives with the aim of making Europe’s multicultural and multilingual riches discoverable together in a common on-line environment.

To do this Europeana harvests and indexes the descriptive metadata associated with the digital objects. As there is no one universal metadata standard applied across the participating domains, a set of metadata elements has been developed that will allow a common set of information to be supplied to support the functionality desired by the user and needed for the operation of the underlying system.

The Europeana Semantic Elements V3.2.2 (ESE)\(^1\) is the metadata set developed for the prototype version of Europeana launched in November 2008. It is a Dublin Core-based application profile\(^2\) providing a generic set of terms that can be applied to heterogeneous materials thereby providing a baseline to allow contributors to take advantage of their existing rich descriptions.

To provide metadata in the ESE format, it is necessary for contributors to map elements from their own metadata format to ESE. In addition to the mapping it is necessary for a normalisation process to be carried out on some values to enable machine readability. In the initial implementation of the Europeana prototype much of the mapping and normalisation was carried out centrally in the Europeana Office. This work will increasingly be passed to data providers or aggregators and these Guidelines are provided to support those tasks.

It is anticipated that further domain-specific examples will be provided as the ESE is applied by data providers and aggregators.

An XML Schema has also been produced\(^3\) as a further tool to assist providers in ensuring compliance with ESE. Some details of the schema are explained later in this document.

ESE v3.2.2 is a sub-set of the metadata initially defined in the Europeana Metadata Requirements described in the EDLnet deliverable D2.5 “Europeana Outline Functional Specification”\(^4\)

The mapping and normalising methodologies described in this document are specific to the Europeana service.

These are Guidelines for the normative specification for ESE metadata found in ESE v3.2.2. The XML schema checks for basic conformance to this specification. Note however that it is an extension of the DC terms schema and will therefore accept all DC terms - even those that are not importable into the portal. Please include in your metadata only the elements defined in the specification.

\(^1\) [http://version1.europeana.eu/c/document_library/get_file?uuid=c56f82a4-8191-42fa-9379-4d5f8c4f75&groupId=10602](http://version1.europeana.eu/c/document_library/get_file?uuid=c56f82a4-8191-42fa-9379-4d5f8c4f75&groupId=10602)
\(^2\) [http://dublincore.org/documents/](http://dublincore.org/documents/)
\(^3\) [http://www.europeana.eu/schemas/ese/ESE-V3.2.xsd](http://www.europeana.eu/schemas/ese/ESE-V3.2.xsd)
\(^4\) [http://version1.europeana.eu/c/document_library/get_file?uuid=a9e29cb4-a9b3-462a-a43d-0b480c677088&groupId=10602](http://version1.europeana.eu/c/document_library/get_file?uuid=a9e29cb4-a9b3-462a-a43d-0b480c677088&groupId=10602)
2. Scope of this document

As a Dublin Core (DC) application profile the ESE incorporates elements from both the dc\(^5\) and dcterms\(^6\) namespaces plus some locally coined terms which have been added specifically to support functionality in Europeana. A full alphabetic declaration of these terms can be found in the ESE V3.2.2 Specification.

This Guidelines document goes into more detail about mapping source data to the ESE format. The DC elements are divided into sections that make it easier to identify the most significant elements for the description of the object. The “Strongly recommended elements” plus <dc:subject> support the advanced search function.

There is a separate section explaining the added Europeana elements as they have specific functions in the Europeana system. They require special attention in the mapping and data transformation process.

When making mapping decisions, providers are also asked to consider how their data will perform in response to “who, what, where and when” queries.

2.1 List of elements

<table>
<thead>
<tr>
<th>Strongly recommended</th>
<th>Recommended</th>
<th>Additional elements</th>
<th>Europeana elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>dc:title</td>
<td>dc:coverage</td>
<td>dc:format</td>
<td>europeana:country</td>
</tr>
<tr>
<td>dcterms:alternative</td>
<td>dcterms:spatial</td>
<td>dcterms:extent</td>
<td>europeana:hasObject</td>
</tr>
<tr>
<td>dc:creator</td>
<td>dcterms:temporal</td>
<td>dcterms:medium</td>
<td>europeana:isShownAt</td>
</tr>
<tr>
<td>dc:contributor</td>
<td>dc:description</td>
<td>dc:identifier</td>
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<td>dc:date</td>
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<td>dc:rights</td>
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<tr>
<td>dcterms:created</td>
<td>dc:language</td>
<td>dc:provenance</td>
<td>europeana:object</td>
</tr>
<tr>
<td>dcterms:issued</td>
<td>dc:publisher</td>
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<td></td>
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<td>dcterms:conformsTo</td>
<td>europeana:type(^7)</td>
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<td></td>
<td>dc:subject</td>
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<td></td>
<td>dc:type(^7)</td>
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<td></td>
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<td>dcterms:hasPart</td>
<td>europeana:year</td>
</tr>
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<td></td>
<td>dcterms:isReferencedBy</td>
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<tr>
<td></td>
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<td>dcterms:references</td>
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</tr>
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<td></td>
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<td>dcterms:isReplacedBy</td>
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<td></td>
<td>dcterms:isRequiredBy</td>
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<tr>
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<td>dcterms:requires</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dcterms:tableOfContents</td>
<td></td>
</tr>
</tbody>
</table>

\(^5\) http://purl.org/dc/elements/1.1/
\(^6\) http://purl.org/dc/terms/
\(^7\) Please note that the dc and europeana namespaces both have “Type” and “Language” elements, these have different uses which are explained in the specifications below.
3. Mapping guidelines

This chapter explains the general principles of mapping practice for the Europeana Portal and should be read in conjunction with the ESE Ver 3.2.2 specification. It also offers some mapping examples and additional guidance for mapping information that is a difficult fit with ESE.

3.1 General rules

1. Map as many as possible of the original source elements to the available ESE elements.
2. If it is not possible to map the source element to an appropriate ESE element then leave it unmapped or consider using <europeana:unstored>.
3. If possible use one of the more specific <dcterms> refinements (as indicated in the text) but only when the semantic of the source term clearly corresponds to the narrower term.
4. The persistent link to digital object and/or full information page should be given as a URL. These may need to be constructed from metadata values and information external to the metadata.
5. If it is difficult to decide which ESE element to map a source term to, consider how best to meet expectations of the user and the functionality of the system.
6. Where there are multiple values for the same element repeat the element for each instance of the value.
7. Consider how the data would perform in response to “who, what, where and when” queries. This therefore encompasses names, types, places and dates relevant to the object and what it depicts.
8. To ensure that your data will be meaningful when displayed in the new context consider adding a prefix or suffix. As a simple example, “100 x 200” could become “100 x 200 cm”. Such additions are especially important where data from several source elements have been aggregated into one ESE element. In the following (abbreviated) example several source elements have been mapped to <dc:description>:


> Papier

> Radierung


The word “Papier” could have been preceded by “Materiel:” and “Radierung” by “Technik:” as they were taken from those elements in the source data.
3.3 Strongly recommended elements

### 3.3.1 Title

<dc:title>

The title or name by which the digital object is known. This is likely to be the title or name also applied to the original physical object in the case of a digitisation. Use the refinement dcterms:alternative for any title variants, translations etc.

Where many objects share the same title, as may be the case where there are many issues of a periodical, consider aggregating the title values with information from another element to give a more useful, non-ambiguous display.

*Example:*

<br />

<dc:description>1933-12-24 (Numéro 01)</dc:description>

*Aggregate the values using a full stop as a separator to give:*

<br />

<dc:title>A-Z : Luxemburger illustrierte Wochenschrift. 1933-12-24 (Numéro 01)</dc:title>

*Dc example:*

<br />

<dc:title>Eight weeks</dc:title>

*MODS crosswalk* example


becomes

<dc:title>Florida Environments Online</dc:title>

Note that MODS defines several Type attributes and sub-elements for the <titleInfo> element which may more accurately be mapped to <dcterms:alternative>.

*EAD 2002 XML example:*

<br />

<unittitle>The Golden Gate entrance to the bay of San Francisco: sunrise</unittitle>

becomes

<dc:title>The Golden Gate entrance to the bay of San Francisco: sunrise</dc:title>

### 3.3.2 Alternative title

<dcterms:alternative> This is a refinement of dc:title

This can be any alternative title or name by which the digital object is known and will often be the name also applied to the original physical object in the case of a digitisation. It can include abbreviations or translations of the title.

*DC example:*

<br />

<dcterms:alternative>Ocho semanas</dcterms:alternative>

---

8 The MODS examples for dc elements are gratefully quoted from [http://www.loc.gov/standards/mods/dcsimple-mods.html](http://www.loc.gov/standards/mods/dcsimple-mods.html). The examples for dcterms are not taken from this source.

3.3.3 Creator

<dc:creator>

The name of the creator or creators of the original physical object or the born digital object. Names can include those of people, organisations or services

Map each name to a separate repeated creator element if possible.

Ideally choose a preferred form of name from an authority source. If you do not use an authority source, use a consistent form of the name e.g. Shakespeare, William.

DC example:
<dc:creator>Shakespeare, William</dc:creator>

3.3.4 Contributor

<dc:contributor>

The name of contributors to the either the original physical object or the born digital object. Names can include those of people, organisations or services

Map each name to a separate repeated contributor element if possible.

Ideally choose a preferred form of name from an authority source... If you do not use an authority source, use a consistent form of the name e.g. Shakespeare, William.

DC example:
<dc:contributor>Frances Bacon</dc:contributor>
MODS crosswalk\(^{10}\):

<mods:name><mods:namePart>Florida Geological Society</mods:namePart></mods:name>
<mods:name><mods:namePart>Florida. Department of Agriculture and Consumer Affairs</mods:namePart></mods:name>
<mods:name><mods:namePart>Agricultural Experiment Station/Extension Service (IFAS)</mods:namePart></mods:name>
becomes:
<dc:contributor>Florida Geological Society</dc:contributor>
<dc:contributor>Florida. Department of Agriculture and Consumer Affairs</dc:contributor>
<dc:contributor>Agricultural Experiment Station/Extension Service (IFAS)</dc:contributor>

Museumdat example:
<museumdat:museumdat>
  <museumdat:descriptiveMetadata>
    <museumdat:eventWrap>
      <museumdat:indexingEventWrap>
        <museumdat:indexingEventSet>

\(^{10}\) You are advised to consider how the role type sub-elements have been used in a MODS record when mapping to dc:contributor from MODS. See [http://www.loc.gov/standards/mods/dcsimple-mods.html](http://www.loc.gov/standards/mods/dcsimple-mods.html)
In this museum example the data also contains the role of the contributor “Hersteller” (Manufacturer). Although Roles cannot be directly mapped to ESE, and ESE does not support the associating of names with roles, this information could usefully be mapped to <europeana:unstored>.

### 3.3.5 Date

<dc:date>

This date element should be used to contain the most significant date in the life of the digital object or the original physical object in the case of a digitisation. There are many ways of expressing dates and time periods and the values will display in the full record in whatever form they are supplied. Significantly however, the values will also be used as the basis for locating the object in the Timeline and the Date facet in the portal and this must be a machine readable date. If you are using the more precise date terms of <dcterms:created> or <dcterms:issued> these will also be used for the Timeline and Date facet.

The values in the date elements will be used by the europeana normalisation process to generate values for <europeana:year> element. <europeana:year> will contain a standard four digit year of the Gregorian calendar (e.g. 1523). The value supplied may not be in this standard form but the normalisation process will attempt to identify a four digit year from the value supplied. Ideally therefore the value in this element should contain a year in the form yyyy. For example:

- <dc:date>1933-12-24</dc:date> generates <europeana:year>1933</europeana:year>
- <dc:date>1914-1918</dc:date> generates <europeana:year>1914</europeana:year>
- <dc:date>19780403</dc:date> generates <europeana:year>1978</europeana:year>

Objects where no <europeana:year> value can be generated will not appear in the Timeline or Date facet so please add a date element containing a relevant four digit value.

**Before the Common Era, Before Christ or Before Present dates**

Currently, the Europeana portal cannot use BC, BCE or BP dates but such dates should be retained in the mapped metadata (i.e. dc:date) in order to be present for future development of the portal.

**Textual date values**

Textual time periods will display in a result list but cannot be represented in the Timeline or Date facet and should also be provided as numeric dates.
Example where the provider has a specific time period defined:
<localtimeperiod>Roman Britain</localtimeperiod>
Transform and map as e.g. <dc:date>0043</dc:date> and <dc:date>0410</dc:date>
which will generate
<europeana:year>0043</europeana:year> and
<europeana:year>0410</europeana:year>

Example where text is used:
<localtimeperiod>17th century</localtimeperiod>
Transform and map also as <dc:date>1601</dc:date> and <dc:date>1700</dc:date>
which will generate:
<europeana:year>1601</europeana:year> and
<europeana:year>1700</europeana:year>

3.3.6 Date Created

<dcterms:created> This is a refinement of <dc:date>

This is the date of the creation of the digital object or, in the case of a digitisation, the original physical object. See <dc:date> above for fuller information about the form of the date.

3.3.7 Date Issued

<dcterms:issued> This is a refinement of <dc:date>

The date when the digital object was formally issued or published. This is likely to be the date the original physical object was issued in the case of a digitisation. See <dc:date> above for fuller information about the form of the date.

MODS example:
<mods:originInfo><mods:dateIssued encoding="iso8601">20030331</mods:dateIssued>
becomes
<dcterms:issued>20030331</dcterms:issued>
Note that the hyphenated form is preferred e.g. 2003-03-31
3.4 Recommended elements

3.4.1 Coverage

<dc:coverage>

Coverage can be used for either spatial or temporal aspects of the object being described. Values will typically include either a spatial location (place name or geographic co-ordinates) or a temporal period (a date range or period label).

If analysis of the data shows that it contains only spatial or only temporal data then please map to either the spatial or temporal element refinements described below: the greater precision will allow the addition of place and time-based functionality. If values in the source data are mixed or unknown then this more generic dc:coverage element should be chosen for the mapping.

When metadata contains information about multiple objects (e.g. a photograph of a flint arrowhead that has been digitised into a jpeg file) it can be difficult to decide whether to map aspects of the image to <dc:coverage>, <dcterms:spatial> or <dc:subject>. Examples of some interpretations used in the prototype can be found in the section on difficult elements in Section 5 of this document.

3.4.2 Spatial

<dcterms:spatial> A refinement of dc:coverage.

Use this element for information about the spatial characteristics of the digital object or the original physical object in the case of a digitisation i.e. what the resource represents or depicts in terms of space. This may be a place name, a location, spatial co-ordinates or a named administrative entity. Values in this element will appear in the Subject line of a full result display.

EAD example:
<controlaccess>
<geogname role="country of coverage" source="tgn">United States</geogname>
<geogname role="state of coverage" source="tgn">California</geogname>
<geogname role="city of coverage" source="tgn">San Francisco</geogname>
</controlaccess>

Becomes
<dcterms:spatial>United States</dc:spatial>
<dcterms:spatial>California</dc:spatial>
<dcterms:spatial>San Francisco</dc:spatial>

3.4.3 Temporal

<dcterms:temporal> A refinement of dc:coverage.

Use this element for the temporal characteristics of the digital object or the original physical object in the case of a digitisation i.e. what the resource is about or depicts in terms of time. This is in contrast to <dc:date> which relates to an event in the life of the object itself (e.g. the creation or the art work or publication of the book.) Values in this element will appear in the Subject line of a full result display.
3.4.4 Description

<dc:description>

A prose description of the digital object or the original physical object in the case of a digitisation, elaborating on the information in the metadata.

ESE has a limited number of elements and this can make it difficult to map some of the richer data elements that exist in provider metadata. Data mapped to <dc:description> will show in the results display. The following are examples of such data that could be mapped to the description element:

- statements relating to a technique applied to an object in terms of technology or craftsmanship e.g. carving, pressing, shoe making, binding
- statements where a technique includes reference to a material e.g. wood carving. When the statement is only about the material (wood, ivory) then <dcterms:medium> should be chosen.)
- statements about an event relating to an object

The europeana:unstored element could be used for this information if it is more appropriate in the provider context, however, the data would not then show in the result display.

See section 5 for further discussion on mapping difficult elements and some interpretations applied in the prototype.

MODS crosswalk example:
<mods:note>Florida Environments Online contains both digital full text materials and research bibliographies about the ecology and environment of Florida. [.....] as well as engineering documents created by the UF Engineering and Industrial Experiment Station</mods:note>
becomes
<dc:description>Florida Environments Online contains both digital full text materials and research bibliographies about the ecology and environment of Florida. [.....] as well as engineering documents created by the UF Engineering and Industrial Experiment Station</dc:description>

EAD 202 XML examples:
<scopecontent>
<p>View from off Point Lobos looking towards San Francisco Bay with Steamship John L. Stephens and clipper ship Flying Cloud just entering the Golden Gate.</p></scopecontent>
becomes
<dc:description>View from off Point Lobos looking towards San Francisco Bay with Steamship John L. Stephens and clipper ship Flying Cloud just entering the Golden Gate.</dc:description>

<physdesc>
<physfacet type="Materials and Techniques">print: engraving, hand colored</physfacet>
</physdesc>
Becomes
<dc:description>print: engraving, hand colored</dc:description>
3.4.5  Is Part of

< dct:isPartOf> A refinement of <dc:relation>

This element should be used to identify a related resource in which the described resource is physically or logically included. More particularly, use this for the name of the collection of which the digital object is part.

3.4.6  Language

< dc:language>

This element should be used to state the language of the digital object and should be repeated if the object has more than one language. If there is no language aspect to the object (for instance, a photograph) then the element should be ignored.

The use of RFC 4646 is highly recommended. Best practice is to use that ISO 639-1 (two letter code) unless only the ISO639-2 three letter code exists. (ISO 639-3 should not be used.)

Note: the <dc:language> element should not be used to indicate the language of the metadata. Additionally, the language of the <europeana:provider> is given in a normalised <europeana:language> element described later in this document.

MODS crosswalk example
<mods:language authority="rfc4646">en</mods:language>
becomes
<dc:language>en</dc:language>

3.4.7  Publisher

< dc:publisher>

The name of the publisher of the digital object or the original physical object in the case of a digitisation.

MODS example:
becomes
<dc:publisher>Oxford University Press</dc:publisher>

3.4.8  Source

< dc:source>

This element should be used to indicate a related resource from which the digital object is derived. The element has widely been used for other interpretations of “source” however including reference sources and the names of content holders. Europeana does not differentiate between these uses but recommends that the name of the content holder should be recorded here so that it will show in the brief record display in the portal. The name of the
organisation that submits the data directly to Europeana (probably an aggregator) will be held in the normalised <europeana:provider> element. If the content holder supplies data directly to Europeana then the name should also appear in <europeana:provider>.

Multiple instances of dc:source may be supplied and all values will be displayed as shown in the example below and in the test record in Annex B.

Record:
<dc:source>The British Library</dc:source>

Display in portal
Source: The British Library
ISBN 1-86197-612-7

If multiple instances are to be provided containing different values it is suggested that they should be provided in a consistent order e.g always putting the name of the content holder first.

3.4.9 Subject

The subject of the digital object or the original physical object in the case of a digitisation. This can include topics, people and places but consider using the spatial and temporal elements for places and time periods if the source data allows.

Best practice is to use a separate instance of the element for individual subject terms.

MODS example:
<mods:subject><mods:topic>Environmental sciences</mods:topic></mods:subject>
<mods:subject><mods:topic>Geology</mods:topic></mods:subject>
<mods:subject><mods:topic>Agriculture</mods:topic></mods:subject>
becomes
<dc:subject>Environmental sciences</dc:subject>
<dc:subject>Geology</dc:subject>
<dc:subject>Agriculture</dc:subject>

EAD 2002 XML example:
<persname role="subject" rules="aacr2">Casey, James P.</persname>
<persname role="subject" rules="aacr2">Cora, Charles</persname>
<subject source="lctgm">Bays</subject>
<subject source="lctgm">Vessels</subject>
<geogname role="country of coverage"source="tgn">United States</geogname>
<geogname role="state of coverage"source="tgn">California</geogname>
<geogname role="site of coverage" source="tgn">Golden Gate (channel)</geogname>
becomes
<dc:subject>Casey, James P.</dc:subject>
<dc:subject>Cora, Charles</dc:subject>
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3.4.10 Type

The nature or genre of the digital object or the original physical object in the case of a digitisation. This should be used to record the values given in the source data which, ideally, will have been taken from a controlled vocabulary. Typically this element contains values such as photograph, painting, sculpture.

Although the portal needs normalised values to support type-related functions it is desirable to keep the original local values. Thus, all these original values should be mapped to <dc:type>. A separate <europeana:type> element has been added to contain the normalised value for use in the portal. Use of this element is described in the Section 4 – Europeana elements and normalisation.

EAD 2002 XML example:
<controlaccess>
<genreform source="aat">color lithographs</genreform>
<genreform source="aat">marines (visual works)</genreform>
</controlaccess>
becomes
<dc:type>color lithographs</dc:type>
<dc:type>marines (visual works)</dc:type>
3.5 Additional elements

3.5.1 Format

<dc:format>

This element can include the file format, physical medium and dimensions of the original physical object or the digital object. It is recommended to use this element for the file format of digitised or born-digital object. For digital objects it is recommended to use MIME Types\(^\text{11}\).

The refinements of <dcterms:extent> and <dc:terms:medium> can be used as appropriate for the more specific information.

It can be difficult to map terms from heterogeneous domains to <dc:format> and its two refinements <dcterms:extent> and <dcterms:medium>. Examples of some interpretations used in the prototype can be found in the section on difficult elements in Section 5 of this document.

MODS crosswalk example:
<mods:physicalDescription><mods:form>text/html</mods:form></mods:physicalDescription>
Becomes
<dc:format>text/html</dc:format>

3.5.2 Extent

<dcterms:extent> A refinement of <dc:format>

Use to record the size or duration of the original physical or digital object. This includes measurements of physical objects that have been digitised. To ensure a meaningful display for the user, please indicate the units of measurement in the value.

EAD example:
<physdesc>
<dimensions unit= "metric">42.4 x 68 cm</dimensions>
<dimensions unit= "inches">17 inches x 27 inches</dimensions>
</physdesc>
Becomes
<dcterms:extent>42.4 cm x 68 cm <dcterms:extent>
<dcterms:extent>17 inches x 27 inches <dcterms:extent>

3.5.3 Medium

<dcterms:medium> A refinement of <dc:format>

The material or physical carrier of the resource. This refers to the medium of the digital or original physical object such as paper, wood or ivory.

It can be difficult to map terms from heterogeneous domains to <dc:format> and its two refinements <dcterms:extent> and <dcterms:medium>. Examples of some interpretations used in the prototype can be found in the section on difficult elements in Section 5 of this document

\(^\text{11}\) http://www.iana.org/assignments/media-types/
3.5.4 Identifier

<dc:identifier>

This element can be used for an identifier of the digital object or the original physical object in the case of a digitisation. Keeping this identifier throughout the ingestion workflow will support the de-duplication process.

The element <europeana:isShownBy> has been added specifically to hold the URL that gives direct access to the digital object. If the URL of the digital object is to be mapped to <dc:identifier> then it should also be mapped to <europeana:isShownBy> or <europeana:isShownAt> as appropriate (see section 4 on Europeana elements).

<mods:identifier type="uri">http://palmm.fcla.edu/feol/</mods:identifier>
Becomes
<dc:identifier>http://palmm.fcla.edu/feol/</dc:identifier>
And
<europeana:isShownBy>http://palmm.fcla.edu/feol/</dc:identifier>

3.5.5 Rights

<dc:rights>

Information about intellectual property rights, access rights or license arrangements for the digital object.

DC Example:
<dc:rights>Creative Commons Attribution 3.0 License</dc:rights>

3.5.6 Provenance

<dcterms:provenance>

This element is to record a statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. This may include a description of any changes successive custodians made to the resource.

For Europeana this relates particularly to the ownership and custody of the original analog or born-digital object.

3.5.7 Relation

<dc:relation>

This element should be used for information about resources that are related to the digital object or the original physical object in the case of a digitisation. It has been used for a wide range of relationships and it is recommended to use one of the several more specific relationship refinements where appropriate. Ideally this value should be a URI but it is recognised that practice varies in this respect.
DC example:
<dc:relation> maps.crace.1/33</dc:relation>
This is the shelfmark for the map that was digitised from the Crace collection at the British Library.

3.5.8 Conforms To

< dcterm s:conformsTo > A refinement of <dc:relation>

Use this element to identify standards to which the described resource conforms.

< dcterm s:conformsTo > W3C WCAG 2.0</dcterms:conformsTo> (for an HTML document that conforms to web content accessibility guidelines).

3.5.9 Has Format

< dcterms:hasFormat > A refinement of <dc:relation>

Use this element to identify another resource that is substantially the same as the digital object being described by the metadata but exists in a different format. Use < dcterms:hasVersion > for changes in content.

Note that the purpose of this element is to give the identifier of the other resource in a different format, not to state the format of the object being described.

A link to another image format of a tiff image file being described.

3.5.10 Is Format Of

< dcterms:isFormatOf > A refinement of <dc:relation>

Use this element to identify a related resource that is substantially the same as the digital object but in a different format. Use when there are alternative formats and it is not clear which preceded the other.

3.5.11 Has Version

< dcterms:hasVersion > A refinement of <dc:relation>

Use this element to identify a related resource that is a version, edition or adaptation of the digital object described in the metadata. This implies changes in content rather than just a different format.

3.5.12 Is Version Of

< dcterms:isVersionOf > A refinement of <dc:relation>
Use this element to identify a related resource of which the described resource is a version, edition, or adaptation. Changes in version imply substantive changes in content rather than differences in format.

### 3.5.13 Has Part

< dct:hasPart > A refinement of < dc:relation >

Use this element to identify a related resource that is included either physically or logically in the digital object.

### 3.5.14 Is Referenced By

< dct:isReferencedBy > A refinement of < dc:relation >

Use this element to identify a related resource that references, cites, or otherwise points to the digital object.

### 3.5.15 References

< dct:references > A refinement of < dc:relation >

Use this element to identify related resources that are referenced, cited, or otherwise pointed to by the digital object.

### 3.5.16 Is Replaced By

< dct:isReplacedBy > A refinement of < dc:relation >

Use this element to identify a related resource that supplants, displaces, or supersedes the digital object.

### 3.5.17 Replaces

< dct:replaces > A refinement of < dc:relation >

Use this element to identify a related resource that is supplanted, displaced, or superseded by the digital object.

### 3.5.18 Is Required By

< dct:isRequiredBy > A refinement of < dc:relation >

Use this element to identify a related resource that requires the digital object to support its function, delivery or coherence.

### 3.5.19 Requires

< dct:requires > A refinement of < dc:relation >

Use this element to identify a related resource that is required by the digital object to support its function, delivery or coherence.
3.5.20 Table of Contents

<dcterms:tableOfContents> A refinement of dc:description

Use for a list of the sub-units of the digital object or the original physical object in the case of a digitisation.

MODS example:
Becomes
4 Europeana elements and normalisation of values

Several of the Europeana terms are designated as mandatory and, in addition to this, they must contain values in standard form. Generally this means the data has to be normalised, either at the time of creating the mapped data or at the point of ingestion to the Europeana system. The normalisation takes place at different points in the process for different elements.

This table summarises who is responsible for providing the Europeana elements. It should be read in conjunction with the greater detail in the following element descriptions.

<table>
<thead>
<tr>
<th>Element</th>
<th>Who is responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>europeana:isShownAt or europeana:isShownBy</td>
<td>You must provide at least one of these elements.</td>
</tr>
<tr>
<td>europeana:object</td>
<td>You should provide this element if appropriate to your data</td>
</tr>
<tr>
<td>europeana:provider</td>
<td>You must provide this element.</td>
</tr>
<tr>
<td>europeana:type</td>
<td>You must provide this element.</td>
</tr>
<tr>
<td>Europeana:unstored</td>
<td>You can provide this element if appropriate to your data</td>
</tr>
<tr>
<td>europeana:country</td>
<td>Europeana is responsible for providing all these elements.</td>
</tr>
<tr>
<td>europeana:hasObject</td>
<td></td>
</tr>
<tr>
<td>europeana:language</td>
<td></td>
</tr>
<tr>
<td>europeana:uri</td>
<td></td>
</tr>
<tr>
<td>europeana:usertag</td>
<td></td>
</tr>
<tr>
<td>europeana:year</td>
<td></td>
</tr>
</tbody>
</table>

4.1 Country

<europeana:country> This element is used to support the Country facet in the portal.

This is the name of the country in which the organisation named in <europeana:provider> is based or the value is “Europe” in the case of Europe-wide projects. The name of the country is derived automatically from information held in the Europeana Providers authority file. The element is populated automatically during the ingest process and providers do not need to supply this information separately.

Country names are normalised to the ISO 3166 standard
4.2 Has Object

<europeana:hasobject> This element supports the process of generating a thumbnail from a URL supplied in <europeana:object>. It is for internal use during the ingestion process and is added centrally as part of that process. Providers should not enter a value in this element.

For information: this element takes a value of True or False and indicates to the Europeana system that there is a URL in the <europeana:object> element identifying an object in a compliant format could be used to create a thumbnail for the digital object. Objects with no URL for a thumbnail will have only the default type icon showing in the display.

4.3 Is Shown At

<europeana:isShownAt> This element will be active in the portal and will provide the link to the digital object in full information context on the provider website.

It is a complementary element to <europeana:isShownBy> (please see below before mapping) and **it is mandatory to provide a URL link in one of these elements**.

Europeana focuses on giving access to digital objects and this two-fold URL strategy is useful when ESE is not able to properly represent the original metadata model. For example, EAD, an archival metadata format, has complex hierarchical information and cannot be displayed as such in Europeana interface. The isShownAt element allows the Europeana users to access to the EAD hierarchy.

If the digital object is displayed with local metadata, with a header or banner, or if the object is only accessible by clicking another icon on the local page then <europeana:isShownAt> should be used.

Records that do not have a valid link in either <europeana:isShownAt> or <europeana:isShownBy> will be excluded from the portal. The link should be to the object in its best available resolution.

Examples of using this element are provided in Annex A

4.4 Is Shown By

<europeana:isShownBy> This element will be active in the portal and will provide a link to the digital object on the provider website.

To map to <europeana:isShownBy> the object should be directly accessible by the URL and reasonably independent at that location. The inclusion of, for example, short copyright information or minimal navigation tools would be acceptable in this element. The link should be to the object in its best available resolution/quality.

This is a complementary element to <europeana:isShownAt> (above) and **it is mandatory to provide a URL link in one of these elements**.

(Note that it may be possible to construct URLs to objects that are embedded in HTML by right-clicking on the object and using the metadata identifier. In this case please provide the
direct URL in <europeana:isShownBy> as well as the link provided in <europeana:isShownAt>.

Europeana focuses on giving access to digital objects and records that do not have a valid link in either <europeana:isShownBy> or <europeana:isShownAt> will be excluded from the portal.

Examples of using this element are given in Annex A.

### 4.5 Language

**<europeana:language>**  This element is used to support the language facet in the portal. This is the official language of the country in which the organisation named in <europeana:provider> is located. The name of the country is derived automatically from information held in the Europeana Providers authority file. The element is populated automatically during the ingest process and providers do not need to provide this information separately.

Languages are normalised to the ISO 369-1 standard two character code. For countries with more than one official language the value “mul” is used.

### 4.6 Object

**<europeana:object>**  This element supports the process of creating thumbnails for the portal and works in conjunction with <europeana:hasObject>. There are three situations:

1) the metadata includes a URL to an existing thumbnail image so this will be mapped to <europeana:object>
2) There is no existing thumbnail (so no URL to it) but a thumbnail image can be generated from the resource at the URL in <europeana:isShownBy>. In this case the URL mapped to <europeana:isShownBy> is also mapped to <europeana:object>.
3) There is no existing thumbnail (so no URL to it) and a thumbnail image cannot be generated from the resource at the URL in <europeana:isShownBy>. In this case nothing can be mapped to <europeana:object>, the value in <europeana:hasObject> will be “False” and a default thumbnail will be used in the portal.

Thumbnail images are generated from digital objects using the ImageMagick software. Image Magick needs to have direct access to the image to create a thumbnail so it cannot make a thumbnail out of an image embedded in an HTML page.

Europeana creates one thumbnail per record. If a record contains several pages in a PDF, the front page is used to create the thumbnail. If a record contains several image files, the first file that appears is used for the thumbnail. Please ensure that the page that will be used is the an appropriate image to represent the object.

### 4.7 Provider

**<europeana:provider>**  This element supports the Provider facet in the portal.

This element should contain the name of the organisation that delivers data directly to Europeana. In most cases this will be the name of an aggregator or project although some
individual content holders will also fall under this definition (in which case their name should also appear in <dc:source>). The names of these organisations should be provided in the original language(s). The value should be provided by the organisation that is supplying data to Europeana.

The Europeana Office will maintain a controlled list of Provider names. For current projects associated with Europeana the following values should be used:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Value for europeana:provider element</th>
</tr>
</thead>
<tbody>
<tr>
<td>APEnet</td>
<td>APEnet</td>
</tr>
<tr>
<td>Athena</td>
<td>The name of the institution</td>
</tr>
<tr>
<td>BHL-Europe</td>
<td>BHL-Europe</td>
</tr>
<tr>
<td>CARARE</td>
<td>The name of the institution</td>
</tr>
<tr>
<td>EFG</td>
<td>EFG - The European Film Gateway</td>
</tr>
<tr>
<td>EuropeanaLocal</td>
<td>Name of local aggregator e.g. City of Helsinki for Finland</td>
</tr>
<tr>
<td>EUScreen</td>
<td>EUScreen</td>
</tr>
<tr>
<td>Judaica</td>
<td>Judaica</td>
</tr>
<tr>
<td>MIMO</td>
<td>The name of the institution</td>
</tr>
<tr>
<td>PrestoPrime</td>
<td>PrestoPrime</td>
</tr>
<tr>
<td>Travel</td>
<td>The European Library</td>
</tr>
</tbody>
</table>

4.8 Type

<europeana:type> This element is used to support the Type facet in the portal, the categorisation of objects in the result display and assignment of the appropriate default thumbnail icon.

Europeana currently handles only four object types and uses a controlled vocabulary of four words expressed in upper case as the value of this element: TEXT, IMAGE, SOUND, and VIDEO. Each of the values used in the local data must be mapped to one of the four Europeana type values. For the prototype this was achieved by providers supplying a mapping (and a translation) on a spreadsheet to the Europeana Office and the processing took place centrally. This process must now be carried out by providers. At some point in the process of extracting data from local databases, transforming and normalising it into ESE, one of the four Europeana type values must be inserted, in upper case, into a <europeana:type> element for each object.

The categorisation should be based on another type element in the source data. If it is difficult to categorise all digital objects into 4 types, please consult us. A difficult example is a PDF file of an old manuscript. Some may categorise it as an image, others may regard it as a text. We, therefore, recommend you do not use file formats (e.g. dc:format) for the categorisation.

Objects categorised as VIDEO should actually be moving images and not static images of objects related to or about videos. A typical example would be an object found at YouTube (http://www.youtube.com/)

If viewing the video requires a specific browser plug-in or application then the provider should inform the user of this requirement.
It is highly recommended to classify the objects, taking users needs into account. The original local values should not be discarded but should be mapped to `<dc:type>`.

Example of Type mapping spreadsheet:

<table>
<thead>
<tr>
<th>Local terms in your metadata <code>&lt;dc:type xml:lang=&quot;pl&quot;&gt;</code></th>
<th>Europeana Type Classification</th>
<th>Remarks (<code>&lt;dc:type xml:lang=&quot;en&quot;&gt;</code>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czasopismo</td>
<td>TEXT</td>
<td>periodical</td>
</tr>
<tr>
<td>dokument życia społecznego</td>
<td>TEXT</td>
<td>pamphlet, ephemera</td>
</tr>
<tr>
<td>druk muzyczny</td>
<td>TEXT</td>
<td>music prints</td>
</tr>
<tr>
<td>Fotografia</td>
<td>IMAGE</td>
<td>photography</td>
</tr>
<tr>
<td>Grafika</td>
<td>IMAGE</td>
<td>print</td>
</tr>
<tr>
<td>Książka</td>
<td>TEXT</td>
<td>book</td>
</tr>
<tr>
<td>Pocztówka</td>
<td>IMAGE</td>
<td>postcard</td>
</tr>
</tbody>
</table>

4.9 Unstored

`<europeana:unstored>` This element is indexed for searching.

This element has been created in order to allow providers to retain all important information that cannot otherwise be mapped to ESE. The contents of this element are indexed and searched but the values do not show in the display. Care should be taken not to map several fields with similar data to avoid distorting the weighting.

Example:
`<europeana:unstored>` National Gallery, London`<europeana:unstored>`
Where the National Gallery is the current location of the object but there is no other element in ESE suitable for this information.

4.10 URI

`<europeana:uri>` This element supports the internal functioning of the Europeana system. It is generated by the Europeana system and providers do not need to supply a value for this element.

The value in this element is a unique identifier for each object record in the system. It is generated algorithmically based on an element in the source metadata that provides a unique identifier for the object. Should a provider supply records where duplicated values are found in all the possible identifier elements only the first record will be retained and subsequent ones discarded.

4.11 User tag

`<europeana:usertag>` This element is provided to support future functionality in Europeana. These are tags created by registered users.

4.12 Year
<europeana:year>  This element is used to support the Timeline and the Date facet in the portal.

The value in this element is a four digit year (YYYY) from the Gregorian calendar. It is generated during the normalisation process from the value provided in the <dc:date> element (or one of the date refinements as appropriate) by the provider. The value supplied in <dc:date> may not be in this standard form but the normalisation process will attempt to identify a four digit year from the value supplied. Ideally therefore the value in the <dc:date> element should contain a year in the form YYYY. Objects where no <europeana:year> value can be generated will not appear in the Timeline or Date facet.

See the <dc:date> in section 3.2.5 for suggestions about converting textual dates into a numeric form.
5 Difficult elements

When mapping from diverse rich metadata formats to the relatively simple set provided by ESE it can be difficult to decide where an element belongs. This section attempts to summarise some of the interpretations that were made during the mapping for the prototype.

5.1 Techniques and materials related to the object

It is sometimes difficult to map information about the techniques and materials used in relation to an object to ESE. This section summaries information that may already have been stated in a particular element as well.

**Dc:format** should be used if the semantic is not clear enough to distinguish the following cases:

- If data includes information about the craftsmanship or technology related to the object (i.e. pressing, binding, carving, shoe making etc), the preferred mapping is to **dc:description** as the data will then be displayed in the result.
- If data includes information about the physical materials of the object (i.e. ivory, wooden, cast-iron etc), the preferred mapping is to **dcterms:medium**
- If data includes information about both two cases described above, it is recommended to map it to preferably **dc:description**

Examples from the film domain include the following examples. Again **dc:format** is used as the generic element but in some cases the refinements could be applied.

- **FilmManifestation/Duration** - **dcterms:extent**
  (1 min, 4 min, 1 min 30 sec, 2 min, 3 min, 4 min 8 sec)

- **FilmManifestation/CarrierAspect** - **dc:format**
  (1:1,33, 16:9 86 1:1,37, 1:2,35)

- **FilmManifestation/CarrierFormat** - **dc:format**
  (35 mm, DVD, 16 mm, VHS)

- **FilmManifestation/Colour** - **dc:format**
  (Black and White, Colour, tinted)

- **FilmCopy/CarrierType** - **dc:format**
  (Positive, Digital file, n/a, Video tape, Duplicate negative, Reversal positive, Negative)

- **FilmCopy/CarrierMaterial** - **dcterms:medium**
  (Acetate, Polyester, Nitrate)

5.2 Events and roles

It is accepted that it is not easy to record event and role data in ESE. The following are suggestions.
If data includes information about events related to the object, it is recommended to map it to preferably **dc:description**

Data may include information about people/actors in events. If you are confident that it is directly related to the object itself, the preferred mapping is to **dc:contributor** If you are not sure, for example, the people/actors may be related to what is depicted in image, use **dc:description** or europeana:unstored. **dc:creator** should only be used if you are confident about the relationship between the object and the actor (e.g. maybe an attribute indicates the actor is the creator of the object).

If data includes information about the type of the agent roles in events (e.g. mask maker, builder, actress, archaeologist etc), it is recommended to map it to preferably europeana:unstored. The names of agent (roles) have to be mapped to **dc:contributor**. A notable example for agent roles is MARC Relator. According to DCMI, most of MARC Relator should be mapped to **dc:contributor**.

For more information, please see these websites:
Relators [http://lcweb2.loc.gov/cocoon/loc.terms/relators/dc-relators.html](http://lcweb2.loc.gov/cocoon/loc.terms/relators/dc-relators.html)

### 5.3 Multiple resources described in one record

It will be difficult to decide on the best mapping for some objects. This example is just one instance and decisions such as these should be made on a case by case basis by those who are familiar with the content of any particular collection. In this example, a physical flint arrowhead is depicted in a photograph which is digitized as jpeg.

<table>
<thead>
<tr>
<th>No</th>
<th>Value</th>
<th>Original field name</th>
<th>Solution adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Title Neolithic arrowhead from Southern Iraq</td>
<td>Name</td>
<td>dc:title</td>
</tr>
<tr>
<td>2</td>
<td>Unknown</td>
<td>Actor</td>
<td>dc:creator</td>
</tr>
<tr>
<td>3</td>
<td>Neolithic</td>
<td>Period</td>
<td>dc:date</td>
</tr>
<tr>
<td>4</td>
<td>image/jpeg</td>
<td>Format</td>
<td>dc:format</td>
</tr>
<tr>
<td>5</td>
<td>1.5 cm X 3cm</td>
<td>Dimension</td>
<td>dcterms:extent</td>
</tr>
<tr>
<td>6</td>
<td>flint</td>
<td>Material</td>
<td>dcterms:medium</td>
</tr>
<tr>
<td>7</td>
<td>Iraq</td>
<td>Origin</td>
<td>dc:subject</td>
</tr>
<tr>
<td>8</td>
<td>London; BM</td>
<td>Current Location</td>
<td>europeana:unstored</td>
</tr>
</tbody>
</table>

The mappings of items 1 to 6 are imperfect but adequate for searching given the limitations of ESE metadata. However, for items 7 and 8 the choice is a bit more difficult. In this case it is suggested that number 7 should be mapped to `<dc:subject>` as Iraq is one of the subjects in the image of the arrowhead i.e. it appears as the background with the arrowhead in the foreground. The image is not a photograph of the excavation in Iraq which would more readily justify the use of `<dc:spatial>`. For number 8 where the relationship of the object to the location is less obvious, the generic `<europeana:unstored>` is adequate in these circumstances.
This suggestion provides a principle for using <dc:coverage> or its spatial refinement in these complex cases:

- where an image depicts a place, typically a landscape painting or photograph, use <dc:coverage> or <dc:spatial>
- where the place depicted is incidental to the story of the object depicted, use <dc:subject>
- where the relationship is not obvious the fall-back mapping is <dc:description>
- where the emphasis of the semantic is on the history of custody and ownership, use <dcterms:provenance>
Annex A

Examples of <europeana:isShownBy> and <europeana:isShownAt>

europeana:isShownBy should contain the URL that gives a direct link to the digital object. The digital object needs to be reasonably independent and directly accessed by the URL.

Europeana:isShownAt should contain a URL where the object is displayed within an information context or is accessed indirectly via another link.

Example 1 – isShownBy
This is clearly <isShownby> because the URL leads to the JPEG image itself (note the “jpg” extension in the URL).
http://www.museen-sh.de/eingabe/bilder/data/mitte/360/913.jpg

Example 2 - isShownBy
This could be interpreted differently as there is a small set of navigation tools with the image. <isShownBy> is still appropriate however as there is no other accompanying information – no banner or HTML frame etc. Immediate access to the digital object is the main criterion.
http://resolver.kb.nl/resolver?urn=urn:gnv:RA01:30051001544664
Example 3 – isShownAt
This is clearly <isShownAt> because the object is embedded in HTML web page.
http://www.nmm.ac.uk/collections/explore/object.cfm
?ID=NAV1627

Consider constructing the URL of the object by right-clicking it to see the identifier. This could then be used with external data to construct a value for <isShownBy>

Example 4 – isShownAt
Although the web page is very simple showing only one object (digital photo), this should be <isShownAt> because there is a banner etc.
http://brunelleschi.imss.fi.it
/isd/iisd.asp?c=34962
Example 5 – isShownAt
The red circle shows the “Full Text” hyperlink which allows the users to link to the pdf file. The URL of this website is <isShownAt>, while the URL of PDF is <isShownBy>.
Test record

This record was created by the Europeana office to test ESE records in the ingestion processes and the portal. It uses all the ESE elements, repeated where allowed. The section following the record shows the resulting metadata as it would be displayed in the portal.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<metadata xmlns="http://www.europeana.eu/schemas/ese/
xmlns:europeana="http://www.europeana.eu/schemas/ese/
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<record>
<dc:identifier>1</dc:identifier>
<dc:title>The Hague (with capital T; Dutch: Den Haag, officially also 's-Gravenhage) is the third largest city in the Netherlands after Amsterdam and Rotterdam, with a population of 485,818 (as of May 31, 2009) (population of agglomeration: 1,011,459 [1]) and an area of approximately 100 km². It is located in the west of the country, in the province of South Holland, of which it is also the provincial capital. The Hague is, like Amsterdam, Rotterdam, Utrecht and Almere, part of the Randstad metropolitan area, with 6,659,300 inhabitants.</dc:title>
<dc:title>The Hague is the seat of government, but not the capital of the Netherlands, a role set aside by the Dutch constitution for Amsterdam. The Hague is the home of the States-General of the Netherlands. Queen Beatrix of the Netherlands lives and works in The Hague. All foreign embassies and government ministries are located in the city, as well as the Hoge Raad der Nederlanden (Supreme Court), the Raad van State (Council of State) and many lobbying organisations.</dc:title>
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<dc:description>The Hague originated around 1230, when Floris IV, Count of Holland purchased land alongside a pond (now the Hofvijver) in order to build a hunting residence. In 1248 William II, Count of Holland and Rex Romanorum, decided to extend the residence to a palace. He died in 1256 before this palace was completed, but parts of it were finished by his son Floris V, of which the Ridderzaal (Knights’ Hall), still extant, is the most prominent. It is still used for political events, such as the annual speech from the throne by the monarch.</dc:description>
<dc:description>Because of its history, the historical inner city of The Hague differs in various respects from the nearby smaller cities of Leiden and Delft. It doesn't have a cramped inner city, bordered by canals and walls. Instead it has some small streets in the town centre that may be dated from the late Middle Ages, and several spacious streets boasting rich 18th century houses built for diplomats and affluent Dutch families. It has a large church dating from the 15th century, an impressive City Hall (built as such) from the 16th century, several large 17th-century palaces, a 17th-century Protestant church built in what was then a modern style, and many important 18th-century buildings.</dc:description>
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Mapping & Normalization Guideline for Europeana Prototype

Metadata Display

This shows how the metadata contained in that test record would be labelled and grouped for display in the portal.

1st instance of DC TITLE (test for 250 char max)
The Hague (with capital T; Dutch: Den Haag, officially also ’s-Gravenhage) is the third largest city in the Netherlands after Amsterdam and Rotterdam, with a population of 485,818 (as of May 31, 2009) ...

Title: 1st instance of DC TITLE (test for 250 char max) The Hague (with capital T; Dutch: Den Haag, officially also ’s-Gravenhage) is the third largest city in the Netherlands after Amsterdam and Rotterdam, with a population of 485,818 (as of May 31, 2009) (population of agglomeration: 1,011,459 [1]) and an area of approximately 100 km². It is located in the west of the country, in the province of South Holland, of which it is also the provincial capital. The Hague is, like Amsterdam, Rotterdam, Utrecht and Almere, part of the Randstad metropolitan area, with 6,659,300 inhabitants.

2nd instance of DC TITLE (test for 250 char max) The Hague is the seat of government, but not the capital of the Netherlands, a role set aside by the Dutch constitution for Amsterdam. The Hague is the home of the States-General of the Netherlands. Queen Beatrix of the Netherlands lives and works in The Hague. All foreign embassies and government ministries are located in the city, as well as the Hoge Raad der Nederlanden (Supreme Court), the Raad van State (Council of State) and many lobbying organisations.

1st instance of DCTERMS ALTERNATIVE
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Creator: 1st instance of DC CREATOR; 2nd instance of DC CREATOR; 1st instance of DC CONTRIBUTOR; 2nd instance of DC CONTRIBUTOR

Description: 1st instance of DC DESCRIPTION (test for 800 char max) The Hague originated around 1230, when Floris IV, Count of Holland purchased land alongside a pond (now the Hofvijver) in order to build a hunting residence. In 1248 William II, Count of Holland and Rex Romanorum, decided to extend the residence to a palace. He died in 1256 before this palace was completed, but parts of it were finished by his son Floris V, of which the Ridderzaal (Knights’ Hall), still extant, is the most prominent. It is still used for political events, such as the annual speech from the throne by the monarch. 2nd instance of DC DESCRIPTION (test for 800 char max) Because of its history, the historical inner city of The Hague differs in various respects from the nearby smaller cities of Leiden and Delft. It doesn’t have a cramped inner city, bordered by canals and walls. Instead it has some small streets in the town centre that may be dated from the late Middle Ages, and several spacious streets boasting rich 18th century houses built for diplomats and affluent Dutch families. It has a large church dating from the 15th century, an impressive City Hall (built as such) from the 16th century, several large 17th-century palaces, a 17th-century Protestant
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Language: en; ro

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Provider: EUROPEANA PROVIDER

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Document history

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Acknowledgements

Thanks are due to the following for their contribution to these guidelines:
Valentine Charles, Robina Clayphan, Antoine Isaac, Catherine Lupovici, Susanna Summa, Go Sugimoto, Julie Verleyen.

Some of the MODS and EAD 2002 XML examples have been copied or adapted from http://www.loc.gov/standards/mods/dcsimple-mods.html and http://www.oclc.org/programs/ourwork/past/culturalmaterials/RLG_desc_metadata.pdf respectively, with grateful thanks.