Europeana Data Model – Mapping Guidelines v2.4

06/10/2017

Document Scope

This is **The EDM Mapping Guidelines** document. It is part of the family of documents about the Europeana Data Model (EDM) aimed at different audiences. They can all be found at https://pro.europeana.eu/edm-documentation, except the object templates which are at https://github.com/europeana/corelib/wiki/EDMObjectTemplatesProviders

The EDM Mapping Guidelines – give guidance for providers wanting to map their data to EDM. They show which property relates to which class and contains definitions of the properties, the data types that can be used as values and the obligation level of each property. It also has an example of original data, the same data converted to EDM and diagrams showing the distribution of the properties amongst the classes. The full set of EDM classes and properties are being implemented incrementally and the Mapping Guidelines is the reference document showing which are currently available.

The EDM Definition – the formal specification of the Europeana Data Model and lists the classes and properties that could be used in Europeana. Not all of these are currently implemented. Please refer to the Mapping Guidelines for the current subset of classes and properties in use.

The EDM Primer – the "story" of EDM and explains how the classes and properties may be used together to model data and support Europeana functionality.

The XML schema and the Schematron rules - this is the XML schema and the required Schematron rules for validating the current implementation of EDM.

The EDM object templates – a working document is a simple wiki listing that shows which properties apply to which class and states the data types and obligation of the values. These templates should be regarded as a work in progress however and may be out of step with the Guidelines. Please refer to the Mapping guidelines for the current set of classes and properties in use.

The EDM Case Studies - There are also several case studies that address various aspects of using EDM that can be found at https://pro.europeana.eu/page/edm-case-studies.

Terminology

Aggregation	The set of related resources in the Europeana system about one particular provided object from one provider. These are either created by the provider or generated from the metadata by the Europeana system.
Class	A group of things that have common properties e.g. Web Resources.
Cultural heritage object (CHO)	The original object that is the focus of the metadata description. It may be either a physical object (painting, book etc) or a digital original.
Literal	A string value with an optional language tag (taken from ISO639), represented in RDF/XML using the xml:lang attribute. (RDF terminology)
Metadata description	This term is used to refer to the package of data about one CHO (i.e. the metadata for the ProvidedCHO, the WebResource, the Aggregation and any associated classes. See also "Record" below.
Record	This term is occasionally used as a shorthand means of referring to the package of data about one CHO (i.e. the metadata for the ProvidedCHO, the WebResource, the Aggregation and any associated classes). It is recognised that it is not a term generally employed in the RDF/XML context. See "metadata description" above.
Reference ("Ref")	A reference to another object or resource using an identifier for that object or resource (e.g. a URI or local identifier)
Resource	A thing that has identity and which can be the object of descriptions or used in other resources' description.
Property	An element that expresses the relationship between two resources. Properties can be seen as the attributes or characteristics of a resource.
Provided object	The cultural heritage object that a provider is submitting data about to Europeana.
ProvidedCHO	The ProvidedCHO is the cultural heritage object which has given rise to and is the subject of the package of data that has been submitted to Europeana. Its properties are those of the original cultural heritage object with a few Europeana-specific ones added. In the model it is the class of resource that is the object of the edm:aggregatedCHO statement. There is an exact match between ProvidedCHOs and the items that can appear from a search.
Value	The text or reference that is contained in a Property.
Web Resource	A digital representation of the provided cultural heritage object.

TABLE OF CONTENTS

1   Introduction

The EDM is a theoretical data model that allows data to be presented in different ways according to the practices of the various domains which contribute data to Europeana. To create a practical implementation Europeana has not used all the classes and properties defined in the EDM model. In particular, the **ore:Proxy** is not included because it is created within Europeana using data provided according to the Guidelines. Additionally, for its internal working Europeana utilises a different set of classes and properties.

There are several case studies that address particular aspects of using EDM which can be found at https://pro.europeana.eu/page/edm-case-studies. If needed, these Guidelines can be read in conjunction with the full EDM Definition and the EDM Primer, which explain the principles of how EDM works. You can also refer to the **Europeana Semantic Element Specification** (ESE), which has the full description of the Dublin Core elements and the ESE elements reused in EDM.

These Guidelines describe only the seven classes from the full model that are currently implemented: the three **core classes** representing the cultural heritage object and the four **contextual classes** that may be associated with it.

The core classes are:
*   edm:ProvidedCHO - the provided cultural heritage object
*   edm:WebResource - the web resource that is the digital representation
*   ore:Aggregation - the aggregation that groups the classes together

Main contextual classes include:
*   edm:Agent – who
*   edm:Place – where
*   edm:TimeSpan - when
*   skos:Concept – what
*   cc:License – access and usage

1.1   The core classes

EDM separates the cultural heritage object from its digital representation in order for metadata values to be associated appropriately. In this it differs greatly from ESE even though many of the properties will be familiar. To enable this separation EDM defines three classes to represent the core object. For example, the Mona Lisa is represented by the **edm:ProvidedCHO** and its digital image by the class **edm:WebResource.** This allows the relevant metadata properties to be applied to each class. In the Mona Lisa example, the edm:ProvidedCHO could have a dc:creator property with the value "Leonardo da Vinci" and the edm:WebResource a dc:format property with the value "jpg".

Because the metadata about an object and its digital representations will now be separated between those two classes, there is also a mechanism to associate the related classes. This is the **ore:Aggregation** class and it is the pivotal object between the edm:ProvidedCHO and the edm:WebResource(s). It has properties to allow linking between the associated classes and also has some more familiar descriptive properties, such as edm:dataProvider, that apply to the whole group.

edm:WebResource
[identifier for web resource]

ore:Aggregation
[aggregation identifier]

edm:ProvidedCHO
[identifier for "real" object]
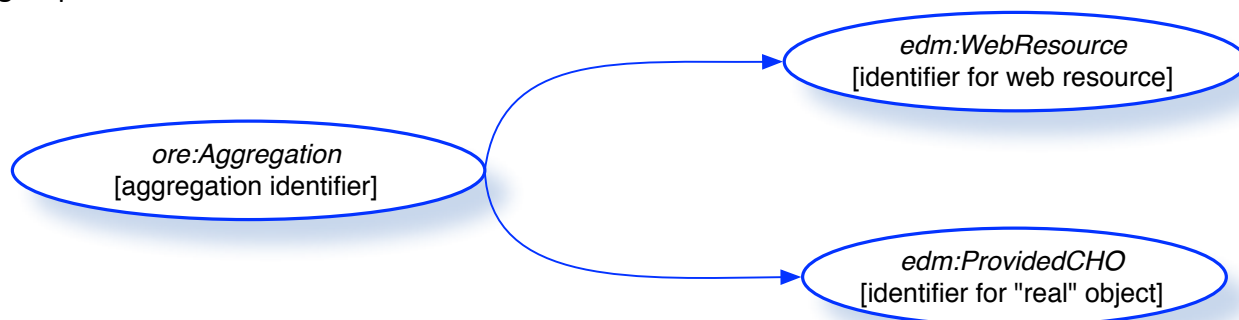
Figure 1. The three core classes: an Aggregation with a Provided CHO and a Web Resource

To handle more complex provided objects additional properties have been defined to express the relationships between parts of objects. For example, an edm:ProvidedCHO could have an edm:isNextInSequence property to link to another object which logically precedes it.

With the ability to express such relationships, providers should always try to "distribute" their original descriptions onto objects that precisely match their holdings, i.e. choose the most appropriate level of granularity for the CHO. In the archive domain, for example, a record can describe different object levels ("sub-series", "file, "item", etc.). The description should be broken down into a number of sub-descriptions each of which is about an object at a different level that is considered to be a CHO. They should be related using dcterms:isPartOf (or dcterms:hasPart) and edm:isNextInSequence statements. For example: the first edm:ProvidedCHO would relate to an aggregation for a sub-series, the second edm:ProvidedCHO to an aggregation for a file and the third edm:ProvidedCHO would relate to an aggregation for an item.

1.2   The contextual classes

Many providers already have rich data due to their use of authority files, controlled vocabularies and thesauri. The inclusion of contextual resources allows the exploitation of this rich data and allows data about the contextual resource to be kept separate from the data about the object of the description. For example, a provider could create an instance of an edm:Agent class and instead of simply providing the text string " William Shakespeare" as dc:creator, could provide the link (URI) to Shakespeare in an authority file and enable the use of the rich related data in that source(multi-lingual variations of the name, dates and places of birth, death etc.) Similarly for Places, Timespans and Concepts.

Europeana can use such URIs to fetch further information from those external resources if they are available as linked open data.[1] This is therefore the main way in which we can carry out enrichment on the data: by adding details that may not already exist in the provided data.
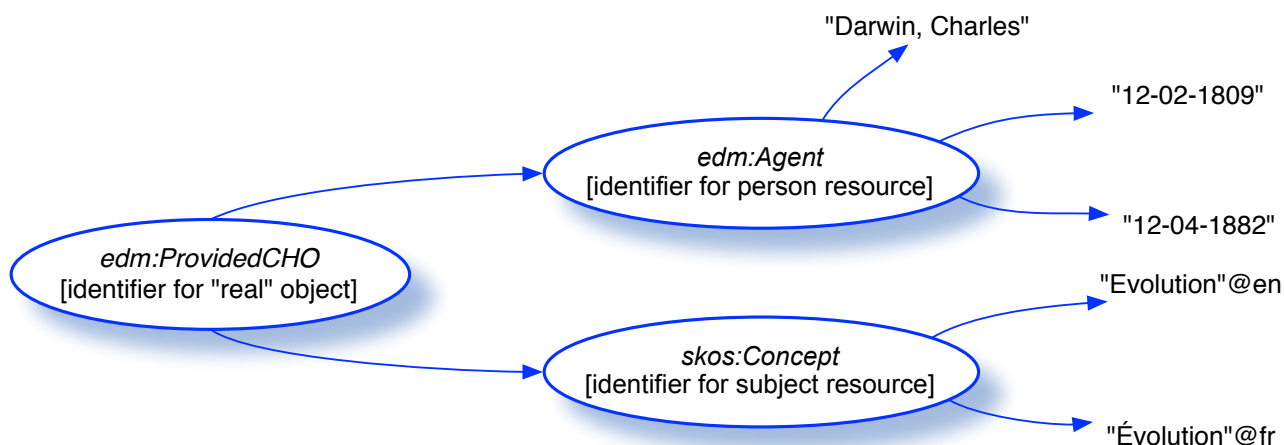
Figure 2. A Provided CHO with two contextual resources

In the following sections a table of properties is provided for each class listing all the properties that could be used with it.

1.3   Namespaces

This documentation uses the following namespace abbreviations:
• dc: http://purl.org/dc/elements/1.1/
• dcterms: http://purl.org/dc/terms/
• edm: http://www.europeana.eu/schemas/edm/
• ore: http://www.openarchives.org/ore/terms/
• owl: http://www.w3.org/2002/07/owl#
• rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
• foaf: http://xmlns.com/foaf/0.1/
• skos: http://www.w3.org/2004/02/skos/core#
• rdau: http://www.rdaregistry.info/Elements/u/
• wgs84_pos: http://www.w3.org/2003/01/geo/wgs84_pos#
• crm: http://www.cidoc-crm.org/cidoc-crm/
• cc: http://creativecommons.org/ns#

---

[1] See the Europeana Pro Page on semantic enrichment: https://pro.europeana.eu/page/europeana-semantic-enrichment

2 Overview of the properties in each class

✔ = **Mandatory property**

➔ Blue = **at least** one of the blue properties should be present (and can be used alongside each other)

⭕ Red = **at least** one of the red properties should be present (and can be used alongside each other)

◆ Green = **at least** one of the green properties should be present (and can be used alongside each other)

+ = recommended property

Detailed characteristics of all properties are given in the full tables following this summary.

Core Classes

	Properties for edm:ProvidedCHO		
+	dc:contributor		dcterms:isReplacedBy
	dc:coverage		dcterms:isRequiredBy
+	dc:creator	+	dcterms:issued
+	dc:date		dcterms:isVersionOf
➔	dc:description		dcterms:medium
	dc:format		dcterms:provenance
+	dc:identifier		dcterms:references
✔	**dc:language** (if edm:type = TEXT)		dcterms:replaces
+	dc:publisher		dcterms:requires
	dc:relation	⭕	dcterms:spatial
	dc:rights		dcterms:tableOfContents
+	dc:source	⭕	dcterms:temporal
⭕	dc:subject		edm:currentLocation
➔	dc:title		edm:hasMet
⭕	dc:type		edm:hasType
+	dcterms:alternative		edm:incorporates
	dcterms:conformsTo		edm:isDerivativeOf
+	dcterms:created	+	edm:isNextInSequence
	dcterms:extent		edm:isRelatedTo
	dcterms:hasFormat		edm:isRepresentationOf
	dcterms:hasPart		edm:isSimilarTo
	dcterms:hasVersion		edm:isSuccessorOf
	dcterms:isFormatOf		edm:realizes
+	dcterms:isPartOf	✔	**edm:type**
	dcterms:isReferencedBy		owl:sameAs

Properties for ore:Aggregation			
✔	**edm:aggregatedCHO**	✔	**edm:provider**
✔	**edm:dataProvider**		dc:rights
	edm:hasView	✔	**edm:rights**
◆	edm:isShownAt		edm:ugc
◆	edm:isShownBy	+	edm:intermediateProvider
+	edm:object		

Properties for edm:WebResource	
dc:creator	dcterms:hasPart
dc:description	dcterms:isFormatOf
dc:format	dcterms:isPartOf
dc:rights	dcterms:isReferencedBy
dc:source	dcterms:issued
dcterms:conformsTo	edm:isNextInSequence
dcterms:created	+ edm:rights
dcterms:extent	owl:sameAs

Contextual Classes

Properties for edm:Agent			
+	skos:prefLabel		foaf:name
+	skos:altLabel		rdaGr2:biographicalInformation
	skos:note	+	rdaGr2:dateOfBirth
	dc:date	+	rdaGr2:dateOfDeath
	dc:identifier		rdaGr2:dateOfEstablishment
	dcterms:hasPart		rdaGr2:dateOfTermination
	dcterms:isPartOf		rdaGr2:gender
	edm:begin		rdaGr2:placeOfBirth
	edm:end		rdaGr2:placeOfDeath
	edm:hasMet		rdaGr2:professionOrOccupation
	edm:isRelatedTo		owl:sameAs

Properties for edm:Place			
+	wgs84_pos:lat		skos:note
+	wgs84_pos:long		dcterms:hasPart
	wgs84_pos:alt		dcterms:isPartOf
+	skos:prefLabel		edm:isNextInSequence

	skos:altLabel	owl:sameAs

Properties for edm:TimeSpan		
+	skos:prefLabel	+	edm:begin
	skos:altLabel	+	edm:end
	skos:note		edm:isNextInSequence
	dcterms:hasPart		owl:sameAs
	dcterms:isPartOf		

Properties for skos:Concept		
+	skos:prefLabel	skos:relatedMatch
+	skos:altLabel	skos:exactMatch
	skos:broader	skos:closeMatch
	skos:narrower	skos:note
	skos:related	skos:notation
	skos:broadMatch	skos:inScheme
	skos:narrowMatch	

Properties for cc:License	
✔ **odrl:inheritFrom**	cc:deprecatedOn

3 Aspects of the data

3.1 Identifiers for resources in the data

This section should be read with reference to the sample EDM data in Annex A where all the examples are taken from.

- Datasets will be provided to Europeana in an RDF/XML structure and will contain metadata descriptions for many cultural heritage objects.
- The metadata description for one cultural heritage object is made up of several "sections".
- Each section corresponds to an instance of one of the classes described above and contains the properties and values associated with that class.
- Each of these sections of metadata can be regarded as a **"resource"** in its own right because it will have a have a unique identifier and one or more properties associated to that particular class. The term "resource" is used for these sections of metadata in the remainder of this part of the document.

- Each resource **must** have its own unique identifier (URI) so that all the resources in one description can be linked together internally. For more information on providing URI's consult the document 'URIs in the context of the Europeana Data Model'.[2]
- The identifier for the resource is given in the "rdf:about" statement at the start of the section of metadata for the resource.
- The link from a referring resource (a) to another resource (b) is made by putting the identifier of (b) in one of the properties of (a) as an "rdf:resource". See examples below.

Each resource (section of metadata) starts with the "rdf:about" statement containing the identifier of the resource. For example:

Identifier for the resource representing the Provided CHO

```
<edm:ProvidedCHO rdf:about="#UEDIN:214">
```

Identifier for resource representing the WebResource

```
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg">
```

Identifier for resource representing the Aggregation

```
<ore:Aggregation rdf:about= "http://www.mimo-db.eu/UEDIN/214">
```

The resources are then linked using those identifiers in the "rdf:resource " statement.

The Aggregation resource is linked to the ProvidedCHO resource using its ID in the rdf:resource statement

```
<ore:Aggregation rdf:about=http://www.mimo-db.eu/UEDIN/214>
 <edm:aggregatedCHO rdf:resource="#UEDIN:214"/>
      …
</ore:Aggregation>
```

The Aggregation is linked to the WebResource resource using its ID in the rdf:resource statement

```
<ore:Aggregation rdf:about=http://www.mimo-db.eu/UEDIN/214
 <edm:aggregatedCHO rdf:resource="#UEDIN:214"/>
 <edm:isShownBy rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>…
    </ore:Aggregation>
```

Contextual resources are linked in a similar fashion. A property in the metadata of one of the core class resources will contain the ID of the contextual resource. In this example the

---

[2]http://pro.europeana.eu/files/Europeana_Professional/Share_your_data/Technical_requirements/FAQs/URIs%20in%20EDM_pro.pdf

edm:ProvidedCHO has a dc:type property which contains the HTTP URI which is the identifier for the skos:Concept resource:

```
<edm:ProvidedCHO rdf:about="#UEDIN:214">
 <dc:title> …
 <dc:type rdf:resource="http://www.mimo-db.eu/HornbostelAndSachs/356"/>
 <dc:…...
</edm:ProvidedCHO>

<skos:Concept rdf:about="http://www.mimo-db.eu/HornbostelAndSachs/356">
 <skos:prefLabel xml:lang="en">423.22 Labrosones with slides</skos:prefLabel>
</skos:Concept>
```

In the example identifiers above you will see that the URIs are not of the same sort.

- The ID of the ProvidedCHO resource is an internal identifier (a record identifier in fact) used here simply to allow other resources to refer to it.
- The ID of the WebResource resource is a real HTTP URI that will resolve to an external resource.

There are four types of identifier that can be used in this context:
1. an HTTP URI that references a linked open data resource external to the data submitted to Europeana
2. an HTTP URI that references another resource inside the same metadata description submitted to Europeana
3. a local URI that is not dereferenceable[3] but that refers to another resource inside the same metadata description (e.g. an identifier internal to the provider infrastructure)
4. an identifier that is not dereferenceable but that refers to another resource inside the same metadata description (any string used to identify a resource, such as an inventory number)

3.2   Language aspects of the data

There are two language aspects to the data in Europeana that are relevant for providers:
1) the language of the values in the properties
2) the language of the object being described

In the ISO 639-2 standard widely-known languages have both a two letter code (e.g. "fr" for French and "it" for Italian) and a three letter code ("eng" for English "fre" for French). Less widely used languages may only have the three letter code. Providers are recommended to use the two letter code wherever possible, as per the table at
http://www.loc.gov/standards/iso639-2/php/code_list.php
IANA has created a registry rationalising the codes[4]. It clarifies which languages are recommended to use the two letter code and which must use the three letter code. Providers are recommended

---

[3] https://en.wikipedia.org/wiki/Dereferenceable_Uniform_Resource_Identifier
[4] http://www.iana.org/assignments/language-subtag-registry/language-subtag-registry

to consult this registry. A useful explanation of this can be found at http://www.w3.org/International/articles/language-tags/Overview.en.php.

1. The language of the values given in the metadata properties

The language of the values given in the properties should be declared using the xml:lang attribute with the appropriate language code. For example, a description in French can be:

```
<dc:description xml:lang="fr">Trois boutons en argent</ dc:description>
```

If that description is also available in English the property can be repeated:

```
<dc:description xml:lang="en">Three silver buttons</ dc:description>
```

Note that for Europeana there are specific rules for translations of titles that apply to dc:title and dcterms:alternative. These are given in the property description tables below.

2. The language of the object being described

Where there is a language aspect to the object being described, providers are asked to indicate the language of the object using the dc:language property. For objects with the edm:type of TEXT it is mandatory and for other types (for example, a voice recording or an image with some text on it) it is recommended. We also recommend the use of the ISO 639-2 code ZXX for no linguistic content. It is recommended to use a language code for the value:

```
<dc:language>it</dc:language>
```

3.3   General mapping rules

1. Providers are encouraged to provide as many properties as they can from their existing data to create a full description. It is not necessary to use all the available EDM properties, but those that are marked as mandatory must be provided.
2. Provide the properties in the record in the same order given in this document.
3. If the same contextual class applies to multiple ProvidedCHOs then it should be repeated for each ProvidedCHO. I.e. it cannot just be provided once in the data file.
4. The values provided for properties will either be a **reference** or a **literal**. Most properties can have either type of value but for some, one or the other is specified.
5. Provide only a reference or a literal value to avoid duplicating data.
6. Properties used in combination with (i.e. which link to) contextual resources are recommended.
7. Whenever a literal value is used an xml:lang tag should be employed to indicate the language of the value. It is recommended to use them wherever appropriate.
8. Try to find the most precise property that is available. For example, use the sub-properties dcterms:spatial or dcterms:temporal instead of the more general dc:coverage.

9. All classes and other resources represented in an EDM record should have an identifier as described in section 1.3.
10. Do not use HTML mark-up in property values as it may distort the portal display and the API data output.
11. Ensure the mandatory or alternative mandatory properties are included. See the overview in section 2 and at the start of the section for each class.
12. The properties dc:type and edm:type should have different values.

4 The Core EDM classes

This section deals with the three core classes: **edm:ProvidedCHO**, **edm:WebResource**, and **edm:Aggregation**. Each submission of an item to Europeana should give rise to the creation of three types of "resource" (section of metadata):
- one for the source cultural heritage object - edm:ProvidedCHO
- one for the digital object being submitted - edm:WebResource
- one for the overall package - ore:Aggregation

Each will have its own associated metadata, giving three core "metadata sections" per item submitted. The next three sections of this document consist of a table for each class showing the properties that apply to it. Each property has:
- a brief definition together with some mapping notes, including a snippet of xml showing how to code for a simple text string (Literal) or for a link to another resource (Ref).
- the expected type of value. This is either "Literal" for a text string or "Ref" for a URI or local identifier.
- a cardinality column (Card.) showing whether the property is mandatory and/or repeatable.

A fuller RDF/XML encoded example of data for each class is shown in Section 5 using a real-life worked example of a record mapped from LIDO to EDM. The full converted record and original LIDO data is given in Annex A.

4.1 Provided cultural heritage object (edm:ProvidedCHO)

The values in these properties relate to the original cultural heritage object (CHO) itself, not the digital representation of it. E.g. the attributes of the Mona Lisa, not the digitised image of the painting.

Mandatory Properties for the ProvidedCHO:
dc:title **or** dc:description
dc:language for text objects
dc:subject **or** dc:type **or** dcterms:spatial **or** dcterms:temporal
edm:type

Property	Note	Value type	Card.
dc:contributor	Use for contributors to the CHO. If possible supply the identifier of the contributor from an authority source. Providers with richer role terms can elect to map a subset to dc:contributor and others to dc:creator. Repeat for multiple contributors. <dc:contributor>Maria Callas</dc:contributor> or create a reference to an instance of the Agent class <dc:contributor rdf:resource="http://www.example.com/MariaCallas"/>	literal or ref	0…n
dc:coverage	The spatial or temporal topic of the CHO. Use the more precise dcterms:spatial or dcterms:temporal properties if the data will support it. <dc:coverage>1995-1996</dc:coverage> or <dc:coverage>Berlin</dc:coverage> or create a reference to an instance of a contextual class, for example, a Place class <dc:coverage rdf:resource="http://sws.geonames.org/2950159"/>	literal or ref	0….n
dc:creator	For the creator of the CHO. If possible supply the identifier of the creator from an authority source. Repeat for multiple creators.	literal or ref	0….n

	<dc:creator>Shakespeare, William</dc:creator> or create a reference to an instance of the Agent class <dc:creator rdf:resource="http://viaf.org/viaf/96994048"/>		
dc:date	Use for a significant date in the life of the CHO. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). NB: other EDM elements are relevant for expressing dates of different events in the life of the CHO: dcterms:temporal, dcterms:created and dcterms:issued. Be careful and choose the most appropriate one! <dc:date>Early 20th century</dc:date> or <dc:date>1919</dc:date> or create a reference to an instance of the TimeSpan class <dc:date rdf:resource="http://semium.org/time/19xx_1_third"/>	literal or ref	0….n
dc:description	A description of the CHO. If there is no dc:description for an object, there **must** be a dc:title. If both are available, provide both. <dc:description>Illustrated guide to airport markings and lighting signals, with particular reference to SMGCS (Surface Movement Guidance and Control System) for airports with low visibility conditions.</dc:description>	literal or ref	0….n
dc:format	Use for the terms generally applied to indicate the format of the cultural heritage object or the file format of a born digital object. Use the value "3D-PDF" if appropriate. <dc:format>paper</dc:format>	literal or ref	0….n
dc:identifier	An identifier of the original CHO. <dc:identifier>RP-T-1952-380</dc:identifier>	literal	0….n
dc:language	The language of text CHOs and also for other types of CHO if there is a language aspect. **Mandatory** for TEXT objects, strongly recommended for other object types with a language element. Best practice is to use ISO 639 two- or three-letter primary language tags[5]. Repeat for multiple languages. We also recommend the use of the ISO 639-2 code for no linguistic content (ZXX).	literal	0….n

---

[5]http://www.loc.gov/standards/iso639-2/php/code_list.php

	<dc:language>it</dc:language>		
dc:publisher	The name of the publisher of the CHO. If possible supply the identifier of the publisher from an authority source. <dc:publisher>Oxford University Press</dc:publisher> or create a reference to an instance of the Agent class <dc:publisher rdf:resource="http://www.oup.com/"/>	literal or ref	0….n
dc:relation	The name or identifier of a related resource, generally used for other related CHOs. Cf edm:isRelatedTo. <dc:relation>maps.crace.1/33</dc:relation> (Shelf mark) Or to provide a link to another object: <dc:relation rdf:resource="http://www.identifier/relatedObject"/>	literal or ref	0….n
dc:rights	Use to give the name of the rights holder of the CHO if possible or for more general rights information. (Note that the controlled edm:rights property relates to the digital objects and applies to the edm:WebResource and/or edm:Aggregation). <dc:rights>Copyright © British Library Board</dc:rights>	literal or ref	0….n
dc:source	A related resource from which the described resource is derived in whole or in part i.e. the source of the original CHO. (Not the name of the content holder: for this see edm:dataProvider.) <dc:source>Security Magazine pp 3-12</dc:source>	literal or ref	0….n
dc:subject	The subject of the CHO. One of dc:subject or dc:type or dcterms:spatial or dcterms:temporal **must** be provided; if more than one of these properties is available, please provide them all. High-level dc:subject values like 'archaeology' are allowed, especially when there is no other subject that can be easily filled in. <dc:subject>trombone</dc:subject> or create a reference to an instance of the Concept class <dc :subject rdf:resource="http://id.loc.gov/authorities/subjects/sh85137992"/>	literal or ref	0….n
dc:title	A name given to the CHO. dc:title **should** be present; but if there is no dc:title available, it is acceptable to have dc:description instead. dc:title and dc:description should be distinct. Exact translations of the title can be	literal	0….n

	provided using appropriate xml language attributes. <dc:title xml:lang="en">Eight Weeks</dc:title> <dc:title xml:lang="it">Ocho semanas</ dc:title>		
dc:type	The nature or genre of the CHO. Ideally the term(s) will be taken from a controlled vocabulary. One of dc:type or dc:subject or dcterms:spatial or dcterms:temporal **must** be provided; if more than one of these properties is available, please provide them all. dc:type should not be (strictly) identical to edm:type. <dc:type>Book</dc:type> or <dc:type>trombone</dc:type> or create a reference to an instance of the Concept class <dc:type rdf:about="http://www.mimo-db.eu/HornbostelAndSachs/356/">	literal or ref	0....n
dcterms:alternative	Any alternative title of the CHO including abbreviations or translations that may not be exact. <dcterms:alternativexml:lang="en">Eight weeks: a novel</dcterms:alternative>	literal	0....n
dcterms:conformsTo	An established standard to which the CHO conforms. <dcterms:conformsTo>W3C WCAG 2.0</dcterms:conformsTo> (conforms to web content accessibility guidelines). Or link to the resource <dcterms:conformsTo rdf:resource="http://www.w3.org/TR/WCAG/"/>	literal or ref	0....n
dcterms:created	The date of creation of the CHO. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). NB: other EDM elements are relevant for expressing dates of different events in the life of the CHO: dc:date, dcterms:temporal and dcterms:issued. Be careful and choose the most appropriate one! <dcterms:created>Mid 16th century</dcterms:created> or <dcterms:created>1584</dcterms:created> or create a reference to an instance of the TimeSpan class <dcterms:created rdf:resource="http://semium.org/time/15xx_3_third"/>	literal or ref	0....n
dcterms:extent	The size or duration of the CHO. <dcterms:extent>13 cm</dcterms:extent> (the width of an original object).	literal or ref	0....n

	<dcterms:extent>34 minutes</dcterms:extent> (the duration of an audio file).		
dcterms:hasFormat	A resource related to the CHO that is substantially the same as the CHO but in another format. <dcterms:hasFormat>http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png</dcterms:hasFormat> for a png image file of the described tiff resource Or as a link to a resource <dcterms:hasFormat rdf:resource="http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png"/>	literal or ref	0….n
dcterms:hasPart	A resource that is included either physically or logically in the CHO. It is possible to use either dcterms:isPartOf or dcterms:hasPart to express relation between objects in a hierarchy. However in many cases (especially when a parent object has many children) it is preferable to use dcterms:isPartOf. <dcterms:hasPart>Vol.2. Issue 1</dcterms:hasPart>.	literal or ref	0….n
dcterms:hasVersion	Another, later resource that is a version, edition or adaptation of the CHO demonstrating substantive changes in content rather than format. <dcterms:hasVersion>The Sorcerer's Apprentice (translation by Edwin Zeydel, 1955)</dcterms:hasVersion>. In this example the 1955 translation is a version of the described resource.	literal or ref	0….n
dcterms:isFormatOf	Another resource that is substantially the same as the CHO but in another format. <dcterms:isFormatOf>Europeana_logo.tiff</dcterms:isFormatOf>where the resource being described is a png image file.	literal or ref	0….n
dcterms:isPartOf	A resource in which the CHO is physically or logically included. This property can be used for objects that are part of a hierarchy and will be used to support an appropriate display in the portal. For that purpose it will be necessary to supply a reference as the value. See the Task Force report[6] on representing hierarchical entities. It is possible to use either dcterms:isPartOf or dcterms:hasPart to express relation between objects in a hierarchy. However in many cases (especially when a parent object has many children) it is preferable to use dcterms:isPartOf. <dcterms:isPartOf>Crace Collection of Maps of London</dcterms:isPartOf>	literal or ref	0….n

---

[6] https://pro.europeana.eu/project/hierarchical-objects

	Or link to parent object if part of a hierarchy of CHOs <dcterms:isPartOf rdf:resource="http://data.europeana.eu/item/08701/1B0BACAA44D5A807E43D9B411C9781AAD2F96E65"/>		
dcterms:isReferencedBy	Another resource that references, cites or otherwise points to the CHO. <dcterms:isReferencedBy>Till, Nicholas (1994) *Mozart and the Enlightenment: Truth, Virtue and Beauty in Mozart's Operas*, W. W. Norton & Company </dcterms:isReferencedBy>	literal or ref	0….n
dcterms:isReplacedBy	Another resource that supplants , displaces, or supersedes the CHO. <dcterms:isReplacedBy>http://dublincore.org/about/2009/01/05/bylaws/</dcterms:isReplacedBy> where the resource described is an older version (http://dublincore.org/about/2006/01/01/bylaws/) or link <dcterms:isReplacedBy rdf:resource="http://dublincore.org/about/2009/01/05/bylaws/"/>	literal or ref	0….n
dcterms:isRequiredBy	Another related resource that requires the CHO to support its function, delivery or coherence <isRequiredBy>http://www.myslides.com/myslideshow.ppt</isRequiredBy> where the image being described is required for an online slideshow.	literal or ref	0….n
dcterms:issued	Date of formal issuance or publication of the CHO. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). NB: other EDM elements are relevant for expressing dates of different events in the life of the CHO: dc:date, dcterms:temporal and dcterms:created. Be careful and choose the most appropriate one! <dcterms:issued>1993</dcterms:issued> or create a reference to an instance of the TimeSpan class <dcterms:issued rdf:resource="http://semium.org/time/17xx_3_third"/> (late 18th century)	literal or ref	0….n
dcterms:isVersionOf	Another, earlier resource of which the CHO is a version, edition or adaptation, demonstrating substantive changes in content rather than format. <dcterms:isVersionOf>The Sorcerer's Apprentice<dcterms:isVersionOf>. In this example The Sorcerer's Apprentice (translation by Edwin Zeydel, 1955) is the resource being described.	literal or ref	0….n
dcterms:medium	The material or physical carrier of the CHO.	literal	0….n

	<dcterms:medium>metal</dcterms:medium>	or ref	
dcterms:provenance	A statement of changes in ownership and custody of the CHO since its creation. Significant for authenticity, integrity and interpretation. <dcterms:provenance>Donated to The National Library in 1965</dcterms:provenance>	literal or ref	0….n
dcterms:references	Other resources referenced, cited or otherwise pointed to by the CHO. <dcterms:references>Honderd jaar Noorse schilderkunst </dcterms:references>	literal or ref	0….n
dcterms:replaces	A related resource that is supplanted, displaced, or superseded by the CHO. <dcterms:replaces>http://dublincore.org/about/2006/01/01/bylaws/</dcterms:replaces> where the resource described is a newer version (http://dublincore.org/about/2009/01/05/bylaws/) or link to resource <dcterms:replaces rdf:resource="http://dublincore.org/about/2006/01/01/bylaws/"/>	literal or ref	0….n
dcterms:requires	Another resource that is required by the described resource to support its function, delivery or coherence. <dcterms:requires>http://ads.ahds.ac.uk/project/userinfo/css/oldbrowsers.css</dcterms:requires> where the resource described is an HTML file at http://ads.ahds.ac.uk/project/userinfo/digitalTextArchiving.html	literal or ref	0….n
dcterms:spatial	Spatial characteristics of the CHO. i.e. what the CHO represents or depicts in terms of space (e.g. a location, co-ordinate or place). Either dcterms:spatial or dc:type or dc:subject or dcterms:temporal **must** be provided; if more than one of these properties is available, please provide them all. dcterms:spatial is used to record the place depicted in the CHO and other locations associated with it as opposed to edm:currentLocation which is used only to record the place where the CHO is currently held (e.g. a museum or gallery). Be careful to choose the most appropriate one! <dcterms:spatial>Portugal</dcterms:spatial> or create a reference to an instance of the Place class <dcterms:spatial rdf:resource="http://sws.geonames.org/2264397/"/>	literal or ref	0….n
dcterms:tableOfContents	A list of sub-units of the CHO. <dcterms:tableOfContents>Chapter 1. Introduction, Chapter 2. History </dcterms:tableOfContents>	literal	0….n
dcterms:temporal	Temporal characteristics of the CHO. i.e. what the CHO is about or depicts in terms of time (e.g. a period, date	literal	0….n

	or date range.) Either dcterms:temporal or dc:type or dc:subject or dcterms:spatial **must** be provided; if more than one of these properties is available, please provide them all. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). NB: other EDM elements are relevant for expressing dates of different events in the life of the CHO: dc:date, dcterms:created and dcterms:issued. Be careful and choose the most appropriate one! <dcterms:temporal>Roman Empire</dcterms:temporal> or create a reference to an instance of the TimeSpan class <dcterms:temporal rdf:resource="http://semium.org/time/roman_empire"/>	or ref	
edm:currentLocation	The geographic location whose boundaries presently include the CHO. This location must have a position within an established positioning system: a location with coordinates or address or inside another location that has a position, such as a room within a (museum) building. Ideally this position should be provided with the value of the property, either by using a reference (to a Place entity) that has coordinates or an address attribute, or as a simple literal. edm:currentLocation is used only to record the place where the CHO is currently held (e.g. a museum or gallery); dcterms:spatial is used to record the place depicted in the CHO and other locations associated with it. Be careful to choose the most appropriate one! <edm:currentLocation rdf:resource="http://sws.geonames.org/2950159"/> (Identifier for Berlin)	literal or ref	0….1
edm:hasMet	The identifier of an agent, a place, a time period or any other identifiable entity that the CHO may have "met" in its life. <edm:hasMet rdf:resource="http://viaf.org/viaf/96994048"/> (Identifier for William Shakespeare) <edm:hasMet rdf:resource="http://sws.geonames.org/6620265"/>(location identifier for Shakespeare's Globe theatre.)	ref	0….n
edm:hasType	The identifier of a concept, or a word or phrase from a controlled vocabulary (thesaurus etc) giving the type of the CHO. E.g. Painting from the AAT thesaurus. This property can be seen as a super-property of e.g. dc:format or dc:type to support "What" questions.	ref or literal	0….n

	<edm:hasType>Painting</edm:hasType>		
edm:incorporates	The identifier of another resource that is incorporated in the described CHO. E.g. the movie "A Clockwork Orange" incorporates Rossini's La Gazza Ladra" in its soundtrack. <edm:incorporates rdf:resource="http://www.identifier/IncorporatedResource"/>	ref	0....n
edm:isDerivativeOf	The identifier of another resource from which the described CHO has been derived. E.g. the identifier of Moby Dick when the Italian translation is the described CHO. <edm:isDerivativeOf rdf:resource="http://www.identifier/SourceResource"/>	ref	0....n
edm:isNextInSequence	The identifier of the preceding object where both objects are part of the same overall resource. Use this for objects that are part of a hierarchy or sequence to ensure correct display in the portal. <edm:isNextInSequence rdf:resource="http://www.identifier/PrecedingResource"/>	ref	0....n
edm:isRelatedTo	The identifier or name of a concept or other resource to which the described CHO is related. E.g. Moby Dick is related to XIX Century literature. Cf dc:relation. <edm:isRelatedTo>Literature</edm:isRelatedTo > Or link to resource <edm:isRelatedTo rdf:resource="http://www.eionet.europa.eu/gemet/concept?cp=4850"/>	ref or literal	0....n
edm:isRepresentationOf	The identifier of another object of which the described CHO is a representation. E.g. the identifier of the statue when the CHO being described is a painting of that statue. <edm:isRepresentativeOf rdf:resource="http://www.identifier/RepresentedResource"/>	ref	0....1
edm:isSimilarTo	The identifier of another resource to which the described CHO is similar. <edm:isSimilarTo rdf:resource="http://www.identifier/SimilarResource"/>	ref	0....n
edm:isSuccessorOf	The identifier of a resource to which the described CHO is a successor. E.g. "The Two Towers" is a successor of "Fellowship of the Ring". <edm:isSuccessorOf rdf:resource="http://dbpedia.org/resource/The_Fellowship_of_the_Ring"/>	ref	0....n
edm:realizes	If the CHO described is of type edm:PhysicalThing it may realize an information object. E.g. a copy of the Gutenberg publication realizes the Bible.	ref	0....n

	<edm:realizes rdf:resource="http://www.identifier/PhysicalThing"/>		
edm:type	The value must be one of the types accepted by Europeana as it will support portal functionality: TEXT, VIDEO, SOUND, IMAGE, 3D. (For 3D, when applicable, use the value "3D-PDF" in dc:format) <edm:type>IMAGE</edm:type> (upper-case) <edm:type>3D</edm:type> (upper-case)	literal	1….1
owl:sameAs	Use to point to your own (linked data) representation of the object, if you have already minted a URI identifier for it. It is also possible to provide URIs minted by third-parties for the object. <owl:sameAs rdf:resource="http://www.identifier/SameResourceElsewhere"/>	ref	0….n

4.2   Properties for the Web Resource (edm:WebResource)

These are the properties that can be used for the class of edm:WebResource.   This means that they are attributes of the digital representation of the provided cultural heritage object, not the cultural heritage object itself.

There may be more than one edm:WebResource for each edm:ProvidedCHO. They will be linked via the ore:Aggregation using edm:hasView or one of its subproperties. One of these must be one of the mandatory properties edm:isShownAt or edm:isShownBy (and, for IMAGE objects, the link could be repeated in edm:object). Each web resource should have its own set of properties.

Europeana providers who wish to submit their IIIF[7] resources to Europeana can do so by using a small extension to the WebResource element from the Europeana Data Model. More details are available in the Guidelines for submitting IIIF resources for objects in EDM[8].

Mandatory Properties: there are no mandatory properties for the edm:WebResource

Property	Note	Value type	Card.
dc:creator	For the creator of the web resource. If possible supply the identifier of the creator from an authority source. Repeat for multiple creators. <dc:creator xml:lang="es">Biblicoteca Nacional de España</dc:creator> or create a reference to an instance of the Agent class <dc:creator rdf:resource="http://viaf.org/viaf/147143794/"/>	literal or ref	0….n
dc:description	Use for an account or description of this digital representation <dc:description>Performance with Buccin trombone/>	literal or ref	0….n
dc:format	Use for the format of this digital representation. (Use the value "3D-PDF" if appropriate.)	literal	0….n

---

	<dc:format>image/jpeg</dc:format>	or ref	
dc:rights	Use for the name of the rights holder of this digital representation if possible or for more general rights information. Note the difference between this property and the mandatory, controlled edm:rights property below. <dc:rights> Copyright © British Library Board</dc:rights>	literal or ref	0….n
dc:source	A related resource from which the Web resource is derived in whole or in part. <dc:source>The name of the source video tape <dc:source>	literal or ref	0….n
dc:type	The nature or genre of the digital representation. Ideally the term(s) will be taken from a controlled vocabulary. dc:type should not be (strictly) identical to edm:type. <dc:type>video</dc:type> or create a reference to an instance of the Concept class <dc:type rdf:about= "http://schema.org/VideoObject" >	literal or ref	0….n
dcterms:conformsTo	An established standard to which the web resource conforms. <dcterms:conformsTo>W3C WCAG 2.0</dcterms:conformsTo> (web content accessibility guidelines).	literal or ref	0….n
dcterms:created	Date of creation of the Web resource. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). <dcterms:created>2010</dcterms:created> or create a reference to an instance of the TimeSpan class <dc:date rdf:resource="http://semium.org/time/2010"/>	literal or ref	0….n
dcterms:extent	The size or duration of the digital resource. <dcterms:extent>1h 26 min 41 sec</dcterms:extent>	literal or ref	0….n
dcterms:hasPart	A resource that is included either physically or logically in the web resource. <dcterms:hasPart rdf:resource="http://www.identifier/Part"/>	ref	0….n
dcterms:isFormatOf	Another resource that is substantially the same as the web resource but in another format.	literal	0….n

	<dcterms:isFormatOf>http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png</dcterms:isFormatOf> for a png image file of the described tiff web resource. Or as a link to a resource <dcterms:isFormatOf rdf:resource="http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png"/>	or ref	
dcterms:isPartOf	A resource in which the WebResource is physically or logically included. This property can be used for web resources that are part of a hierarchy. Hierarchies can be represented as hierarchies of ProvidedCHOs or hierarchies of web resources but not both at the same time. See the Task Force report[9] on representing hierarchical entities. <dcterms:isPartOf rdf:resource="http://data.europeana.eu/item/08701/1B0BACAA44D5A807E43D9B411C9781AAD2F96E65"/>	ref	0….n
dcterms:isReferencedBy	A related resource that references, cites, or otherwise points to the described resource. In a IIIF implementation, dcterms:isReferencedBy can be used to connect a edm:WebResource to a IIIF manifest[10] URI. <dcterms:isReferencedBy rdf:resource="http://dams.llgc.org.uk/iiif/2.0/1294670/manifest.json"/>	literal or ref	0…n
dcterms:issued	Date of formal issuance or publication of the web resource. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). <dcterms:issued>1999</dcterms:issued> or create a reference to an instance of the TimeSpan class <dcterms:issued rdf:resource="http://semium.org/time/2010"/>	literal or ref	0….n
edm:isNextInSequence	Where one CHO has several web resources, shown by multiple instances of the edm:hasView property on the ore:Aggregation this property can be used to show the sequence of the objects. Each web resource (apart from the first in the sequence) should use this property to give the URI of the preceding resource in the sequence.	ref	0….n

---

[9] https://pro.europeana.eu/project/hierarchical-objects

[10] The manifest resource represents a single object and intellectual work or works embodied within that object http://iiif.io/api/presentation/2.0/#manifest

	<edm:isNextInSequence rdf:resource="http://data.europeana.eu/item 2020601/9A3907CB46B651DE91621933ECC31EC1DC52B33C"/> links to the web resource for page 2 of a digitised diary from the WebResource for page 3.		
edm:rights	The value in this element will indicate the copyright, usage and access rights that apply to this digital representation. It is **strongly recommended** that a value is supplied for this property for each instance of a web resource. The rights statement specified at the level of the web resource will 'override' the statement specified at the level of the aggregation. The value in this element is a URI taken from the set of those defined for use in Europeana. A list of these can be found at https://pro.europeana.eu/available-rights-statements. **Note:** rights statements must be exactly as specified there, which means in many cases that they must start with http and not https. <edm:rights rdf:resource="http://creativecommons.org/publicdomain/mark/1.0/"/> <edm:rights rdf:resource="http://rightsstatements.org/vocab/InC/1.0/"/> Or create a reference to an instance of the cc:License class where additional details of the rights can be provided (such as an expiry date for the restrictions): http://rightsstatements.org/vocab/NoC-NC/1.0/ or <edm:rights rdf:resource="#statement_3000095353971"/>	ref	0….1
owl:sameAs	Provide the URI of another web representation of the same resource. <owl:sameAs rdf:resource="urn:soundcloud:150424305"	ref	0….n

4.3   Properties for the aggregation (ore:Aggregation)

These are the properties that can be used for the class of **ore:Aggregation**.   This means that they are attributes that apply to the whole set of related resources about one particular provided CHO. For each ore:Aggregation a set of these properties should be provided.

Mandatory Properties for the Aggregation:

edm:dataProvider

edm:isShownAt **or** edm:isShownBy – but using both is recommended!

edm:provider

edm:rights

edm:aggregatedCHO

edm:ugc (if applicable)

Property	Note	Value type	Card.
edm:aggregatedCHO	The identifier of the source object e.g. the Mona Lisa itself. This could be a full linked open data URI or an internal identifier. <edm:aggregatedCHO rdf resource="#UEDIN:214"/>	ref	1….1
edm:dataProvider	The name or identifier of the data provider of the object (i.e. the organisation providing data to an aggregator). Identifiers will not be available until Europeana has implemented its **Organization profile**[11]. In the case of the data provider Zuidwestbrabants Museum, which delivers data through Erfgoedplus.be to LoCloud, the properties would look like this: <edm:dataProvider>Zuidwestbrabants Museum</edm:dataProvider> <edm:intermediateProvider>Erfgoedplus.be</edm:intermediateProvider> <edm:provider>LoCloud</edm:provider>	literal or ref	1….1
edm:hasView	The URL of a web resource which is a digital representation of the CHO. This may be the source object itself in the case of a born digital cultural heritage object.	ref	0….n

---

[11] https://pro.europeana.eu/page/edm-profiles

	edm:hasView should only be used where there are several views of the CHO and one (or both) of the mandatory edm:isShownAt or edm:isShownBy properties have already been used. It is for cases where one CHO has several views of the same object. (e.g. a shoe and a detail of the label of the shoe) <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg"/> <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3"/>		
edm:isShownAt	The URL of a web view of the object in full information context. An edm:isShownAt **must** be provided. If there is no edm:isShownAt for an object, there must be a edm:isShownBy. If both are available, provide both The use of edm:isShownBy is preferred. <edm:isShownAt rdf:resource="http://www.mimo-db.eu/UEDIN/214"/>	ref	0….1
edm:isShownBy	The URL of a web view of the object. An edm:isShownBy **must** be provided. If there is no edm:isShownBy for an object, there must be a edm:isShownAt. The use of edm:isShownBy is preferred. Europeana generates previews for any direct link to an image file. See **Europeana Portal Image Guidelines**[12] for information regarding the specifications of previews. <edm:isShownBy rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>	ref	0….1
edm:object	The URL of a representation of the CHO which will be used for generating previews for use in the Europeana portal. This may be the same URL as edm:isShownBy. See **Europeana Portal Image Guidelines** for information regarding the specifications of previews. This must be an image, even if it is for a sound object. <edm:object rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>	ref	0….1
edm:provider	The name or identifier of the provider of the object (i.e. the organisation providing data directly to Europeana). Identifiers will not be available until Europeana has implemented its **Organization profile**.	literal or ref	1….1

---

[12] https://pro.europeana.eu/post/europeana-media-policy

	In the case of the provider LoCloud, which collects data from the data provider Zuidwestbrabants Museum through Erfgoedplus.be, the properties would look like this: <edm:dataProvider>Zuidwestbrabants Museum</edm:dataProvider> <edm:intermediateProvider>Erfgoedplus.be</edm:intermediateProvider><edm:provider>LoCloud</edm:provider> <edm:provider>LoCloud</edm:provider>		
dc:rights	Ideally this should be applied to the edm:WebResource or the edm:ProvidedCHO. It is included here for the conversion of data from ESE where it is not known which object the rights apply to.	literal	0….n
edm:rights	This is a **mandatory** property and the value given here should be the rights statement that applies to the digital representation as given (for example) in edm:object or edm:isShownAt/By, when these resources are not provided with their own edm:rights (see edm:rights documentation). The value for the rights statement in this element is a URI taken from the set of those defined for use in Europeana at http://pro.europeana.eu/available-rights-statements. **Note:** rights statements must be exactly as specified there, which means in many cases that they must start with http and not https. The rights statement given in this property will also by default apply to the previews used in the portal and will support portal search and display functionality. Where there are several web resources attached to one edm:ProvidedCHO the rights statement given here will be regarded as the "reference" value for all the web resources. Therefore a suitable value should be chosen with care if the rights statements vary between different resources. In fact in such cases Europeana encourages the provision of separate rights statements for each individual web resource. For example, a low-resolution of a JPEG file could be CC-BY, while the high resolution version or a video showing the object would be CC-BY-NC. In such cases the rights statements given for the individual web resources would 'override' the one specified at the ore:Aggregation level. Any other associated web resources would still be governed by the edm:rights of the ore:Aggregation.	ref	1….1

	<edm:rights rdf:resource="http://creativecommons.org/publicdomain/mark/1.0/"/> <edm:rights rdf:resource="http://rightsstatements.org/vocab/InC/1.0/"/> Or create a reference to an instance of the cc:License class where additional details of the rights can be provided (such as an expiry date for the restrictions): http://rightsstatements.org/vocab/NoC-NC/1.0/ or <edm:rights rdf:resource="#statement_3000095353971"/>		
edm:ugc	This is a mandatory property for objects that are user generated or user created that have been collected by crowdsourcing or project activity. The property is used to identify such content and can only take the value "true" (lower case). <edm:ugc>true<edm:ugc>	literal	0….1
edm:intermediateProvider	The name or identifier of the intermediate organization that selects, collates, or curates data from a Data Provider that is then aggregated by a Provider from which Europeana harvests. The Intermediate Provider must be distinct from both the Data Provider and the Provider in the data supply chain. Identifiers will not be available until Europeana has implemented its **Organization profile**. In the case of the Erfgoedplus.be, which collects data from Zuidwestbrabants Museum and provides it to LoCloud, the properties would look like this: <edm:dataProvider>Zuidwestbrabants Museum</edm:dataProvider> <edm:provider>LoCloud</edm:provider> <edm:intermediateProvider>Erfgoedplus.be</edm:intermediateProvider>	literal or ref	0…n

5 The Contextual Classes

The contextual classes of edm:Agent, edm:Place, edm:TimeSpan and skos:Concept are provided to allow these entities to be modelled as separate entities from the CHO with their own properties if the data can support such treatment.

When source metadata contains additional details about an entity that is distinct from the CHO (for instance, the date of birth for an author, different language versions of a subject term) then these contextual classes can be employed to model that separate entity. Such values are properties of that separate entity, rather than a property of the CHO and the properties can be mapped by creation of an appropriate EDM contextual entity. This may be the case where the value in the property is an identifier taken from a thesaurus or authority file which will link to further information related to that entity. For example, the identifier for an Author name in an authority file will give access to fuller information about that Author.

5.1 Properties for an Agent (edm:Agent)

The class edm:Agent comprises people, either individually or in groups, who have the potential to perform intentional actions for which they can be held responsible.

Note: the base domain/namespace for the rdaGr2 properties has been changed by the RDA governing bodies. A redirect will be implemented and a mapping has been provided[13]. The mapping is shown in Annex B.

Property	Note	Value type	Card.
skos:prefLabel	The preferred form of the name of the agent. Although the maximum number of occurrences is set at 1, it can be interpreted as 1 per language tag. At least one skos:prefLabel **SHOULD** be provided. Several prefLabels with languages tags are strongly recommended for language variants and translations. <skos:prefLabel xml:lang="fr">Courtois neveu aîné</skos:prefLabel> <skos:prefLabel xml:lang="en">Courtois'eldest nephew</skos:prefLabel>	literal	0…1
skos:altLabel	Alternative forms of the name of the agent. **This is a recommended property for this class.**	literal	0….n

---

[13] Gordon Dunsire, Chair, Joint Steering Committee for Development of RDA

	<skos:altLabel xml:lang="en">Courtois</skos:altLabel> <skos:altLabel xml:lang="fr">Augte. Courtois aîné</skos:altLabel>		
skos:note	A note about the agent e.g. biographical notes. <skos:note> Courtois neveu aîné started a company of the same name manufacturing brass instruments in Paris in 1803</skos:note>	literal	0….n
dc:date	A significant date associated with the Agent. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). <dc:date>1803</dc:date/>	literal or ref	0….n
dc:identifier	An identifier of the agent. <dc:identifier>http://viaf.org/viaf/96994048</dc:identifier>	literal	0….n
dcterms:hasPart	Reference to an Agent that is part of the Agent being described (e.g. a part of a corporation). <dcterms:hasPart rdf:resource="http://identifier/partOfCorporation/">	ref	0….n
dcterms:isPartOf	Reference to an agent that the described agent is part of. <dcterms:isPartOf rdf:resource="http://identifier/parentCorporation/">	ref	0….n
edm:begin*	The date the agent was born/established. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). <edm:begin>1795</edm:begin>	literal	0….1
edm:end*	The date the agent died/terminated. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). <edm:end>1885</edm:end>	literal	0….1
edm:hasMet	Reference to another entity which the agent has "met" in a broad sense. For example a reference to a Place class <edm:hasMet rdf:resource="http://sws.geonames.org/6620265/">	ref	0….n
edm:isRelatedTo	Reference to other entities, particularly other agents, with whom the agent is related in a generic sense. <edm:isRelatedTo rdf:resource="http://identifier/relatedAgent/">	ref	0….n

foaf:name	The name of the agent as a simple textual string. <foaf:name>Auguste Courtois</foaf:name>	literal	0….n
rdaGr2:biographicalInformation	Information pertaining to the life or history of the agent. <rdaGr2:biographicalInformation>Courtois neveu aîné started a company of the same name manufacturing brass instruments in Paris in 1803</rdaGr2:biographicalInformation>	literal	0….n
rdaGr2:dateOfBirth	The date the agent (person) was born. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). **This is a recommended property for this class.** <rdaGr2:dateOfBirth>1795</rdaGr2:dateOfBirth>	literal	0….1
rdaGr2:dateOfDeath	The date the agent (person) died. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). **This is a recommended property for this class.** <rdaGr2:dateOfDeath>1895</rdaGr2:dateOfDeath>	literal	0….1
rdaGr2:dateOfEstablishment	The date on which the agent (corporate body) was established or founded. <rdaGr2:dateOfEstablishment>1795</rdaGr2:dateOfEstablishment>	literal	0….1
rdaGr2:dateOfTermination	The date on which the agent (corporate body) was terminated or dissolved. <rdaGr2:dateOfTermination>1895</rdaGr2:dateOfTermination>	literal	0….1
rdaGr2:gender	The gender with which the agent identifies. < rdaGr2:gender>Female</rdaGr2:gender>	literal	0….1
rdaGr2:placeOfBirth	The town, city, province, state, and/or country in which a person was born. <rdaGr2:placeOfBirth>Lusaka, Northern Rhodesia</rdaGr2:placeOfBirth> <rdaGr2:placeOfBirth rdf:resource="http://sws.geonames.org/909137/"/>	literal or ref	0….1
rdaGr2:placeOfDeath	The town, city, province, state, and/or country in which a person died. <rdaGr2:placeOfDeath>London, United Kingdom</rdaGr2:placeOfDeath> <rdaGr2:placeOfDeath rdf:resource="http://sws.geonames.org/2635167/"/>	literal or ref	0….1
rdaGr2:professionOrOccupation	The profession or occupation in which the agent works or has worked. <rdaGr2:professionOrOccupation>Instrument Maker</rdaGr2:professionOrOccupation>	literal or ref	0….n

Property	Note	Value type	Card.
owl:sameAs	Another URI of the same agent. <owl:sameAs rdf:resource="http://www.identifier/sameResourceElsewhere"/>	ref	0….n

*Generic "begin" and "end" properties are being used to indicate start date and end date generically for edm:Agent and edm:TimeSpan. For edm:Agent this can be interpreted and birth and death dates.

5.2 Properties for a Place (edm:Place)

A spatial location identified by the provider and named according to some vocabulary or local convention.

Property	Note	Value type	Card.
wgs84_pos:lat	The latitude of a spatial thing (decimal degrees). **This is a recommended property for this class.** <wgs84_pos:lat>51.5075</wgs84_pos:lat>	Floating point[14]	0….1
wgs84_pos:long	The longitude of a spatial thing (decimal degrees). **This is a recommended property for this class.** <wgs84_pos:long>-0.1231</wgs84_pos:long>	Floating point[14]	0….1
wgs84_pos:alt	The altitude of a spatial thing (decimal metres above the reference) <wgs84_pos:alt>21</wgs84_pos:alt>	Floating point [14]	0….1
skos:prefLabel	The preferred form of the name of the place. Although the maximum number of occurrences is set at 1, it can be interpreted as 1 per language tag. At least one skos:prefLabel **SHOULD** be provided. Several prefLabels with languages tags are strongly recommended for language variants and translations. <skos:prefLabel xml:lang="en">London</skos:prefLabel>	literal	0….1
skos:altLabel	Alternative forms of the name of the place. <skos:altLabel xml:lang="en">Greater London</skos:altLabel>	literal	0….n

---

[14] See http://www.w3.org/TR/xmlschema-2/#decimal or http://books.xmlschemata.org/relaxng/ch19-77057.html

skos:note	Information relating to the place. <skos:note xml:lang="en">Pop. 21m</skos:note>	literal	0....n
dcterms:hasPart	Reference to a place that is part of the place being described. <dcterms:hasPart rdf:resource="http://sws.geonames.org/2643741/"/> (City of London)	ref	0....n
dcterms:isPartOf	Reference to a place that the described place is part of. <dcterms:isPartOf rdf:resource="http://sws.geonames.org/2635167/"/> (United Kingdom)	ref	0....n
edm:isNextInSequence	Can be used to represent a sequence of Place entities over time e.g. the historical layers of the city of Troy. Use this for objects that are part of a hierarchy or sequence to ensure correct display in the portal.	ref	0....n
owl:sameAs	URI of a Place <owl:sameAs rdf:resource="http://sws.geonames.org/2635167/"/>(London)	ref	0....n

5.3 Properties for a Timespan or Period (edm:TimeSpan)

A period of time having a beginning, an end and a duration. There is a difference between timespans as chronological values (where different skos:prefLabel can be used, e.g., "3200BC" is written "3200AC" is some languages, and all variants for "20th century") and historical timespans (e.g. "Bronze Age", "Middle Age") . edm:TimeSpan is **not** recommended for the latter.

Property	Note	Value type	Card.
skos:prefLabel	The preferred form of the name of the timespan or period. Although the maximum number of occurrences is set at 1, it can be interpreted as 1 per language tag. At least one skos:prefLabel **SHOULD** be provided. Several prefLabels with languages tags are strongly recommended for language variants and translations. <skos:prefLabel xml:lang="en">Roman Empire</skos:prefLabel>	literal	0....1
skos:altLabel	Alternative forms of the name of the timespan or period.	literal	0....n

	<skos:altLabel xml:lang="fr">Empire romain (27 avant J.-C.-476 après J.-C.)</skos:altLabel >		
skos:note	Information relating to the timespan or period. <skos:note>The **Roman Empire** (Latin: *Imperium Romanum*) was the post-Republican period of the ancient Roman civilization, characterised by an autocratic form of government and large territorial holdings around the Mediterranean in Europe, Africa, and Asia.</skos:note>	literal	0….n
dcterms:hasPart	Reference to a timespan which is part of the described timespan.	ref	0….n
dcterms:isPartOf	Reference to a timespan of which the described timespan is a part.	ref	0….n
edm:begin	The date the timespan started. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). **Providing edm:begin in combination with edm:end is recommended for this class.** <edm:begin>27 BC</edm:begin>	literal	0….1
edm:end	The date the timespan finished. Europeana recommends date conforming to ISO 8601 starting with the year and with hyphens (YYYY-MMDD). **Providing edm:end in combination with edm:begin is recommended for this class.** <edm:end>476 AD</edm:end>	literal	0….1
edm:isNextInSequence	Can be used to represent a sequence of Time periods. Use this for objects that are part of a hierarchy or sequence to ensure correct display in the portal. <edm:isNextInSequence rdf:resource="http://semium.org/time/roman_republic"/> (The Roman Empire was preceded by the Roman Republic)	ref	0….n
owl:sameAs	The URI of a timespan <owl:sameAs rdf:resource="http://semium.org/time/roman_empire"/>	ref	0….n

5.4   Properties for a Concept (skos:Concept)

A Concept is defined as a unit of thought or meaning that comes from an organised knowledge base (such as subject terms from a thesaurus or controlled vocabulary) where URIs or local identifiers have been created to represent each concept. In the cultural heritage world there are many such controlled vocabularies such as the Library of Congress Subject Headings[15] or AAT[16].

Property	Note	Value type	Card.
skos:prefLabel	The preferred form of the name of the concept. Although the maximum number of occurrences is set at 1, it can be interpreted as 1 per language tag. At least one skos:prefLabel **SHOULD** be provided. Several prefLabels with languages tags are strongly recommended for language variants and translations. <skos:prefLabel xml:lang="fr">Buccin</skos:prefLabel> <skos:prefLabel xml:lang="de">Buccin</skos:prefLabel> <skos:prefLabel xml:lang="nl">Buccin</skos:prefLabel>	literal	0….1
skos:altLabel	Alternative forms of the name of the concept. **Recommended** unless several prefLabel are already given with different language tags (altLabel is not suitable for translations of prefLabel). <skos:altLabel xml:lang="en">Buccin</skos:altLabel>	literal	0….n
skos:broader	The identifier of a broader concept in the same thesaurus or controlled vocabulary. <skos:broader rdf:resource="http://www.mimo-db.eu/InstrumentsKeywords/4369_1"/>	ref	0….n
skos:narrower	The identifier of a narrower concept. <skos:narrower rdf:resource="http://narrower.term/"/>	ref	0….n
skos:related	The identifier of a related concept <skos:related rdf:resource="http://related.term/"/	ref	0….n

---

[15]http://id.loc.gov/authorities/subjects.html
[16]http://www.getty.edu/research/tools/vocabularies/aat/index.html

skos:broadMatch skos:narrowMatch skos:relatedMatch	The identifier of a broader, narrower or related matching concepts from other concept schemes. <skos:broadMatch rdf:resource="http://broadMatch.term/"/> <skos:narrowMatch rdf:resource="http://narrowMatch.term/"/> <skos:relatedMatch rdf:resource="http://relatedMatch.term/"/>	ref	0….n
skos:exactMatch skos:closeMatch	The identifier of close or exactly matching concepts from other concept schemes. <skos:exactMatch rdf:resource="http://exactMatch.term/"/> <skos:closeMatch rdf:resource="http://closeMatch.term/"/>	ref	0….n
skos:note	Information relating to the concept. <skos:note>The buccin is a visually distinctive trombone popularized in military bands in France between 1810–1845 which subsequently faded into obscurity.</skos:note>	literal	0….n
skos:notation	The notation in which the concept is represented. This may not be words in natural language for some knowledge organisation systems e.g. algebra <skos:notation rdf:datatype="http://www.w3.org/2001/XMLSchema#int">123</skos:notation>	string (+ rdf: datatype attribute)	0….n
skos:inScheme	The URI of a concept scheme	ref	0….n

5.5   Properties for a License (cc:License)

Mandatory Properties for the cc:License:
odrl:inheritFrom

odrl:inheritFrom	ID of a base rights statement from which the described License is derived. This value must come for a list of statements controlled by Europeana. <odrl:inheritFrom rdf:resource="http://rightsstatements.org/vocab/NoC-NC/1.0/"/>	ref	1….1
cc:deprecatedOn	The date that the license expires, as it has been described, which implies among other things the	Literal	0….1

| | | expiration of the restrictions specified by the license.
<cc:deprecatedOn rdf:datatype="http://www.w3.org/2001/XMLSchema-datatypes#date">2029-06-01 </cc:deprecatedOn> | expressed as an XML date type | |

cc:License is a new class in EDM so it does not appear in the example MIMO data shown in the annexes. An example is given here instead.

In the metadata for the edm:WebResource there will be an edm:rights statement with the identifier of the cc:License class. This will form the link to the cc:License resource.

```
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg">
    <edm:rights rdf:resource="#statement_3000095353971"/>
</edm:WebResource>

<cc:License rdf:about="#statement_3000095353971"/>
    <odrl:inheritFrom rdf:resource="http://rightsstatements.org/vocab/NoC-NC/1.0/"/>
    <cc:deprecatedOn rdf:datatype="http://www.w3.org/2001/XMLSchema-datatypes#date">2029-06-01 </cc:deprecatedOn>
</cc:License>
```

```
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg">
 <edm:rights rdf:resource="#statement_3000095353971"/>
</edm:WebResource>

<cc:License rdf:about="#statement_3000095353971"/>
 <odrl:inheritFrom rdf:resource="http://rightsstatements.org/vocab/NoC-NC/1.0/"/>
 <cc:deprecatedOn rdf:datatype="http://www.w3.org/2001/XMLSchema-datatypes#date">2029-06-01 </cc:deprecatedOn>
</cc:License>
```

6 An example of a record mapped to EDM classes

In this section a record is used to show how the EDM properties are distributed across three EDM core classes and two conceptual classes.

This example is a description of a Buccin trombone which has a stand-alone digital image and can also be seen embedded in a video and be heard in a sound recording.

Figure 1
Title: Buccin trombone Nominal pitch: B?[17]
Data Provider: University of Edinburgh
Rights:
http://creativecommons.org/licenses/by-nc-sa/3.0/

6.1 Original data

The original metadata for this example is presented in LIDO[18] format in Annex A, followed by its EDM XML representation.

6.2 Mapped data

Each of the classes created from the example data are shown as a section of RDF/XML and a diagram. The source LIDO data in given in the Annex, followed by the full record of mapped data.

Note: all resources mapped in EDM should have an identifier. It could be either absolute or local. In this document absolute identifiers are clickable.

---

[17] http://www.europeana.eu/portal/record/09102/_UEDIN_214.html

[18] LIDO stands for Lightweight Information Describing Objects: http://www.lido-schema.org/schema/v1.0/lido-v1.0-specification.pdf

6.2.1 Provided CHO

In the original LIDO record, these properties can be found in the set related to the descriptive metadata allowing the identification of the object. These properties only describe the Cultural Heritage Object provided to Europeana, in this case a musical instrument.

```
<edm:ProvidedCHO rdf:about="#UEDIN:214">
 <dc:date>Circa 1840</dc:date>
 <dc:description xml:lang="fr">Technical description: Brass; ligature fitting on bell
section at joint; stockings on main slides. Bell with one coil, angled to face forwards.
Repair History: Main slide possibly not original (tenon of slide section of joint is
tapered, bell section joint for cylindrical tenon).</dc:description>
 <dc:identifier>#UEDIN:214</dc:identifier>
 <dcterms:spatial rdf:resource="http://sws.geonames.org/3017382/" />
 <dc:title xml:lang="fr">Buccin trombone. Nominal pitch: B?.</dc:title>
 <dc:type rdf:resource="http://www.mimo-db.eu/InstrumentsKeywords/4378"/>
 <dc:type rdf:resource="http://www.mimo-db.eu/HornbostelAndSachs/356"/>
 <edm:type>IMAGE</edm:type>
</edm:ProvidedCHO>
```
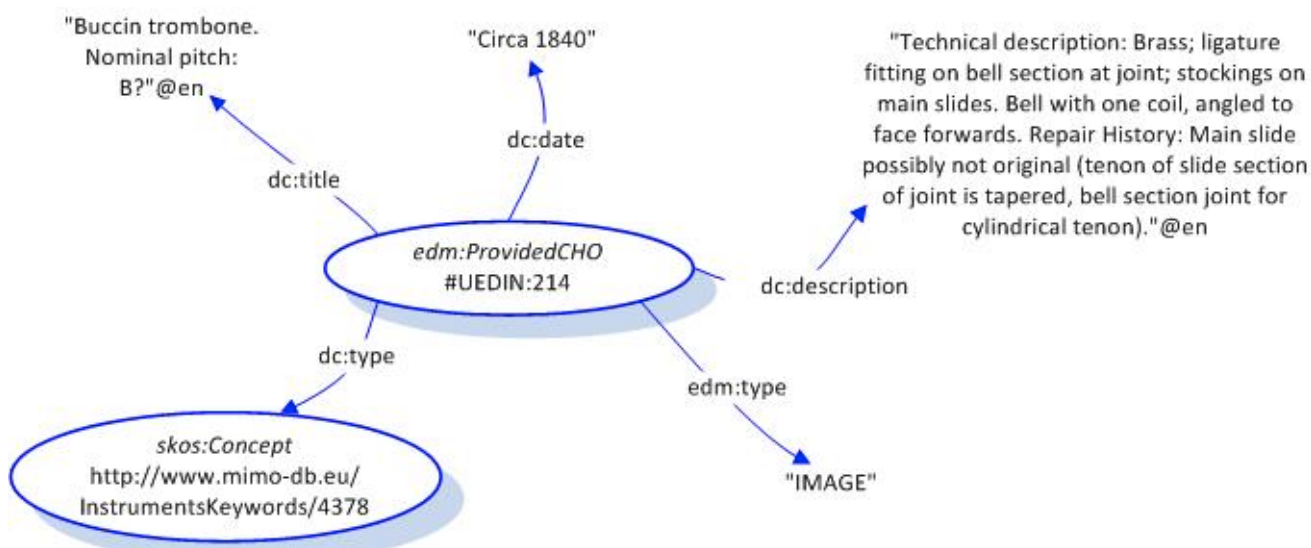

Figure 3. Provided CHO (Not all properties are shown for readability)

6.2.2 Web Resource

In this example, the cultural heritage object is provided with three different digital representations. This musical instrument has a stand-alone digital image but can also be seen embedded in a video and be heard in a sound recording. This situation results in the creation of three different WebResources pointing to a different type of resources: Image (jpeg), video (mpg) and sound recording (mp3).

```
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg">
 <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3">
 <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg">
 <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
```

Figure 4. Three Web Resources

6.2.3 Aggregation

In the original LIDO record, these properties can be found in the set related to the administrative metadata. In our example, the musical instrument has been provided to Europeana by a specific provider: MIMO – Musical Instrument Museums Online. Additional properties have been added to describe the delivery made to Europeana which gathered every information related to the Cultural Heritage Object. This package of information is embedded in an aggregation.

```
<ore:Aggregation rdf:about="http://www.mimo-db.eu/UEDIN/214">
 <edm:aggregatedCHO rdf:resource="#UEDIN:214"/>
 <edm:dataProvider>University of Edinburgh</edm:dataProvider>
 <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg"/>
 <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3"/>
 <edm:isShownAt                   rdf:resource="                     http://www.mimo-
db.eu/MIMO/infodoc/ged/view.aspx?eid=OAI_IMAGE_PROJECTS_LIB_ED_AC_UK_10683_17533"/>
 <edm:isShownBy rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>
 <edm:object rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>
 <edm:provider>MIMO - Musical Instrument Museums Online</edm:provider>
 <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</ore:Aggregation>
```
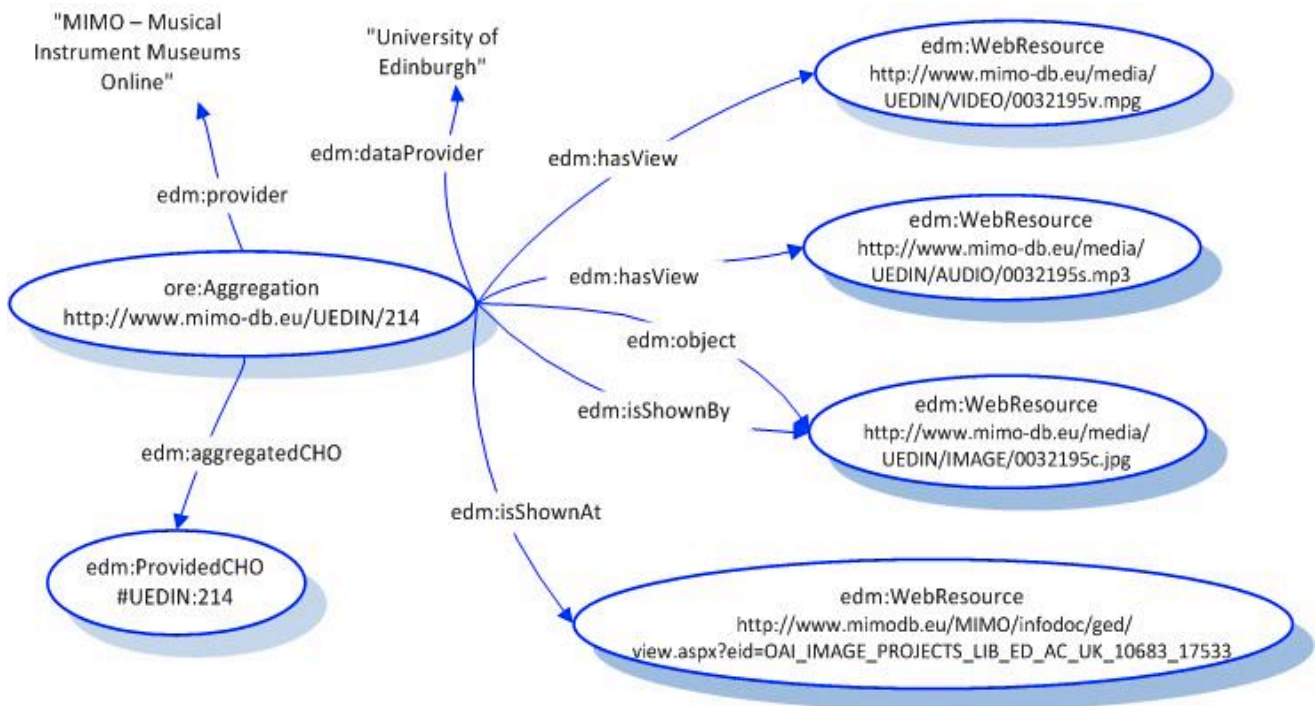

Figure 5. The Aggregation

6.2.4 Contextual Classes

In this example instead of linking data directly to the edm:ProvidedCHO it is possible to create separate nodes for Concept and Place. The original data contained identifiers for two Concepts taken from controlled vocabularies – the MIMO instrument keywords vocabulary and the Hornbostel-Sachs musical classification system. Similarly, there is an identifier for the Place taken from GeoNames[19]. Both of these are shown using SKOS[20].

```
<edm:Place rdf:about="http://sws.geonames.org/3017382/"/>
 <skos:preflabel xml:lang="en">France</skos:prefLabel>
 <wgs84_pos:lat>47.0000</wgs84_pos:lat>
 <wgs84_pos:long>2.00</wgs84_pos:long>
</edm:Place>

<skos:Concept rdf:about="http://www.mimo-db.eu/InstrumentsKeywords/4378">
 <skos:prefLabel xml:lang="en">Buccin</skos:prefLabel>
</skos:Concept>

<skos:Concept rdf:about="http://www.mimo-db.eu/HornbostelAndSachs/356">
 <skos:prefLabel xml:lang="en">423.22 Labrosones with slides</skos:prefLabel>
</skos:Concept>
```
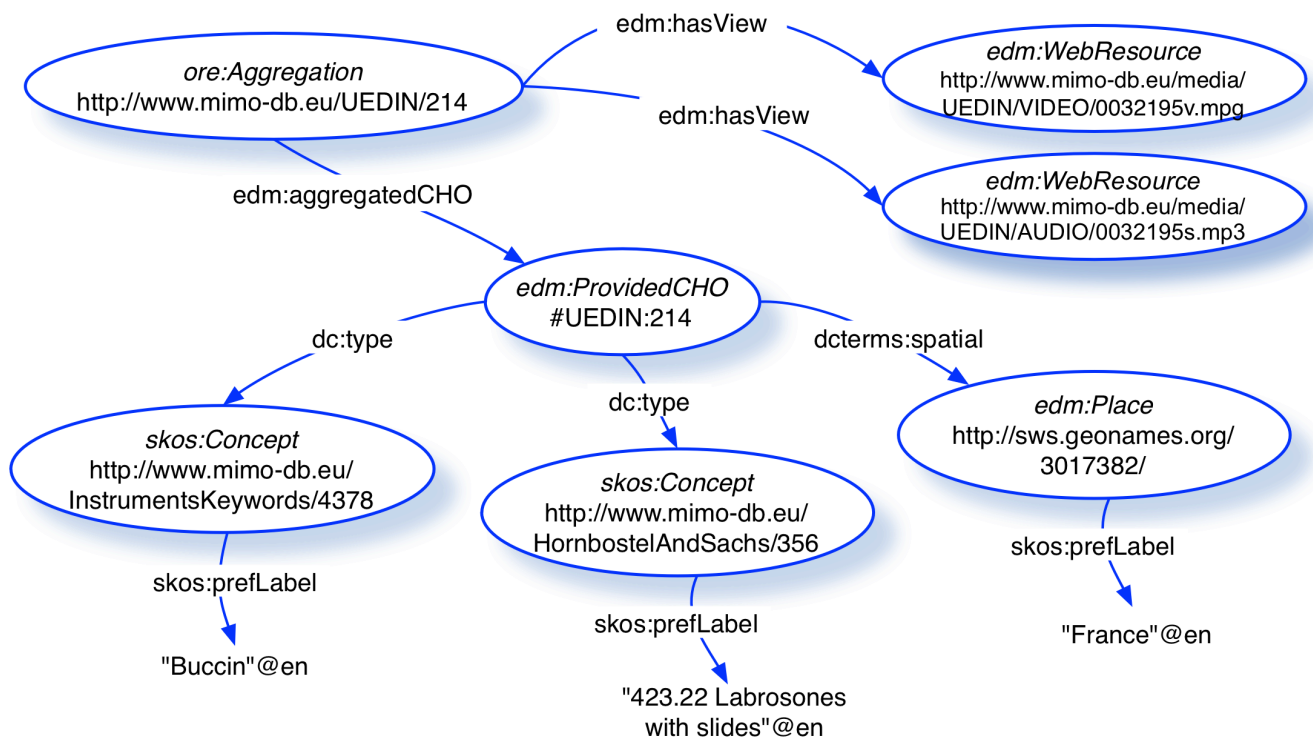

Figure 6. Contextual resources

[19] http://www.geonames.org/
[20] Specifications are available at http://www.w3.org/2004/02/skos/

7 Anomalies

- The specification in EDM v5.2.4 for edm:dataProvider and edm:provider is that they have a range of edm:Agent. For the time being we allow these values to be simple literals.
- Some properties are specified by DCMI to have only non-literal values but EDM allows literals. This is inherited from ESE and must to continue for the time being. A solution would be to "dumb-down" such properties to their original dc super-property as the original dc properties (v1.1) still allow literals. For example, all the DC properties that are sub-properties of dc:relation (e.g. dcterms:isVersionOf) would be mapped to dc:relation if the values were literals. This would entail considerable semantic loss however.
- Definition of edm:hasType in EDM v5.2.4 implies that it is for "What" questions in the portal by acting as an umbrella super-property for dc:type and format (and possibly others). It therefore has the domain of Europeana CHOs and range of Concepts. It has however also been included in the edm:Event class to allow the typing of Event entities

8 Annex A – XML source of the example

The first section shows the original data provided in LIDO format[21]. The second shows the data in EDM after mapping and conversion.

Original data in LIDO format (some empty elements removed)

```
<lido>
 <lidoRecID type="local">UEDIN:214</lidoRecID>
 <descriptiveMetadata xml:lang="en">
  <objectClassificationWrap>
   <objectWorkTypeWrap>
    <objectWorkType>
     <term>musical instruments</term>
    </objectWorkType>
   </objectWorkTypeWrap>
   <classificationWrap>
    <classification>
     <term>Buccin.</term>
    </classification>
    <classification>
     <conceptID type="SH_Class">423.22</conceptID>
    </classification>
    <classification type="InstrumentsKeywordsPivot">
     <conceptID type="URI">http://www.mimo-db.eu/InstrumentsKeywords/4378</conceptID>
     <term label="Instrument class">Buccin</term>
    </classification>
    <classification type="InstrumentsKeywords">
     <conceptID type="URI">http://www.mimo-db.eu/InstrumentsKeywords/4378_1</conceptID>
     <term label="Instrument class" xml:lang="en">Buccin</term>
    </classification>
    <classification type="HornbostelSachsClass">
     <conceptID type="URI">http://www.mimo-db.eu/HornbostelAndSachs/356</conceptID>
     <term label="Hornbostel-Sachs class" xml:lang="en">423.22 Labrosones with slides</term>
    </classification>
   </classificationWrap>
  </objectClassificationWrap>
  <objectIdentificationWrap>
   <titleWrap>
    <titleSet>
     <appellationValue pref="preferred">Buccin trombone. Nominal pitch: B?.</appellationValue>
    </titleSet>
   </titleWrap>
   <repositoryWrap>
    <repositorySet type="current">
     <repositoryName>
      <legalBodyName>
```

---

[21]Specifications available at:http://www.lido-schema.org/schema/v1.0/lido-v1.0-schema-listing.html

```xml
      <appellationValue>University of Edinburgh</appellationValue>
     </legalBodyName>
    </repositoryName>
   </repositorySet>
  </repositoryWrap>
  <objectDescriptionWrap>
  <objectDescriptionSet>
   <descriptiveNoteValue>Technical description: Brass; ligature fitting on bell section at joint; stockings on main slides.
Bell with one coil, angled to face forwards. Repair History: Main slide possibly not original (tenon of slide section of joint
is tapered, bell section joint for cylindrical tenon).</descriptiveNoteValue>
   </objectDescriptionSet>
  </objectDescriptionWrap>
  <objectMeasurementsWrap>
  <objectMeasurementsSet>
  <displayObjectMeasurements>1200.</displayObjectMeasurements>
  </objectMeasurementsSet>
  </objectMeasurementsWrap>
 </objectIdentificationWrap>
 <eventWrap>
 <eventSet>
 <event>
 <eventType>
  <term xml:lang="en">production</term>
 </eventType>
 <eventActor>
  <actorInRole>
   <actor>
    <nameActorSet>
     <appellationValue xml:lang="en"/>
    </nameActorSet>
   </actor>
   <roleActor>
    <term xml:lang="en">instrument maker</term>
   </roleActor>
  </actorInRole>
 </eventActor>
 <eventActor>
  <displayActorInRole>Probably to be identified with the `Trombone with snake's head' purchased by Professor John
Donaldson for the Music Classroom, University of Edinburgh, from Thomas Glen, 2 North Bank Street 20 August 1857 for
&#xA3;1/5/-.</displayActorInRole>
  <actorInRole>
   <actor>
    <nameActorSet>
     <appellationValue xml:lang="en">Probably to be identified with the `Trombone with snake's head' purchased by
Professor John Donaldson for the Music Classroom, University of Edinburgh, from Thomas Glen, 2 North Bank Street 20
August 1857 for &#xA3;1/5/-.</appellationValue>
    </nameActorSet>
   </actor>
   <roleActor>
    <term xml:lang="en">provenance</term>
   </roleActor>
  </actorInRole>
 </eventActor>
```

```xml
    <eventDate>
     <displayDate xml:lang="en">Circa 1840</displayDate>
    </eventDate>
    <eventPlace>
     <placeID type="geonames">http://www.geonames.org/3017382</placeID>
     <namePlaceSet>
      <appellationValue xml:lang="fr">FRANCE</appellationValue>
     </namePlaceSet>
    </eventPlace>
   </event>
  </eventSet>
 </eventWrap>
</descriptiveMetadata>
<administrativeMetadata xml:lang="en">
 <recordWrap>
  <recordID type="local"/>
  <recordType>
   <term>item</term>
  </recordType>
  <recordSource>
   <legalBodyID source="http://www.mimo-db.eu/DataProviders/5" type="local">UEDIN</legalBodyID>
   <legalBodyName>
    <appellationValue label="Preferred Name (en)" xml:lang="en">University of Edinburgh</appellationValue>
    <appellationValue label="Preferred Name (local language)" xml:lang="en">University of Edinburgh</appellationValue>
    <appellationValue label="City">Edinburgh</appellationValue>
    <appellationValue label="Country">United Kingdom</appellationValue>
   </legalBodyName>
   <legalBodyWeblink label="OAI repository URL">http://image-projects.lib.ed.ac.uk/oai/request?verb=Identify</legalBodyWeblink>
   <legalBodyWeblink label="OAI repository set">EUCHMI</legalBodyWeblink>
  </recordSource>
  <recordRights/>
 </recordWrap>
 <resourceWrap>
  <resourceSet>
   <resourceID type="local">http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg</resourceID>
   <resourceRepresentation>
    <linkResource>
http://image-projects.lib.ed.ac.uk//bitstream/10683/17533/3/0032195v.mpg</linkResource>
   </resourceRepresentation>
   <resourceType>
    <term>VIDEO</term>
   </resourceType>
  </resourceSet>
  <resourceSet>
   <resourceID type="local">http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3</resourceID>
   <resourceRepresentation>
    <linkResource>
http://image-projects.lib.ed.ac.uk//bitstream/10683/17533/2/0032195s.mp3</linkResource>
   </resourceRepresentation>
   <resourceType>
    <term>SOUND</term>
```

```
   </resourceType>
  </resourceSet>
  <resourceSet>
   <resourceID                    pref="preferred"                    type="local">http://www.mimo-
db.eu/media/UEDIN/IMAGE/0032195c.jpg</resourceID>
   <resourceRepresentation>
    <linkResource>
http://image-projects.lib.ed.ac.uk//bitstream/10683/17533/1/0032195c.jpg</linkResource>
   </resourceRepresentation>
   <resourceType>
    <term>IMAGE</term>
   </resourceType>
  </resourceSet>
 </resourceWrap>
 </administrativeMetadata>
</lido>
```

Data in EDM after mapping conversion

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:edm="http://www.europeana.eu/schemas/edm/"
xmlns:wgs84_pos="http://www.w3.org/2003/01/geo/wgs84_pos#"
xmlns:foaf="http://xmlns.com/foaf/0.1/"
xmlns:rdaGr2="http://rdvocab.info/ElementsGr2/"
xmlns:oai="http://www.openarchives.org/OAI/2.0/"
xmlns:owl="http://www.w3.org/2002/07/owl#"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:ore="http://www.openarchives.org/ore/terms/"
xmlns:skos="http://www.w3.org/2004/02/skos/core#"
xmlns:dcterms="http://purl.org/dc/terms/">
<edm:ProvidedCHO rdf:about="#UEDIN:214">
        <dc:date>Circa 1840</dc:date>
        <dc:description>Technical description: Brass; ligature fitting on bell section at joint; stockings on main slides.
Bell with one coil, angled to face forwards. Repair History: Main slide possibly not original (tenon of slide section of joint
is tapered, bell section joint for cylindrical tenon).</dc:description>
        <dc:identifier>#UEDIN:214</dc:identifier>
        <dcterms:spatial rdf:resource="http://sws.geonames.org/3017382/"/>
        <dc:title>Buccin trombone. Nominal pitch: B?.</dc:title>
        <dc:type rdf:resource="http://www.mimo-db.eu/InstrumentsKeywords/4378"/>
        <dc:type rdf:resource="http://www.mimo-db.eu/HornbostelAndSachs/356"/>
        <edm:type>IMAGE</edm:type>
</edm:ProvidedCHO>
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg">
        <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3">
        <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
<edm:WebResource rdf:about="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg">
        <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</edm:WebResource>
```

```
<edm:Place rdf:about="http://sws.geonames.org/3017382/"/>
        <skos:prefLabel xml:lang="en">France</skos:prefLabel>
</edm:Place>
<skos:Concept rdf:about="http://www.mimo-db.eu/InstrumentsKeywords/4378">
        <skos:prefLabel xml:lang="en">Buccin</skos:prefLabel>
</skos:Concept>
<skos:Concept rdf:about="http://www.mimo-db.eu/HornbostelAndSachs/356">
        <skos:prefLabel xml:lang="en">423.22 Labrosones with slides</skos:prefLabel>
</skos:Concept>
<ore:Aggregation rdf:about="http://www.mimo-db.eu/UEDIN/214">
        <edm:aggregatedCHO rdf:resource="#UEDIN:214"/>
        <edm:dataProvider>University of Edinburgh</edm:dataProvider>
        <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/VIDEO/0032195v.mpg"/>
        <edm:hasView rdf:resource="http://www.mimo-db.eu/media/UEDIN/AUDIO/0032195s.mp3"/>
        <edm:isShownAt                        rdf:resource="                        http://www.mimo-
db.eu/MIMO/infodoc/ged/view.aspx?eid=OAI_IMAGE_PROJECTS_LIB_ED_AC_UK_10683_17533"/>
        <edm:isShownBy rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>
        <edm:object rdf:resource="http://www.mimo-db.eu/media/UEDIN/IMAGE/0032195c.jpg"/>
<edm:provider>MIMO - Musical Instrument Museums Online</edm:provider>
        <edm:rights rdf:resource="http://creativecommons.org/licenses/by-nc-sa/3.0/"/>
</ore:Aggregation>
</rdf:RDF>
```

9 Annex B – Mapping for RDA Group 2 properties

In the new namespace each property has both a canonical numeric form (as shown below) and a human readable form such as rdau:placeOfBirth. These can all be seen at http://www.rdaregistry.info/Elements/u/

Old Europeana property	New RDA property
rdaGr2:biographicalInformation	rdau:P60492
rdaGr2:dateOfBirth	rdau:P60599
rdaGr2:dateOfDeath	rdau:P60598
rdaGr2:dateOfEstablishment	rdau:P60524
rdaGr2:dateOfTermination	rdau:P60525
rdaGr2:gender	rdau:P60531
rdaGr2:professionOrOccupation	rdau:P60468
rdaGr2:placeOfBirth	rdau:P60594
rdaGr2:placeOfDeath	rdau:P60592

10 Document History

Version	Editor	Date	Comments
v2.2	Robina Clayphan	17/12/2014	**Changes since v2.1** • Several minor edits from Dan Matei • Addition of owl:sameAs to WebResource to create a lightbox track. • Addition of cc:License class and corresponding amendments to WebResource and Aggregation. • Addition of summary list of properties per class and related adjustments. • Removal of table of M and R properties • Rearrangement of place of birth and death to match schema. • Removal of edm:unstored • Retained wgs84_pos: form although schema uses only wgs84:
V2.3	Kirsten de Hoog, Valentine Charles	18/11/2016	• Several minor edits, including updates of references, layout changes • All references to Europeana rights statements replaced by statements from rightsstatements.org • Differences between mandatory and recommended properties made clearer in the summary table. • Addition of edm:isReferencedBy to edm:Webresource. • Addition of edm:intermediateProvider to ore:Aggregation as a recommended property
V2.4	Kirsten de Hoog, Valentine Charles	06/10/2017	• Inclusion of the recommendations from the Data Quality Committee o Clarifications of the conditions for mandatory elements o Language tags made recommended for most of the properties o New recommendation in dc:language for no-linguistic content o Additional data quality recommendations for contextual resources • Change of value constraints for edm:currentLocation and clarification of the property definition. • Addition of edm:type in edm:WebResource. • Change of cardinalities for rdaGr2:professionOrOccupation

11 Acknowledgements

This document is the result of the combined efforts of Robina Clayphan, Valentine Charles and Antoine Isaac. It was reviewed by Dimitra Atsidis, Francesca Morselli, Marie-Claire Dangerfield, Cecile Devarenne, Kirsten de Hoog and Go Sugimoto who suggested useful improvements. Thanks are extended to Rodolphe Bailly for providing the example MIMO data and giving his assistance, and to the members of the Data Quality Committee for their recommendations.