



Definition of the Europeana Data Model elements

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Europeana v1.0



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Disclaimer

This document and the companion EDM Definition available from the Europeana v1.0 website (<http://version1.europeana.eu/web/europeana-project/technicaldocuments/>) reflect the consensus reached in discussions in the Europeana v1.0 Work Package 3 meetings in 2009 and the first half of 2010.

These documents are complete and consistent but the model described may undergo changes as a result of testing in the prototype from August 2010 through January 2011.

It is the intention that these documents will remain stable until the end of the prototyping phase. At that time, any changes that need to be made as a result of prototyping and further discussions with technical experts and content providers will be included in the next version of the Europeana Data Model, scheduled for publication in early 2011.

Users of these documents should be aware that changes may occur between this release and that in January 2011 which are not backwardly compatible. The team will only make such changes if they are absolutely necessary. However, developers that are working with these versions will need to be able to modify their software and re-convert their data to reflect potential changes.

Please also note that, as of August 2010, the RDF schema for the namespace <http://www.europeana.eu/schemas/edm/> is not yet in place. The namespace schema will be created and updated as a result of the prototyping activities. For further information, please contact info@europeana.eu (using "EDM" as subject) or look for more technical details on the EDM Prototyping Wiki at <http://www.europeanalabs.eu/wiki/EDMPrototyping>.

Credits

The Europeana Data Model is the results of the work of many people, who interact in the context of a complex organization. This organization can be described as a series of concentric circles.

- The inmost circle includes the members of the Europeana v1.0 project, in particular the leaders of WP3 and the Europeana Office. From the Europeana Office, special thanks go to Antoine Isaac, who very actively contributed to the Europeana Data Model, also by authoring the companion document to these specifications, the Primer.
- The next circle includes the member of the twin project EuropeanaConnect, and in particular the Guus Schreiber's Web & Media group at the Free University of Amsterdam.
- The next circle includes the Europeana v1.0 core experts. Amongst the core experts, we would like to mention Martin Doerr from the museums, Michael Fingerhult from the audio-visual archives, Daniel Pitti from the archives, Emanuelle Bermes from the libraries and Herbert van de Sompel from the OpenArchivesInitiative.
- The next circle includes the Europeana v1.0 WP3 participants.
- Finally, the other projects in the Europeana group.

To all the contributors, our warmest thanks.

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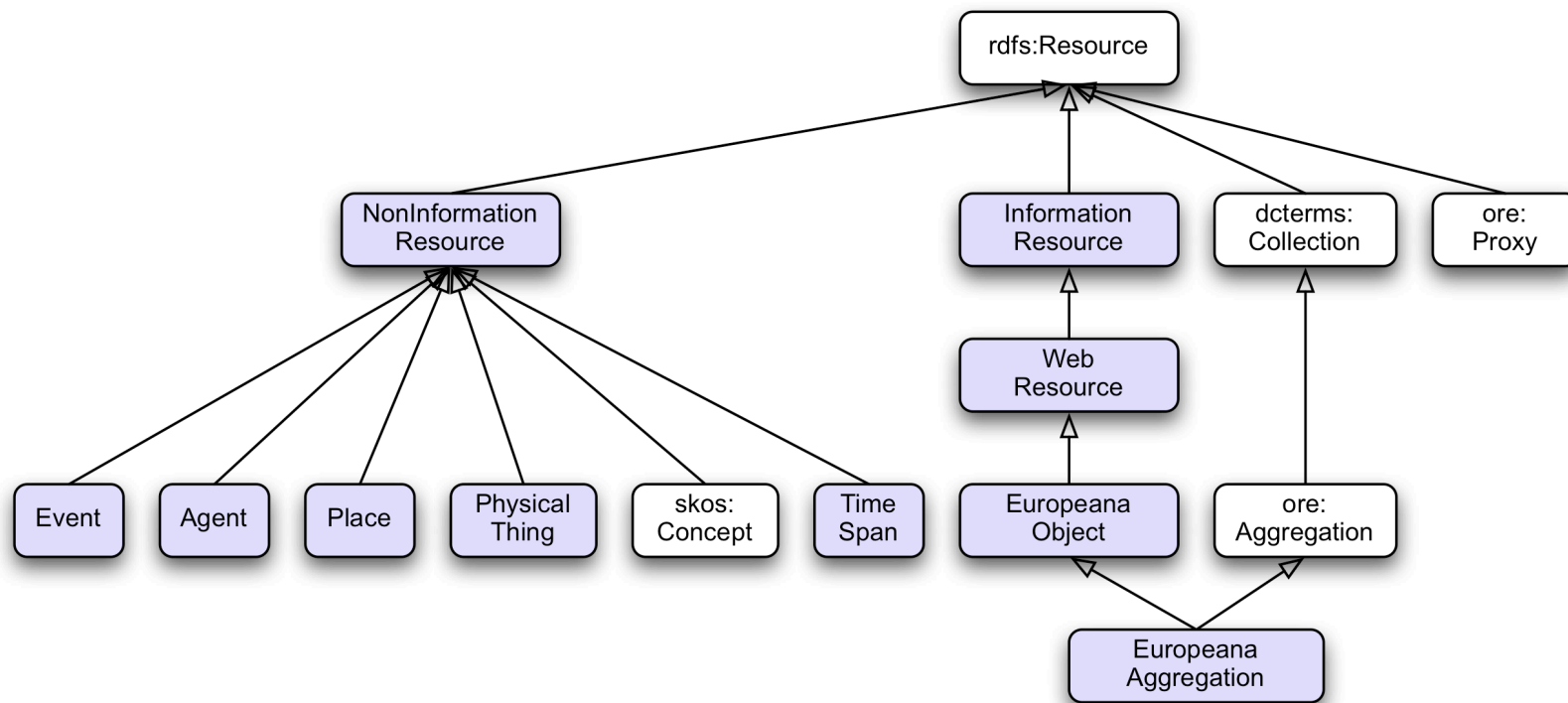


Figure 1. The EDM Class hierarchy. The classes introduced by EDM are shown in light blue rectangles. The classes in the white rectangles are re-used from other schemas; the schema is indicated before the colon.

1 Introduction

The Europeana Data Model (hereafter EDM for short) is aimed at being an integration medium for collecting, connecting and enriching the descriptions provided by Europeana content providers. As such, it may be said to include any element (i.e., class or property) found in a content provider's description. Giving an account of all these elements is clearly an impossible task, since they form an open set, *i.e.* a set that can be extended as new providers join the Europeana information space.

There is however a well-identified set of elements that EDM uses in order to carry out its task. These elements can be divided into two main categories:

1. The elements re-used from other namespaces, and
2. The elements introduced by EDM.

EDM re-uses from the following namespaces:

- The Resource Description Framework (RDF) and the RDF Schema (RDFS) namespaces (<http://www.w3.org/TR/rdf-concepts/>)
- The OAI Object Reuse and Exchange (ORE) namespace (<http://www.openarchives.org/ore>)
- The Simple Knowledge Organization System (SKOS) namespace (<http://www.w3.org/TR/skos-reference/>)
- The Dublin Core namespaces for elements (<http://purl.org/dc/elements/1.1/>, abbreviated as DC), terms (<http://purl.org/dc/terms/>, abbreviated as DCTERMS) and types (<http://purl.org/dc/dcmitype/>, abbreviated as DCMITYPE)
- The Visual Resources Association (VRA) namespace

In the sequel, the elements of EDM are presented in a formal way. Classes are introduced first, properties subsequently, both in alphabetical order, giving priority to re-used elements.

2 Classes

The EDM class hierarchy is given in Figure 1.

2.1 *Relevant classes from other namespaces*

2.1.1 ORE Aggregation

Class name: ore:Aggregation	
Namespace	ore
URI	http://www.openarchives.org/ore/terms/Aggregation
Label	
Definition	A set of related resources (Aggregated Resources), grouped together such that the set can be treated as a single resource. This is the entity described within the ORE interoperability framework by a Resource Map.
Subclass of	dcmitype:Collection

Europeana note	Aggregations are used in Europeana to represent the complex constructs that are provided by contributors. An aggregation is associated to the object that it is about, by the property <code>ens:aggregatedCHO</code>
Obligation & Occurrence	
Example	
Rationale	This class plays a central role in EDM, as it serves to group together all important elements of Cultural Heritage Objects contributed by the content providers.

2.1.2 ORE Proxy

Class name: ore:Proxy	
Namespace	ore
URI	http://www.openarchives.org/ore/terms/Proxy
Label	proxy
Definition	A Proxy is a Resource that indicates an Aggregated Resource in the context of a specific Aggregation. The type <code>ore:Proxy</code> is associated with a Resource via an assertion that describes the Aggregation that is the context of the Proxy. The URI of a Proxy then can be used in assertions specific to the Aggregated Resource in the context of that aggregation.
Subclass of	
Europeana note	Europeana uses proxies as place-holders for Cultural Heritage Objects within Aggregations (whether Europeana Aggregations or not) to the end of making assertions about the corresponding Cultural Heritage Objects while distinguishing the provenance of these assertions.
Obligation & Occurrence	
Example	
Rationale	This class is used to create aliases of Cultural Heritage Object to which a certain description is attached. This allows Europeana to keep track of provenance of descriptions.

2.1.3 RDFS Resource

Class name: rdfs:Resource	
Namespace	rdfs
URI	http://www.w3.org/2000/01/rdf-schema#Resource
Label	resource
Definition	This is the class of all resources
Subclass of	

Europeana note	
Obligation & Occurrence	
Example	Anything in the Europeana information space is an <code>rdfs:Resource</code>
Rationale	This class ties the class taxonomy up and is the domain or the range of many EDM properties

2.1.4 SKOS Concept

Class name: skos:Concept	
Namespace	skos
URI	http://www.w3.org/2004/02/skos/core/Concept
Label	concept
Definition	A SKOS concept can be viewed as an idea or notion; a unit of thought. However, what constitutes a unit of thought is subjective, and this definition is meant to be suggestive, rather than restrictive. The notion of a SKOS concept is used to refer to specific ideas or meanings established within a knowledge organization system and describe their conceptual structure.
Subclass of	
Europeana note	
Obligation & Occurrence	
Example	See the SKOS primer (http://www.w3.org/TR/skos-primer/) for examples of identifying and describing SKOS concepts.
Rationale	Concepts are used for the contextualization of resources

2.2 EDM Classes

2.2.1 Agent

Class name: Agent	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/Agent
Label	Agent
Definition	This class comprises people, either individually or in groups, who have the potential to perform intentional actions for which they can be held responsible.
Subclass of	ens:NonInformationResource
Equivalent class	E39_Actor (CIDOC CRM)

Europeana note	
Obligation & Occurrence	
Example	Leonardo da Vinci, the British Museum, W3C
Rationale	This class is a domain of <code>ens:wasPresentAt</code>

2.2.2 Europeana Aggregation

Class name: EuropeanaAggregation	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/EuropeanaAggregation
Label	Europeana aggregation
Definition	The set of resources related to a single Cultural Heritage Object that collectively represent that object in Europeana. Such set consists of: all descriptions about the object that Europeana collects from (possibly different) content providers, including thumbnails and other forms of abstractions, as well as of the description of the object Europeana builds.
Subclass of	<code>ore:Aggregation</code> , <code>ens:EuropeanaObject</code>
Europeana note	An instance of <code>EuropeanaAggregation</code> is created at ingestion time for each different Cultural Heritage Object recognized by Europeana. Such instance is associated to the Cultural Heritage Object that it is about, by the property <code>ens:aggregatedCHO</code>
Obligation & Occurrence	The relation between the Cultural Heritage Objects represented in Europeana and the instances of the class <code>EuropeanaAggregation</code> is one-to-one: every Cultural Heritage Object is represented by an instance of <code>EuropeanaAggregation</code> , and every instance of <code>EuropeanaAggregation</code> represent a Cultural Heritage Object.
Example	<ul style="list-style-type: none"> The painting Mona Lisa is a Cultural Heritage Object represented in Europeana by one <code>EuropeanaAggregation</code> instance The journal "Le Temps" is a Cultural Heritage Object represented in Europeana by one <code>EuropeanaAggregation</code> instance The 56th issue of "Le Temps" is a (different) Cultural Heritage Object represented in Europeana by another <code>EuropeanaAggregation</code> instance
Rationale	This class is used in Europeana to gather in a single conceptual unit all the information about a Cultural Heritage Object, necessary for all operations on these objects.

2.2.3 Europeana Object

Class name: EuropeanaObject	
Namespace	europaena

URI	http://www.europeana.eu/schemas/edm/EuropeanaObject
Label	Europeana object
Definition	Any object that is the result of Europeana's activities
Subclass of	ens:WebResource
Europeana note	
Obligation & Occurrence	
Example	<ul style="list-style-type: none"> • Any instance of the class EuropeanaAggregation • An annotation created by a user through the Europeana portal • Any content created by the users through the service made available by Europeana for that purpose
Rationale	This class is used as the range of ens:hasAnnotation

2.2.4 Event

Class name: Event	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/Event
Label	event
Definition	An event is a change “of states in cultural, social or physical systems, regardless of scale, brought about by a series or group of coherent physical, cultural, technological or legal phenomena” (E5 Event in CIDOC CRM) or a “set of coherent phenomena or cultural manifestations bounded in time and space” (E4 Period in CIDOC CRM)
Subclass of	ens:NonInformationResource, crm:E4_Period
Equivalent class	Event (FRBR), Temporality (ABC Harmony)
Superclass of	Activities (AAT)
Europeana note	Events are identified either by the content provider or by Europeana enrichment at ingestion time
Obligation & Occurrence	
Example	<ul style="list-style-type: none"> • the act of painting Mona Lisa • the 2nd World War • the change of custody of Mona Lisa
Rationale	This class is a domain of ens:happenedAt and the domain of ens:occurredAt

2.2.5 Information Resource

Class name: ens:InformationResource	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/InformationResource
Label	information resource
Definition	An information resource is a resource whose essential characteristics can be conveyed in a single message. It can be associated with a URI, it can have a representation, for example: a text is an InformationResource.
Subclass of	rdfs:Resource
Equivalent class	the union of IFLA Work, Expression and Manifestation, E73_Information_Object (CIDOC CRM)
Europeana note	
Obligation & Occurrence	
Example	The text of a book, a digital object, a musical score are all information resources.
Rationale	This class is the domain of ens:wasPresentAt, ens:isRepresentationOf, and the range of ens:realizes

2.2.6 Non-Information Resource

Class name: ens:NonInformationResource	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/NonInformationResource
Label	non-information resource
Definition	All resources that are not information resources.
Subclass of	rdfs:Resource
Europeana note	
Obligation & Occurrence	
Example	People, places, physical things are all non-information resources
Rationale	This class is the range of ens:hasType and also serves to state disjointness of its sub-classes with the sub-classes of ens:InformationResource

2.2.7 Physical Thing

Class name: PhysicalThing	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/PhysicalThing
Label	Physical Thing

Definition	A persistent physical item such as a painting, a building, a book or a stone. Persons are not items. This class represents Cultural Heritage Objects known to Europeana to be physical things (such as Mona Lisa) as well as all physical things Europeana refers to in the descriptions of Cultural Heritage Objects (such as the Rosetta Stone).
Subclass of	ens:NonInformationResource
Equivalent class	E18_Physical_Thing (CIDOC CRM)
Europeana note	Physical things are identified by the content provider or by Europeana at enrichment time
Obligation & Occurrence	
Example	<ul style="list-style-type: none"> • the Venus by Praxiteles • any non-digital Cultural Heritage Object • the House of Parliament
Rationale	This class allows to capture the distinction between a physical object and a digital representation of that object. This class is the domain of crm:P128_carries.

2.2.8 Place

Class name: Place	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/Place
Label	place
Definition	An “extent in space, in particular on the surface of the earth, in the pure sense of physics: independent from temporal phenomena and matter” (CIDOC CRM)
Subclass of	ens:NonInformationResource
Equivalent class	Place (FRBR, ABC Harmony, TGN), Space Region (DOLCE), E53_Place (CIDOC CRM)
Europeana note	Places are identified by the content provider and named according to some vocabulary or local convention, and possibly normalized by Europeana at enrichment or at ingestion time
Obligation & Occurrence	
Example	<ul style="list-style-type: none"> • the region of space occupied by Rome today • the region of space occupied by the United Kingdom today • the region of space occupied by the Republic of Crimea in 1945
Rationale	This class is the range of property ens:happenedAt

2.2.9 Time Span

Class name: TimeSpan	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/TimeSpan
Label	time span
Definition	The class of “abstract temporal extents, in the sense of Galilean physics, having a beginning, an end and a duration” (CIDOC CRM)
Subclass of	ens:NonInformationResource, dcterms:PeriodOfTime
Equivalent class	Time (ABC Harmony), E52 Time-Span (CIDOC-CRM), Temporal Interval (DOLCE)
Europeana note	Time spans are identified by the content provider or by Europeana at enrichment time
Obligation & Occurrence	
Example	<ul style="list-style-type: none"> • 2001-12-31 • 01.01.01 – 02.02.02 • 1503 – 1506 (the time span of the creation of Mona Lisa)
Rationale	This class is the range of ens:occurredAt

2.2.10 Web Resource

Class name: ens:WebResource	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/WebResource
Label	web resource
Definition	Information Resources that have at least one Web Representation and at least a URI.
Subclass of	ens:InformationResource
Europeana note	
Obligation & Occurrence	
Example	A Web Resource containing a description of Mona Lisa
Rationale	This class is used as the type of the digital representations that are aggregated to the Cultural Heritage Object. As such, it is the range of ens:landingPage

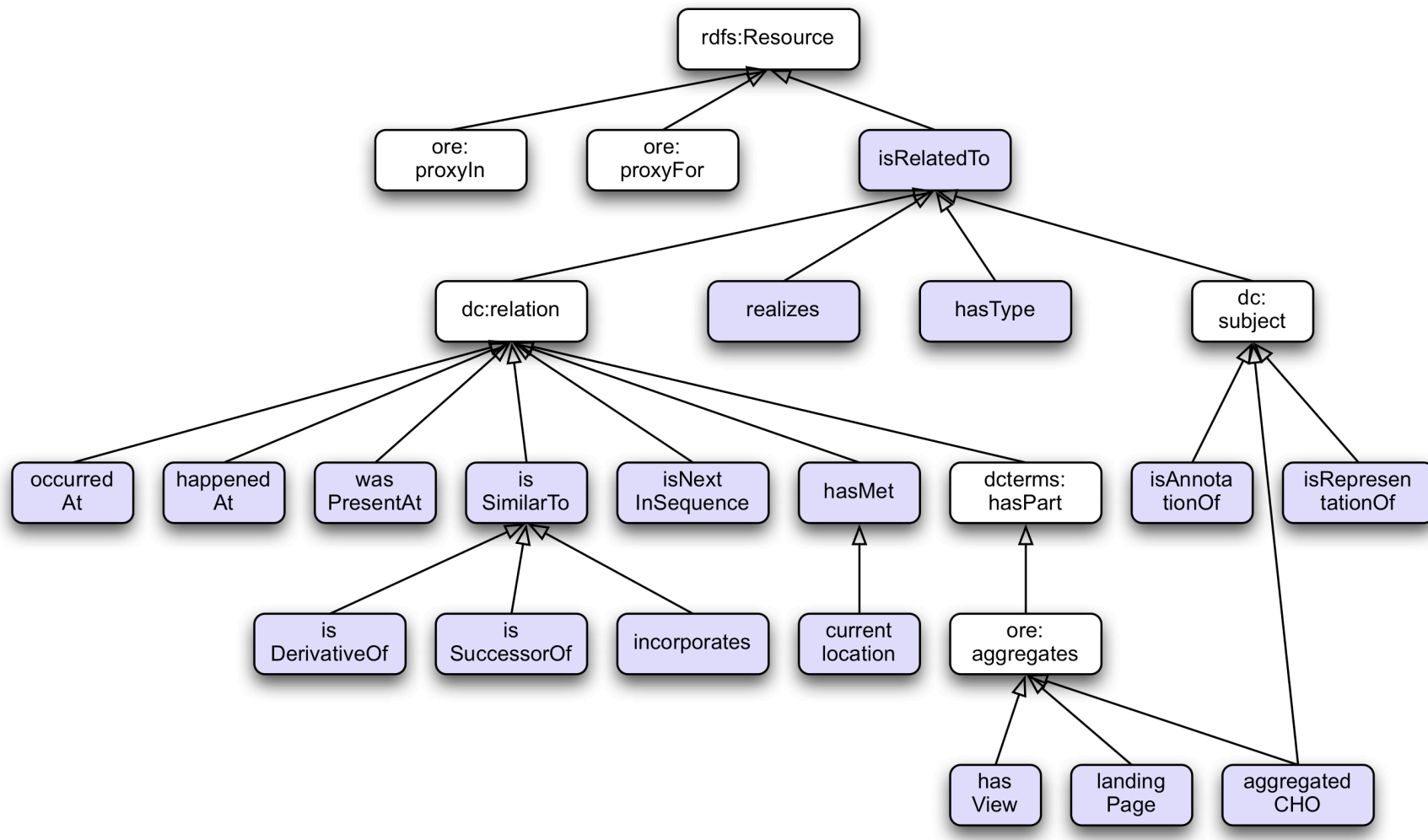


Figure 2. The EDM property hierarchy without the properties included in ESE (for readability). The properties introduced by EDM are shown in light blue rectangles. The properties in the white rectangles are re-used from other schemas.

3 Properties

The hierarchy of the EDM properties is given in Figure 2. For readability, the properties integrated from ESE are not included in the Figure.

3.1 Relevant properties from other namespaces

3.1.1 ORE Aggregates

Property name: ore:aggregates	
Namespace	ore
URI	http://www.openarchives.org/ore/terms/aggregates
Label	aggregates
Definition	Aggregations, by definition, aggregate resources. The ore:aggregates relationship expresses that the object resource is a member of the set of aggregated resources of the subject (the Aggregation). This relationship between the Aggregation and its Aggregated Resources is thus more specific than a simple part/whole relationship, as expressed by dcterms:hasPart for example
Subproperty of	dcterms:hasPart
Domain	ore:Aggregation
Range	ore:AggregatedResource
Europeana note	
Obligation & Occurrence	An aggregation may aggregate 1 to many resources, and a resource may be aggregated by 0 to many aggregations
Example	The Europeana Aggregation about Mona Lisa ore:aggregates a thumbnail of Mona Lisa
Rationale	This property is fundamental for constructing Europeana Aggregations.

3.1.2 ORE Proxy For

Property name: ore:proxyFor	
Namespace	ore
URI	http://www.openarchives.org/ore/terms/proxyFor
Label	proxy for
Definition	Proxy objects are used to represent a Resource as it is aggregated in a particular Aggregation. The ore:proxyFor relationship is used to link the proxy to the Aggregated Resource it is a proxy for. The subject of the relationship is a Proxy object, and the object of the relationship is the Aggregated Resource.
Subproperty of	
Domain	ore:Proxy
Range	ore:AggregatedResource

Europeana note	
Obligation & Occurrence	A proxy may be for 1 aggregated resource, and an aggregated resource may have 0 to many proxies for it
Example	The proxy of Mona Lisa ore:proxyFor Mona Lisa
Rationale	This property (as a part of the ORE proxy mechanism) is required to keep track of the provenance of descriptions

3.1.3 ORE Proxy In

Property name: ore:proxyIn	
Namespace	ore
URI	http://www.openarchives.org/ore/terms/proxyIn
Label	proxy in
Definition	Proxy objects must also link to the Aggregation in which the resource being proxied is aggregated. The ore:proxyIn relationship is used for this purpose. The subject of the relationship is a Proxy object, and the object of the relationship is the Aggregation.
Subproperty of	
Domain	ore:Proxy
Range	ore:Aggregation
Europeana note	
Obligation & Occurrence	A proxy may be in 1 to many aggregations, and an aggregation may have 0 to many proxies in it
Example	The proxy of Mona Lisa ore:proxyIn the aggregation of Mona Lisa
Rationale	This property (as a part of the ORE proxy mechanism) is required to keep track of the provenance of descriptions

3.2 EDM Properties

3.2.1 Aggregated Cultural Heritage Object

Property name: aggregatedCHO	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/aggregatedCHO
Label	aggregated Cultural Heritage Object
Definition	This property associates an ORE aggregation with the Cultural Heritage Object(s) (CHO for short) it is about.
Subproperty of	ore:aggregates, dc:subject

Domain	ore:Aggregation
Range	
Europeana note	
Obligation & Occurrence	In Europeana, an aggregation aggregates at least one CHO (typically in an aggregation there will be exactly one aggregated object, but some aggregations, e.g. those representing archive finding aids, may refer to more than one object). Conversely, a CHO may be aggregated by at most one aggregation (typically, a CHO will be aggregated by exactly one aggregation, however, there may be CHOs for which there is no aggregation, for instance CHOs referred to from the description of another CHO).
Example	The aggregation of Mona Lisa ens:aggregatedCHO Mona Lisa
Rationale	This property indicates the CHO(s) an aggregation is about. It supports several operations regarding the discovery and management of CHOs.

3.2.2 Happened At

Property name: happenedAt	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/happenedAt
Label	happened at
Definition	This property associates an event with the place at which the event happened.
Subproperty of	dc:relation
Equivalent property	P7_took_place_at (CIDOC CRM)
Domain	ens:Event
Range	ens:Place
Europeana note	
Obligation & Occurrence	An event may have happened at 0 to 1 place, and a place may have 0 to many events that happened at it.
Example	The creation of Mona Lisa happened at Florence. The excavation of the Egyptian Amphora L2409 happened at Heraklion, Crete.
Rationale	This property is useful for supporting discoveries concerning places (where query) since it relates a place to the events which happened at that place. In addition, it can be used to browse specific events.

3.2.3 Has Met

Property name: hasMet

Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/hasMet
Label	has met
Definition	ens:hasMet relates a resource with the objects or phenomena that have happened to or have happened together with the resource under consideration. We can abstractly think of history and the present as a series of “meetings” between people and other things in space-time. Therefore we name this relationship as the things the object “has met” in the course of its existence. These meetings are events in the proper sense, in which other people and things participate in any role.
Subproperty of	dc:relation
Domain	rdfs:Resource. More accurately, the domain of this property is the set of Cultural Heritage Objects that Europeana collects descriptions about, represented in the EDM by the ORE proxies that are ore:proxyIn a Europeana Aggregation
Range	
Europeana note	
Obligation & Occurrence	A resource may have met 0 to many resources. Conversely, a resource may be met by 0 to many resources.
Example	The location of an object may be due to a transport, move to a place, or because it has been created at that spot.
Rationale	ens:hasMet allows for querying historical relationships without specifying simultaneous correlations to other things, such as the specific constellations of people and things at a particular event. It allows for “who, when, where, what” queries, without specifying if the “who” matches the “when”, such as a (fictitious) object made by Praxiteles and found in 1865. In addition, it supports the integration of all properties used within the descriptions contributed by content providers to Europeana that capture the notion of meeting in the sense outlined above, such as dc:creator, dc:publisher, dc:contributor, dc:date. To this end, any such properties should be declared to be a (direct or indirect) sub-property of ens:hasMet.

3.2.4 Has Type

Property name: hasType	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/hasType
Label	has type
Definition	This property relates a resource with the concepts it belongs to in a suitable type system such as MIME or any thesaurus that captures categories of objects in a given field (e.g., the “Objects” facet in Getty’s Art and Architecture

	Thesaurus). It does not capture aboutness.
Subproperty of	ens:isRelatedTo
Equivalent property	P2_has_type (CIDOC CRM)
Domain	rdfs:Resource. More accurately, the domain of this property is the set of Cultural Heritage Objects that Europeana collects descriptions about, represented in the EDM by the ORE proxies that are ore:proxyIn a Europeana Aggregation
Range	ens:NonInformationResource, based on the need of using both SKOS concepts and strings as values of this property
Europeana note	
Obligation & Occurrence	A resource may have 0 to many types. Conversely, a non information resource may be the type of 0 to many resources.
Example	The type of Mona Lisa is (AAT) Painting. The type of a digital image of Mona Lisa may be JPEG.
Rationale	This property allows specific typing of resources through the use of a controlled vocabulary, terminological hierarchy, or thesaurus. It supports “what” queries. In addition, it supports the integration of all properties used within the descriptions contributed by content providers to Europeana that capture the notion of typing in the sense outlined above, such as dc:type, dc:format, dc:language.

3.2.5 Has View

Property name: hasView	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/hasView
Label	has view
Definition	This property relates a ORE aggregation about a CHO with a web resource providing a view of that CHO. Examples of view are: a thumbnail, a textual abstract and a table of contents. The ORE aggregation may be a Europeana Aggregation, in which case the view is an object owned by Europeana (i.e., an instance of ens:EuropeanaObject) or an aggregation contributed by a content provider. In order to capture both these cases, the domain of ens:hasView is ore:Aggregation and its range is ens:WebResource
Subproperty of	ore:aggregates
Domain	ore:Aggregation
Range	ens:WebResource
Europeana note	
Obligation &	An aggregation may have 0 to many resources as views for its corresponding

Occurrence	CHO. Conversely, a resource may appear as view in 0 to many aggregations.
Example	An ore:Aggregation of Mona Lisa contributed by Louvre may have as view a low resolution digital image of Mona Lisa. The issue number 56 of “Le Temps” contributed by BNF may have as view a text of some parts of the issue
Rationale	This property enables associating an aggregation about a CHO with the possibly many and heterogeneous views of that CHO. This is required since Europeana may collect several such views in order to support browsing of its resources. In addition, it allows the integration of all properties used in content providers’ descriptions that capture the notion of view in the sense outlined above. To this end, any such properties should be declared to be a (direct or indirect) sub-property of ens:hasView.

3.2.6 Incorporates

Property name: Incorporates	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/incorporates
Label	incorporates
Definition	This property captures the use of some resource to add value to another resource. Such resources may be nested, such as performing a theater play text, and then recording the performance, or creating an artful edition of a collection of poems or just aggregating various poems in an anthology. There may be no single part that contains ultimately the incorporated object, which may be dispersed in the presentation. Therefore, incorporated resources do in general not form proper parts. Incorporated resources are not part of the same resource, but are taken from other resources, and have an independent history. Therefore ens:incorporates is not a sub-property of dcterms:hasPart.
Subproperty of	ens:isSimilarTo
Domain	
Range	
Europeana note	
Obligation & Occurrence	A resource may incorporate 0 to many resources. Conversely, a resource may be incorporated by 0 to many resources.
Example	The movie “A Clockwork Orange” incorporates Rossini’s symphony from “La Gazza Ladra” in its original soundtrack. “E.A.Poe, The Raven (poem)” is incorporated in “Emerson Lake & Palmers Tales of Mystery (music)” which is incorporated in “Concert Recording 1973 (vinyl)”.
Rationale	This property enables associating resources that are one the incorporation of the other. This is required since Europeana may collect descriptions about resources and their incorporation. It also supports browsing of resources by incorporation. Finally, it allows the integration of all properties used in content

	providers' descriptions that capture the notion of incorporation in the sense outlined above. To this end, any such properties should be declared to be a (direct or indirect) sub-property of ens:incorporates.
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3.2.7 Is Annotation Of

Property name: isAnnotationOf	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/isAnnotationOf
Label	is annotation of
Definition	This property relates an annotation (a Europeana object) with the resource that it annotates.
Subproperty of	dc:subject
Domain	ens:EuropeanaObject
Range	The set of Cultural Heritage Objects that Europeana collects descriptions about, represented in the EDM by the ORE proxies that are ore:proxyIn a Europeana Aggregation
Europeana note	
Obligation & Occurrence	A Europeana Object may annotate 0 to many resources. Conversely, a resource may have 0 to many annotations.
Example	
Rationale	It allows proper attachment of annotations to contributed objects within Europeana.

3.2.8 Is Derivative Of

Property name: isDerivativeOf	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/isDerivativeof
Label	is derivative of
Definition	This property captures a narrower notion of derivation than ens:isSimilarTo, in the sense that it relates a resource to another one, obtained by reworking, reducing, expanding, parts or the whole contents of the former, and possibly adding some minor parts. Versions have an even narrower meaning, in that it requires common identity between the related resources. Translations, summaries, abstractions etc. do not qualify as versions, but do qualify as derivatives.
Subproperty of	ens:isSimilarTo
Domain	
Range	

Europeana note	
Obligation & Occurrence	A resource may be a derivative of to 0 to many resources. Conversely, a resource may have 0 to many resources that are derivative of its.
Example	The Italian translation of Moby Dick is a derivation of the original work.
Rationale	This property enables associating resources that are one the derivation of the other. This is required since Europeana may collect descriptions about resources and their derivations. It also supports browsing of resources by derivation. Finally, it allows the integration of all properties used in content providers' descriptions that capture the notion of derivation in the sense outlined above, such as those capturing versioning, translations and abstractions. To this end, any such properties should be declared to be a (direct or indirect) sub-property of <code>ens:isDerivativeOf</code> .

3.2.9 Is Next in Sequence

Property name: isNextInSequence	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/isNextInSequence
Label	is next in sequence
Definition	<code>ens:isNextInSequence</code> relates two resources R and S that are ordered parts of the same resource A, and such that R comes immediately after S in the order created by their being parts of A.
Subproperty of	<code>dc:relation</code>
Domain	
Range	
Europeana note	
Obligation & Occurrence	A resource may come immediately after at most one resource. Conversely, a resource may precede at most one resource.
Example	Page 34 of the Gutenberg Bible is next in sequence to page 33 of the same title.
Rationale	<code>isNextInSequence</code> supports browsing through the parts of resources, by establishing the correct order. It also supports proper displaying of the information, when order matters.

3.2.10 Is Related To

Property name: isRelatedTo	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/isRelatedTo

Label	is related to
Definition	ens:isRelatedTo is the most general contextual property in EDM. Contextual properties have typically to do either with the things that have happened to or together with the object under consideration, or what the object refers to by its shape, form or features in a figural or encoded form. For sake of simplicity, we include in the contextual relationships also the scholarly classification, which may have either to do with the role and cultural connections of the object in the past, or its kind of structure, substance or contents as it can be verified at present.
Subproperty of	
Domain	The set of Cultural Heritage Objects that Europeana collects descriptions about, represented in the EDM by the ORE proxies that are ore:proxyIn an aggregation
Range	
Europeana note	
Obligation & Occurrence	A resource may be related to 0 to many resources. Conversely, a resource may relate to 0 to many resources.
Example	Moby Dick is related to XIX century literature. Mona Lisa is related to Renaissance Art.
Rationale	Querying ens:isRelatedTo corresponds to a typical retrieval by keyword, as supported by web search engines; but it also allows more, as the objects of ens:isRelatedTo statements can be fully-fledged resource such as concepts, documents, etc.

3.2.11 Is Representation Of

Property name: isRepresentationOf	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/isRepresentationOf
Label	is representation of
Definition	This property associates an information resource to the resource (if any) that it represents
Subproperty of	dc:subject
Domain	ens:InformationResource
Range	
Europeana note	
Obligation & Occurrence	An information resource may be the representation of at most one resource. Conversely, a resource may have 0 to many representations.
Example	A high resolution image created by the Multimedia Louvre Lab by digitizing Mona Lisa is a representation of Mona Lisa

Rationale	This property allows to properly represent the information inside Europeana. For instance, if Europeana collects information about both Mona Lisa (a physical thing) and a high resolution digital image of Mona Lisa (an information resource), the property allows to distinguish and relate the corresponding resources, thus avoiding confusion and supporting proper browsing and querying of the information.
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3.2.12 Is Similar To

Property name: isSimilarTo	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/isSimilarTo
Label	is similar to
Definition	The most generic derivation property, covering also the case of questionable derivation. Is Similar To asserts that parts of the contents of one resource exhibit common features with respect to ideas, shapes, structures, colors, words, plots, topics with the contents of the related resource. Those common features may be attributed to a common origin or influence (in particular for derivation), but also to more generic cultural or psychological factors.
Subproperty of	dc:relation
Equivalent property	P130_shows_features_of (CIDOC CRM)
Domain	
Range	
Europeana note	
Obligation & Occurrence	A resource may be similar to 0 to many resources. Conversely, a resource may have 0 to many resources that are similar to it.
Example	
Rationale	This property allows querying Europeana by similarity in the most generic sense. It also allows the integration of all properties used in content providers' descriptions that capture the notion of relatedness in the sense outlined above. To this end, any such properties should be declared to be a (direct or indirect) sub-property of ens:isSimilarTo.

3.2.13 Is Successor Of

Property name: isSuccessorOf	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/isSuccessorOf
Label	is successor of

Definition	This property captures the relation between the continuation of a resource and that resource. This applies to a story, a serial, a journal etc. No content of the successor resource is identical or has a similar form with that of the precursor. The similarity is only in the context, subjects and figures of a plot. Successors typically form part of a common whole – such as a trilogy, a journal, etc.
Subproperty of	ens:isSimilarTo
Domain	
Range	
Europeana note	
Obligation & Occurrence	A Europeana object may be the successor of 0 to many resources, and may have 0 to many resources as successors.
Example	“The Two Towers” is a successor of “Fellowship of the Ring”. The issue 57 of “Le Temps” is a successor of issue 56 of the Le Temps.
Rationale	This property allows associating resources that are one the derivation of the other. This is required since Europeana may collect descriptions about resources and their successors. It also supports browsing of resources by successor: the query for successors has very practical importance: people want to directly access continuations as such. Finally, it allows the integration of all properties used in content providers’ descriptions that capture the notion of successor in the sense outlined above. To this end, any such properties should be declared to be a (direct or indirect) sub-property of ens:isSuccessorOf.

3.2.14 Landing Page

Property name: landingPage	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/landingPage
Label	landing page
Definition	This property captures the relation between an aggregation representing a Cultural Heritage Object and the Web Resource representing that Object on the provider’s web site.
Subproperty of	ore:aggregates
Domain	
Range	ens:WebResource
Europeana note	
Obligation & Occurrence	A (Cultural Heritage Object represented by a) Europeana Aggregation may have at most one Web resource as landing page, and a web resource may be the landing page of at most 1 (Cultural Heritage Object represented by) a Europeana Aggregation.

Example	Mona Lisa, represented by the Europeana Aggregation europeana:ea-monalisa, has landing Page http://www.culture.gouv.fr/public/mistral/joconde_fr?ACTION=CHERCHER&FIELD_1=REF&VALUE_1=000PE025604
Rationale	This property allows accessing Cultural Heritage Objects represented in Europeana on the providers' web sites.

3.2.15 Current Location

Property name: Current Location	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/currentLocation
Label	Location
Definition	The geographic location and/or name of the repository, building, site, or other entity whose boundaries presently include the resource.
Subproperty of	dc:terms:spatial
Domain	ore:Proxy
Range	ens:Place
Equivalent property	http://www.w3.org/2003/01/geo/wgs84_pos#location , P55 has current location (CIDOC CRM)
Europeana note	
Obligation & Occurrence	A resource may have 0 to many (places as) current location, and a place may be the location of 0 to many resources
Example	
Rationale	Current locations are used for the contextualization of resources and for answering where queries

3.2.16 Occurred At

Property name: occurredAt	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/occurredAt
Label	occurred at
Definition	This property associates an event to the smallest known time span that overlaps with the occurrence of that event
Subproperty of	dc:relation
Equivalent property	P4_has_time_span (CIDOC CRM)
Domain	ens: Event

Range	ens:TimeSpan
Europeana note	
Obligation & Occurrence	The occurrence in time of an event may overlap with 0 to many disjoint time spans, and a time span may have 0 to many events whose occurrences overlap with it.
Example	The creation of Mona Lisa occurred at 1503 - 1506
Rationale	This property is useful for discoveries concerning time (when query, time-line browsing) since it relates a time span to the events that occurred at that time. In addition, it can be used to browse specific events.

3.2.17 Realizes

Property name: realizes	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/realizes
Label	realizes
Definition	A relation between an information realization and the information resource it realizes.
Subproperty of	ens:isRelatedTo
Equivalent property	P128_carries (CIDOC CRM)
Domain	ens:PhysicalThing
Range	ens:InformationResource
Europeana note	
Obligation & Occurrence	A physical thing may realize 0 to many information resources and an information resource be realized by 0 to many physical things
Example	Gutenberg's edition realizes the Bible
Rationale	This property allows Europeana to properly relate information resources and their realizations

3.2.18 Was Present At

Property name: wasPresentAt	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/wasPresentAt
Label	was present at
Definition	This property associates the people, things or information resources with an event at which they were present

Subproperty of	dc:relation
Equivalent property	P121_was_present_at (CIDOC CRM)
Domain	ens:Agent union ens:InformationResource union ens:PhysicalThing
Range	ens:Event
Europeana note	
Obligation & Occurrence	A resource may be present at 0 to many events, and an event may have 0 to many resources that are present at it
Example	Leonardo da Vinci was present at the event of the creation of Mona Lisa.
Rationale	This property is useful for two kinds of discoveries: 1. discoveries concerning persons (who query) since it relates a person to the events in which the person has taken part 2. discoveries concerning things or information resources (what query) since it relates an artifact to the events in which the artifact has been involved In addition, it can be used to browse specific events.

3.3 ESE elements

The present version of EDM integrates the Europeana Semantic Elements (version 3.3), by re-contextualizing each element in the more structured context of EDM. Amongst other things, this means that each ESE element is now viewed as an RDF property, endowed with a domain and a range, and connected to the rest of the EDM via a set of sub-property links.

The rationale for the integration is to enrich EDM with a set of properties that have proven to be most useful in modelling Cultural Heritage Objects. These properties constitute an interoperability core within EDM, since every object is required to have an ESE record, and an ESE record is now a valid EDM instance. Moreover, the ESE properties offer additional mapping possibilities from other data models, increasing the interoperability potential of EDM. As an example, all DCTERMS elements that are not explicitly mentioned in these specifications, can be integrated in EDM as sub-properties of their corresponding DC elements, all of which are part of these specifications.

A side effect of the integration of ESE into EDM is that ESE is expressed in RDF. This offers the additional advantage of exploiting the Web architecture for linking resources. In particular, in the context of EDM deployment, the values of ESE properties that are currently given as simple strings could be given, in a typical RDF fashion, as pointers to fully-fledged (RDF) resources standing for concepts, agents or places (to name a few) that would be provided with complete description and linkage to other resources. This applies in particular to both Dublin Core properties (e.g., dc:creator) and to ESE-specific ones (e.g., ens:isShownAt).

3.3.1 DCTERMS Alternative

Element name: alternative

Namespace	dcterms
URI	http://purl.org/dc/terms/alternative
Label	Alternative Title
Definition	An alternative name for the resource. This can be any form of the title that is used as a substitute or an alternative to the formal title of the resource including abbreviations or translations of the title.
Subproperty of	dc:title
Domain	
Range	In current practice, this term is used primarily with literal values; however, there are important uses with non-literal values as well. As of December 2007, the DCMI Usage Board is leaving this range unspecified pending an investigation of options.
Europeana note	Any alternative title by which the original analog or born digital object is known. This can include abbreviations or translations of the title.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:alternative>Ocho semanas</dcterms:alternative> (When <dc:title>Eight weeks</dc:title>)

3.3.2 DCTERMS Conforms To

Element name: conformsTo	
Namespace	dcterms
URI	http://purl.org/dc/terms/conformsTo
Label	Conforms To
Definition	An established standard to which the described resource conforms
Subproperty of	dc:relation
Domain	
Range	http://purl.org/dc/terms/Standard
Europeana note	The names of standards that the digital object (digitized or born digital) complies with and which are useful for the use of the object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:conformsTo>W3C WCAG 2.0</dcterms:conformsTo> (for an HTML document that conforms to web content accessibility guidelines).

3.3.3 DC Contributor

Element name: contributor	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/contributor

Label	Contributor
Definition	An entity responsible for making contributions to the resource.
Subproperty of	ens:hasMet
Domain	
Range	http://purl.org/dc/terms/Agent
Europeana note	The name of contributors to the original analog or born digital object. This could be a person, an organisation or a service.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:contributor>Maria Callas</dc:contributor>

3.3.4 Country

Element name: country	
Namespace	europaena
URI	http://www.europeana.eu/schemas/edm/country
Label	Country
Definition	This is the name of the country in which the Provider is based or “Europe” in the case of Europe-wide projects.
Subproperty of	P12_occurred_in_the_presence_of (CIDOC CRM)
Domain	
Range	http://www.iso.org/iso/english_country_names_and_code_elements
Europeana note	The country name is derived automatically from information held in the Europeana Providers authority file. Europeana provides the value for this element Country names should conform to ISO 3166. “EU” to be used for “Europe”. For reasons of backward compatibility, the domain of this property is left unspecified, even though it should be ens:Agent, and this is the direction we intend to move in the future.
Obligation & Occurrence	Mandatory (Minimum: 1, Maximum: 1)
Example	<ens:country>AL</ens:country>

3.3.5 DC Coverage

Element name: coverage	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/coverage
Label	Coverage
Definition	The spatial or temporal topic of the resource, the spatial applicability of the resource, or the jurisdiction under which the resource is relevant. This may be a named place, a location, a spatial coordinate, a period, date, date range or a

	named administrative entity.
Subproperty of	ens:hasMet
Domain	
Range	In the context of rich EDM data we expect this property to be used with instances of ens:Place or ens:TimeSpan, although this is not mandatory
Europeana note	Coverage is the unqualified spatial or temporal coverage of the original analog or born digital object. Use of the more specific dcterms:spatial and dcterms:temporal elements is preferred where possible.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:coverage>1995-1996</dc:coverage> <dc:coverage>Boston, MA</dc:coverage>

3.3.6 DCTERMS Created

Element name: created	
Namespace	dcterms
URI	http://purl.org/dc/terms/created
Label	Date Created
Definition	Date of creation of the resource
Subproperty of	dc:date
Domain	
Range	In the Europeana context, we expect this property to be used with instances of ens:TimeSpan, although this is not mandatory
Europeana note	This is the date when the original analog or born digital object was created. The creation date is used to generate the ens:year for use in the timeline where appropriate. See Guidelines for date format recommendations
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:created>1564</dcterms:created> <dcterms:created>Iron Age</dcterms:created>

3.3.7 DC Creator

Element name: creator	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/creator
Label	Creator
Definition	An entity primarily responsible for making the resource. This may be a person, organisation or a service.
Subproperty of	ens:hasMet
Domain	

Range	In the context of rich EDM data we expect this property to be used with instances of <code>ens:Agent</code> , although this is not mandatory
Europeana note	This is the name of the creator of the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<code><dc:creator>Shakespeare, William</dc:creator></code>

3.3.8 Data Provider

Element name: dataProvider	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/dataProvider
Label	Europeana Data Provider
Definition	The name or identifier of the organisation that contributes data to Europeana
Subproperty of	<code>dc:provenance</code>
Domain	<code>ore:Aggregation</code>
Range	<code>ens:Agent</code>
Europeana note	<p>This element is specifically included to allow the name of the organisation who supplies data to Europeana indirectly via an aggregator to be recorded and displayed in the portal. Aggregator names are recorded in <code>ens:provider</code>. If an organisation provides data directly to Europeana (i.e. not via an aggregator) the values in <code>ens:dataProvider</code> and <code>ens:provider</code> will be the same.</p> <p>Organisation names should be provided as an ordinary text string until the Europeana Authority File for Organisations has been established. At that point providers will be able to send an identifier from the file instead of a text string. The name provided should be the preferred form of the name in the language the provider chooses as the default language for display in the portal. Countries with multiple languages may prefer to concatenate the name in more than one language (See the example below.)</p> <p>Note: Europeana Data Provider is not necessarily the institution where the physical object is located.</p>
Obligation & Occurrence	Recommended (Minimum: 0, Maximum: 1)
Example	<code><ens:dataProvider>Lille, Palais des Beaux-Arts</ens:dataProvider></code> <code><ens:dataProvider>Koninklijke Bibliotheek van België / Bibliothèque royale de Belgique</ens:dataProvider></code>

3.3.9 DC Date

Element name: date	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/date

Label	Date
Definition	A point or period of time associated with an event in the lifecycle of the resource.
Subproperty of	ens:hasMet
Domain	
Range	Although no range is defined by DC specification, in the context of Europeana, values for this property should be ens:TimeSpan instances
Europeana note	Use for a significant date in the life of the original analog or born digital object (see example). Use dcterms:temporal (or dc:coverage) if the date is associated with the topic of the resource. dc:date will be used to generate ens:year for the timeline where appropriate. See Guidelines for date format recommendations
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:date>17 th century</dc:date> (For example the date when an object was repaired).

3.3.10 DC Description

Element name: description	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/description
Label	Description
Definition	An account of the resource
Subproperty of	
Domain	
Range	
Europeana note	A description of the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<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>

3.3.11 DCTERMS Extent

Element name: extent	
Namespace	Dcterms
URI	http://purl.org/dc/terms/extent
Label	Extent

Definition	The size or duration of the resource.
Subproperty of	dc:format
Domain	
Range	
Europeana note	Size or duration of the digital object and the original object may be recorded.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:extent>13 cm</dcterms:extent> (the width of an original object). <dcterms:extent>34 minutes</dcterms:extent> (the length of an audio file).

3.3.12 DC Format

Element name: format	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/format
Label	Format
Definition	The file format, physical medium or dimensions of the resource.
Subproperty of	ens:hasType
Domain	
Range	
Europeana note	The unqualified element includes file format, physical medium or dimensions of the original and/or digital object. Use this element for the file format of the digital object or born digital originals. Internet Media Types [MIME] are highly recommended (http://www.iana.org/assignments/media-types/). Use of the more specific elements dcterms:extent (dimensions) and dcterms:medium (physical medium) is preferred where appropriate.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:format>image/jpeg</dc:format>

3.3.13 DCTERMS Has Format

Element name: hasFormat	
Namespace	dcterms
URI	http://purl.org/dc/terms/hasFormat
Label	Has Format
Definition	A related resource that is substantially the same as the pre-existing described resource, but in another format.
Subproperty of	inverse of ens:isDerivativeOf

Domain	
Range	
Europeana note	Use dcterms:hasVersion for differences in version.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:hasFormat>http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png</dcterms:hasFormat> where the resource being described is a tiff image file.

3.3.14 DCTERMS Has Part

Property name: dcterms:hasPart	
Namespace	dcterms
URI	http://purl.org/dc/terms/hasPart
Label	has part
Definition	A related resource that is included either physically or logically in the described resource.
Subproperty of	dc:relation
Domain	
Range	
Europeana note	
Obligation & Occurrence	A resource may be part of 0 to many other resources. Conversely, a resource may have 0 to many other resources as parts.
Example	The issue number 56 of the journal "Le Temps" is part of the journal "Le Temps".
Rationale	This property enables associating resources and their parts inside Europeana. In addition, it supports the integration of all structural properties used within the descriptions contributed by content providers to Europeana. To this end, any such properties should be declared to be a (direct or indirect) sub-property of dcterms:hasPart.

3.3.15 DCTERMS Has Version

Element name: hasVersion	
Namespace	dcterms
URI	http://purl.org/dc/terms/hasVersion
Label	Has Version
Definition	A related resource that is a version, edition, or adaptation of the described resource. Changes in version imply substantive changes in content rather

	than differences in format.
Subproperty of	inverse of ens:isDerivativeOf
Domain	
Range	
Europeana note	Use dcterms:hasFormat for differences in format.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<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.

3.3.16 DC Identifier

Element name: identifier	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/identifier
Label	Identifier
Definition	An unambiguous reference to the resource within a given context.
Subproperty of	
Domain	
Range	
Europeana note	This is an identifier for the original analog or born digital object. Use ens:isShownBy for the URL of the digital object. If the URL is already included in the dc:identifier element in the existing metadata, keep it and repeat the information in ens:isShownBy.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:identifier>urn:isbn:9780387097466</dc:identifier> <dc:identifier>http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png</dc:identifier>

3.3.17 DCTERMS Is Format Of

Element name: isFormatOf	
Namespace	dcterms
URI	http://purl.org/dc/terms/isFormatOf
Label	Is Format Of
Definition	A related resource that is substantially the same as the described resource, but in another format.
Subproperty of	ens:isDerivativeOf

Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:isFormatOf>Europeana_logo.tiff</dcterms:isFormatOf> where the resource being described is a png image file.

3.3.18 DCTERMS Is Part Of

Element name: isPartOf	
Namespace	dcterms
URI	http://purl.org/dc/terms/isPartOf
Label	Is Part Of
Definition	A related resource in which the described resource is physically or logically included.
Subproperty of	inverse of dc:relation
Domain	
Range	
Europeana note	Use for the name of the collection which the digital object is part of.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:isPartOf>Crace Collection of Maps of London</dcterms:isPartOf>

3.3.19 DCTERMS Is Referenced By

Element name: isReferencedBy	
Namespace	dcterms
URI	http://purl.org/dc/terms/isReferencedBy
Label	Is Referenced By
Definition	A related resource that references, cites, or otherwise points to the described resource.
Subproperty of	inverse of dc:relation
Domain	
Range	
Europeana note	

Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:isReferencedBy>Till, Nicholas (1994) <i>Mozart and the Enlightenment: Truth, Virtue and Beauty in Mozart's Operas</i> , W. W. Norton & Company </dcterms:isReferencedBy>

3.3.20 DCTERMS Is Replaced By

Element name: isReplacedBy	
Namespace	dcterms
URI	http://purl.org/dc/terms/isReplacedBy
Label	Is Replaced By
Definition	A related resource that supplants, displaces, or supersedes the described resource.
Subproperty of	inverse of ens:isDerivativeOf
Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<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/)

3.3.21 DCTERMS Is Required By

Element name: isRequiredBy	
Namespace	dcterms
URI	http://purl.org/dc/terms/isRequiredBy
Label	Is Required By
Definition	A related resource that requires the described resource to support its function, delivery or coherence.
Subproperty of	inverse of dc:relation
Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)

Example	<isRequiredBy>http://www.myslides.com/myslideshow.ppt</isRequiredBy> where the image being described is required for an online slideshow.
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3.3.22 Is Shown At

Element name: isShownAt	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/isShownAt
Label	Is Shown At
Definition	An unambiguous URL reference to the digital object on the provider's web site in its full information context. See also ens:isShownBy
Subproperty of	ens:landingPage
Domain	
Range	ens:WebResource
Europeana note	This is a URL that will be active in the Europeana interface. It will lead users to the digital object displayed on the provider's web site in its full information context. Use ens:isShownAt if you display the digital object with extra information (such as header, banner etc).
Obligation & Occurrence	Optional (Minimum: 0, Maximum: 1) But either isShownAt OR isShownBy is Mandatory
Example	<ens:isShownAt>http://www.photo.rmn.fr/cf/htm/CPICZ.aspx?E=2C6NU0VFLVNY</ens:isShownAt>

3.3.23 Is Shown By

Element name: isShownBy	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/isShownBy
Label	Is Shown By
Definition	An unambiguous URL reference to the digital object on the provider's web site in the best available resolution/quality. See also ens:isShownAt.
Subproperty of	ens:hasView
Domain	
Range	ens:WebResource
Europeana note	This is a URL that will be active in the Europeana interface. It will lead users to the digital object on the provider's website where they can view or play it. The digital object needs to be directly accessible by the URL and reasonably independent at that location. If the URL includes short copyright information with the pointer to the object it can be entered in ens:isShownBy. Use ens:isShownAt for digital objects embedded in HTML pages (even where the

	page is extremely simple).
Obligation & Occurrence	Optional (Minimum: 0, Maximum: 1) But either isShownBy OR isShownAt is Mandatory
Example	<ens:isShownBy>http://resolver.kb.nl/resolve?urn=urn:gvn:RA01:30051001524450</ens:isShownBy>

3.3.24 DCTERMS Issued

Element name: issued	
Namespace	dcterms
URI	http://purl.org/dc/terms/issued
Label	Date Issued
Definition	Date of formal issuance (e.g., publication) of the resource.
Subproperty of	dc:date
Domain	
Range	ens:TimeSpan
Europeana note	The date when the original analog or born digital object was issued or published. It may be used to generate the ens:year for the timeline where this is appropriate. See Guidelines for date format recommendations
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:issued>1993</dcterms:issued>

3.3.25 DCTERMS Is Version Of

Element name: isVersionOf	
Namespace	dcterms
URI	http://purl.org/dc/terms/isVersionOf
Label	Is Version Of
Definition	A related resource of which the described resource is a version, edition, or adaptation. Changes in version imply substantive changes in content rather than differences in format
Subproperty of	ens:isDerivativeOf
Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:isVersionOf>ESE Version 0.5</dcterms:isVersionOf>

3.3.26 DC Language

Element name: language	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/language
Label	Language
Definition	A language of the resource
Subproperty of	ens:hasType
Domain	
Range	The recommended best practice is to use a controlled vocabulary such as RFC 4646 (http://www.rfc-archive.org/getrfc.php?rfc=4646) which, in conjunction with ISO 639, defines two- and three-letter primary language tags. Either a coded value or text string can be represented here.
Europeana note	Use this element for the language of text included in images (i.e. posters, newspapers etc). If there is no language aspect to the digital object (e.g. a photograph), please ignore this element. Use of RFC 4646 is highly recommended. This element is not for the language of the metadata of a resource, which may be described in <code>xml:lang</code> attribute. For example, <code><dc:title xml:lang="en">After dark</dc:title></code> . See <code>ens:language</code> .
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<code><dc:language>it</dc:language></code>

3.3.27 Language

Element name: language	
Namespace	Europeana
URI	http://www.europeana.eu/edm/terms/language
Label	Europeana Language
Definition	A language assigned to the resource with reference to the Provider.
Subproperty of	
Domain	
Range	The recommended best practice is to use a controlled vocabulary such as RFC 4646 (http://www.rfc-archive.org/getrfc.php?rfc=4646) which, in conjunction with ISO 639, defines two- and three-letter primary language tags. Either a coded value or text string can be represented here.
Europeana note	For the Europeana prototype, <code>ens:language</code> is the official language of the country where the Provider is located. Europeana provides the value for this element. It is expressed using the ISO 639-1 (the two-character code) (e.g. "en", "de" etc). For countries with several official languages, Europeana uses "mul" for multilingual (ISO 639-2). For reasons of backward compatibility, the domain of this property is left unspecified, even though it should be <code>ens:Agent</code> ,

	and this is the direction we intend to move in the future.
Obligation & Occurrence	Mandatory (Minimum:1, Maximum: 1)
Example	<ens:language>ro</ens:language>

3.3.28 DCTERMS Medium

Element name: medium	
Namespace	dcterms
URI	http://purl.org/dc/terms/medium
Label	Medium
Definition	The material or physical carrier of the resource.
Subproperty of	dc:format
Domain	
Range	
Europeana note	This is the medium of the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:medium>metal</dcterms:medium>

3.3.29 Object

Element name: object	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/object
Label	Object
Definition	The URL of a thumbnail representing the digital object or, if there is no such thumbnail, the URL of the digital object in the best resolution available on the web site of the data provider from which a thumbnail could be generated. This will often be the same URL as given in ens:isShownBy.
Subproperty of	ens:hasView
Domain	
Range	ens:WebResource
Europeana note	Note that there is no requirement to provide an image in any other format than those readily available on the providers website. Europeana can generate thumbnail images from several different image formats using the ImageMagick software. Image Magick needs to have direct access to the image to create a thumbnail so it cannot make a thumbnail out of an image embedded in an HTML page. A listing of suitable formats and their specifications will be produced shortly. Europeana creates one thumbnail per record. If a record

	contains several pages in a PDF, the front page is used to create the thumbnail. Please ensure that the first page is suitable for this purpose e.g. it does not contain extraneous information from the digitisation process. If a record contains several image files, the first file that appears is used for the thumbnail. If there is no thumbnail available and it is not possible to generate one, a default thumbnail for the type of object will be displayed.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: 1) But mandatory if applicable (See above)
Example	<ens:object>http://upload.wikimedia.org/wikipedia/en/f/f3/Europeana_logo.png</ens:object>

3.3.30 DCTERMS Provenance

Element name: provenance	
Namespace	dcterms
URI	http://purl.org/dc/terms/provenance
Label	Provenance
Definition	A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. This may include a description of any changes successive custodians made to the resource.
Subproperty of	
Domain	
Range	
Europeana note	This relates to the ownership and custody of the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:provenance>Donated by The National Library in 1965</dcterms:provenance>

3.3.31 Provider

Element name: provider	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/provider
Label	Europeana Provider
Definition	Name of the organization that delivers data to Europeana
Subproperty of	ens:hasMet
Domain	
Range	ens:Agent

Europeana note	The ens:provider is the organization that sends the data to Europeana, and this is not necessarily the institution that holds or owns the original or digitised object. Where data is being supplied by an aggregator or project ens:provider is the name of aggregator/project. The name of the content holder can be recorded in dc:source. If the content holder supplies data directly to Europeana then the name should also appear in this element. The name should be in the original language(s).
Obligation & Occurrence	Mandatory (Minimum: 1, Maximum: 1)
Example	<ens:provider>Het Geheugen van Nederland</ens:provider>

3.3.32 DC Publisher

Element name: publisher	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/publisher
Label	Publisher
Definition	An entity responsible for making the resource available. Examples of a publisher include a person, an organisation and a service.
Subproperty of	ens:hasMet
Domain	
Range	In the context of rich EDM data we expect this property to be used with instances of ens:Agent, although this is not mandatory
Europeana note	The name of the publisher of the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:publisher>Oxford University Press</dc:publisher>

3.3.33 DCTERMS References

Element name: references	
Namespace	dcterms
URI	http://purl.org/dc/terms/references
Label	References
Definition	A related resource that is referenced, cited, or otherwise pointed to by the described resource
Subproperty of	dc:relation
Domain	
Range	
Europeana note	

Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:references>Honderd jaar Noorse schilderkunst</dcterms:references>

3.3.34 DC Relation

Element name: relation	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/relation
Label	Relation
Definition	A related resource. The recommended best practice is to identify the resource using a formal identification scheme.
Subproperty of	ens:isRelatedTo
Domain	
Range	
Europeana note	This is information about resources that are related to the original analog or born digital object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:relation>maps.crace.1/33</dc:relation> (This is the shelf mark for a map held in the British Library's Crace Collection).

3.3.35 DCTERMS Replaces

Element name: replaces	
Namespace	dcterms
URI	http://purl.org/dc/terms/replaces
Label	Replaces
Definition	A related resource that is supplanted, displaced, or superseded by the described resource.
Subproperty of	ens:isDerivativeOf
Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<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/)

3.3.36 DCTERMS Requires

Element name: requires	
Namespace	dcterms
URI	http://purl.org/dc/terms/requires
Label	Requires
Definition	A related resource that is required by the described resource to support its function, delivery or coherence.
Subproperty of	dc:relation
Domain	
Range	
Europeana note	
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:requires>http://ads.ahds.ac.uk/project/userinfo/css/oldbrowsers.css</dcterms:requires> where the resource described is a HTML file at http://ads.ahds.ac.uk/project/userinfo/digitalTextArchiving.html

3.3.37 DC Rights

Element name: rights	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/rights
Label	Rights
Subproperty of	
Domain	
Range	
Definition	Information about rights held in and over the resource.
Europeana note	Information about intellectual Property Rights, access rights or license arrangements for the digital object (digitized or born digital).
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:rights>Creative Commons Attribution 3.0 License</dc:rights>

3.3.38 Rights

Element name: rights	
Namespace	Europeana

URI	http://www.europeana.eu/schemas/edm/rights
Label	Europeana Rights
Definition	Information about copyright of the digital object as specified by isShownBy and isShownAt
Subproperty of	
Domain	
Range	
Europeana note	The value in this element is a URL constructed according to the specifications in the “Specifications of the controlled values for ens:rights“. The URLs are constructed by adding a code indicating the copyright status of an object to the domain name where that status is defined. The domain will be either the europeana.eu domain or the creativecommons.org domain. For users of Europeana.eu this copyright information also applies to the preview specified in ens:object. In order to allow organisations to manage the provision of this element, ens:rights has an obligation level of “recommended” in this version of EDM. It will be changed to “Mandatory” in a later version.
Obligation & Occurrence	Recommended (Minimum: 0, Maximum: 1)
Example	<ens:rights>http://www.europeana.eu/rights/pd/</ens:rights>

3.3.39 DC Source

Element name: source	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/source
Label	Source
Definition	A related resource from which the described resource is derived in whole or in part.
Subproperty of	ens:isDerivativeOf
Domain	
Range	
Europeana note	This element can be used for several sources that are related to the object (such as reference sources) but the name of the content holder should be recorded here so that it will show in the brief record display. The name of the organisation that submits the data directly to Europeana (probably an aggregator) will be held in the normalised ens:provider element. If the content holder supplies data directly to Europeana then the name should also appear in ens:provider. Multiple instances of dc:source may be supplied and all values will be displayed.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dc:source>Security Magazine pp 3-12</dc:source> <dc:source>BAM portal</dc:source>

3.3.40 DCTERMS Spatial

Element name: spatial	
Namespace	dcterms
URI	http://purl.org/dc/terms/spatial
Label	Spatial Coverage
Definition	Spatial characteristics of the resource
Subproperty of	dc:coverage
Domain	
Range	In the Europeana context, we expect this property to be used with instances of <code>ens:Place</code> , although this is not mandatory
Europeana note	Information about the spatial characteristics of the original analog or born digital object, i.e. what the resource represents or depicts in terms of space. This may be a named place, a location, a spatial coordinate or a named administrative entity.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<code><dcterms:spatial>Portugal</dcterms:spatial></code>

3.3.41 DC Subject

Element name: subject	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/subject
Label	Subject
Definition	The topic of the resource
Subproperty of	ens:isRelatedTo
Domain	
Range	
Europeana note	This is the subject of the original analog or born digital object,
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<code><dc:subject>submarine</dc:subject></code>

3.3.42 DCTERMS Table of Contents

Element name: tableOfContents	
Namespace	dcterms
URI	http://purl.org/dc/terms/tableOfContents

Label	Table Of Contents
Definition	A list of subunits of the resource.
Subproperty of	ens:hasView, dc:description
Domain	
Range	
Europeana note	A list of the units within the original analog or born digital resource object.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms:tableOfContents>Chapter 1. Introduction, Chapter 2. History</dcterms:tableOfContents>

3.3.43 DCTERMS Temporal

Element name: temporal	
Namespace	dcterms
URI	http://purl.org/dc/terms/temporal
Label	Temporal Coverage
Definition	Temporal characteristics of the resource
Subproperty of	dc:coverage
Domain	
Range	In the Europeana context, we expect this property to be used with instances of ens:TimeSpan, although this is not mandatory
Europeana note	The temporal characteristics of the original analog or born digital object i.e. what the resource is about or depicts in terms of time. This may be a period, date or date range
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<dcterms :temporal>Roman</dcterms :temporal>

3.3.44 DC Title

Element name: title	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/title
Label	Title
Definition	A name given to the resource. Typically, a Title will be a name by which the resource is formally known.
Subproperty of	
Domain	

Range	
Europeana note	The title of the original analog or born digital object.
Obligation & Occurrence	Optional(Minimum: 0, Maximum: unbounded)
Example	<dc:title>Taal vitaal</dc:title>

3.3.45 DC Type

Element name: type	
Namespace	dc
URI	http://purl.org/dc/elements/1.1/type
Label	Type
Definition	The nature or genre of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content.
Subproperty of	ens:hasType
Domain	
Range	The recommended best practice is to select a value from a controlled vocabulary (for example, the DC Type vocabulary is available at http://dublincore.org/documents/dcmi-type-vocabulary/).
Europeana note	The type of the original analog or born digital object as recorded by the content holder, this element typically includes values such as photograph, painting, sculpture etc. Providers are recommended to map the values entered in this element to the four material types used in Europeana: TEXT, IMAGE, SOUND and VIDEO. See ens:type below.
Obligation & Occurrence	Optional (Minimum:0, Maximum: unbounded)
Example	<dc:type>painting</dc:type> <dc:type>photograph</dc:type> <dc:type>coin</dc:type>

3.3.46 Type

Element name: type	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/type
Label	Europeana Type
Definition	The Europeana material type of the resource
Subproperty of	dc:type
Domain	
Range	All digital objects in Europeana have to be classified as one of the four

	Europeana material types using upper case letters: TEXT, IMAGE, SOUND or VIDEO.
Europeana note	This element is used to create the Type facet based on the Europeana material types. A default thumbnail is used for each type in the short or full record display when a thumbnail is not. As well as recording the original type values in dc:type, providers are asked to map from the local type terminology to the four types used in Europeana.
Obligation & Occurrence	Mandatory (Minimum:1, Maximum: 1)
Example	<ens:type>TEXT</ens:type> (upper-case) <ens:type> IMAGE</ens:type> (upper-case) <ens:type>SOUND</ens:type> (upper-case) <ens:type>VIDEO</ens:type> (upper-case)

3.3.47 Unstored

This property is integrated in EDM only for backward compatibility with ESE. When an ESE record is transformed into a proper EDM instance, any information provided by a content provider finds a place in the instance, and as a consequence this property will have an empty value and would be useless.

Element name: unstored	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/unstored
Label	Unstored
Definition	This is a container element which includes all relevant information that otherwise cannot be mapped to another element in the ESE.
Subproperty of	
Domain	
Range	
Europeana note	The ens:unstored element is provided in order to include important information for indexing purposes. All relevant information elements, which cannot be mapped to another element in the ESE, should be mapped into this element. This element is not available in “full search result display”.
Obligation & Occurrence	Optional (Minimum: 0, Maximum: unbounded)
Example	<ens:unstored> National Gallery, London</ens:unstored> (Where the National Gallery is the current location of the object; there is no other element suitable for this information).

3.3.48 URI

This property is integrated in EDM only for backward compatibility with ESE. When an ESE record is transformed into a proper EDM instance, the value of this property should be used as identifier of the object and the property itself would then be redundant.

Element name: uri	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/uri
Label	Europeana URI
Definition	An unambiguous URI to the resource within Europeana's context.
Subproperty of	
Domain	
Range	
Europeana note	This is a record identifier for the object in the Europeana system. It is created by Europeana based on the unique identifiers provided in the source metadata. Please note that in cases where a provider supplies two or more records with the same record identifier, only the first record is kept by Europeana. Subsequent records with the same identifier are discarded.
Obligation & Occurrence	Mandatory (Minimum: 1, Maximum: 1)
Example	<ens:uri> http://www.europeana.eu/resolve/record/004/A7F7E0E6600 </ens:uri>

3.3.49 User tag

Element name: userTag	
Namespace	europeana
URI	http://www.europeana.eu/schemas/edm/userTag
Label	User Tag
Definition	This is a tag created by a user through the Europeana interface.
Subproperty of	dc:description
Domain	
Range	
Europeana note	These are tags created by registered users.
Obligation & Occurrence	Optional (Minimum:0, Maximum: unbounded)
Example	<ens:userTag>My favorite food!</ens:userTag>

3.3.50 Year

Element name: year	
Namespace	Europeana
URI	http://www.europeana.eu/schemas/edm/year
Label	Europeana Year
Definition	A point of time associated with an event in the life of the original analog or born digital object.
Subproperty of	dc:temporal
Domain	
Range	This is a 4 digit year in the Gregorian calendar (e.g. 1523), which is derived by Europeana from date values in the source metadata. It is derived from dc:date and its refinements.
Europeana note	It is used in the Europeana timeline and the date facet. Objects with no value for this property will not be represented in the Timeline or the date facet.
Obligation & Occurrence	Optional (Minimum:0, Maximum: unbounded)
Example	<ens:year>1523</ens:year>

Acronyms and Abbreviations (to be completed)

ABC: The ABC Ontology and Model [1]

CIDOC CRM: The CIDOC Conceptual Reference Model [2]

FRBR: Functional Requirements for Bibliographic Records [3]

TGN: Getty Thesaurus of Geographic Names

References

1. Carl Lagoze and Jane Hunter. The ABC Ontology and Model. *Journal of Digital Information*, 2 (2), 2001.
2. Martin Doerr. The CIDOC Conceptual Reference Module: An Ontological Approach to Semantic Interoperability of Metadata. *The AI Magazine*, 24 (3), 2003.
3. IFLA Study Group on the Functional Requirements for Bibliographic Records. *Functional Requirements for Bibliographic Records*. UBCIM Publications – New Series Vol 19. 1998

Change history from version 5.1

Date	Change	Author
5/7/2010	<p>Corrections based on feedback from the WP3 Meeting in Pisa (14-15 June 2010):</p> <ul style="list-style-type: none"> • aligned with ESEv3.3 (based on draft from A. Isaac of June 16) <ul style="list-style-type: none"> ○ addition of ens:dataProvider ○ addition of ens:rights • dropped ens:InformationRealization • changed the scope note of ens:Event to include also E4 Period from CIDOC CRM • added vra:location • made ens:TimeSpan a sub-class of dcterms:PeriodOfTime • added the fields “Equivalent Class” (“Equivalent property”) and “Superclass of” (“Superproperty of”) in the description of classes (resp. properties) in order to express mappings to other data models. Changed the description of some of the elements in order to use these new fields • aligned with CIDOC CRM based on input from Martin Doerr. The alignment is expressed as Equivalent class or property statements between EDM elements and the corresponding CIDOC CRM elements • the property ens:aggregatedCHO has been introduced for modelling the association between an aggregation and the Cultural Heritage Object it refers to. In EDMv5.1 this information was represented by ens:isAbout • the property ens:isAbout has been removed from the model, since the logical union of dc:subject and ens:aggregatedCHO is equivalent to it • as a consequence of the previous removal, the (indirect) sub-property link between dc:subject and dcterms:references has disappeared; this link has not been replaced (by a direct sub-property link between dc:subject and dcterms:references) because it does not exist in the official RDF expression of DC elements and DC terms. 	Carlo Meghini
26/7/2010	<p>Corrections based on revision on v5.2 by Antoine Isaac:</p> <ul style="list-style-type: none"> • moved section on Credits at the beginning of the document • added a reference to the ens:aggregatedCHO property in the Europeana note of both ore:Aggregation and ens:EuropeanaObject • replaced the last 3 examples in ens:EuropeanaObject with an example on user-generated content • rephrased the rationale of ens:NonInformationResource • rephrased the examples in ens:Place • rephrased the rationale of ens:WebResource • replaced vra:location with ens:currentLocation due to 	Carlo Meghini

	<p>unclear mapping of the former</p> <ul style="list-style-type: none"> • label of ens:aggregatedCHO has been modified • rationale of ens:hasType has been slightly rephrased • domain and rationale of ens:isRelatedTo re-phrased • added a section at the beginning for acronyms and abbreviations • the introduction about ESE-EDM integration from has been moved from section 1 to section 3.3 and largely re-written • modified the range of dc:identifier • removed the “search and display features” line from the specification of dc:type • ens:year has been made a sub-property of dcterms:temporal • ens:aggregatedCHO is a sub-property of dc:subject (in order to capture the fact that an aggregation is about the CHO that it aggregates) • added reference section • domain of ens:country and ens:language left unspecified for backward compatibility with legacy data. A note has been added signalling that we intend to use ens:Agent as domain of both properties in the future • relaxed the constraint on range of dc:coverage, dc:creator, dc:publisher • re-arranged the property taxonomy for alignment with DC. Basic change: ens:isRelatedTo is now the top property, having as direct sub-properties dc:subject, ens:hasType and dc:relation, the latter having as direct sub-properties ens:wasPresentAt, ens:happenedAt, ens:occurredAt, ens:isNextInSequence, ens:isSimilarTo, dcterms:references, dcterms:hasPart, ens:hasMet 	
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