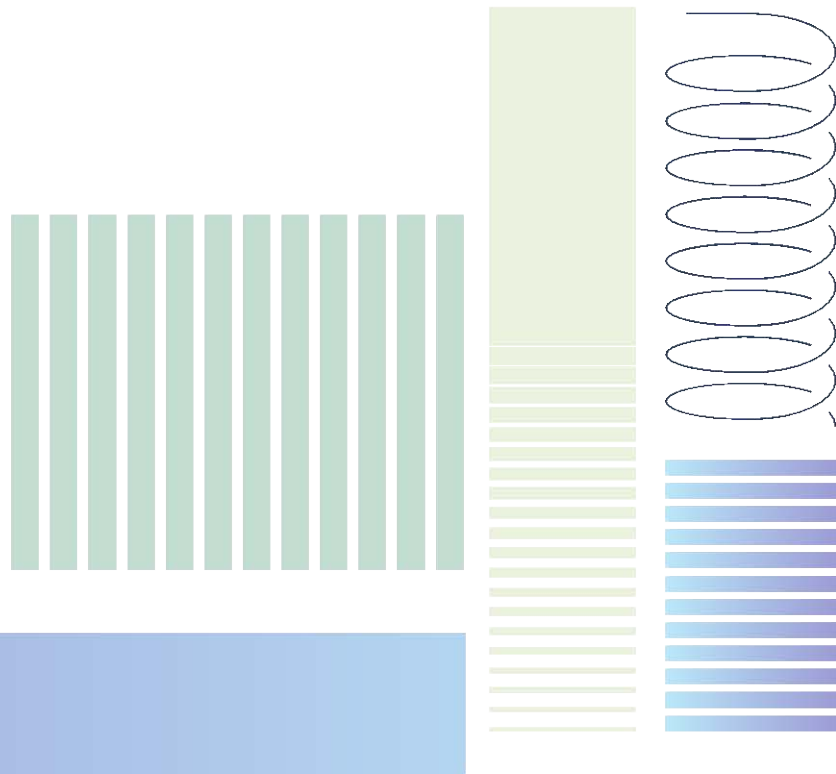


## D3.2: Design of the SILKNOW Ontology and the Ontology



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<b>List of acronyms</b>	
<b>CRM</b>	Conceptual Reference Model
<b>RDF</b>	Resource Description Framework
<b>OWL</b>	Ontology Web Language
<b>SPARQL</b>	SPARQL Protocol and RDF Query Language
<b>SKOS</b>	Simple Knowledge Organization System

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This deliverable describes the design of the SILKNOW ontology, which is based on CIDOC-CRM as a common data model for describing silk-related material. It also provides mappings between proprietary data formats used by cultural heritage institutions and this common data model. This serves as an evaluation of the coverage and relevance of the SILKNOW ontology.

## 1. INTRODUCTION

The SILKNOW ontology is based on the CIDOC1 Conceptual Reference Model (CRM) which provides definitions and a formal structure for describing the underlying semantic of the structure of documentation on cultural heritage. The CRM is therefore an international standard for exchanging data relative to cultural heritage. It is also an ISO norm (ISO 211127:2006) published in 2006 that evolved thereafter so that in December 2014, the version 5.0.4 was also published as an ISO norm (ISO21127:2014). This document is based on the version 6.2, the current published version.

The CRM is an entity relational model, with entity relationship diagrams. It is an object oriented model and more precisely an event-centric model. It defines a limited set of objects with which it is possible to describe complex realities. Moreover, the CRM data model is flexible and extensible. In other words, given that it is based on a double hierarchy of classes and properties, it is possible, if needed, to add new sub-classes and sub-properties for expressing more detailed relationships and properties without modifying the basic structure of the model. The SILKNOW ontology is based on this model and foresees to use this extension mechanism.

In the Deliverable D6.1, we described the general architecture of the SILKNOW platform (Figure 1). In this report, we further describe the SILKNOW ontology and the mapping rules that enable to validate the coverage of the ontology based on the metadata records collected by the SILKNOW crawler. The deliverable D3.2 includes also the ontology itself which consists in the OWL implementation of the CIDOC CRM model and guidelines to use values from the SILKNOW multilingual thesaurus for many properties.

The remainder of this report is structured as follows. In Section 2, we propose a basic 101 guide of the CIDOC-CRM ontology which is chosen as the basis for the SILKNOW ontology. In Section 3, we detail the mapping rules for 3 different museums, namely: GARIN (a data provider in the SILKNOW consortium), the Joconde museum and the IMATEX museum. For each case, we provide the mapping table and an example of the RDF graph being generated. Finally, we provide some conclusions and future work.

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<sup>1</sup> International Committee for Documentation of the International Council of Museums

# SILKNOW

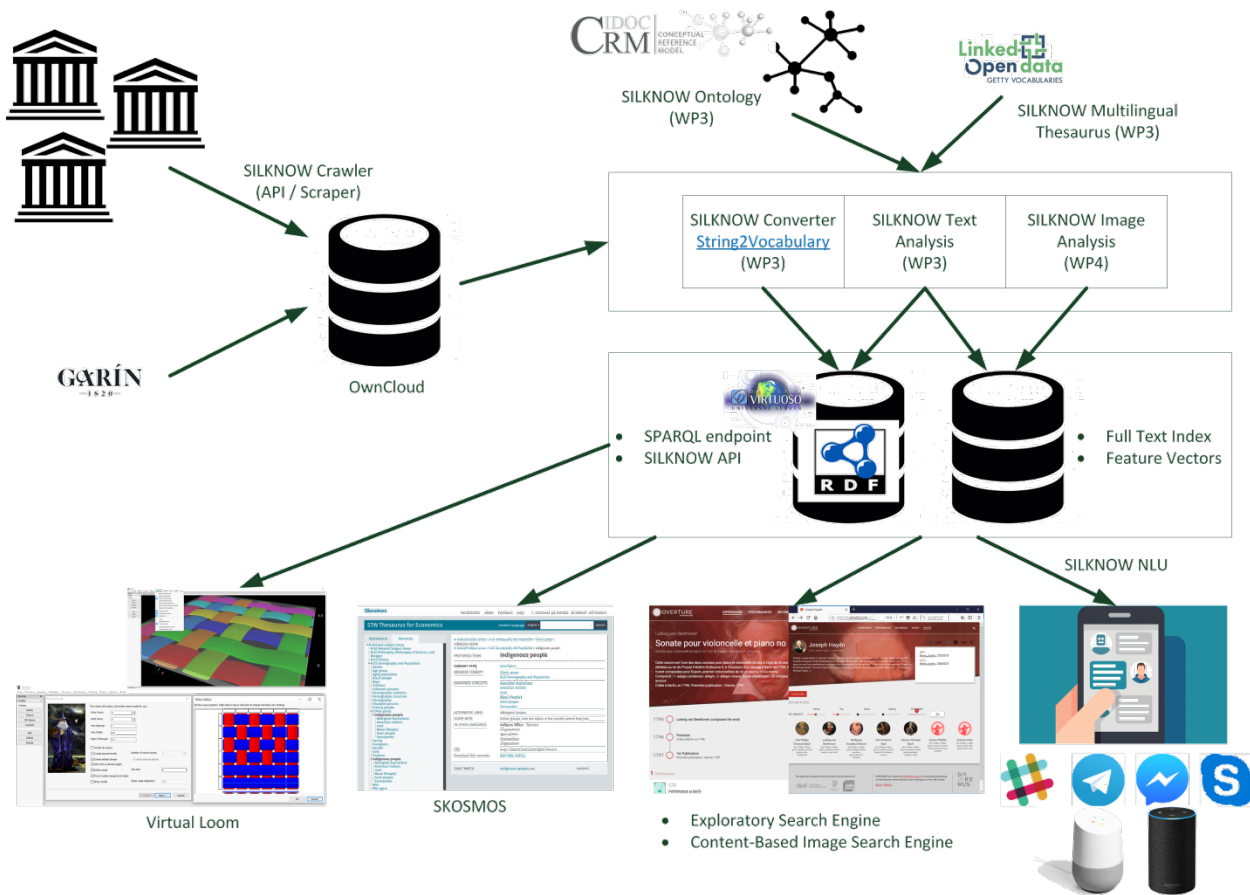


Figure 1. General architecture of the SILKNOW platform (from [6]). In this document, we focus on the mapping rules that will lead to the development of the SILKNOW converter.

## 2. CIDOC-CRM 101

The CIDOC CRM ontology consists of a limited set of classes (which correspond to real world things) and properties. The current version of the model is the version 6.2.1 which provides 89 classes and 151 properties. These classes are generalization abstracted from numerous cultural heritage data models. In the following, we make use of the OWL implementation of the CIDOC CRM ontology developed by erlangen<sup>2</sup> and available on github at <https://github.com/erlangen-crm/ecrm/>.

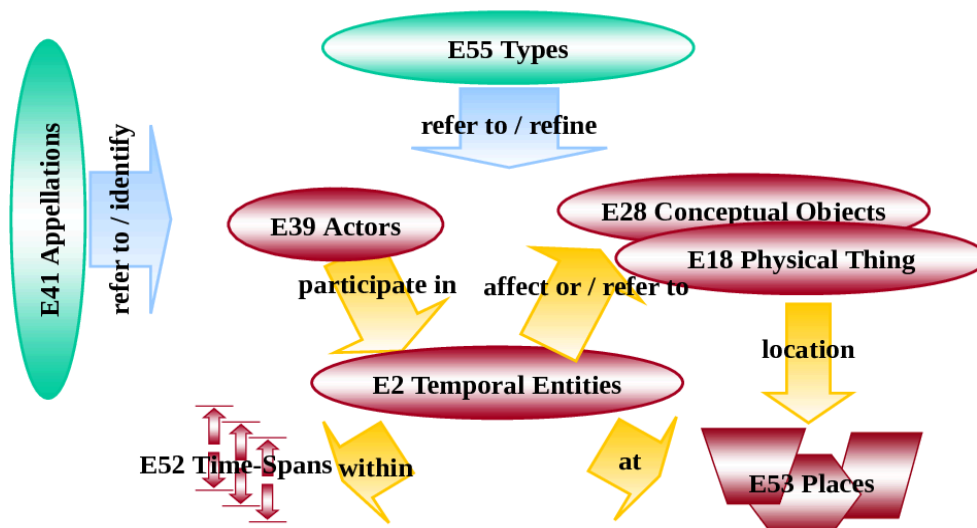
A CRM class is a category of items sharing common traits. It is identified by numbers preceded by the letter “E” and is named using noun phrases with title case. For example: E62 Beginning of Existence or E54 Dimension. Its scope note explicits the meaning and the intention (the sum of the traits) of the class. A class can have more than one superclass of which it is a specialisation. For

<sup>2</sup> Bernhard Schiemann, Martin Oischinger and Günther Görz at the Friedrich-Alexander-University of Erlangen-Nuremberg, Department of Computer Science, Chair of Computer Science 8 (Artificial Intelligence) in cooperation with the Department of Museum Informatics of the Germanisches Nationalmuseum Nuremberg and the Department of Biodiversity Informatics of the Zoologisches Forschungsmuseum Alexander Koenig Bonn.

instance, the class `E21 Person` is a subclass of `E39 Actor` and conversely, `E39 Actor` is a super-class of `E21 Person`.

A CRM property defines a relationship of a specific kind between two classes. By convention, it is identified by a number preceded by the letter “P” and named using verbal phrases in lower case. For properties with the character of states, the present tense is used (for instance `P2 has type`). For properties related to events, the past time is used (for instance `P14 carried out by`). A property can have more than one immediate super-property and therefore more than one immediate sub-property. Moreover, a property is also defined with reference to its domain (the class for which the property is formally defined) and its range (the class that comprises all potential values of a property). As for classes, properties are organized in a hierarchy.

## The CIDOC CRM Top-level classes useful for integration



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Figure 2. The CIDOC CRM, a Standard for the Integration of Cultural Information (from [7])

**Temporal entities (E2)** are core in the model. They represent things that have occurred in the past. Only temporal entities can be linked to time and have time spans (E52). CRM does not allow Actors (E39) or Conceptual Object (E28) or Physical Thing (E18) to be directly linked to time. They have to be linked to an Event (E5), which is a subclass of a Temporal Entity (E2). That is why we consider that CIDOC-CRM is an event-centric model.

Generally, events occur somewhere. A **Place (E53)** could be a geographical location but also a location as the bottom of a glass.

**Actors (E39)** “are agents who have the potential to perform intentional actions of kinds for which someone may be held responsible”. They participate in events. They can be individuals (E21 Person)

or Group (E74), or its subclass Legal Body (E40). Actors interact with or affect things, Physical Thing (E18) or Conceptual Object (E28).

It is a very common practice to identify things and people with names which are a type of Appellation (E41). An object title or record number are also forms of appellation. Thus, the CRM makes possible to name anything. It is important to differentiate between a thing and its appellation because a thing can have different names through time and in different places.

It is also a common practice to classify things and people using **Type (E55)**. The CRM enables to multi-type anything. Moreover, it is possible to discuss the classification of things over time and examine its history.

One of the most important distinctions in CRM is the disjunction between the **temporal entities** (events, activities) branch and the **persistent items** branch in the hierarchy.

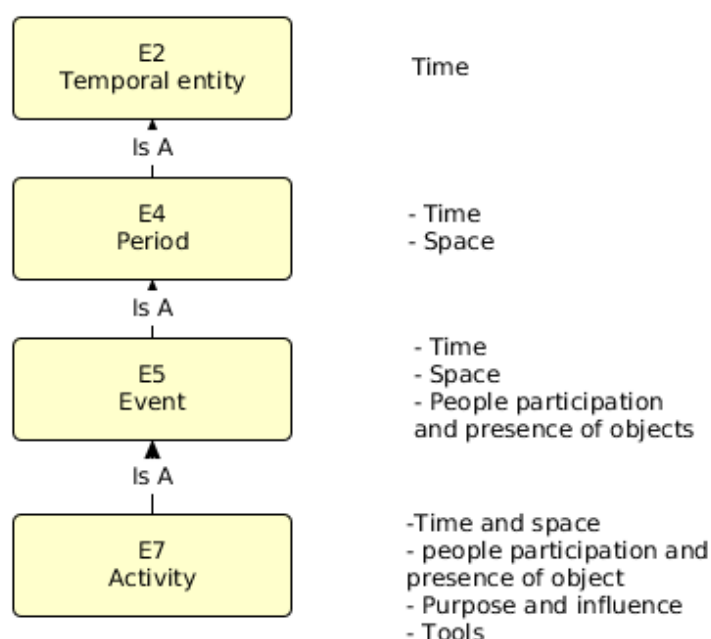


Figure 3. Temporal entities hierarchy.

The Temporal entity (E2) is an abstract class with no direct instance but its subclasses introduce successively new properties. Period (E4) is a specialization of Temporal Entity (E2), which applies to a particular area and can be linked to place and Condition State (E13) which applies to Physical Thing (E18). Period is confined in time and space. It is where we can add parts. Event (E5) is a specialization of Period which allows us to discuss participation (who or what took part or was present). Activity (E7) is a specialization of Event. At this level we can talk about purpose or intention and about any object used to fulfil a task.

A **persistent** item is something we can identify over time, something able to survive one or more events. Persistent items types define instances that initiate, receive or witness events or activities. A persistent item can originate, survive or terminate in events. So they can participate in temporal events or a carrier of it can be present in the case of a conceptual object.

## 3. MAPPING RULES

First, we provide below the general graph that relates the digital object with the metadata records that describe them (Figure 4). In the following, the CRM entity in yellow represents the entities represented in yellow or green in the RDF graph illustrations.

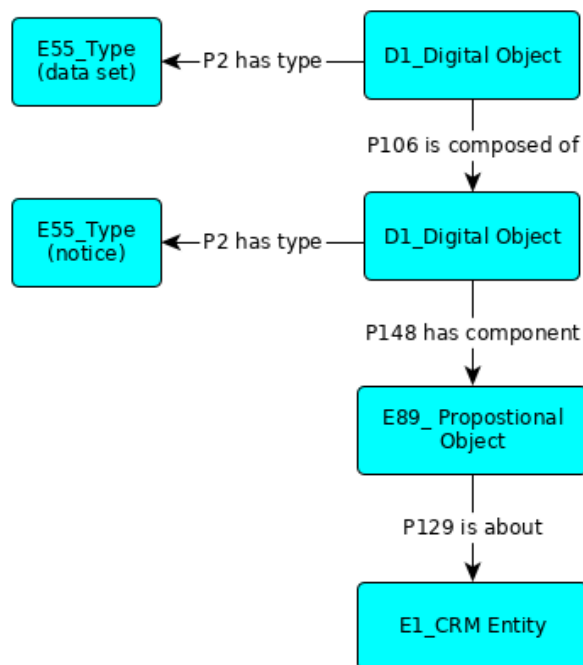


Figure 4. Relations between dataset, records and parts of records.

### 3.1 GARIN

GARIN is a SILKNOW consortium partner which provided 3125 metadata records associated to 6626 images. We provide in this section the mapping tables for two real records from Garin which are represented in the Excel spreadsheet format (the record T000053.xls in section 3.1.1 and the record T000059.xls in section 3.1.2). Next, we provide the RDF graph, which will be generated for those two records using the SILKNOW ontology in section 3.1.3.

#### 3.1.1 Record 1 (T000053.xls)

Field	Example	SILKNOW Class	Path	Comments
Propiedad	Ajuntament de Moncada	E8_Acquisition	E40_Legal Body P1 is identified by E82_Actor Appellation E8_Acquisition P24 transferred title of E22_Man Made Object E8_Acquisition P22_ transferred title to E40_Legal Body	



			E8_Acquisition P24_transferred title of E39_Actor	
N° Inventario	T000053	E15_Identifier Assignment	E15_Identifier Assignment P140 assigned attribute to E22_Man-Made Object E15_Identifier Assignment P37 assigned E42_Identifier E42_Identifier P2 has type E55_Type	
Denominación principal	Abundancia		E22_Man-Made Object P102 has title E35_Title	
Objeto	Tejido	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment carried out by E39_Actor E17_Type Assignment P2 has type E55_Type	Type_Assignment of type 'Domain'
Localización	Depósito del chalet de La fábrica Garín	E9_Move	E9_Move P27 moved from E53_Place is identified by E44 Place Appellation E9_Move P25 moved E22_Man-Made Object	
Ubicación	Almacén tejidos	E9_Move	E9_Move P26 moved to E53_Place is identified by E44 Place Appellation E9_Move P25 moved E22_Man-Made Object	
Técnica	Telar mecánico	E12_Production	E12_Production P106 has produced E22_Man-Made Object E12_Production P32 use general technique E55_Type	
Material	Algodón y rayón	E12_Production	E12 Production P126 employed E57_Material	
Medidas	62.5	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
	62		E22_Man-Made Object P43	

			<p>has  dimension E54_Dimension  E16_Measurement P39  measured E22_Man-Made  Object  E16_Measurement P40  observed dimension  E54_Dimension  E54_Dimension P91 has unit  E58_Measurement unit  E54_Dimension P90 has value  E58_Number  E54_Dimension P2 has type  E55_Type</p>	
Tipología	Damasco	E17_Type Assignment	<p>E17_Type Assignment P41  classified E22_Man-Made  Object  E17_Type Assignment P42  assigned E55_Type  E17_Type Assignment P2 has  type E55_Type</p>	
Accesorios	G.B.0577, G.P. 00051, G.P.00077,T000033, T000053, T000054 y T001691	E12_Production	<p>E12_Production P16 use  specific object E22_an Made  Object</p>	
Descripción	Damasco de fondo raso en algodón azul, con dibujo Abundancia formado por una trama de rayón color crema.	S4_Observation	<p>S4_Observation 08 observed  E22_Man-Made Object  S4_Observation P3 has note  E62_String  S4_Observation P2 has type  E55_Type</p>	
Descripción técnica	Urdimbre: Trama: 28 pasadas. Rapport: 31 cm. Telar: de lanzadera	S4_Observation	<p>S4_Observation 08 observed  E22_Man-Made Object  S4_Observation P3 has note  E62_String  S4_Observation P2 has type  E55_Type</p>	
Condición	Buena	E14_Condition Assessment	<p>E14_Condition Assessment  P35 has identified  E3_Condition State  E14_Condition Assessment  P34 concerned E22_Man-  Made Object  E14_Condition Assessment  P14 carried out by E40_Legal  Body  E3_Condition State P2 has  type E55_Type  E3_Condition State P3 has  note E62_String  E3_Condition State P5  consists of E3_Condition State</p>	
Deterioros	Perforaciones en el margen superior	E14_Condition Assessment	<p>E3_Condition State P2 has  type E55</p>	

			E3_Condition State P3 has note E62_String	
Partes que faltan	No	E14_Condition Assessment	E3_Condition State P2 has type E5 E3_Condition State P3 has note E62_String E14_Condition Assessment P35 has identified E3_Condition State	
Restauraciones localizadas	'Empty'	E11_Modification	E11_Modification P32 has modified E22_Man-Made Object E11_Modification P2 has type E55_Type E11_Modification P3 has note E62_String	
Autor de la obra	Fábrica Garín	E12_Production	E12_Production P14 carried out by E39_Actor P1 is identified by E82_Actor Appellation	
Época	1ª mitad siglo XX	E12_Production	E12_Production P4 has time-span E52_Time-Span P78 is identified by E49_Time Appellation	
Documentación gráfica	'2 Images'	E38_Image	E38_Image P138 represents E22_Man-Made Object	
Anverso	No	S4_Observation	E22_Man-Made Object P59 has section E53_Place P87 is identified by E46_Section Definition S4_Observation 08 observed E53_Place S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	
Reverso	Etiqueta adhesiva "MG Valencia 11"	S4_Observation	E22_Man-Made Object P59 has section E53_Place P87 is identified by E46_Section Definition S4_Observation 08 observed E53_Place S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	

### 3.1.2 Record 2 (T000059.xls)

Field	Example	Main Class	Path	Comments
Propiedad	Ajuntament de Moncada	E8_Acquisition	E40_Legal Body P1 is identified by E82_Actor Appellation	

# SILKNOW

			E8_Acquisition P24 transferred title of E22_Man Made Object E8_Acquisition P22 transferred title to E40_Legal Body E8_Acquisition P24 transferred title of E39_Actor	
N° Inventario	T000059	E15_Identifier Assignment	E15_Identifier Assignment P140 assigned attribute to E22_Man-Made Object E15_Identifier Assignment P37 assigned E42_Identifier E42_Identifier P2 has type E55_Type	
Denominación principal	Agapito		E22_Man-Made Object P102 has title E35_Title	
Objeto	Tejido	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment carried out by E39_Actor E17_Type Assignment P2 has type E55_Type	Type_Assignment of type 'Domain'
Localización	Depósito del chalet de La fábrica Garín	E9_Move	E9_Move P27 moved from E53_Place is identified by E44 Place Appellation E9_Move P25 moved E22_Man-Made Object	
Ubicación	Almacén tejidos	E9_Move	E9_Move P26 moved to E53_Place is identified by E44 Place Appellation E9_Move P25 moved E22_Man-Made Object	
Técnica	Telar mecánico, lanzadera	E12_Production	E12_Production P106 has produced E22_Man-Made Object E12_Production P32 use general technique E55_Type	
Material	Seda	E12_Production	E12 Production P126 employed E57_Material	
Medidas	65	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39	

			<p>measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type</p>	
	30		<p>E22_Man-Made Object P43 has dimension E54_Dimensio n E16_Measurement P39 measured E22_Man- Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type</p>	
Tipología	Damasco	E17_Type Assignment	<p>E17_Type Assignment P41 classified E22_Man- Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type</p>	
Accesorios	G.P. 00075, del T000056 al T000082, T001675 al T001679, T001720 al T001722	E12_Production	E12_Production P16 use specific object E22_an Made Object	
Descripción	Dibujo Agapito con trama y urdimbre de color rosa	S4_Observation	<p>S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type</p>	
Descripción técnica	Urdimbre: Trama: 35 pasadas Rappor t: 65 cm de ancho (incompleto) y alto incompleto	S4_Observation	<p>S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type</p>	
Condición	Buena	E14_Condition Assessment	E14_Condition Assessment P35 has	

			<p>identified E3_Condition State  E14_Condition Assessment P34 concerned E22_Man-Made Object  E14_Condition Assessment P14 carried out by E40_Legal Body  E3_Condition State P2 has type E55_Type  E3_Condition State P3 has note E62_String  E3_Condition State P5 consists of E3_Condition State</p>	
Deterioros	Orillas deshilachadas	E14_Condition Assessment	<p>E3_Condition State P2 has type E55  E3_Condition State P3 has note E62_String</p>	
Partes que faltan	No	E14_Condition Assessment	<p>E3_Condition State P2 has type E5  E3_Condition State P3 has note E62_String  E14_Condition Assessment P35 has identified E3_Condition State</p>	
Restauraciones localizadas	No	'Empty'	E11_Modification	<p>E11_Modification P32 has modified E22_Man-Made Object  E11_Modification P2 has type E55_Type  E11_Modification P3 has note E62_String</p>
Autor de la obra	Fábrica Garín	Fábrica Garín	E12_Production	<p>E12_Production P14 carried out by E39_Actor P1 is identified by E82_Actor Appellation</p>
Época	Finales del siglo XIX o primer tercio del XX	1ª mitad siglo XX	E12_Production	<p>E12_Production P4 has time-span E52_Time-Span P78 is identified by E49_Time Appellation</p>
Documentación gráfica	'2 Images'	'2 Images'	E38_Image	<p>E38_Image P138 represents E22_Man-Made Object</p>
Anverso	Tirella para marcar el inicio y final del tejido	S4_Observation	E22_Man-Made Object P59 has section	

	de la pieza		E53_Place P87 is identified by E46_Section Definition S4_Observation 08 observed E53_Place S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	
Reverso	'Empty'	S4_Observation	E22_Man-Made Object P59 has section E53_Place P87 is identified by E46_Section Definition S4_Observation 08 observed E53_Place S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	

### 3.1.3 RDF graph representation

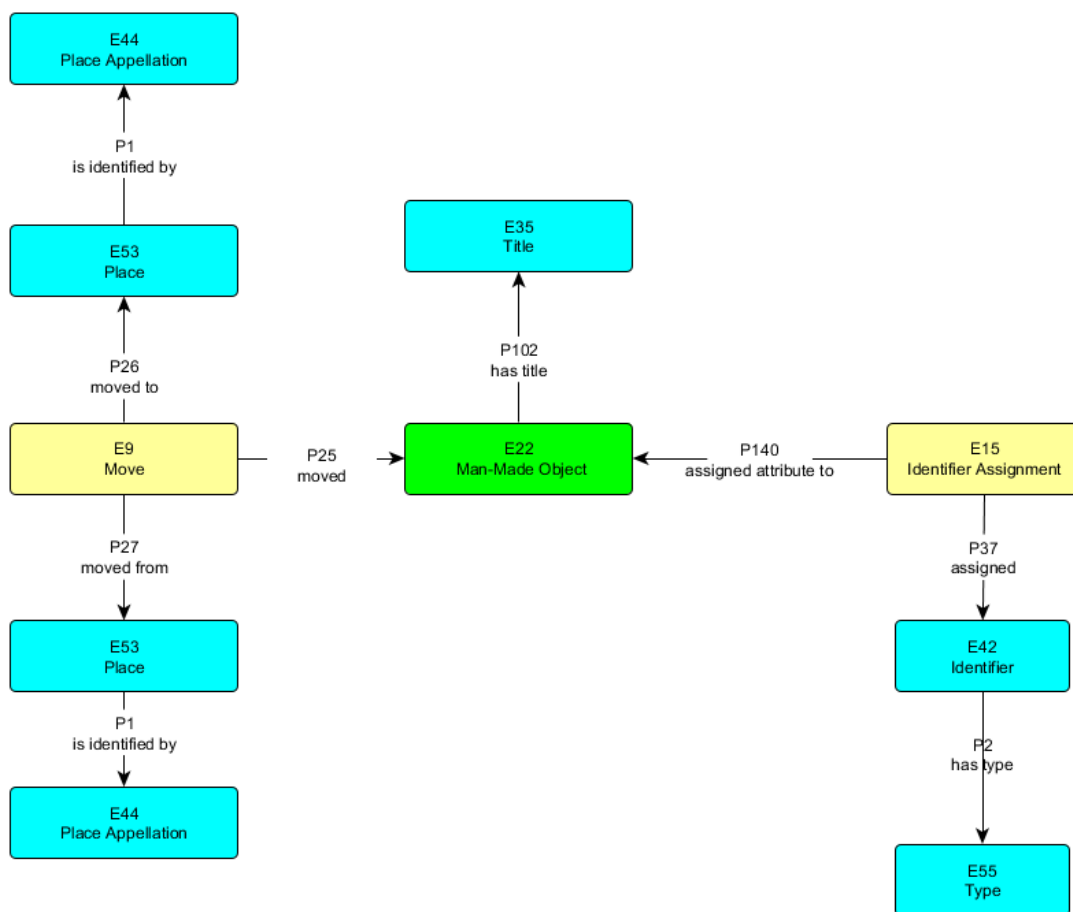


Figure 5. RDF graph representing the following properties: N° inventario, denominación principal, localización, ubicación.

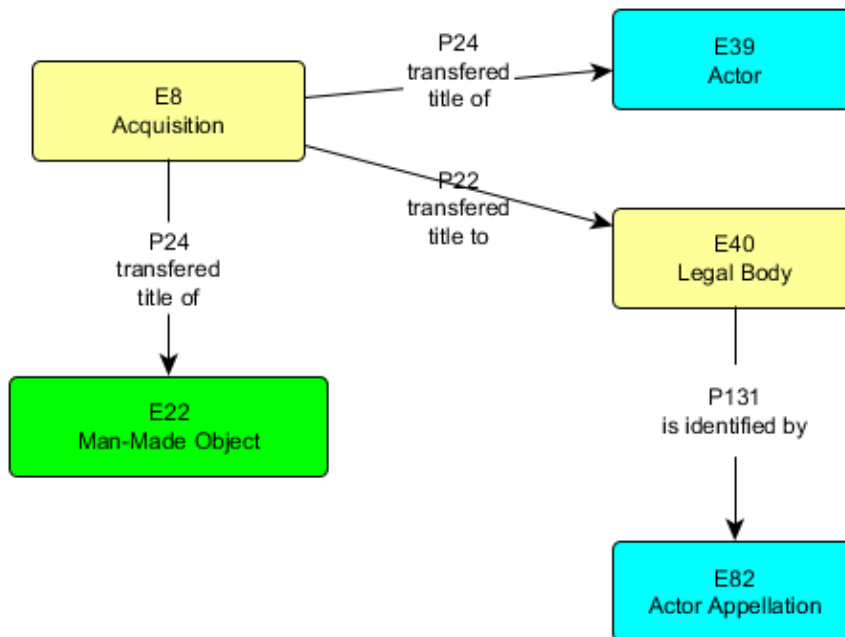


Figure 6. RDF graph representing the property: propiedad.

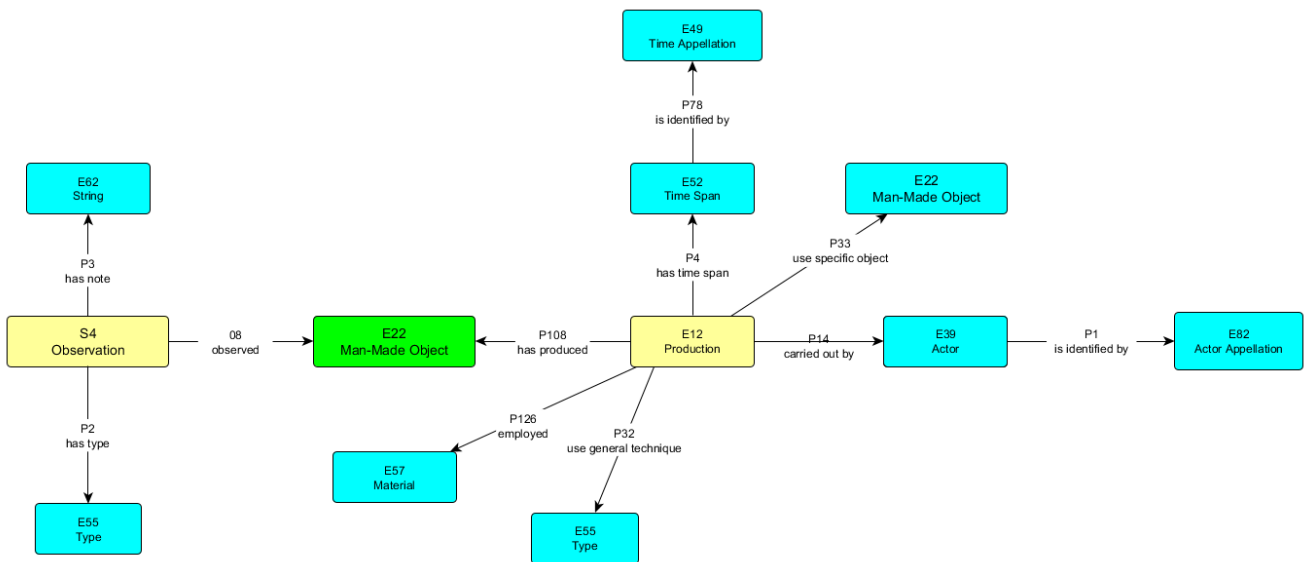


Figure 7. RDF graph representing the following properties: Técnica, Material, Accesorios, Autor de la obra, Epoca, Descripción, Descripción técnica



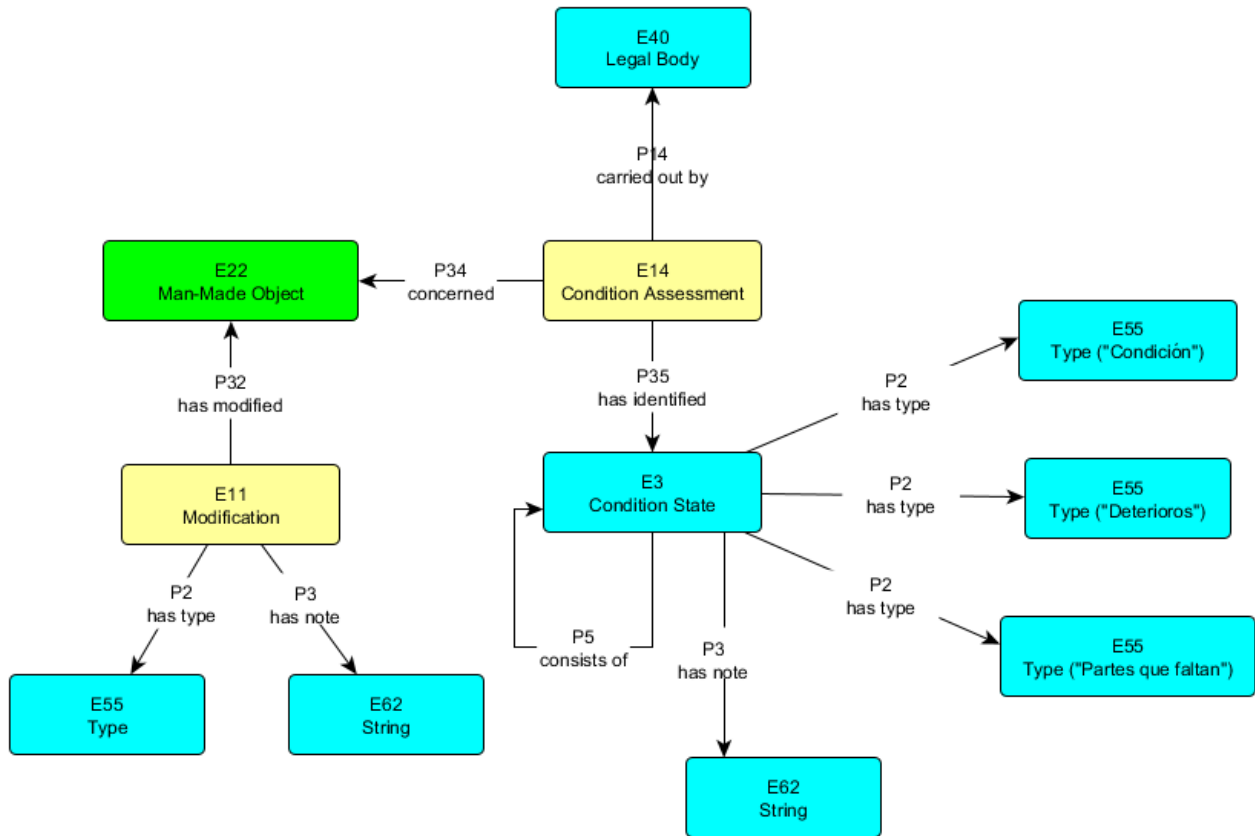


Figure 8. RDF graph representing the following properties: condición, deterioros, partes que faltan, restauraciones localizadas.

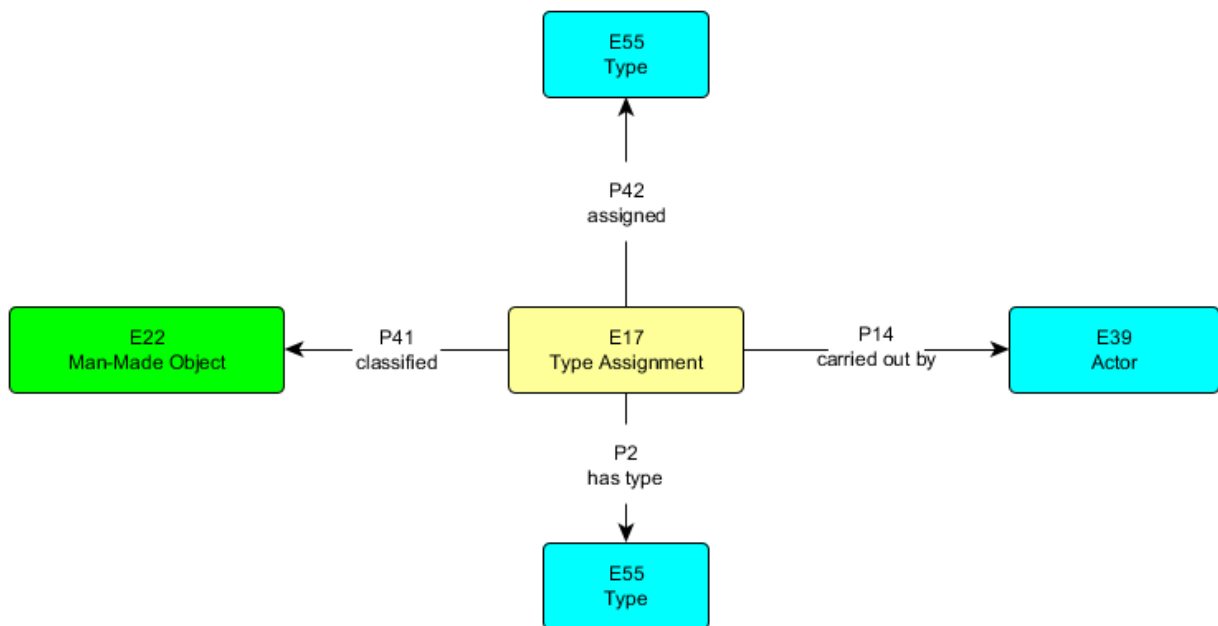


Figure 9. RDF graph representing the object itself.

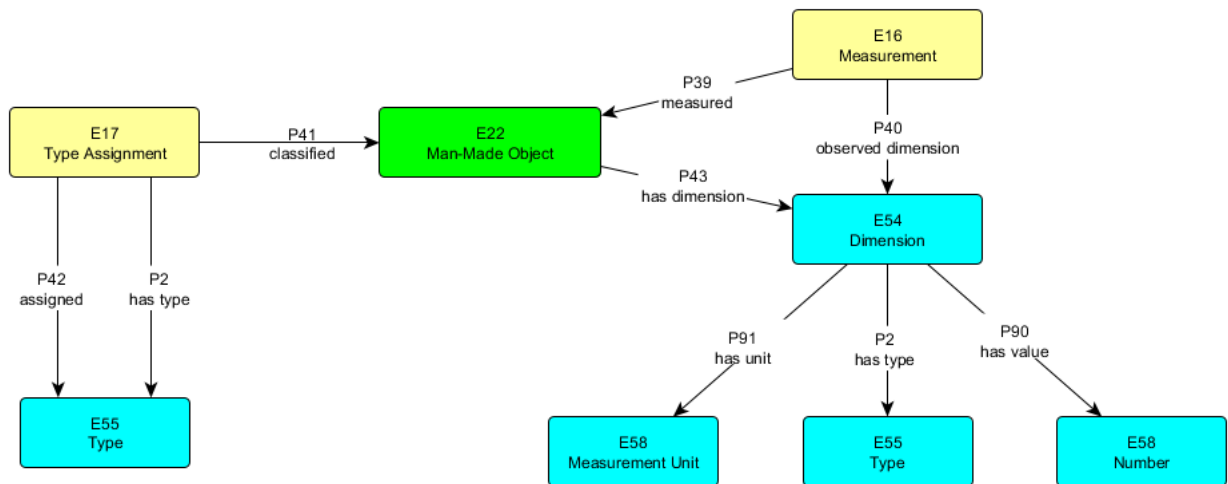


Figure 10. RDF graph representing the field dimensions of the object.

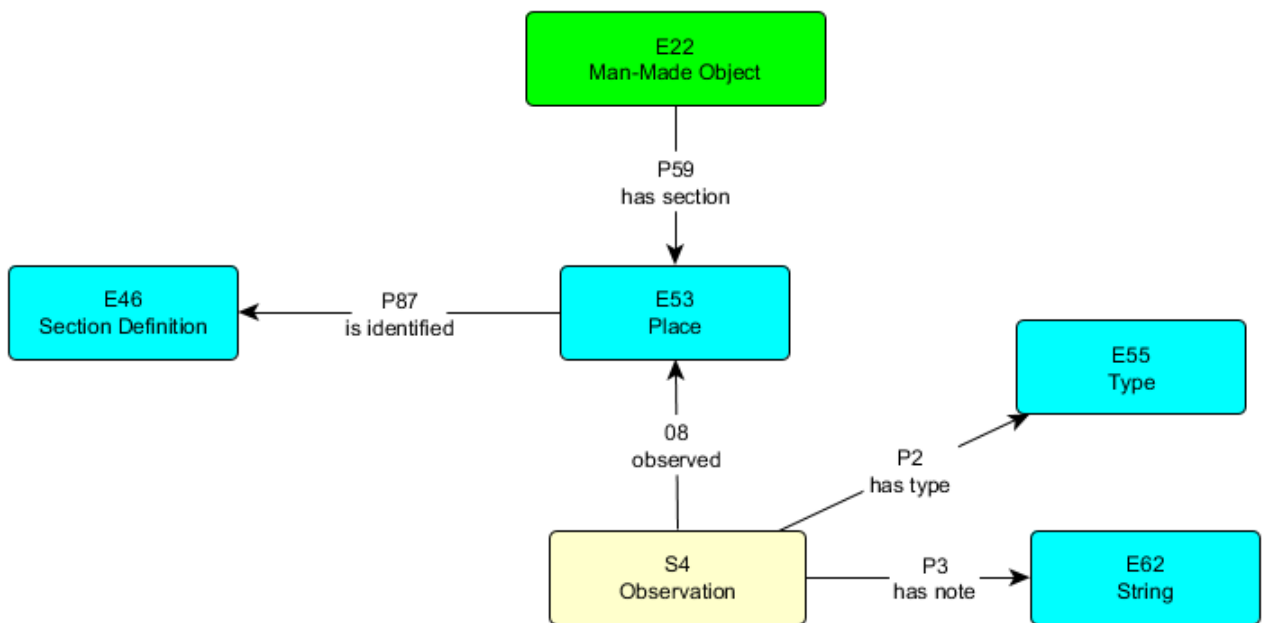


Figure 11. RDF graph representing the properties Anverso and Reverso.

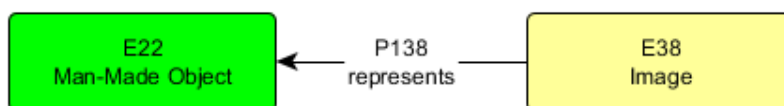


Figure 12. RDF graph representing the field documentación gráfica.

## 3.2 JOCONDE

The French Joconde portal<sup>3</sup> gathers collections from numerous French museums. We provide in this section the mapping tables between two representative records scraped from the Joconde portal which are represented in the JSON format (sections 3.2.1 and 3.2.3). For each record, we provide the RDF graph being generated using the SILKNOW ontology (sections 3.2.2 and 3.2.4).

### 3.2.1 Record 1 (95.71.2.json)

Field	Example	Main Class	Path	Comments
Domaine	textile	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Domain)	controlled vocabulary  Type_Assignment of type 'Domain'
Dénomination	ruban	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Denomination)	controlled vocabulary
Titre	bouquet de fleurs		E22_Man-Made Object P102 has title E35_Title	
Auteur/exécutant	REBOUR Charles (exécutant)		E12_Production P108 has produced E22_Man Made Object E12_Production P14 carried out by E39_Actor P131 is identified by E82_Actor_Appellation	
Précision auteur/exécutant	REBOUR : ?, 1831 ; ?, 1897		E39_Actor P3 has note E62_String	
lieu de création / exécution	France, Rhône-Alpes, Loire, Saint-Etienne (lieu de création)		E12_Production P8 took place on or within E53_Place P1 is identified by E48_Place Name	
Période création /exécution	2e moitié 19e siècle		E12_Production P4 has time-span E52_Time-Span P78 is identified by E49_Time Appellation	
Genèse	objet en rapport	E89_Propositional Object	E89_Propositional Object P129 is about E22_Man-Made Object E89_Propositional Object P2 has type E55_Type	Rule : if field 'Genese' is not null and like 'objet en rapport' the field

<sup>3</sup> <http://www2.culture.gouv.fr/documentation/joconde/fr/pres.htm>

				'Historique' should have the identifier or the appellation of the related object (objet en rapport).
Historique	voir aussi : ruban (95.71.158)		E89_Propositional Object P67 refers to E22_Man-Made Object P1 is identified by E42_Identifier E22_Man-Made Object P3 has note E62_String	Here the E22_Made-Made Object is the one referred to in the field 'Historique'.
Matériaux/ techniques	soie, or, fil métallique, taffetas, broché, filé	E12 Production	E12 Production P126 employed E57_Material E12_Production P32 use general technique E55_Type	Material and technique are concatenated in this field.
Description	Ruban en soie et or, taffetas broché noir et effets de fond (épis), bord façonné or	S4_Observation	S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	
Dimensions	hauteur en cm 196	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
	largeur en cm 27	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
Inscriptions	cachet (français)	E17_Type Assignment	E22_Man-Made Object P128 carries E34_Inscription E17_Type Assignment P41	In fact, this field specifies the type of

			classified E34_Inscription E17_Type Assignment P42 assigned E55_Type P1 is identified by E41_Appellation (cachet français) E34_Inscription P2 has type E55_Type	inscriptions
Précision inscriptions	cachet : Aux 2 extrémités, traces du cachet cire rouge : Ch R. : Charles Rebour		S4_Observation 08 observed E34_Inscription S4_Observation P3 has note E62_String	
Sujet représenté	représentation végétale (bouquet, rose, épi, blé, muguet)	E89 Propositional Object	E89 Propositional Object P129 is about E22_Man Made Object P62 depicts E70_Thing P1 is identified by E41_Appellation	
Précision sujet représenté	Ruban noir avec décor de divers bouquets de fleurs composés d'épis de blé, de roses et de muguets. Le bord du ruban est orné de feuilles d'or		E89_Propostional Object P3 has note E62_String	
Lieu de conservation	Saint-Etienne ; musée d'Art et d'Industrie	E10 Transfer of Custod	E10 Transfer of Custody P29 received by E40_Legal Body P1 is identified by E82_Actor Appellation E10 Transfer of Custody P30 transferred of custody of E22_Man Made Object	
Statut juridique	propriété de la commune ; don ; Saint-Etienne ; musée d'Art et d'Industrie	E30_Right	E30_Right P104 applies to E22_Man-Made Object E30_Right P75 is possessed by E40_Legal Body P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
Numéro d'inventaire	95.71.2 ; Tg 2 (n° d'étude) ; 95-71-2 T (ancien numéro)	E15_Identifier Assignment	E15_Identifier Assignment P140 assigned attribute to E22_Man-Made Object E15_Identifier Assignment P37 assigned E42_Identifier E42_Identifier P2 has type E55_Type E15_Identifier Assignment P38 deassigned E42_Identifier E42_Identifier P2 has type E55_Type	
Rédacteur	Gidon Marielle ; Besson Sylvain		E31 Document P70 documents E22_Man-Made Object E31 Document P105 right held by E39 Actor	

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			E39_Actor P1 is identified by E82_Actor Appellation E21_Person P1 is identified by E82_Actor Appellation	
Copyright notice	© Saint-Etienne, musée d'Art et d'Industrie, © Service des musées de France, 2011		E30_Right P104 applies to E89_Propositional Object P129 is about E22_Man-Made Object E30_Right P75 is possessed by E40_Legal Body P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
Crédits photographiques	© Studio Caterin		E38_Image P138 represents E22_Man-Made Object E30_Right P104 applies to E38_Image E30_Right P75 is possessed by E39_Actor P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
'Image'	<a href="http://www2.culture.gouv.fr/Wave/image/joconde/0594/m102389_0005505_p.jpg">http://www2.culture.gouv.fr/Wave/image/joconde/0594/m102389_0005505_p.jpg</a>		E38_Image P138 represents E22_Man-Made Object	
Bibliographie		E73_Information Object	E73_Information Object P2 has type E55_Type (Bibliography) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	
expositions		E73_Information Object	E73_Information Object P2 has type E55_Type (Exhibitions) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	

## 3.2.2 RDF graph representation of Record 1

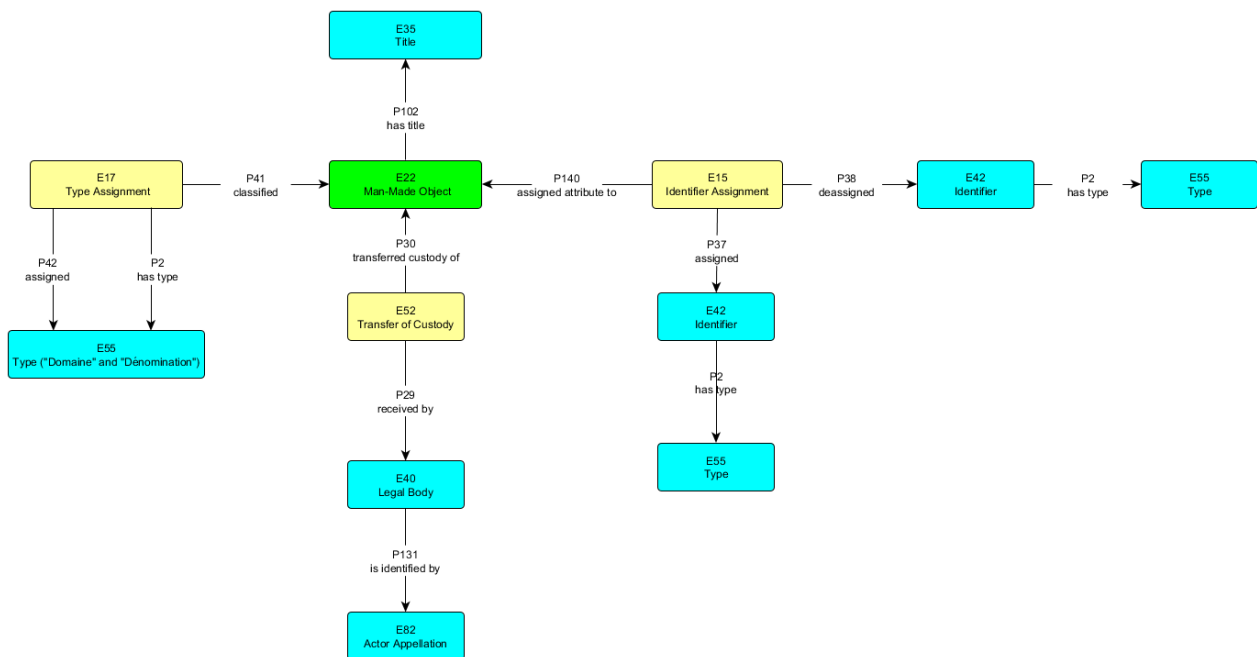


Figure 13. RDF graph representing the fields: Domaine, Dénomination, Titre, Lieu de conservation, Numéro d'inventaire.

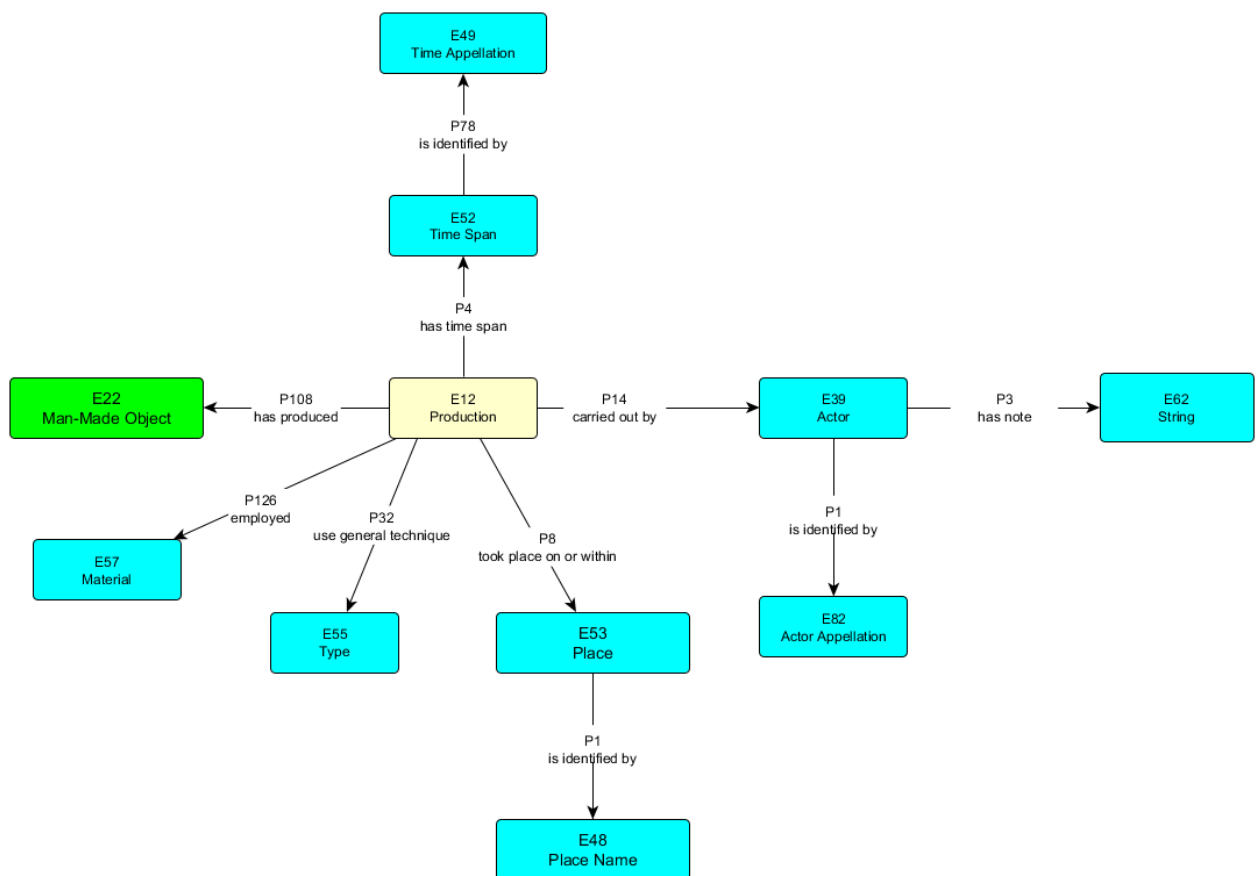


Figure 14. RDF graph representing the fields: Auteur/exécutant, Précisions auteur/ exécutant, Lieu de création/exécution, Période création/exécution, Matériaux/techniques.

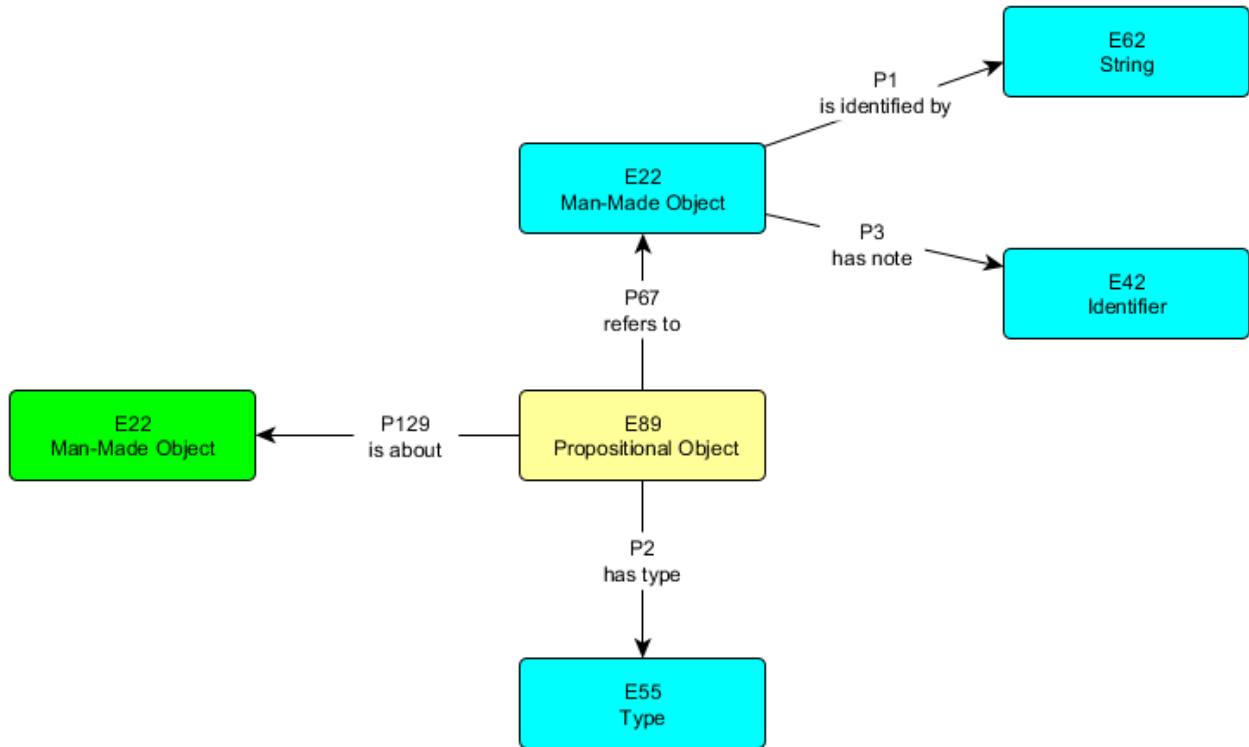


Figure 15. RDF graph representing the fields: Genèse, Historique.

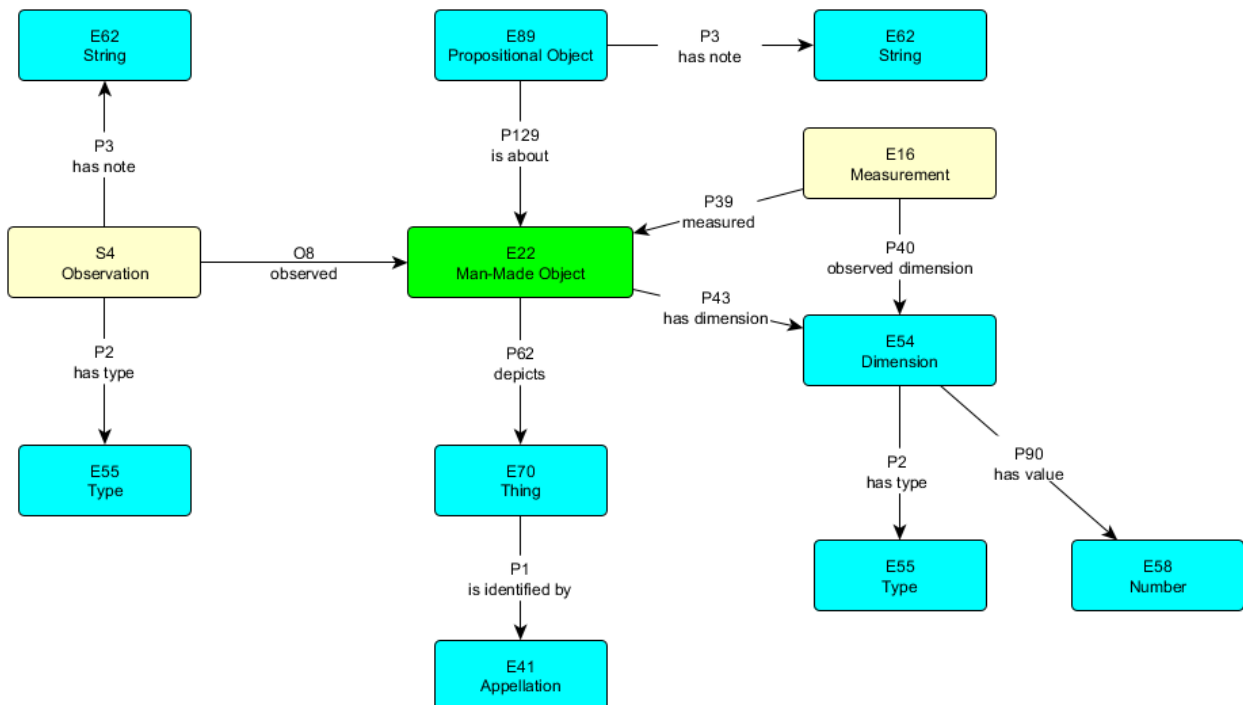


Figure 16. RDF graph representing the fields: Description, Dimensions, Sujet représenté, Précision sujet représenté.



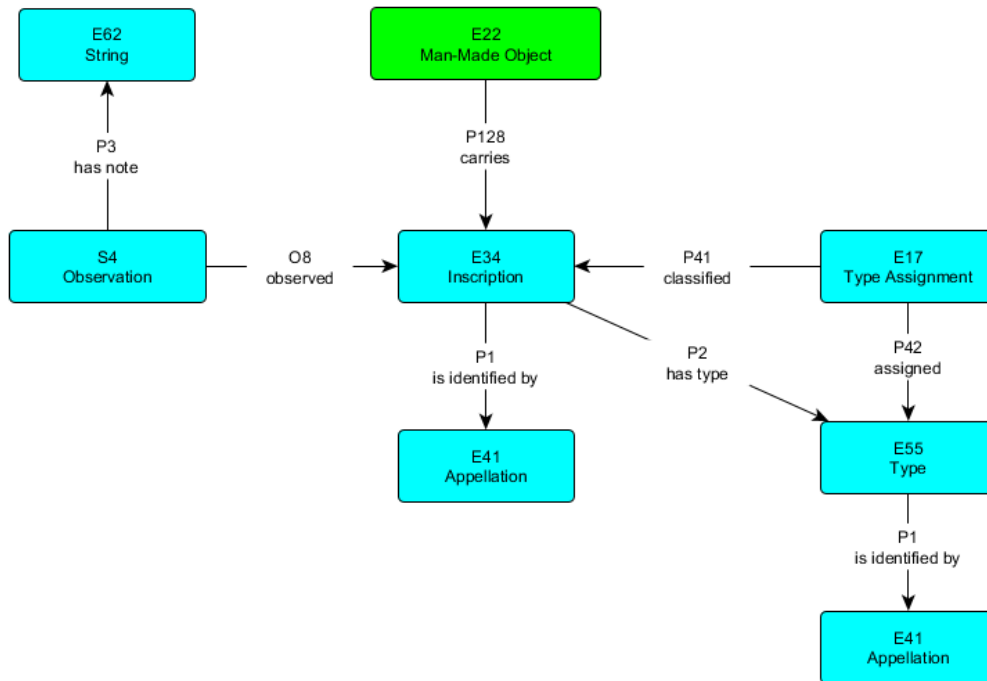


Figure 17. RDF graph representing the fields: Inscriptions, Précisions inscription.

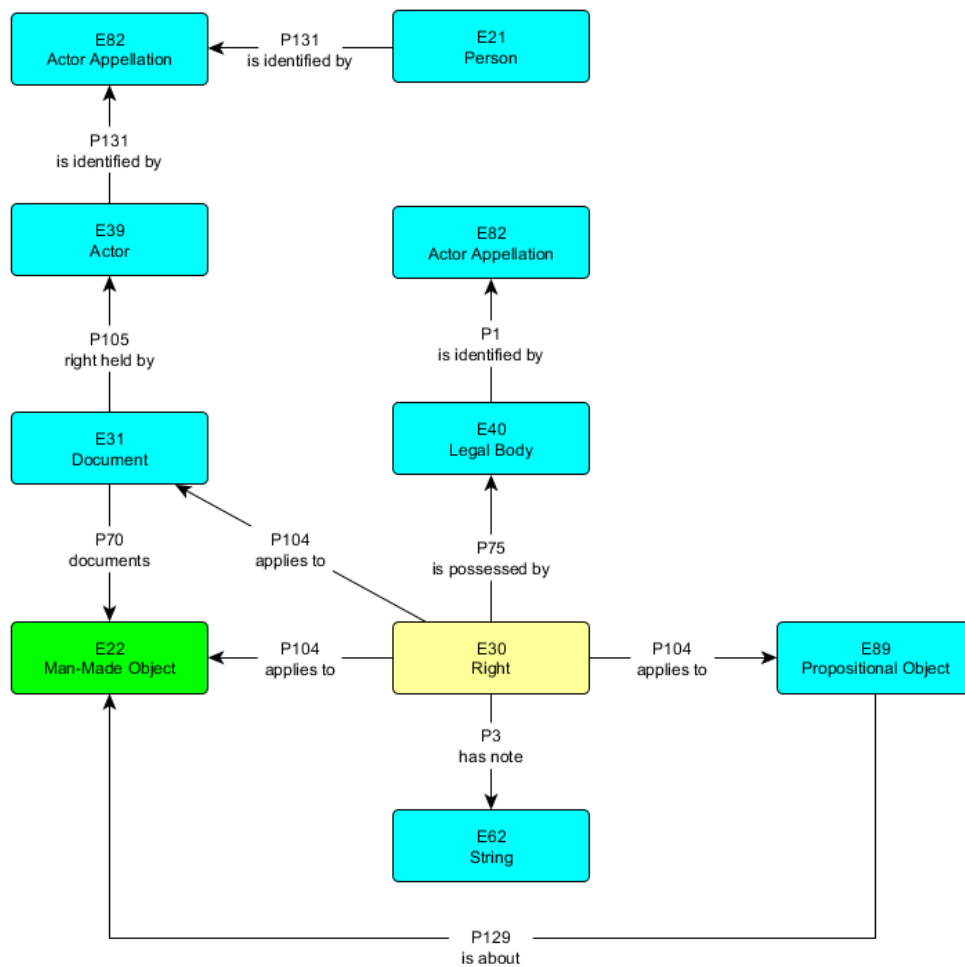


Figure 18. RDF graph representing the fields: Statut juridique, Rédacteur, Copyright notice.

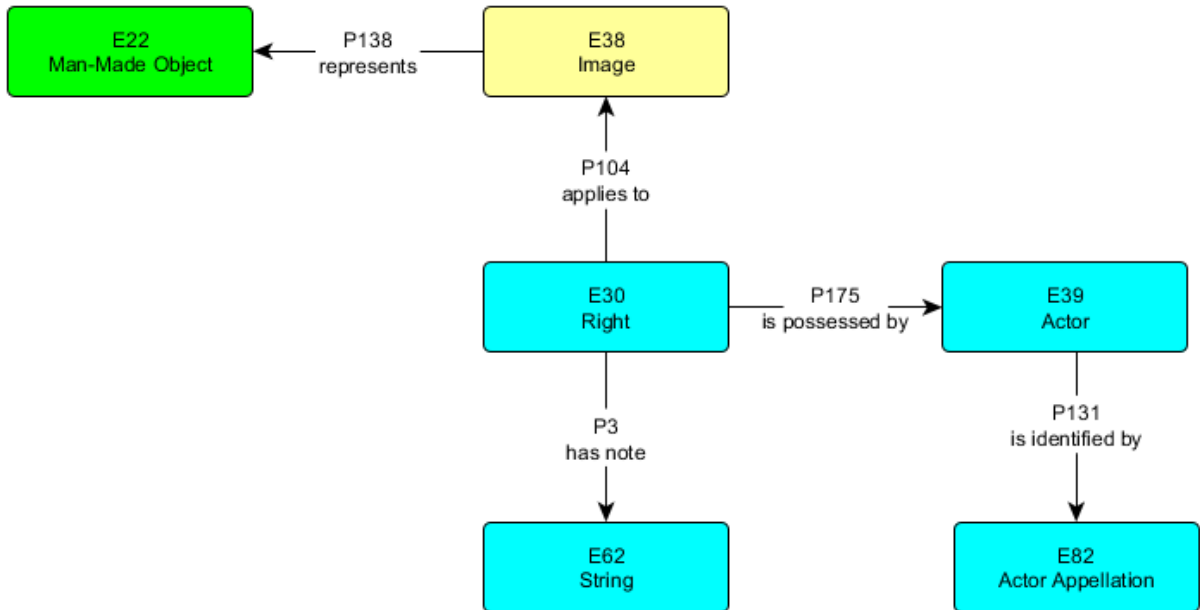


Figure 19. RDF graph representing the fields: Crédits photographiques, 'Image'.

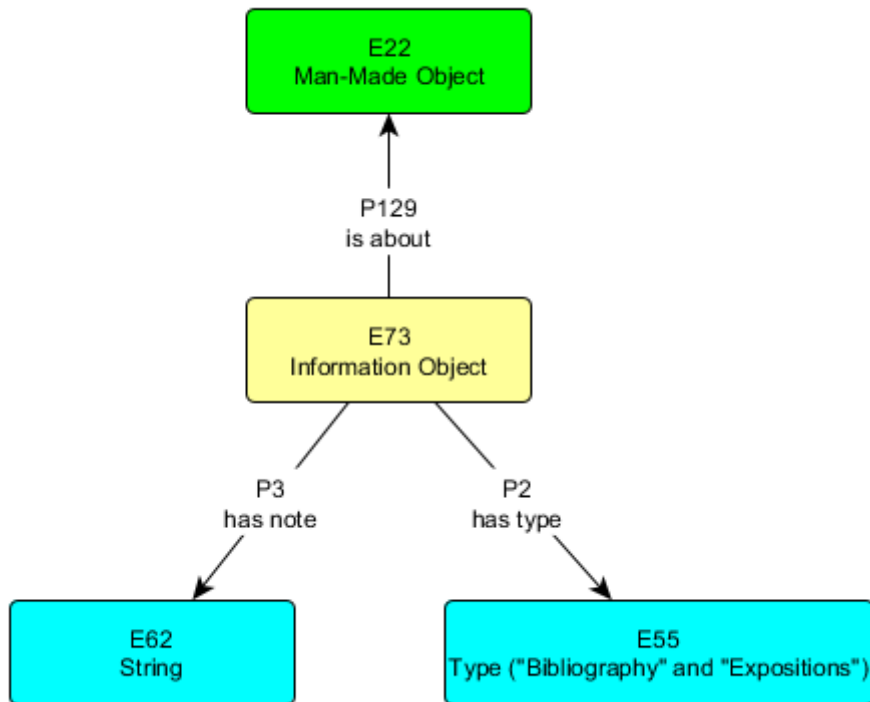


Figure 20. RDF graph representing the fields: Bibliographie, Expositions.

## 3.2.3 Record 2 (95.71.364.json)

Field	Example	Main Class	Path	Comments
Domaine	textile	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Domain)	
Dénomination	ruban	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Denomination)	
Titre	rayures		E22_Man-Made Object P102 has title E35_Title	
Auteur/exécutant	anonyme (fabricant)		E12_Production P108 has produced E22_Man Made Object E12_Production P14 carried out by E39_Actor P131 is identified by E82_Actor_Appellation	
Lieu de création / exécution	France, Rhône-Alpes, Loire, Saint-Etienne (lieu de création)		E12_Production P8 took place on or within E53_Place P1 is identified by E48_Place Name	
Période création /exécution	2e moitié 19e siècle ; 1er quart 20e siècle		E12_Production P4 has time-span E52_Time-Span P78 is identified by E49_Time Appellation	
Genèse	objet en rapport	E89_Propositional Object	E89_Propositional Object P129 is about E22_Man-Made Object E89_Propositional Object P2 has type E55_Type	
Historique	voir aussi : ruban (95.71.356) proche		E89_Propositional Object P67 refers to E22_Man-Made Object P1 is identified by E42_Identifier E22_Man-Made Object P3 has note E62_String	
Matériaux/ techniques	soie, faille	E12 Production	E12 Production P126 employed E57_Material E12_Production P32 use general technique E55_Type	
Description	Ruban en soie, faille rayée jardinière multicolores	S4_Observation	S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String	

			S4_Observation P2 has type E55_Type	
Dimensions	hauteur en cm 59	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
	largeur en cm 2.9	E16_Measurement	E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P91 has unit E58_Measurement unit E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
Sujet représenté	ornementation (rayure)	E89 Propositional Object	E89 Propositional Object P129 is about E22_Man Made Object P62 depicts E70_Thing P1 is identified by E41_Appellation	
Précision sujet représenté	Galon chapelier avec décor de rayures longitudinales multicolores, beige, rouge, bleu, noir, marron		E89_Propostional Object P3 has note E62_String	
Lieu de conservation	Saint-Etienne ; musée d'Art et d'Industrie	E10 Transfer of Custod	E10 Transfer of Custody P29 received by E40_Legal Body P1 is identified by E82_Actor Appellation E10 Transfer of Custody P30 transferred of custody of E22_Man Made Object	
Statut juridique	propriété de la commune ; mode d'acquisition	E30_Right	E30_Right P104 applies to E22_Man-Made Object E30_Right P75 is possessed	

	inconnu ; Saint-Etienne ; musée d'Art et d'Industrie		by E40_Legal Body P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
Numéro d'inventaire	95.71.364 ; Tg 364 (n° d'étude) ; 95-71-364 T (ancien numéro)	E15_ Identifier Assignment	E15_ Identifier Assignment P140 assigned attribute to E22_Man-Made Object E15_ Identifier Assignment P37 assigned E42_Identifier E42_Identifier P2 has type E55_Type E15_ Identifier Assignment P38 deassigned E42_Identifier E42_Identifier P2 has type E55_Type	
Rédacteur	Gidon Marielle ; Besson Sylvain		E31 Document P70 documents E22_Man-Made Object E31 Document P105 right held by E39 Actor E39 Actor P1 is identified by E82_Actor Appellation E21_Person P1 is identified by E82_Actor Appellation	
Copyright notice	© Saint-Etienne, musée d'Art et d'Industrie, © Service des musées de France, 2011		E30_Right P104 applies to E89_Propositional Object P129 is about E22_Man-Made Object E30_Right P75 is possessed by E40_Legal Body P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
Crédits photographiques	© Studio Caterin		E38_Image P138 represents E22_Man-Made Object E30_Right P104 applies to E38_Image E30_Right P75 is possessed by E39_Actor P131 is identified by E82_Actor Appellation E30_Right P3 has note E62_String	
'Image'	<a href="http://www2.culture.gouv.fr/Wave/image/joconde/0595/m102389_0005276_p.jpg">http://www2.culture.gouv.fr/Wave/image/joconde/0595/m102389_0005276_p.jpg</a>		E38_Image P138 represents E22_Man-Made Object	
Bibliographie		E73_Information Object	E73_Information Object P2 has type E55_Type (Bibliography) E73_Information Object P3 has note E62_String	

			E73_Information Object P129 is about E22_Man-Made Object	
expositions		E73_Information Object	E73_Information Object P2 has type E55_Type (Exhibitions) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	

### 3.2.4 RDF graph representation of Record 2

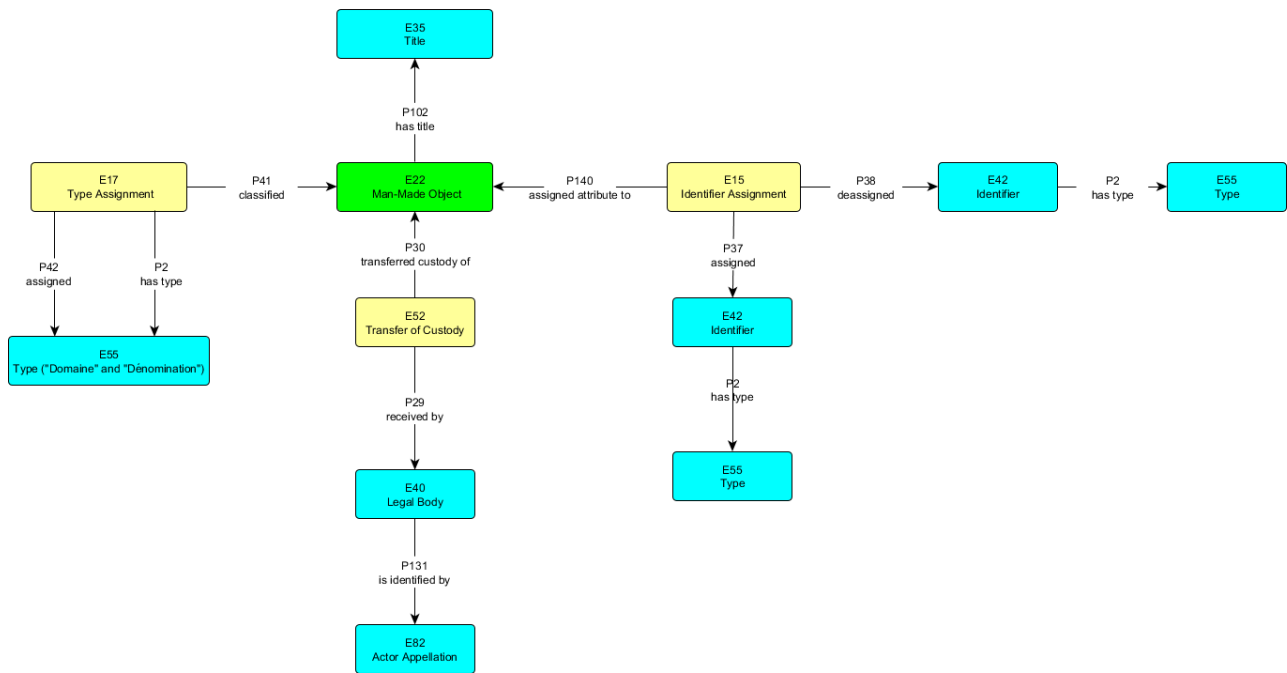


Figure 21. RDF graph representing the fields: Domaine, Dénomination, Titre, Lieu de conservation, Numéro d'inventaire.

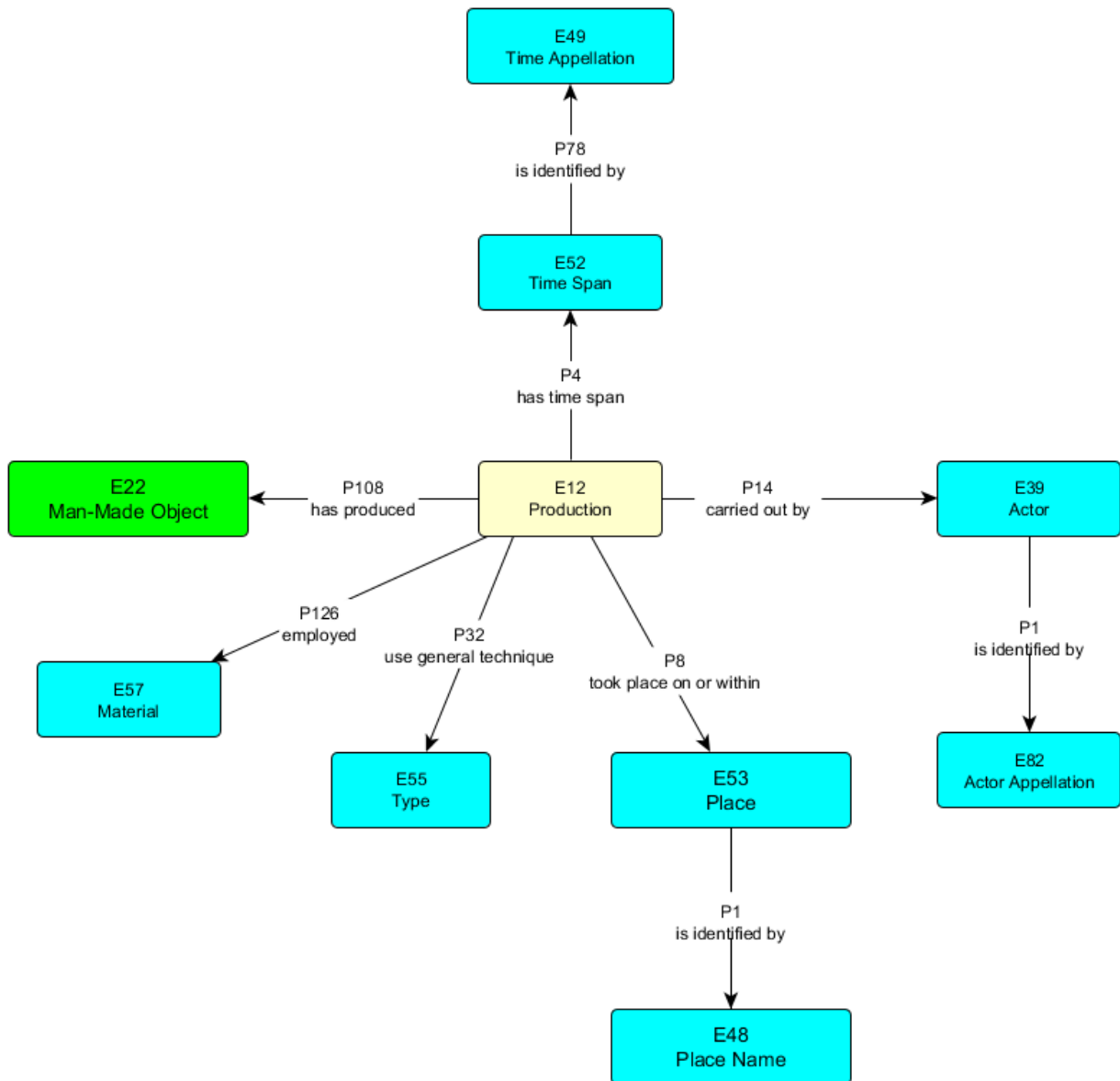


Figure 22. RDF graph representing the fields: Auteur/exécutant, Lieu de création/exécution, Période création/exécution, Matériaux/techniques.

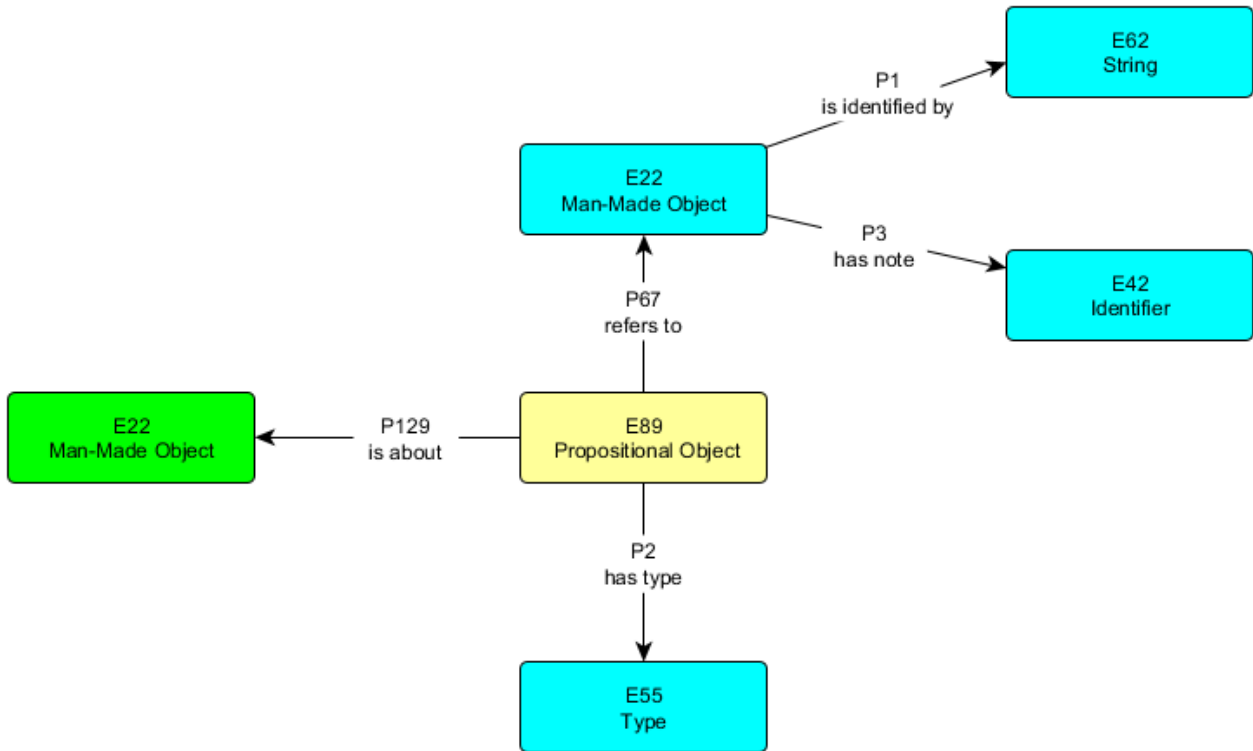


Figure 23. RDF graph representing the fields: Genèse, Historique.

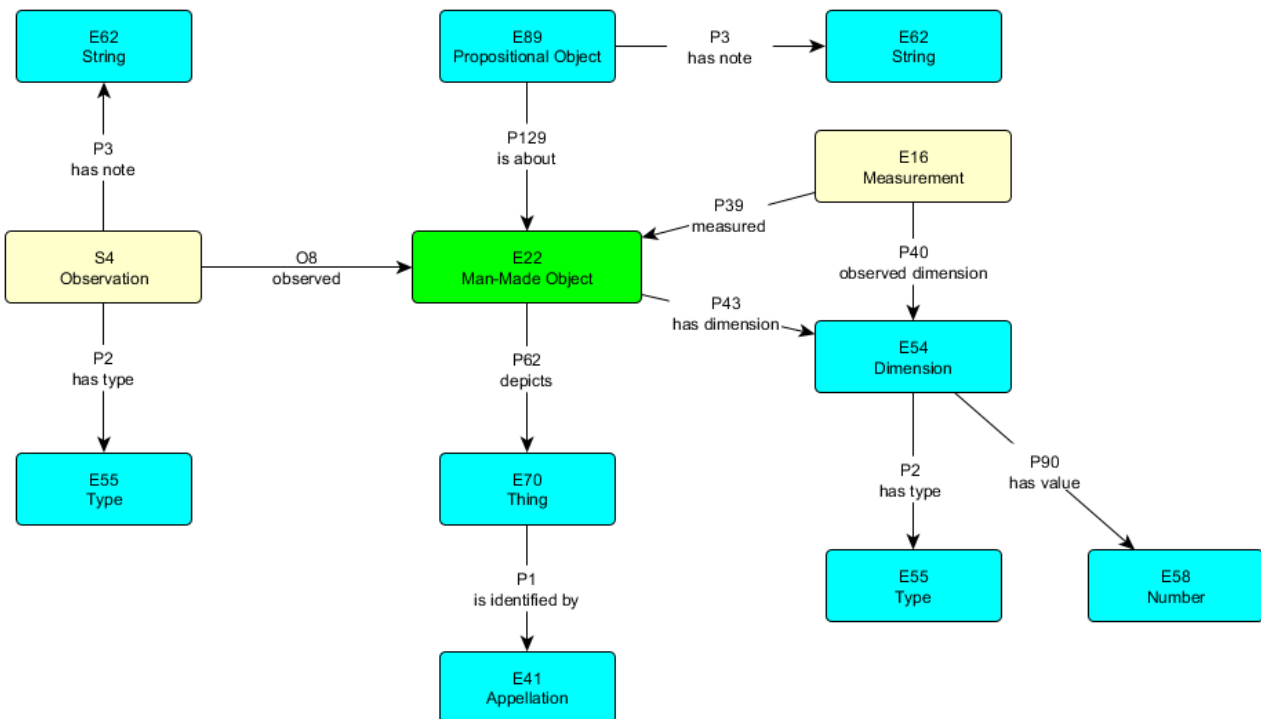


Figure 24. RDF graph representing the fields: Description, Dimensions, Sujet représenté, Précision sujet représenté.



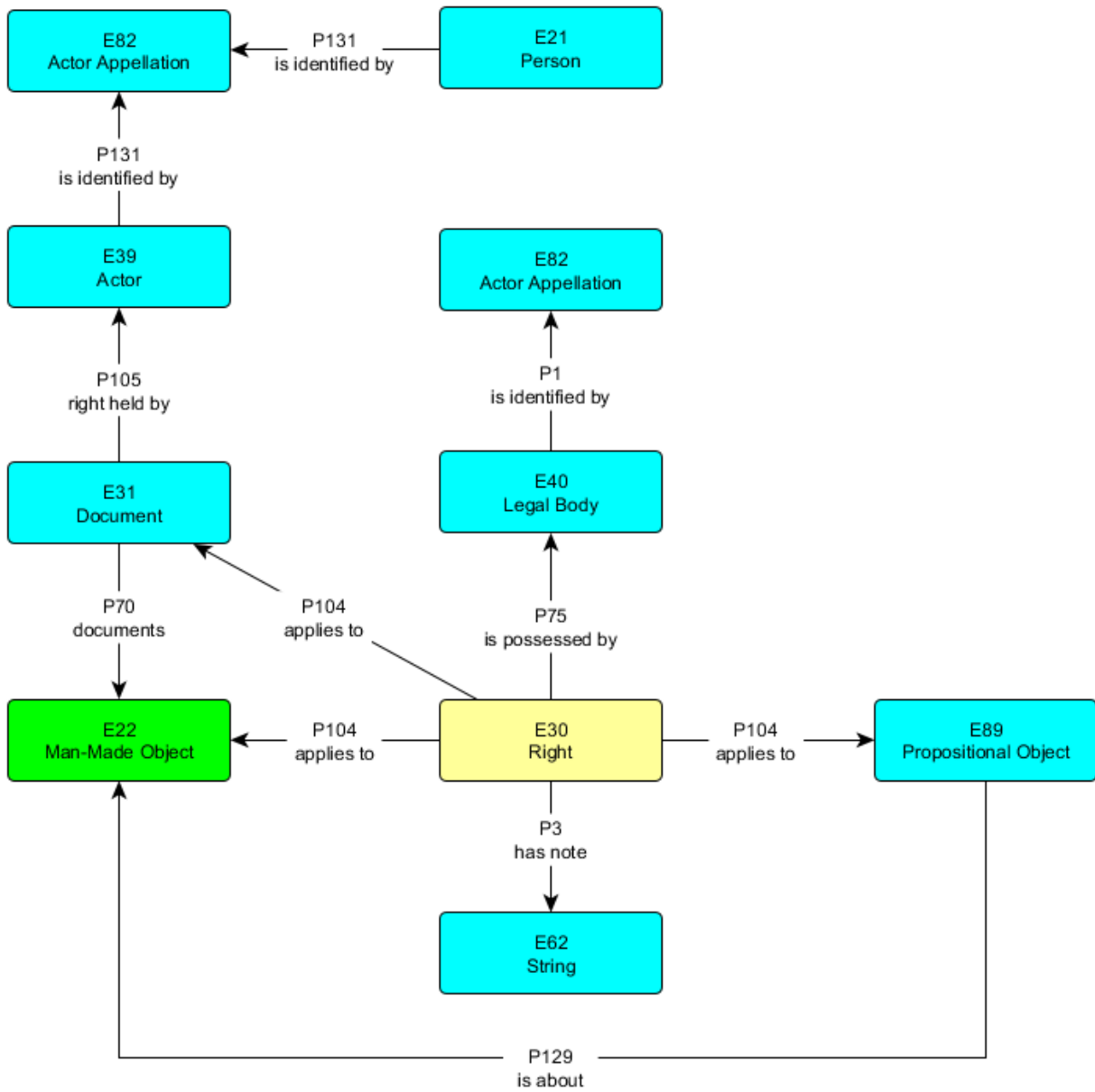


Figure 25. RDF graph representing the fields: Statut juridique, Rédacteur, Copyright notice.

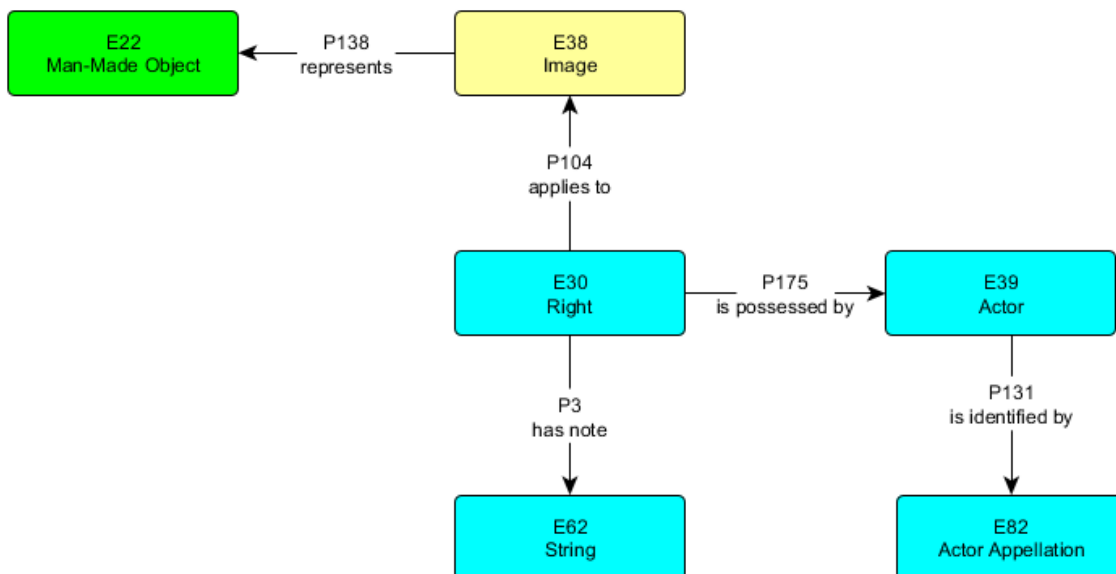


Figure 26. RDF graph representing the fields: Crédits photographiques, 'Image'.

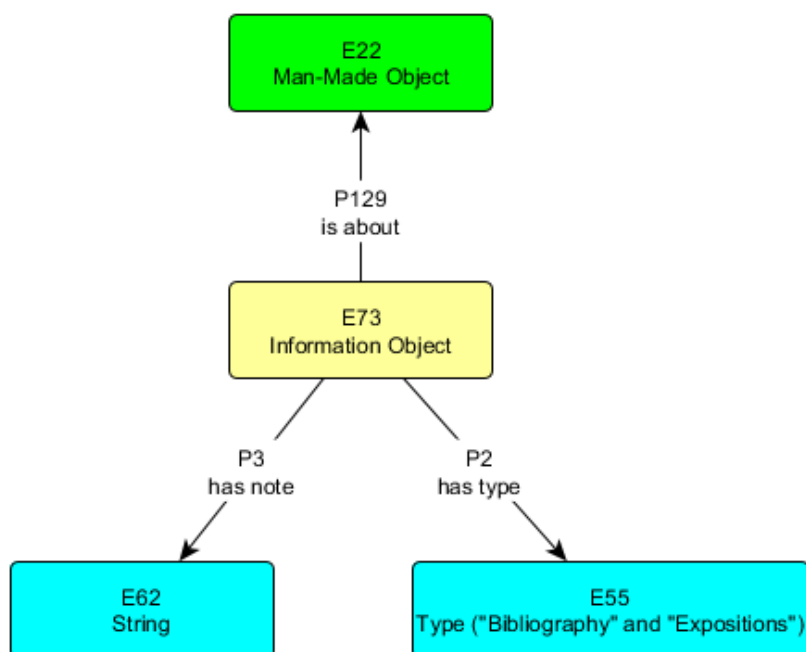


Figure 27. RDF graph representing the fields: Bibliographie, Expositions.

### 3.3 IMATEX

IMATEX is the search interface and database for the Centre de Documentació Museu Tèxtil (CDMT)<sup>4</sup>. We provide in this section the mapping tables for two exemplary records scraped from the IMATEX database which are represented in the JSON format (sections 3.3.1 and 3.3.3). For each record, we provide the RDF graph being generated using the SILKNOW ontology (sections 3.3.2 and 3.3.4).

<sup>4</sup> <http://cdmt.cat/en/>

## 3.3.1 Record 1 (3008\_en.json)

Field	Example	Main Class	Path	Comments
REGISTER NUMBER	2374	E15_ Identifier Assignment	E15_ Identifier Assignment P140 assigned attribute to E22_ Man-Made Object E15_ Identifier Assignment P37 assigned E42_ Identifier E42_ Identifier P2 has type E55_Type	
ID FOTOGRAFIA and PICTURES	02374.tif	E15_ Identifier Assignment	E15_ Identifier Assignment P140 assigned attribute to E38_ Image P138 represents E22_ Man-Made Object E38_ Image P1 is identified by E42_ Identifier E15_ Identifier Assignment P37 assigned E42_ Identifier E42_ Identifier P2 has type E55_Type	
CLASSIFICACIÓ GENÈRICA	textiles pieces	E17_Type Assignment	E17_Type Assignment P41 classified E22_ Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Denomination)	Type_Assignment of type 'Denomination'
CRONOLOGIA	període medieval / Almohad period / to mid-twentieth century / 13th century	E12_Production	E12_Production P4 has time-span E52_Time-Span P3 has note E62_String E52_Time-Span P78 is identified by E49_Time Appellation E4_Period P4 has time-span E52_Time-Span	Two periods are mentioned here: període medieval and Almohad period (a "sub" - period of període medieval)
DECORACIÓ	square distribution / geometrical pattern / stars	E89 Propositional Object	E89 Propositional Object P129 is about E22_ Man Made Object P62 depicts E70_Thing P1 is identified by E41_Appellation	
DENOMINACIÓ	textile		E17_Type Assignment P41 classified E22_ Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Domain)	Type Domain
DESTÍ D'ÚS	liturgical garments		E22_ Man-Made Object P19 was intended for E55_Type P2 is identified by E41_Appellation	
ESTAT DE	restaurat	E14_Condition	E14_Condition Assessment	

CONSERVACIÓ		Assessment	P35 has identified E3_Condition State E14_Condition Assessment P34 concerned E22_Man-Made Object E3_Condition State P2 has type E55_Type E3_Condition State P3 has note E62_String E3_Condition State P5 consists of E3_Condition State	
FONT INGRÉS	Biosca, Josep	E8_Acquisition	E8_Acquisition P23 transferred title from E39_Actor P1 is identified by E89_Actor Appellation E8_Acquisition P24 transferred title of E22_Man-Made Object E8_Acquisition P22 transferred title to E40_Legal Body	
FORMA INGRÉS	donacions		E8_Acquisition P2 has type E55_Type	
MATÈRIES	silk - / cyprus gold		E12_Production P126 employed E57_Material	
NOMS PROPIS ASSOCIATS	sant Valeri		E7_Activity P14 is carried out by E39_Actor P1 is identified by E83_Actor Appellation E7_Activity P16 used specific object E22_Made Object	This field cannot be systematically mapped this way. The relation depends on the record itself (cf. Description)
ORIGEN	Al-Andalus		E12_Production P8 took place on or within E53_Place P1 is identified by E48_Place Name	We have to guess that it is the place of production
RESTAURACIÓ	Cerdà Durà, Elisabet - 2010 / Fundació Abegg Stiftung 1992	E11_Modification	E11_Modification P31 has modified E22_Man-Made Object E11_Modification P2 has type E55_Type E11_Modification P3 has note E62_String	
TÈCNICA	double-cloth / pseudo-lampàs / patterned fabric		E12_Production P32 use general technique E55_Type	
MEASUREMENT	11,5		E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension	

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			E54_Dimension E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
	16		E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
SEASON	'Empty'			This field will always be empty for our concerned periods. So it seems not necessary to map it in CIDOC.
DESSIGNER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	We need an overview of the content of the field to understand its meaning.
MANUFACTURER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	
TAILOR/COUTURIER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	
AUTHOR	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	We need an overview of the content of the field to understand its meaning.
YEAR ENTERED THE MUSEUM	01/03/1951	E8_Acquisition	E8_Acquisition P4 has time- span E52_Time Span E8_Acquisition P24 transferred title of E22_Man Made Object	
DESCRIPTION	Fragment del	S4_Observation	S4_Observation 08 observed	

	<p>Teixit de les Estrelles de la capa del tern de sant Valeri, directament relacionat amb el conjunt de fragments conservats amb el núm.reg. 3938.</p> <p>Es tracta un teixit de gran riquesa visual per l'ús que en ell s'ha fet del color i dels materials. Els colors blau, verd i vermell de les sedes s'han conservat amb gran intensitat i combina magníficament amb l'ús del fil d'or treballat en abundància. El disseny és una rígida estructura reticular amb dos motius diferents disposats a portell: fileres de flors de vuit pètals amb una estrella central alternen amb estrelles de vuit puntes de composició calidoscòpica. Tot el conjunt té un fort sentit geomètric com és habitual en els teixits del període almohade, moment al que pertany la peça.</p> <p>De la indumentària del sant, composta per dues dalmàtiques, una casulla i una</p>		<p>E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type</p>	
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	<p>capa, el CDMT també conserva un altre fragment de la capa (núm.reg.3938) i diversos fragments del Teixit dels Lleons de la casulla (núm.reg.2979-1, 2979-2, 3976 i 3937).</p> <p>Segons els documents, sant Valeri va ser bisbe de Saragossa al segle IV i el seu tern va ser portat amb les seves relíquies a Roda d'Isàbena l'any 1279. Al segle XV va passar a la catedral de Lleida d'on va ser venut a principis del segle XX al colleccionista Lluís Plandiura, qui les va vendre a la Junta de Museus de Barcelona l'any 1932.</p> <p>El tern de sant Valeri és un conjunt d'indumentària litúrgica de reconeguda importància i del que s'ha fet un exhaustiu estudi històric i tècnic . De la seva història es coneixen els nombrosos canvis, modificacions i mutilacions que al llarg del temps ha sofert i que expliquen la gran</p>			
--	---	--	--	--

	<p>dispersió dels seus fragments.</p> <p>Des del punt de vista estilístic se'l pot relacionar amb el teixit de la creu del taüt d'Enrique I en el panteó reial de Las Huelgas a Burgos (m.1217) i a nivell tècnic destaca l'interès de la peça per ser exemple de transició entre la tècnica de taqueté i la de lampàs</p>			
<p>TECHNICAL DESCRIPTION</p>	<p>LAMPÀS (ó pseudo-lampàs) amb decoració per 4 trames llançades, fons en doble tela i decoració en tafetà</p> <p>. ORDIT</p> <p>- relació d'ordits: 2 ordits, en relació: 4 fils d'ordit de fons / 1 fil d'ordit de lligadura</p> <p>- matèria: ordit de fons: seda; color beix; fils simples; torsió Z</p> <p>ordit de lligadura: seda; color beix; fils simples; torsió Z</p> <p>- densitat: 40 fils ordit de fons / 10 fils ordit de lligadura</p> <p>- escalat: 1 fil d'ordit de fons</p> <p>. TRAMA</p> <p>- relació de trames: 5 trames, en relació: 1 trama de fons / 4 trames de</p>	<p>S4_Observation</p>	<p>S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type</p>	



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	<p>decoració llançades - matèria: 1 trama de fons: seda; color blanc; STA 3 trames de decoració llançades: seda; blau, verd i vermell; STA 1 trama de decoració llançada: seda entorxada amb pell daurada (or de Xipre) en torsió Z - densitat: 34-36 passades/cm - escalat: 1 passada</p> <p>. RAPORT de disseny: 7,5 x 3,5 cm</p> <p>. TELER: de llaços, ordit passat a punta i retorn, 2 plegadors d'ordit</p>			
MUSEUM	Centre de Documentació i Museu Tèxtil - CDMT	E10 Transfer of Custody	E10 Transfer of Custody P29 received by E40_Legal Body P1 is identified by E82_Actor Appellation E10 Transfer of Custody P30 transferred of custody of E22_Man Made Object	
BIBLIOGRAPHY		E73_Information Object	E73_Information Object P2 has type E55_Type (Bibliography) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	
EXHIBITIONS		E73_Information Object	E73_Information Object P2 has type E55_Type (Exhibitions) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	

OTHER ITEMS		E89_Propositional Object	E89_Propositional Object P129 is about E22_Man-Made Object E89_Propositional Object P2 has type E55_Type E89_Propositional Object P67 refers to E22_Man-Made Object P1 is identified by E42_Identifier E22_Man-Made Object P2 has note E62_String	
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### 3.3.2 RDF graph representation of Record 1

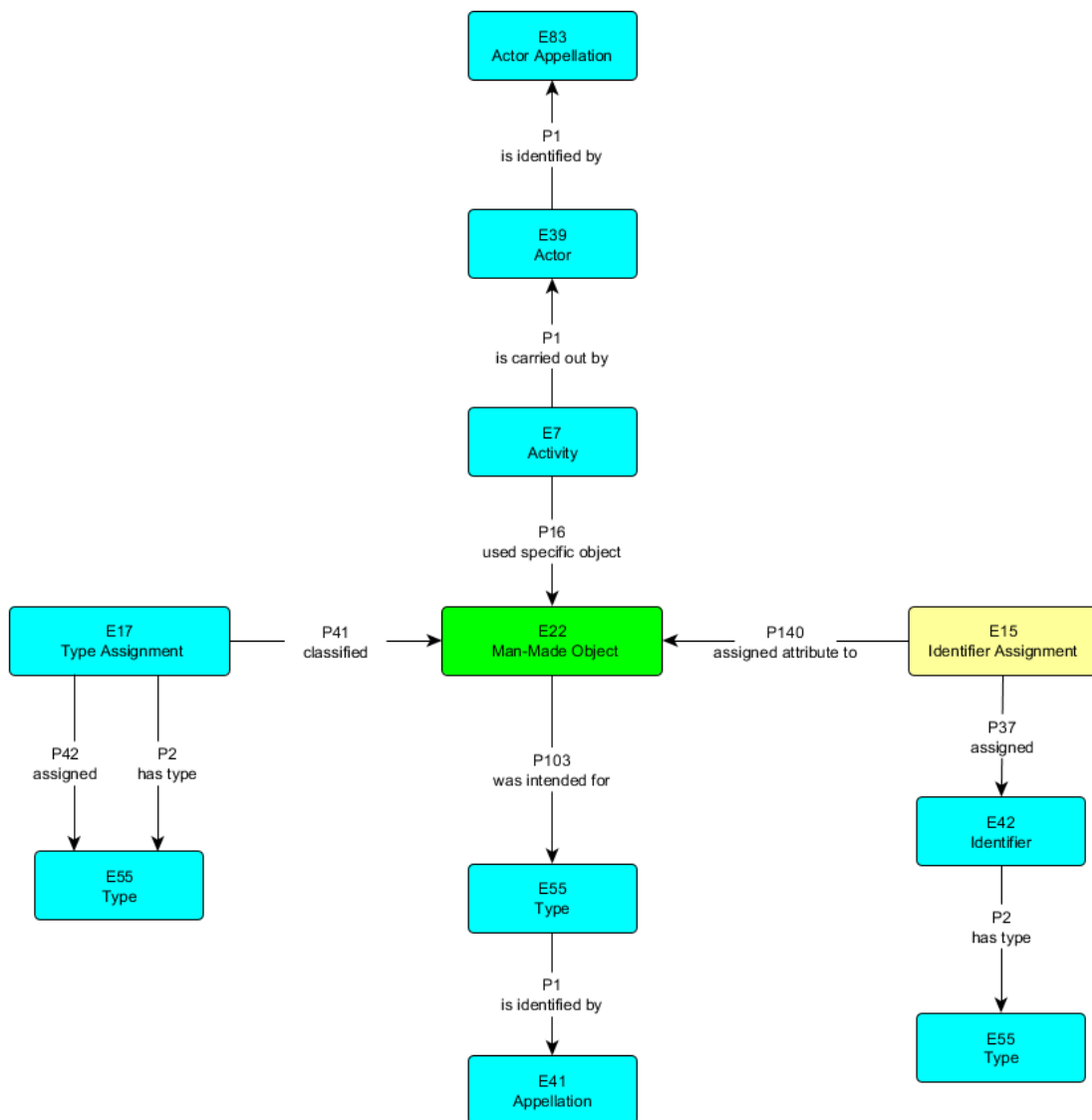


Figure 28. RDF graph representing the fields: Register Number, Denominacio, Desti Dus, Noms Propis associats.

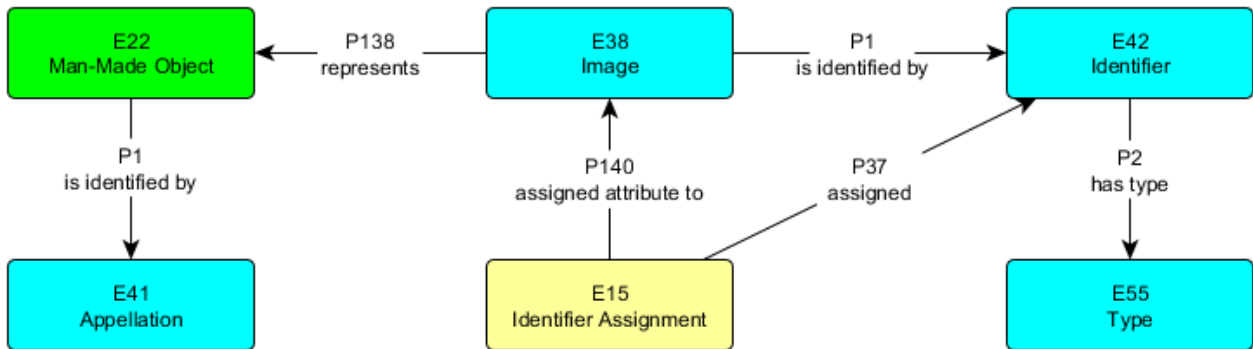


Figure 29. RDF graph representing the fields: ID Fotografia, Pictures.

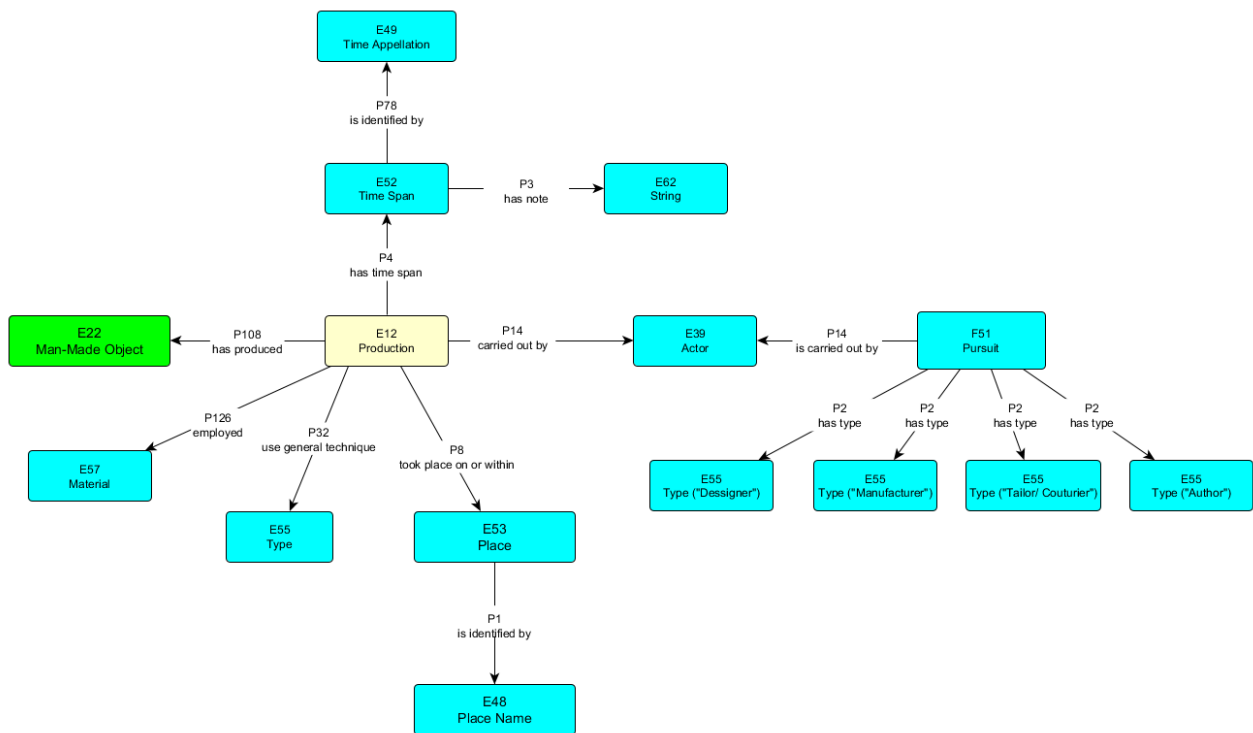


Figure 30. RDF graph representing the fields: Cronologia, Materies, Origen, Tecnica, Dessigner, Manufacturer, Tailor/ Couturier, Author.

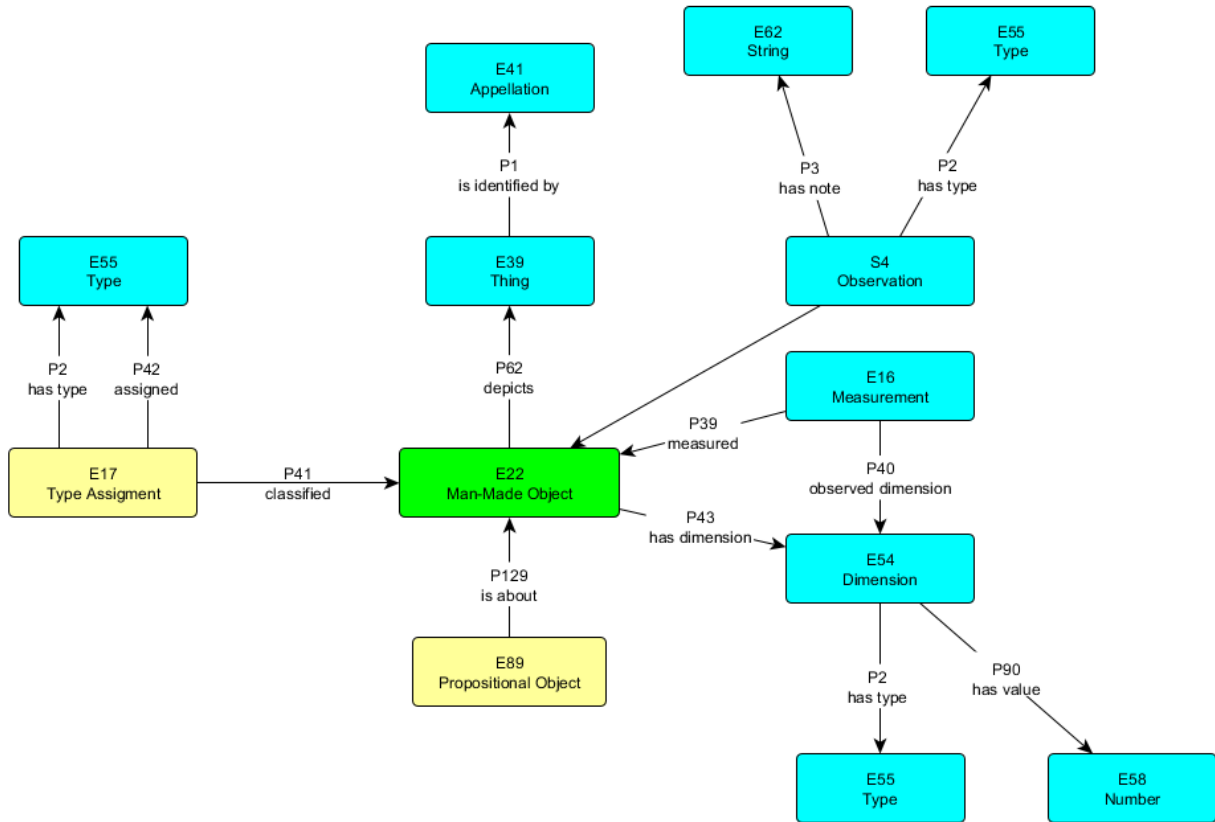


Figure 31. RDF graph representing the fields: Classificacio generica, Decoracio, Measurement, Description, Technical description.

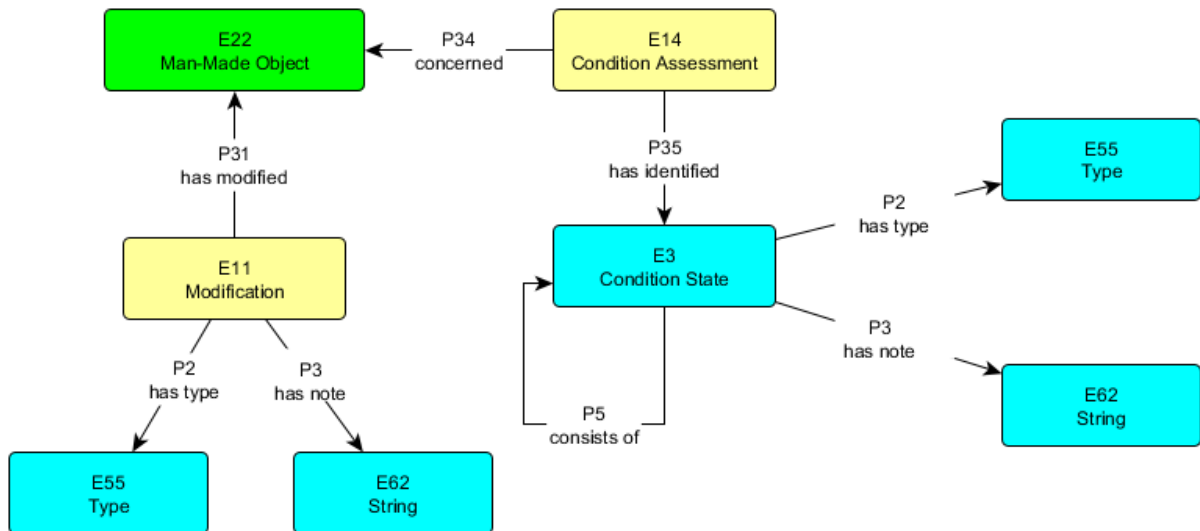


Figure 32. RDF graph representing the fields: Estat de Conservacio, Restauracio.

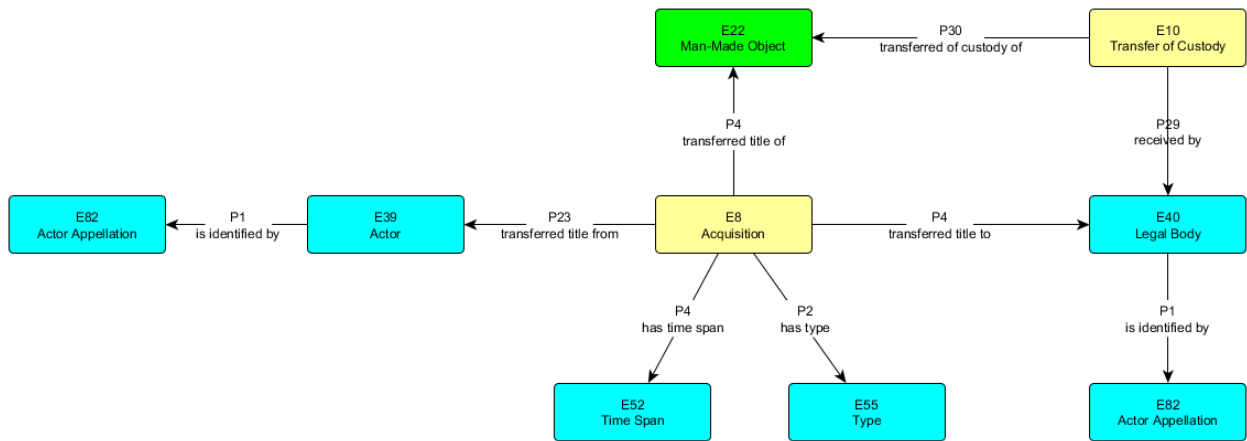


Figure 33. RDF graph representing the fields: Font Ingrés, Forma Ingrés, Year entered museum, Museum.

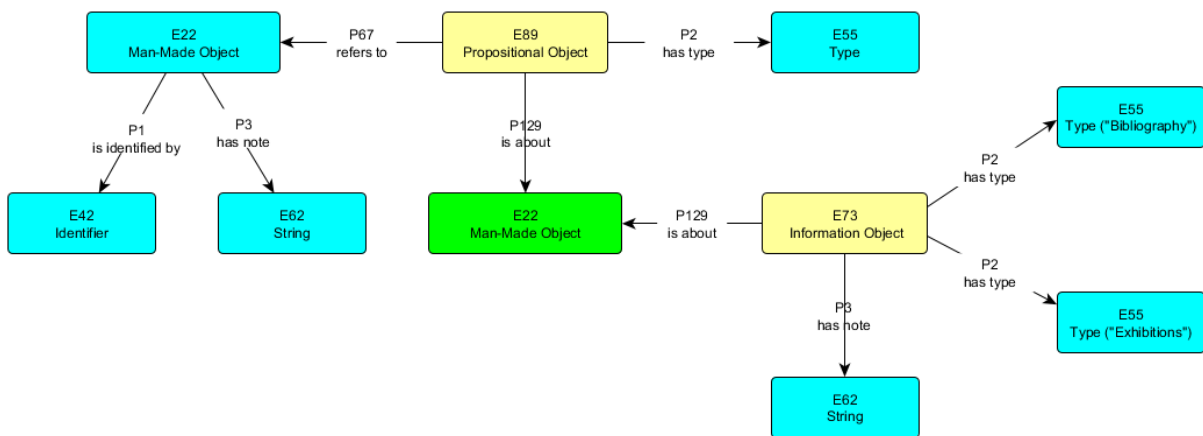


Figure 34. RDF graph representing the fields: Bibliography, Exhibitions, Other items.

### 3.3.3 Record 2 (3345\_en.json)

Field	Example	Main Class	Path	Comments
REGISTER NUMBER	5456	E15_ Identifier Assignment	E15_ Identifier Assignment P140 assigned attribute to E22_ Man-Made Object E15_ Identifier Assignment P37 assigned E42_ Identifier E42_ Identifier P2 has type E55_Type	
ID FOTOGRAFIA and PICTURES	05456.tif	E15_ Identifier Assignment	E15_ Identifier Assignment P140 assigned attribute to E38_Image P138 represents	

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			E22_Man-Made Object E38_Image P1 is identified by E42_Identifier E15_Identifier Assignment P37 assigned E42_Identifier E42_Identifier P2 has type E55_Type	
CLASSIFICACIÓ GENÈRICA	textiles pieces	E17_Type Assignment	E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Denomination)	
CRONOLOGIA	third quarter - / 17th century	E12_Production	E12_Production P4 has time- span E52_Time-Span P3 has note E62_String E52_Time-Span P78 is identified by E49_Time Appellation E4_Period P4 has time-span E52_Time-Span	
DECORACIÓ	floral patterns / plant motifs	E89 Propositional Object	E89 Propositional Object P129 is about E22_Man Made Object P62 depicts E70_Thing P1 is identified by E41_Appellation	
DENOMINACIÓ	textile		E17_Type Assignment P41 classified E22_Man-Made Object E17_Type Assignment P42 assigned E55_Type E17_Type Assignment P2 has type E55_Type (Domain)	
FONT INGRÉS	Viñas, Ricard	E8_Acquisition	E8_Acquisition P23 transferred title from E39_Actor P1 is identified by E89_Actor Appellation E8_Acquisition P24 transferred title of E22_Man-Made Object E8_Acquisition P22 transferred title to E40_Legal Body	
FORMA INGRÉS	purchase - Diputació de Barcelona		E8_Acquisition P2 has type E55_Type	
MATÈRIES	silk		E12 Production P126 employed E57_Material	
ORIGEN	unconfirmed - / Spain - / Italy		E12_Production P8 took place on or within E53_Place P1 is identified by E48_Place Name	
TÈCNICA	damask - / trama llançada - / patterned		E12_Production P32 use general technique E55_Type	

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	fabric			
MEASUREMENT	44,5		E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
	35		E22_Man-Made Object P43 has dimension E54_Dimension E16_Measurement P39 measured E22_Man-Made Object E16_Measurement P40 observed dimension E54_Dimension E54_Dimension P90 has value E58_Number E54_Dimension P2 has type E55_Type	
SEASON	'Empty'			
DESSIGNER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	Create a subclass of E12_Production and use it instead of production if this field is not empty.
MANUFACTURER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	Create a subclass of E12_Production and use it instead of production if this field is not empty.
TAILOR/COUTURIER	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	Create a subclass of E12_Production and use it instead of production if this field is not empty.
AUTHOR	'Empty'		E12_Production P14 carried out by E39_Actor F51_Pursuit P14 is carried out by E39_Actor F51_Pursuit P2 has type E55_Type	

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YEAR ENTERED THE MUSEUM	01/01/1957	E8_Acquisition	E8_Acquisition P4 has time-span E52_Time Span E8_Acquisition P24 transferred title of E22_Man Made Object	
DESCRIPTION	'Empty'	S4_Observation	S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	
TECHNICAL DESCRIPTION	'Empty'	S4_Observation	S4_Observation 08 observed E22_Man-Made Object S4_Observation P3 has note E62_String S4_Observation P2 has type E55_Type	
MUSEUM	Centre de Documentació i Museu Tèxtil - CDMT	E10 Transfer of Custody	E10 Transfer of Custody P29 received by E40_Legal Body P1 is identified by E82_Actor Appellation E10 Transfer of Custody P30 transferred of custody of E22_Man Made Object	
BIBLIOGRAPHY		E73_Information Object	E73_Information Object P2 has type E55_Type (Bibliography) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	
EXHIBITIONS		E73_Information Object	E73_Information Object P2 has type E55_Type (Exhibitions) E73_Information Object P3 has note E62_String E73_Information Object P129 is about E22_Man-Made Object	
OTHER ITEMS		E89_Propositional Object	E89_Propositional Object P129 is about E22_Man-Made Object E89_Propositional Object P2 has type E55_Type E89_Propositional Object P67 refers to E22_Man-Made Object P1 is identified by E42_Identifier E22_Man-Made Object P2 has note E62_String	



## 3.3.4 RDF graph representation of Record 2

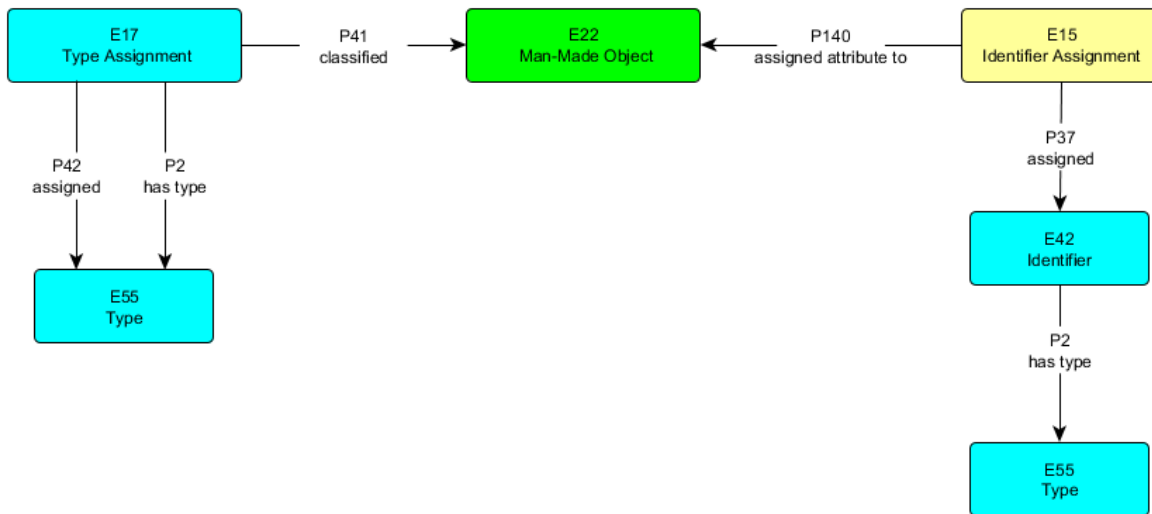


Figure 35. RDF graph representing the fields: Register Number, Denominacio.

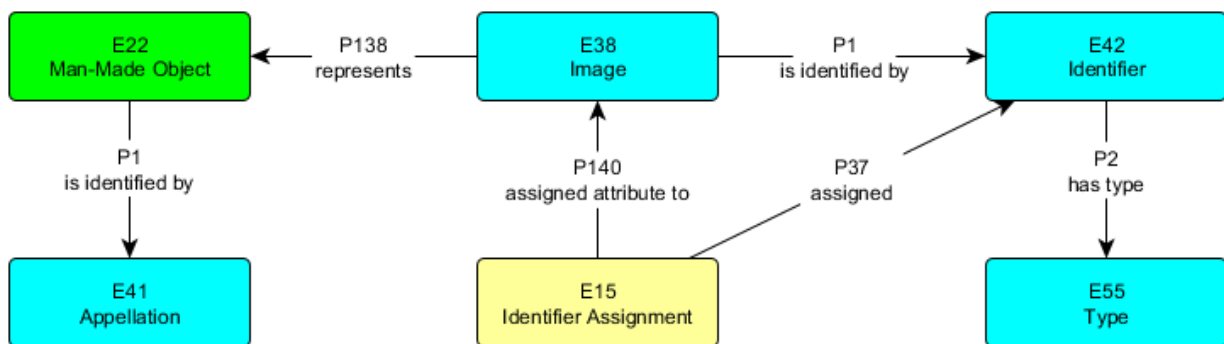


Figure 36. RDF graph representing the fields: ID Fotografia, Pictures.

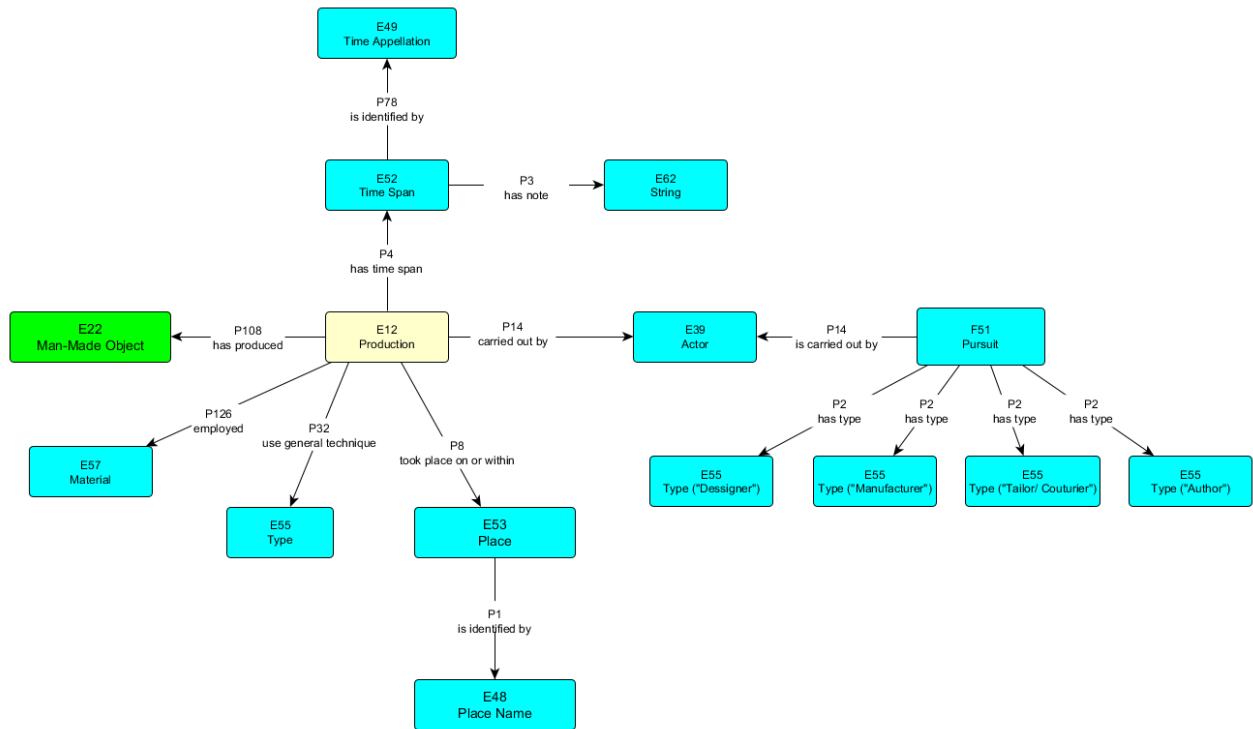


Figure 37. RDF graph representing the fields: Cronologia, Materies, Origen, Tecnica, Designer, Manufacturer, Tailor/ Couturier, Author.

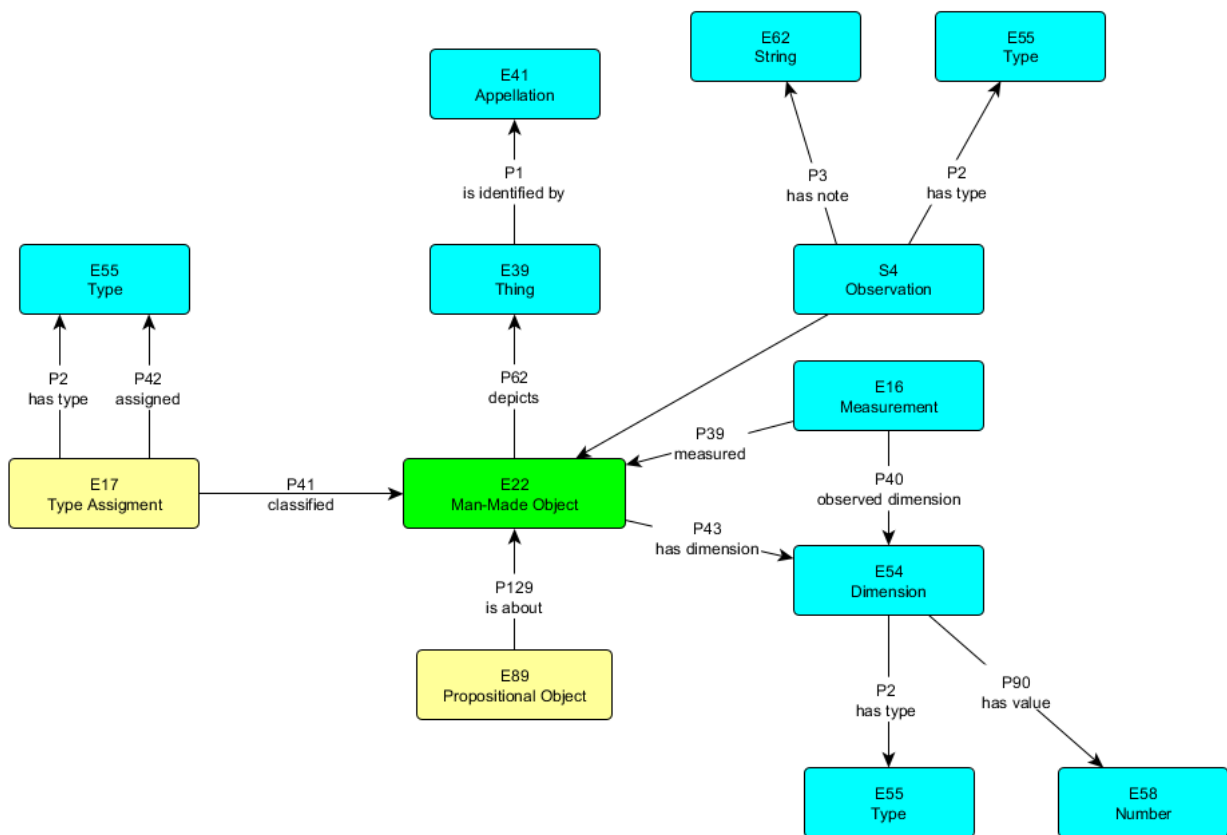


Figure 38. RDF graph representing the fields: Clasificacio generica, Decoracio, Measurement, Description, Technical description.

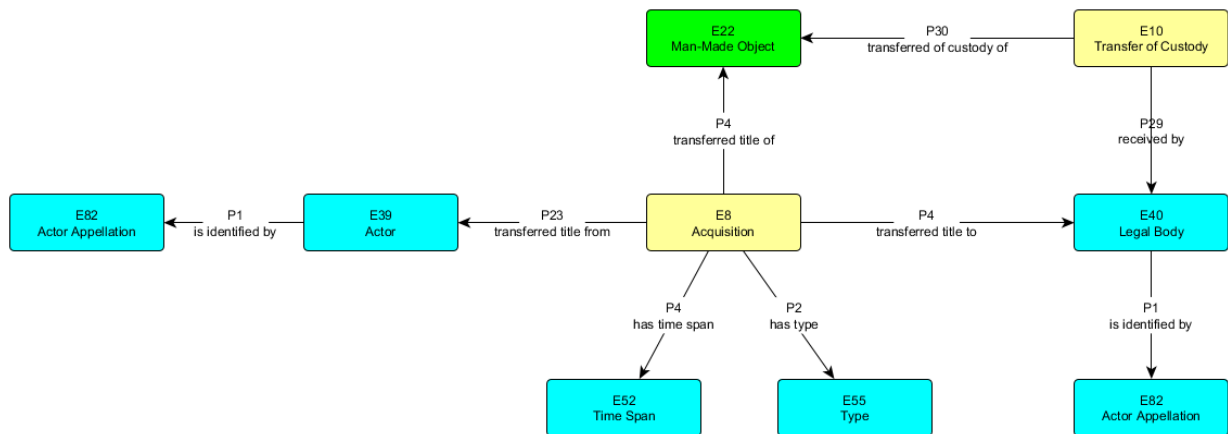


Figure 39. RDF graph representing the fields: Font Ingrés, Forma Ingrés, Year entered museum, Museum.

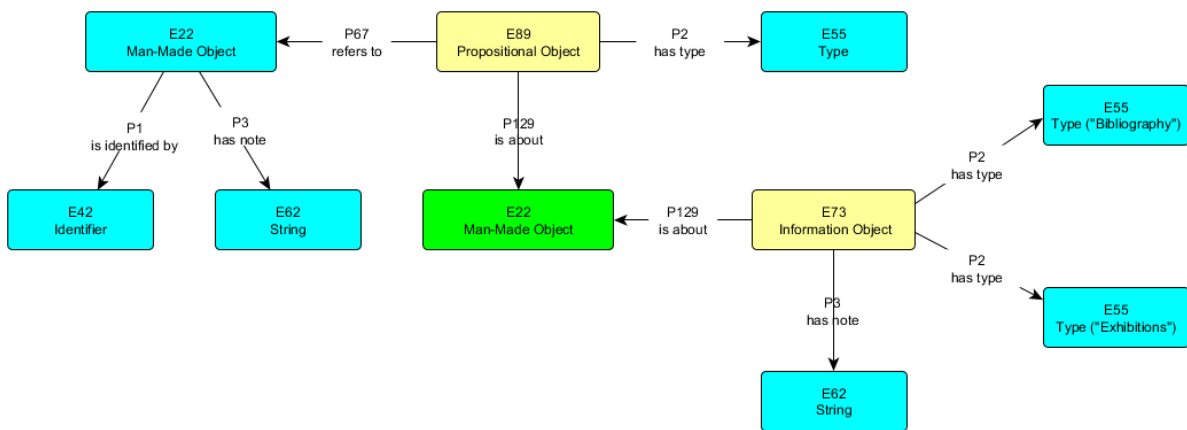


Figure 40. RDF graph representing the fields: Bibliography, Exhibitions, Other items.

## 4. CONCLUSION AND FUTURE WORK

In this report, we have described the SILKNOW ontology, which is based on the OWL implementation made by Erlangen of the CIDOC-CRM model. In addition, we provide guidelines to use terms from the SILKNOW multilingual thesaurus [5] as values of the properties.

We evaluate the goodness of the ontology by providing mapping rules between the museum metadata records and the SILKNOW ontology for three museums, namely GARIN, Joconde and IMATEX. We observe that all fields can be represented using classes and properties from the SILKNOW ontology so far.

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As future work, we will continue the mapping exercise for more museums: Museos estatales del MEC, Musée des Arts Décoratifs, Metropolitan Museum, Boston Museum of Fine Arts, Musée des Tissus de Lyon, Rhode Island School of Design, Victoria and Albert Museum.

## 5. REFERENCES

[1] SILKNOW Deliverable D2.1 – Data Model Definition, May 2018.

[2] SILKNOW Deliverable D2.2 – Initial Collected Data, July 2018

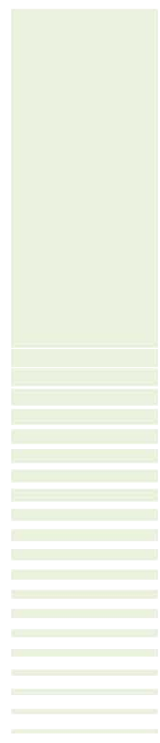
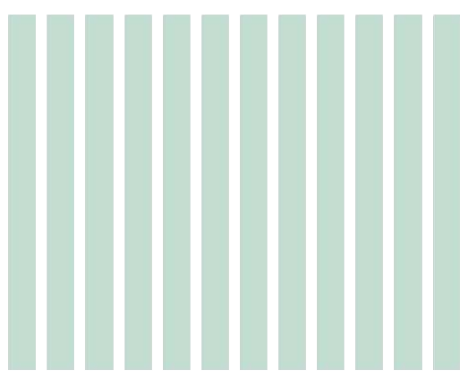
[3] SILKNOW Deliverable D2.3 - Definition of the Graphical User Interface (GUI), August 2018.

[4] SILKNOW Deliverable D2.4 – Pilot Scenarios Definition, September 2018.

[5] SILKNOW Deliverable D3.1 – Historical Silk Multilingual Thesaurus, December 2018.

[6] SILKNOW Deliverable D6.1 – Design Overall Software Structure and Data Sharing Framework

[7] Martin Doerr and Steffen Stead. The CIDOC CRM, a Standard for the Integration of Cultural Information. 2008



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