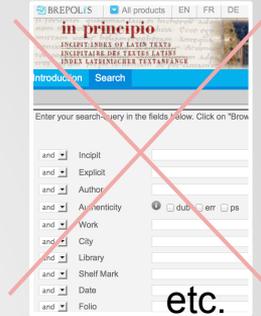


# Ontologies and thesauri

How to answer complex  
questions using  
interoperability ?

How to answer complex questions using current (open access) web facilities?



Access point I:

Medium  
Trame



# Medium

Répertoire des manuscrits

IRHT

- Identification
- Contenu et datation
- Codicologie

## Recherche avancée de manuscrits

Types de documents

catalogue  
charte  
fac-similé  
imprimé

Supports

?  
coton  
métal  
papier  
papier ?

Décorations

?  
armoiries  
croquis d'architecture  
exercice de plume  
iconographie

## Recherche simple

*Utiliser '%' comme signe de troncature*

Pays

Ville

Etablissement

Manuscrit (cote)

Lien vers les bases de l'IRHT

Lien vers un site externe

Dimensions (mm)

Reliure

## Access point II:

- The Union Catalog of France  
(Catalogue Collectif de France / [CCFr](#))
- BnF archives et manuscrits ([BAM](#))
- [Catalogue Général de la BnF](#)

Title ?  
Person ?  
Subject ?  
Shelfmark ?  
Date ?  
...



## Manuscripts

- Accueil
- Recherche globale
- Imprimés-multimedia
- Base Patrimoine
- Manuscripts**

Catalogues sélectionnés :  
ou Faire votre sélection de catalogues

CGM, BnF-AM, PALME, CALAMES

Désélectionner tout

CGM  BnF-AM  PALME  
 CALAMES

Limiter la recherche aux manuscrits numérisés

Plein texte  
Personne  
Titre  
Sujet

Tous les rôles

Institution de conservation Cote Langue Date  
Toutes les villes et  
Toutes les institutions et

BnF

## Archives et manuscrits

Accueil Collections Formulaire de recherche

### Formulaire de recherche

Utilisez ce formulaire de recherche pour trouver des descriptions d

et Texte  
libre  
et Cote  
et Nom  
et Titre  
et Sujet  
et Année ou entre et

BnF  
catalogue  
général

Espace personnel  
En savoir plus ...

Identifiez vous

Recherches simples

- par mots
- dans les index
- par cote
- Collections en libre accès (Tolbiac)

Recherches avancées

Recherche avancée par mots de la notice

Recherche avancée par mots de la notice

Ce mode de recherche vous permet d'accéder à des notices par un ou plusieurs mots présents dans les critères saisis. Pour retrouver la recherche avancée classique (par index), [cliquez ici](#).

Toute la notice  
Et Auteurs, contributeurs, ...  
Et Titres  
Et Sujets, thèmes, genres, ...  
Et Notes

afficher 20 résultats

Collections

Types de document

Tout désélectionner Tout désélectionner

Access point III:

BVH

BVMM

Gallica



Pour chaque critère vous pouvez utiliser le caractère de troncature %.

Pays	<input type="text" value="France"/>	<a href="#">Index</a>	
Ville	<input type="text" value="AVRANCHES"/>	<a href="#">Index</a>	
Etablissement	<input type="text" value="Bibliothèque municipale"/>	<a href="#">Index</a>	
Cote	<input type="text" value="0161"/>		
Décor	<input type="checkbox"/>	Reprod. intégrale <input type="checkbox"/>	Tout <input checked="" type="checkbox"/>
<a href="#">Vider</a>		<a href="#">Rechercher</a>	(1 résultat)

## 1 . AVRANCHES, Bibliothèque municipale, 0161

RUFINUS, Eusebii Caesariensis Historia ecclesiastica, trad.

Langues : latin

Date : 12<sup>e</sup> s. (milieu)



Access point IV:

MESA



# Search MESA:

Search all federations

Search

Exact Match    Some Variance    More Variance

## Other search options:



Title:

Exact Match    Some Variance    More Variance

Role:

(Select a role) ▾ Please select a role.



Language:

(Select a language) ▾

Year

(YYYY):

Search

# Search Query (LOG IN to save this search)

(LOG IN or Create new account to save these results)

New Search

Add new search criteria or select limiters to refine your search.

Search Term	français	AND ▾	
Search Term	1728	AND ▾	
Search Term	manuscript	AND ▾	
Search Term Fuzziness	<input checked="" type="radio"/> Exact Match <input type="radio"/> Some Variance <input type="radio"/> More Variance		Change
Search Term ▾	<input type="text" value="click here to add new search term"/>	AND ▾	Add

Click here to see the top authors, editors, and publishers found in your search

## Search Results (266)

[Expand All Entries]



**Guillaume Peyraut, Le Livre de l'enseignement des roys et des princes[De eruditione principum], traduction française anonyme ; Jacques de Cessolis, Moralité des nobles hommes et des gens du pueple sur** [\[show full title\]](#)

Source: Bibliothèque nationale de France, Département des Manuscrits, Français 1728

By: Jacobus de Cessolis. Auteur du texte

Tags: [\[LOG IN to add tags\]](#)

Site: [Bibliothèque nationale de France Gallica](#)

[more...]

Excerpt from Full Text:

Librairie du Louvre établis entre 1380 et 1424, il fit, très vraisemblablement partie de la bibliothèque de Charles V. Le contenu du volume coïncide partiellement avec le

Collect

Discuss

Sort by: Relevancy ▾

3 4 5 6 7 8 9 >>

Query in MESA



**Guillaume Peyraut, Le Livre de l'enseignement des roys et des princes[De eruditione principum], traduction française anonyme ; Jacques de Cessoles, Moralité des nobles hommes et des gens du pueple sur le jeu d'échecs [Liber de moribus hominum et officiis nobilium ac popularium sive super ludum scacchorum], traduction en français par ;Jean de Vignay; Le livre de Boece de consolacion, sans gloses , avec prologue de Jean de Meun; Douze mois figurez ou Etas hominum secundum exposicionem mensium.** ...[show full title]

Collect

Discuss

Source: Bibliothèque nationale de France, Département des Manuscrits, Français 1728

By: Jacobus de Cessolis. Auteur du texte

Tags: *[LOG IN to add tags]*

Site: [Bibliothèque nationale de France Gallica](#) 

Genre: Unspecified

Discipline: Manuscript Studies

Editor: Henri de Trévou. Copiste

Publisher: Bibliothèque nationale de France

Date: 1375-1380

Dump not available



Access point V:

Manuscripta Medievalia

Europeana / The European Library

Manuscriptorium

[Return to search results](#)

All fields

Titles

Creators

Subjects

24

Dates/Periods

Places



[< Previous](#) [Next >](#)



View item at  
[Bayerische Staatsbibliothek](#)

# Bibliotheca Belgica manu

**Creator:** Sanderus, Antoine

**Date:** 1641 ; <http://semium.org/time/1641>

**Date of creation:** 1641

**Type:** Druck

**Format:** 367 S.

**Identifier:** bvb-id : BV017810802 ; oclc : 633483466 ; urn : urn:nbn:de:bvb:12-bsb10799962-4

**Relation:** Signatur: München, Bayerische Staatsbibliothek -- Hbh/E 6220-1

**Is part of:** Serie : ... ; 7,1

**Language:** mul

**Publisher:** Insulis

**Data provider:** Bayerische Staatsbibliothek

**Provider:** Bayerische Staatsbibliothek

**Providing country:** Germany

## Search also for:

### Title

[Bibliotheca Belgica manuscripta / \[1\] \(3\)](#)

### Who

[Sanderus, Antoine \(12\)](#)

### What

[Druck \(836149\)](#)

### Provider

[Bayerische Staatsbibliothek \(761341\)](#)

[Bayerische Staatsbibliothek \(761099\)](#)

Query in Europeana I

Matches for:

[français 1728 manuscrit](#) ✕

Refine your results:

▾ Add more keywords

+ Add

▾ By media type

TEXT (54)

▸ By language of description

▸ By year

▸ By providing country

▸ Can I use it?

▸ By copyright

▸ By provider

Include content contributed

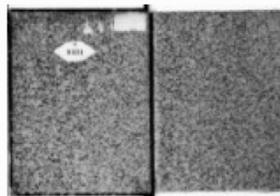
Results per page: 24 ▾

Results 49 - 54 of 54

<< < 3 of 3



Il Telemaco.. // Atto  
Pmo. // Del Sig... 



Collection de pièces  
de théâtre, for... 



Recueil de mémoires  
et documents ... 



Recueil de mémoires  
et documents ... 



Guillaume Peyraut,  
Le Livre de l'e... 



Évangélaire noté 

Query in Europeana II

Dump available at: <http://data.europeana.eu/download/2.0/>



Access point VI:

Isidore



**isidore**



**Guillaume Peyraut, Le Livre de l'enseignement des roys et des princes [De eruditione principum], traduction française anonyme ; Jacques de Cessoles, Moralité des nobles hommes et des gens du pueple sur le jeu d'échecs [Liber de moribus hominum et officiis nobilium ac popularium sive super ludum scacchorum], traduction en français par ; Jean de Vignay; Le livre de Boece de consolacion, sans gloses , avec prologue de Jean de Meun; Douze mois figurez ou Etas hominum secundum expositionem mensium.**

*Par : Jacobus de Cessolis. Auteur du texte, Jean de Vignay (1282?-13..). Traducteur, Jean de Meung (124.?-1304?). Traducteur, Maître du couronnement de Charles VI. Enlumineur de l'œuvre reproduite et Maître du Policratique. Enlumineur de l'œuvre reproduite*

Date : janvier 1375 | disponible sur <http://gallica.bnf.fr/ark:/12148/btv1b84473026>

F. 1-156v. [Livre du gouvernement des roys et des princes, traduction française anonyme]. Le traité latin dont le manuscrit contient la traduction a été attribué à Guillaume Peyraut, attribution mise en doute, malgré la thèse du Père Dondaine (« Guillaume Peyraut. Vie et œuvres », dans Archivum fratrum predicatorum, 18, 1948, p. 162-236). F. 1-2. [Prologue]. « Ci commence le Livre du gouvernement des roys et des princes. Le prologue (rubr.) » « Comme la compagnie des princes soit noble partie de l'église et la vie du menu pueple depende mult

Access point VII:

## All specialised databases



Bibliothèque virtuelle  
du Mont Saint-Michel



Πίνακες



**Bibale**

*Mandragore*

Epistemon

Miroir des classiques

**Jonas**

Sermones.net

**reliures.bnf.fr**

# Found in the Web

**Bibliotheca bibliothecarum manuscriptorum nova... du Mauriste Dom Bernard de Montfaucon, 1739**

Version PDF:

**Bernard de MONTFAUCON**

*Bibliotheca bibliothecarum manuscriptorum nova*, t. 1-2

**Paris, 1739**

On trouvera ici le texte complet de la *Bibliotheca bibliothecarum* (désormais *BBN*) de Bernard de Montfaucon, téléchargeable au format pdf. La table renvoie à la pagination de la transcription en mode texte ; la pagination originale est indiquée en rouge, entre accolades.

<http://www.libraria.fr/fr/editions/la-bibliotheca-bibliothecarum-de-montfaucon-est-t%C3%A9l%C3%A9chargeable-en-mode-texte-sur-libraria>

**Conclusion I:  
There is no single  
access point specialised  
on the written heritage  
from the Medieval and  
Renaissance Europe**

**Conclusion II:  
Search possibilities  
regarding the history of  
collections and texts are  
limited**

# Vision Biblissima

How to answer complex  
questions using  
interoperability ?

# Federate databases ...

... by establishing a common **RDF** framework:

- Ontology
- Data in RDF
- Enable (complex) queries
- Thesaurus

# Ontology

Definition I :

“A **conceptual map** of the **terms** and **relationships** that constitute a **domain**. For example, a library ontology would likely include "books," and would note that books often have "authors," that authors have "birth\_years," and that books also often have "titles," "subtitles," and "subjects." The **terms** and **relationships** in an ontology can then be used to determine the metadata to be recorded, as well as the ways in which data can be retrieved from a dataset. Although ontologies pre-date the Semantic Web, they have been brought to prominence by it.”

Source : [Getting Started Guide](#) (Harvard University)

# Ontology

Definition II :

“A **formal model** that allows knowledge to be represented for a specific domain. An ontology describes the types of things that exist (**classes**), the relationships between them (**properties**) and the logical ways those classes and properties can be used together (**axioms**).”

Source : [Linked Data Glossary](#) (w3c)

# Ontology

O  
n  
t  
o  
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o



g  
D  
a  
t  
a



Individual

Individual



# Data alignment

OpenRefine:

History Bookmarks Tools Help

eur - Google R...

3333/project?project=2361968217283

Jonas oeuvre auteur [Permalink](#) Open... Export Help

ido / Redo 4436 **5340 records** Extensions: [Freebase](#) [RDF](#)

Show as: rows records Show: 5 10 25 50 records « first < previous 1 - 10 next > last »

All	Clef_auteur	VIAF auteurs UF	VIAF auteurs IC	ARKs catalogue	ARKs data bnf U	ARKs data bnf I	Clef_titre	VIAF oeuvre UR	VIAF oeuvre UR	ARKs cat bnf U	ARKs data bnf U	ARKs data bnf I	ARKs data bnf U	ARKs data bnf I	ARKs
1	Abbé Dazon <a href="#">Create new topic</a> <a href="#">Search for match</a>						Chant royal								
2	Abbé de Saint-Wandrille <a href="#">Create new topic</a> <a href="#">Search for match</a>						Rondeau								
3	Adam de la Halle <a href="#">Create new topic</a> <a href="#">Search for match</a>	<a href="http://viaf.org/viaf/46769232">http://viaf.org/viaf/46769232</a>	Adam de Le Hale 124 - 1288?		<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de La Halle (124 - 1288?)	Chansons								
4	Adam de la Halle <a href="#">Create new topic</a> <a href="#">Search for match</a>	<a href="http://viaf.org/viaf/46769232">http://viaf.org/viaf/46769232</a>	Adam de Le Hale 124 - 1288?		<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de La Halle (124 - 1288?)	Jeu de la feuillee				<a href="http://data.bnf.fr/ark:/12148/tcb12443931f">http://data.bnf.fr/ark:/12148/tcb12443931f</a>	Le jeu de la feuillee	<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de l	(124 - 128
5	Adam de la Halle <a href="#">Create new topic</a> <a href="#">Search for match</a>	<a href="http://viaf.org/viaf/46769232">http://viaf.org/viaf/46769232</a>	Adam de Le Hale 124 - 1288?		<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de La Halle (124 - 1288?)	Jeu du Pélerin	<a href="http://viaf.org/viaf/293474656">http://viaf.org/viaf/293474656</a>	Jeu du Pélerin		<a href="http://data.bnf.fr/ark:/12148/tcb12072521q">http://data.bnf.fr/ark:/12148/tcb12072521q</a>	Jeu du Pélerin	<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de l	(124 - 128
6	Adam de la Halle <a href="#">Create new topic</a> <a href="#">Search for match</a>	<a href="http://viaf.org/viaf/46769232">http://viaf.org/viaf/46769232</a>	Adam de Le Hale 124 - 1288?		<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de La Halle (124 - 1288?)	Robin et Marion	<a href="http://viaf.org/viaf/294197474">http://viaf.org/viaf/294197474</a>	Adam de La Halle 124 - 1288? Le jeu de Robin et Marion		<a href="http://data.bnf.fr/ark:/12148/tcb1401370p">http://data.bnf.fr/ark:/12148/tcb1401370p</a>	Robin et Marion	<a href="http://data.bnf.fr/ark:/12148/tcb11950889p">http://data.bnf.fr/ark:/12148/tcb11950889p</a>	Adam de l	(124 - 128
7	Adam de Rosa <a href="#">Create new topic</a> <a href="#">Search for match</a>			<a href="#">Open</a>			Vision de saint Paul								
8	Adam de Suel <a href="#">Create new topic</a> <a href="#">Search for match</a>						Disticha Catoris	<a href="http://viaf.org/viaf/174961747">http://viaf.org/viaf/174961747</a>	Disticha Catoris		<a href="http://data.bnf.fr/ark:/12148/tcb122028176">http://data.bnf.fr/ark:/12148/tcb122028176</a>	Disticha Catoris			
9	Adam Des Rocques <a href="#">Create new topic</a> <a href="#">Search for match</a>						Chant royal								
10	Adam Lar <a href="#">Create new topic</a> <a href="#">Search for match</a>						Ballade								

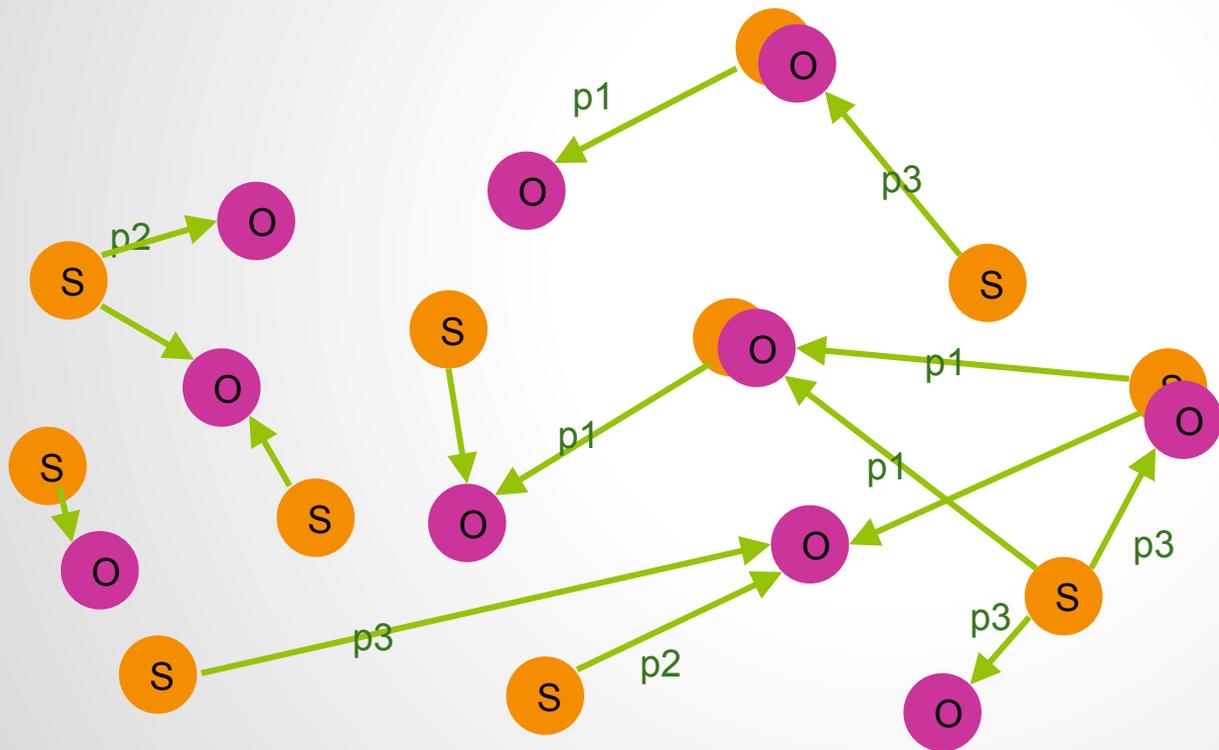
nd filters

ers to select subsets  
on. Choose facet and  
1 the menus at the top  
rin.

et started?  
[encasts](#)

3

# Datasets in a triplestore

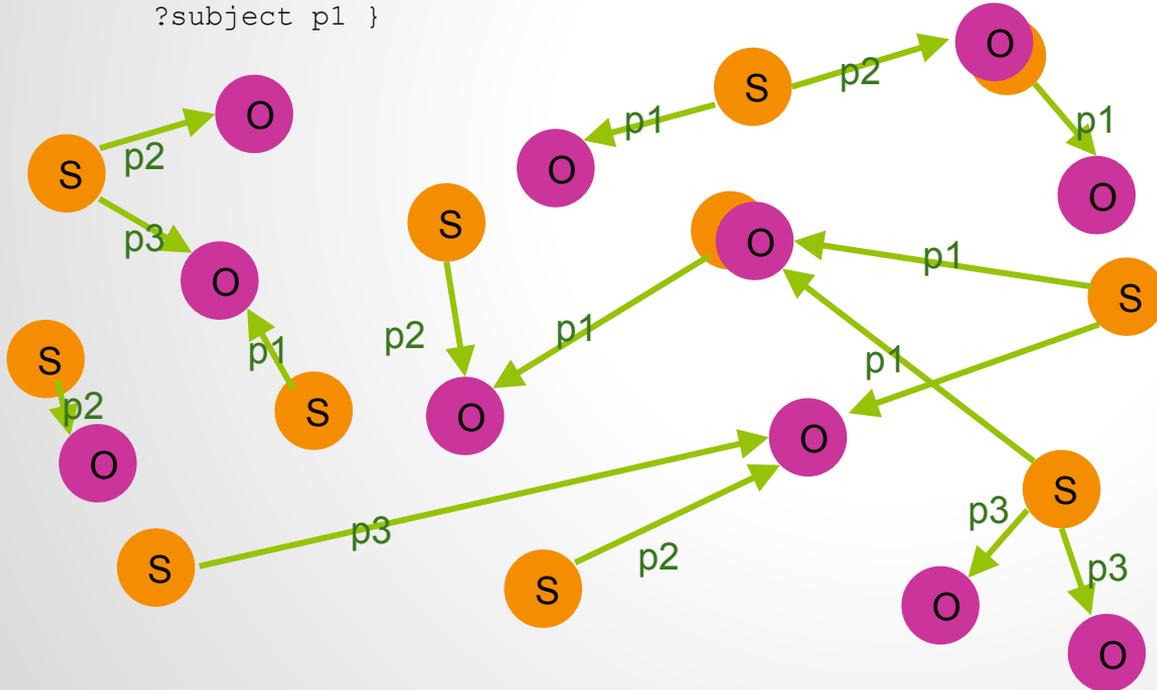


Triple table

Triple		
A	p1	X
B	p1	X
C	p1	Y
A	p2	Z
F	p2	Z
G	p2	Z

# Query via SPARQL

```
PREFIX Bbissima: <http://purl.org/NET/Bbissima#>
SELECT ?subject
WHERE { ?subject p2 Bbissima:Manuscript.
       ?subject p1 }
```



Triple table		
Triple		
A	p1	X
B	p1	X
C	p1	Y
A	p2	Z
F	p2	Z
G	p2	Z

Query graph



**SPARQL query**  
SELECT ?Subject  
WHERE {  
 ?Subject p1 X .  
 ?Subject p2 Z .  
}

Result

Subject

A

# Biblissima SPARQL endpoint (test)

## SPARQL Endpoint

[\[-\] show sample queries](#)

### Query

```
SELECT ?s ?p ?o WHERE {  
  ?s ?p ?o  
} LIMIT 10
```

Enabled operations: select, construct, ask, describe (Max. number of results: 2000)

Send Query

Load Namespaces

### Options

Output format (if supported by query type):

HTML Table

Show results inline:



JSONP callback (for JSON results):

HTTP method:

get

post

# RDF/XML data (simplified)

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:Bbissima="http://purl.org/NET/Bbissima#">
<Bbissima:Expression> <!-- subject -->
  <Bbissima:is_carried_by> <!-- predicate -->
    <Bbissima:Manuscript rdf:about="http://data.biblissima.fr/ark:/00000/BnF_Mss_Grec1432"> <!-- object / subject -->
      <Bbissima:consists_of> <!-- predicate -->
        <Bbissima:Material
          rdf:about="http://data.biblissima.fr/thesaurus/resource/ark:/00000/support_bombycin"/>
          <!-- object -->
        </Bbissima:consists_of>
      </Bbissima:Manuscript>
    </Bbissima:is_carried_by>
  </Bbissima:Expression>
</rdf:RDF>
```

# .... + sample data thesaurus

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:Bbissima="http://purl.org/NET/Bbissima#"
xmlns:skos="http://www.w3.org/2004/02/skos/core#">
  <Bbissima:Expression>
    <Bbissima:is_carried_by>
      <Bbissima:Manuscript rdf:about="http://data.biblissima.fr/ark:/00000/BnF_Mss_Grec1432">
        <Bbissima:consists_of>
          <Bbissima:Material
            rdf:about="http://data.biblissima.fr/thesaurus/resource/ark:/00000/support_bombycin"/>
          </Bbissima:consists_of>
        </Bbissima:Manuscript>
      </Bbissima:is_carried_by>
    </Bbissima:Expression>

  <skos:Concept rdf:about="http://data.biblissima.fr/thesaurus/resource/ark:/00000/support_bombycin">
    <skos:prefLabel xml:lang="fr">Bombycin</skos:prefLabel>
    <skos:broader rdf:resource="http://data.biblissima.fr/thesaurus/resource/ark:/00000/support_papier"/>
  </skos:Concept>
</rdf:RDF>
```

# Complex query

All the manuscripts (in the triplestore) that carry a text in greek on paper:

```
PREFIX skos:<http://www.w3.org/2004/02/skos/core#>
```

```
PREFIX Bbissima:<http://purl.org/NET/Bbissima#>
```

```
SELECT ?manuscript
```

```
WHERE { ?manuscript Bbissima:has_language <http://id.loc.gov/vocabulary/iso639-5/grk> .
```

```
    ?manuscript Bbissima:consists_of <http://data.biblissima.fr/thesaurus/resource/ark:/00000/support\_papier> .}
```

```
    UNION
```

```
    {?manuscript Bbissima:consists_of ?material .
```

```
      <http://data.biblissima.fr/thesaurus/resource/ark:/00000/support\_papier> skos:narrower ?material.}
```

```
    }
```

# **Build on the outcomes of the Europeana Regia project (2010 - 2012)**

(BnF, BSB, BHUV, HAB, KBR)

(3 historical collections)

- Crosswalk EAD, TEI, Marc21, ESE 3.4, EDM

Source	Target	Source	Target	Source	Target	Source	Target
ESE element	TEI element	EMARC field	TEI element				
...	...	...	...	...	...	...	...

- Reference Transformation

```

31 => <xsl:transform xmlns:xsl="http://www.w3.org/1999/XSL/Transform" xmlns:fn="http://www.w3.org/2005/xpath-functions"
32 xmlns:edm="http://www.europeana.eu/schemas/edm/"
33 xmlns:enrichment="http://www.europeana.eu/schemas/edm/enrichment/"
34 xmlns:ore="http://www.openarchives.org/ore/terms/"
35 xmlns:owl="http://www.w3.org/2002/07/owl#"
36 xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
37 xmlns:skos="http://www.w3.org/2004/02/skos/core#"
38 xmlns:wgs84="http://www.w3.org/2003/01/geo/wgs84_pos#"
39 xmlns:dcterms="http://purl.org/dc/terms/"
40 xmlns:dc="http://purl.org/dc/elements/1.1/"
41 xmlns:xi="http://www.w3.org/2003/12/xsl-ns#"
42 xmlns:refNum="http://bibnum.bnf.fr/ns/refNum"
43 xmlns:sc="http://http://www.shared-canvas.org/ns/"
44 xmlns:europeana="http://www.europeana.eu/schemas/ese/"
45 xmlns:tei="http://www.tei-c.org/ns/1.0"
46 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0"
47 xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
48 xmlns="http://xmlns.com/foaf/0.1"
49
50
51
52 <!-- for TEI documents produce only one record -->
53 <!-- local template to pass the control back to X_to_end_or_ese -->
54 <xsl:call-template name="singleRecord"/>
55 </xsl:template>
56
57 <!-- output of source format as comment -->
58 <xsl:template match="tei:TEI" mode="sourceComment" >
59 <xsl:if test="@version='5.1'">
60 <xsl:text>

```

- Data ingestion

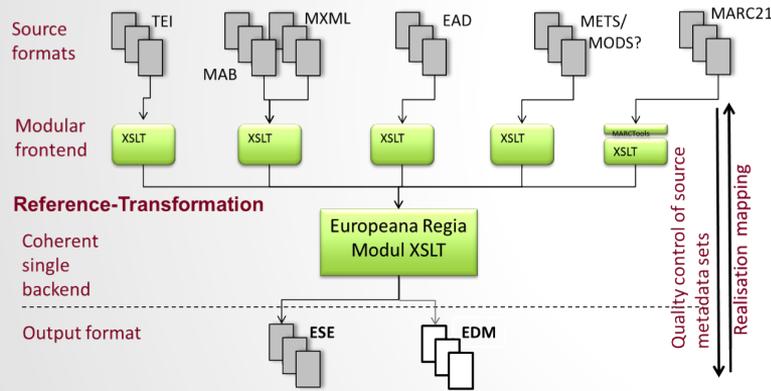
- 5 partners (BnF, BSB, BHUV, HAB, KBR)

The screenshot shows the 'The European Library' website interface. At the top, there is a search bar with the text 'Search all European Library content...' and a 'GO' button. Below the search bar, there are navigation links for 'HOME', 'DISCOVER', and 'SERVICES FOR RESEARCHERS'. The main content area displays search results for the query 'Search for "europeana regia"'. The first result is 'Bartholomaei Facelli libri decem de rebus gestis Alphonsi I. Regis Neapolitani. [Paris, BnF, MSS Latin 5912A]'. To the right of the title, there are service icons for 'Access On', 'Add to Menu', and 'Add to ZOT'. Below the title, there is a 'Harvard-Style Citation' section. A small image of a book cover is visible on the left. At the bottom, there are sections for 'Description', 'Source', and 'Publication'.

# Data Sources for 33 Europeana Display Fields

A1 Author: Stefanie Gehrke, December 2011						
	A	B	C	D	E	
	Display-line EUROPEANA	ESE-element	Search (general/specific/ phrase/filer) (auto completion+spelling suggestion)	Marc21	ENRICH-Plus (KBR)	TEI Export-File HAB and BSB
2	<b>center frame</b>					
3	Title:	dc:title	what/who (general/specific)	245 abpn	*:head/*:title OR *:msContents/*:summary	*:msDesc/*:head/*:title AND *:idno *:msContents/*:summary AND *:idno
4						All (?) *:msltem/*:author AND *:msltem
5						(reoccurrence if msPart)
6						
7						
8	Alternative title:	dcterms:alternative	what/who (general/specific)	130, 240, 242, 243, 246, 730, 740	*:msName AND if not dc:title *:msContents/*:summary	*:msName (reoccurrence) *:msContents/*:summary
9						(reoccurrence if msPart)
10						
11	Creator: (unique list!)	dc:creator	who (general/specific)	100, 110  abcdjq4	*:msltem/*:author	*:msltem/*:author (reoccurrence)
12				VIAF-Number:  0	attribute ref	attribute ref (reoccurrence if msPart)
13						
14	Contributor:	dc:contributor [Cop.] [Cop.] [Ill.]	who (general/specific)	700, 710  abcdjq4 distinction via content subfield "e"	*:handNote//persName@role='scribe' *:decoNote//persName@role='scribe' *:decoNote//persName@role='ill'	*:handNote//persName@role='scribe' *:decoNote//persName@role='scribe' *:decoNote//persName@role='ill'
15						
16						
17						
18				VIAF-Number:  0	attribute ref	attribute ref (reoccurrence if msPart)
19		[?]				*:accMat/*:persName
20		[Additions?](Margin)				*:additions/*:persName
21		[Translator?]				??? *:title/*:persName @role='trans
22						???
23	Coverage:	dc:coverage (?)			???	???
24						
25	Date:	dc:date	when (general/specific)/filtering	difficult to extract from 260  c	*:origin/*:p/*:origDate (reoccurrence?) ?	*:origDate/@when or @notBefore
26						(reoccurrence if msPart)
27		dcterms:created		260  c	*:head/*:origDate	*:head/*:origDate
28					*:origin/*:p/*:origDate (first)	*:origin/*:p/*:origDate
29						(reoccurrence if msPart)
30	Time periode:	???				
31						
32	Geographic Coverage:	dcterms:spatial	where (general/specific)	752  ad TGN-Number:  0	*:origin/*:p/*:origPlace (if "unclear"/2 possibilities?)	*:head/*:origPlace *:origin/*:p/*:origPlace (reoccurrence if msPart or if "unclear")
33						*:objectDesc/@form='codex'
34						objectDesc/@form='Handschrift'
35	Type:	dc:type	filtering	Manuscript il-luminat		
36						
37	Subject:	dc:subject	what (?) (general/specific)	600, 610, 630, 650, 653	??? *:term is not the best !!!	*:musicNotation/*:term
38	(ToDo: unique list!)					*:handNote/*:p/*:term
39						*:decoNote/*:p/*:term
40						

# Medieval Manuscripts in Europe(ana)



```
<!-- X_to_EDM_or_ESE : single backend for various input file formats -->
<xsl:transform xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:fn="http://www.w3.org/2005/ xpath-functions"
  xmlns:dct="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:repo="http://repo.kit.edu/"
  xmlns:europa="http://www.europeana.eu/schemas/ese/"
  xmlns:edm="http://www.europeana.eu/schemas/edm/"
  xmlns:tei="http://www.tei-e.org/xml/1.0/"
  xmlns:ead="http://www.loc.gov/ead/2002/schemas/ead2002"
  xmlns:core="http://www.openarchives.org/ocf/terms/"
  xmlns:ocf="http://www.w3.org/2002/07/ocf#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:skos="http://www.w3.org/2004/02/skos/core#"
  xmlns:wg94="http://www.w3.org/2003/01/geo/wg94_pos#"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0">
  <xsl:output method="xml" encoding="UTF-8" indent="yes"/>
  <!-- include the various input formats like TEI, EAD, Open Document Format, etc -->
  <xsl:include href="/_Name_Languages_v020.xsl"/>
  <xsl:include href="/_TEI_for_X_to_edm_v020.xsl"/>
  <xsl:include href="/_EAD_for_X_to_edm_v020.xsl"/>
  <!--><xsl:include href="/_MARC21ConvertedToMARC21_for_X_to_edm_v020.xsl"/>
  <!-- Treat European parameters -->
  <xsl:param name="defaultSource" http://www.europeana-regia.eu/xsl:param
  <!--><xsl:param name="europeanCountry" Europe/xsl:param -->
  <xsl:param name="europeanProvider" The European Library/xsl:param
  <xsl:param name="europeanType" TEXT/xsl:param
```

```
<!-- TEI_for_X_to_EDM : TEI transformation frontend for EAD, EAD2002, EAD2002
  <xsl:transform xmlns:xsl="http://www.w3.org/1999/XSL/Transform" xmlns:fn="http://www.w3.org/2005/ xpath-functions"
  xmlns:europa="http://www.europeana.eu/schemas/ese/"
  xmlns:edm="http://www.europeana.eu/schemas/edm/"
  xmlns:tei="http://www.tei-e.org/xml/1.0/"
  xmlns:ead="http://www.loc.gov/ead/2002/schemas/ead2002"
  xmlns:core="http://www.openarchives.org/ocf/terms/"
  xmlns:ocf="http://www.w3.org/2002/07/ocf#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:skos="http://www.w3.org/2004/02/skos/core#"
  xmlns:wg94="http://www.w3.org/2003/01/geo/wg94_pos#"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0">
  <xsl:output method="xml" encoding="UTF-8" indent="yes"/>
  <!--><xsl:include href="/_Name_Languages_v020.xsl"/>
  <!--><xsl:include href="/_TEI_for_X_to_edm_v020.xsl"/>
  <!--><xsl:include href="/_EAD_for_X_to_edm_v020.xsl"/>
  <!--><xsl:include href="/_MARC21ConvertedToMARC21_for_X_to_edm_v020.xsl"/>
  <!-- Treat European parameters -->
  <xsl:param name="defaultSource" http://www.europeana-regia.eu/xsl:param
  <!--><xsl:param name="europeanCountry" Europe/xsl:param -->
  <xsl:param name="europeanProvider" The European Library/xsl:param
  <xsl:param name="europeanType" TEXT/xsl:param
```

```
<!-- Name_Languages : transformation frontend for the transformation between EAD -->
  <xsl:transform xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:fn="http://www.w3.org/2005/ xpath-functions"
  xmlns:europa="http://www.europeana.eu/schemas/ese/"
  xmlns:edm="http://www.europeana.eu/schemas/edm/"
  xmlns:tei="http://www.tei-e.org/xml/1.0/"
  xmlns:ead="http://www.loc.gov/ead/2002/schemas/ead2002"
  xmlns:core="http://www.openarchives.org/ocf/terms/"
  xmlns:ocf="http://www.w3.org/2002/07/ocf#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:skos="http://www.w3.org/2004/02/skos/core#"
  xmlns:wg94="http://www.w3.org/2003/01/geo/wg94_pos#"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0">
  <xsl:output method="xml" encoding="UTF-8" indent="yes"/>
  <!--><xsl:include href="/_Name_Languages_v020.xsl"/>
  <!--><xsl:include href="/_TEI_for_X_to_edm_v020.xsl"/>
  <!--><xsl:include href="/_EAD_for_X_to_edm_v020.xsl"/>
  <!--><xsl:include href="/_MARC21ConvertedToMARC21_for_X_to_edm_v020.xsl"/>
  <!-- Treat European parameters -->
  <xsl:param name="defaultSource" http://www.europeana-regia.eu/xsl:param
  <!--><xsl:param name="europeanCountry" Europe/xsl:param -->
  <xsl:param name="europeanProvider" The European Library/xsl:param
  <xsl:param name="europeanType" TEXT/xsl:param
```

Transformation published at Sourceforge:  
<http://sourceforge.net/projects/eregia2eseedm>

# Medieval Manuscripts in Europe(ana)

```
<!-- Names_Languages : Localization resource for transformation backend XtoEDM -->
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="2.0">
<!--Localization -->
  <!--displayLanguage -->
  <xsl:param name="displayLanguage">
    <xsl:apply-templates select="/" mode="europeanaLanguage"/>
  </xsl:param>

  <xsl:template name="Cop.">
    <xsl:choose>
      <xsl:when test="\$displayLanguage='de' or \$displayLanguage='deu' or \$displayLanguage='p">
        <xsl:text>, [Copist]</xsl:text>
      </xsl:when>
      <xsl:when test="\$displayLanguage='eng' or \$displayLanguage='en'">
        <xsl:text>, [Copyist]</xsl:text>
      </xsl:when>
      <xsl:when test="\$displayLanguage='fr' or \$displayLanguage='fre' or \$displayLanguage='f">
        <xsl:text>, [Copiste]</xsl:text>
      </xsl:when>
      <xsl:when test="\$displayLanguage='ca' or \$displayLanguage='cat'">
        <xsl:text>, [Copista]</xsl:text>
      </xsl:when>
    </xsl:choose>
  </xsl:template>
</xsl:stylesheet>
```

One XSLT module contains controlled multilingual vocabulary for the Europeana display fields

# Medieval Manuscripts in Europe(ana)

Lessons learned:

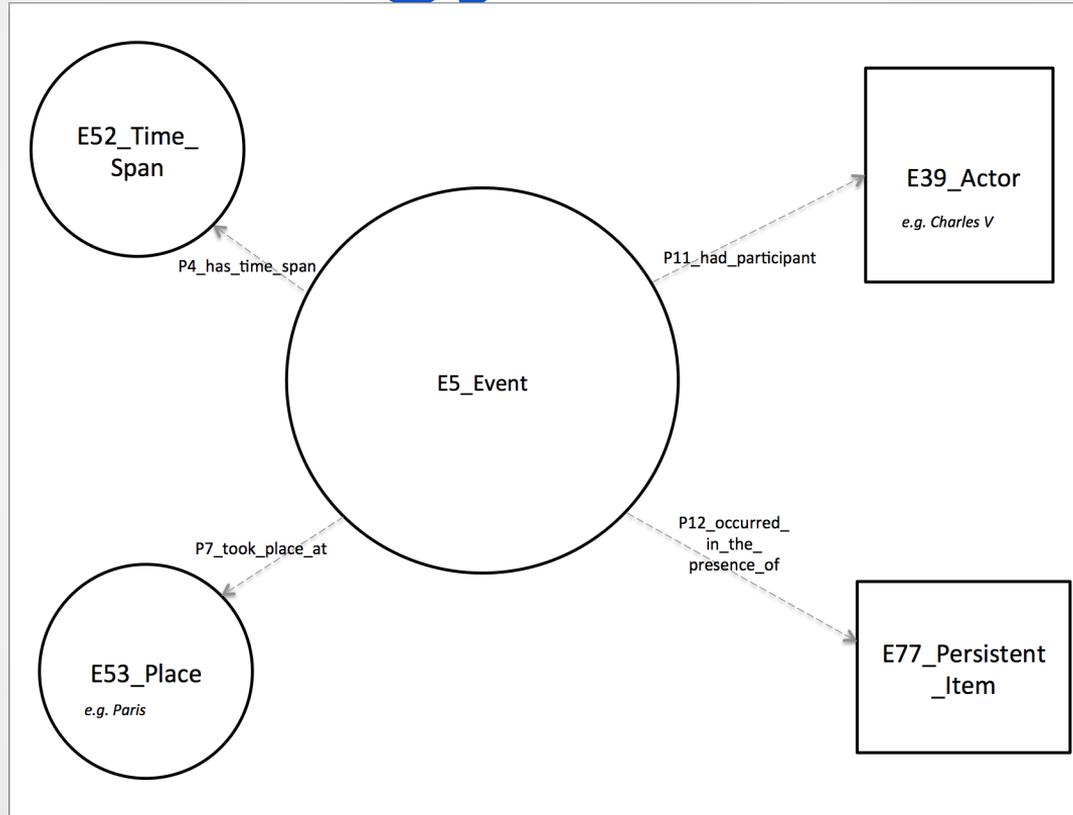
- build reliable relations
- share transformation code
- modelisation experience

# Ontology and thesaurus

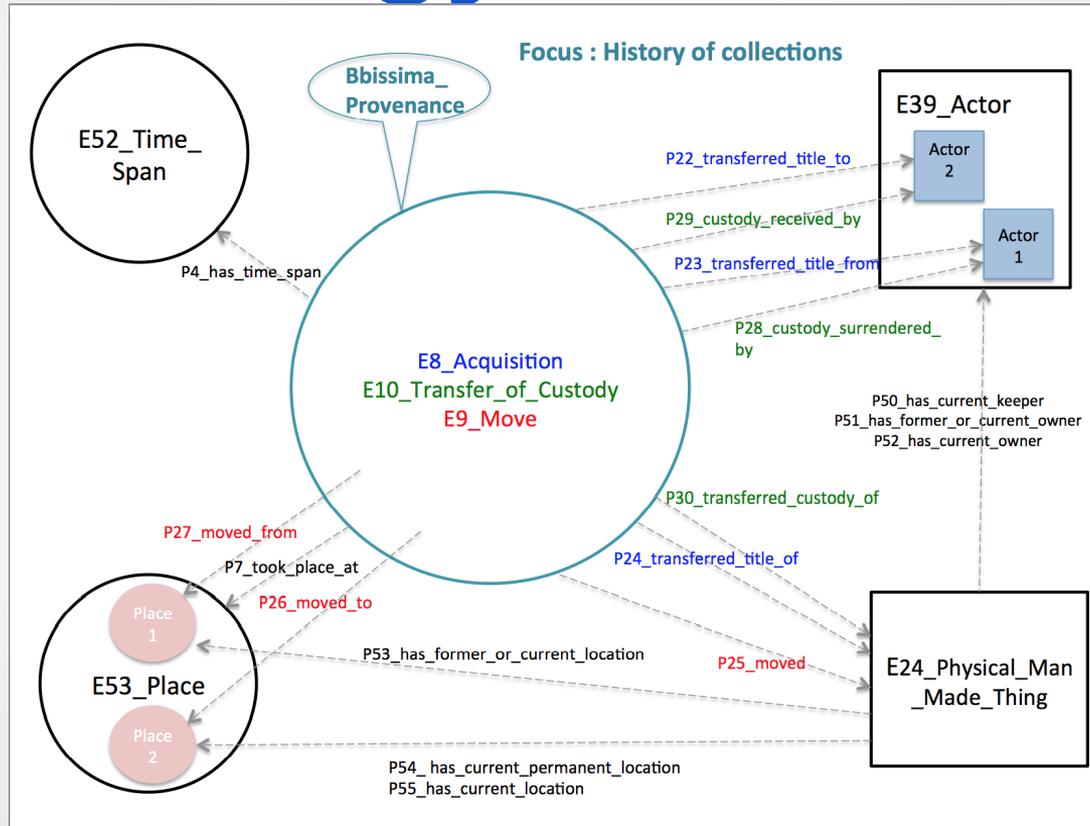
## Biblissima

- Build on CIDOC-CRM and FRBRoo
- Ontology: Publication of v0.1 May 2014

# Ontology Biblissima

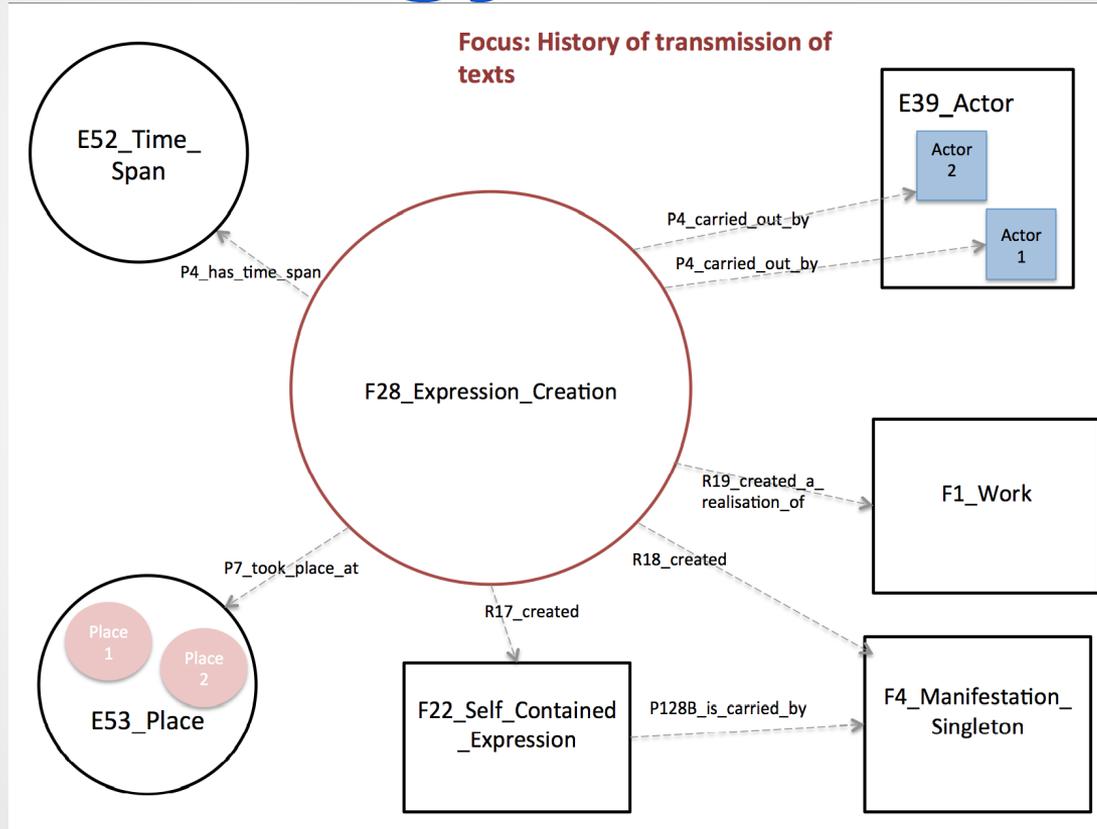


# Ontology Biblissima



Modelisation of the events “Acquisition”, “Transfer of Custody” and “Move” in CIDOC CRM and Biblissima

# Ontology Biblissima



Modelisation of the event "Expression Creation" related to a manuscript in CIDOC CRM and Biblissima

# Thesaurus Biblissima

- to build a thesaurus in the fields of the **transmission of books and texts**
- focus on the vocabularies needed for the **scientific description of manuscripts and early prints**: codicology, paleography, textual criticism etc.

# Tools used by Biblissima

4store

GINCO

OpenRefine

Protégé

Sesame

XXE

Virtuoso

# Merci !

See you on **Wednesday 02/04/2014** at the **Workshop about RDF data**

Campus Condorcet, IUT, 3-7 rue de la Croix Faron, Saint-Denis, **14:30-18:00**