



The Europeanana Use Case

Multilingual & Semantic Interoperability in Cultural Heritage Information Systems

Vivien Petras

Berlin School of Library and Information Science

12 March 2013

W3C Multilingual Web Workshop

Contents

- Europeana: Multilingual Collections & Users
- Multilingual Interoperability
- Semantic Enrichment
- Preview: New Enrichment Plans
- Playing with Europeana Data



Europeana

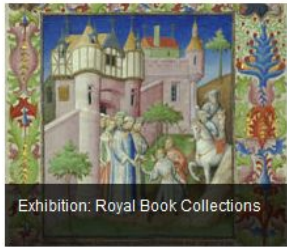
Home Explore Help About Us Follow Us My Europeana Choose a language



Explore Europe's cultural collections

Search Help

6.6K



- 15.2 million images
- 10 million texts
- 450,000 sound files
- 170,000 video files

From the blog



Marie Curie: An Inspirational Woman for International Women's Day

Today is International Women's Day. In order to write today's blog, a couple of weeks ago, we ran a poll on our Facebook page asking our follower...

Fashion Heritage for the Masses – Join us on Tumblr

Last year you might remember we dived into the world of Pinterest with five of our partners including the University for Barcelona, Biblioteca de Catalunya a...

Where would the Oscars be without European literature?

Last night saw the ever glamorous Academy Awards, or Oscars, take place in Hollywood. This year – the awards' 85th - saw many nominations for...

Featured item



The Old Plovdiv

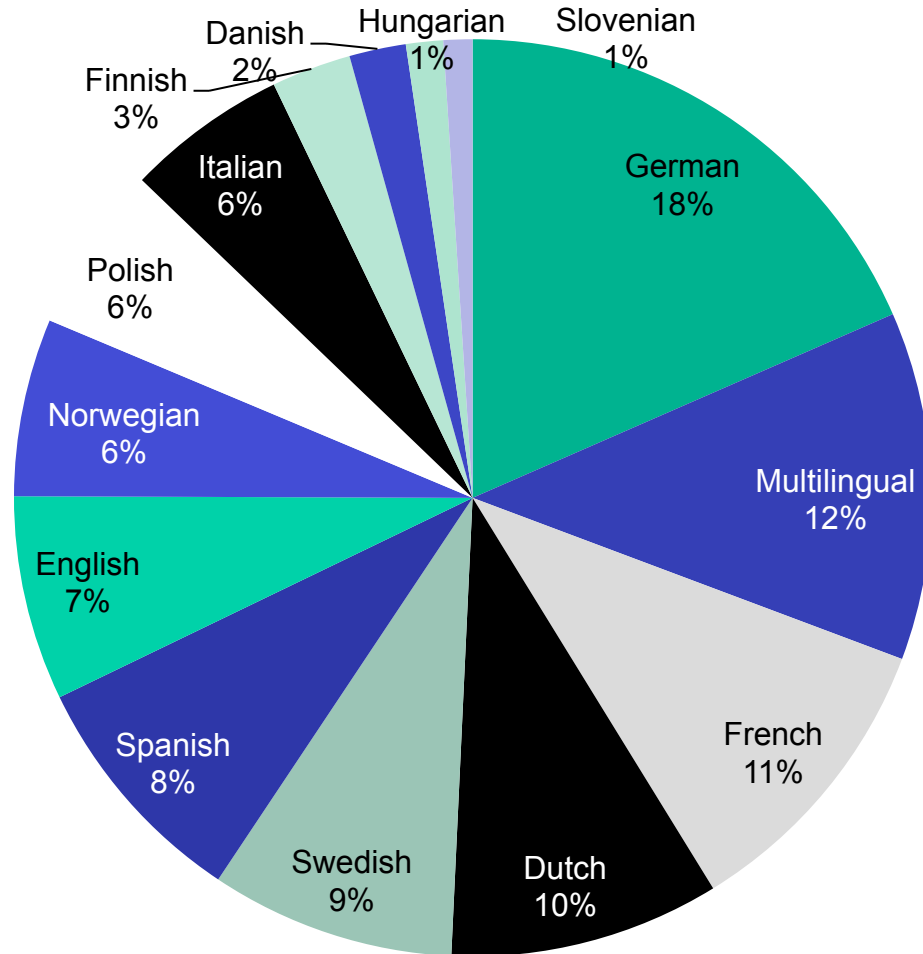
Tsanko Lavrenov was one of the most prominent, influential and distinctive Bulgarian artists of the 20th century. A modernist influenced by the Symbolism and the Secession, best kn...

Follow us on *Pinterest*



Men's Leather Oxford Shoe. Oval toe. Low stacked heel. Upper with facings extended to back of shoe.

Europeana Multilingual Collections



→ Most Europeana objects are language-independent (e.g. images), but the meta-data is multilingual.

Multilingual Europeana Users

- Native language browser: 69%
 - Native language Google (entry point): 91%
 - Native language objects: 43% (SV 77%, DE 71%)
- Native language use increases as soon as native language content increases.

Gäde, Maria (forthcoming). “User Behavior through the Language Glass” – Language-specific Behavior in Multilingual Digital Libraries.



Multilingual Interface in 31 Languages

- users seem to assume that search is affected

The screenshot displays the Europeana website's home page. At the top, there is a navigation bar with links for 'Hjem', 'Gå på opdagelse i', 'Hjælp', 'Om Europeana', 'Følg os', 'Mit Europeana', and a language selection dropdown 'Vælg et sprog'. Below this is the Europeana logo and the tagline 'Tænk kulturarv'. A search bar is prominently featured with the text 'Gå på opdagelse i Europas kultursamlinger' and a 'Søg' button. A red circle highlights the main content area, which includes a row of featured items: 'WW1 Roadshow: Banbury, UK, 3 November', 'Featured Search: The Museum of Architecture, Berlin', 'Exhibition: European Sport Heritage', and 'Preview the new Europeana portal before it's launched'. Below this are three columns: 'Fra bloggen' with a blog post preview, 'Vist emne' featuring a butterfly specimen, and 'Follow us on Pinterest' with a portrait of Jean-Baptiste Lully.

Query Result Filtering by Language

- language of record vs. language of content

Filter your search:

▸ By media type

- + SOUND (4,878)
- + IMAGE (3,367)
- + TEXT (865)
- + VIDEO (457)

▸ By language

- + **Multilingue (mul) (5,095)**
- + Deutsch (deu) (2,412)
- + Français (fre) (580)
- + Español (esp) (460)

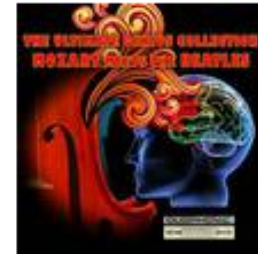
▸ By date

▸ By country

Matches for: mozart



Results 1 - 12 of 9,567 Page: [1](#) [2](#) [3](#)



Requiem KV 626



The Ultimate Genius Collection - Mozart ...



W.A. Mozart: Early Symphonies - Vol. 2



Mozart: Requiem



Document Translation

- general MT – not domain-specific



View item at
[The Wellcome Library](#)

Rights: Wellcome Library, London

An alchemist concentrates on a book in his study, while Deat

Coverage: [S.I. :] ▶

Subject: [alchemist](#) | ▶ [alchemy](#) | ▶ [death](#) | ▶ [\[ICV\]](#) | ▶ [scholar](#) | ▶

Description: An alchemist concentrates on a book in his study, while Death next to him tells him "My dear Herr Collaborator, you are are too hardworking". Gouache painting, 19th century.

Data provider: [The Wellcome Library](#) | ▶



Translate details ▾

Select language ▾

Powered by Microsoft® Translator

[Cite on Wikipedia](#)



View item at
[The Wellcome Library](#)

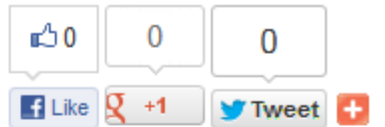
Rights: Wellcome Library, London

An alchemist concentrates on a book in his study, while Deat

Coverage: [S.I. :] ▶

Subject: [Alchemist](#) | ▶ [alkymi](#) | ▶ [død](#) | ▶ [Integritetskontrolværdien \(ICV\)](#) | ▶ [Scholar](#) | ▶

Description: En alkymist koncentrerer sig om en bog i hans studie, mens døden ved siden af ham fortæller ham "min kære Herr samarbejdspartner, du er også flittige". Gouache maleri, 1800-tallet.



Translate details ▾

Danish ▾

Powered by Microsoft® Translator

[Return to original language](#)

[Cite on Wikipedia](#)

Query Translation – Planned for 2013

- How many languages?
- How much user interaction?

did you mean: [ornaments](#)

storia del rinascimento [Advanced search](#)

Multilingual search Italian ▾

[Translation Details](#)

Query Translation Details [query language: IT(GUESSED)]

1. rinascimento - rinascimento [NOUN] named entity=false guessed=false lang:it

- Renaissance - Renaissance [NOUN] named entity=false guessed=false lang:de
- Rinascimento - Rinascimento [NOUN] named entity=false guessed=false lang:de
- renaissance - renaissance [NOUN] named entity=false guessed=false lang:fr
- Renaissance - Renaissance [NOUN] named entity=false guessed=false lang:en
- reincarnation - reincarnation [NOUN] named entity=false guessed=false lang:en

2. storia - storia [NOUN] named entity=false guessed=false lang:it

- Entwicklungsgeschichte - Entwicklungsgeschichte [NOUN] named entity=false guessed=false lang:de
- Erzählung - Erzählung [NOUN] named entity=false guessed=false lang:de
- Flunkerei - Flunkerei [NOUN] named entity=false guessed=false lang:de
- histoire - histoire [NOUN] named entity=false guessed=false lang:fr
- history - history [NOUN] named entity=false guessed=false lang:en
- story - story [NOUN] named entity=false guessed=false lang:en

Matches for: storia del rinascimento

Semantic Enrichment

- concept (GEMET Thesaurus), agent (DBpedia), period (Semium time ontology), place (Geonames)



Prosit Neu Jahr 1891. Familie Drescher Leipzig

Creator: [Drescher, Heinrich Georg \(artist\)](#) | ▶

Date: 1890 [Production]

Type: [Watercolor](#) | ▶ [Views of the city](#) | ▶ [Graphics](#) | ▶ [Art/crafts](#) | ▶

Subject: [Church](#) | ▶ [Thekla](#) | ▶ [Parthian](#) | ▶

Description: Storage location: [Stadtgeschichtliches Museum Leipzig](#)

Technique: Watercolour

[Thekla Church](#)

[See more](#) ▶

Data provider: [Stadtgeschichtliches Museum Leipzig](#) | ▶

Provider: [Athena](#) | ▶ [Germany](#) | ▶

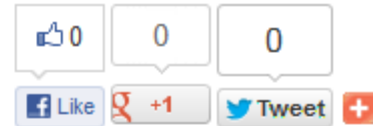
Explore further!

Similar content



View item at
[Stadtgeschichtliches Museum Leipzig](#)

Rights: City's history of Leipzig Museum



[Translate details](#) ▼

English ▼

Powered by [Microsoft](#)® Translator

[Return to original language](#)

[Cite on Wikipedia](#)

[Auto-generated tags](#) ▼

What ▼

Concept Label: kyrka ; budynek sakralny ; cerkev ; kirche ; templom ; church ; kirkko ; église ; bažnyčia ; 教堂 ; igrejas ; църква ; kerk ; kostol ; kirik ; църква ; iglesia ; εκκλησία(ιερός) ναός ; kostel ; kirke ; chiesa ; biserică

Concept Term:

<http://www.eionet.europa.eu/gemet/concept/1410>

Poisonous India...



Explore Europe's cultural collections

poison

Search
Help

[Return to search results](#)

[← Previous](#) [Next →](#)



View

Creator: [Huber, Claude](#) | ▶

Date: 1967

Subject: [Inde](#) | ▶

Provider: [Musées lausannois](#) | ▶ [Switzerland](#) | ▶

Explore further!

Similar content



View item at

[Musées lausannois](#)

Rights: Musée historique de Lausanne

Identifier: P.2.E.19.301.001 ; 141728

Format: photographie



Translate details ▾

Select language ▾

Powered by Microsoft® Translator

[Cite on Wikipedia](#)

Auto-generated tags ▾

What ▾

Concept Label: яд ; gift ; μέρεγ ;
δηλητήριο ; strup ; poison ; jed ;
myrkky ; truczna ; veleno ; otravã ;
nuodai ; 毒药 ; venenos ; отрова ;
mürk ; vergif

Concept Term:

<http://www.eionet.europa.eu/gemet/concept/6358>

Enrichment Challenges

- Metadata quality & sparsity
- Vocabulary ambiguity
 - domain
GEMET print → (German) *Druck* → *pressure*
 - language
electrical Power → (German) *Strom* → (Czech) *strom* → *tree*
 - context
Córdoba = *Spain* | *Argentina*



Olensky, M., Stiller, J., Dröge, E. (2012). Poisonous India or the Importance of a Semantic and Multilingual Enrichment Strategy. In: Proc. of MTSR 2012: Metadata and Semantics Research Conference, Nov. 2012, Cádiz, Spain.

Preview: New Enrichment Plans

→ transition to linked data-based Europeana Data Model (EDM)

- links to contextual vocabularies from providers
- enrich during ingestion



View



CC BY-NC-SA Attribution-NonCommercial-ShareAlike 3.0 Unported

View item at

Buccin trombone. Nominal pitch: B?.

Title:

Description: Technical description: Brass; ligature fitting on bell section at joint; stockings on main slides. Bell with one coil, angled to face forwards. Repair History: Main slide possibly not original (tenon of slide section of joint is tapered, bell section joint for cylindrical tenon).

Date: Circa 1840

Type: <http://www.mimo-db.eu/InstrumentsKeywords/4378>; <http://www.mimo-db.eu/HornbostelAndSachs/356>

Identifier: #UEDIN:214

Data provider: University of Edinburgh

Provider: MIMO - Musical Instrument Museums Online

Providing country: FR

[Auto-generated tags](#) ▾

[What](#) ▾

Concept Term: <http://www.mimo-db.eu/InstrumentsKeywords/4378>

Concept Label: [Buccin] (de); [Buccin] (); [Buccin-trombone] (it); [423.22 Labrosones with slides, Trumpets] (def); [Buccin] (sv); [Buccin] (fr); [Buccin] (en); [Buccin] (nl)

Search also for:

Title

[Buccin trombone. Nominal pitch: B?. \(1\)](#)

Provider

[University of Edinburgh \(3981\)](#)
[MIMO - Musical Instrument Museums Online \(41553\)](#)

Playing with Europeana Data

- CHiC: Cultural Heritage in CLEF
 - Europeana data (XML) & queries / 13 languages
 - ad-hoc retrieval / semantic enrichment tasks
 - Submission deadline: 14 April 2013
 - <http://www.culturalheritageevaluation.org>
- Europeana Linked Open Data
 - RDF file dumps in EDM (Europeana Data Model)
 - SPARQL endpoint
 - CC0 open license
 - <http://data.europeana.eu/>
- Contact: *vivien.petras@ibi.hu-berlin.de*

