

Semantic Technologies for Cultural Heritage

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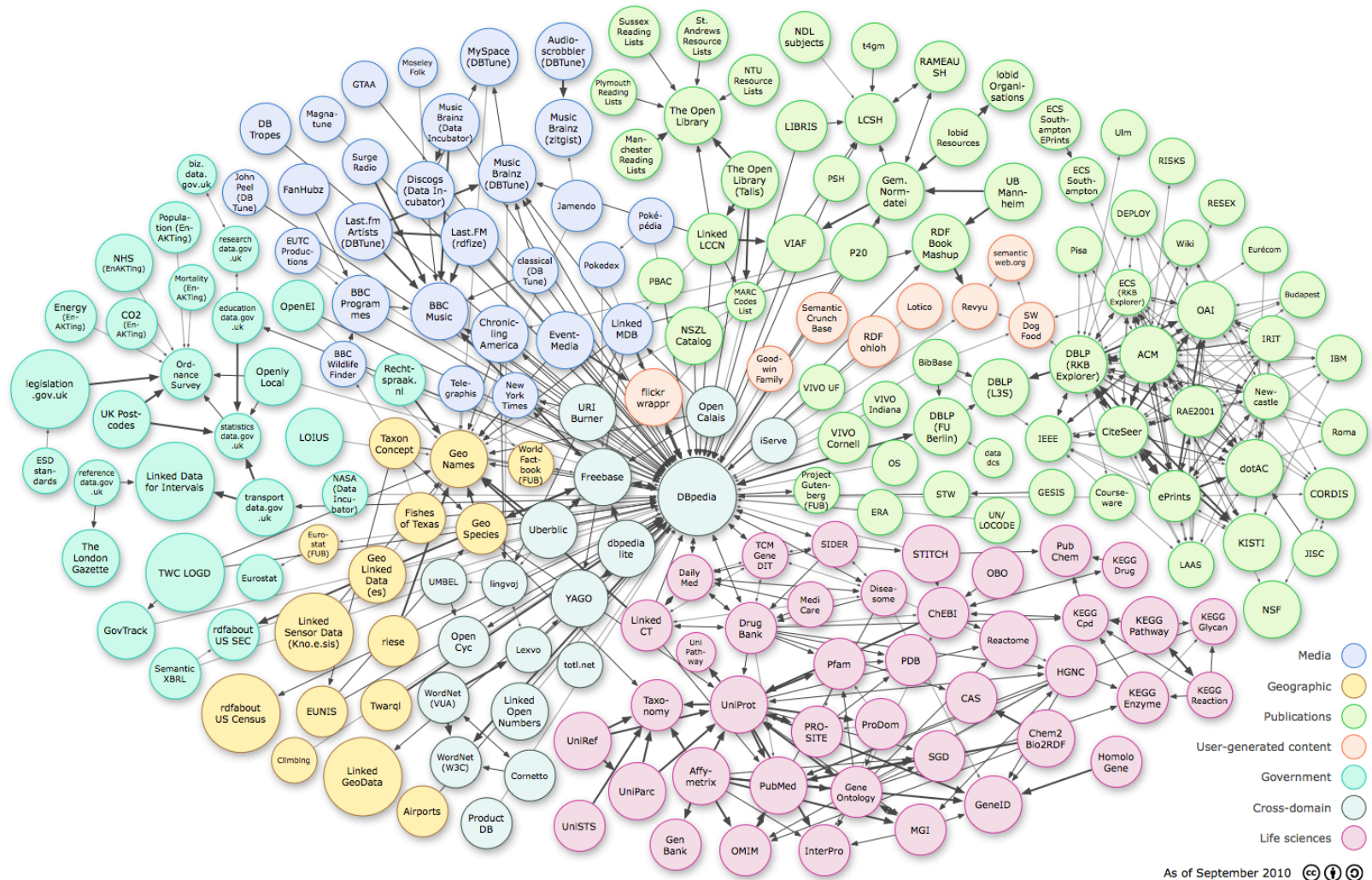


- Semantic Web
 - Linked Open Data
 - Ontotext Corp
- Cultural Heritage
 - Applicability of Semantic Web
 - Data Standards
 - Europeana Data Model
- Related Projects
 - EU Projects
 - EU Projects with BG Participation
 - BG Projects
- ITCC Project

SEMANTIC WEB, LOD, ONTOTEXT

- What is the semantic web?
 - "Artificial Intelligence meets the web": Recasting of AI developments, but with realistic goals and at global web scale
 - Proposed around 1998 by T.Berners-Lee (same person who proposed the WWW)
 - Standardized by the WWW Consortium (W3C)
 - If Web 1.0 is a giant hyperlinked **document**, then Web 3.0 is a giant linked **database**
- Emerged as the best Data Integration approach
 - Many professional fields have a data fusion problem
 - Semantic web becomes the "Rosetta Stone" linking various types of independent data sources, using a **unified**, **globalized** and **abstracted** representation (RDF, RDFS, OWL2, RIF)
 - Schema info (metadata) is represented the same way as data
- Intro videos (from the TED series)
 - Tim Berners-Lee: [The next Web of open, linked data](#)
 - Tim Berners-Lee: [The year open data went worldwide](#)
 - Hans Rosling: [No more boring data](#)

Linked Open Data



- Grown exponentially since 2008. Currently 207 datasets, 28 **billion** facts
- Provides useful background information (geographic, political, statistical)
- Any new data can be linked to LOD to benefit from background/context knowledge

- Who is Ontotext?
 - The leading semtech company in Eastern Europe and one of the leaders world-wide
 - 55 people: Bulgaria (Sofia, Varna), Austria, USA
 - Worked in this area since 2000
 - Venture funding and commercial clients since 2008
 - Bulgaria's most successful participant in EU FP5,6,7 research
 - www.ontotext.com
- 360-degree semantic technology:
 - Semantic Repository (OWLIM), ETL
 - Text Mining, Semantic Annotation and Search (KIM, U.Sheffield GATE, Teamware, MIMIR)
 - Web Mining and Crawling
 - Ontology Engineering and Exploitation
 - Master Data and Linked Data Management

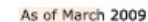




Ontotext Clients (selected)



- British Broadcasting Corporation (BBC)
 - Runs its World Cup 2010 sites on top of OWLIM
 - Next is BBC Sports (2011) and the **2012 Olympics**
- The National Archives (UK)
 - The UK Government's official archive contracted Ontotext to implement semantic search for the Government Web Archive
- AstraZeneca
 - Analysis and retrieval of clinical trial reports
 - Integration of biomedical databases for drug target identification
- **KT**
 - **Applications of OWLIM in Interactive TV and IPTV**
- All these clients need to:
 - integrate massive amounts of heterogeneous data
 - provide efficient search and navigation



- 8

- Richard McManus (founder of ReadWriteWeb):
 - “...the tipping point for the Semantic Web may be when one can ... deliver –using Linked Data– a comprehensive list of locations of original Modigliani art works ...”
- Query <http://factforge.net/sparql>: uses data from 3 independent datasets (DBpedia, FreeBase, UMBEL)

```

SELECT DISTINCT
  ?painting_l ?owner_l ?city_fb_con ?city_db_loc ?city_db_cit
WHERE {
  ?p fb:visual_art.artwork.artist dbpedia:Amedeo_Modigliani ;
    fb:visual_art.artwork.owners [
      fb:visual_art.artwork_owner_relationship.owner ?ow ] ;
    ff:preferredLabel ?painting_l.
  ?ow ff:preferredLabel ?owner_l .
  OPTIONAL { ?ow fb:location.location.containedby [
    ff:preferredLabel ?city_fb_con ] } .
  OPTIONAL { ?ow dbp-prop:location ?loc.
    ?loc rdf:type umbel-sc:City ;
      ff:preferredLabel ?city_db_loc }
  OPTIONAL { ?ow dbp-ont:city [ ff:preferredLabel ?city_db_cit ] }
}
    
```

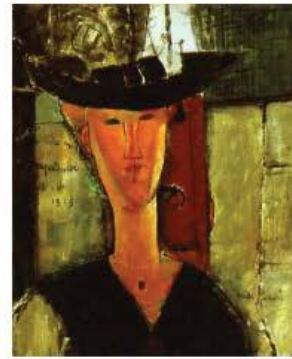


Results for PREFIX fb: <<http://rdf.fr...>> (8)

View as [Exhibit](#) Download in [JSON](#) | [SPARQL Results in XML](#) | [SPARQL Results in JSON](#)

| painting_l | owner_l | city_fb_con | city_db_loc | city_db_cit |
|-----------------------------|---|---------------|-------------|-------------|
| Head@en | Museum of Modern Art | New York City | | |
| Anna Zborowska@en | Museum of Modern Art | New York City | | |
| Portrait of Diego Rivera@en | The São Paulo Museum of Art@en | | São Paulo | |
| Woman with a Necklace@en | School of the Art Institute of Chicago@en | | | Chicago |
| Portrait of a Woman@en | School of the Art Institute of Chicago@en | | | Chicago |
| Reclining Nude@en | Museum of Modern Art | New York City | | |
| Madam Pompadour@en | School of the Art Institute of Chicago@en | | | Chicago |
| Jeanne Hébuterne@en | Barnes Foundation@en | Philadelphia | | |

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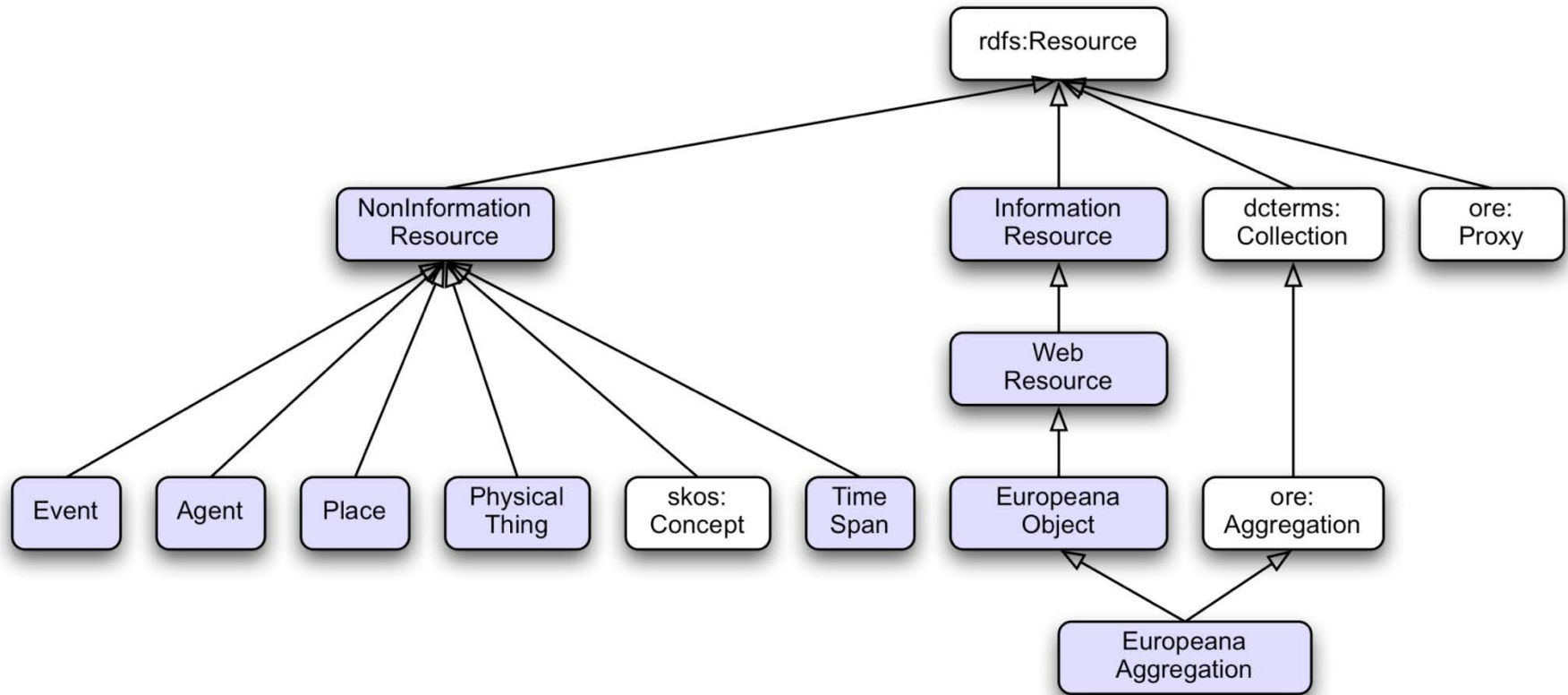


- Reaching the tipping point of the semantic web
- Interestingly, with an application to **cultural heritage**

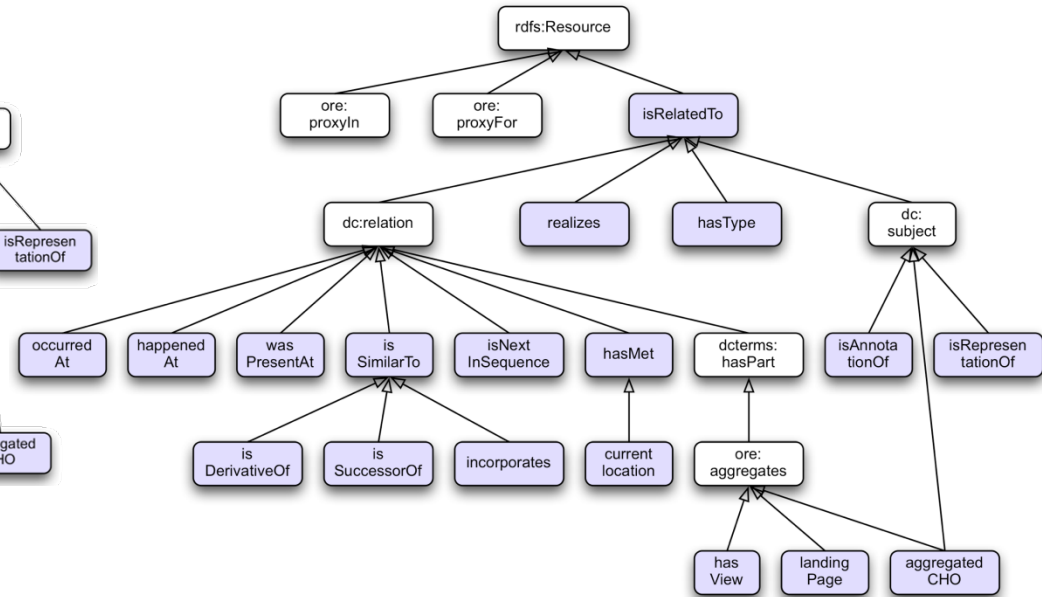
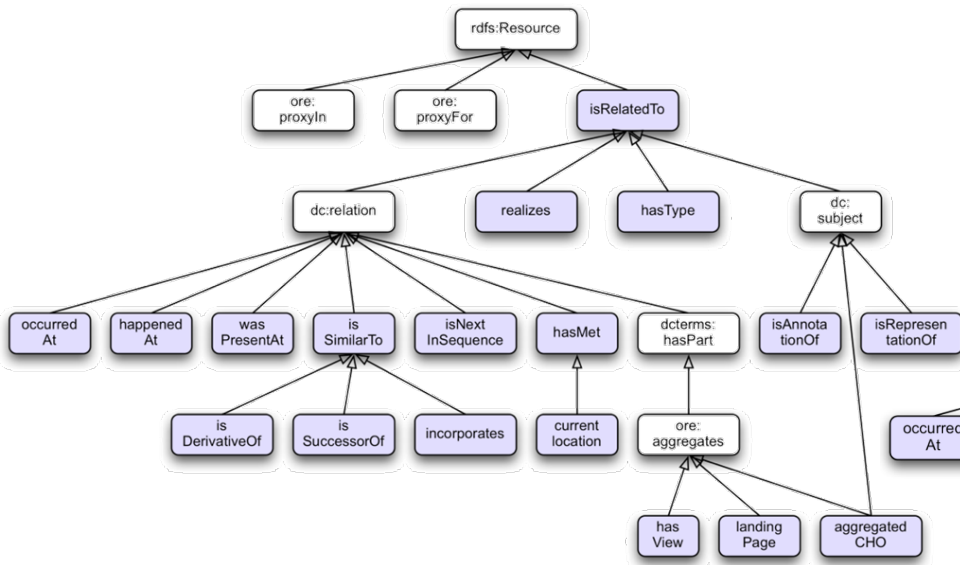
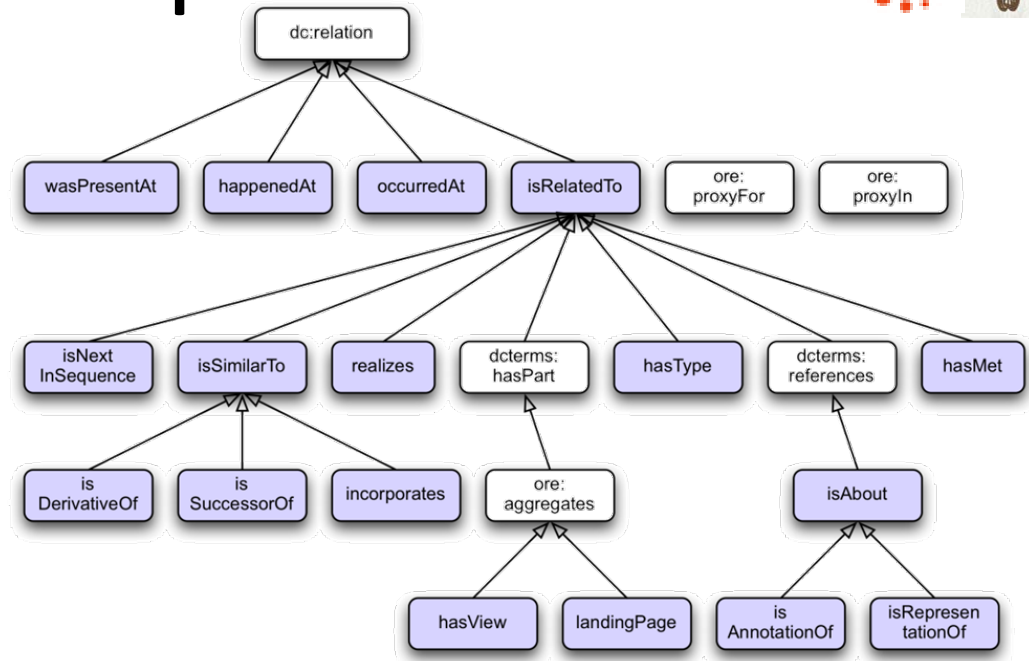
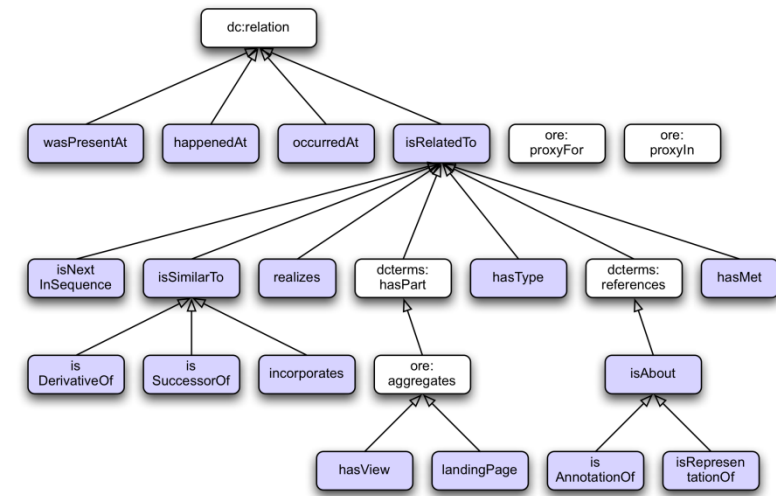
CULTURAL HERITAGE AND DATA STANDARDS

- Cultural Heritage (C.H.) represents
 - **artifacts**: historical, archeological, written, art, etc
 - **institutions**: museums, galleries, archives, audiovisual collections, libraries, trusts, universities, research institutes, ...
 - **activities**: preservation, scientific research, cataloging, dissemination, digitalization, ...
 - **fields**: artistic, scientific, industrial, bibliographic, ethnographic, nature ...
 - A large, heterogeneous, cross-disciplinary field
- Social importance
 - The EU agenda includes multiculturalism and cultural preservation
 - Both BG and KR have rich history and heritage

- Dublin Core (DC)
 - Simple resource descriptions: author, date created, etc
 - ISO 15836
- **Conceptual Reference Model (CRM)**
 - By International Committee on Documentation (CIDOC) of the International Council of Museums (ICOM), an organization devoted to conserve and communicate to society the world's natural and cultural heritage
 - Core upper-level concepts common across c.h. documentation
 - ISO 21127 (2006) "Information and documentation — A reference ontology for the interchange of cultural heritage information"
- Functional Requirements for Bibliographic Records (FRBR)
 - by International Federation of Library Associations and Institutions (IFLA)
 - Conceptual entity-relationship model
- **Europeana Data Model (EDM)**
 - Structuring the data that Europeana is ingesting, managing and publishing
 - Refined until the end of 2010, will be implemented during 2011
 - Open, cross-domain framework, adheres to semweb modeling principles
 - Intended to accommodate specific community standards such as LIDO, EAD, METS
 - Probably in the future will incorporate CRM



- Reuses 4 other ontologies (shown in white)
- This is the true spirit of semweb



EDM Example: Mona Lisa

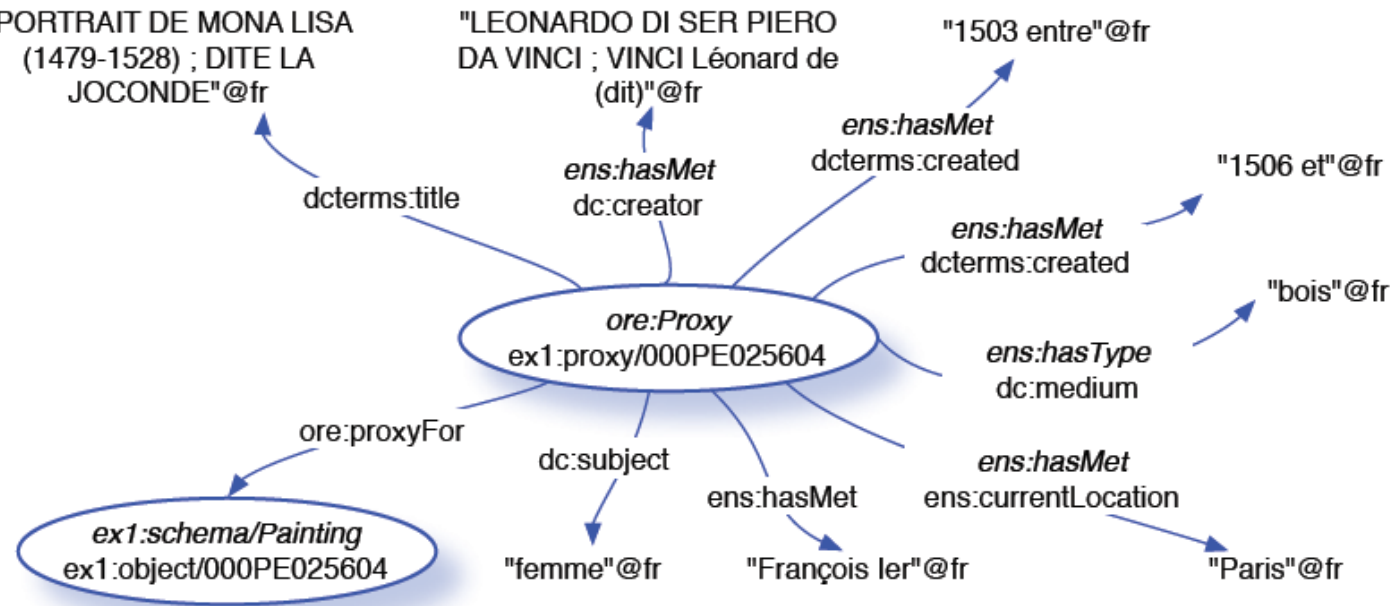


Fig. 11. Mona Lisa – an object-centric description

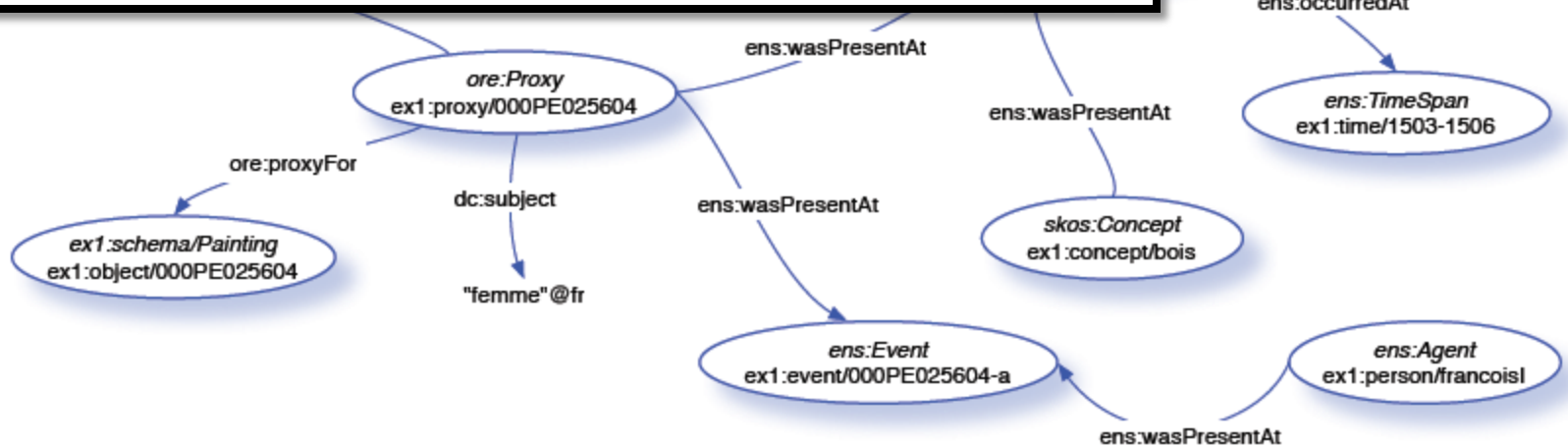


Fig. 12. Mona Lisa – an event-centric description

Why Semweb for C.H.?



- Many C.H. institutions have a data integration problem, since data about the same artifacts is scattered in separate silos:
 - cataloging data
 - acquisition data
 - conservation data
 - scientific data, ...
- Cross-institution and cross-country research is stuttered
 - Which BG archeological sites exhibit the same style as MK sites? Who knows...
- British Museum hosted a [Cultural Heritage & SemWeb day](#) (13.1.2011)
 - Examined use of the emerging web of data by c.h. and humanities organizations. See this [interesting blog](#)
 - Looked at practical applications of semweb technology relevant to the sector
 - Out of 8 presenters:
 - **John Sheridan** (Ontotext client): Government and National Archive initiatives (the 2nd most used web archive in the world is being converted to a Semantic Knowledge Base with 50M documents)
 - **Atanas Kiryakov** (Ontotext CEO): FactForge – the Fast Track to the Centre of the Data Web

PROJECTS RELATED TO CULTURAL HERITAGE & SEMTECH

- Numerous related projects are sponsored by the EU, in line with its multiculturalism agenda
 - Europeana
 - EU FP7 and DigiCult projects
- Some EU projects with BG participation
 - MOLTO
 - CULTURA
 - IMPACT
 - Linked Heritage
- BG Projects
 - SUdigital
 - Romulus, Theseus, Thelamon
 - Collaborative Portal

- <http://europeana.eu>
- Pan-European Digital Museum
- People can explore the digital resources of Europe's museums, libraries, archives, audio-visual collections
 - And be inspired by the rich diversity of Europe's cultural and scientific heritage
- Promotes discovery and networking opportunities in a multilingual space
- Around 1500 institutions contributed
 - Includes over 15 M items
 - Still none from BG, but that will change soon



- Europeana adopts semtech for all future development
 - EDM is based on semweb, which makes it easily extensible
 - Current holdings will be converted to semweb format
- Europeana's [first White Paper](#) **Knowledge = Information in Context** looks at the key role LOD will play in Europeana's development
 - "Linked data gives machines the ability to make associations and put search terms into context. Without linked data, Europeana could be seen as a simple collection of digital objects. With linked data, the potential is far greater"
- [LOD Experiment in Europeana Thought Lab](#):
 - Data and metadata from the Amsterdam Museum (AM)
 - 70k cultural heritage objects related to the city
 - Retrieved from an XML API of the museum's collection (database by AdLib UK)
 - [Converted to LOD compliant with EDM](#) by Vrije Universiteit (VU): 5M facts
 - Conversion software is available as open source
 - **Linked to existing datasets**
 - Dutch Art and Architecture Thesaurus (AATNed)
 - Getty's Union List of Artists Names (ULAN)
 - DBpedia (data version of Wikipedia)
 - GeoNames (structured geographical data)
 - Published to the [Comprehensive Knowledge Archives Network \(CKAN\)](#)
 - Prime example the type of LOD that Europeana will be producing

Places

Admin

Repository

Vocabularies

Alignments

Query

Help

Login

Search

Plate commemorating the first Amsterdam-Batavia flight



am-data.ttl/124095

1924 1924

hoogte 2.5 cm diameter 23.7 cm

Category: keramiekcollectie

Produced in: onbekend

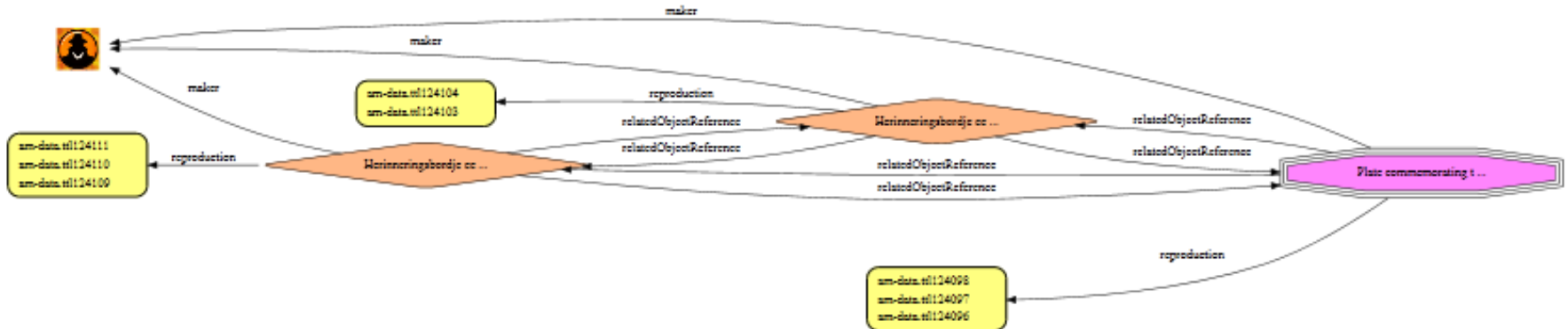
Technique: beschilderd

Technique: gebakken

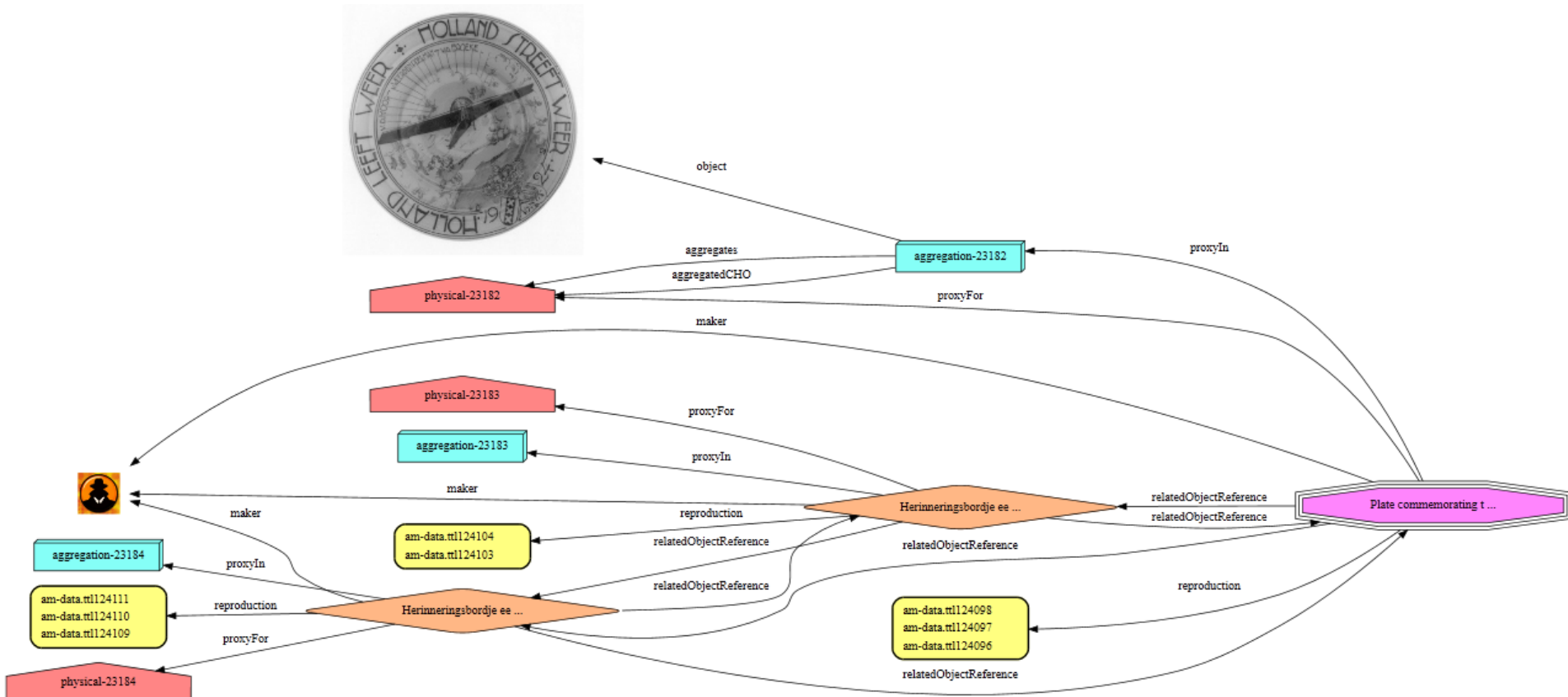
Technique: geglazuurd

Amsterdams Historisch Museum KA 17150

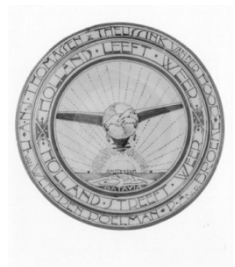
Related objects



- http://semanticweb.cs.vu.nl/europeana/browse/list_resource?r=http://purl.org/collections/nl/am/proxy-23182



- Click on any node to see its object and relations, e.g.
 - The plate was made by "Heytze, J.C."
 - It is related to another plate (see on right), etc
- This is the essence of LOD!



- [DigiCult and TeLearn](#)
 - **DigiCult (Cultural Heritage)**: leading-edge ICT for accessing, experiencing and preserving cultural and scientific resources
 - **TeLearn (Technology Enhanced Learning)**: how ICT can make learning more efficient
- [FP6 Projects](#)
 - 25 research projects were executed to mid 2010
- [FP7 projects](#) and calls:
 - 11 projects from the first two calls, started between Nov 2007 and Feb 2009
 - 15 projects from the latest call, started between Dec 2010 and Apr 2011
 - ICT SME DCL: open till Apr 2011, Digital Content and Languages, **targets SMEs**
 - Ontotext submitted a proposal with VU Amsterdam and AdLib (UK) similar to the Europeana pilot
 - [ICT call 9](#): open Jan-Jul 2012, **targets Digitization**
- Budget (specifically for DigiCult and TeLearn, other calls are also be applicable)
 - WP 2007-2008: 102 MEUR DigiCult and TeLearn (Calls 1 and 3)
 - WP 2009-2010: 69 MEUR for "Digital Libraries and Digital Preservation"
 - WP 2011-2012: 110 MEUR (Call 9, Challenges 4 and 8) for "Digital Preservation" and "ICT for access to cultural resources"



- Digital cultural experiences: exploration of leading edge technologies (e.g. **knowledge management systems, semantic tools**, graphics, interfaces, novel displays)
 - Empower applications that improve the meaningful use of cultural resources and the experiences users get from visits of museums and sites
 - 3D-COFORM, ARTSENSE, AXES, CHESS, CINESPACE, CULTURA, DECIPHER, EPOCH, ISAAC, iTACITUS, MOSAICA, PATHS, P2P-FUSION, QVIZ, V-City, ...
- Information retrieval and use: application areas such as digital libraries and archives, exploring methods and tools for **(semi)automatic indexing, semantic annotation** of non-textual objects (music, speech, images).
 - Aim at enhancing information and knowledge retrieval through efficient search engines able to deliver results from complex multimedia resources, from distributed collections, across languages.
 - CONTRAPUNCTUS, EASAIER, ethnoArc, IMAGINATION, MEMORIES, MultiMATCH, PAPYRUS, QVIZ, Treble-CLEF, ...

EU PROJECTS WITH BG PARTICIPATION

- Multilingual Online Translation (MOLTO), www.molto-project.eu
 - develops knowledge infrastructure, provides interoperability between natural language and structured queries
- BG partner: **Ontotext**
- Objectives:
 - tool for creating domain-specific translation systems;
 - set of tools for translators and the general public to translate documents;
 - three extensive case studies: mathematical exercises, biomedical patents, **museum objects**
- Ontotext is in charge the Representation Infrastructure, including interoperability between NL P and SPARQL and case study 3
 - Goal: provide access to museum information, allow querying for museum items, discover information related to them from other sources
 - Data comes from Gothenburg City Museum
 - Uses **LOD and Reason-able views** to publish museum data
 - Integrates standard museum-specific ontologies (**CRM**) with upper-level ontologies, to permit linking museum data to existing LOD (e.g. from DBpedia)
 - Integrates c.h.-specific systems such as the Swedish **K-search** system


Föremål 96596. SHM 3094:3A

[Startsida](#) | [Rapportera problem](#) | [Hjälp](#) | [Dela](#) | [Translate](#) | [Logga in / Registrera dig!](#)

[Hem](#) > [SHM 3094](#) > [Go Väte Väte](#) > [FÖREMÅL 96596](#)

LÄNK: [HTTP://WWW.HISTORISKA.SE/DATA/?FOREMAL=96596](http://www.historiska.se/data/?foremal=96596)



 Christer Åhlin SHMM 2009-03-06

Använd bilden

Hämta: Miniaturbild | Liten | Medel | Stor

Bädda in: Kopiera koden nedan och klistra in i din sida.

```
<div xmlns:cc="http://creativecommons.org/ns#"><a
rel="cc:attributionURL" href="http://www.historiska.se
/data/?foremal=96596">  |
| UNDERNUMMER            | 3A                                                                                                                                                                           |
| FYNDNUMMER             |                                                                                                                                                                              |
| LAND                   |                                                                                                                                                                              |
| LANDSKAP               | Gotland                                                                                                                                                                      |
| SOCKEN                 | Väte                                                                                                                                                                         |
| LOKAL                  | Väte »                                                                                                                                                                       |
| BEBYGGELSEOBJEKT (RAÄ) |  »                                                                                          |
| FÖREMÅLSKATEGORI       |                                                                                                                                                                              |
| SAKORD                 | målning                                                                                                                                                                      |
| TYP                    | pannå                                                                                                                                                                        |
| DEL                    |                                                                                                                                                                              |
| MATERIAL               | fur                                                                                                                                                                          |
| BESKRIVNING            | Köp 1863, medeltida målning pannå                                                                                                                                            |
| ANTAL                  | 1                                                                                                                                                                            |
| ANTAL FRAGMENT         |                                                                                                                                                                              |
| VIKT (g)               |                                                                                                                                                                              |
| RELATIV DATERING       | högmedeltid                                                                                                                                                                  |



- CULTivating Understanding and Research through Adaptivity ([CULTURA](http://www.cultura-strep.eu)), [www.cultura-strep.eu](http://www.cultura-strep.eu)
- BG partners: **Sofia University, ComMetric (BG branch of US company)**
- Development of adaptive systems, new forms of multi-dimensional adaptivity:
  - personalized information retrieval and presentation: user and contextual intent models
  - community-aware adaptivity: responds to community activity, interest, contribution and experience
  - content-aware adaptivity: responds to entities and relationships automatically identified within the artifacts and across collections
  - personalized dynamic storylines: generated across individual artifacts and entire collections
- Advances and integrates:
  - Natural language processing: normalizes ambiguities in noisy historical texts
  - Entity and relationship extraction: highlights the key individuals, events, dates and other entities and relationships within unstructured text
  - Social network analysis of entities and relationships within the content, and also of the individuals and broader community of users engaging with the content
  - Multi-model adaptivity to support dynamic reconciliation of multiple dimensions of personalization

- Improving Access to Text ([IMPACT](http://www.impact-project.eu)), [www.impact-project.eu](http://www.impact-project.eu)
- Goal: improve access to historical texts
- Innovate OCR technology
  - explore challenges using different approaches, rather than just one sided approaches
  - develop cutting edge approaches such as collaborative correction
- Innovative language technologies to remove the historical language barrier
- Create center for access to digitized materials of all participating institutions
- Remove constraints to mass digitization by providing Best Practice guidance
- In 2010 the project was extended to include more countries and languages, totaling 25 beneficiaries all over Europe.
- BG participants: **Bulgarian Academy of Sciences (ICT Institute), National Library**
  - Digitize 2000 pages and create a dictionary of 10k old BG words

- [Coordination of Standards and Technologies for the enrichment of Europeana, www.linkedheritage.org](http://www.linkedheritage.org)
- Consortium includes key stakeholder groups from 20 EU countries, Israel and Russia
  - Several partners participate in related Europeana ecosystem projects; guarantees alignment with Europeana's evolution
  - Organizations which have not in the past been involved will contribute for the first time to Europeana
- BG participant: **Bulgarian Academy of Sciences (Central Library)**
- Main objectives:
  - Contribute large quantities of new content to Europeana (from both public and private sectors). 3 M new items will be delivered to Europeana, covering a wide spectrum of types of cultural content
  - Demonstrate enhancement of quality of content, in terms of metadata richness, re-use potential and uniqueness
  - Enable improved search, retrieval and use of Europeana content
- Facilitate and deliver large-scale, long-term enhancement of Europeana and its services. Address problems associated with:
  - Non-standard descriptive terminologies
  - Preservation of complex metadata models within the Europeana metadata schema

# BG PROJECTS



- Digital Library of Sofia University ([sudigital.org](http://sudigital.org))
- A common platform and presentation portal for digitization initiatives at SU (e.g. see next 3 such initiatives)
- Cross-disciplinary effort. Current participants:
  - University Library,
  - Faculty of History,
  - Faculty of Theology,
  - Faculty of Journalism,
  - Faculty of Philology (Slavic, Western, Eastern, Ancient languages)
- Built using the CDS Invenio digital repository by CERN (CH), currently 1k items
- Extensible variety of document types
  - Currently extended to epigraphics (stone inscriptions).
  - A universal system for describing and indexing c.h. items that is unique for BG
  - Adheres to the spirit of Europeana and hopefully will soon contribute to Europeana

Търсене Изпращане Персонализиране Помощ Начало

Начало > Статии > Запис#18751: Македонско пирувание

Информация

Референции

Цитирания

Дискусия

Статистики за употреба

Пълен текст

Published Article

SUDGTL-ARTICLE-2011-061

## Македонско пирувание

Атений ; Стефан Захариев (прев.)

1871

s.e. Цариград

**Описание:** Откъс от съчинението на старогръцкия писател Атений от Навкратида "Гощавка на софисти" (IV, 128c-130d), преведен от Стефан Захариев (1810-1871), български възрожденец и деятел по черковния въпрос от Татар Пазарджик. Публикуван е в списание "Читалище", кн.7/1.01.1871 г., стр. 210-216. Преводът е придружен с кратко въстъпление и по-обширен послеслов от Стефан Захариев, които са дадени в курсив. Текстът е обработен електронно за целите на проект "Тезей" и е пресъздаден с частично нормализирани правопис и пунктуация.

Език: bul Страници: mult. p

**Ключови думи:** Атений ; Стефан Захариев ; 19. в. ; XIX в. ; 3. в. сл.Хр. ; III в. сл.Хр. ; 3. в. сл.н.е. ; III в. сл.н.е. ; софисти ; дейпнософисти ; старогръцки ; превод ; Възраждане ; македонски ; пир ; пирувание ; възрожденска литература ; списание "Читалище"

Записът е създаден на 2011-03-30, последна промяна на 2011-03-31

[Подобни записи](#)

Пълен текст:



Преглед онлайн:



- [Добавяне в личната кошница](#)
- Експортирай: [BibTeX](#), [MARC](#), [MARCXML](#), [DC](#), [EndNote](#), [NLM](#), [RefWorks](#)

- Digitization projects of the Faculty of Philology
- **Romulus Bulgaricus** ([romulus-bg.net](http://romulus-bg.net)): bilingual library of Latin texts and their Bulgarian translations
  - Uses XML tags and an **automatic aligner** between the two texts
  - Presentation by books and chapters, original text and/or one of the translations, parallel view
  - Electronic Encyclopedia of the Ancient world and an image gallery
- **Theseus Bulgaricus** ([theseus.proclassics.org](http://theseus.proclassics.org)): bilingual library of Ancient Greek texts and their Bulgarian translations
- **Telamon** ([telamon.proclassics.org](http://telamon.proclassics.org)): library of Ancient Greek inscriptions in BG. Epigraphic heritage is very rich in BG
  - Universal system for **XML tagging of text and archeological data** about epigraphics
  - Conforms to the tag set of Text Encoding Initiative (TEI)
- These projects are fully integrated into the SUDigital portal




**Проект Тезей**

[каталог](#)
[връзки](#)
[контакти](#)
[новини](#)

**Из Гощавка на софисти**

- Македонско пирувание (1870)

**Търси в речника**

**Меню**

- Каталог преводи
- Последни публикации
- Речник
- Контакти
- Новини
- Статии
- Връзки

**Вход**

[Начало](#) » [Из Гощавка на софисти](#)

## Македонско пирувание (1870)

Изпратено от theseus на Съб., 03/27/2010 - 23:07.

Tagged: [Атений](#) • [Стефан Захариев](#) • [литературен пир](#)

### АТЕНЕЙ

### МАКЕДОНСКО ПИРУВАНИЕ

Превод: Стефан Захариев, 1870

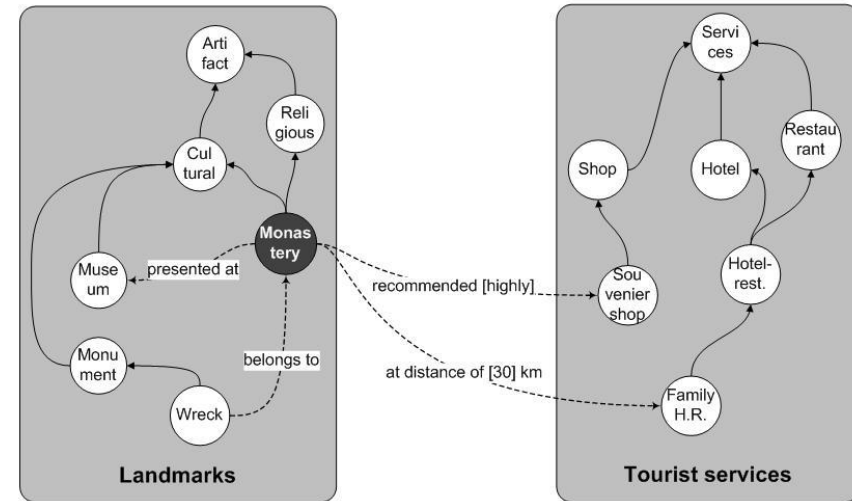
Електронна обработка: Драгомира Вълчева, 2009

*Из списанията на мъдрецът Атиней, наречени “Дипнософисте”, намира ся един документ, извлечен от едно писмо на някого си Иполита, който му описува пируванието, което направил на приятелите си във времето на сватбата си (бракосъчетанието) един Македонски велмож от цар Александровите военачалници, на име Каран, подир безвременната смърт на Великий Александър Македонский!*

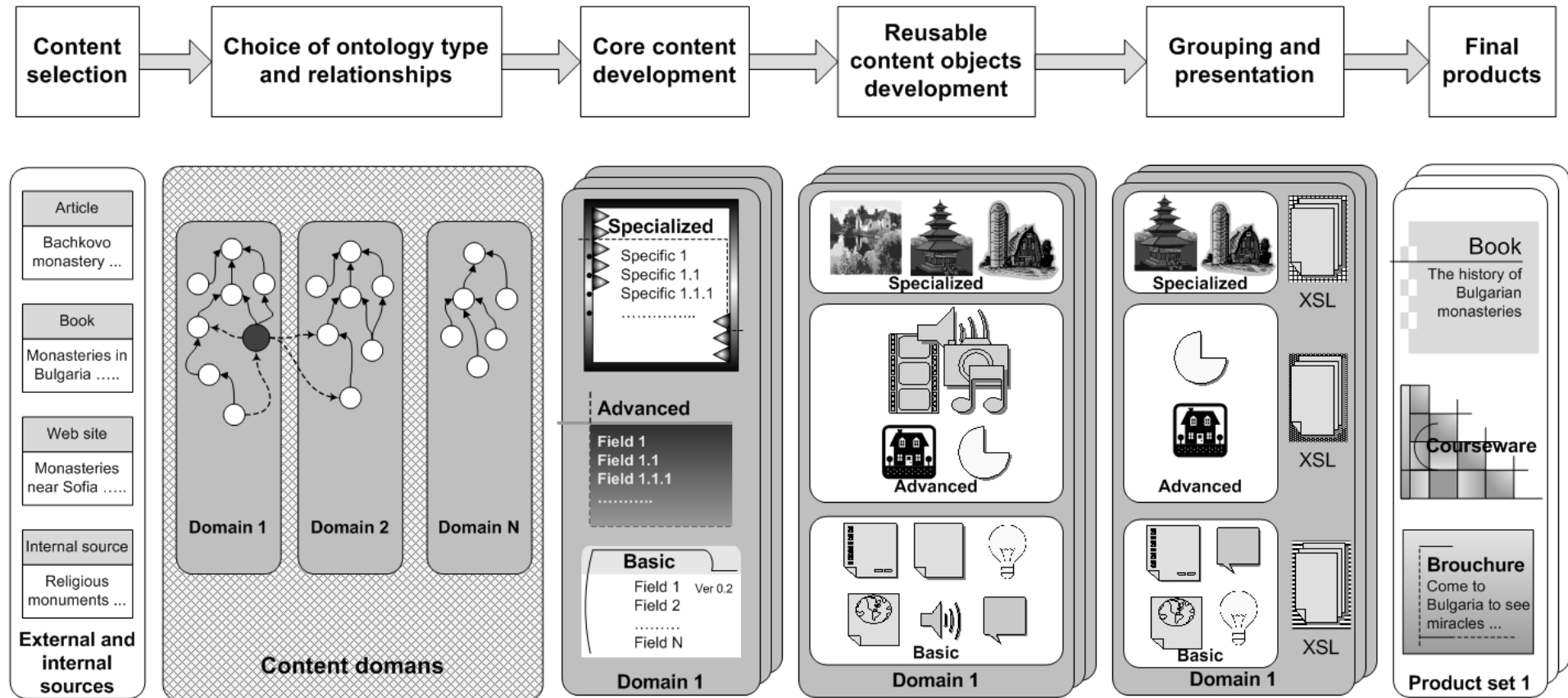
*Съдържанието на това писмо е следуюцето:*

- Sample text of the SUDigital record shown earlier

- Developed at Sofia University
- Collaborative creation of data about immovable monuments (monasteries, archeological sites, nearby tourist services, ...)
- Creation of new content types (bottom). Inter and intra-ontology relations (right)
- Uses Google Maps for geo-referencing of sites
- Described in "Ontology-Based Content Development In Collaborative Environments with Semantic Services" (B.Bontchev, R.Jardim-Gonçalves)

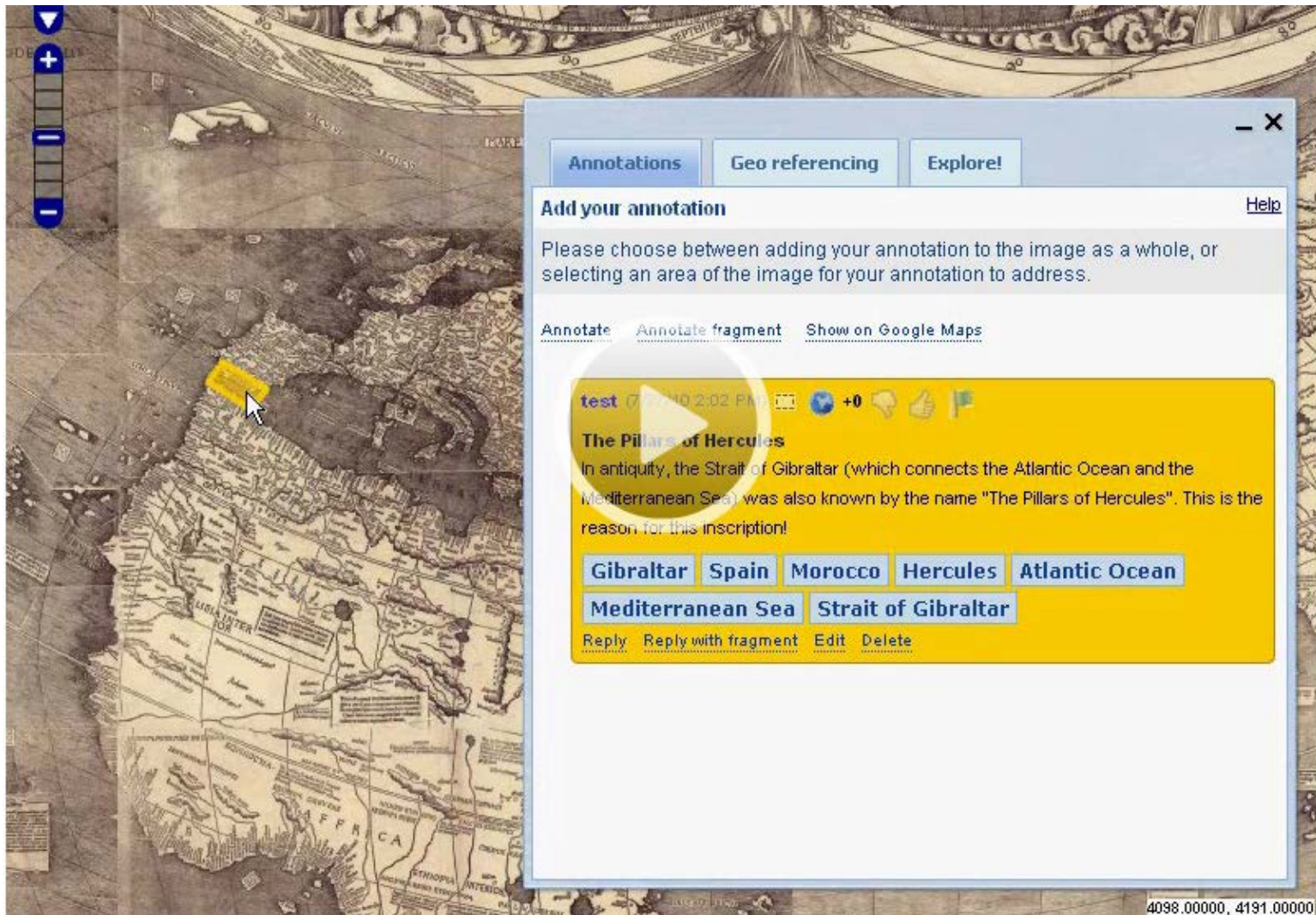


| GUI control  | Content type | Mnd | No | ID            | BG title       | EN title       | BG values           | EN values       |
|--------------|--------------|-----|----|---------------|----------------|----------------|---------------------|-----------------|
| Label        | String       | Yes | 1  | type          | Тип            | Type           | манастир            | monastery       |
| TextBox      | String       | Yes | 2  | title         | Име            | Title          |                     |                 |
| CheckBoxList | String       | Yes | 3  | active        | действащ       | active         | да, не              | yes, no         |
| TextBox      | String       | Yes | 4  | established   | основан        | established    |                     |                 |
| TextBox      | String       | Yes | 5  | renovated     | обновен        | renovated      |                     |                 |
| TextBox      | Other        | Yes | 6  | patronalFeast | храмов празник | patronal Feast |                     |                 |
| DropDownList | String       | Yes | 7  | femaleMale    | тип            | type           | мъжки, женски       | male, female    |
| Multiline    | Other        | Yes | 8  | description   | описание       | description    |                     |                 |
| Image        | Other        | Yes | 9  | photo         | снимка         | photo          | снимка на манастира | monastery photo |



- Proposed collaborative content development workflow
- Could be extended to reuse existing artifacts (e.g. Wikipedia BG articles, Panoramio photos, etc)
- Potential to be used by the BG Ministry of Culture for creating an immovable c.h. catalog





- <http://dme.arcs.ac.at/annotation>. Eg: semantic annotation of ancient maps
- Adding an ancient name to a map (**Pillars of Hercules**) finds contemporary geonames (e.g. Gibraltar, Spain, Morocco) and offers them for association



# ITCC-SPONSORED PROJECT

# Project Partners

- Sponsor: BG-KR ITCC ([www.itcc-bg.com](http://www.itcc-bg.com))
- BG Partners
  - Ontotext Corp
  - Sofia University
    - Faculty of Mathematics and Informatics
    - Faculty of History
    - Faculty of Classical and New Philology
- KR Potential Partners
  - Saltlux
  - Wonkwang University



- Semweb publishing for SUDigital
  - Map SUDigital content models to EDM (ontology mapping)
  - (optional) Enrich SUDigital with more item relations
  - Convert SUDigital holdings to LOD
  - Put the RDF data to a semantic repository
  - Publish the RDF data to Europeana
  - Use content negotiation to serve human-readable content to browser agents
    - Similar to Europeana pilot (Amsterdam Museum) and MOLTO (Gothenburg City Museum)
  - Streamline a semweb publishing pipeline for c.h. institutions
  - (optional) Contribute semweb publishing to Invenio by CERN (inventor of the web)

- Semweb publishing of data about immovable monuments
  - Map the Collaborative Portal data models to EDM
  - Enrich the Collaborative Portal with a semweb publishing pipeline
  - Publish data about immovable monuments to Europeana
- (optional) Extend and integrate
  - Integrate the Collaborative Portal to SUDigital to allow description of immovable monuments
  - Create in-depth Archeological ontology, in particular about Tombs and rich graves in Thracia and the Mediterranean area during Classical and Hellenistic ages