EuropeanaConnect
Enhancing User Access to European Digital Heritage

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What is EuropeanaConnect?

- “Best Practice Network”
- Co-funded by EC in the eContentplus programme
- Duration May 2009 – October 2011 (= 2,5 years)
- 30 project partners from 14 countries
- Coordinated by Austrian National Library
- ~ 900 Person Months total labour effort
- Total budget: 5.625.000 Euro
- 80 % EU funding: 4.500.000 Euro
Building Europeana

- **EuropeanaConnect**: one of the two core projects that will build the fully operational Europeana in the coming two years
- Sister project of “Europeana v1.0” (coordinated by the EDL Foundation)
- Both projects will build the core components and services for Europeana
- Europeana v1.0:
  - Backend processes and full scale business development
- EuropeanaConnect:
  - Key technical components and audio content
The Europeana group comprises a number of projects run by different cultural heritage institutions. All are part-funded by the European Commission’s eContentplus programme. Over the next 3 years these projects will be contributing technology solutions and content that will create the fully operational Europeana.eu

Core technology projects

Europeana 1.0 develops a fully functional Europeana.

Europeana Connect delivers technologies and resources to improve Europeana services.

Europeana Connect adds more material to Europeana.

Content suppliers

APEnet aggregates content from Europe’s national archives.

ATHENA aggregates museum content and promotes standards for museum digitisation and metadata.

BHL Europe links biodiversity heritage into Europeana.

European Film Gateway (EFG) aggregates cinema-related material.

Europeana Local brings content from regional and local content holders.

EUnscreen contributes television material to Europeana.

Europeana Travel will bring material associated with travel, trade, tourism, and migration into Europeana.

Judaica Europeana looks at the Jewish contribution to Europe’s cultural heritage.

MIMU will create a single access point to digital and information and multimedia instruments in European museums.

The European Library contributes from its collection.

www.group.europeana.eu
Project Partners ...
Project Partner Structure

• EDL – European Digital Library Foundation, The Hague

• 8 Libraries:
  • Austrian National Library (Coordinator)
  • Royal Library of Denmark
  • National Library of Luxembourg
  • National Library of the Netherlands
  • Innsbruck University Library
  • State- and University Library Göttingen
  • German National Library
  • National Library of Portugal

• 10 Universities and Academies of Sciences:
  • Humboldt University Berlin
  • University of Vienna
  • Instituto Superior Técnico, Lisbon
  • Vrije Universiteit, Amsterdam
  • National Technical University of Athens
  • University of Amsterdam
  • University of Padua
  • Polish Academy of Sciences
  • Hungarian Academy of Sciences
  • Slovenian Academy of Sciences
Project Partner Structure

- **7 Research Institutes:**
  - Austrian Research Centers, Vienna
  - XEROX European Research Center, Grenoble
  - CELI S.R.L., Torino
  - Kennisland / Knowledgeland, Amsterdam
  - University College London Consultants (UCLC)
  - OFFIS e.V. (Oldenburg Research and Development Institute for Information Technology Tools and Systems)
  - Angewandte Informationstechnik Forschungsgesellschaft, Graz (AIT)

- **1 Broadcast Company:**
  - RBB – Rundfunk Berlin-Brandenburg

- **1 Publishing House:**
  - Amsterdam University Press

- **1 Institute for Literature:**
  - Institute of Lithuanian Literature and Folklore, Vilnius

- **1 Consultant Company:**
  - Eremo s.r.l., Cupramontana
What will EuropeanaConnect build?
Add the music dimension to Europeana
New audio content for Europeana

• Today: there’s not much music in Europeana…
  • 77% Images
  • 20% Text
  • 2.5% Video
  • 0.5% Audio

• EuropeanaConnect will add the music dimension to Europeana

• Five audio archives are consortium members

• Continuous approach to involvement of new audio archives for the entire duration of the project
New audio content for Europeana

• Up to 150 archives will participate as content providers
  • Around 40,000 music tracks at project start
  • Estimated 150,000 – 200,000 music tracks by project end

• Europeana Audio Aggregation Platform (AAP)
  • Harvesting, analysing and storing audio metadata
  • Data provision for Europeana using OAI-PMH

• How to start?
  • Audio Starter Kit on EuropeanaConnect Website
    http://www.europeanaconnect.eu/results-and-resources.php
  • Describes process of providing audio content to Europeana via the AAP
What do users really want?
User Orientation – Why, How?

• Why:
  • We want Europeana to be used widely by people
  • We (= project team members of the Europeana group) are not necessarily identical with these ”people”

• How:
  • Personas
  • Log file analysis
  • Surveys
  • User Tests
What are „Personas“?

• Archetypical representations of our users
• Personas are based on:
  • Existing research: search behaviour, user studies, interaction design
  • Existing personas from domain of archives, museums and libraries
  • A personas workshop with participants from several countries
• One Persona can have several User Scenarios
  • Will maintain their own personality and approach regardless of scenario
• One user scenario can be applied to different Personas

• Personas are very useful in order to remember key user characteristics
  → Will guide Europeana development process!
Personas matrix

Europeana Personas Catalogue will be available on the EuropeanaConnect website soon.
Log File Analysis and User Testing

• **Log File Analysis** for Europeana to evaluate the use of the services
  - How do users really navigate and search in Europeana?
  - Method: Deep log analysis
  - First analysis to be delivered in December

• **User Testing** of Europeana services with different user communities
  - Europeana Registry of Test Users
  - Selection of methods for user testing
Building the Semantic Layer
Build the Europeana Semantic Layer

• Make resources in Europeana accessible not only via metadata records but also as linked data
• Organise Europeana data space as network of interlinked resources for object discovery and further use
• Semantic Layer will allow to
  • Build innovative interfaces for Europeana
  • Perform automatic processing of semantically enriched and linked data
• Prerequisite for integration of and with other semantically aware WWW services
What will be linked?

• Object Descriptions
  • Metadata
• Object Abstractions
  • E.g. Thumbnails, TOCs
• Existing Structured Resources
  • Vocabularies etc.
• Linked Data in the WWW
  • E.g. DBpedia, VIAF, LCSH
What new services can be created?

• Search via browsing
• Faceted browsing
• Visualised navigation
  • Browse the network of interrelated resources
• List search results according to relevance
• List results in a timeline or in a map
• Etc.
What will EuropeanaConnect do?

• Build a repository of harvested semantic resources
  • Vocabularies, classification schemes …
• Convert data into semantic representations
  • Semantic processing will mostly use SKOS
• Semantically enrich Europeana content by mapping it to these semantic representations
  • E.g. Link “Amsterdam” to an URI of Geo-Vocabulary
Multilingual Access
Multilingual Access to Europeana

• **Multilingual aspects** are at the heart of making Europeana content accessible for users across all European countries

• Europeana metadata descriptions are generally not multilingual

• **EuropeanaConnect:**
  • Provide *multilingual access capabilities* for Europeana
  • Users will be able to find relevant content in Europeana even if its not described in their native / preferred language
What will EuropeanaConnect do?

• Build Europeana Repository of Language Resources for translation and mapping
• Tools for multilingual mapping of controlled vocabularies
• Suite of translation services for querying and browsing
• Supported set of languages:
  • Start with English, French, German, Italian, Spanish
  • Expand with Dutch, Hungarian, Portuguese, Polish, Swedish
New Access Channels to Europeana
Spatio-temporal User Interface

• Make use of **time-related and geographical metadata** of the Europeana Semantic Layer

• Provide a new visual access channel for Europeana
  • Combination of spatial and temporal metadata for visualisation
  • Interactive and generic map of geo-related tagged events, places and characters in Europe – combined with timeline
Mock-up of the Spatio-temporal User Interface
Mobile Access Channel to Europeana

• Generic Mobile Client, adapting to the user’s mobile device:
  • Different capabilities of mobile devices:
    • Hardware Level
      – Display resolution and size
      – Sensors (GPS, camera, …)
    • Software Level
      – Operating System (Symbian, iPhone OS, Android, …)
      – Mobile Browser (Opera, …)
      – Support for JavaScript / AJAX
  • Location-aware search
Europeana Mobile: System architecture

Mobile Web Browsers
Heterogeneous devices and browsers (Opera, Safari, …)

Basic Services
Device dependent searching

Adaptive Web Client
Dynamically adapts to capabilities of mobile devices

Advanced Services
Location aware searching

Based on JAVA / Spring-MVC, running in Jetty / Tomcat on eConnect server

Semantic Layer

Europeana Database

EuropeanaConnect
Max Kaiser, Austrian National Library

Coordinated by the Austrian National Library
Europeana Mobile Prototype: Start Screen
Europeana Mobile Prototype: Search Results

Mixed mode
Thumbnails and Text

Lightweight mode
Text only

Gallery Mode
Thumbnails only
* Ineluctable modality of the visible: at least that if no more, thought through my eyes. Signatures of all things I am here to read, seaspawn and seashark, the nearing tide, that rusty boot. Snootgreen, bluesilver, rust: coloured signs. Limits of the diaphane. But he adds: in bodies. Then he was aware of them bodies before of them coloured. How? By knocking his sconce against them, sure. Go easy. Bald he was and a millionaire, maestro di color che sanno. Limit of the diaphane in. Why in? Diaphane, adiaphane. If you can put your five fingers through it is a gate, if not a door. Shut your eyes and see.

Stephen closed his eyes to hear his boots crush crackling wack and wild. You are walking through it. Nowadays I am always at a time. A very short space of time. Within. Excuse me. You are walking through the Neshinam indelibly! I am getting on nicely in the dark.

My ash sword hangs at my side. Tap with it they do. My two feet in my boots are at the ends of his legs, nehevinander. Sounds solid: made by the mallet of Los demigurges. Am I walking into eternity along Sandy mount strand? Crush, crack, crick, crick. Wild sea money. Dominie Deasy kens them a'.

Won't you come to Sandy mount, Madeline the mare?

Rhythm begins, you see. I hear Acatalectic tetrameter of iambic marching. No, gallop: deline the mare.

Open your eyes now. I will. One moment. Has all vanished since? If I open and am for ever in the black adiaphane. Basta! I will see if I can see.

See now. There all the time without you: and ever shall be, world without end.

They came down the steps from Leahy's terrace prudently, Frauenzimmer; and down the shelving shore flabbily, their splayed feet sinking in the silted sand. Like me, like Algys, coming down to our mighty mother. Number one swung lourdly her midwife's bag, the other's gamp poked in the beach. From the liberties, out for the day. Mrs Florence MacCabe, relict of the late Pat MacCabe, deeply lamented, of Brude Street.
Annotation Service

• Allows users to make their own contribution to Europeana content
• Annotation of multimedia resources
• Comments, discussion, linking
• Add value to existing content
• Enhance Europeana searchability through user-provided metadata
• Support establishment of social networks around Europeana
Image Annotations
Video Annotations
eBooks-on-Demand

- Integration of eBooks on Demand (EOD) Service into Europeana
  - Existing digitisation-on-demand service
  - http://www.books2ebooks.eu/
- Allow for an automatic and generic transfer of eBooks created within EOD to Europeana
- Develop Print-on-Demand demonstrator for Europeana
Back-office Components
Bringing metadata into Europeana
Bringing metadata into Europeana

OAI-PMH Management Infrastructure

APEnet

Archives

Museums

Libraries

Audio Archives

Film Archives

Broadcast Archives

EUScreen

others ...

The European Library

Europeana Connect

EFG

thought culture
Key infrastructure components

• Europeana OAI-PMH Management Infrastructure
  • Europeana will harvest metadata from a large number of OAI data providers
  • Implementation of a service for management of OAI data providers and for administration of harvested metadata records

• Europeana Metadata Registry
  • Registration and management of metadata terms and schemas created by various communities in multiple contexts

• Europeana Service Registry
  • Will manage service descriptions of Web Services and support integration of external services into Europeana (mashups)
... and more infrastructure components ...

- Europeana Persistent Identifier Resolution Service
  - Meta-Service: forward PI resolution requests to resolution services of national libraries and to resolvers for other identifier networks

- Integration of Geographical Information Services
  - Geoparser and Gazetteer: will enrich Europeana metadata and content with explicit geographical metadata and references
And now for the legal stuff...
Europeana Licensing Framework

- EuropeanaConnect will build the Europeana Licensing Framework
- Set of interoperable licenses that will cover rights information for content in Europeana and accessible from Europeana
- EuropeanaConnect will
  - Create and validate a first functional license to govern the Europeana Rhine release
  - Create the draft Europeana Licensing Framework and validate it
  - Build tools for implementation of the Framework
  - Test and validate tools and proof of concept
Europeana Connect is a Best Practice Network funded by the European Commission within the area of Digital Libraries of the eContentplus Programme.

Its overall objective is to deliver core components which are essential for the realisation of Europeana, the European Digital Library as a truly interoperable, multilingual and user-oriented centre for all European citizens. Europeana Connect will also add the music dimension to Europeana by aggregating a critical mass of audio content.

Europeana provides integrated access to digital resources from museums, archives, audio-visual archives and libraries of Europe.

Europeana Connect started in May 2009 and will last for 30 months.

More information? Visit www.europeanaconnect.eu
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