Europeana
Towards The European Digital Library

Nicola Aloia
ISTI – CNR
IRCDL 2009 - January 29-30 Padua
Outline:

• Europeana
  • What is it
  • How it is being built
  • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana

• Contacts & Links
Outline:

• Europeana
  • What is it
    • How it is being built
    • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
What is Europeana: Short History

• In October 2004 **Google Book Search** a tool from **Google** that searches the full text of books. The service was formerly known as **Google Print** when it was introduced at the **Frankfurt Book Fair**.

• In 2005, Jacques **Chirac** initiated the European **Digital Library** project in order to affirm the ‘cultural identity’ of Europe and to spread its heritage.

• In 2006, The European Commission takes on board the duty of creating the European Information space (i2010) and in particular elaborates a plan to bring on-line the European Culture (i2010 – Digital Libraries Building Europe's Digital Library).
What is Europeana: Short History

Horst Forster at ECDL 2006:

• Within the i2010 strategy, the European Commission has designated the “European Digital Library” as a flagship project, delivering integrated access to millions of digital objects from cultural collections, distributed across a wide range of museums, archives and libraries in Europe.

• Plan: the Commission and CENL — the Conference of European National Libraries — announced last March that the European Digital Library for cultural content will be built onwards from the TEL-project’s organisational infrastructure. TEL already provides a strong European cooperation between national libraries, which makes it a good organisational nucleus for the initial development of the European Digital Library. It will gradually integrate resources held by archives, museums and other libraries at local and regional level.
What is Europeana: Short History

• on 24 August 2006, the European Commission presented its vision about the European Digital Library:

• A common multilingual access point would make it possible to search Europe’s distributed – that is to say, held in different places by different organisations – digital cultural heritage online. Such an access point would increase its visibility and underline common features.

• The access point should build on existing initiatives such as The European Library (TEL), in which Europe’s libraries already cooperate. It should where possible closely associate private holders of rights in cultural material and all interested stakeholders. A strong commitment by the Member states and cultural institutions to arrive at such an access point should be encouraged.
What is Europeana

• Two main threads: the stakeholders (libraries, archives, museums, other organizations devoted to the production and dissemination of culture) and the scientific/technological

• From the stake-holders thread:
  o TEL
  
  o EDLproject an eContentplus Programme coordinated by the German National Library.

  o The project, started in September 2006 and completed in February 2008, worked towards the integration of the bibliographic catalogues and digital collections of the National Libraries of Belgium, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Spain and Sweden, into The European Library.

  o EDLnet

  o … (many many more)
What is Europeana

• Scientific/technology thread:

  • DELOS

  • BRICKS

  • EPOCH

  • Multimatch

  • (and many many many more)
Outline:

• Europeana
  • What is it
    • How it is being built
    • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
The EDLnet Thematic Network is an eContentPlus programme to prepare the ground for the European Digital Library. The project addresses particularly the area of improving cross-domain accessibility to cultural content- a pillar of the European Commission’s i2010 Digital Libraries initiative.

EDLnet Thematic Network aims to tackle the fragmented cultural heritage map of Europe by bringing on board the key European stakeholders to build consensus on creating the European Digital Library.
EDLnet (past)

EDLnet project aims to deliver the following results:

• A larger and more visible community of archivists, librarians and museum people committed to making content available in an interoperable way.

• Clear and usable summary reports and recommendations on each of the main areas of interoperability addressed in the EDLnet.

• A roadmap showing how the component parts interlink and what needs to be achieved when to realise the aim of the European Digital Library.

• One or more prototype(s) demonstrating the proposed solutions.

• A fully working prototype, with interoperable multilingual access to at least 10 collections from each of the four cultural sectors, covering over 2 million digital items.

• A proposal for funding to create a fully operational European Digital Library service.
EDLnet (present)

EDLnet project results:

- Europeana functional specifications: D2.5
- Working prototype: http://www.europeana.eu
EDLnet (present)

- EDLnet has created the ground and also defined a number of projects which will cooperate to make Europeana.
- **Project cluster (Running):**
  - **EPA (APENET)** The aim is to build a network of European archives.
  - **EFG**: European Film Gateway: It will provide direct access to about 790,000 digital objects including films, photos, posters, drawings, sound material and text documents.
  - **EUROPEANA Local**: is a Best Practice Network. The project aims to improve the interoperability of the digital content held by local institutions and to make it accessible through Europeana.
  - **PrestoPrime** will research and develop practical solutions for the long-term preservation of digital media objects.
  - **Athena** is a Network of Best Practice. will bring together relevant stakeholders and content owners from museums and other cultural institutions.
  - **STERNA**: Semantic web based Thematic Reference Network Application.
• **Project cluster (Negotiation):**

  • **Europeana v1.0** is the successor of EDLnet (EuropeanaNet). It will develop an operational service and solve key operational issues related to the implementation and functioning of the European Digital Library [Europeana].
  
  • **Europeana connect**: It will deliver core components which are essential for the realisation of the European Digital Library (Europeana).
  
  • **BHL Europe**: The aim is to improve the interoperability among projects dealing with biodiversity material in numerous institutions across the EU.
  
  • **EUScreen**: Best Practice Network aims at achieving a highly interoperable digitised collection of television material.
  
  • **Europena Travel** The theme is Travel and Tourism in Europe
  
  • **MIMO**: It will deal with museums of Musical Instruments.
  
  • **Judeica** The aim is to establish a comprehensive map of European Jewish Cultural Heritage.
Outline:

• Europeana
  • What is it
  • How it is being built
  • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
System view

• An integration system
  • Periphery: highly heterogeneous schemas and data
  • Europeana: integration in a global schema (surrogate model).
  • Free search on the whole metadata values.
  • Advanced Search on a pivot schema (ESE).
Functional architecture

Applications

Web Browser  Crawlers  Rich clients  Other Client

Web Server

Http server  Servlet engine  Web Service engine  AJAX  MOM  ...

Capture & Dissemination Mgr

Push & Pull Manager

Semantic Processing Manager

Object Manager

Rendering Mgr

Surrogate Mgr

User Manager

Authentication Mgr

Authorization Mgr

User Content Mgr

Simple search Mgr

Advanced search Mgr

External search Mgr

Language Mgr

Result Mgr

Navigation Manager

Discovery Manager

External Service Manager

System Administration

Database Management System

Middleware (Components interaction Layer)

Cache Mgr  ...

Europeana Management System

IRCDL 2009 - January 29-30 Padua
Functional architecture (harvesting)
Functional architecture
(search)
Functional architecture
(landing Page)

User application
Get landing page

Object Manager
Get User Permissions (Authentication/Permission Mgr)
Permissions & profile
Get DR for landing page components (DRM)
DR compliant page components
Build page (Considering user preferences)

User Manager

Result

Access Manager
Functional architecture
(my Europeana)
Surrogate Model (beta)
• Europeana
  • What is it
  • How it is being built
  • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
CNR ISTI past and present experiences

- DELOS1, DELOS2
- FP5 projects
- FP6: BRICKS, CASPAR, Multimatch
- FP7: DRIVER, SAPIR, EFG, DL-org

More at
http://www.isti.cnr.it/ResearchUnits/Labs/nmis-lab/research-pro.html
Outline:

• Europeana
  • What is it
  • How it is being built
  • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
Role in EDLnet

• Carlo Meghini has been invited as Director of the EDLnet Working Group on the Technical Architecture in July 2007.

• Since then, CNR ISTI has been strictly cooperating with EDLnet. In particular:
  • Modelling
  • Functional Architecture design in the func. Specs (D2.5)
  • Prototype realization
• Europeana
  • What is it
  • How it is being built
  • System view

• CNR ISTI in Europeana
  • Past Experiences
  • Role in EDLnet
  • Role in Europeana
  • Contacts & Links
Role in Europeana

• We will work in Europeana1.0

• We do:
  • Data model
  • Search functionality
  • Ingestion
  • Technical support to the development infrastructure
Contacts & Links

- Europeana: [http://www.europeana.eu](http://www.europeana.eu)

- CNR ISTI: Cesare Concordia, Carlo Meghini, Nicola Aloia
  (nome.cognome@isti.cnr.it)