Digital Curation and Preservation

Funders' Perspectives

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Outline

- **Who we are**

- **Why we feel concerned by this topic**

- **What have we been doing**

- **What are our plans for the future**

- **Some ideas for discussion ...**

Important legal notice

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At a Glance

- Regulation
- Research
- Promoting Wider Use
- Who's Who
- See More

Evaluation & Monitoring

IS Thematic Portal

Practical Information

Improving Lives, Creating Opportunities for the Future

"DG Information Society & Media pursues an integrated approach to achieving the Information Society, encompassing an evolving **regulatory environment** which emphasises competition and lets the market decide on technology; a world-class **research programme** which pools Europe's resources for world leadership; and a range of programmes designed to **promote wider use**, demonstrate innovative technologies and ensure that the benefits are felt by all"

- **Fabio Colasanti, Director-General**

Viviane Reding, Commissioner for Information Society and Media

"It's probably no surprise to you that Europe's IT, telecommunications and audiovisual industries are important to our future. Taken together, these sectors are now worth around 8% of EU GDP - double that in the early 1990s - and employ 13 million people." **Read more...**

High roaming charges are deterring Europeans from using their mobile phone abroad, says new Commission survey

Are you paying too much for your roaming?

A Triple Play for Europe

Regulation

EU-led regulation liberalised Europe's telecommunications sector in the 1990s, creating growth and driving prices down. **read on ...**

Research

Information Society Technologies research takes up the single largest portion (€3.6bn) of the EU's Research Programme (2002-2006) **read on ...**

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- Promote the **development** and the **use** of **ICT for the benefit of** EU **citizens**
  - **ICT research and development – FP6 IST programme => FP7 (2007-2013)**
  - Availability and accessibility of ICT-based services
  - Development of content-based industries
  - **Regulation** of electronic communication services
  - EU representative in international fora (ITU, UN, etc.)
- **Complements the activities developed at national level**

Digital Content & Cognitive Systems

- new ways of creating, finding and understanding content

- how to make easier the access to and the use of content

- cross-border use of content (inc. multilinguality)

Programmes:
- **FP6 - IST => FP7**
- **eContentPlus**
- SaferInternetPlus

Initiatives:
- **Digital libraries**
- **Scientific information**
- Public Sector Information

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D I R E   What we do   Who we are

@ a Glance

- Events
- Presentations & publications

Fields of activities
IST programme
- Cognitive systems
- ICTs for cultural heritage
- Interface technologies
- Knowledge technologies
- Technology-enhanced learning

Other activities
- Digital libraries
- eContent*plus*
- PSI Directive
- Safer Internet*plus*

Internal News

- E Web-Publisher

Welcome to Directorate E
Digital Content & Cognitive Systems

Our mission is making content accessible to all, and fostering and exploiting multilingualism.

The directorate is tasked with the execution of those RTD activities set out in the specific programme "**Integrating and strengthening the European Research Area**" relating to knowledge and interface technologies, learning, leisure, tourism and cultural heritage. This covers research work on content in its various formats, from sensor-generated and raw data to multilingual content and multimedia objects on the Web.

Activities focus on the technologies that facilitate: understanding raw data; exploiting knowledge in and providing new forms of content; enhanced learning from content; and access to, preservation of and new forms of cultural content. Innovation-related activities aim at stimulating the development of content-based applications and services, analysing and reacting to technology-induced change in the information market. They are accompanied by actions for raising awareness. Regulatory measures are addressed, where necessary.

We pursue three strands of activities:

- To explore new ways of creating, finding and understanding content
- To foster innovation to ease access to and use of content
- To establish a framework for cross-border use of content

More »

Horst Forster - Director

Library
- **Directorate's brochure** (600 Kb)
- **Presentations & publications**

Areas of activity	Home page	What we do	When & how	Who we are
E1: Interaction & Interfaces				

Digital Curation/Preservation: the knowledge economy

- In the **knowledge economy**, an efficient allocation of resources to **management of information, knowledge and expertise is critical** and strategic

- **ICT is revolutionising** activities such as scientific research, engineering, and creative work which depend on **sharing rich information** among many people – generating unforeseen **positive externalities**

- **Information and knowledge as public** (or semi-public) **good**: zero marginal distribution cost but production costs are not zero and risk of free-riding is not negligible

- **Redefinition of roles and responsibilities of institutions** (libraries, museums, archives, universities) in charge of **creating, collecting, organising, preserving and providing access to knowledge-bearing objects**

- **Scientific communities** have been **pioneers** in the kind of open and distributed knowledge systems, but **approach is expanding** to other domains

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Digital Curation/Preservation: a public policy view

- What's the rationale for a public intervention in digital curation / preservation?
  - Act as a **catalyst** in the process of **transformation** of institutions and redefinition of practices
  - Support the emergence of a coherent policy framework covering the following **dimensions**:
    - **Organisational**: who does what
    - **Economic/financial**: with which resources (now and in the future)
    - **Legal**: based on which incentives
    - **Technological**: a critical enabler / driver of the transformation process

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Digital Curation/Preservation: the EU context

- The **prevalence of national** (hence dispersed and uncoordinated) **approaches** to "management of information, knowledge and expertise" is an **obstacle to efficient allocation of resources**

- These (national approaches) do not take full account of the **cross-national** and **cross-disciplinary** nature of "**knowing communities**" (e.g. communities of practice, epistemic communities)

- However, coordinated approach does not mean a unique and centralised view. Instead a careful **balance** is needed, making sure that **efficiency** does not put at risk key features such as

  - **cultural diversity (e.g. multilinguality)**
  - **user-oriented perspective**

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Private R&D Investment

Coordinating R&D in Europe

Innovation through ICTs

Key Documents

Digital Libraries Initiative - Home

What is DLI

Cultural Heritage

Scientific and Scholarly Information

Timeline of Development

What's New

FAQ

Library

Contacts

About the Website

Digital Libraries Initiative Homepage :: Scientific and Scholarly Information

Scientific and Scholarly Information

- **Scientific and scholarly information** represents the second part of the **Digital Library Initiative**.

- This is an area with its own specifics and dynamics in view of the need to handle and store huge quantities of digital data, and the rapid growth of publications only available in digital form.

- The Commission adopted on **14 February 2007** a **Communication on access to scientific information in the digital age** (**EN**, **FR**, **DE**; all PDF files; final versions).

- The Communication announces a series of measures on how the Commission will deal with open access in FP7 funded projects - and how it will use its funding programmes to improve the access to and the preservation of scientific information.

  o **Staff Working Paper** (PDF file) accompanying the Communication

  o **Press release** "Scientific information in the digital age: Ensuring current and future access for research and

Digital Curation/Preservation: the EU initiatives

- "I2010 digital libraries": digitisation and online accessibility of cultural material and digital preservation
    - European Digital Library
    - Safeguard Europe's collective digital memory

- "Scientific information in the digital age": access, dissemination and preservation
    - Issues and challenges (organisational, economic/ financial, legal, technological)
    - Action plan (exploratory projects, debate among stakeholders, more systematic analysis of the sector)

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Digital Curation/Preservation: where we stand (I)

Implementation strategy:

- **Policy**
  - **Action plan for digitisation, online access and digital preservation** (MS / EC)
    - 2008: national strategies for long term preservation and deposit with quantitative and qualitative targets
    - 2008: standards for digital preservation
    - 2009: legislative framework supporting digital preservation
    - 2007 (onwards): monitor activities in MS and support collective reflection (EC)
    - 2007 (onwards): support the development of collective expertise and capacity (centres of competence)
    - 2007: promote dialogue among stakeholders around the major issues (e.g. copyright and preservation – High Level Group)
  - **Studies**: develop a more solid basis for evidence-based policies
    - **Socio-economic drivers and impact of digital preservation** (call for tender)
    - Digital Repositories for eScience (ongoing)

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Digital Curation/Preservation: where we stand (II)

Implementation strategy:

- **Research**
  - **FP6-IST**
    - 2 Integrated Projects **CASPAR** and **PLANETS**
    - **OAIS-based systems and tools** supporting longer term availability and accessibility of multi-sourced and multi-formatted resources
    - **Test beds** allowing to assess the technical feasibility and the organisational impact of new systems
    - **Training and Outreach** – disseminate know-how and good practice
    - **DPE:** Coordination of national activities – **centres of competence**

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Digital Preservation
EC-funded projects - PLANETS

Preservation and **L**ong-term **A**ccess to our Cultural and Scientific Heritage

- Focus on the digital preservation needs of memory institutions (libraries and archives)
- **Preservation Planning** services to define, evaluate, and execute preservation plans
- Methodologies, tools and services for the c**haracterisation** of digital objects
- Tools and services to support **Preservation Actions**
- **Test Bed** for the objective evaluation of different preservation protocols, tools and services and for the validation of the effectiveness of preservation plans
- **Interoperability Framework** reflecting current and ongoing development work on digital preservation standards (notably OAIS)
- **Participants**: leading European National Libraries and Archives, research institutions and technology providers

Digital Preservation
EC-funded projects - PLANETS

http://www.planets-project.eu

Digital Preservation
EC-funded projects - CASPAR

Cultural, **A**rtistic and **S**cientific Knowledge **P**reservation, for **A**ccess and **R**etrieval

- **system framework** for longer term preservation of heterogeneous digital resources
- foundation methodology for digital preservation activities
- **Open Archival Information Systems Reference Model** (**OAIS**, ISO 14721)
- **Characterisation** (representation and preservation description information), **virtual storage**, **access** services (intuitive query and browsing mechanisms)
- standardisation, **authentication**, **accreditation** and **digital rights management**
- **Test-beds**: **science**, **performing arts** and **tangible cultural heritage**
- **Participants**: large research organisations, universities, audio-visual content, cultural heritage sites, technology companies

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Digital Preservation
EC-funded projects - CASPAR

Digital Preservation
EC-funded projects - DPE

- **D**igital **P**reservation **E**urope
  - raise the profile of digital preservation (organisations, specialist professionals, citizens)
  - promote the ability of Member States acting together
  - use cross-sectoral cooperation to avoid redundancy and duplication of effort
  - ensure auditable and certificated standards for digital preservation processes are selected and introduced
  - facilitate skills development through training packages
  - enable relevant research coordination and exchange
  - develop and promote a research **agenda roadmap**
  - Participants: organisations involved in ongoing national initiatives (e.g. DCC, DPC, NESTOR)

Digital Preservation
EC-funded projects - DPE

Digital Curation / Preservation: our expectations

- Most immediate problems of libraries and archives are being dealt with by PLANETS

- CASPAR provides an opportunity for a valuable insight into more generic systems for digital preservation

- Explore the **synergies of PLANETS, CASPAR and ongoing national initiatives** to raise awareness, mobilise people and resources, and build capacity hence the importance of **training and outreach**

- Use the coordination action DPE to orchestrate this collective effort leading to an European centre of competence

- We expect that these projects will have a **leverage effect** on the agenda of digital curation and preservation at **national level**

Carlos Oliveira – INFSO E3

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Revisit prevalent approaches to digital preservation:

- Exponential increase in **volume** of born-digital content allied to increasingly **dynamic** and **ephemeral** nature of **Web**-based resources

- Identifying **how and what to keep** – original context plus enabling future use (including curation as an integral part of the preservation process)

- Look at the problem considering the **specific nature of born-digital content** – do not let the approach be pre-determined by traditional organisational contexts

- The context of the problem and the scope of research benefit from considering the needs of the commercial sector, government organisations, and individuals

- Embedding **digital preservation** at the earliest possible level of the content creation life-cycle

- Reviewing fundamental principles and exploit emerging capabilities of cognitive systems to develop **innovative** automated **solutions** to organising **digital memory**

Conclusion: we need to do more research and experiments, with the involvement of key user communities, and increase awareness of problem among decision makers and the public

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Digital Curation/Preservation: The future

- Research
  - **FP7-ICT** (call for proposals – 8th May) – 25 MEUR (est.)
    - **Complete the current portfolio** of projects addressing the topic of digital curation and preservation
    - Explore **possibilities** offered by new **ICT** to consider **new approaches to digital preservation**
- Innovation
  - **eContentPlus**: improve accessibility and usability of scientific content (e.g. interoperability, multilinguality) – 10 MEUR (est.)
- Infrastructure
  - Support networking of **digital repositories** using European **research networks infrastructure** – 20-50 MEUR

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Some thoughts about the future

- The role of knowing communities in the creation and interpretation of digital content (and shaping future use scenarios)

- How to make authenticity and trustworthiness intrinsically part of digital preservation

- Which steps can be taken to progress towards a scenario of pervasive digital curation / preservation services (e.g. digital deposit services)

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Links and Contacts

- ## Digital Libraries initiative
  http://ec.europa.eu/information_society/activities/digital_libraries/index_en.htm

- ## Digital Cultural Heritage, Digital Libraries and Digital Preservation
  http://www.cordis.lu/ist/digicult/index.html
  infso-digicult@ec.europa.eu

- ## Further contacts:
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