



Cultural Heritage approaches e-Infrastructures

DC-NET Conference
e-Infrastructures for cultural heritage
Brussels, 28 October 2010

Jean Moulin
Belgian Federal Science Policy (BELSPO)
S&T Information Service (STIS)



DC-NET Conference — Brussels, 29-10-2010





Cultural heritage approaches e-Infrastructures

DC-NET's twofold approach:

- I. To understand rules, requirements, operative conditions the (digital) cultural heritage sector should know in order to use e-Infrastructures
 - II. To investigate new services for research and innovation in digital cultural heritage (DCH) that can be envisaged thanks to the availability of e-Infrastructures
- ... and work together with the e-Infrastructure operators to develop joint action plans



DCH vs e-Infrastructures: strengthening mutual knowledge

DCH (Libraries, Archives, Museums, Art Galleries, Film Archives, etc): challenges, projects, networks

- Facing important R&D challenges (for itself and for its users): massive repositories, long-term access and preservation, semantic approaches to inter-operability, 3-D digitisation, automatic description of items, user generated content, multilingualism, etc
- EU FP/ICT - R&D *DigiCult* projects: digital libraries; digital preservation; access to cultural heritage
- *Europeana*: end-user oriented, digital library
- National priorities, programmes and projects
- NET HERITAGE: ERANET on tangible heritage
- Joint Programming Initiative on Cultural Heritage and Climate Change: tangible + digital heritage





DCH vs e-Infrastructures: strengthening mutual knowledge (2)

e-Infrastructure networks, projects, opportunities

- *NRENs, GEANT2, EGEE2, Grid2 & EGI*, Grid-based digital repositories project, cloud computing : science-driven (e.g. CERN)
- *DRIVER II*: establish a cohesive, pan-European infrastructure of digital repositories for research (FP7)
- ESFRI Roadmap (PPPs with FP7/RI support), e.g.:
 - *CLARIN*: RI to make language resources and technology available and useful to scholars of all disciplines
 - *PRACE*: high-performance computing network
 - *DARIAH*: distributed digital RI for the Arts and Humanities (long-term access and preservation), in preparation phase
- ESFRI TWG SSH: analysis of the landscape, including DCH
- e-Infrastructures are also faced with challenging issues for their own development: interoperation, standardisation, ease-of-use, sustainability
- e-IRG Roadmap (e-Infrastructures as a service, sustainable data management infrastructure, etc)





DCH vs e-Infrastructures: strengthening mutual knowledge (3)

e-Infrastructure networks, projects, opportunities (cont'd)

e-IRG Blue Paper 2010

(ESFRI–e-IRG collaboration on the e-Infra aspects of the Roadmap):

- Many data services requirements are universal, such as the need for storage coupled with computation, archiving and replication, reliable data referencing
- Common requirements of the Social Sciences and Humanities:
 - Data archiving and curation
 - Flexible repository system with support for Persistent Identifiers
 - Fine-grained Authorization and Authentication systems to cope with data sensitivity (i.e. digital rights management)
 - Access to grid and cloud computing facilities
 - Ease of access to all e-Infrastructure resources via Single Sign-On
 - Education and training for e-Infrastructure usage
- Co-evolution of Research Infrastructures, e-Infrastructure and user requirements
- Move towards e-Infrastructure as a service

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DCH vs e-Infrastructures: strengthening mutual knowledge (4)

DC-NET will first:

- **Explore** the e-Infrastructure **landscape** in each partner country and at European level
- **Establish a dialogue** with the appropriate persons responsible within the NRENs (and other actors) for the delivery of services to R&D and DCH
- **Provide** the DCH actors with the **knowledge** they need about e-Infrastructures



e-Infrastructure awareness (1)

- Informing cultural ministries and agencies regarding:
 - facilities and services offered by e-Infrastructures;
 - rules and constraints applicable when accessing e-Infrastructures;
 - current usages of e-Infrastructures.
- Establishing contact:
 - between representatives of cultural bodies / institutions and e-Infrastructures in each partner country;
 - with coordinating initiatives such as GEANT2 and EGEE2/EGI, and with projects like DRIVER2, DARIAH, etc.



e-Infrastructure awareness (2)

- Describing the (local) national, regional and European programmes to be coordinated in order to support the implementation of the DC-NET ultimate goal, the Joint Activities Plan
- Documenting all the information gathered for future use
- Achieving agreement between the project partners and the e-Infrastructures representatives on the next steps: the Joint Programming of Research



First achievements

- In all partner countries, appropriate representatives of the NRENs and other relevant e-Infrastructures have been identified and met with
- Information obtained via a questionnaire/interviews:
 - Capacities of the e-Infrastructure provider: network, computing and data services
 - Policies, programmes, rules/regulations governing access and use
 - Mechanisms and technical standards that need to be complied with
 - Some information on DCH customers references and services used, good practices, specific agreements
- A table of contents of the “e-Infrastructures handbook” has been drawn up



First achievements (2)

General conclusions of the survey

- Network infrastructure available in all countries via national research networks (mainly) or other (e.g. ministerial network)
- European computing infrastructure does exist for some types of computing (GRID, some HPC) but is generally unknown by DCH actors
- No European data infrastructures are available; data storage and handling is not uniformly solved (formats, metadata, curation, ...)



First achievements (3)

e-Infrastructures handbook's contents

- Existing e-Infrastructures in partner countries
- Physical access to e-Infrastructures
- Access policies and constraints for the use of e-Infrastructures
- Costs connected to the use of e-Infrastructures
- e-Infrastructures additional services
- International e-infrastructures
- Partner organisations already using e-Infrastructure services
- Contact details
- It will be a thematic complement to the TERENA Compendium

Publication: December 2010





First achievements (4)

- A draft model for a National **Memorandum of Understanding** (MoU) has been drawn up, to be signed by representatives of the e-Infrastructure and the concerned authority
 - General frame, common denominator
 - Good practices governing the access to e-Infrastructures by the cultural sector
 - Initiating regular contacts and recognizing the need and usefulness to collaborate
 - To serve as the basis for a European MoU



Planned activities

Concertation Seminar, Tallinn, 13-14 January 2011

- **Participants:**
 - Representatives of national ministries/agencies
 - e-Infrastructures, including coordinating initiatives such as GEANT2, EGI, etc
- **Objectives:**
 - Identifying and documenting on commonalities in accessing e-Infrastructures
 - Agreeing on possible common future research goals
 - Drawing up an outline about next steps, every organisation's role and contribution, definition of service priorities, ... as a clear definition of the prerequisites for the next phases of the project
- Proceedings of the Concertation Seminar



Towards effective cooperation with e-Infrastructures and joint research

- By month 15 of the project, the DCH actors should have established strong awareness of the e-Infrastructures:
 - their capacities and how they can be accessed;
 - what the limitations and constraints are;
 - the services they may offer to the DCH research;
 - the regional/national programmes available to support the exploitation of NREN services.
- This will be essential for the further development of the project:
 - key inputs for the objective of drawing up a **new set of priorities** for digital cultural heritage research;
 - part of the process to achieve a common understanding among all DCH stakeholders and an effective cooperation with e-Infrastructures: **joint programming of research, Joint Activities Plan** = the ultimate goal of DC-NET



Thank you for your attention

Jean Moulin

Scientific and Technical Information Service

Belgian Federal Science Policy

jean.moulin@stis.belspo.be



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