The role of research libraries in a European e-science environment

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About LIBER

- **www.libereurope.eu**
- The largest network of European research/academic libraries: 400 institutions, from over 40 countries
- **Mission**: to represent and promote the interests of European research/academic libraries, and of their users: students and researchers
What is E-science?

- Research that requires/is
  - Large scale computing resources
  - Data-intensive
  - Carried out over the internet
  - Collaborative (team science, virtual science communities)
  - Distributed (networked science)
  - Interdisciplinary
  - Heterogeneous
“Data are no longer considered as interim products to be discarded once the research reporting them is published. Rather, they have become **important sources of scholarly content to be used and re-used**.”

(Borgman, The role of libraries in e-science)

Ex. Hubble telescope, CERN Large Hadron Collider etc.
Sharing data = publishing

- Documents:
  - Formal: books, journal articles, proceedings etc.
  - Gray literature: reports, working papers etc.
  - Websites, blogs, wiki’s, tweets etc.
- Primary/raw data:
  - result of observation, experimentation, calculation etc.
- And all mixtures of these
Example: conference

- PPT’s
- Abstracts
- Biographies
- Podcasts
- Interviews
- Reports of break out sessions
- …
- Full text papers
Why now?

- E-science is already a reality but we can do more
- Internet, global connectivity
- Data deluge, data collection, data mining
- New and cheap means to share, distribute and publish information quickly
- More efficient use of technology in R&E essential for European knowledge economy
- Time of crisis = time of opportunities
The paradox of e-science

- Race against the time: the new generations are arriving at the university
- Cultural change: how do you make researchers share data?
  - How do you make funding agencies reward collaboration and sharing data?
  - Current copyright/IPR rules are hindrance for e-science
Incentives for sharing data

- There is no other way
- Collaboration is a necessity
- Gives visibility and recognition
“Digital Europe – a vision for the next 5 years”: 4 priorities:

- Easy access to digital content ("modern copyright and IPR rules are essential for the development of attractive digital content")
- Safe and consumer-friendly space for mobile payments
- Digital economy open to small businesses
- Innovative ICT solutions for low-carbon economy

(V. Reding, Brussels, 9 July 2009)
EC E-infrastructures Concertation and Consultation Meeting, Brussels 12-13 October 2009 (http://www.beliefproject.org):

- GEANT (backbone for European data networking)
- Sharing computational resources (e-science grid, supercomputing)
- Global virtual research communities
- Scientific data
- Simulation and visualisation
The role of OA

- Essential
- Results of publicly funded research should be available in public domain
- Allows verification and replication of findings
- Stimulates international competition based on excellence
Data management issues

- Ubiquitous, trusted and easy access to (discovery of) research data
- Integrity
- Version management
- Semantics: how to interpret data?
- Ownership of data
- Long term preservation
- Visualisation
Data management issues (2)

- Licensing
- Technology and sustainable infrastructure (funding!)
- Repositories
- Use and re-use
- HR: data managers
- “Data repositories may become the new special collections for research libraries” (Borgman)
Into the workflow of R&E!

- Kill the library as book and journal store!
- Integration of library services in virtual research and education environments
- Support to data producers
- Recruitment of content
- Digital repositories: data!
- Enhanced publications: annotations, recommendations, primary data, podcasts etc.
Re-invent the library

- Observe the angry young (wo)men
- They ALL deal with information/data!
- How do they:
  - Access
  - Disseminate
  - Preserve
  - Legitimise CONTENT
New strategies

- E-science requires
  - New strategies for research support
  - New infrastructures
  - Integration in scholarly workflows
  - Skilled library professionals
Annual Conference “Re-inventing the library. The challenges of the new information environment”, 29 June-2 July 2010

“Books and reading in the digital age”. 5-6 July 2010 (to be confirmed)

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Thank you! Questions?

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