Annual RLG Partnership Meeting

June 2, 2009

Economically Sustainable Digital Preservation

Brian Lavoie

Research Scientist

OCLC

lavoie@oclc.org

OCLC™ The world's libraries. Connected.

Roadmap

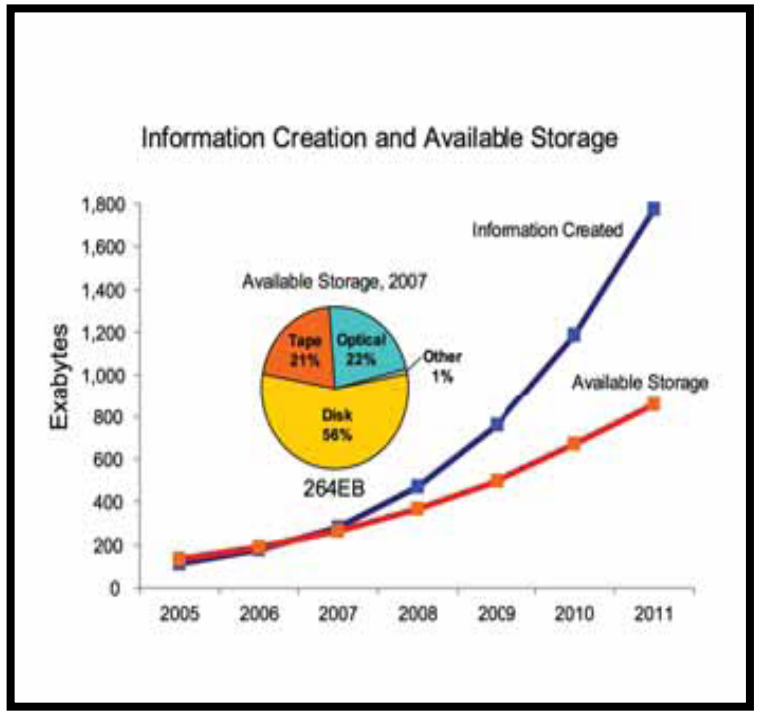
- Sustainability (economically speaking)
- Blue Ribbon Task Force on Sustainable Digital Preservation and Access
- Interim Report highlights
- Next steps
- Questions for discussion

Digital preservation: multi-faceted problem

2007: Amount of digital information created, captured, or replicated exceeded available storage capacity

“Dealing with the digital universe is not a technical problem alone”

Perpetuating digital signals
Deciding what is preserved
Accommodating IPR
Matching means to ends

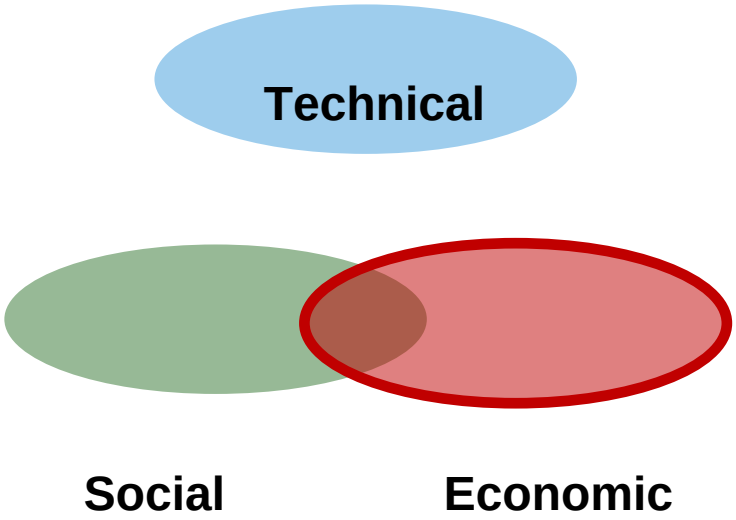


Source: *“The Diverse and Exploding Digital Universe” IDC Whitepaper, March 2008*

Sustainability

Secure digital collections as part of enduring scholarly & cultural record …

… Sustainable digital preservation



Blue Ribbon Task Force on Sustainable Digital Preservation and Access

- **Task Force:**
  - Supported by NSF, Mellon, Library of Congress, JISC, CLIR, NARA
  - Co-chairs: Brian Lavoie (OCLC), Fran Berman (SDSC)
  - Cross-domain, cross discipline
  - http://brtf.sdsc.edu/
- **Frame digital preservation as *sustainable economic activity***
  - Economic activity: deliberate allocation of resources
  - Sustainable: ongoing resource allocation over long periods of time
  - Articulate the problem/provide recommendations & guidelines

Task Force Interim Report (December 2008)

Sustaining the Investment:

Issues and Challenges of Economically Sustainable Digital Preservation

http://brtf.sdsc.edu/biblio/BRTF_Interim_Report.pdf

Definition: economic sustainability

Economically sustainable digital preservation requires:

- *Recognition of benefits*
- *Incentives for decision-makers to act*
- *Selection*
- *Mechanisms to support ongoing, efficient allocation of resources*
- *Appropriate organization and governance*

Benefits & Incentives

- **Clearly articulate benefits of digital preservation activity**
  - **"Value proposition" for digital preservation**
  - **Benefits should emphasize outcomes**
  - **Articulate benefits → cultivate sense of value, "willingness to pay"**
- **Clearly articulate incentives for decision-makers to act**
  - **Accept responsibility to undertake preservation**
  - **Identify and leverage institutional "self-interest": e.g., business opportunity; mission-driven; policy compliance**
  - **Orchestrate incentives over complete digital lifecycle**

Selection & Allocation of Resources

- **Selection: can't "preserve everything for all time"**
  - Prioritization: allocate resources where they generate most value
  - Circumscribed set of materials; realistic preservation goals
  - Manage expectations; align expectations and capacity
- **Support ongoing, efficient allocation of resources**
  - Coordinate resource transfer from those who are willing to pay to those who are willing to preserve (pricing, donations, fees/taxes)
  - Efficiency: productive use of resources; leverage economies of scale, economies of scope

Organization & Governance

- Preservation activities can be managed through a variety of organizational forms, e.g.:
  - Organization with no private interest in preservation (e.g., third party service)
  - Organization with private interest in preservation; preserves on behalf of itself and other organizations (e.g., research library)
  - Organizations with mandate to preserve, conferred by public policy, to fulfill stated public interest (e.g., national archive)
- Governance: strategy, responsibility, accountability
- Organization/governance ➔ trust

Economic sustainability: problem space

Demand-side
VALUE

Beneficiaries

Providers

Supply-side
INCENTIVES

Process
SELECTION

ONGOING/EFFICIENT RESOURCE ALLOCATION

ORGANIZATION/ GOVERNANCE

Digital Preservation Activity

Challenges

- Long-term preservation activities funded by short-term resource allocations
- Lack of clear responsibility for digital preservation, and a prevailing assumption it is someone else's problem
- Misaligned incentives between those who are in a position to preserve, and those who benefit
- Little coordination of preservation activity across diffused stakeholder communities
- Challenges in valuing/monetizing benefits of digital preservation, to attract funding and investment

Lessons learned

- **Separating preservation costs from other costs is difficult**
  - No clear distinction between process of “making things available now” v. “making things available in the future”
  - Presents challenges for segregating digital preservation as separate activity and answering questions like “what does it cost?”
- **Monetizing and charging for a “social good”:**
  - Public-spirited, mission-driven institutions sometimes resistant to charging for content & services
  - Compelling value expressed in monetary terms, coupled with mechanism for charging reasonable fee to those who share in value

Lessons learned

- **Digital preservation is not just "for the future"**
  - Incur costs now for future benefits
  - Perception: Digital preservation separable from interests of today's stakeholders; focused on future stakeholders
  - Reality: Digital preservation more about ensuring digital assets are handed off in good condition to next succession of stewards 5/10 years from now, than taking actions to benefit users 100 years hence
- **Non-monetary incentives can be important**
  - Preservation bestows societal benefits to research, learning, culture
  - Engage private enterprise in supporting provision of these benefits
  - Leverage corporate recognition and reputation enhancement

Real world to theory to recommendations

- **Final report: practical recommendations for decision-makers associated with digital preservation activities**
- **Approach:**
  - **Collect, organize, synthesize key information from real world digital preservation case studies …**
  - **… to which we can apply economic theory/insight to isolate important economic implications …**
  - **… from which we can derive practical recommendations/guidelines to support economic sustainability**

Generalized digital preservation scenarios

- Base economic analysis on information gathered from real-world digital preservation case studies. But:
  - Every activity "differs in the details"
  - Analysis/recommendations should have wide applicability
- Roll individual case studies up into generalized scenarios:
  - Categories of digital preservation activities that at a reasonable level of abstraction, share roughly the same characteristics
- Apply economic analysis to/derive recommendations for the generalized digital preservation scenarios

Four generalized scenarios

Primary Research Inputs

(e.g., data sets)

Secondary Research Inputs

(e.g., e-journals)

Open Web Content

(e.g., blogosphere)

Commercially-owned Cultural Materials

(e.g., movie studio output)

Conclusion

- Final Report: December 2009
- Report will be successful if:
  - Recommendations are of practical use to decision-makers
  - It catalyzes further work on economically sustainable digital preservation/curation
- Economic sustainability = risk management
  - Many threats to long-term future of digital materials
  - Economic threat is pervasive and immediate
  - Sustainability strategy is a means to mitigate economic risk

Questions for discussion

- Major obstacles/issues/challenges for economic sustainability? Institutional level? System-wide level?
- Crafting a value proposition: how to articulate the value/benefits of long-term preservation of scholarly & cultural digital assets?
- Who are the important decision-makers attached to economically sustainable digital preservation (i.e., who should read the Task Force Final Report?)
- Other thoughts?