

ITHAKA S+R



## Sustaining Digital Resources

NSDL Annual Meeting, 2009  
Kate Wittenberg, ITHAKA

## Ithaka Strategy and Research: An Overview

- Mission: to help the scholarly community take full advantage of advances in information technology
- We are pursuing that mission by
  - assisting organizations and projects with market research and strategic planning to help them innovate and build sustainable digital resources
  - conducting research and analysis on the impact of digital media on the research and learning communities
  - helping the academy to build new models for university-based publishing and digital resource development



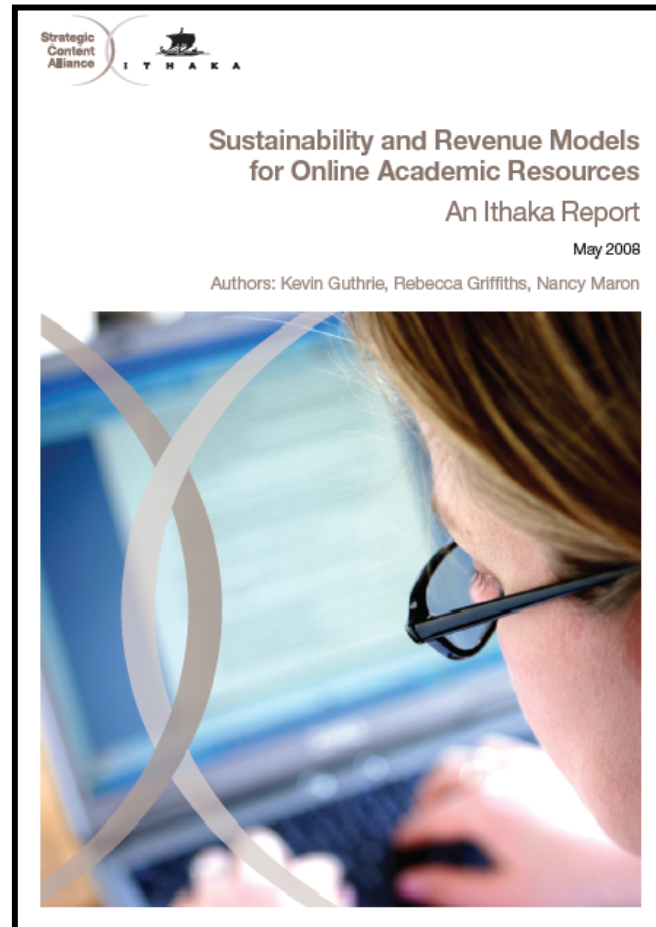
## The Sustainability Problem

- Many digital library projects return to funding agencies for additional grants to support core operations once a project is up and running
- Funding agencies are seeking ways to encourage projects to become sustainable after the grant funding period
- Project leaders are seeking ways to support the resources they have developed, beyond grant funding
- Since fall 2007, with the support of JISC, NEH, and NSF, Ithaka has been involved in an ongoing project with the goal of understanding the key factors in developing sustainable digital resources



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## Sustainability and Revenue Models (2008)



## Sustainability and Revenue Models Report (2008) Recommendations

- Project leaders should not assume ongoing grant support
- Sustainability plans should include strategies for future growth, as well as maintenance of the resource
- Digital resources can create value through their positive impact on users
- Projects should consider benefits of scale through partnerships
- In an increasingly competitive environment, strategic planning is critical
- Needs and expectations of users are constantly increasing
- Project leaders must be fully accountable for their projects
- There is a need for continual creativity, risk-taking, and innovation



## From Theory to Practice

- 2008 report on sustainability outlined the mindsets and theoretical strategic shifts needed for digital resources to thrive.
- Feedback from project leaders, funding agencies, libraries, and other stakeholders indicated a need for on-the-ground examples of the strategies that projects employ.
- With support from JISC, NEH, and NSF, Ithaka undertook a second round of research and analysis. Case studies examined 12 projects engaged in creating and sustaining digital resources.
- We explored the evolution of their strategy, the decision-making process, and their cost-containment and revenue-generating models. *Sustaining Digital Resources: An On-the-Ground View of Projects Today* (2009) is the result of that inquiry.



## Case study subjects

We chose cases that represented a range of projects spanning:

- Different countries: 6 from UK, 3 from Europe and Middle East, 4 from US
- Disciplines: Science and Humanities
- Different types of institutional bases: libraries, archives, museums, academic departments at universities, government-sponsored initiatives, k-12 educational resources
- Different types of revenue models: subscription, endowment, membership, author pays, licensing, institutional subsidy, government support, public/private partnerships, non-profit partnerships.



## Case Studies


- Centre for Computing in the Humanities, Kings College
- Electronic Enlightenment, Oxford University
- V&A Images, Victoria and Albert Museum
- The National Archives
- Hindawi Publishing, Cairo-based journals publisher
- DigiZeitschriften, German digital library for journals
- L'Institut national de l'audiovisuel, French media archive
- eBird, Cornell Lab of Ornithology
- Stanford Encyclopedia of Philosophy
- Thesaurus Linguae Graecae, UC, Irvine
- National Science Digital Library: Middle School Portal
- University of Southampton Library Digitization Initiatives





## Centre for Computing in the Humanities

- Academic department at King's College London focuses on research in the digital humanities. Currently engaged in 34 diverse research projects
- Achieves **economies of scale** for research projects through shared infrastructure and staffing
- In addition to generating income through **research grants**, offers **consultancy services** to outside organizations



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The Centre for Computing in the Humanities (CCH) is in the School of Humanities at King's College London. The primary objective of the CCH is to foster awareness, understanding and skill in the scholarly applications of computing. It operates in three main areas: as a department with responsibility for its own academic programme; as a research centre promoting the appropriate application of computing in humanities research; and as a unit providing collegial support to its sister departments in the School of Humanities. As a research centre, CCH is a member of the Humanities Research Centres, the School's umbrella grouping of its research activities with a specifically inter-disciplinary focus.

**New address**

As of Monday 3rd December 2007 our new address will be:

2nd Floor  
26-29 Drury Lane  
London  
WC2B 5RL

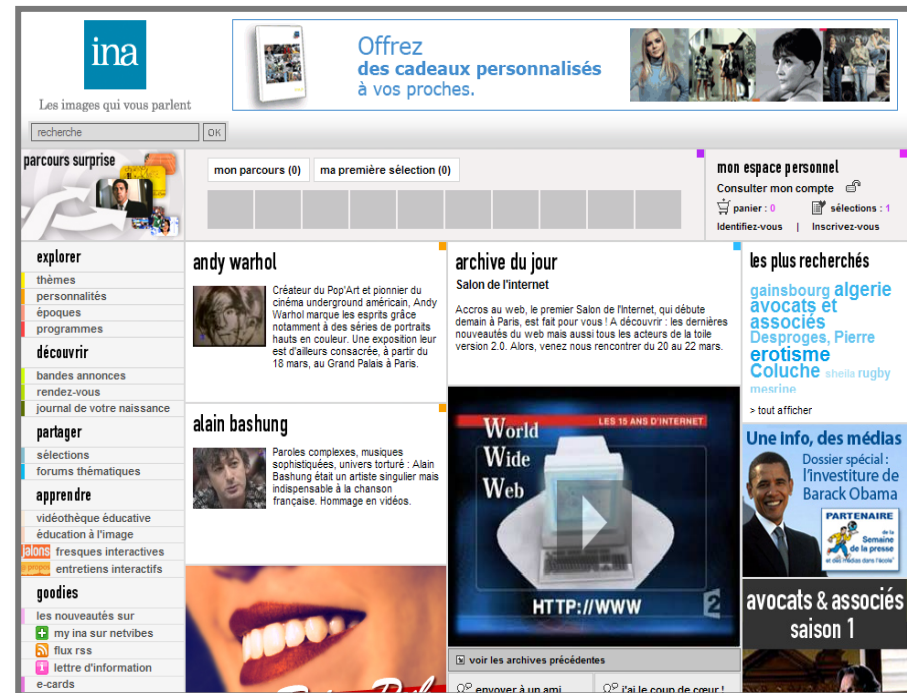
**Announcements**

- DARC/CCH Conference on Digitization in Humanities
- AHRC Collaborative Training Scheme: Medieval Manuscript



## L'Institut national de l'audiovisuel

- French national archive of radio and television broadcasts
- **Government-supported through an audiovisual tax, plus diverse revenue streams including rights licensing, advertising, and sales of its original productions and custom DVDs**
- Exemplifies ability to use **free and toll content to support both audience and revenue goals.**



## eBird

- Joint project of Cornell Lab of Ornithology and the Audubon Society with the National Science Foundation
- Solicits observations of bird migration from bird-watching community; **aggregates, checks, and packages the observation data** for download and use by researchers
- Supported by **corporate sponsorship** and **sale of educational materials** to museums and schools

eBird

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March 04, 2009

When you submit your sightings to eBird, we make those observations available to researchers, conservationists, and others with an interest in birds. We also provide these records to the authors of *North American Birds* and regional journals focused on bird distribution. At the end of each season, records for each state are made available for download for authors and editors of these publications. All you need to do to have your winter records (1 December 2008 - 28 February 2009) included is submit them to eBird prior to the 8th of March.



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- ▶ [Avibase](#)
- ▶ [Jack Siler's eBird Rarity Map](#)
- ▶ [All About Birds](#)



## Stanford Encyclopedia of Philosophy

- Online reference work for philosophy; entries contributed by scholars
- **Open access with Library membership fees** and **additional funding from institutional host**
- Focus on **specialized user needs** for content and **building community support**

STANFORD ENCYCLOPEDIA OF PHILOSOPHY

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### Paraconsistent Logic

*First published Tue Sep 24, 1996; substantive revision Wed Nov 21, 2007*

The development of *paraconsistent logic* was initiated in order to challenge the logic *quodlibet* (*ECQ*). Let  $\models$  be a relation of logical consequence, defined either semantically or syntactically. In classical logic, intuitionistic logic, and most other standard logics,  $(A, \sim A) \models B$ . Paraconsistent logics are not explosive.

The modern history of paraconsistent logic is relatively short. Yet the subject has already involved the motivations for the subject, its philosophical implications and its applications. This entry gives some idea of the basic technical constructions involved in paraconsistent logics.

- Motivation and Applications
  - Inconsistent but Non-Trivial Theories
  - Dialetheias (True Contradictions)



## NSDL Middle School Portal Math and Science Pathway

- Part of the larger NSDL digital resource funded by NSF
- Identifies digital resources for teaching and learning, including **community-based web 2.0 tools** (integrating current events into instruction through a blog).
- Sustainability through **user-generated content** and **community participation** by middle school educators and **partnerships with organizations that support middle school community.**



## Findings from the Case Studies

- Sustainability strategies must include **financial stability of the whole resource**, as well as the ongoing value of the content.
- Sustainability is a **dynamic process, requiring continual investment in a resource** to keep up with user needs and the competitive environment.
- Project leaders must be willing to **adapt and alter their business models** as conditions around them change.
- Most projects we studied rely on some **part of their costs being contributed by a host institution**.
- Sustainability models often include **creative cost management** strategies as well as effective revenue strategies.
- **Collaborating with partners** outside of the organization can help to amplify the impact of a project's content, and can result in significant cost savings.



## What are some challenges we observed?

- **There is no consensus on which is the right sustainability model.** This is a very difficult problem to solve and experimentation is necessary in order to learn what succeeds.
- **Reliance on a single revenue source can put projects at risk.** Hybrid business models and a portfolio of sustainability strategies is most effective.
- **Hidden cost contributions can obscure the real costs of operating a digital resource.** Leaders must have a clear understanding of total project costs.
- Making the switch from a **“research project” to an “operational resource”** is one of the most difficult but important challenges.



## What contributes to success?

- **Understanding users:** their habits, needs, and preferences, and how these characteristics differ among disciplines.
- **Defining the value of a digital resource** to its user community.
- **Leadership with vision, dedication, creativity, authority, and accountability** for the project's outcomes.
- **Willingness to make difficult decisions** and changes in the project's plan and staff when necessary for its success.
- **Ability to create partnerships** to share costs, gain skills and experience, and build on existing infrastructure.
- **Skill in demonstrating the value of the resource** to its host institution, partners, or collaborators.
- Expertise in selecting, editing, and **contextualizing content for a particular audience.**
- **Ability to lead a hybrid, collaborative organization.**





## Next steps:

# Maximizing the Impact of the Sustainability Studies

- Communicating the case study work to specific types of project leaders as well as other stakeholders (funders, university administrators, library and museum directors, etc.)
- Beginning work on tools for project leaders, including developing a Sustainability Decision-Making Tree and possibly a curriculum for current and future leaders (this could take the form of an online resource or in-person seminars).



## How can we help?

- What would be the most useful next steps in this ongoing project?
- What other cases and/or activities would be useful for the NSDL community?
- What are the most pressing concerns for NSDL projects at this time?
- What information/research projects/tools/curriculum/ would help?



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The report and case studies are available at:  
[www.ithaka.org](http://www.ithaka.org)

