



*Update:*  
Blue Ribbon Task Force on  
Sustainable Digital Preservation and Access

**Dr. Francine Berman**

BRTF-SDPA Co-Chair

Director, SDSC

HPC Endowed Chair, UCSD



## *Today's Presentation*

- Digital preservation and economic sustainability
- The Blue Ribbon Task Force on Sustainable Digital Preservation and Access
  - Membership, charge, and scope
  - Activities and deliverables
- BRTF–SPDA Interim Report
- Plans for Year 2

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *Success in the Information Age is predicated on persistent access to valued information*

- **Digital data is the Information Age's "natural resource"**
  - Fundamental to the conduct of modern research, education, business, commerce, government
  - Fragile– dependent on rapidly changing technologies. Valuable data lost or damaged often cannot be recovered
- **Critical Problem: How to ensure persistent access to valuable digital information?**



**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



# The Problem is Urgent: Access to digital information tomorrow requires planning for preservation today

## Partnerships for International Research and Education (PIRE)

PROGRAM SOLICITATION  
NSF 09-505

REPLACES DOCUMENT  
NSF 06-589



National Science  
Office of International  
Office of Cyberinfrastructure  
Office of Polar Programs

### H. Supplementary Documentation (Full proposals only):

- **Required: (1-page limit) A conceptual data management plan** that describes how the project fits within NSF's data management policies and the policies of any partners.

## WIRED SCIENCE

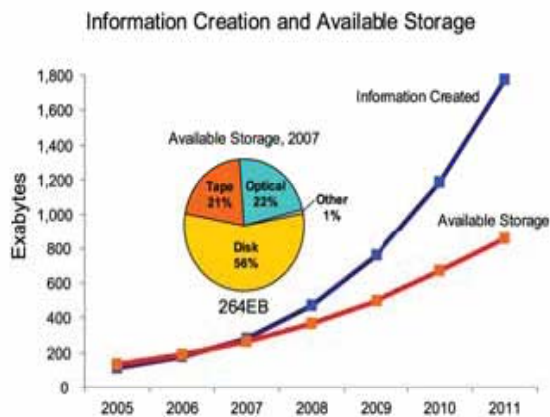
HOME | SUBSCRIBE >> | SECTIONS >> | BLOGS >> | REVIEWS >> | VIDEO | READ MAGAZINE

« Video: Molecules Moving in Living Cells | Main | HD Eruption Video Gives Clues to How Volcanoes Work »

### Google Shuttters Its Science Data Service

By Alexis Madrigal | December 18, 2008 | 5:30:06 PM | Categories: Gossip, Web/Tech

2007 and beyond: More digital data generated than storage available



Washington

### Bush Data Threatens to Overload Archives

By ROBERT PEAR and SCOTT SHANE  
Published: December 27, 2008

WASHINGTON — The [National Archives](#) has put into effect an emergency plan to handle electronic records from the Bush White House amid growing doubts about whether its new \$144 million

E-MAIL | PRINT | SINGLE PAGE | REPRINTS

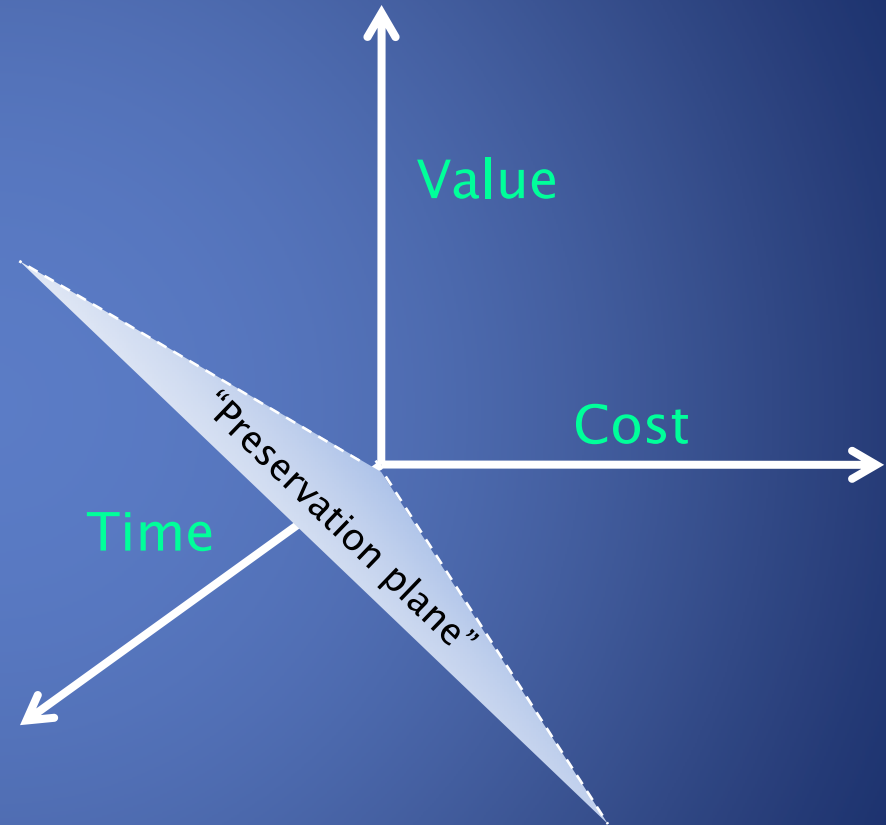
Graph source: "The Diverse and Exploding Digital Universe" IDC Whitepaper, March 2008



*More than a technical / capacity problem:  
Successful digital preservation and access  
requires a multidimensional approach*

*Viable solutions to the preservation  
and access problem integrate  
technical, social, organizational,  
regulatory, policy, and economic  
components*

- Key Questions:
  - 1) What should we save?
  - 2) How should we save it?
  - 3) Who should save it?
  - 4) *Who should pay?*





## *Focus on Economics: Blue Ribbon Task Force on Sustainable Digital Preservation and Access (BRTF-SDPA)*

- International BRTF-SDPA initiated to study issues of economic sustainability of digital preservation and access
- Task Force to meet 2008–2009
- BRTF-SDPA is an independent group who will report to the community

### CHARGE:

1. To conduct a **comprehensive analysis of previous and current efforts** to develop and/or implement models for sustainable digital information preservation; **(First year report)**
2. To identify and **evaluate best practice** regarding sustainable digital preservation among existing collections, repositories, and analogous enterprises; **(First year report)**
3. To **make specific recommendations for actions** that will catalyze the development of sustainable resource strategies for the reliable preservation of digital information; **(Second Year report)**
4. Provide a **research agenda** to organize and motivate future work. **(Second Year report)**

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF-SDPA Participants*

### **Blue Ribbon Task Force:**

- Paul Ayris, University College London
- Fran Berman, SDSC/UCSD [co-Chair]
- Sayeed Choudhury, Johns Hopkins University
- Elizabeth Cohen, AMPAS/Stanford
- Paul Courant, University of Michigan
- Lee Dirks, Microsoft
- Amy Friedlander, CLIR
- Vijay Gurbaxani, UC Irvine
- Anita Jones, University of Virginia
- Ann Kerr, Consultant
- Brian Lavoie, OCLC [Co-Chair]
- Cliff Lynch, CNI
- Dan Rubinfeld, UC Berkeley
- Chris Rusbridge, DCC
- Roger Schonfeld, Ithaka
- Abby Smith, Consultant
- Anne Van Camp, Smithsonian

### **Sponsoring Agencies / Institutions:**

- National Science Foundation
- Mellon Foundation
- Library of Congress
- National Archives and Records Administration
- CLIR
- NITRD
- JISC
- Member institutions

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF–SDPA Working Definition of Economic Sustainability*

The set of **business, social, technological, and policy mechanisms** that encourage the gathering of important information assets into digital preservation systems, and support the indefinite persistence of digital preservation systems, enabling access to and use of the information assets into the long-term future.

### **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*

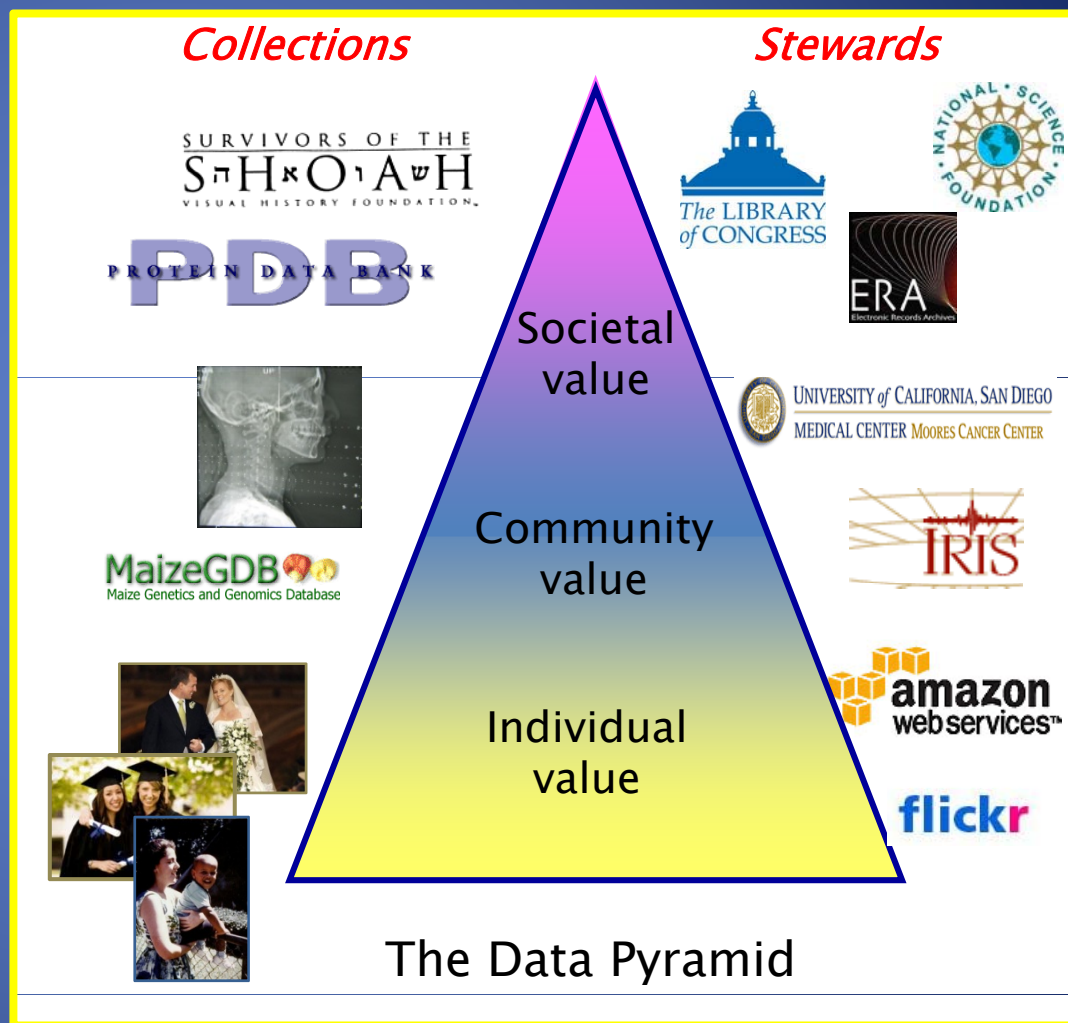
**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**





# Multiple Economic Models Needed

- **SCOPE:** BRTF focusing on economic sustainability of digital data for which there is a clear public interest
  - Many forms of valued data: text, audio, video, website, scientific data, e-journals, etc.
- Preservation responsibilities may transfer from one steward / sector to another over time
  - Some data can/will be identified at its inception as data of long-term value, but for some data, retention only becomes apparent later on



Blue Ribbon Task Force on Sustainable Digital Preservation and Access



# BRTF Deliverables: Reports, Website, Public Outreach

## Reports

- **Interim Report (2008)** (positive, “what is”):
  - Synthesize major themes for economic sustainability and identify systemic challenges from current practice
- **Final Report (2009)** (normative, “what should be”):
  - **General framework** and viable economic models for preservation
  - **Actionable recommendations** which list real world conditions for which each model is best suited.
    - “If your digital preservation context is X, we recommend you consider using model Y to organize your activities in a sustainable way.”
  - **Areas for further investigation** to fill in the gaps in our understanding of the economics of digital preservation



## Community Website

**brtf.sdsc.edu** is a community resource for literature related to the economics of digital preservation, information from the Task Force

## Public Outreach

- Articles, op-eds
- Community engagement and presentations
- Symposia being planned



**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF – SDPA Interim Report: Systemic challenges create barriers for sustainable digital access and preservation*

### Systemic Challenges

- “One-time” funding models are inadequate to address persistent long-term access and preservation needs.
- Alignment is poor between stakeholders in the digital preservation and access world and their roles, responsibilities and support models.
- There is a lack of institutional, enterprise, and/or community incentives to support the collaboration needed to enforce sustainable economic models.
- There is complacency that current practices are “good enough.” Both “carrots,” in the form of recognition that access to information is an investment in current and future success, and “sticks,” in the form of penalties for non-compliance, accounting of explicit opportunity costs, or costs of lost information are needed.
- Fear that digital access and preservation is too big to take on.

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF–SDPA Interim Report: Lessons Learned from Current Practice*

- It is easier to sell “outcomes” (e.g. persistent access) than processes (e.g. preservation)
- **Don’t oversell the future:** The benefits of digital preservation are a matter of current as well as future interest
- **Separating preservation costs from other costs is difficult**
  - No clear distinction between process of “making things available now” vs. “making things available in the future”
- **Diversity of funding streams is important**
- **Non-monetary incentives are important**
  - Corporate recognition and reputation enhancement are also incentives
- Think out of the box – **consider the full range of options when selecting an economic model** to support digital preservation
  - Public-spirited, mission-driven institutions sometimes resistant to monetizing and charging for a “social good”

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF Interim Report: Areas for Community Investigation*

### Further work required:

- **Survivability**
  - Ability to survive threats, accidents, attacks, and other causes of possible data loss
- **Recovery**
  - Ability to reinstate systems after failure; ability to assess and reconstruct damaged data
- **User and institutional responsibility in the preservation process**
  - Behavior shift for users and institutions to incorporate data curation and data life cycle management as part of normal professional activities
- **Privacy**
  - What is the right tension between privacy and accessibility? How should it be enforced for various scenarios?

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**



## *BRTF-SDPA Year 2*

- **Focus on the Final Report**
  - General economic framework for preservation
  - Actionable recommendations for common scenarios
  - Areas for further investigation in the economics of digital preservation
  
- **Outreach** from TF members to communities on draft recommendations
  - Planning symposia, continued public outreach for 2009 / early 2010

**Target audience for the Final Report:** Decision makers who can implement economically sustainable preservation practices

### **BRTF-SDPA Contact Info:**

- Email: [brtf@sdsc.edu](mailto:brtf@sdsc.edu)
- Website: [brtf.sdsc.edu](http://brtf.sdsc.edu)

**Blue Ribbon Task Force on Sustainable Digital Preservation and Access**