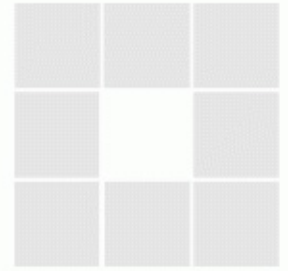


Digital Preservation

An Overview of Where We Are



Keynote Speech to the NDAP 2008 Annual International Conference National Digital Archives Program, Taiwan

Technology Building, National Science Council
Taipei, Taiwan, 18 March 2008

Deanna B. Marcum
Associate Librarian of Congress for Library Services
Library of Congress, Washington, D.C., U.S.A.

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Technology Building, NSC, Taipei, Taiwan

18 ~ 20 March 2008

Digital Preservation Challenge

- Digital media is far more fragile than books and journals
- Electronically recorded information is in danger of becoming unreadable even before the digital media deteriorates
 - Computer hardware and software used to create digital files become obsolete



Digital Preservation Challenge

- Ever-increasing volume of electronic material to be preserved
- More materials are “born digital”
 - Scientific and academic journals
 - Documents, reports, email messages
 - Databases and data sets



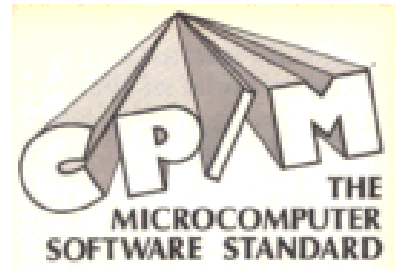
Digital Preservation Challenge

- Material comes in a wide array of complex and sometimes unpredictable formats
 - Dynamically generated Web pages
 - Animations, Simulations, and 3-D Models
 - Geographic Information Systems
 - Blogs, Listservs, and Bulletin Boards



Preservation Techniques: Migration

- May require abandoning original formats and systems



Preservation Risks

- Search engines, information hubs, and publishers of periodicals
 - do not promise perpetual preservation of their material
- Publishers who do submit materials for preservation
 - often impose severe access restrictions to protect copyright

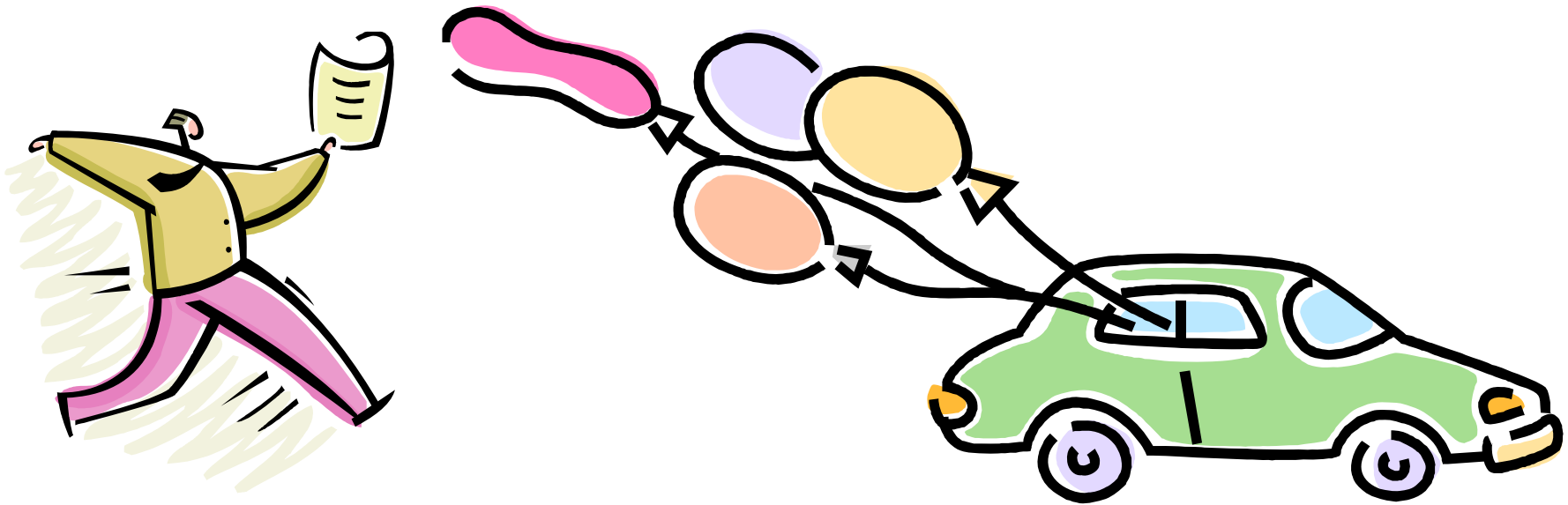


More Challenges

- Increasing preservation = more \$\$\$\$
- Additional funds also needed for R&D
- Selection decisions become difficult



“because developments in publishing, information services, and technology are rapid and dynamic ... developing [a preservation] strategy is akin to jumping onto a moving vehicle.”



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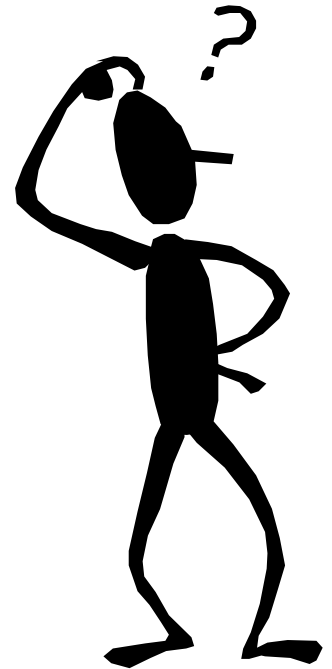
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How are we doing?



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The Netherlands

Dioscuri - the modular emulator

Dioscuri is an x86 computer hardware emulator written in Java. It is designed by the digital preservation community to ensure documents and programs from the past can still be accessed in the future.

The Dioscuri emulator has two key features: it is durable and flexible. Because it is implemented in Java, it can be ported to any computer platform which supports the Java Virtual Machine (JVM), without any extra effort. This reduces the risk that emulation will fail to work on a single architecture in the future, as it will continue to work on another architecture.

Dioscuri is flexible because it is completely component-based. Each hardware component is emulated by a software surrogate called a module. Combining several modules allows the user to configure any computer system, as long as these modules are compatible. New or upgraded modules can be added to the software library, giving the emulator the capability to run these.

Dioscuri is the best choice to retain access to your old documents, games and other applications!

Latest news

14 February 2008



Dioscuri

- [Idea and key features](#)
- [Digital Preservation](#)
- [Screenshots](#)
- [Latest news!](#)

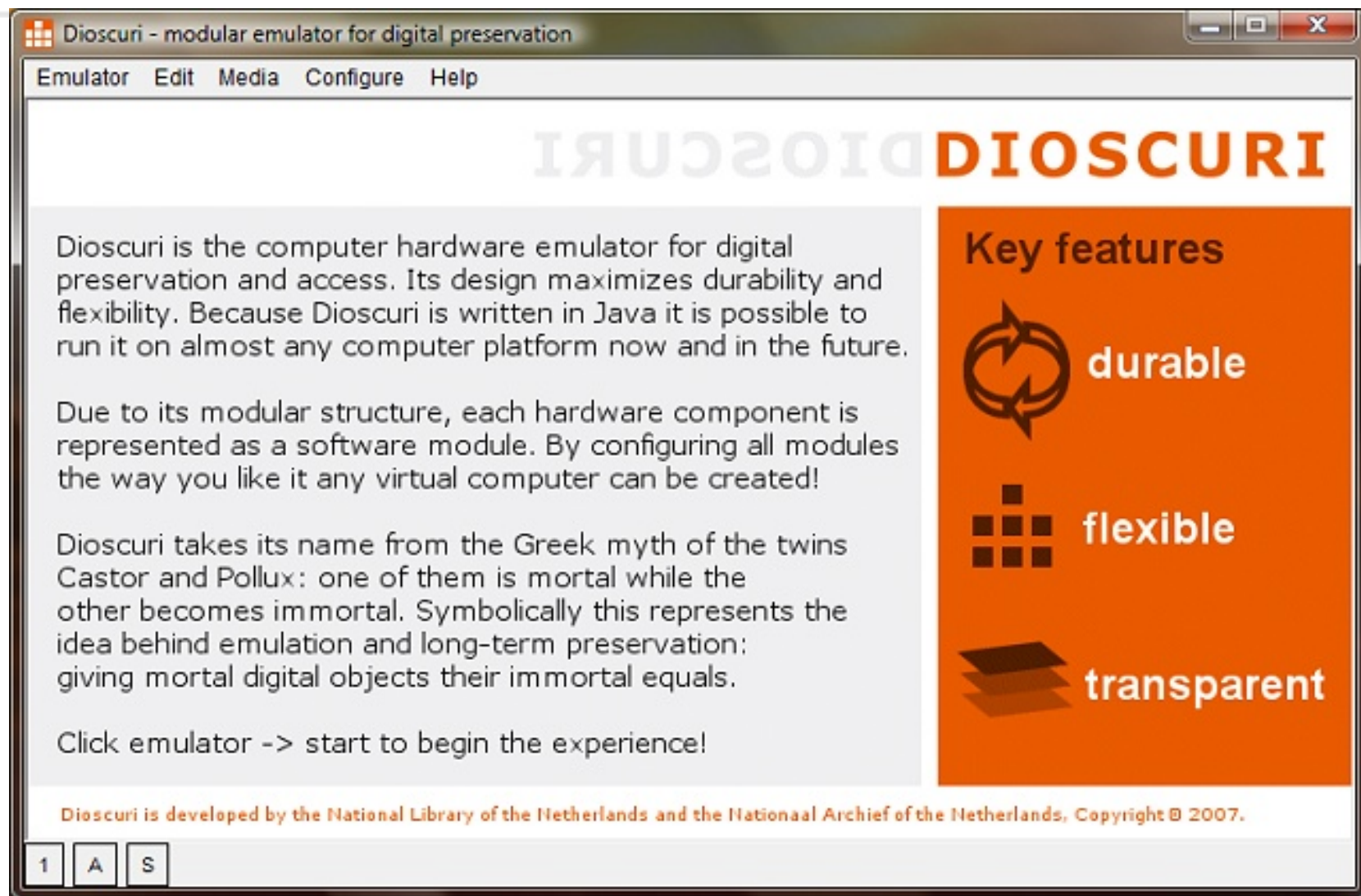
Downloads

- [Latest version](#)
- [All versions / sourcecode](#)
- [Disk images](#)

Documentation

- [User manual](#)
- [Reference docs](#)

The Netherlands



The screenshot shows a web browser window titled "Dioscuri - modular emulator for digital preservation". The browser's address bar is empty, and the page content is as follows:

DIOSCURI



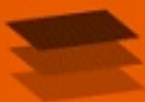
Dioscuri is the computer hardware emulator for digital preservation and access. Its design maximizes durability and flexibility. Because Dioscuri is written in Java it is possible to run it on almost any computer platform now and in the future.

Due to its modular structure, each hardware component is represented as a software module. By configuring all modules the way you like it any virtual computer can be created!

Dioscuri takes its name from the Greek myth of the twins Castor and Pollux: one of them is mortal while the other becomes immortal. Symbolically this represents the idea behind emulation and long-term preservation: giving mortal digital objects their immortal equals.

Click emulator -> start to begin the experience!

Key features

-  **durable**
-  **flexible**
-  **transparent**

Dioscuri is developed by the National Library of the Netherlands and the Nationaal Archief of the Netherlands, Copyright © 2007.

1 A S

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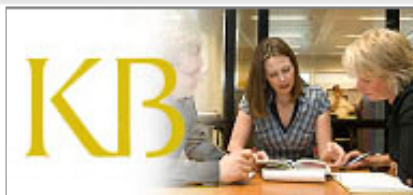
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About the KB

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e-Depot and digital preservation

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← About the KB

e-Depot and digital preservation

- › Information for international publishers
- › The e-Depot system (DIAS)
- › Digital preservation research
- › Contact
- › Publications and links

Library



Expositions & Collections



'To ensure permanent access to digital objects'

The e-Depot is a digital archiving environment that ensures long-term access to digital objects which would otherwise be threatened by rapidly evolving software and hardware platforms as well as media decay. It is the dedicated archiving environment for the KB's national electronic deposit collection. In addition, it will include the Dutch web archive and digitised master images. In line with the international nature of information provision, the KB has extended its e-Depot services to publishers worldwide. The e-Depot is supported by sustained research and development efforts geared towards maintaining the integrity of stored digital objects.

- [Information for international publishers](#)
- [Information on the e-Depot system \(DIAS\)](#)
- [Information on Digital preservation research](#)
- [Contact](#)
- [Publications and links](#)



New

[RAND report on digital preservation and the KB's response](#)

[Presentations Tools and Trends: International conference on digital preservation](#)

[Information for Dutch publishers](#) (Dutch only)

Koninklijke Bibliotheek - *National library of the Netherlands*

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The logo for Koninklijke Bibliotheek (KB) consists of the letters 'KB' in a large, bold, yellow serif font.

About the KB

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⌵ About the KB

⌵ e-Depot and digital preservation

⌵ The e-Depot system (DIAS)

Facts and figures

Library



Expositions & Collections



Costs: digital archiving and R&D digital preservation

- € 1,1 million structural funds for staff and system maintenance
- € 1,2 million structural funds for research
- 20 full-time equivalents involved

Volume and capacity

- More than 5,000 e-journal titles, 10 million e-journal articles, approximately 11 TB
- Current storage capacity 25 TB, to be extended to 1,5 PB

System properties

- Operating system AIX 5.3
- Software: Tivoli Storage Manager, Access Manager, DB2, Content manager, Web Sphere, Java
- Hardware: IBM P570, P520, 4 Gb fibre channel switches

Publishers with archiving agreements

Facts and figures as of November 2007

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About the KB

DARE: Digital Academic Repositories

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⌕ e-Depot and digital preservation

⌕ Digital preservation research

⌕ Current projects

DARE

⌕ Contact

Library



Expositions & Collections



Introduction

The DARE programme is a joint initiative of the National Library of the Netherlands (KB), the Dutch universities, the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO). DARE's aim is to store the results of all Dutch research in a network of repositories, in which the National Library fulfils the role of safe place in charge of digital preservation. In this way all participants retain responsibility for and control over their own data while making them accessible at the same time. Moreover, as the KB takes responsibility for storage and long-term preservation, the universities can concentrate on their research work.

Use of the e-Depot

Long-term preservation and accessibility of the repository material is safeguarded as the KB's e-Depot is used for the deposit. Not only is the e-Depot the world's first electronic deposit system, the KB also is one of the leading institutions in the field of digital preservation research in the world. The participants of the DARE programme can benefit from this expertise.

At the moment the focus is on establishing the technical link for the delivery, the quality of the metadata in the repositories and the procedures for deliveries and versioning. Furthermore a start will be made with the retrieval aspect of the project. The technical issues required for batch retrieval are currently being implemented, most of them in collaboration

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- Just one repository in what they call a “safe places network”
- Network would comprise several repositories engaged in preserving international electronic publications

British Library – “Dom Programme”

BRITISH LIBRARY

ABOUT US

[Home](#) > [About Us](#) > [Strategy, policies and programmes](#) > [The digital programme](#) > [Digital Object Management Programme](#)

Digital Object Management

Under long-standing Legal Deposit legislation the Library receives a copy of every printed publication produced in the UK and Ireland. We also purchase materials extensively from around the world. Technological developments mean that we are now collecting an ever-increasing number of electronic items.

These electronic items include:

- Digitised materials sourced in the UK, received under a voluntary arrangement with some publishers since January 2000
- The digitisation of parts of our own collections
- e-Journals
- Cartographic data
- Audio CDs and other sound items
- The products of Web archiving

Beyond this, however, the **Legal Deposit Libraries Act 2003** (which is not expected to come into effect until late 2007 at the earliest) extends the present legislation and places legal requirements on us.

Search **About us**

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In this section

- [DOM mission and vision](#)
- [DOM strategic approach](#)
- [DOM solutions](#)
- [Papers published on DOM](#)

External links

- [Legal Deposit Libraries Act 2003](#)

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British Library – “Dom Programme”

- store and preserve any digital material in perpetuity
- provide access with appropriate permissions
- ensure that the material is easy to find
- ensure that users can view the material with contemporary applications
- ensure that users can experience material with the original look-and-feel

Germany – Kopal



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About kopal

[Goal](#)

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Technical Aspects

[Object Specification](#)

[Standards](#)

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koLibRI -
kopal Library for
Retrieval and Ingest

About kopal

kopal - Co-operative Development of a Long-Term Digital Information Archive

Making digital documents available long-term is one of the still unsolved problems of our information society. With the increasing number of electronic publications, it is becoming critical that we reliably archive them. In the course of technological development, new digital file formats which are dependent on specific hardware and operating systems are continually being developed and used. Thus, older data are often not usable with current hardware and software. The kopal project is dedicated to finding a solution to this problem in the form of a cooperatively developed and operated long-term archive for digital data.

The **kopal demonstrator** visualizes concept and workflow of the kopal archival system.

The German National Library, the Niedersaechsische Staats- und Universitaetsbibliothek Goettingen

News

Call for Papers - E-Government and Digital Archives...

by Stefan Strathmann,
2008-02-27

Start of intended standardization processes at the Normenausschuss Bibliotheks- und Dokumentationswesen (NABD)...

by Philipp Höhler,
2008-02-22

New UK National Nuclear Archive announced...

by Stefan Strathmann,
2008-02-14

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European Union - DPE



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welcome

The CeBIT logo consists of the word 'CeBIT' in a bold, white, sans-serif font on a red background.	DPE at CeBIT 2008 Preserving the future - Stand B14, Hall 9, Future Parc	A smaller version of the Digital Preservation Europe logo, with 'd' in purple and 'p' in yellow.
--	---	--

DigitalPreservationEurope(DPE), building on the earlier successful work of ERPANET, facilitates pooling of the complementary expertise that exists across the academic research, cultural, public administration and industry sectors in Europe.

DPE fosters collaboration and synergies between many existing national and international initiatives across the European Research Area.

DPE addresses the need to improve coordination, cooperation and consistency in current activities to secure effective preservation of digital materials. DPE's success will help to secure a shared knowledge base of the processes, synergy of activity, systems and techniques needed for the long-term management of digital material.

Latest News:

Preserving the future - cutting edge digital preservation techniques showcased at CeBIT 4-9 March 2008 Stand B14, Hall 9, Future Parc

- [about DPE](#)
- [news and events](#)
- [exchange programme](#)
- [DPE challenge](#)
- [DPE user community](#)
- [DPE registries](#)
- [DPE publications](#)

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European Union - PLANETS



PLANETS - PRESERVATION AND LONG-TERM ACCESS
THROUGH NETWORKED SERVICES

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Welcome to Planets

Planets, Preservation and Long-term Access through Networked Services, is a four-year project co-funded by the European Union under the Sixth Framework Programme to address core digital preservation challenges. The primary goal for Planets is to build practical services and tools to help ensure long-term access to our digital cultural and scientific assets. Planets started on 1st June 2006. This website makes available project documentations and deliverables as Planets progresses so that these can be shared with the libraries, archives and digital preservation community.

The strong Planets consortium brings together experts in libraries, archives, leading research universities and technical services. The partners are:
British Library, the partners are:

- The British Library
- The National Library of the Netherlands
- Austrian National Library
- The Royal Library of Denmark
- State and University Library, Denmark
- The National Archives of the Netherlands
- The National Archives of England, Wales and the United Kingdom
- Swiss Federal Archives

- University of Cologne
- University of Freiburg
- HATII at the University of Glasgow
- Vienna University of Technology
- Austrian Research Centers GmbH
- IBM Netherlands
- Microsoft Research Limited
- Tessella Support Services Plc

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News

Planning the future with Planets: a preservation planning tutorial

29th February 2008

Planets is organising a two-day tutorial on preservation planning. It will be held on 14-15 April 2008 in Vienna, Austria. The event is intended to offer a complete overview of preservation planning and provide attendees the opportunity to learn about Planets' approach and technique. [\[More\]](#)

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European Union - CASPAR

CASPAR Cultural, Artistic and Scientific knowledge for Preservation, Access and Retrieval

Home CASPAR Project Community Publications Events Training Press Links Join us

Cultural Data **Contemporary Arts** **Scientific Data**

Legend RSS

Welcome to the CASPAR Preservation User Community!

How can digitally encoded information still be understood and used in the future when the software, systems, and everyday knowledge will have changed? This is the challenge of CASPAR.

Digital information innervates modern civilization. Yet digital information is extremely vulnerable. A huge amount of precious digital information created and stored all over the world becomes unaccessible every few years at a very fast pace. Think of losing official records, a museum archive.

Community Members area

User ID

Password **login**

Join the Community

To join the CASPAR Preservation User Community please use our [Registration Form](#)

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Alliance for Permanent Access

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Alliance for Permanent Access

The Alliance aims to develop a shared vision and framework for a sustainable organisational infrastructure for permanent access to scientific information

Digital media have become the dominant way that we create, shape and exchange information. Government, businesses, research organisations and memory institutions as well as individuals have become completely dependent on digital information. This dependence comes with a number of major risks because of the many unresolved challenges in the long-term management, access and preservation of this information. Science depends entirely on the knowledge gained in the past to further advance. Therefore, the prospect of losing the digital records of science is very alarming. The big challenge for the coming years will be to establish a viable and sustainable European infrastructure for access to the records of science, which means research data as well as scientific publications.

The Alliance for Permanent Access, in which major stakeholders from the world of science have joined together, aims to become the driving force in the efforts to realise such a European organisational infrastructure.

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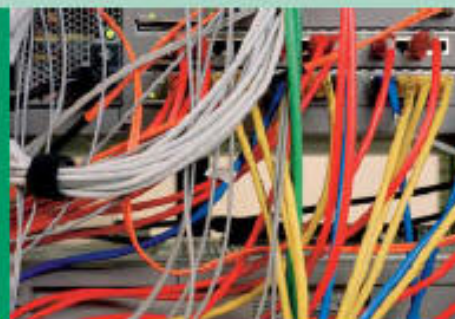
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Publications 119

Networking for Digital Preservation



Current Practice in 15 National Libraries

Ingeborg Verheul

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Australia - PADI

PADI Preserving Access
to Digital Information

PADI is a subject gateway to international digital preservation resources

Browse the **Resource Types** list or brief **Topics** list below OR the [full topic list](#) OR use [Search](#)
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- ▶ Policies, Strategies & Guidelines
- ▶ Projects
- ▶ Organisations & Websites
- ▶ Bibliographies
- ▶ Discussion Lists

DIGITAL PRESERVATION TOPICS

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- ▶ Digital Libraries
- ▶ Digital Records
- ▶ Digitisation
- ▶ Formats & Media
- ▶ General Resources
- ▶ Issues

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Australia - PANDORA

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National Library of Australia and Partners

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Canada - CISTI



National Research
Council Canada

Conseil national
de recherches Canada

Canada

NRC-CIRC

CISTI - Canada Institute
for Scientific and Technical
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United States - NDIIPP


The LIBRARY of CONGRESS

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GO Options

The Library of Congress > Digital Preservation

DIGITAL PRESERVATION



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- ➔ [Partners](#)
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- ➔ [What You Can Do](#)
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Related Resources

- [Standards at the Library of Congress](#)
- [Digital Collections & Programs](#)
- [U.S. Copyright Office](#)

TODAY TOMORROW FOREVER

National Digital Information Infrastructure and Preservation Program (NDIIPP)




Talking about Digital Preservation

- David Kirsch, University of Maryland
- Abby Smith, consultant to NDIIPP
- American Voices: Digital Preservation

[Video Transcripts](#)

Meeting the Challenge



The Library has just opened a state-of-the-art conservation center for its audio and visual works. Learn what the Library is doing.

➔ [Read more](#)

News & Events

NDIIPP Grows to Over 100

With the addition of 21 state partners, the preservation network continues to grow.

➔ [Read More](#)

OSI Strategic Plan Released

OSI has just issued its Strategic Plan for the next six years. The plan is intended as a living document that will guide OSI as it develops programs, plans and strategies for the Library of Congress's digital future.

➔ [Read More](#)

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NDIIPP – Primary Goals

- Identify and preserve significant digital content that is at risk
- Support the improvement of tools, models, and methods for digital preservation
- Develop a national digital collection and preservation strategy
- Establish a network of partners committed to these goals

NDIIPP - Selection

The LIBRARY of CONGRESS


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The Library of Congress > Digital Preservation > Achievements

DIGITAL PRESERVATION

Achievements



We have selected more than **66 terabytes of digital files for preservation** - the text equivalent of approximately **66 million books**.

The Library of Congress has been working together with other libraries and archives to save our digital heritage through the National Digital Information Infrastructure and Preservation Program (NDIIPP).

In 2000, the U.S. Congress, recognizing the importance of saving digital content for future generations, appropriated \$100 million for the Library of Congress to work with libraries, archives, other federal agencies and the private sector to [develop a strategy](#) for a national digital preservation program.

In 2002, Congress approved the Library's plan for "[Preserving Our Digital Heritage](#)." The plan's guiding principles and directives have shaped NDIIPP's progress and have led to many successes. Some milestones and the years they occurred:

Identifying and collecting digital content that is at risk of disappearing

2004: NDIIPP partners identify Web sites, digital television, business records, databases, geospatial data, cultural heritage documents and electronic publications that are at risk of being lost. More than [66 terabytes of digital files](#) have been identified and selected for preservation (as of the end of fiscal 2006). (1 Tb is equivalent to the text of approximately 1 million books.)

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NDIIPP - Partners

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DIGITAL PRESERVATION



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- [Web Capture](#)
- [World Digital Library](#)

Partners



The Library of Congress has **formed a growing network of preservation partners** both in the United States and abroad to help save digital information that would otherwise be lost.

[Partners Home](#) | [Collecting & Preserving Content](#) | [Digital Preservation Research](#) | [Organizational Alliances](#) | [Technical Tools and Services](#) | [U.S. States](#) | [Index of Partners](#)

Collecting and Preserving Content

The Library has established a groundbreaking preservation network, made up of public and private sector organizations, to save our nation's digital heritage. ➤ [Read More](#)

Digital Preservation Research

The Library has teamed with many research organizations to undertake pioneering research to support the long-term management of digital information. ➤ [Read More](#)

Technical Tools and Services

The network of collecting and preserving partners has identified tools and services that are needed to preserve digital content. ➤ [Read More](#)

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LC and NSF - DIGARCH

The screenshot shows the NSF website interface. At the top left is the NSF logo with the tagline "WHERE DISCOVERIES BEGIN". To the right is a search box with "NSF Web Site" selected. Below the header is a navigation bar with links: HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane. The main content area features a "News" section with a "Press Release 05-074" titled "National Science Foundation and Library of Congress Announce Digital Preservation Awards". The sub-headline reads "Projects will develop new technologies to advance digital archives". Below the text is a graphic showing books, server racks, and digital data. A "View video" link is provided. At the bottom of the main content, it states "NSF and the Library of Congress made awards for their DIGARCH program." with a link to "Credit and Larger Version".

News

News From the Field
For the News Media
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Research Overviews
NSF-Wide Investments
Speeches & Lectures
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NSF Current Newsletter
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News by Research Area
Arctic & Antarctic
Astronomy & Space

Press Release 05-074
National Science Foundation and Library of Congress Announce Digital Preservation Awards
Projects will develop new technologies to advance digital archives

[View video](#)

NSF and the Library of Congress made awards for their DIGARCH program.
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National Archives - ERA

THE NATIONAL ARCHIVES ARCHIVES.GOV

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Electronic Records Archives (ERA)

Electronic Records Archives (ERA)

EXPLORE ERA

- [Welcome Message](#)
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ERA RESOURCES

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Electronic Records Archives (ERA)



ERA is the National Archives and Records Administration's strategic initiative to preserve and provide long-term access to uniquely valuable electronic records of the U.S. Government, and to transition government-wide management of the lifecycle of all records into the realm of e-government.

An ERA Milestone

The development of the Electronic Records Archives (ERA) system has passed a significant milestone, with the successful completion of government testing of the first delivery of software from the developer, Lockheed Martin Corporation. **For more information, see the [press release](#).**

Learn about ERA

[Welcome Message](#)

ERA Vision 

ARCHIVES.GOV FOR...

Select One...

Building the Archives of the Future Video



* [Windows Media Player](#)
[run time: 6.25 minutes]

* [Text Transcript](#)

Copies of the ERA video are available for presentation to interested groups or organizations. Please contact the ERA program office at era.program@nara.gov or by calling 301-837-0740 for more information.

The Electronic Records Archives (ERA) will:

- Provide a means for NARA to take in, preserve, and

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National Archives - ERA

Press Release
December 13, 2007

Successful Test for First Phase of National Archives Electronic Records Archives System

Washington, DC...The development of the Electronic Records Archives (ERA) system has passed a significant milestone, with the successful completion of government testing of the first delivery of software from the developer, Lockheed Martin Corporation. ERA is the National Archives and Records Administration's strategic initiative to preserve and provide long-term access to uniquely valuable electronic records of the U.S. Government, and to transition government-wide management of the lifecycle of all records into the realm of e-government.



Lockheed Martin started deploying ERA hardware last spring and released the first pilot software to the National Archives on September 27, 2007. After extensive engineering and end-user testing of the system, the National Archives gave Lockheed Martin the green light to complete development of the second pilot.

The first pilot supports creating and processing records schedules and requests for transfer of records. The second pilot, to be delivered at the end of December, 2007, will add system functions for transferring electronic records. The third pilot, scheduled for delivery in early March, 2008, will provide tools for automated inspection of electronic records. Ken Thibodeau, ERA Program Director at the National Archives, describes the pilots as "three ounces of prevention" aimed at ensuring that the system's Initial Operating Capability (IOC) meets the government's needs with a robust design and a high quality user interface.

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Digital Preservation Network

The screenshot shows the home page of the Digital Preservation Network. At the top right, there is a "Sign In" link with a question mark icon. Below this is a navigation bar with "Home" and "Search" tabs. A search box is present with a dropdown menu set to "All Sites" and an "Advanced Search" button. On the right side of the navigation bar, there are links for "Request Access", "Change Password", and "Forgot Password".

The main content area is titled "Home" and contains the following sections:

- Search**: A sub-section header.
- Home**: A paragraph stating: "This is the default home page of the portal site. From this location, you can navigate to other areas of the portal site using the primary navigation bar. To change this page, click Edit Page."
- Charter**: A section with a blue header and a white background. The text reads: "The Digital Preservation Network is dedicated to forging a community of practitioners who are focused on the issues of preserving the digital records and publications of government. This online forum will be a repository for the exchange and discussion of ideas, research, strategy and documents that can be used by other practitioners in their organization. Membership into this community will be open to any practitioner employed in a government funded institution that is currently researching or participating in appraisal, acquisition, preservation or access of government records or publications."
- News**: A section with a blue header and a white background, currently empty.
- Events**: A section with a blue header and a white background. The text reads: "There are currently no upcoming events."
- Links**: A section with a blue header and a white background, containing a list of links:
 - URL
 - Washington State Digital Archives
 - Library of Congress Sustainability of Formats
 - Maine State Archives GeoArchives
 - GSLIS Electronic Archives Project
 - Digital Information Management Program
 - North Carolina State Government Web Site Archives
 - Oregon Documents Repository
 - Arizona State Library, Archives and Public Records

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Preserving Creative America

The LIBRARY of CONGRESS Options

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[The Library of Congress](#) > [News Releases](#) > [Library Makes Awards to Preserve Creative America](#)

NEWS RELEASES

News from the Library of Congress

Contact: Guy Lamolinara (202) 707-9217

August 3, 2007

Digital Preservation Program Makes Awards to Preserve American Creative Works

[Preserving Creative America Initiative to Engage Private Sector Creators of Films, Sound Recordings, Photographs, Cartoons and Video Games in Digital Formats](#)

The Library of Congress, through its National Digital Information Infrastructure and Preservation Program (NDIIPP), today announced eight partnerships as part of its new Preserving Creative America initiative to address the long-term preservation of creative content in digital form. These partners will target preservation issues across a broad range of creative works, including digital photographs, cartoons, motion pictures, sound recordings and even video games. The work will be conducted by a combination of industry trade associations, private sector companies and nonprofits, as well as cultural heritage institutions.

Several of the projects will involve developing standardized approaches to content formats and metadata (the information that makes electronic content discoverable by search engines), which are expected to increase greatly the chances that the digital content of today will survive to become America's cultural patrimony tomorrow. Although many of the creative content industries have begun to look seriously at what will be needed to sustain digital content over time, the \$2.15 million being awarded to the Preserving Creative America projects will provide added impetus for collaborations within and across industries, as well as with libraries and archives.

"America's creativity is unrivaled in the world, and it is among our most important exports," said Librarian of Congress James H. Billington. "The Library is pleased to be able to bring together creators of such diverse content for the sake of saving our nation's heritage, which is increasingly being created only in digital formats."

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The Library of Congress

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San Diego Supercomputer Center

SDSC

SAN DIEGO SUPERCOMPUTER CENTER

Placing Trust in Organizations: San Diego Supercomputer Center

David Minor wants you to trust him. He seems honest enough, so it might be worth it to take a pass, depending on the circumstances. But he also wants you to trust his organization, the San Diego Supercomputer Center (SDSC), with managing, storing and preserving some of your most valuable digital assets. Now how willing are you to trust him?

This is the question the Library set out to answer when the NDIIPP program engaged SDSC in the Data Transfer and Storage Project, a one-year demonstration project to test the feasibility of engaging external partners as service providers to fill digital management needs. Minor and Richard Moore, SDSC division director for Production Services came to the Library on Sept. 19, 2007, to present their findings.

Many cultural heritage institutions and government agencies are suffering from tight budgets and a shortage of resources and expertise, with many forced to look outside their walls to find the needed expertise. This is especially true in the digital preservation environment, where technical knowledge is rare, and the costs of long-term information management remain speculative. Additionally, the geographic distribution of materials, capabilities and expertise has the benefit of helping to ensuring that digital materials survive into the future by maximizing the benefits of cooperation and maintaining a level of redundancy that prevents total loss from happening due to the breakdown of any one node.

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PORTICO



Portico offers a not-for-profit service that provides a permanent archive of scholarly literature published in electronic form, beginning with electronic journals.

PORTICO

6,142,211

articles ingested into the archive

50

participating publishers

7,334

committed titles

425

participating libraries

4,031

archived titles

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Audit the Archive

for designated librarians and publishers

Access the Archived Content

for researchers at participating institutions

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Digital Library Federation

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Providing Leadership for Libraries

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COLLECT

PRODUCE

PRESERVE

USE

BUILD



The Digital Library Federation (DLF) is a consortium of libraries and related agencies that are pioneering the use of electronic-information technologies to extend collections and services.

DLF Aquifer News

Updates on project news available from the **AquiSphere**

Initiative News

ERMI white paper on interoperability available from **here**

Forum News

Spring Forum 2008 registration details available from **here**

DLF is a 501(c)(3) nonprofit membership organization.
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Last updated: Wednesday, February 6, 2008

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CLIR works to expand access to information, however recorded and preserved, as a public good. Through projects, programs, and publications, CLIR works to maintain and improve access to information for generations to come.



News >>

Application period now open for **A. R. Zipf Fellowship, 2008**
[Details >>](#)

Read about CLIR's agenda for 2007-2009
[Details >>](#)

Reports >>

CLIR's Annual Report 2006-2007 [>>](#)

Press version, February 2008:
Preservation in the Age of Large-Scale Digitization, A White Paper
By Oya Y. Rieger

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CLIR Issues >>

CLIR Issues newsletter #61, January/February 2008 [>>](#)

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Additional Projects



The world's libraries.
Connected.



 Ohio Library and Information Network



aDORe Archive

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LOCKSS



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search

"...let us save what remains: not by vaults and locks which fence them from the public eye and use in consigning them to the waste of time, but by such a multiplication of copies, as shall place them beyond the reach of accident." Thomas Jefferson to Ebenezer Hazard, February 18, 1791.

Home

L O T S O F C O P I E S K E E P S T U F F S A F E ™



Welcome

LOCKSS (Lots of Copies Keep Stuff Safe) is an international non-profit community initiative that provides tools and support so libraries can easily and cost-effectively preserve today's web-published materials for tomorrow's readers.

Libraries inform and educate citizens and provide critical support to democratic societies by acting as memory organizations. The memory of a library is its collections; therefore in order for a library to be a memory organization it must build collections.

LOCKSS helps libraries stay relevant by building collections even as an increasing portion of today's content is born digitally and published on the web.

LOCKSS replicates the traditional model of libraries keeping physical copies of books, journals, etc. in their collections, making it possible for libraries to house copies of digital materials long-term. Hundreds of publishers and libraries around the world have joined the LOCKSS community and are working together to ensure that libraries continue their important social memory role.

The ACM award-winning LOCKSS technology is open source, peer-to-peer, decentralized digital preservation infrastructure. LOCKSS preserves all formats and genres of web-published content. The intellectual content, which includes the historical context (the look and feel), is preserved. LOCKSS is [OAIS-compliant](#); the software [migrates content forward in time](#) ; and the bits and bytes are [continually audited and repaired](#) . Content preserved by libraries through LOCKSS becomes a part of their collection, and they have perpetual access to 100% of the titles preserved in their LOCKSS Box.

LOCKSS, now in its tenth year, is a Stanford University Libraries Program. The software is freely available for you to examine and [use](#). Please join us!

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CLOCKSS



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search

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Home

CLOCKSS: Controlled LOCKSS™
A Trusted Community Archive

February 22, 2008

Vicky Reich honored with the 2008 Ulrich's Serials Librarianship Award

The CLOCKSS Initiative is proud to announce that Vicky Reich is the recipient of the 2008 Ulrich's Serials Librarianship Award in recognition of her distinguished and ongoing contributions to the field of digital preservation. Vicky's leadership role in the development and adoption of digital preservation solutions like LOCKSS and CLOCKSS ensures the accessibility of serial publications and other digital content for future generations.

[more here](#) 

January 30, 2008

CLOCKSS Works

Researchers increasingly access journal articles online, but the real possibility exists that, due to natural disaster or human/computing failure, digital content might not always be available. Libraries and publishers have joined forces in an initiative called CLOCKSS*, providing leadership and the supporting technology, to ensure reliable, long-term access to scholarly e-content.

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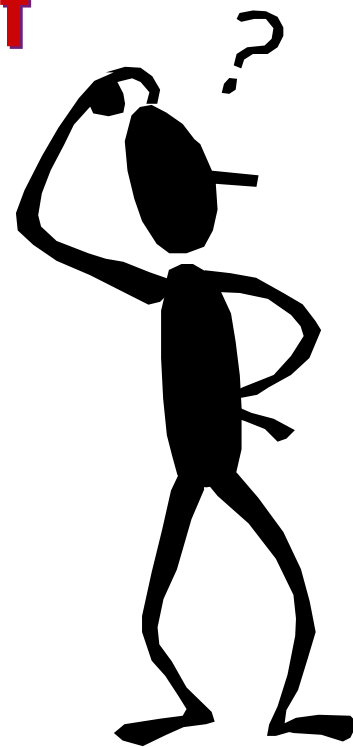
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Even if we can develop the technological means to ensure digital preservation of all kinds, can we afford what it will cost?



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Blue Ribbon Task Force Named

Library Leaders Named to Task Force on Sustainable Digital Preservation and Access

Norman Oder -- Library Journal, 1/22/2008

Two-year project
Report due in 2009
Lynch, Courant among members

Several library leaders, scholars, and technologists have been named to the Blue Ribbon Task Force on Sustainable Digital Preservation and Access, **announced** last September and funded by the National Science Foundation (NSF) and the Andrew W. Mellon Foundation. The task force will sponsor quarterly discussion panels involving international experts from the academic, public, and private sectors. Two reports are expected, including a final report in late 2009 that will offer recommendations for digital preservation,

The task force is co-chaired by Fran Berman, director of the San Diego Supercomputer Center at University of California, San Diego, and Brian Lavoie, a research scientist with OCLC. The

Task Force members include:

- Paul Ayris, Director of Library Services, the University College of London, England
- G. Sayeed Choudhury, Associate Dean of Libraries, Johns Hopkins University, Baltimore, MD
- Elizabeth Cohen, Academy of Motion Pictures Arts and Sciences, Stanford University, Stanford, CA

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- Paul Courant, University Librarian, University of Michigan, Ann Arbor, MI
- Lee Dirks, Director of Scholarly Communications, Microsoft Corp.
- Amy Friedlander, Director of Programs, Council on Library and Information Resources (CLIR), Washington, DC
- Vijay Gurbaxani, Senior Associate Dean, Paul Merage School of Business, University of California at Irvine
- Anita Jones, Professor of Engineering and Applied Science, University of Virginia, Charlottesville, VA
- Ann Kerr, Independent Consultant, AK Consulting, La Jolla, CA
- Clifford Lynch, Executive Director, Coalition for Networked Information (CNI), Washington, DC
- Dan Rubinfeld, Professor of Law and Professor of Economics, University of California at Berkeley
- Chris Rusbridge, Director, Digital Curation Centre, University of Edinburgh
- Roger Schonfeld, Manager of Research, Ithaka, Inc.
- Abby Smith, Historian and Consulting Analyst to the Library of Congress, (based in San Francisco)
- Anne Van Camp, Director, Smithsonian Institution Archives, Washington, DC

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International Collaboration Needed

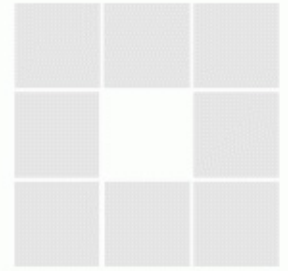
“It would be to the mutual benefit of these initiatives [preservation of electronic journals] to establish relationships with each other... it would be natural to share costs and technology, exchange best practices, and cooperate in agreeing on common standards.”

International Collaboration Needed

“It is important to collaborate on a national and international scale and to share knowledge...no institution can solve the digital preservation problem on its own.”

Digital Preservation

An Overview of Where We Are



Keynote Speech to the NDAP 2008 Annual International Conference National Digital Archives Program, Taiwan

Technology Building, National Science Council
Taipei, Taiwan, 18 March 2008

Deanna B. Marcum
Associate Librarian of Congress for Library Services
Library of Congress, Washington, D.C., U.S.A.

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