National Digital Information Infrastructure and Preservation Program (NDIIPP)

Martha Anderson
Office of Strategic Initiatives
Library of Congress
NDIIPP Legislation and Funding

- Created by federal legislation (PL 106-554) in December 2000
- Up to $175 million potentially available
  - $5 million (available now until expended)
  - $20 million (subject to advance Congressional approval)
  - $75 million (subject to $ for $ match from non-federal sources)
  - $75 million (private funds)
NDIIPP Goal

• To develop a nationwide collection and preservation strategy for digital materials in cooperation with the information and technology industry, concerned federal agencies, libraries, research institutions and not-for-profit entities.
NDIIPP Vision

• To ensure the long term access to a rich body of digital content through the establishment of a network of partners, collaborating in a digital preservation architecture with defined roles and responsibilities.
Listening and Learning
Planning Phase, 2001-2002

- Consultation with Stakeholders
- Background Research
- Scenario Planning
- Defining Components of the Digital Preservation Infrastructure

Planning Outcomes
Major Lessons Learned

• There is broad agreement that preservation of digital materials is important.
• The Library is trusted as an honest broker that can facilitate necessary cooperation.
• An infrastructure has two major components:
  - A preservation network
  - A technical architecture
Consultation with Stakeholders

- Established the NDSAB
  - Representation from federal agencies, industry, research libraries and foundations

- Convened Stakeholder Meetings
  - 3 workshops including 100 industry representatives (Fall 2001)
Consultation with Stakeholders - Findings

• Areas of Consensus
  - Need for NDIIPP initiative
  - Need for distributed/decentralized solution
  - Need for digital preservation technologies research
  - Recognition technology is part of solution set

• Priorities for Action
  - Intellectual property and liability issues
  - Scope of collecting
  - Understanding of User community
  - Balance between preservation and access
Background Research: Initiatives in Progress but No Magic Bullets

- Surveyed the landscape
- Defined preservation space
- Facilitated a National Science Foundation research agenda
Scenario Planning

Plausible Scenarios

What is Saved?
- Everything
- Most Important

Who saves?
- Library of Congress
- Everyone

Triage

Congress of Libraries

Universal Library
Planning Outcomes

• The problem cannot be solved exclusively through technology.
• The solutions must be collaborative.
• Standards for information description and sharing are needed.
• The Library of Congress can play a unique role as trusted third party to convene and facilitate.
A Network of People
An Architecture for Preservation

Ensures the long-term access to a rich body of digital content through the establishment of a national network of committed partners.

Two key components of infrastructure:
- Preservation Network: partners collaborating to preserve and provide long-term access to digital content and preservation architecture:
  - Technical components that enable digital preservation

VALUES

Support the needs of multiple communities over long periods of time
- Respond to rapidly changing technologies and innovative behaviors
  - Be transparent and trustworthy
NDIIPP Strategic Direction

- Listening
- Collaborating
- Learning
- Early Action
Preservation Architecture

People Above

Institutions In Between

Bits Below

10101010010101010100
Preservation Architecture

• 4 Layers Between People and Bits

- Interfaces
- Collections
- Gateways
- Repositories
Preservation Architecture

• Design Principles

The NDIIPP digital preservation architecture must:
- Support relationships between institutions
- Allow questions of preservation to be handled separately from questions of access
- Be built modularly, using existing technology and efforts where possible
- Be able to be assembled over time, rather than needing to be built all at once
- Be upgradeable in pieces, without disrupting the whole system, and
- Be specified using broadly adoptable protocols
NDIIPP Recommended Actions:

• **catalytic**: investing in existing strengths, leveraging public and private investments, and stimulating research and development where needed,

• **collaborative**: engaging willing partners and key stakeholders in areas of mutual interest and expertise,
NDIIPP Recommended Actions:

- *iterative*: learning from the initial planning and fact-finding to inform subsequent actions and investments, and continuing to feed results back into the chain of research, testing, and development, and

- *strategic*: addressing a broad spectrum of issues in technology, collection development, infrastructure and organization, intellectual property, technical standards, and other key components of the preservation network through a balance of early short-term and long-term actions and investments.
Next Steps

• Investigate the technical architecture in more detail
• Invest in collaborative public/private projects that enhance core capacities essential to developing the preservation network
• Participate with NSF and other federal agencies in sponsoring long term research
NDIIPP Next Steps

Practical Applications
Technical Preservation Architecture
Basic Digital Preservation Research
NDIIPP Next Phase

- **Practical Applications**
  - Born Digital Collaboration
  - Best Editions
  - Content Tests of Preservation Architecture

- **Technical Preservation Architecture**
  - Trusted Repository
  - Detailed Definition of 4-layered stack
  - Survey of Software

- **Research**
  - Tools and Techniques
NDIIPP Expected Outcomes

Preservation Infrastructure

- Network
- Architecture
Communication is Critical
http://www.digitalpreservation.gov