

NDIIPP State Projects – Lessons, Observations and Recommendations

December 6, 2011

A Model Technological and Social Architecture for the Preservation of State
Government Digital Information

All Partners meeting

St. Paul, Minnesota

Cal Lee

University of North Carolina at Chapel Hill



UNC

SCHOOL OF INFORMATION
AND LIBRARY SCIENCE

Four NDIIPP State Projects

Project	Lead Institution
Persistent Digital Archives and Library System	Arizona State Library, Archives and Public Records
A Model Technological and Social Architecture for the Preservation of State Government Digital Information	Minnesota Historical Society
Geospatial Multistate Archive and Preservation Project (GeoMAPP)	North Carolina Center for Geographic Information and Analysis
Multi-state Preservation Partnership	Washington State Archives

States Represented in NDIIPP States Projects*

States Participating in <u>No</u> Projects	15
States Participating in <u>One</u> Project	26
States Participating in <u>Two</u> Projects	10

*Includes District of Columbia (no territories represented); does **not** reflect any participation by entities in the state in other NDIIPP projects (see: http://www.digitalpreservation.gov/partners/partners_state.html)

Project Review Process

- Kick-off discussion at Best Practices Exchange in October 2010
- Analysis of project deliverables and documentation
- Visits to each of the project's lead partner sites
- Monitoring of project activities and announcements – mailing lists, project spaces (BaseCamp), conference calls

Main Questions Guiding State NDIIPP Project Review

- What are the main **factors** that drove you to undertake this project?
- **Who** is involved and **why**?
- What were the related activities and relationships of the participating parties **before** the project?
- How does the project fit into the missions, goals and plans of the participating parties (i.e. what are their **incentives** for participating)?
- What are the plans for advancing the activities **after** the grant?
- Which of the products and lessons from the project are **most** likely to be applicable in other states and which are **least** likely to be applicable in other states?



Two technical goals: (1) develop a curatorial rationale to support an automated, integrated workflow to process collections of digital publications and records, and (2) implement “digital stacks” using an inexpensive, storage network that can preserve the authenticity and integrity of the collections

Social goal: PeDALS also aims to build a community of shared practice including a wide range of repositories and to remove barriers to adopting the technology by keeping costs low

Products include: repository system architecture based on BizTalk and LOCKSS; PeDALS Email Extractor (for Microsoft Outlook .pst files)



[Alabama Department of Archives and History](#)

[Arizona State Library Archives and Public Records](#)

[State Library and Archives of Florida](#)

[New Mexico State Records Center and Archives](#)

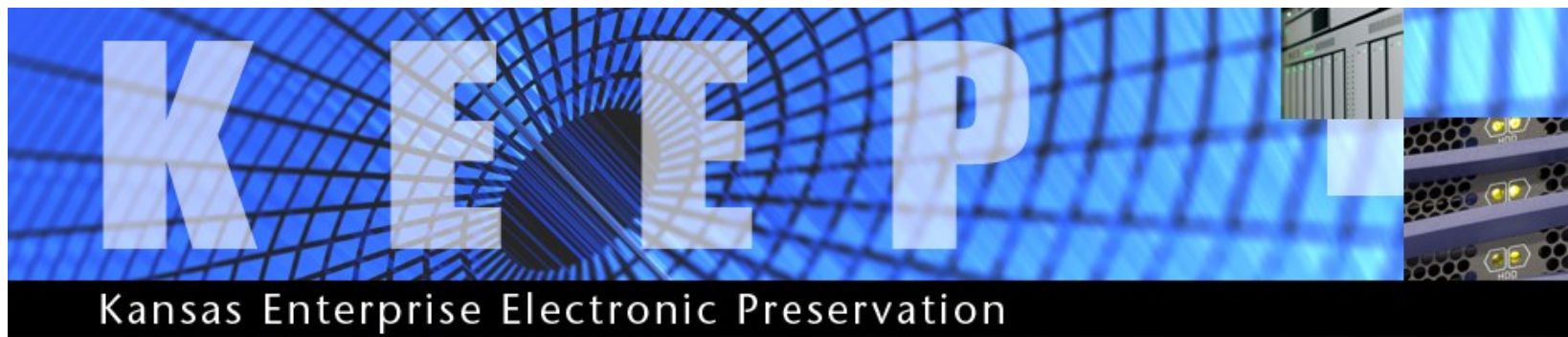
[New York State Archives, New York State Library](#)

[South Carolina Department of Archives and History & South Carolina State Library](#)

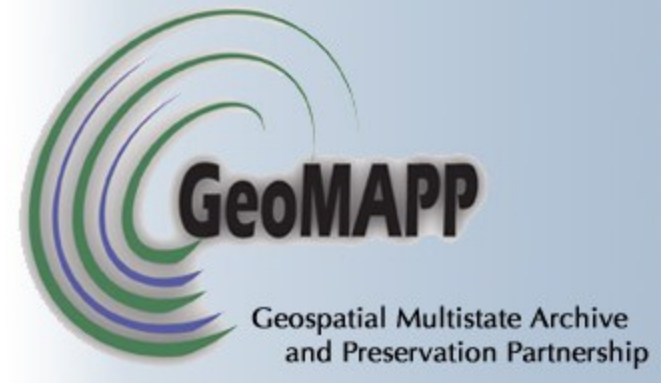
[Wisconsin Historical Society](#)

A Model Technological and Social Architecture for the Preservation of State Government Digital Information

- Working with state legislatures to explore enhanced access to legislative digital records
- States: Minnesota, California, Kansas, Tennessee, Mississippi, Illinois and Vermont
- In recognition of diversity of state contexts - exploring a variety of technical approaches and architectures
- Training and generation of guidance documents for states
- Investigation of XML-native database environment for information from legislative systems
- Partnership with University of California Curation Center (UC3) – testing of Merritt system for ingest and management of legislative materials
- Recent addition: testing of Tessella’s Safety Deposit Box – Vermont, Tennessee, Illinois, Minnesota
- Partnering with and channeling grant funds to...



- To build enterprise-wide (all three government branches), trustworthy, digital repository for Kansas government electronic records with long-term value.
- Certification of authenticity for specific record sets on a fee basis.
- Team includes Kansas Historical Society, legislature, judicial branch, Attorney General's Office, Division of Information Systems and Communications (DISC).
- To be integrated with Kansas Legislative Information Systems and Services (KLISS) system
- Major factor: Kansas House Bill 2195 (2010) authorizing State Archivist to set standards for maintaining the authenticity of electronic government records, certify systems for compliance with the standards, and serve as agent for authenticating records
- Funding model based on:
 - Funds from IT projects that house records with retentions of 10 or more years
 - Maintenance fees related to the quantity and format of the records in KEEP
 - Fees for authenticating records
- Companies: Imerge Consulting, Propylon, Alexander Open Systems (EMC, Cisco, VMWare)



- Preservation of at-risk and temporally significant geospatial content
- Modeling an organizational network for transfer and replication of geospatial data within and between states
- Exploring various methods and tools for preserving geospatial data
- Generating detailed guidance for states to ingest and manage snapshots of geospatial data
- Recent contract (August) with Applied Geographics and AECOM to help develop business planning resources
- Partner States: Kentucky, Montana, North Carolina, Utah
- Informational Partners: Arizona, District of Columbia, Georgia, Illinois, Kansas, Maine, Maryland, Minnesota, Mississippi, New York, Texas, Wisconsin, Wyoming

Multi-state Preservation Partnership

- Building on Washington State Archives digital archives environment to implement centralized regional repository for state and local digital information
- Strong focus on local records
- Component for submission – ArchiveThis!
- Component for ingest functions – Auto Todd
- Code written in C# programming language and built on top of Microsoft platform
- States: Alaska, California, Colorado, Idaho, Indiana, Louisiana, Montana, Nevada, North Carolina, Oregon, Washington

Personnel and Leadership Changes (Retirements, Leaves from Positions and Job Changes Precluding Participation)*

Lead State Participant Changes	20
Other Key Personnel Changes in Lead State	5
Other State Partner Changes	19
TOTAL	44

*Based on information I've been able to collect, so actual numbers likely to be higher

Major Lessons and Themes

- Building on strengths – previous activities, opportunities in local context
- Building bridges across professional communities
- Persistence in face of dramatic disruptions
- Diversity of approaches is major asset – most valuable if states can easily learn what others are doing
- Progress is often specific to content type – an asset and a limitation
- Contractual arrangements and flexibility of arrangements

Building on a Diverse Set of Strengths

- Most successful initiatives have attended to specific opportunities, resources and constraints of their local environments
- Minnesota Historical Society (MHS) – many grant-funded projects since 1990, including project with Minnesota Office of the Revisor of Statutes (ROS) and Minnesota Legislative Reference Library (LRL), has played a leadership role in a variety of other activities throughout the state of Minnesota that bear on the long-term management of digital assets, and has engaged in numerous interstate and national partnerships and collaborations
- Kansas Historical Society (KSHS) began building an electronic records program in the mid-1990s, worked with various structures to make case for laws, policies and procedures to support preservation of state electronic records; strong relationship with the Department of Administration and CITO of the legislative branch helped to establish technical and financial arrangements
- MSPP benefited from significant advocacy, outreach and capacity building efforts of the Washington State Archives, experience with ingesting and providing access to large numbers of records, significant infrastructure
- Arizona State Library, Archives and Public Records (ASLAPR) - Arizona 'Electronic Records Taskforce (ALERT), "Electronic Recordkeeping System (ERS) Guidelines"; work with Arizona Memory project; participated in two NDDIIPP-funded projects; numerous efforts to bring attention to electronic records issues
- North Carolina had undertaken a variety of activities related to both electronic records and management of GIS data - ArcLib Taskforce, Digital Preservation Policy Framework, web archiving; North Carolina Geospatial Data Archiving Project (NCGDAP) NDIIPP grant project ; Preservation of Electronic Mail Collaboration Initiative

Primary Roles of NDIIPP State Project Lead Partners

Role	Explanation	Lead Partners
Digital Preservation Service Provider	Development, maintenance and support of a centralized preservation environment where other parties can transfer resources (within the state or across states)	Kansas Historical Society (KEEP) Washington State Archives (MSPP)
Digital Preservation Enabler	Development, maintenance and support of software tools and systems that other institutions can install and run in their own environments	Arizona State Library, Archives and Public Records (PeDALS)
Digital Preservation Facilitator	Convening of forums for discussion and interaction among interested professionals, support for development of communities of practice, local testing of technical approaches to share experiences with others, development and dissemination of guidance documents	Minnesota Historical Society (MTSA) North Carolina Center for Geographic Information and Analysis and North Carolina State Archives (GeoMAPP)

Specific Observations about MSTA Project

- Powerful combination of external connection building and focused attention to specific technical approaches
- Project that took the least “custodial” approach
- Resources created by the project should be extremely valuable to other states

Suggestions for Other States:

- Progress on digital preservation comes through incremental advances
- Identify priorities in your context for digital preservation in the next few years
- Look at the numerous incremental advances of the state NDIIPP projects
- Pick up the ones that promise to advance your priorities, then extend/adapt them and **let others know** how it went
- Plan for sustainability in the face of continuous disruption – this is both possible and necessary
- Cast collaboration nets widely
- Continue looking outward for digital preservation advances and resources

Looking Elsewhere: Digital Preservation Activities and Trends

Umbrella Initiatives

- National Digital Stewardship Alliance (NDSA) – July 2010, initiative of NDIIPP
- OpenPlanets Foundation (OPF)
- Digital Curation Centre (UK) - numerous events, resources, training activities
- Preservation and Archiving Special Interest Group (PASIG) – major industry focus, previously Sun, then Oracle, but now reformulated as independent

Software Development and Support

- OpenPlanets Foundation
- DuraSpace (major funders: Moore Foundation, Mellon Foundation, NDIIPP, IMLS, NSF)
- LOCKSS – robust storage and on-the-fly migration
- iRODS – rule-based data management using data grids
- Born Digital Collections: An Inter-Institutional Model for Stewardship (AIMS) (Mellon Foundation) – Hypatia, Rubymatica
- BitCurator (Mellon Foundation)
- Events – CurateCamp, Code4Lib, hackathons
- Dissemination environments – SourceForge, GitHub

Specialized Commercial Vendors/Systems

- Archivematica - Artefactual
- Safety Deposit Box (SDB) – Tessella
- Rosetta - Ex Libris

Audit and Certification

- DRAMBORA
- TRAC -> ISO RAC
- Test audits run already

Data-Intensive Science and Data Curation

- Major focus of the DCC
- National Science Foundation
 - Office of CyberInfrastructure
 - DataNet
 - Requirement for data management plans (along with many other funding agencies)

One view of alignment:



Source: Wheel Alignment Cost.

<http://www.wheelalignmentcostpro.com/wp-content/uploads/2011/05/Wheel-Alignment-300x238.jpg>

Probably more appropriate for
preservation of state electronic
resources:



Source: http://www.arcade-museum.com/game_detail.php?game_id=8747

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 - Multi-state Preservation Consortium: Jerry Handfield, Justin Jaffe, Adam Miller, Bryan Smith, June Timmons, Dan Waterbly
 - PeDALS: Richard Pearce-Moses, Linda Reib, Brian Schnackel, Pete Watters

Questions:

- What would you like to get from other states?
- What would you have to offer to other states?
- What sort of further multi-state initiative could benefit your work?