

**GEORGIA ARCHIVES**  
**OFFICE OF SECRETARY OF STATE**

**NHPRC Preserving Georgia's Historical Data: A Case Study**  
**Grant No. 5419-GA**  
**Grant Period January 2005 – May 2006**  
**Final Report and Project Assessment**

**Grant Application Summary**

The Georgia Archives sought and obtained an \$187,581 grant from NHPRC to partner with the state Board of Pardons and Paroles (PAP) to implement an electronic record keeping system and to devise policies, procedures, and processes for the transfer of reliable archival information to the Georgia Archives. Key products of the grant are a case study of the development of an agency record keeping system as an example to Georgia government and the development of a policy and procedural framework for the preservation of archival data.

The project centered around five stated goals –

1. To elicit discussion of the conceptual, economic, and technological restraints on electronic records management and preservation with other state agencies;
2. To cooperate with the Board of Pardons and Paroles to implement an electronic record keeping system and to devise processes for the transfer of reliable archival information to the Georgia Archives;
3. To publish a case study of the development of an agency record keeping system as an example to Georgia government;
4. To issue policies and procedures regarding the transfer of archival information for use by state government agencies; and,
5. To develop a preservation strategy for archival information in the custody of the Georgia Archives.

Completion of these project goals has given the Georgia Archives a firm foundation from which to implement a digital archives for the state.

**Accomplishments**

The Georgia Archives, like many state archives, has found itself struggling with the issues surrounding digital preservation. Always understaffed and stressed for adequate funding, this project forced us to take stock of our situation and to acknowledge one salient fact -- that we are unlikely to ever have all the skill sets

or the funding needed to operate a digital archives without assistance from the agencies of Georgia government. Either we build collaborative partnerships or we do nothing and lose the records. Yet, the option of “doing nothing” has never been considered a viable solution for Georgia. Therefore, our project focused on strengthening our ties within government to facilitate and encourage the creation of archives-ready records and the building of a pool of technical advisors who would be able to provide feedback as we moved forward in implementing a digital archives.

### **Products:**

All grant products included in the application proposal were completed within the eighteen month time frame of the grant. A summary of the grant products follows:

1. **Fully implemented life-cycle management process within web-based ECOAVS.** The multi-agency project team elected to utilize Tower Software’s Context product to provide lifecycle control over the records of the parole process. The Georgia Archives currently utilizes Context and it was determined that the product provided the functionality and support desired by the PAP. Differing from the Georgia Archives which uses SQL, PAP chose to use Oracle as the backend database for Context. This allowed the Archives project team the opportunity of evaluating Oracle to handle larger digital objects with complex metadata schema. Use of Oracle by PAP highlighted one of the first technical/staffing concerns for the Georgia Archives as it moves forward – having already acknowledged that we are unlikely to all the required skill sets in-house, how would we manage to preserve records of multiple operating systems when our expertise is with SQL?

PAP staff has been so pleased with the functionality of the system that end of the year funds (July) were utilized to expand the number of licenses at the agency to over 100 licenses in its offices statewide. A case study documenting the installation of the software was developed as part of the grant products.

2. **Implementation at Georgia Archives of preservation methodology and processes for the transfer and accessibility of historical data.** The Georgia Archives project team has implemented both a strategy and an overall methodology for the preservation of government records. The strategy consists of policy and procedure for the preservation of digital objects over time. The methodology focuses on the promulgation of administrative policy and technology standards aimed at the creation of records. The technology standards are issued jointly between the Georgia Archives and the Georgia Technology Authority. The first such standard issued, ENT-01-001-STD, requires the use of DoD 5015.2-STD certified content management software. Policy and standards combine to ensure the creation of archives-

ready records based on open enterprise technology standards. The following policy and procedural statements have been approved and included in Georgia's Administrative Code as chapter 590-6-1, Digital Archives: Vision Statement, Legal Authority, Data Acquisition and Transfer, Acceptable File Formats, Restrictions on Access, Use of XML, and Digital Preservation Policy.

3. **Written preservation methodology and procedures for transfer of electronic data from state government agencies.** Digital preservation policy and procedure was developed that incorporates the RLG-NARA Audit Checklist for Certifying Digital Repositories. In support of the policy, a preservation strategy detailing the activities that will be undertaken to ensure the reliable preservation of digital records was developed. The strategy describes the preservation actions that will take place; the pros and cons of one action over another; and programmatic requirements the actions will place on the Georgia Archives.

Procedures for the transfer of physical media to the Georgia Archives, namely CD-Rs have been issued as an intermediary acquisition method during the grant. Project staff evaluated a SSH (secure shell) transfer protocol in use by the Washington Digital Archives for use in Georgia and issued procedures for the use of an FTP site to transfer records. In addition, the Georgia Archives has access to a secure FTP server through the Office of Secretary of State. Staff is following up the grant project by developing procedures for utilizing this site as well.

The project team envisions three methods of transfer that equate to the technology sophistication of the agency.

1. Bottom Tier -- transfer of physical media – manual
2. Middle Tier -- FTP via web – external to state backbone
3. Top Tier -- direct transfer via proxy server is our transfer method of choice. Internal to state network, historical data is 'pushed' to the digital archives at regular intervals. Testing of this method was not completed within the grant period and is still in pilot with the GTA.

The three tiers of agencies are fully described in the Vision Statement (Georgia Administrative Code, 590-6-1-.01).

4. **Case study of project development.** Three case studies were completed during the grant project. Each discusses a different aspect of the grant and the development of a digital archives.
  - Case Study: Implementing an Electronic Records Management Application in a State Agency.
  - Case Study: Planning for Georgia's Digital Archives
  - Case Study: The Digital Records Center as a Preservation Tool

A fourth case study or white paper has been completed post-grant and submitted to the Office of the Governor to provide an overview of the project. This whitepaper contains a proposed budget for system implementation and ongoing maintenance.

5. **Possible program sessions at annual meetings of grant partners, at COSHRC, and at NAGARA.** Two presentations were given discussing the grant project. In September, Amelia Winstead spoke at the Document Automation for the Enterprise conference in Arlington, Va. The topic of her discussion was "Lifecycle Management of Electronic Records in Georgia." In the presentation, the case study and demonstration project with Pardons and Paroles was discussed. In October, Amelia addressed the National State Auditors Association's Information Technology Conference on the topic of "Technology Changes and Their Impact on Archival Data." This session discussed the difficulties of preserving electronic records and the standards and policies being developed for the Digital Archives. A session proposal for the 2007 NAGARA meeting in Kansas City is being discussed.

#### **Additional Work Completed:**

In addition to the planned grant products, staff was able to capitalize on several opportunities to accomplish additional work. A description of these products follows:

1. **Appraisal of parole record and evaluation of appraisal/scheduling process.** The selection of the parole and clemency record as a case study for lifecycle management of electronic records in Georgia proved to be a wise choice. Concerns for security and reliability of the records over time resulted in development of a regimented paper based system. When PAP began to move their processes into an electronic environment, these same stringent procedures and controls moved forward with the records. File plans and metadata had already been developed for these records. The Archives project team simply had to work with PAP in analyzing the need for and potential uses of the data.

PAP maintains its parole records as case files documenting the oversight of parolees until their release. The paper case files average over 100 documents per case and in the past were scheduled for destruction. This decision was based on the volume of case files and the difficulty of purging the records to remove confidential and temporary information. As the case file moved into an electronic format, PAP and the Georgia Archives began discussions over the possibility of preserving key information within the files. As the project team evaluated the records, it focused the analysis on the identification of information/individual documents within the case file that were of possible historical value. Ryan Speer of the Georgia Archives joined a

Records Project Team at PAP that was charged with making a recommendation that identified information/documents of historical value. The project team recommended that five documents within the case file be preserved.

As part of the project, the team also evaluated the scheduling process to recommend possible changes. No changes were recommended. At this point, current scheduling procedures work for digital images which can be considered as records series. The Georgia Archives will continue to work with PAP in evaluating scheduling procedures as PAP moves toward the use of e-forms in the ECOAVS.

2. **Development of procedures covering the scanning, indexing and quality control of parole images.** The second major task of the Records Project Team was to draft procedures documenting the processes involved in scanning the parole records. As mentioned above, PAP maintains a highly structured and regimented record keeping system in response to the need to produce its records as evidence in court. This need continues forward into the electronic system. The documentation of all procedures is seen as critical to ensuring this need.
3. **Adoption of DoD5015.2-STD by the state as a technology standard for document management and enterprise content management software.** The preservation methodology for the digital archives is based on the issuance of policy and standards guiding the creation of archive-ready records. As a starting point to this methodology, staff worked with GTA to draft and submit a technology standard for the use of enterprise content management software. Such software can be utilized as a part of an agency's document management system, adding records management functionality into the IT infrastructure. Once approved, work began on identifying the requirements for a request for purchase (RFP) to establish a statewide contract for the purchase of compliant software.
4. **Initial release of a metadata standard.** A standard identifying required minimum metadata has also been approved and is being tested both at PAP and in the Archives on digital images. The standard will be issued in its final form following completion of the grant project. The Georgia Technology Authority (GTA) has expressed an interest in jointly issuing the requirements as an enterprise technology standard.
5. **Identification of functional and technical specifications for a digital archives system.** Working with our agency advisors and GTA, staff is identifying the technical requirements for preserving digital objects. These requirements will become a blueprint for the full implementation of the digital archives. Once the technical requirements have been completed, the Department of Audits (one of our agency advisors) will provide a third-party

review and evaluation of the requirements paying particular attention to security needs.

### **Difficulties Encountered**

The project encountered several difficulties, many of which we are still working to resolve. The grant project itself got off to a rocky start with the late arrival of the formal award notification letter. Ultimately, this pushed all major project deadlines back by three months. The project team determined not to apply for an extension and was able to reorganize the project schedule to complete the work. Personnel difficulties, namely hiring and retaining project staff, dogged the steps of the project team the entire grant period. However, this is simply a reflection of the job market in Atlanta and the ability of individuals to find higher paying jobs. Many state agencies are currently experiencing difficulties hiring and retaining qualified IT staff.

Staffing will remain a challenge for the near future. The Archives is evaluating several options for maintaining a consistent flow of staff in key technology positions. Among the ideas being considered is participation in the cooperative programs of the Georgia Institute for Technology (Georgia Tech) through which students are given professional level experience while completing their degrees. Participation in this program would provide the Archives with a steady stream of qualified IT professionals as well as provide these an educational experience in the challenges of digital preservation.

Technical difficulties encountered on the project included the failure of staff to include all necessary hardware and software in the original budget propose (easily corrected) and the inability to connect between the Secretary of State and PAP networks because of a GTA-owned firewall. Although initially nerve wracking, all were successfully resolved. These difficulties served to highlight the critical need to have the right skill sets within reach – even if those skill sets are located in another agency that could be called upon for assistance. The strengthening of ties with GTA will only continue to grow in importance as the digital archives continues to develop.

### **Assessment**

Overall, the project was a tremendous success. It has succeeded in raising awareness of the need to manage records throughout their entire lifecycle and has opened a dialogue within state government on the challenges of digital preservation. Project staff was able to capitalize on several opportunities to complete additional work and the initial infrastructure was implemented to allow the acquisition of electronic records.

Implementation of RMA software at PAP has served to highlight the benefits and risk avoidance that can be accomplished by managing the electronic record with

the same care as the paper record was handled. Adoption of DoD5015.2-STD as an enterprise technology standard heightened this awareness causing other agencies to assess the software for purchase. To date, the Department of Human Resources, Department of Audits and Accounts, Department of Insurance, and the Department of Juvenile Justice are discussing the purchase of RMA software. The issuance of a statewide contract for the purchase of RMA software, expected to be approved in September, will enable agencies to purchase RMA software with the same ease that they currently purchase Microsoft Office.

**Total Project Costs: January 2005 – July 2006**

The table below shows the total project costs. All grant funds were expended except \$1,722.14. The in-kind match of \$333,586 was more than the budgeted \$268,379 because the addition of staff into the project from both GTA and the Board of Pardons and Paroles. A detail list of staff and time is attached.

	Grant Funds		Cash Match		In-Kind Match	
	Budgeted	Spent	Budgeted	Spent	Budgeted	Spent
Salaries & Wages	\$ 51,804	\$51,804			\$197,643	\$ 245,663
Fringe Benefits (staff only)					\$ 70,736	\$ 87,923
Consultants/Travel	\$ 8,600	\$ 8,600				
Supplies	\$ 2,700	\$ 2,700	\$ 3,330	\$2,723.66		
Services	\$ 30,432	\$ 30,432	\$ 10,487			
Other Costs	\$ 94,045	\$ 92,322.86	\$ 5,000	\$10,098.30		
<b>Total</b>	\$187,581	\$185,858.86	\$ 18,817	\$12,821.96	\$268,379	\$333,586

**Next Steps**

Having tested and implemented an initial technical infrastructure that ensures the secure transfer and storage of historical digital records, the next steps are to flesh out the remaining portions of the digital archives. Functional requirements (the work processes performed) for the digital archives are already in draft. GTA has offered to assist in identifying the technical requirements for the digital

archives and has developed an enterprise architect to the project. With the assistance of GTA, a work plan is being developed for full implementation of the digital archives. Among the steps in the work plan are such technical concerns as:

- Identifying the business rules needed to automate processes within the Digital Archives System
- Designing workflow processes in support of business rules, automating the processes where possible.
- Implementing the technology infrastructure needed to preserve and provide access to records.
- Exploring the role of dark archives in the protection of confidential data and the preservation of digital records.
- Developing and/or test procedures for the creation of preservation copies of digital objects and for the preservation and maintenance of the original bit stream.

And such content and policy-related concerns as:

- Evaluating the extent to which archival appraisal models can apply to email and various types of datasets beyond digital images.
- Issuing enterprise standards and policy in support of archiving geospatial data, email, and other types of datasets.
- Developing sustainable partnerships that ensure the preservation of records beyond changes in administration and staffing.

The policy structure developed during the grant project will be validated and refined as the work above is completed. A second lifecycle management project is planned with the Enterprise Architecture group at GTA. Partnering with Microsoft, the Archives and GTA will select a business process in state government, conduct a business process analysis, define the business rules for records management in the process, and implement Microsoft SharePoint server and Office 2007. The goal of this project is to issue guidelines on the use of the records management functionality embedded within Office 2007. In theory, smaller agencies that are unable to justify the expense of purchasing RMA software would be able to manage their electronic records through Microsoft. The guidelines will also include procedures for transferring permanent records to the digital archives.

Finally, the Georgia Archives is preparing for a change in administration. The upcoming November elections will bring a new Secretary of State to the agency. Nationally, digital preservation is a tremendous issue for the National Association of Secretaries of State. The Georgia Archives is hoping to capitalize on this issue and gain executive level support for the digital archives as we move forward.

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Director, Georgia Archives

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Date

Attachments

1. Case Study: Implementing an Electronic Records Management Application in a State Agency
2. Case Study: Planning for Georgia's Digital Archives
3. Case Study: The Digital Records Center as a Preservation Tool
4. Georgia Administrative Code 590-6-1, Digital Archives
5. Analysis of Parole Record
6. Parole Scanning Procedures
7. Metadata Standard
8. Enterprise Technology Standard 01-001-STD, Design Criteria for Electronic Records Management Applications
9. Digital Archives Preservation Strategy
10. In-Kind Match, January 2005 – July 2006