Committee on Electronic Records and Information Systems (CERIS)

Status of the Preservation of Electronic Records by State Archives

April 23, 2004

STATUS OF THE PRESERVATION OF ELECTRONIC RECORDS BY STATE ARCHIVES

INTRODUCTION

The NAGARA Committee on Electronic Records and Information Systems (CERIS) fosters collaboration and information sharing among government archivists and records administrators about the management of information systems and the preservation of electronic records. The Committee also educates NAGARA members by coordinating the quarterly publication of *Crossroads* and other materials, developing sessions for the annual meeting, and posting information on the NAGARA web page. Furthermore, the Committee serves as a resource for the NAGARA Board about electronic records issues or projects as the board directs.

SURVEY

In July 2003 CERIS decided to survey the 50 state archives to determine if they were acquiring government electronic records, and if they had preservation plans in place for these records. The survey was distributed in August via the listserv of the Council of State Historic Records Coordinators (COSHRC), and follow-up surveys were distributed to people who did not respond initially. Eventually, responses were received from 42 states (84% response rate).

QUESTIONS AND ANSWERS

The survey asked each state archive four questions:

1. **Does your state archives actively solicit electronic records from government agencies for transfer to the repository?**

13 state archives answered "yes" (31%). Three states are actively acquiring websites of state agencies. Three states mentioned that they were actively appraising electronic records, while one state indicated that it is appraising records regardless of format. Two states said they did not have the resources for an electronic records program. Three states stated that they request records in human-readable formats. Two states responded that they convert electronic records into microfilm.

2. **Has your state archives taken custody of electronic records created by government agencies within the past five years?**

30 state archives answered "yes" (71%). Since only 13 state archives indicated that they actively solicit electronic records, this means that 17 states (40%) that do not solicit electronic records are accessioning the electronic records with archival value that are offered to them. Apparently, these state archives are accepting responsibility for preserving electronic records without sufficient resources for fulfilling this obligation.

3. **Do you have an active program for ensuring long-term access and preservation of these electronic records, or are you acquiring the records in hopes that a future program will be able to preserve the records?**

13 state archives answered "yes" to having an active program (31%). Apparently most state archives are taking custody of electronic records without any plan or tools in place to ensure they are preserved. Several states mentioned that a paper or microfilm copy of electronic records would be created. One mentioned the need for strategic planning for an electronic records program. Several states have guidelines in place or are developing guidelines. Three states mentioned that they are monitoring research and hope a solution will be available in the future. Two states discussed collaborations with other agencies.

4. **Does your state archives intend to permanently preserve these records electronically, or do you intend to convert the electronic records to a human-readable format for preservation purposes?**

24 state archives answered "yes" to keeping these records electronically (57%). Many states discussed trying to keep records in electronic form as long as possible. Two states responded that their decision to keep records electronically depended upon the type of electronic record. For example, word processed documents and e-mail might be good candidates for conversion to microfilm or paper, while relational databases would remain electronic. Those state archives that responded "no" to this question (18 state archives, 43% of respondents) indicated that they are not even considering the option of electronic preservation, and that they are relying solely on conversion to human-readable formats to keep their electronic records accessible and usable.

ANALYSIS OF RESPONSES

It is clear from this survey that most states have taken custody of electronic records, even though most are not soliciting them. Why are they not soliciting electronic

records? Seven of the state archives that are not actively soliciting electronic records commented that they lack key resources, such as funding and adequate and knowledgeable staff to run an electronic records program. Seven of the state archives that are not actively soliciting electronic records commented that they are still in the process of developing plans for a future electronic records program. However, eight of the state archives that are not actively soliciting electronic records commented that they are either converting their electronic records to human-readable formats, or that they are waiting for technology solutions to become available.

While some respondents did not supply comments to elaborate on their survey answers, many indicated that circumstances required them to acquire electronic records they had hoped to preserve in human-readable formats. For example, two state archives indicated that floppy disks had been packed in boxes containing mostly paper records. Eleven state archives commented that the archival record was only available in an electronic format. In this type of situation, the state archives probably determined that it was better to acquire the records electronically than not to take them at all. This is highlighted by the fact that five state archives that do not solicit electronic records possess electronic records created by former governors.

RECOMMENDATIONS

Research into preservation solutions for electronic records has advanced significantly in recent years. Within a few years tools will be available to archival repositories that wish to accept the responsibility of preserving electronic records. The Open Archival Information System (OAIS) model was published in 2002 to provide a framework for building trustworthy and reliable digital repositories. The San Diego Supercomputer Center (SDSC) has been working for several years to build preservation tools that borrow concepts from the OAIS, InterPARES and other models. Recently, NHPRC funded the Persistent Archives Testbed (PAT) Project which is conducting case studies that will evaluate the effectiveness of preservation tools developed by SDSC using electronic records acquired by four state archives (Michigan, Kentucky, Ohio and Minnesota). Furthermore, NARA's Electronic Records Archives program is building a massive system that will authentically preserve and provide access to any kind of electronic record, free from dependency on any specific hardware or software, enabling NARA to carry out its mission into the future. Also, initiatives to develop open file formats and the PDF-A standard may also assist with the preservation of electronic records.

However, even if these research initiatives prove successful, and preservation tools become available for purchase, many state archives will continue to face challenges

associated with using these tools. Each state archive that attempts to develop an in-house preservation program for electronic records will need to purchase equipment that will need to be upgraded every few years, and will need to hire curatorial staff with significant technical expertise to operate and maintain the equipment. Few state archives will have sufficient funding to be able to support the staff and equipment.

NAGARA could assist state archives by raising the level of awareness nationally about the challenges associated with preserving electronic records. Individual programs are often poorly positioned within their own government organizational structure to make their voices heard. The NAGARA Board could help its members communicate with the various top officials in government through the professional associations that serve those groups of officials, such as the National Governors Association, and the National Conference of State Legislatures. The journals, newsletters, conferences, and task forces sponsored by these associations can serve as a device for communicating with government officials on a large scale. In addition to raising general awareness about the value and importance of government archives and records management programs, one of the goals of this advocacy effort could be to increase funding for electronic records preservation activities.

Individual state archives may be more successful building their electronic records preservation program if they do not need to start from scratch. NAGARA could help state archives by coordinating a collaborative endeavor. The benefit to the participating institutions is that they would not need to re-invent the wheel 50 times, and they could share a knowledge base about addressing preservation challenges as technology evolves over time. A cooperative repository could reduce the costs incurred by individual institutions, because costs and risks would be shared by members. Furthermore, states that are hesitating to venture into the realm of electronic records preservation would be given a new incentive to do so. Of course, a cooperative repository will not be free, and individual state archives will still need to find and justify new money to pay for electronic records preservation. However, as the survey illustrates, many state archives are already building a business case for their electronic records programs by acquiring valuable records.

The cooperative repository would be used to store, maintain, preserve and provide access to the archival electronic records that are accessioned by member archival institutions. The architecture will need to be neutral enough to accommodate individual appraisal and accessioning practices, and it will need to have robust security that can protect confidential or sensitive records. It would take advantage of recent research projects that are developing prototype preservation tools, and it would be

based upon the principle that in a networked environment electronic records can be physically stored anywhere.

Financial assistance from NHPRC could be used to assemble a project team that would design the cooperative repository. This team would conduct the necessary research to develop an architecture for the cooperative repository. This architecture would identify technical requirements, as well as procedural, administrative and funding issues (i.e. a business model).

Once the architecture is defined, the team would prepare a Request for Proposal (RFP) for distribution to various service providers who may be interested in building and maintaining a preservation system that complies with the architecture. The project team would also be responsible for reviewing the bids, selecting a service provider and monitoring the construction of the preservation system. Once built, each participating institution would be responsible for appraising, selecting and providing reference services for electronic records that would be preserved by the cooperative repository. The business model would define the amount of money that each participating institution would need to contribute for the services provided by the repository.

It is time for state archives to take their electronic records preservation programs beyond the policy and guideline development stage. Too many states are acquiring valuable electronic records that they are not prepared to preserve.

Appendix 1: CERIS Survey Statistics

State	Question #1	Question #2	Question #3	Question #4
Alabama	Yes	Yes	No	Yes
Arizona	No	Yes	No	Yes
Arkansas	No	No	No	No
Colorado	No	Yes	No	No
Connecticut	No	No	No	No
Delaware	Yes	Yes	No	Yes
Florida	No	No	No	Yes
Georgia	No	Yes	No	No
Hawaii	No	No	No	Yes
Idaho	Yes	Yes	No	No
Iowa	No	No	No	No
Kansas	No	No	No	No
Kentucky	Yes	Yes	Yes	Yes
Louisiana	No	Yes	Yes	No
Maine	No	No	No	Yes
Maryland	Yes	Yes	Yes	Yes
Massachusetts	No	No	No	No
Michigan	Yes	Yes	No	Yes
Minnesota	No	Yes	Yes	Yes
Mississippi	Yes	Yes	Yes	Yes
Missouri	No	Yes	Yes	No
Montana	No	No	No	No
Nebraska	No	Yes	No	No
Nevada	No	No	No	No
New Hampshire	No	Yes	No	No
New Jersey	No	Yes	Yes	No
New Mexico	No	No	No	Yes
New York	Yes	Yes	Yes	Yes
North Carolina	Yes	Yes	Yes	Yes
Ohio	No	Yes	No	Yes
Oklahoma	No	Yes	No	Yes
Oregon	Yes	Yes	No	Yes
Pennsylvania	No	Yes	Yes	Yes
South Carolina	No	Yes	No	Yes
South Dakota	No	No	No	No

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State	Question #1	Question #2	Question #3	Question #4
Tennessee	No	Yes	No	No
Texas	No	Yes	No	Yes
Utah	No	Yes	Yes	Yes
Virginia	No	Yes	No	Yes
Washington	Yes	Yes	Yes	Yes
Wisconsin	Yes	Yes	No	Yes
Wyoming	Yes	Yes	Yes	No
	Yes=13 (31%)	**Yes=30 (71%)**	**Yes=13 (31%)**	**Yes=24 (57%)**
	No=29 (69%)	**No=12 (29%)**	**No=29 (69%)**	**No=18 (43%)**