Preservica
Active digital preservation

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*Glen McAninch,
Branch Manager*

The Kentucky Department for Libraries and Archives Expands its Capacity to Manage and Preserve Valuable Digital Records with Preservica

Introduction

The Kentucky Department for Libraries and Archives (KDLA) is one of the largest state archives collections in the U.S. and has been a pioneer in archiving electronic records since the early 80s. At that time, KDLA received grant funding to establish an electronic records program to inventory electronic records and develop a management program for them. Subsequently, KDLA established its Electronic Records Archives (e-Archives) as a way to manage digital public records and make them available to its citizens. By the mid 1990s, as many state agencies began to put their records on the internet, the State Archives began actively collecting these records for its e-Archives.

Today, the Kentucky State Archives e-Archives collection includes web sites, publications, minutes, geospatial (map) data sets, databases, digital images, plus video and audio recordings. Although this information is valuable for a variety of reasons, such as historical interest and legal or regulatory research, the state is also mandated by statute to preserve the records of state government that are classified as permanent by the State Archives and Records Commission.

Business Situation

"Although Kentucky is legally mandated to preserve its government records, the importance of doing so goes far beyond simple legal compliance." explained Glen McAninch, Branch Manager for the unit overseeing KDLA's Electronic Records Archives. "If permanent records are lost, the Commonwealth not only loses part of its heritage, but also loses research data that assists analysis of key issues addressed by government, such as public administration, the environment, transportation, health and many others. As an example, the government collects data and stores it in geospatial databases (GIS) that, until recently, were overwritten each time a change was made. In the past four years, KDLA has collected quarterly snapshots of the state-wide GIS database so that research can study trends over time."

Recognizing the importance of its electronic records archives and the preservation challenges it presented, KDLA participated in a test audit of the Trusted Digital Repository standard in 2012, before the standard was adopted by the International Standards Organization (ISO). KDLA was the only government archives

in the U.S. to participate in this test audit. The 2012 audit gave KDLA the opportunity to consider options for expanding and improving its existing digital repository and for managing the growing volume of digital content that the archives receives from its state agencies.

According to Glen, when KDLA entered the test audit, the State Archives staff had the intention to be on the leading edge of advancing the collecting and preserving of electronic records. "We recognize that there's a long way to go," he added, "and we're all looking for the best answers at this point. We want to continue to learn and improve. We realize that things are developing, and continue to try different approaches, whether participating in a grant project, doing a test audit, or just plunging in and seeing what the problems and opportunities are for various software and management approaches."

Business Challenge

For KDLA, and for many similar entities, long-term management of electronic records is a continuing challenge. There are several reasons for this: maintaining an archival copy of a digital record is a relatively new concept, e-record formats are constantly changing, and, in many cases, no additional funds are budgeted for electronic records and digital preservation. Although many state government records are transferred to the archives in analog formats, such as paper and microfilm, electronic records are generally best preserved and made accessible in the format in which they were created or meant to be used, or scanned from paper.

While accessibility can be a key advantage to electronic records, preserving them is much more difficult and costly than those in analog formats. Some e-records, such as websites and databases, for example, cannot be accurately preserved in a non-electronic media. KDLA's method to protect its digital assets was to manually convert records individually, copy them to multiple locations, and perform procedures (virus, fixity and quality assurance checks) on batches of files when they were first accessioned. These procedures were labor intensive and the collection of technical metadata and integrity checking were not automated.

By participating in the test audit, KDLA was able to identify areas of improvement for its digital preservation and electronic records program that led it to look for software products or services that would meet part of the requirements of the international standard.

Solution

KDLA had initially heard of Preservica through other archival institutions participating in tests. They had also received demonstrations of its technology while doing a grant-funded preservation project related to GIS records. KDLA also looked at other archival management companies to evaluate other products and solutions that might meet the preservation requirements KDLA needed. After testing Preservica for six weeks and comparing its preservation functions against other products, KDLA concluded that Preservica was the best solution.

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As Glen explained, "Based on the audit requirements, we knew that cloud-based storage would provide a means for geographically distributing multiple copies of records. Preservica provides automated technical data collection and format migration tools offered in a reasonably priced cloud based service that requires little or no on-site maintenance. And while some competitors could provide storage, their services (normalization, migration and extraction of technical metadata) were much more limited than Preservica. Preservica is one of the few companies that has full preservation services."

Site maintenance in particular was attractive to Glen. "This is a plus because we don't have to be IT dependent," he noted. "With Preservica, KDLA doesn't have to be hands-on for every detail. Maintaining an IT unit to support archival preservation can be costly. Today, even the cost of storage is undergoing scrutiny, and cloud based services like Preservica are an important preservation resource."

Since KDLA had used Preservica during a brief test period, once it was in place, staff could begin using the ingest functions immediately. Ingest was not started in earnest, however, until staff affirmed a hierarchical structure and procedures for entering accession metadata for each batch of files uploaded. Integrating Preservica's active preservation space with KDLA's DSpace data storage repository is a work in progress, but KDLA staff and Tessella staff now have a strategy for importing records from DSpace into Preservica.

Benefits Going Forward

KDLA has used Preservica regularly since the beginning of 2013. As Preservica is the first solution in the market to offer a wide-range of preservation services, KDLA has benefited by being an early adopter in that it is able to influence the development of the product and begin to address the agency's many preservation challenges.

One of the current challenges KDLA staff is addressing is how to maintain provenance data (e.g., how received, who/where from, and when) of electronic records. Keeping this information is essential to future use of increasingly complex data. KDLA records some provenance information for each accession in a separate Preservica accession metadata section. Preservica also addresses the provenance issue for websites, with its capability of harvesting websites with the data linked and distributed in various layers. It can also extend the provenance in migration to different formats, by documenting the transformation from the original format.

This is particularly relevant for rich content such as video and audio, so that both the functionality and the information are preserved."

"We've been working with Preservica staff very regularly," said Glen, "and they've been very responsive at trying to either solve little glitches or alter their programs. They regularly do updates to the program with inputs from the users around the world. We like that approach of being able to have some input on how things are developing so that it meets our needs and, I hope, the needs of others. It's very challenging dealing with complex data sets like GIS. Also, the connections from our network will need to be upgraded to upload high volume files like audios and videos. Preservica is innovative and its knowledgeable staff show a willingness to work with KDLA to adapt to these challenges."

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