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Adapting an Analog Records Management System for the Ingest and Accession of Permanent Electronic Records

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Cover Page Footnote

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Case Study: Adapting an Analog Records Management System for the Ingest and Accession of Permanent Electronic Records

Introduction

The Records and Archives Division of the Office of the Missouri Secretary of State (hereafter MSA) received two National Historical Publications and Records Commission (NHPRC) grants for the purpose of establishing an electronic records program at the Missouri State Archives. The first grant covered planning, staff training and a consultant who determined that minor modifications to the current State of Missouri Agency Records Tracking (SMART) System would allow for the ingest of permanent electronic records. The second grant funded the SMART upgrade and the purchase of data-grabbing equipment. The upgrade succeeded and MSA was able to ingest 150 GB of permanent electronic records via the SMART System.

Keywords: grant project, digital records, state government, electronic records management, digital archives.

Project Background and Significance

The efforts of state and local governments to better serve Missouri citizens has led to the increased creation and reception of digital records by state agencies. Digital records, being more easily transmitted and accessed by agencies and the public alike, aide in the efficiency and transparency of government processes, making electronic records the preferred medium for many government transactions. Thus, MSA was obligated to begin development of an electronic records program for the long-term management of permanent digital records. MSA received two grants from the NHPRC for the project: #NAR 13-RE-10053-13 and #NAR 15-RG-50006-15.

Grant I

The first grant, awarded in 2012, funded the planning phase of the project, including training for MSA's professional staff in the Society of American Archivists Digital Archives Specialist (DAS) program and the hiring of a consultant, William Saffady, to give recommendations on the steps necessary for developing a trusted digital repository based on current collections. Saffady, author of *Records and Information Management: Fundamentals of Professional Practice*, suggested that modifications to the SMART System could create an efficient mechanism to ingest electronic records. This proposal was favored because it averted the cost and inconvenience of designing and installing a completely new and separate system on which the archivists and outside state agency personnel would have to be trained.

Grant II

The second grant, awarded in 2014, funded the implementation phase of the project. The goals of this grant were to upgrade the SMART System for electronic records ingest to the archives, to refine the policies and procedures drafted as a product of the first grant, and to purchase a data grabber to extract electronic records from external media.

Additionally, this grant's performance measures included developing policies and procedures for the transfer and storage of electronic records; working with a minimum of three participating state agencies to transfer their electronic records to MSA; training at least twelve internal and

external staff to transfer electronic records to MSA; processing and preserving at least 1 GB of data and providing access through MSA's reference unit to a minimum of 2,500 unrestricted records.

Methods

MSA believed leveraging existing agency workflows for transferring analog records via the SMART System would improve the long-term viability of the electronic records program. The SMART System is a web-based SQL database created by Infolinx Software Solutions of Kensington, MD that has been successfully used by Missouri's state agencies since 2008 to track, store, and retrieve analog records. Infolinx Records Management Software provides enterprise records management solutions for managing the full life cycle of physical records and digital content/electronic documents. Infolinx customizations allow MSA to manage records from creation to destruction from a single, browser-based application, regardless of media type. At the time of the grant project, there were over 1,500 trained users actively using SMART across 430 state agencies. MSA worked with Infolinx to enable users to create and transfer electronic records within the SMART System.

For the purposes of the pilot project, MSA limited the number of its partner agencies, targeting those that had already approached MSA about transferring electronic records. The partners were the Office of the Governor, the Office of the Lieutenant Governor, the Office of the Auditor, the Missouri General Assembly, the Department of Corrections, the Department of Transportation, the Department of Social Services, and the Missouri State Archives. The volume of permanent electronic records created by these agencies was relatively small, making this an achievable initial effort.

There had been discussions with other potential partner agencies, some of which had existing electronic records processes within their agencies that could not be met by the current SMART System upgrade. The Office of the State Courts Administrator (OSCA), for instance, preferred a system-to-system transfer as opposed to users transferring files manually. They also raised security concerns with ingest being FTP, while MSA was concerned that a system-to-system transfer increased the likelihood of confidential or restricted records being transferred in error. Even so, an automated transfer scheme, such as the one OSCA would prefer, is under consideration for future SMART upgrades.

Implementation

The SMART System was upgraded in January 2016, and the new role of Electronic Records Liaison (ERL) was created to assist grant participants in submitting electronic records to MSA. This prevented general users from being able to access the electronic records submission tab, giving MSA control over which records were uploaded. MSA required all ERLs to have legal authority from their originating state agency to transfer the physical and intellectual rights of their agency records to MSA.

Since metadata in SMART was largely created by consumers, MSA developed a schema that encouraged the use of the new system through its ease of application, while providing the information necessary for long-term preservation of the electronic records. The requirements for electronic records were similar to those for analog records, including department information,

record series, description, and date(s) with additions of file type(s) and a submission acknowledgment check box.

Grant staff chose not to require certain metadata from users out of concern over a lack of technical knowledge, especially in agencies with high staff turnover. Additional metadata, such as record group and accession numbers, are added by MSA processors following accession.

In working with actual file uploads from state agencies, MSA processors were able to develop and streamline procedures for accessioning electronic records. After an agency submits an electronic file, an MSA records analyst notifies a processing archivist of the Submission Information Package (SIP) receipt. The archivist verifies the file integrity of the submission by comparing the checksum, used to detect errors in data, of the file received to the file submitted, opens the file to make sure it is not corrupted, and verifies that all basic information on the SMART record is sufficient for accessioning. If the submission is insufficient, the processing archivist requests that the records analyst contact the agency regarding the missing information or resubmitting the record.

Once the file is determined to be complete, it is accepted into the electronic records archives for processing. If the record does not contain restricted information, the processing archivist adds the processed date at the completion of processing and notifies the appropriate analyst that the file has been successfully accessioned. The analyst then notifies the agency that the record has been successfully accessioned and that it may be deleted from the agency's system. The addition of the processed date alerts the reference staff that the Dissemination Information Package (DIP) is ready to be accessed.

The upgrade also gave MSA processors the ability to upload legacy records, such as committee minutes on CD-ROMs, and to identify future upgrade possibilities, such as higher GB limits for audio and video files. One of the additions made to SMART during this process was a confidential/closed/restricted checkbox on the mail ingest page to help insure that these records are not inadvertently accessed by the public. If the record is marked "restricted," access will not be granted without redaction of the restricted content. Any record that has been designated as "confidential" is either restricted by statute or includes information or matters that are privileged and to which public access has been generally denied by law. In this instance, only government officials who need to use the information in the performance of their duties are permitted access. A record identified as "closed" is closed by statute.

There were ten ERLs across participating state agencies, who submitted a total of 150 GB of electronic records, and eleven MSA users, four of whom ingested Secretary of State records into SMART. Records or folders had to be less than 2GB for submission through SMART. For records or folders greater than 2GB, descriptive information was entered into the system and the files were sent to MSA on optical media (CD, DVD), thumb drives, or external hard drives. After submission, ERLs received an automated email confirming the upload and stating that they must wait for approval from their assigned analyst before deleting the original record from their system.

Of the 40,239 electronic records ingested, 13,567 of these are now accessioned and available to the public and state agencies via the MSA Reading Room.

Results

By the conclusion of the project, MSA had met or exceeded all of the grant requirements. The SMART System was updated to ingest electronic records and twenty-one internal and external staff members were trained to use it for electronic record submission and management. In all, 40,239 electronic records from eleven state agencies were successfully ingested via SMART and 13,567 of those have been accessioned and made available to the public and state agencies. A total of 150 GB of data has been preserved. This number does not include duplicate uploads and partial uploads that “timed out” because of the size of the file, which had been included in earlier file ingest numbers. All policies and procedures were refined as the project unfolded and the final versions were made publicly available on MSA’s website and the Council of State Archivists (CoSA) web portal.

Discussion

ERLs reported that the training to submit electronic records was easy to learn and use. Since all SMART System users are required to take an online course in order to work within the system, training for electronic records could be easily scaled up to a larger user base.

Submitting records through the SMART System was not only convenient for agencies, it was also beneficial for MSA. Currently, electronic records are received intermittently, typically on CD or DVD, as physical records are transferred. Giving state agencies the option to upload electronic records directly to MSA could make transfers more timely, helping MSA improve access to records.

Conclusion

MSA ingested electronic records from participating state agencies through the well-established SMART System, saving the time and costs of a new and separate system dedicated to electronic records and training on the new system for agency personnel. Given SMART’s wide use and established training programs within state government, scaling up the successful pilot to include all state agencies will be relatively easy. This initial effort proved that MSA can meet the challenges of ingestion posed by increasing creation and use of electronic records in state government in an efficient and cost-effective way.