

Background

The Minnesota Historical Society (MHS), San Diego Supercomputer Center (SDSC), Minnesota Revisor's Office (RO) and Legislative Reference Library (LRL) launched a project to preserve the electronic records of the Minnesota legislature in April 2005. The advisory board, which consists of the California Legislative Counsel, State Archives and State Library, are also a part of the project. With their assistance, the MHS will provide a final evaluation of the SRB software and grid technology offered by the SDSC, both in regards to the preservation of selected Minnesota legislative documents and with respect to implementation by other states, such as California.

The phases planned for the project are (some overlapping):

- Phase 1: Preparation (April-June 2005)
- Phase 2: Research and analysis (June 2005-June 2006)
- Phase 3: Testing and implementation (June 2006-January 2007)
- Phase 4: Evaluation and advocacy (January 2007-June 2007)
- Phase 5: Completion of final reports and products (June 2007-September 2007).

A project work plan, which looks at the phases in more detail, is available on the project web site (www.mnhs.org/preserve/records/elegislature/Workplan-28june06.pdf).

Project Objectives

Objective 1: Timely submission of complete reports and three copies of grant products.

The MHS team has completed three interim project reports: November 2005, April 2006, and November 2006. The team will complete another interim report in April 2007 and the final report in September 2007, along with copies of the grant products.

Objective 2: Hire a project archivist and finalize contract with the SDSC. Appraise legislative electronic records from the Minnesota Revisor's bill drafting system.

The project archivist was hired and the contract with the SDSC was finalized in the beginning stages of the project. The MHS project team is formalizing the appraisal of target records identified for preservation from the Revisor's bill drafting system. These records include the final edited session laws, final edited statutes and their associated tables and indices, and the administrative rules and their associated tables. These are the only records we plan to transfer in this project.

Objective 3: Review and analyze Minnesota Revisor's XML Schema.

The MHS has met with staff from the Revisor's Office frequently during the course of the project and has closely reviewed the Office's XML schema. The team is now exploring options

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for associating metadata to the electronic records including using the Revisor's Office XML schema as a basis. The MHS team has copies of the RO's DTD, which will help inform the metadata schema.

Also, the MHS team and Revisor's Office is in the process of comparing the RO's XML schema to other states legislative XML schemas and organizations such as the NCSL. This is an important step to learn what is necessary in a XML schema for other states to set up a similar system. This information is needed in order to participate in any multi-state collaboration.

Objective 4: Install Storage Resource Broker (SRB) and grid-bricks.

The installation of the grid bricks and the SRB software was completed in 2005, although there have been some significant technological challenges. With regard to the SRB installation in the MHS Windows environment, there have been issues with the firewall, particularly in conjunction with SRB version upgrades; with Scomands for file management (lack of documentation and bugs in the software); and with bandwidth capacity for file transfers. This last item is also an issue for the Revisor's Office, as that system often times out in the process of a file transfer. While new versions of the SRB software offer enhanced performance, the frequent upgrades have made it difficult to keep up with the technology and set a routine.

At this time, use of the SRB is quite labor-intensive, but work in Phase 3 may resolve, or at least better define, many of these problems. SDSC staff have worked closely with the MHS and the RO to resolve the above-outline issues, offering assistance by telephone and e-mail to get the system working. They have also pointed to online support materials (www.sdsc.edu/srb), including an SRB chat room, tutorials, and wiki pages and these resources will be further explored as part of the Phase 3 work.

The RO and MHS will continue to define a record workflow for moving and managing files between the RO, SDSC and the MHS. It appears that the most efficient system is to have the RO transfer selected files directly to the SDSC once they have been finalized within the XTEND bill-drafting system, with MHS staff performing necessary management activities on the files once they are in SDSC storage. Phase 3 work will include defining an SDSC-side directory structure, naming conventions, and recordkeeping metadata, as well as testing variations on the file transfer and management process to establish a routine. The MHS and RO will work with the SDSC to determine what functions can be automated or done with specialized tools to increase efficiency.

Objective 5: Maintain a project web page with all written materials available online.

Currently the project web site (www.mnhs.org/elegislature) offers access to several reports, including the "Minnesota Revisor's Office Workflow and Document Type Summary, Minnesota Senate and House Document Type Summaries, and the Joint Departments and Commissions Document Type Summary." As the MHS team finalizes other reports, such as the cost/benefit comparison and the appraisal of target records, they will be posted on the web site.

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Other materials posted on the web site include information from the September 2005 and June 2006 project meetings. Links to the agendas, participant lists, meeting summaries, presentations and other resources are provided for both meetings. Another important addition was a project work plan, which outlines the phases of the project in greater detail. This is a valuable tool used by all the partners to track the progression and next steps of the project.

Objective 6: Complete reports on the model developed in Minnesota, with evaluations from the California perspective.

In June 2006 the California Legislative Counsel, State Library and State Archives hosted the second project meeting in Sacramento, California. Representatives from the Minnesota Historical Society (MHS), Minnesota Revisor's Office (RO) and Legislative Reference Library (LRL) attended to learn more about California's legislative system. This meeting also gave the MHS team an opportunity to report on Minnesota tests and to discuss future steps of the project. The agenda, participant list, meeting summary and presentations are available on the project web site (www.mnhs.org/preserve/records/elegislature/elegislature-june06meeting.htm). The final project meeting will be in September 2007, with the location to be decided. Prior and leading up to the final meeting, the MHS team will send any new reports to the California team. The California partners will provide ongoing review and evaluations to decide if this technology is something they want to implement.

Objective 7: Provide reports on best practices to help other states position themselves to learn from this model.

During the testing phase of the technology offered by the SDSC, the MHS team will record what products are needed to make the transition to this technology in other states. Once the MHS team and Revisor's Office have a more complete assessment of the technology and the evaluation from California, the MHS team will prepare a best practices report to help other states learn from this model.

Also, as project work has advanced, the team has realized that two Phase 3 tasks need to be modified that relate to this objective. Initially, it was proposed that a web site for integrated access to digital resources and metadata would be developed and tested, along with capacity for discovery and access across resources. However, a web access prototype would run up against scalability and capability issues, as well as presuming traditional online access through specialized pages is the best solution, which can be no longer taken for granted given the array of commercial search/access options now available. It seems that a more valuable approach is to offer guidance on technological and content considerations to organizations considering the SRB and grid technology model, using the MHS/RO system as an example. Work on this product will continue through Phase 4.

Objective 8: Present papers and reports at professional meetings and journals.

Bob Horton, of the MHS, and Robbie LaFleur, of the MN Legislative Reference Library, spoke at the NCSL's NALIT annual meeting in the fall of 2005; they gave participants a preliminary

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view of the project. The contacts they made certainly informed the development of the MHS's application to the Library of Congress's NDIIPP program, in which the NCSL is a partner. Beyond that, since the project team is still in the testing phase, the team has not reported any findings at professional meetings or in journals. The team plans to do so however, during Phase 4 of the project. In preparation for this activity, the team will offer proposals to appropriate conferences in the spring and summer such as the NAGARA Annual Conference in July 2007.

Objective 9: Evaluate and appraise additional and ancillary legislative records and the context to bills and laws.

The MHS project team met with the Minnesota House and Senate IT departments as well as the Minnesota Joint Departments and Commission to learn more about the array of legislative records available to the public. Reports for each of these visits are posted on the project web site. At this point the MHS team is not planning to preserve any additional electronic records other than the ones identified in Objective 2. However, at the end of the project the MHS team will be in a position to make recommendations to these agencies to plan for their long- and short-term digital preservation.

Objective 10: Develop a cost/benefit analysis and recommendations to the legislative and archival systems.

Initially, the project envisioned focusing on record storage at the SDSC for preservation purposes. But, over the course of the project, it has become apparent that the use of SDSC for disaster recovery storage is of equal importance to the RO. The SDSC can provide safe storage for long-term preservation needs as well as short-term disaster recovery (business continuity) purposes. Meeting the needs of disaster recovery is a compelling argument for investment by agencies the MHS might partner with in the future. While there are many points of commonality between archival and disaster recovery copies, there are, of course, some different management requirements, which will be explored and articulated as part of Phase 3. In light of this, the project partners decided the focus of the cost-benefit analysis will be disaster recovery. The MHS team will do a comparative analysis between the RO's current disaster plan and what the SDSC offers. Also, the team will continue to gather evidence of need and to survey other disaster recovery options. All of this analysis will become part of the final assessment and best practices recommendations for the SRB/grid technology offered by the SDSC.