

# SAA ELECTRONIC RECORDS SECTION NEWSLETTER

June 2007

## In This Issue:

From the Section Chair.....p.1  
Collaborative Electronic Records Project  
(N. Adgent).....p.2  
E-Records: Archiving Alaska's Future  
(K. Nail, Jr.) ... ..p.2-3  
Repository Reports  
    Clemson.....p.3  
    Duke.....p.3  
    Michigan.....p.3-4  
    SLAC.....p.4  
Award-Winning Digital Prototype  
ExtendedTo West Virginia  
(P. Tooby).....p. 4-6  
Building RecordKeeping Requirements  
Into Your Information Technology  
Systems (R. Fitzgerald).....p.6-9



## FROM THE SECTION CHAIR

Welcome to the newest edition of the Electronic Records Section newsletter. The steering committee hopes that this will serve as a way for members to communicate news and other developments about their electronic records programs. While this edition is in a newsletter format, future editions might simply appear on the section's website at SAA.

## Chicago Annual Meeting

Our meeting during the SAA meeting will be on Friday, August 31 at Noon. If you have an idea for a presentation, please contact the steering committee as soon as possible. During the meeting, we will be holding elections for vice-chair/chair-elect and for a position on the steering committee. Also, please reserve the

September 1 slot for the annual meeting of the SAA membership. One of the items up for approval at that meeting will be the proposed dues increase that was discussed in the March/April edition of *Archival Outlook*.

## ERS NEEDS YOU!!

### Call for Nominations

Would you like to have a say in how the Section is run? Do you want a great way to get started in SAA leadership? Then you can run for a position on the Electronic Records Steering Committee.

We will have two vacancies to fill at the Chicago meeting. One candidate will be elected Vice-chair/Chair-elect and one candidate will serve a three year term on the steering committee.

Under ERS rules, individuals that serve as Chair rotate onto the steering committee for a three-year term when their term as Chair expires.

If you are interested in submitting a nomination or have any questions about the positions, please contact either Chair Arian Ravanbakhsh (arian.ravanbakhsh@nara.gov) or Vice-Chair Suzie Long. (long-s@mssu.edu)

## Current Steering Committee Members

For full contact information, please see the ERS webpage at:

<http://www.archivists.org/saagroups/ers/2006lead.asp>

Arian D. Ravanbakhsh, Chair  
Suzie Long, Vice-Chair/Chair-Elect  
Mark Conrad (term expires 2009)

Richard Marciano (term expires 2009)  
Kevin Glick (term expires 2008)  
Shelby Sanett (term expires 2008)  
Rosemary Pleva Flynn (term expires 2007)  
Eliot Wilczek (term expires 2007)  
Jean Marie Deken, Webmaster  
Mark Duffy, SAA Council Liaison



## COLLABORATIVE ELECTRONIC RECORDS PROJECT

The Rockefeller Archive Center (RAC) and the Smithsonian Institution Archives (SIA) are collaborating to develop and implement methods and the technology necessary for preserving and ensuring future researchers' access to information archived in electronic form. Launched in August 2005 and managed by Riccardo Ferrante, SIA Information Technology Archivist, the Collaborative Electronic Records Project (CERP) resulted from discussions between Dr. Darwin H. Stapleton, RAC Executive Director, and Dr. Edie Hedlin, former director of the SIA and a past president of the Society of American Archivists. RAC and SIA are parallel repositories in that both collect information with educational, scientific, and cultural subject matter; however, they differ in their relationship to donors as well as in the scale of their operations.

As archives and their depositors face space limitations, rising costs, and governmental regulations, business practices will dictate that materials, particularly those "born digital," be archived in electronic form. E-mail records are the primary focus of the project because of the key role e-mail plays in today's organizations and because e-mail is especially susceptible to being lost from the historical record. During Phase One, CERP archivists, Nancy Adgent at RAC and Lynda Schmitz Fuhrig at SIA, conducted interviews with selected staff members at participating depositors' offices about their use of e-mail in documenting policy and program decisions and activities. Each archive selected

three donor units for pilot tests consisting of e-mail capture, preservation, and analysis. Phase One's primary documentary product, e-mail "best practices" guidelines, is available on the RAC website, <http://archive.rockefeller.edu/CERP/>.

Currently, in Phase Two, CERP archivists are testing captured e-mail, making use copies, and drafting technical guidelines for transferring born digital records from depositors to archives. IT consultant Dr. Steve Burbeck is developing system requirements for a model digital archive to handle records assessment, transfer, classification, preservation, storage, and accessibility. The team recently reviewed its findings and summarized the issues in a presentation to the Archivists Round Table of Metropolitan New York, accessible on the CERP website:

<http://siarchives.si.edu/cerp/cerpteam.htm>.

During Phase Three, the technological infrastructure will be constructed and tested. The team will also offer solutions to any system problems encountered, prepare finding aids for records that are permanently transferred during the testing process, and propose a model business case including a cost-benefit analysis of various ways to manage electronic records. Throughout the project, team members are presenting their findings at conferences, on the project website, and via an e-newsletter. To be added to the "Friends of CERP" newsletter e-mail list, please contact Nancy Adgent at [nadgent@rockefeller.edu](mailto:nadgent@rockefeller.edu). More information about the collaborating institutions is available from their websites:

<http://archive.rockefeller.edu> and

<http://siarchives.si.edu>.

*Submitted by Nancy Adgent,  
RAC Project Archivist*



### **E-Records: ARCHIVING ALASKA'S FUTURE**

On March 19<sup>th</sup>, the Alaska State Archives and the Alaska State Historical Records Advisory Board held a special three-hour meeting for persons interested throughout Alaska; the meeting was titled: E-Records: Archiving Alaska's Future and featured presentations on what Alaska is currently doing with electronic records and what it plans to do. The highlight of the meeting was the presentation by Adam Jansen, Deputy State Archivist of Washington and perhaps the top digital archivist in the country. The meeting drew 76 persons in three venues and was videoconferenced in Juneau and in Anchorage. The session was also videotaped for later conversion to DVDs especially for those who could not attend either in person or by videoconference.

Information about our March 19<sup>th</sup> meeting – three presentations – is now available on our website at <http://www.archives.ak.state.us>, and on April 18-19, there was a meeting with Microsoft representatives to learn about the capabilities of the SharePoint software for helping to create our e-records archives system in Alaska.

*Submitted by Ken Nail, Jr.,  
Alaska State Archivist*



### **REPOSITORY REPORTS:**

#### **CLEMSON:**

Clemson University Records Management is in the process of installing an electronic records retention module. The module will ensure the

management and disposition of digitized records in accordance with approved records retention schedules. All university departments currently managing official university records housed on any electronic imaging system are participating. For details, visit <http://www.lib.clemson.edu/recmgmt/index.htm> or contact [wisaac@clemson.edu](mailto:wisaac@clemson.edu).

#### **DUKE:**

The Duke University Archives is pleased to announce the launch of DukeSpace, a pilot digital repository for electronic records managed by the Archives. DukeSpace provides access to Duke dissertations, master's papers, university reports, other open access digital content. In the coming months we plan to add born digital content received with manuscript collections and test the repository as a potential site for other Duke University

Library managed born digital content. We also see DukeSpace as a demonstration project as Duke explores university-wide institutional repository options. <http://dukespace.lib.duke.edu/>

#### **MICHIGAN:**

Michigan State University Archives and Historical Collections is pleased to announce the recent appointment of two Electronic Records Archivists. Ms. Deborah Gouin has BA from Michigan State University, MA from Central Michigan U. and a graduate certificate in archival administration from Wayne State University. She worked on the State of

Michigan NHPRC funded Records Management Application Pilot Project, and has worked for IBM and consulted with Xerox and Pfizer on electronic records.

Mr. Richard Adler has a 2006 Master of Science in Information from the University of Michigan's School of Information, with a specialization in Archives and Records Management, and an M.A. in history from Harvard University. Prior to his

## REPOSITORY REPORTS: (cont'd)

studies at U of M , he was for ten years a book buyer with Borders Group, Inc., where he had company purchasing responsibility in several areas, including American history, political science, and regional interest.

### **SLAC:**

The SLAC Archives and History Office is collaborating with the San Diego Supercomputer Center (SDSC), an NSF sponsored program, and the University of Maryland on research and development for a Transcontinental Persistent Archive Prototype (TPAP). The TPAP research is funded by the National Archives and Records Administration (NARA).

SLAC's participation in the TPAP project follows on the heels of their participation in the successfully completed Persistent Archives Testbed Project (PAT). PAT project participants conducted case studies that tested the ability to implement the SDSC's Storage Resource Broker (SRB) data grid technology in the archiving of electronic records. SLAC's PAT and TPAP project efforts are documented at [www.slac.stanford.edu/history/projects.shtml](http://www.slac.stanford.edu/history/projects.shtml). (For further information on TPAP, see Paul Tooby article, below)



### **Award-Winning Digital Preservation Prototype Extended to West Virginia**

The Transcontinental Persistent Archives Prototype (TPAP), a testbed for preserving electronic records collections from the National Archives and Records Administration (NARA) that must be maintained for “the life of the Republic,” has announced the addition of a sixth partner site at the U.S. Navy’s Allegany Ballistics Laboratory near Keyser, West Virginia.

The TPAP project, whose sites nationwide are linked by data preservation technology developed by the San Diego Supercomputer Center at UC San Diego, is addressing key challenges in safeguarding, preserving, and providing access to authentic electronic records as the nation’s information becomes increasingly digital.

Along with SDSC in San Diego, the six project sites include two NARA sites in or near the nation’s capital, the University of Maryland, Georgia Tech, and the new site in West Virginia.

A key aspect of the Transcontinental Persistent Archives Prototype is the collaborative nature of the research.

“Extending this prototype to the Allegany Ballistics Laboratory in West Virginia applies advanced SDSC data preservation technology in association with the first deployment of the high performance, low latency, networking capabilities of the Department of Defense’s Defense Research and Engineering Network (“DREN”) in the state of West Virginia,” said Robert Chaddock, principal technologist for NARA’s Electronic Records Archives Program. “This materially advances the nation’s window onto the electronic records archives of the future where shared knowledge can be managed and distributed across multiple institutions and platforms spanning the country.”

“The capabilities being demonstrated in this extended testbed are essential to ensuring continuing access to electronic records that document our nation’s history, our democratic processes, the rights of American citizens and our national experience.”

The TPAP project, built on the SDSC Storage Resource Broker (SRB) data grid system, received an Internet2 Driving Exemplary Applications (IDEA) Award in 2006 for enabling transformational progress in digital preservation research.

The project's results are expected to be a major contribution to the nation's ability to sustain a "memory" in digital form. With digital data growing exponentially across all sectors of society, the powerful freedoms it offers are accompanied by an array of threats, from the creeping incompatibility of obsolete hardware and software to data corruption, viruses, hard drive crashes, and a lack of tools able to organize, manage, and access this avalanche of data.

Today's high end data collections are reaching petabyte size (one petabyte is one million gigabytes, the equivalent of 500 billion pages of printed text), and are expected to keep growing rapidly. Experts working on these challenges, from archivists and librarians to computer scientists, are urging stepped-up efforts to implement a preservation capability to maintain at-risk data, so that future generations will have the same access to information such as digital maps of the Iraq War as today's historians have to maps of the Civil War.

"The testbed uses SDSC's Storage Resource Broker data grid software. To minimize the labor needed to maintain the preservation environment, we're working on an upgrade of the system to the new open-source Integrated Rule-Oriented Data System (iRODS)," said Reagan Moore, Distinguished Scientist and director of SDSC's Data Intensive Computing Environments (DICE) Division. "This will allow more complex and automated data management procedures which are required as the size and diversity of digital data collections continue their rapid growth."

The TPAP testbed, which already holds almost four terabytes (a terabyte is equivalent to 30,000 Encyclopedia Britannicas) of NARA federal government records in more than five million files, gains its archiving power from the "data virtualization" supported by the SDSC Storage Resource Broker technology. This data

grid manages the properties of shared electronic records collections that may be distributed across multiple storage systems. The SRB also supports federation of the six independently administered sites, enabling the unification of the records so that they appear to users as a single virtual repository.

This unified virtual environment enables archival staff to easily and flexibly add, manage, access, and replicate data from one site to another, ensuring flexible sharing and reliable access even if data is lost at one or more sites.

The system also allows archivists to verify the authenticity and integrity of replicated data, which is essential for reliable long-term archiving. In another key demonstration, the prototype has been used to manage the evolution of storage technologies by migrating digital data to new hardware and software.

In addition to adding a new site, the project extension also includes a research and education partnership between NARA and West Virginia University to study electronic records and promote civic awareness of electronic records as educational resources.

The Transcontinental Persistent Archives Prototype is the product of an eight year research effort that includes the contributions of NARA's Electronic Records Archives Program, the National Science Foundation's Office of Cyberinfrastructure, SDSC, the University of Maryland, and Georgia Tech.

Related links:

National Archives and Records Administration (NARA) <http://www.archives.gov/>

University of Maryland Institute for Advanced Computer Studies (UMIACS) <http://www.umiacs.umd.edu/>

Georgia Tech <http://www.gatech.edu/>

West Virginia University <http://www.wvu.edu/>

San Diego Supercomputer Center (SDSC)  
<http://www.sdsc.edu/>

SDSC Storage Resource Broker (SRB)  
<http://www.sdsc.edu/srb/>

*Submitted by Paul Tooby, SDSC*



### **Building Recordkeeping Requirements into Your Information Technology Systems**

*This article is based on a Business Analysis project initiated at the National Archives and Records Administration (NARA) in October 2005. The author wishes to acknowledge the significant contributions made by team members Rich Noble, Robin Riat, and Cathy Westfeldt.*

All modern institutions create and receive records every day, which they are required by law to maintain and manage. Many of these records are now electronic.

So what happens when these institutions do not properly maintain and manage their records? There are real consequences, beginning with negative and hostile coverage from the news media, and extending to fines and prison terms. For example, thousands of pages of FBI investigation reports were not turned over to McVeigh's lawyers before the trial due in part to antiquated computer systems and systemic information management problems that could not locate and retrieve the files, causing a last-minute delay in McVeigh's execution. Native American tribes have filed a class action lawsuit against the Government, alleging that it has mismanaged, destroyed, and otherwise lost information on individual Indian trust accounts, depriving the plaintiffs of billions of dollars in royalties. In the private sector, Enron, Arthur

Anderson, Martha Stewart, and the parade of businesses and high-level officers in courts across the country testify to the importance of proper recordkeeping and compliance with laws. The tragic events on 9-11 demonstrated the importance of identifying vital records and planning for continuity of operations in the event of a disaster or emergency. These lessons went unlearned, as seen in the response to Hurricane Katrina.

What are some of the possible consequences of improper recordkeeping?

- lack of accountability
- inefficiency, a waste of time and money
- loss of history
- loss of reputation and respect
- prison and fines.

There are many problems relating specifically to records maintained in electronic format, or problems that become significant because of that format.

One is decentralized records: With the advent of desktop computers and the loss of clerical staff, generally each employee is now responsible for managing his or her own records. As a consequence, records fill individual offices and computer hard drives, and no one is certain how to identify them, access them, share them, manage them, and dispose of them. They are not recognized as business assets of value to the entire enterprise, nor is it understood that their proper management will create new sources of information and knowledge. They are also a potential legal liability. Even when the recordkeeping copy is destroyed appropriately, copies could still exist in other files and on other hard drives, and will have to be produced in the event of a lawsuit.

Rapid technological obsolescence of hardware and software is another problem. Significant technological changes occur approximately every 3 to 5 years, and 10 years is about the limit of accessibility unless records are migrated, and migration often entails some data loss. How do we maintain and access electronic data needed for longer periods, or permanently?

There is an overwhelming volume of records and information that are not properly managed: It is very easy to make copies of everything, so we do. There is no guidance for setting up electronic files, what to keep, how long to keep it, where to file it, and how to delete or destroy or transfer it.

There is difficulty in ensuring the authenticity, reliability, and integrity of electronic records: In many systems, it is very easy to change, add, or delete records without leaving any kind of audit trail; security precautions have to be built into electronic recordkeeping systems to provide an audit trail and ensure the reliability of records that have to be authentic.

Ineffective records management processes: Records management provides the principles and practices that solve these problems, but in most organizations the records management function is marginalized and its tools and techniques are unknown to program managers and IT. Many organizations think of records management as managing only paper records, and that its main function is to transfer records to storage. Records managers are not consulted nor are they invited to the table when information systems are designed or updated, even when they possess the knowledge and skills to make the management of all records, including electronic records, simpler and less painful.

One solution is to use Business Analysis (BA) to identify recordkeeping requirements for your lines of business, and then to incorporate these recordkeeping requirements in the design of all new information systems, and into systems when they are upgraded or redesigned.

According to Wikipedia, "Business Analysis is a structured methodology that is focused on completely understanding the customer's needs, identifying how best to meet those needs, and then 'reinventing' the stream of processes to meet those needs. Its purpose is to develop business process improvement (BPI) as a key strategy and a management tool, capable of supporting the organization's vision, mission, goals, and objectives, and to promote the use of technology throughout the organization. Business analysis also helps an organization to improve the way in which it conducts its

functions and activities in order to reduce overall costs, provide more efficient use of scarce resources, and better support its customers. It introduces the notion of process orientation, of concentrating on and rethinking end-to-end activities that create value for customers, while removing unnecessary non-value added work."

Thus, BA involves analyzing and mapping the business process, and identifying areas for improvement. BA occurs before or during the concept phase of the systems development life cycle (SDLC). Looking at the process from the perspective of recordkeeping does add some cost and time to the IT system design process, but this is not significant and can also help increase efficiency in the restructuring and streamlining of the work process.

With records-aware BA, a work process is broken down into constituent tasks and subtasks.

Records management staff then develop a set of specific questions about how and why each task is documented:

- Is a record created or changed?
- If so, who needs access to the record? What restrictions should apply?
- What should the record contain?
- How long should it be kept?
- Is the process governed by any laws, regulations, or professional practices?

The results are a set of detailed, process-specific recordkeeping requirements, which are provided to the systems designers during the requirements-gathering and design stages of the SDLC. Analyzing the business process to account for records can help streamline work processes and therefore improve efficiency. If records are NOT created, then this step may not be necessary to the business process.

After you have identified the records created during the work process and understand the functions they support, you can use this knowledge to identify the records management requirements that will be built into your information system during the SDLC.

Therefore, using BA, records managers create a list of requirements that a system must meet in



order to manage records. Records managers then work with system owners or project managers to ensure that these requirements are included in the system requirements documentation and in the system design. New information systems are then certified against this list of requirements after the records manager verifies that the requirements are met in the system as built.

As a result, all new systems are designed to serve as recordkeeping systems, and manage records as they create or receive them, so that your agency does not necessarily have to set up a separate system for recordkeeping.

There are things you have to do to manage your records. You need up-to-date policies and procedures. You need to be sure that the records are identified, stored appropriately, and kept and managed for the right length of time. You can do this with a separate records management application (RMA), and many institutions do, but standalone records management systems take money, time, and personnel to implement and support, and they don't always capture the records as they're created – the most efficient time to start managing records. They can also require complicated and sophisticated retrofitting of systems already in place.

When you build recordkeeping requirements right into your IT systems, you save yourself time, expense, and effort down the road. You may not need to buy an expensive RMA and try to retrofit your systems. But if you do need to purchase an RMA, the hard work will already have been done, and your systems should integrate well with the new application.

There are several proven tools and techniques to assist your agency in building recordkeeping into your electronic systems. Here are three BA tools that have been around for several years and have been used to incorporate recordkeeping requirements into the design of e-systems and in the improvement of business processes:

- Australian Standard AS 5090-2004, Work Process Analysis for Recordkeeping, <http://www.archives.sa.gov.au/management/standards.html>

- Center for Technology in Government (CTG), Albany, NY, Practical Tools for Electronic Records Management and Preservation, [http://www.ctg.albany.edu/publications/guides/practical\\_tools\\_for\\_erpmp](http://www.ctg.albany.edu/publications/guides/practical_tools_for_erpmp)
- Minnesota State Archives, Trustworthy Information Systems (TIS) Handbook, <http://www.mnhs.org/preserve/records/tis/tis.html>.

In addition, three Federal agencies have developed methods for incorporating recordkeeping requirements into the SDLC:

- FBI Electronic Recordkeeping Certification Manual, <http://www.archives.gov/records-mgmt/toolkit/pdf/erkc-manual.pdf>
- CIA Electronic Recordkeeping System Requirements, [http://www.foia.cia.gov/txt/ERKS\\_Reqs\\_IMS\\_RevC.pdf](http://www.foia.cia.gov/txt/ERKS_Reqs_IMS_RevC.pdf)
- US Patent and Trademark Office Electronic Records Management Technical Standard and Guideline, July 2002, <http://www.uspto.gov/web/patents/ifw/documents/tsgsigned.doc>.

Success depends on the creation of teams drawn from those who have the necessary specialized knowledge. This includes program managers, IT staff, general counsel, records managers, auditors, and users. These teams, in consultation with other stakeholders from your staff, can examine these or other processes and decide which components or solution will work best for your organization.

NARA has also been developing guidance and tools relating to electronic recordkeeping:

- Records Management Profile as part of the Federal Enterprise Architecture (FEA), to show agencies how to identify records management requirements and link them to implementing technologies and business processes so that records management is embedded seamlessly into their work processes, enterprise



architecture, and information systems;  
<http://www.archives.gov/records-mgmt/policy/rm-profile.html>

- Records Management Service (RMS) Component, which is a piece of software that is embedded into new electronic information systems and works behind the scene to provide services that support the creation, management, transfer, and destruction of electronic records;  
<http://www.archives.gov/era/rms/>.

What are the benefits you will realize when you design records management into your electronic information systems?

Records are now an asset. They can be reused and combined in ways that give greater value. Information can be readily located, because it is where it is supposed to be.

You will be able to provide better customer service because you can respond to inquiries and requests more quickly and accurately. Records are now trustworthy. They are what they purport to be.

You will see real cost savings. Control is established over the creation of new records. And when they are no longer needed, they are disposed of. This saves space, time, and money while improving access. The duplication of records is checked and eliminated. Electronic records that are no longer needed, but must be retained for legal or financial reasons, are transferred off-line to less costly storage. Computer hard drives and office space house active records only.

You have also saved a significant amount of money by including records management requirements up front, because it is very costly trying to retrofit your program processes after they have been implemented.

Your organization is now compliant with all laws and regulations. You and your staff are now protected from adverse findings. Vital records are identified and protected.

Your organization's accomplishments, activities, and decisions are documented, and history is preserved.

### Conclusions:

Electronic records can and must be managed. The best, most effective, and most cost-efficient way to manage electronic records is to use BA and to incorporate electronic recordkeeping requirements into your systems while they are being designed and developed.

There are and will be tools and guidance to assist you.

You should employ risk analysis to identify mission-critical, high-risk processes. These are the systems to focus on first. You can also incorporate the tools of cost-benefit analysis. A team approach is essential. Organizations that have successfully implemented electronic recordkeeping systems have all relied on multi-disciplinary teams composed of program managers, IT staff, general counsel, records managers, auditors, and users. Bringing the records manager to the table when new systems are designed or older systems are upgraded makes compliance, management, and protection and preservation of the data much simpler in the long run.

Training is needed for all staff. This is new to everyone. Very few staff members have experience with successful implementations of electronic recordkeeping systems. Records managers will have to learn new skills and acquire new knowledge. Records management training is now necessary for nearly everyone. With a computer on every desk, everyone is now a records manager, and will require training in records management basics as well as training in how to manage electronic records.

*Submitted by Rebecca Fitzgerald, CA  
(Appraisal Archivist at the National Archives and  
Records Administration, and Newsletter Editor of the  
Gaithersburg ARMA Chapter)*

