

Proposal for

ELECTRONIC RECORDS MANAGEMENT

TASK FORCE

I: STATEMENT OF PURPOSE

This document proposes the establishment of a UC system-wide electronic records¹ management task force. The task force will have a system wide purview but the strategies, techniques, and procedures it develops will be implemented by records managers at the campus level.

The University of California has a well-developed, if not perfectly functioning, structure for managing paper records. The RMP series of Business and Finance bulletins provides the policy for the Universities records management program. The objective of the Records Management Program is to promote sound, efficient, and economical records management practices that provide for retention and maintenance of University records to meet operational needs. The program also provides for organization and accessibility of records as needed to conform with federal and state law and regulatory requirements. Security and privacy of records, disposition of records that have no further value are also included in the program. Finally, protection of records vital to the University and the preservation of records of historical importance are within the scope of the RMP series. However, paper records are being quickly displaced by electronic records in the university, and there is not yet in place a commensurate system for managing these electronic records. Campus records managers need policies, procedures, and best practice guidelines for organizing and administering the increasing quantity of electronic records, and record-keeping processes with clear lines of responsibility need to be well articulated. The University of California's records, including electronic records, are affected by several legal mandates. The California Public Records Act requires that certain records from public agencies be retained for specified periods of time and be made available to the public. It is in the University of California's best interest to manage its electronic records in a manner that makes compliance with this act efficient and transparent. Failure to impose control over the university's electronic records will lead to incompatible and improper practices. This lack of guidelines and policy

¹ Throughout this proposal, "records" is used to signify the University of California's business and administrative records (e.g., administrative correspondence, committee minutes, business transactions, data reports, official publications, etc.)

will increase fiscal and legal risks and inevitably result in some measure of the university's history becoming irretrievably lost.

This document first attempts to define some of the issues and impediments present in establishing an electronic records management system. The problem statement is followed by the recommendation for establishment of a cross-domain task force. The problem is restated from the record lifecycle perspective in the Appendix, in which the roles of records managers and archivists is also briefly characterized. The authors hope the document will initiate a dialogue that will lead to resolution of these problems, be it through the work of a electronic records task force or some other option(s).

II: PROBLEM STATEMENT

II-A: Definition of "record"

Currently, the university does not have a suitable definition of an "electronic record". The existing definition of "record" spelled out in RMP-1 is perfect for paper based records but fails to include all the components of electronic records and leaves many questions unanswered concerning electronic records management. In order to insure consistency in electronic record keeping practices across the university system, a basic definition of an electronic record is crucial. Drafts, version control, forms control, e-mail, templates, and data are all records, or parts of records, and need to be sorted out in a formal definition. Definition of the electronic record will require input from a variety of sources, not only UC record managers, but also auditors and information technologists. Furthermore, the input of UC archivists will be important for determining which electronic records have long-standing historical importance. A general definition of an electronic record answering to the fiscal, legal, and historical needs of the university will be the keystone of an electronic record keeping system.

II-B Identification of Records and Record Stewards

Without a formal, sanctioned definition, identification of electronic records will be fraught with inconsistency. Data that needs to be preserved will be lost, and data that should be destroyed will be unnecessarily preserved. Both results will increase the university's legal risk.

This problem of identification is exacerbated by the fact the University's records retention and disposition schedule has not been updated to include any of the electronic records now used by the university. Without specified retention periods for electronic records, staff may fail to apply the same measures to electronic records that they do to the university's paper records.

The absence of electronic records in the retention and disposition schedule means the record's steward is not always clear. In the paper record environment, the record creator and custodian are often the same. That is less likely to be true in the electronic records environment where masses of electronic records are stored in data warehouses maintained quite separately from the units in which the records were created. Thus, in the electronic record environment the stewards and their responsibilities need to be defined clearly and in a manner that promotes efficient and responsible records management.

II-C Record components

Data elements, templates, metadata and software environments--these are some of the components to an electronic record. Is the data in its raw database forms the record? Is capturing a completed template sufficient for preserving the record? Is it in all cases, the best record? Are all instances to be saved, or are there a few key instances? Can electronic records be easily stored, accessed, manipulated, that is managed, without sufficient and consistent metadata? Will the templates or data become inaccessible if the software environments are not also preserved? We must ensure that an authentic university record can be retrieved upon request.

II-D Authentic and reliable

Electronic records are difficult to authenticate. Ownership, authorship, and validity (originality) need to be ensured. University records will be easy to dismiss as evidence if their authenticity is in doubt. It is important to track the path of an electronic record, noting when and by whom it was revised and where the authentic version is stored. Public Key Infrastructure could help solve these problems but this technology is new and not yet readily available. PKI technology promises to ensure authenticity by use of a unique identification card that will be inserted into a computer thereby validating authorship, signature, authenticity, and version control.

II-E Long term preservation

Speculation abounds about the best ways to preserve electronic records long term. Reformatting remains a tried and true method but it removes the record from its normal business environment and thus reduces its evidential value. Migration maintains the electronic character of the record, but it is typically abstracted from its software environment. Emulation middleware allows records to be stored in their original form and software environments, but emulation strategies have not as yet been well defined or deployed. It is important to

develop strategies, policies, and procedures that preserve the content and authenticity of records long term.

II-F Destruction

Regularly scheduled destruction of records no longer needed is a key component of any record management system. Retaining out-of-date records increases liability of an institution. It also unnecessarily increases the cost of records management. In an electronic records environment, it is necessary to know where all versions of a record reside so that all instances of the record can be destroyed at the same time. The Information Technology Department will need to provide guidance on how to ensure that electronic records are thoroughly destroyed. We must ensure that the record is destroyed and not simply remove the link to the record. The computer industry currently has many types of software that can retrieve records that a company assumed destroyed.

II-G IT support

Electronic records management systems are very complex and technologically advanced. Records managers require the involvement of information technologists to ensure that the electronic records system is appropriately and efficiently designed and programmed and that the records are protected against system failure. Records managers, Archivists, and IT Departments need to work together to ensure the success of an electronic records management system. None of the disciplines alone possess all the required knowledge for the design, implementation, and management of an electronic records management system. A collaborative system design is crucial to successfully creating an electronic records management system model.

II-H Education and training

Records creators are present in multitudes on each University of California campus. Every person responsible for creating or updating a university business transaction is a record creator. Extensive education and training will be required to develop the record keeping competencies that are needed at all administrative points in the university to ensure safe, reliable, and efficient records management. Such education and training will be indispensable in promoting consistency and interoperability across campus units and campuses.

II-I Case Study:

In 1997, administrators at UCSD discovered that its electronic records were at risk because of disunited record keeping practices. Data stewards were

managing data warehouses wholly according to storage requirements, while records managers assumed the records were being managed according to state and federal legal requirements. This created a situation in which significant number of records might be prematurely destroyed or, conversely, retained well beyond their stipulated retention periods. As a result, the university convened a committee, the UCSD Archives Team, and charged it to integrate data storage and records management practices and to minimize the risk to the university's electronic records. Team members included university staff from Administrative Computing, Administrative Records, University Archives, Business and Financial Services, and Internal Audit. The cross departmental approach brought skill sets from many different areas and helped the team considerably in understanding the range of issues involved and developing strategies to mitigate most of the risk factors inherent in the records management processes at that time.

The UCSD Archives Team successfully launched, in part, efforts to protect mainframe files that were at risk and assigned responsibility for integrity and validity of the data. Explored the purge and archive processes from both the electronic view and the paper-based perspective. Identified and defined terms that contributed to confusing document retention and disposition requirements and policies. The UCSD Archives Team's successful cross-departmental approach allowed the University to identify the risk inherent in its current policy and to develop new campus process improvements to mitigate those risks.

III: Recommendation

There are several options for addressing the problems of managing the electronic records of the University of California, many of which have already been discussed among groups such as the University Archivists Council and the University Records Management Committee. One option is to appoint a top-level administrator in UCOP to oversee electronic records management across the UC system. Another option is to hire one or more consultants to help establish a records management program. A third option, and the one recommended by the authors of this document and supported by the Records Management Committee and the University Archivist Committee, is to establish a task force that would coordinate the creation of an electronic records management system model.

The broad responsibilities of an electronic records management task force would be:

- Conduct survey of UC electronic records management practices, with an eye to measuring inconsistencies and kinds of risks resulting therefrom

- Develop strategies for establishing UC electronic records management systems and guide their implementations
- Recommend policy to UC administrators
- Keep informed of electronic records management research and development and cultivate relevant expertise within the task force and the general UC records management community by way of retreats with expert consultants, adopting liaison relationships with records management and archives educators in UC, and attendance and participation at appropriate electronic records management conferences
- Develop and conduct training and education programs for UC records managers
- Appoint ad hoc groups as needed to assist with the task force projects

Unlike the Archivists and Records Management committees, the electronic records management task force would be comprised of UC staff from an array of distinct functional areas, but areas all providing desired expertise to electronic records management. A partnership between records managers, archivists, and information technology managers formed to successfully meet the challenges of managing electronic records is needed. Each group of professionals is an integral part of the process of developing the requisite policies and procedures. They also share the obligation to develop clear processes and lines of responsibility, and to define ownership and stewardship of electronic records. Collectively, they hold a greater opportunity in obtaining the necessary allocation of budgetary and staff resources for developing this cross-departmental group.

Ideally, eight to twelve UC staff would populate the task force: 2-3 records managers, 1-2 archivists, 2 auditors, 2-3 information technologists, 1-2 top level administrators, and 1 from General Counsels office. Such a group would be well-positioned to develop electronic records systems that take into account the many different kinds of UC electronic records, the historical value or lack thereof in the records, the legal requirements for the records, the system constraints, and the working needs of UC administrators.

If constituted, the electronic records management task force would meet four to six times a year, or more if necessary, and would require university funding to support modest meetings. It might also require some funding initially to support a two to three day retreat, perhaps with the presence of a consultant experienced with electronic records management issues. It is reasonable to expect that UC administrators would also want to fund the attendance and / or participation of some task force members at appropriate electronic records management educational forums (e.g., conferences, workshops, etc.).

Agenda and governance will be decided by task force members after establishing and appointing its membership. However, our assumption should be stated here that the electronic records management task force we are proposing would not assume any of the responsibilities of either the Records Management Council or the University of California Archivists Council. Nor, because of its “mixed” membership, would the task force report to either of those committees. Rather it would collaborate where relevant with those two committees and other pertinent committees.

Machine-readable records have occupied the attention of archivists and records managers for more than thirty years, and there is no reason to believe that a magical “solution” will ever develop. But management strategies need to be developed, implemented, reviewed, and revised alongside emerging new technologies (such as digital signatures) and new legal mandates (for example, the acceptability of electronic mail as evidence). It makes good sense to conduct this effort at a system level, rather than have each campus deploy a similar amount of resources to solving identical problems.

Peer Committees:

Increasing control of the university’s electronic records and decreasing its business risks should be sufficient motive for establishing an electronic records management task force or adopting another strategy. But there is a unique opportunity to leverage other work to address the task force's goals. Among the many groups with potentially overlapping interest and responsibility (thorough identification of which would presumably be part of the inventory of electronic records management practice), the authors are aware of two library-based efforts with relevant expertise in managing digital assets. One is the Online Archive of California Working Group, which was established in 1998 and which is primarily concerned with managing archival finding aids and digital facsimiles of primary source materials. The second is the SOPAG Digital Preservation and Archive Committee, which was recently established and has yet to meet. This committee will develop standards and best practice guidelines to ensure the preservation of the university’s digital materials. Electronic records and their management are not explicitly within the purview of either of these committees. Thus, these two committees might benefit greatly from the work of an electronic records management task force, and such a task force would certainly gain much from the work of the two committees. In short, the presence of these two committees, as well as the urgent need to yoke electronic records under control, make the current time a good, promising time for establishing an electronic records task force.

Finally, as additional measures of the critical importance of managing electronic records, several public agencies have undertaken ambitious and complex

investigations for how best to insure the security, authenticity, and access of electronic records. These include:

- The Australian Government Standard 4390
- The National Archives of Canada
- Kansas State Historical Society
- InterPARES Project
- The University of Pittsburgh Project
- Indiana University Electronic Records Project

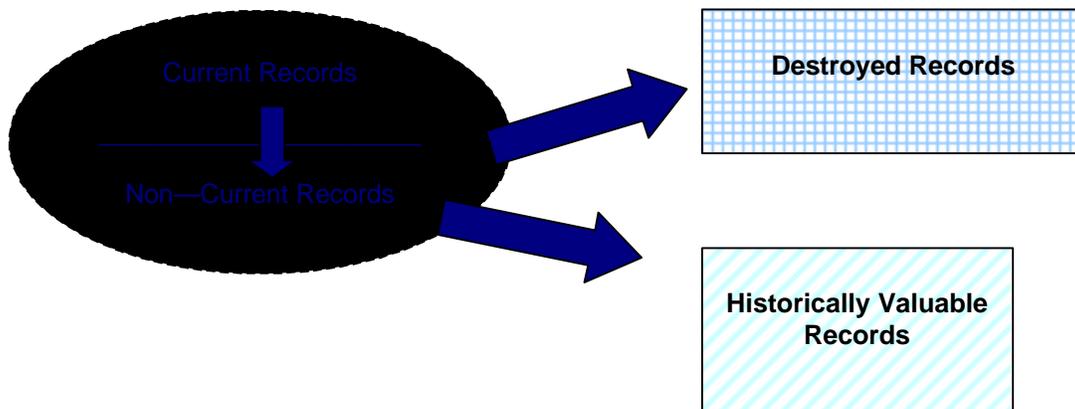
These projects represent a rich, developing research context, which the task force can utilize in developing practical strategies for managing UC's electronic records.

Appendix

The business and administrative records of the University of California are foundational to the continued operation of the enterprise and to a knowledge of its history.

Record Lifecycle

Every University record has a lifecycle. The record is created and managed by its creators as long as it has value to current business operation. Once a record is no longer needed for day to day business or to satisfy legal or regulatory requirements it is disposed of. Disposal will entail either destruction of the record or archiving of those records that are considered to have enduring historical value.



Roles of University personnel

Departmental staff create and manage their records during the current life period of the record. Campus records managers establish the UC retention and disposition schedule according to legal and regulatory requirements and through consultation with UC Archivists, who determine a record's enduring historical value, and other University administrators. Campus records managers ensure that management of University records is in compliance with the retention and disposition schedule, that is, records are not prematurely destroyed or inadvertently retained for longer than is required. University archivists collect for permanent retention that portion of non-current records deemed to have enduring historical value, and they provide these historical records to the research community. (for a more detailed description of these responsibilities see RMP-2, esp. Section VI "Archival Review" at <http://www.ucop.edu/ucophome/policies/bfb/rmp2a.html> and Vice President Earl

Bolton's statement in RMP-1, Section III, at <http://www.ucop.edu/ucophome/policies/bfb/rmp1.html>)

Paper vs. electronic records

Prior to the 1980s the records of the University of California were largely in paper format. Current records remained in the custody of their creators, generally as a wide range of forms and correspondence located in departmental file cabinets. Typically creators transferred their non-current records to the archives or had them destroyed as their file cabinets became full. As a consequence, large numbers of records remained in the custody of their creators long beyond their currency; non-current records were neither promptly destroyed or transferred to the University Archives. However, the records were not considered to be at risk of loss, as they remained in the custody of their creators, their information was stabilized on durable paper for the most part, and locating systems were relatively functional. In short, the paper environment permitted the records to be neglected to a degree. Or, put differently, the records were allowed to stay in storage with their creators until such a time that space limitations necessitated action and / or UC records managers and archivists could attend to them.

The digital environment, which is becoming increasingly populated by university records, is not as forgiving of such inattention and reactive management. Creator-ship and custodianship are typically severed in a digital environment. Creators still produce records in their offices but those records are stored outside the office on magnetic devices managed by other personnel, sometimes according to storage and not regulatory criteria. In addition, both software used to create the records and the devices used for storing the records undergo fairly rapid evolution. As a consequence records that are not migrated to new software or storage environments can become irretrievably lost. Responsible stewardship of electronic records, so as to avoid premature destruction of records or inadvertent retention of non-current records having no historical value, requires close attention and collaboration between records creators, records custodians, records managers, archivists, and auditors. It goes without saying that the participation of information technologists is equally important.

UC Archives

Inattentive and reactive management of electronic records greatly increases the effort and cost of selecting the University's historically valuable records for permanent retention in UC Archives, as well as, to be sure, the risk of losing the records. To appraise historically valuable records, archivists will need to peruse all extant accessible records, opening, reading, and closing each record file. The magnitude of this task will increase dramatically if software and storage environments are not regulated and updated methodically.

An electronic records management system properly designed and implemented, will significantly reduce the labor of appraising historically valuable records for the University Archives. For instance, it would be possible to pre-select record types for archival review and retention. All records in a pre-selected type would have a data element indicating it is to be sent to the Archivist after the record's currency has expired or, more likely, according to a pre-established disposition schedule based on the record type's lifecycle. In addition, it would be possible to ensure that all records submitted to the archive for retention had consistent characteristics and requisite metadata, thereby minimizing the archivists' need to arrange the records in some usable order and describe them in finding aids. Indeed, finding aids equivalent to the ones we are now familiar with could be easily generated. In short, a significant portion of the scheduling, selection, and management of electronic records can be built into an electronic records management system. The Archivist must participate in the design of this new system if the system is to be appropriately responsive to the needs of the UC archives program.

Summation:

It is important to emphasize that the burden of designing and managing the university electronic records should not fall to the UC archivists. However, a system that is designed to take into account the entire record life cycle requires input from the archives perspective. Without it, the university's historically valuable records will not be properly safeguarded against destruction.

It is also important to emphasize that the task force proposed in this document is to be charged only with developing a strategy for managing the university's electronic records. It should not be considered a policy making body. The UC Records Management Council and University of California Archivists Council will continue to establish policy for managing the university's records. The proposed task force would simply devise the procedures to ensure such management is comprehensive, punctual, and efficient. Policy issues generated from the work of the task force would be resolved by RMC, UCAC, or another other appropriate university body.