University Information Assets:
Re-Defining the University Archives in a Digital Age

President's Emerging Leaders Program

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August 23, 2005
Executive Summary

In fall 2004, four members of the President's Emerging Leaders (PEL) 2004-05 cohort undertook a project to help determine the issues and considerations that should help guide the University Archives in developing policies and practices with respect to digital information created within the University and stored and shared on desktop computers. A series of interviews was conducted in spring 2005 with representative University administrators, faculty and staff that provided most of the information used by the PEL group to identify key themes and major issues surrounding current archiving practices, attitudes and beliefs about archiving, and perceptions of the value of archival information. Information gleaned in the interviews was also used to formulate several salient recommendations for consideration by the University Librarian and Archives staff.

Four major themes emerged in the interviews: (1) the large volume of digital information that is created and archived in individual University offices; (2) a lack of confidence or knowledge about what electronic information should be retained and how it should be preserved; (3) a general recognition of the value of archival information to good decision-making; and (4) a widely held view about the need to educate the University community about the importance of archiving the digital information we create. Interviewees also recognized the Archives as a valuable resource—a kind of "hidden treasure"—and found the staff knowledgeable, helpful and efficient in dealing with the vast quantity of material maintained in the Archives.

Given the concerns expressed in the interviews about the potential loss of critical electronic information, we recommend that the University Libraries pursue the development of a digital institutional repository to capture and manage a wide range of electronic information that is created daily at all levels of the institution. Additional recommendations that followed from the interviews fell into four categories: policy, roles and responsibilities, technical aspects of archiving, education and awareness, and archival skills for the 21st century.
Introduction

The University Archives comprise a rich source of historical and legal documentation about the University of Minnesota, including its intellectual and administrative dimensions (i.e., faculty papers and departmental records), and student life. The Archives collections are a valuable institutional asset, not only to the University itself, but also to the State of Minnesota, the nation and, arguably, the world. Technological advances (computers, email, listservs, web sites, digital imaging of documents) have changed the way in which information is generated within the University and have posed new challenges for archiving.

This report describes a project undertaken as part of the 2004-05 President's Emerging Leaders (PEL) program to help determine the issues and considerations that should help guide the University Archives in developing policies and practices with respect to digital information created within the University and managed on desktop computers. The document contains a description of the methodology used to select interviewees for the project, the questions posed in the interviews, core themes common to the interviews, and a set of recommendations gleaned from the interviews and additional research. Also included is a set of appendices relevant to the project. It is hoped that the information provided here will serve as a foundation for the Libraries leadership as they navigate a course toward a reconceived archives that will ensure the preservation and retrieval of essential digital information.

Methodology

As the Library staff was interested in feedback from those individuals who actually archived information and those who were in charge of setting tone and policy, qualitative interviews were determined to be the most effective way to collect information. The PEL team developed a workplan (Appendix A) and a list of potential interviewees in key University of Minnesota units whose records were viewed as important to archive for the future of the institution. Also represented on the interviewee list were individuals in administrative or technical positions who the team believed were responsible for the actual archiving of information. With the help of Library staff, the team drafted a letter of introduction that described the project and asked the potential interviewee if s/he would be willing to be
interviewed. Again with assistance of Library staff, we narrowed the list of potential interviewees, assigned interviews among the four PEL members and contacted interviewees about participating in the project.

Interviewees were sent an e-mail invitation to participate in an hour-long interview (Appendix B). They also received a cover letter from Wendy Pratt Lougee, University Librarian and Project Sponsor, that introduced the PEL team and the project (Appendix C), and a copy of the questions to be asked (Appendix D). The invitation informed interviewees that the interview would be taped for use in the project.

Fourteen people were interviewed who represented a wide range of colleges and University positions: administrators at the Vice-President/Vice-Provost and Dean level, communications specialists, faculty members, Web masters, and foundation and development staff. They were asked a series of questions that dealt with their own archiving practices, reflections on the practice of archiving, and some thoughts about the future. When the interview was over, they were given a copy of the Archives' guidelines so that they could be better informed about how to archive materials addressed in the existing guidelines (Appendix E). Where possible, the interviews were taped and transcribed. As participants were aware that the interviews would be taped for use in this report, and on the advice of the PEL program director, we determined that we did not need to apply for Institutional Review Board (IRB) approval to use human subjects. In order to protect the identities of the interviewees or information that could be of a sensitive nature, all identifying information was removed from the interviews before the transcripts were provided to the Project Sponsor (Appendix F).

We identified four common themes that emerged in the interviews, which are addressed below. In addition, we formulated a set of recommendations based on information gleaned from the interviews, our discussions with the Library staff, Archives' usage statistics, and several articles related to our project. Our preliminary findings were presented at the Digital Repositories: Defining Roles and Constructing Identities Symposium sponsored by the Minitex Library Information Network of the University of Minnesota on May 16, 2005.
**Little archives everywhere**

The first of our themes relates to the distributed nature of current archiving practices at the University of Minnesota, particularly in the area of digital information. We found that many individuals in our interview sample maintain their own electronic archive of materials and records they perceive as of general importance to their office or the University. One of the reasons the interviewees gave for doing this is concern about access to the information and ease of retrieval if it is archived centrally. This concern is not a reflection on the University Archives; in fact, the interviewees who use the Archives consistently reported the Archives to be a valuable resource—a kind of "hidden treasure"—and found the staff knowledgeable, helpful and efficient in dealing with the vast quantity of material maintained in the Archives. Rather, the interviewees keep their digital archival information on desktop computers in offices within their departments because of the ease of storing and retrieving the material in this manner.

Those we interviewed understand the value of maintaining archival information, and some expressed concern over whether or not the electronic files and digital storage media will be accessible as time passes and technology changes. Quotes from the interviewees illustrate the refrains we heard often during the discussions:

With so much stuff existing now in electronic format and with nearly infinite storage capacities on these computers now, I've got virtually everything that I need, even if it goes back 5 or 10 years because it's just sitting on my computer electronically. It's more a question of remembering that I've got it rather than having the capacity to keep it.

And:

My main concern is making sure that whatever is archived is easily retrievable and found in a reasonable amount of time. Especially with this new 'document imaging,' I don't want to put an image on the computer and not be able to find it. That's my biggest fear.

**What to save and how to save it?**

Another common theme we encountered, particularly in regard to the question about challenges to archiving in a digital age, was a lack of confidence or knowledge about what information should be kept (what information is, or may be, of value?) and how it should be preserved. Many interviewees were not familiar with current archival policy at the University. Furthermore, policy has not yet been formulated with respect to digital information.
Individuals/departments do not want to discard important material but are dealing with a large volume of information. There was concern over the loss of valuable information because people are not sure what to retain and what is archivable:

I think one of [the challenges] is deciding how much to keep. Before [digital communication], I'm sure that not every memo slip [was] saved, and e-mail is equivalent to those types of things. How much of that day-to-day stuff do you really want to keep, because every bit that you save is another bit of effort on the other side to try to mine that and get some sort of meaning out of it. That's one of the main challenges, and then related to that is how do you organize and catalog it, and retrieve it after it's deposited. Electronically we need to be very specific about what to collect. What are we really going to prioritize? That is what we need to go after first.

The value of archival information to good decision-making

A third theme prominent in our interviews was the value of archival information to good decision-making. E-mail correspondence, Web pages and other types of administrative information is generated on different levels within the institution—from the departmental level (with respect to aspects of unit life and local decision-making) to the University's highest administrative levels. For example, the documents pertaining to the University's Strategic Positioning initiative represent a current and highly visible example of digital information produced at the very top of the University's administrative structure. The majority of those we interviewed were very clear about the value of archival information, whether in physical or electronic form, across all levels of the institution: This information is critical to good decision-making. As one interviewee said, "It helps administrators do their jobs." Or, as an administrator put it, "I think we do a lot of management by anecdote. We forget a lot of what we've done in the past, and I think gaining access to that information can help make for smarter decisions."

Why is it important to keep these kinds of University records? What value does such information add? Our interviews pointed to a widespread recognition that knowing what was done or tried in the past—and knowing why past efforts succeeded or failed—is important to successful planning for the future. Several interviewees used the same phrase to describe the importance of good archival information: "It keeps us from reinventing the wheel." By not having to reinvent the wheel, the University is more efficient: well-informed decisions result in
increased efficiency, decreased costs, and improved accountability—especially important considerations for a public entity like the University of Minnesota.

Most interviewees recognized that the information created on computers may later contribute to good decisions. Nevertheless, there was also a strong concern that the University is losing valuable information daily because no thought is given to the relationship between this information and decisions that will be made in the future. Unlike the boxes of old records that occupy space in University offices, digital information is easily hidden in the recesses of computers. Such information is also easy to delete when there is no longer a perceived need for it, "You just push a button and it's gone." People do not think about saving electronic information in a deliberate way to facilitate future decision-making, or as previously noted, they simply do not know what information may be valuable. Also, so much information is generated that they may be overwhelmed by the volume.

When asked to consider what could happen if the University loses digital information, most interviewees thought this could have serious consequences. Several described such a loss as "tragic," "terrible," or "very distressing." Several also equated losing such information with "losing how decisions are made." The majority of interviewees specifically mentioned critical items they believed are now being lost as a result of processes that are managed electronically: most e-mail correspondence; reports of University committees and task forces; Web pages (including reports and publications at different levels of the institution); discussions that take place on listservs; budget, business and HR documents; faculty employment records, faculty papers and grant information; and other records of individual faculty members that even the faculty members' departments may not know about. One interviewee pointed to faculty records in particular as a rich part of the University's intellectual history. Clearly, the loss of digital information is a troubling prospect to this sampling of University personnel.

The need for awareness and education

A fourth resonant theme was the need to educate the University community about the importance of archiving the digital information created and the need for a framework for doing so. The importance of ensuring that digital information is archived was unmistakable in
interviewees' vigorous responses to a question about steps that might be taken to achieve better compliance with Archives' policy. The solution offered by most interviewees was education and awareness. First, making University faculty aware of the University Archives and the archival value of digital information and second, providing education about what digital information to archive, and how and when to do this. Most interviewees thought that faculty and staff are simply unaware of current policy and would archive information if they knew about the policy (or were prompted to archive), and were provided with appropriate instructions. A variety of solutions, some quite creative (see p. 12 for a sampling of suggestions), were offered to promote awareness of current policy and the need to archive. Many interviewees also cited a need for education about special considerations surrounding digital data, such as data privacy issues, and a need for policies that specifically address digital data. One senior administrator's perspective on the issue of awareness was especially revealing: "I think the reality is that because a lot of this isn't well known, we don't use it. If it [archiving] isn't quick or easy, at least from the perspective of senior administrators, it's not going to happen."

**Recommendations**

The University Archives is recognized as a valuable resource that is of significant importance both with respect to the University's history and to future decision-making. The Archives is confronted with a crisis created by the quantity of electronic information that is being generated across the University, and the absence of guidelines about what digital information should be saved and a means for saving it. No one in our sample questioned the historical value of information that is "born digital"; in fact, all viewed such information as critical to the University and its future. We therefore recommend that the University Libraries pursue the development of a digital institutional repository to capture and manage a wide range of electronic information that is created daily at all levels of the institution. Our subsequent recommendations assume that the Libraries will implement a central repository for this purpose.

Throughout our interviews, we attempted to identify current archiving practice, as well as attitudes toward archiving and archiving policy. Five key areas emerged in which we offer recommendations:

- Policy
Roles and responsibilities

Technical aspects

Education and awareness

Archiving skills for the 21st century

Policy

We recommend that University Archives' services be made more visible. We further recommend that clear policies be developed to help members of the University community know what electronic information to archive, and how and when to archive. The following excerpts illustrate the need for such policies:

I think I'm a prime example of being guilty: It just doesn't occur to me to archive electronic information. I think the other thing is that it is hard at the rate with which one communicates today to be really able to pull up 25 emails and say "THIS is an important document." They all begin to look alike. Then, we use templates so we can work faster and more efficiently—so, more and more things look alike.

And:

Our internal email and how decisions are made are certainly being lost. For example, convening a group on listserv, what is there is surely being lost. At some point, when we try to recreate why we decided to upgrade our facilities, for example, it would make more sense if the entire documentation were on-line, but it's on e-mail so we'll have to do it based on memory.

Roles and responsibilities

While most of the interviewees value the archives, they did not always know who in their unit was responsible for archiving. When asked who was in charge of archiving in a particular area, most respondents said things like: "the person who sits over there," "someone in that office," "I don't know," or "no one is identified currently."

The Libraries and the Archives need to encourage units to make sure that the responsibility for archiving is actually written into the job descriptions of staff hired in colleges, departments, and other offices. Without identifying someone responsible for the task, archiving
is left undone even though its value is recognized. Policies addressing digital information will help define what information should be archived; including responsibility for archiving in the job descriptions of University employees will help ensure that valuable information is saved.

*Technical aspects*

Three areas emerged as particularly important with regard to the technical aspects of archiving:

- Standards and formats
- Support
- Privacy

Standards and formats are important considerations for the future. What good will the files be in ten years if we do not have the software/support to access them? How will staff know what information should be saved and how they should save it? The wide variety of formats and the sheer volume of electronic materials make this an especially critical issue. Determining what standards and formats will be used will help determine how archiving will be accomplished and how easily digital information will be accessed. In this regard, it may be useful to consider the National Archives and Records Administration's (NARA's) efforts to preserve digital data at the federal level (see Appendix G), and similar efforts of the Library of Congress.

The Archives must also be able to provide support for users if it expects to archive electronic information. One of our interviewees described it this way: "We need a desktop button to transfer the information to archives. Then, we can just click on 'Send this to Archives,' and it will just do it automatically." Combining work on standards and formats with the support of a user-friendly system will enhance attitudes about archiving and encourage the practice of archiving.

Finally, the issue of privacy must be considered. If the University employs an electronic system to get files to the Archives, or to a Website where people can search the Archives, the Archives will need to think seriously about privacy issues. Safe-guarding employee and University information is a legal imperative in the current digital age. As one interviewee said:
The U has a lot of information that technically and officially is public. It is made public when it is asked for. If that information is on the Internet for anyone in the world to mine, there will need to be careful consideration. We must think about exactly what NEEDS to be available before archival information is made public on the Internet. After all, making something public doesn't mean it has to be on the Internet.

These and other issues that warrant consideration in the development of an electronic records archive are included as Appendix H.

Education and awareness

The Archives must learn how to be a "benevolent pest" and must educate and re-educate the University community about the importance of archiving. Examples of ways in which the Archives could create awareness and educate users might include the following:

- A series of educational lectures
- Development of a brochure or other literature
- Periodic reminders from the University's highest administrative levels about the value and importance of archiving
- Participation in orientation sessions for new staff
- Participation in the seminar series for new chairs

Education about the value of digital information is also needed to combat the idea that electronic information is somehow less important than paper:

You've got things on the computer and on e-mail and it's easier to throw things away on the computer than when you have an actual hard copy. Somehow, you feel like you've got more invested when you print something out. It makes you want to keep it. I'm one of the worst. When I'm done with something, I get it out of my life.

Archiving skills for the 21st century

All of the interview and readings suggest that archiving has changed, that there are new and different dimensions to the practice of archiving. While it is beyond the expertise of the PEL group to determine what these new skills are, it cannot be
emphasized enough that archivists in the 21st century will need to be trained in the use of innovative technologies and be prepared for the challenges posed by these new directions.

**Conclusion**

All University employees interviewed for this project recognized the value of the University Archives. They linked archiving with good decision-making, and they realized the potential loss of historical information that would result without sound archiving policy and methods. The University needs to be educated about what digital information to keep and in what format. University staff needs to know how to send information to the Archives and who is responsible for sending it.

Archival information also needs to be accessible. If electronic information is archived, what methods will exist to retrieve it, and will users be able to retrieve it in a timely fashion? Answers to these questions are essential if the University is to adopt successful archiving policies that will serve both the Archives and users well in a digital environment.

The University's central administration must support and value archiving. Central administrative officers can help increase awareness of this issue within the broader University community. The Archives hold the key to our past and will help future University leaders make the wisest decisions based on knowledge of the past.
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Appendix A

UNIVERSITY INFORMATION ASSETS:
RE-DEFINING THE UNIVERSITY ARCHIVES IN A DIGITAL AGE

President's Emerging Leaders Project Work Plan
Revised January 4, 2005

Background:

The University Libraries includes the University Archives -- a rich repository of historical and legal documentation of the University of Minnesota. Since its beginnings, the documentary evidence of University life, programs, and faculty works have formed the core assets of the Archives. Departmental records highlight the history of higher education and document research trends and methods. Publications, course guides, and administrative files provide the raw material for research about the University and about more general social and cultural themes. Users of the archives range from the University historian to various administrative staff (for example, seeking background on earlier decisions or policies), from students working on course papers to development and communications staff needing historical photos. Historians mine the rich resources for evidence of social movements, and alumni and individuals seek information about relatives or former teachers and classmates. In the past, University policy enabled the development of the Archives, through requirements for units to deposit documents and other resources. In an era where documents, publications, and photographs are increasingly digital and managed on distributed servers, what is the future of the University Archives?

Objectives:

This project will explore the current dimensions of the University of Minnesota archives and, in particular, the institutional practices and requirements that affect current use of the Archives by both University and community members. We will assess the role that the Archives play in the institutional memory of the University. We will survey the most current research on digital archiving, both technological advances and their impact upon how archiving is undertaken, to gauge the possible effects of digital archiving. Lastly, based on the information we gather, we will formulate key ideas that the staff of the University Archives and Libraries should include in their planning about how archival digital information might be more efficiently identified, stored and managed, and how distributed technologies might be used to make archival digital information readily accessible to members of the University of Minnesota and of the larger community.

Outcomes:

1. Identify trends in knowledge of the Archives and use by the University of Minnesota and community members.

2. Determine the risk to the University if we do not assess the challenges and opportunities presented by current and emerging technologies.
3. Identify how "digital" impacts the Archives (making storage and access to archives materials easier, making collecting institutional material more difficult because of the distributed fashion in which information is now stored [email, websites, personal computers]).

4. Determine the key messages the University Libraries should stress when formulating a communication plan.

Tasks

1. Collect information about usage data (How are usage statistics collected? What do the data reveal? How do the coordinate campuses of the University of Minnesota handle archiving? What are the budget implications and usage statistics for those campuses?)

2. Conduct interviews

3. Write "white paper"
Appendix B

Interview Invitation

Dear XXXXX,

We are participants in this year's President's Emerging Leaders program, a centrally sponsored program designed to develop leadership potential across the University. In connection with our participation in the PEL Program, we have undertaken a project that will examine issues surrounding the University Archives in a digital age and will identify desired attributes of the Archives in the 21st century. We are in the early stages of our project and are beginning to gather information about the value of archival information; how the University Archives is used and by whom; the kinds of information colleges, departments and other University units currently maintain electronically and whether (and how) this information is preserved; and the challenges, opportunities and risks new technologies present for the preservation of institutional information. We expect the result of our work to be a set of recommendations that Wendy Pradt Lougee, University Librarian, can use in planning for the future of the Archives and in the search for a new University Archivist.

As part of our project's information gathering phase, we plan to interview a sampling of individuals, suggested by Library staff and others, to learn their views about the value of archival records, their unit's practices with respect to maintaining electronic information, their perception of the risks posed by the digital environment in which we now operate, and how they imagine current or emerging technologies might enhance the use of University archival information. I would very much like to meet with you this month or early next to hear your thoughts on these matters. In order to structure our interview, I would provide you with a modest list of questions several days in advance. To ensure the accuracy of our conversation, we would like to tape the interview.

We hope you will be willing to assist us with this project. If so, may I please ask you to indicate your availability during the following weeks:

February 14 - 18
February 21 - 25
February 28 – March 4

Upon receiving your calendar information, we will send you an e-mail to confirm an interview date and time. Please contact any one of us if you would like more information about the Archives project prior to our meeting. For more information about the President's Emerging Leaders Program, please visit the PEL Web site at http://www1.umn.edu/ohr/pel/.

We very much look forward to the opportunity to meet with you.

Thank you,

Vicki Field, Graduate School (field001@umn.edu; 612-625-6532)
Jennifer Dunnam, Disability Services (dunna004@umn.edu; 612-624-6899)
Laura Sayles, Institute for Global Studies (lsayles@umn.edu; 612-624-5839 or 612-624-9007)
Elizabeth Tollefson, University Relations, Crookston Campus (ltollefs@crk.umn.edu; 218-281-8432 or 218-281-8432)
Appendix C

Letter from Wendy Pratt Lougee

University of Minnesota

Twin Cities Campus Office of the University Librarian
Wilson Library
University Libraries
309-19th Avenue South
Minneapolis, MN 55455

February 4, 2005

Dear:

The President's Emerging Leaders (PEL) program provides opportunities for participants to contribute to planning and analysis within campus units. The University Libraries are fortunate to have an Emerging Leaders' project team assisting in our assessment of the university's long-term requirements for institutional information. This letter introduces the project and solicits your participation in the team's efforts to survey campus needs.

The PEL team is working to review the current and future requirements for University Archives. The University Archives (a department of the University Libraries) includes a rich repository of historical and legal documentation of the University of Minnesota collected through requirements for units to deposit documents and other resources. For over 60 years, the University Archives have collected documents, publications, photographs, artifacts, faculty collections, and a range of media. These archives contain a record of the institution's activities that can fuel both institutional and scholarly research.

Increasingly, documents, publications, and photographs are created in digital form and managed on distributed servers. As the digital environment unfolds, how can or should institutional information be preserved? The project will explore the dimensions of institutional practices and requirements that support institutional information on campus.

A member of the project team will contact you to request your participation through a brief interview about practices and requirements within your unit. I hope we can draw on your insights and experience at the University as we carry out this project that will help sustain the University's vital history.

Sincerely,

Wendy Pradt Lougee
University Librarian
Appendix D

PRESIDENT'S EMERGING LEADERS 2004-2005
REDEFINING ARCHIVES PROJECT
INTERVIEW QUESTIONS

We wanted to make sure that you are clear on what we want to accomplish in this interview today.

As you may know the University Archives are a rich repository of historical and legal documentation of the University of Minnesota. Since its beginnings, the documentary evidence of University life, department and program records, and faculty works have formed the core assets of the Archives.

For example, the Departments of Agriculture, Horticulture and Forestry records document the University's contribution to Minnesota's agricultural economy. Records from the Dean of Students and the Student Activities Center highlight the student experience at the University (reflecting diversity of interests from radical student movements to traditional events such as Homecoming).

In the past, University policy enabled the development of the Archives, through requirements for units to deposit documents and other resources. In an era where documents, publications, and photographs are increasingly digital and managed on distributed servers and personal computers, we are trying to determine what the future of the University Archives might look like. To do so, our questions today will cover the institutional practices and requirements that comprise current activities on campus, ask for some impressions about the Archives currently, and end with some reflections on the future of the University Archives in this digital age.

Prior to this interview, were you aware of the existence of the University archives?

Are you familiar with University's archiving policy?

Do you know what type of material is contained in the University archives?

PRACTICES

Does your unit or department access or deposit material in the University Archives? If so, what types of material? How frequently do you use the archives, and for what purpose? (If interviewee doesn't know, ask who might know).

Are there documented policies or practices for sending material to the University Archives? Who makes the decisions on what is sent?

If you do not deposit material in the archives, what are the reasons/obstacles?
Does your unit/department have a procedure for creating, storing, and archiving publications and unit information existing in electronic format (i.e., web pages, e-mail, or other documents that reside on computers)?

Is managing your unit's archival information a part of a specific individual's job responsibilities? Is there a plan for transition in the event of staff changes in your unit?

Are you familiar with standards for creating and storing digital content? What policies are in place for creation, storage of digital content produced by your unit?

**REFLECTIONS ON THE PRESENT**

Discuss your perception of the value in the University's maintenance of archival information—that is, documentation on the publications, services, programs, and activities of the University.

What challenges do you see in maintaining archival information in our current technological age?

How do you make use of older material about the University (e.g., committee reports, publications, news publications, photographs, etc?) Where do you get this information?

What kinds of documents or publications do you think are potentially being lost due to the current lack of infrastructure to support digital archiving? How critical is this loss to the University?

What consequences do you foresee arising from the loss of information? Give specific examples.

What other types of electronic materials would you like to make available if there were an easy method of doing so?

**REFLECTIONS FOR THE FUTURE**

Do you have suggestions of steps to be taken to insure better compliance with the Board of Regents policy?
Appendix E

Archives Services and Guidelines

**Depositing Material in the Archives**
Policy can be found on-line at: http://special.lib.umn.edu/uarch/service.html

All academic or support units supported by the University of Minnesota are required by regental regulation to consult University Archives before disposing of records regardless of format. Certain records may be routinely and regularly transferred to Archives. Others may be destroyed after a given amount of time. Because storage space in University departments is limited, the following guidelines are offered.

**Correspondence Files and Departmental Records**

These records consist of inactive internal and external correspondence files preferably at least five years old. Contents lists should be compiled for files sent to Archives as a record of the transfer and to facilitate retrieval. If possible, please submit a printed list or a 5.25 or 3.5 disk in WordPerfect or ASCII format. Disks will be copied and returned on request. If a filing scheme is used (other than alphabetic), a copy of the classification scheme should also be included. Files should not be removed from file folders. Hanging files damage archival storage boxes. Archives will supply file folders which must be labeled to identify material. If refoldering is not feasible, Archives will replace hanging folders. It is recommended that departments double folder correspondence files with the label on the inside folder.

**Research Files**

Research files consist of reports, data, and working files. Archives does not accept computer print-outs, punch cards and machine readable data files which lack sufficient documentation to identify software used and the method in which data was collected such as worksheets showing how and for what purpose data was collected.

**Publications**

University Archives should be on all mailing lists for departmental publications of all kinds including annual reports, monographs, technical reports, discussion paper series, working paper series, newsletters, brochures, flyers, and course announcements.

**Committee Files**

Committee files include all-University or administrative files including policy, overall budgetary planning, departmental minutes, ad hoc and special. Do not send departmental tenure and promotion or other personnel files.

**Curricular and Teaching Materials**
This material includes course texts, supplementary readings, syllabi, course descriptions (other than regularly issued college bulletins). It is rigorously examined before it is added to the curriculum collection. Please do not send tests, used or unused.

**Photographs and Audio-Visual Material**

University Archives maintains a historic photograph file which is drawn on heavily for research publications, displays, and public relations material. Identified and dated material of University of Minnesota people, buildings and activities is most useful. Unidentified audio-visual material may not be retained.

Audio and video tapes, phonograph records and other visual formats are most useful if contents can be identified and dated. Please discuss potential transfers with Archives staff.

**Material Not Accepted by University Archives**

Archives does not accept grade records and student records, personnel files, search committee files, and fiscal and accounting records such as journal vouchers and ticket receipts. Accounting provides retention and disposal instructions for financial records.

Artifacts and memorabilia may be accepted if small or easily stored. Archives cannot accept items requiring special care and handling such as clothing. The exception to this rule is University-related art work. Please discuss transfer of such material with Archives staff.

**Sending Material to University Archives**

Material may be transferred in records storage boxes presently available from Archives. Please do not the long (25" or longer) boxes as they are too heavy to move when filed. Archives can arrange for the physical transfer of material. Non-University books and journals can be sent to the Libraries' Gift Division. Other material may be recycled. Please consult recycling guidelines.

What happens to material sent to Archives? In time, this material will be evaluated by Archives staff. All duplicate, inappropriate, or non-essential material will be discarded or recycled. While the policy for retention is generous rather than astringent, concern about ultimate retention of borderline or questionable material should be expressed at the time of deposit. If is desirable for a member of Archives staff to examine the records in the department, arrangements can be made. When evaluation and final sorting is complete, the department will receive an undated list.

All University publications are fully cataloged. Ephemeral material such as brochures are held under issuing department. The Archives maintains checking records for newsletters. All material sent to Archives is accessible to the department of origin on request.
Appendix F

Transcripts of Interviews

(Interviews were transcribed verbatim from tape recordings where possible. In a few cases, only notes were made during the interview; in these instances, a summary of the response is provided. Portions of the responses that would reveal the identity of the respondent and are of no relevance to the subject being discussed have been removed.)

Q1. Prior to this interview, were you aware of the existence of the University archives?

EF: Yes.

AB: I was. Knew a little bit about them on a conceptual level.

CD: In sort of a minimal way I was. I was familiar with the photography, but not to any great extent.

IJ: No

OP: Yes

GH: Yes. I spent 100s of hours in the archives as part of my dissertation Research back when it was down in the sub-basement of Walter Library.

QR: Yes, I mean I knew about it for several reasons. I was, you know, the person who wrote a lot of the [deleted] requests, so I knew stuff was in Walter in terrible condition and so both the Walter renovation and Andersen were things that I knew about. Also, working in the [deleted] office, we had materials that needed to be archived and so I know we were pushing stuff over there, but I think it was people like [deleted] who had a better sense of what we were shipping over than I did. I mean, I never looked at it on a day to day basis. I mean, if somebody here knew stuff had to go over, it went over. And then every once in a while when we went scrambling looking for stuff, then we'd go back and try to find it, if we didn't have it in our own records.

And now that I'm working on some special projects for [deleted], I find myself also trying to find reports that I can remember, but nobody can seem to find them, and so often—for example I was just looking at a thing that [deleted] had done on the [deleted], and finally [deleted] said, well you know, [deleted] did a study on that in '86, so we called [deleted] and sure enough, he had a copy. So, I mean that's not the best way to retrieve information of that sort. But I have no idea how well the stuff is indexed, how easy it would be to find and retrieve stuff in the archives [unintelligible]. Again, as a consumer of the stuff when I knew I had it, it was more or less, ask [deleted], and [deleted] the next day would [unintelligible].

Another good person to talk to probably too (he must have used it a lot) is Stan Lehmberg. Stan Lehmberg wrote the history of the University, and I know he did a lot of interviewing; but my guess is he was in the Archives, or he may have been. The only advantage of Stan is that he is a professional historian and worries about these things.
Yes, aware of them and have used them, not as much since they moved over to Andersen, although I don't think that's why I'm not using them. But, there were things when they were still in Walter when we planned our [deleted] anniversary. We went there and dug through a lot of the archives—for archival photos as well as... I went through... I think I went through every bound issue of the Daily because we were trying to identify what were the hot topics of the day. The hot topics at the U are pretty cyclical. About every 3 years we're broke and the hot topic is going to the legislature. That's not an historian's scholarly view of those bound issues of the Daily, but that's what I saw. And now I'm more familiar with the U's archival policy in terms of working with them and reviewing things with the department and faculty members.

KL: Yes, [deleted].

UV: Yes.

WX: Yes.

MN: Absolutely, it was hard to read about the Andersen library and not know there were archives.

YZ: I was aware of the archives both as a consumer and as a producer of archival material. Have used the archives extensively.

ZA: Yes.

BC: --Through own research, used the Social Welfare and YMCA archives
- through teaching of grad students, sent student there
- local history and own research

DE: Yes.

Q2. Are you familiar with University's archiving policy?

EF: Not Really.

AB: I used to work in [deleted] and the Provost's office and when we were doing policy review I remember seeing that it's not something I worked on No.

CD: No.

IJ: Yes. I couldn't recite it to you, but I have seen it.

OP: I know that there is one, but I couldn't tell you what the policy says

GH: No. [Interviewer explained the policy.] I guess I did know there was a Board policy; I didn't know what the Board policy provided.
Q3. Do you know what type of material is contained in the University archives?

There are some gaps in what has been saved. For example, Academic Affairs office doesn't have the same footprint as other offices on campus.

AB: On a conceptual level, I know they have historical documents. It's interesting I read in the documents [that you pass on] that reconstructing history is probably the best usage of archival material and I thought I haven't had to reconstruct anything that far back. If I have to find anything it was in the vaults in Morrell Hall, that's the name of the place they keep documents before they go to the archives. I think it might be around retrieval issues.

CD: Primarily the material I've been exposed to is the photography, just because they're on placards around the U, that's the most visible. Beyond that I can guess about the sort of things that might be in there, but I am not terribly familiar with it.

IJ: I believe I do.

OP: Some, but I'd bet there's an entire lifetime's worth of things in the archives I don't know about. I knew faculty works were in there, some documentation of university history, but it's a very perfunctory understanding of what the archives are. I learned more in your introduction than I've ever known before.

GH: I do have a pretty good idea of the nature of at least some of the materials contained in the Archives.

QR: No, I just assume probably a lot of loose paper, notebooks, I don't know—do we keep the Dailys? INTERVIEWER: We do. INTERVIEWER described wide variety of materials maintained in Archives.] There must be tons of stuff that departments produce here that wind up there. Well, I can tell you that this may be part of the issue to fix: You know, I sat in a senior level administrative position [deleted] and I can never recall a meeting with me, the President, the cabinet or whatever that we ever discussed the archives outside a capital project. Now that doesn't mean I remember all those meetings, but if there were archival issues about saving or whatever, it never came up as something that caught the attention of the central officers. So, I don't know who was communicating what to whom. Maybe in the archives you can see if there is a memo that ever came out of our office instructing people to do X, Y, Z, but if somebody like the President or the Provost isn't sending that out—maybe as an annual letter of instruction to units—no one's going to remember. It's going to be done by some secretary in the office and they change around, and then they leave and they won't tell anybody else they need to do that.

ST: I'm sure I don't know the depth and breadth. My imagination runs wild! I would figure you would have all of the Senate and Consultative Committee kinds of minutes, and Regents minutes, and certain kinds of photos. But I don't know—for instance, given that most departments probably went through some kind of planning process as a part of the Capital Campaign, have we received any of that documentation University-wide? I don't have a clue.

KL: Yes, she is aware of the materials contained in the University archives.

UV: No.
WX: Yes, photos, publications, and things like that.

MN: We just did [deleted], so from that experience, I knew there were photos, books, and some of the materials that we produce, but I wasn't aware of how many maps there were and that there were so many architectural drawings.

YZ: Yes. I also know what's missing—materials generated by individuals who discard their materials or take them with them when they leave. (For example, my files were in bad shape when I vacated my office. Much was lost in my haste of moving out of my office in 4 days.) Missing is an awareness on the part of faculty who are about to retire of the need to organize their materials and have them deposited in the archives. We know when people will retire 3 or 4 years out. Why not convene a meeting of them to discuss archives and the faculty members' obligations? (I was aware, but had no time!)

ZA: Yes.

BC: -For undergrads, Lois introduced them to the archives. They used it for social and cultural history. The project with Cedar-Riverside, there's been a good deal of public relations portion to it, but it's also a fraught relationship (the university and cedar/riverside). Getting local people to use the archives

DE: Probably a pretty good guess. Committee assignments, Final reports, University related reports

PRACTICES

Q4. Does your unit or department access or deposit material in the University Archives? If so, what types of material? How frequently do you use the archives, and for what purpose? (If interviewee doesn't know, ask who might know).

EF: When she retires, she has her own system of marking her own papers.

AB: No I don't. I think so but I've been here a little over a year, but our staff here and after three or four years the files go some place else here and at what point they get moved to the archives or who does that, I don't know. I should know about this. Part of what we are doing is education; I feel pretty sure that there is a process of what goes to the archives, otherwise where would we put everything, and I Know that there is a process of what goes to archives, you just don't want everything to go to archives.

CD: For this one I asked a few people and nobody was familiar. I work in [deleted] and also with the [deleted], and no one was exactly clear, so not that I know of, but there could be some.

IJ: We do to some extent, but we don't have a policy to make sure that it happens. The things we put over there are newsletters and various reports and things.
OP: When I first came into my job as the director of [deleted], I called the archives and said, "I've got some material here and I don't know if it's right for the Archives." It was about [deleted], and they said they had enough information about that and didn't want anymore. As I sit here, though, I'm thinking there are some other things we have that the University might want to archive - some things on construction etc. So, we don't do it regularly, but we ought to.

GH: Yes, we quite regularly send stuff over there. As a matter of fact, all the [deleted] you read from me, one set of those goes automatically to the Archives every time they are issued. So they get all that stuff. Actually, I have several drawers full of things here that really at some point need to be cleaned out, put in boxes and sent to Archives. [INTERVIEWER: How do you circulate [deleted]?] We have a paper mailing list of about 15—all 12 members of Board of Regents get paper copies, the Archives here, the archives at Duluth; it's not a long list, but they get a paper copy (on recyclable paper which deteriorates after about 20 years). Do we use the archives? Rarely. Maybe once every 3 or 4 years we might need to get something out of the Archives. With so much stuff existing now in electronic format and with nearly infinite storage capacities on these computers now, I've got virtually everything that I need, even if it goes back 5 or 10 years because it's just sitting on my computer electronically. It's more a question of remembering that I've got it rather than having the capacity to keep it. [INTERVIEWER: Does anyone else have access to the files that reside on your computer?] No. Well, I mean, the files that I have are the [deleted] business stuff and I'm the only one who deals with it. Or reports that have been issued under the auspices of one or more of the committees that I work with and for the most part, paper copies of those exist and they're usually on the Web at this point. So, I keep them on my computer only for ease of access and just cause its easier to fiddle around with a Word document than it is to deal with something that's on the Web. Well, in fact I'm going to just make a CD of the archival files and just send them to the Archives. Of course those (CD's) have a limited shelf life too. I don't know how easy it would be to read some WordPerfect 2.51 files at this point, you know?

QR: [INTERVIEWER] noted that some of this had already been covered in preceding comments. Yeah, we do [deposit] because, quite frankly, if you sat in the administration as long as I did, you saw the problems come up at least three times where you basically rewrote the same document to find a solution to something that you didn't solve. [INTERVIEWER: What kinds of materials would you seek?] History of the college, or some faculty committee report or something like that that addressed some kind of policy issue. [INTERVIEWER: How frequently did this need arise?] I don't really know. In many ways, I sat there so long that whenever one of these issues came along (in fact even now, I'm doing some special projects for [deleted]), I just go into my computer here and I find the report I did in 97—it's the same issue. I've got my own little archive.

ST: Not very often. But just this spring we will need to go over and try to pull some photos out because we're doing our special publication for our [deleted] anniversary. And I think we will need some historic photos. I can't imagine there's anything here that would be useful to anybody (as I look around the office!) [deleted]
KL: She deals with [deleted]. She encourages use of the archives and she has been working to make the General Counsel more aware. She also refers others to the archives for historical information or asks for information for them.

UV: We do not deposit material in the University Archives.

WX: It depends on what is considered frequent. She does not use it that often. A typical use of the archives for her is to research on an [deleted] or person to bring along with her as it is related to a prospect. She has brought [deleted] to visit the archives if there is something of specific interest. When she does this, she usually contacts Lois so the materials are already retrieved.

MN: I've learned that we have accessed the archives in the past to produce some of the historical materials that we do. When we built a new [deleted], we accessed the archives to get material on the old [deleted]. I know that we used to do a television program from 1987-2001, and that was sent to the archives. The 2001-2003 are in our storage, and we'd very much like to get them out. I know the archives keeps copies of our newsletter, our internal communications piece, and when we went from a printed piece to an electronic piece in 2000, Archives did call our e-communications manager and say that they were going to print the e-mails and file the print copies of the electronic newsletters. We don't know for sure if we've been mailing them [deleted], which has been going out for five or six years. That's our external piece.

YZ: Yes. The [deleted] Department does deposit material in the archives, though I'm not sure how often. I'm also not sure of what types of materials, but I think they include personnel records of a non-sensitive nature. Also, materials that record the ongoing operation of the department—(materials pertaining to) curriculum development, special programs, research initiatives. Also, the internal documentation of the department—committees that set the tone and standards for the department. Departments (and colleges, too) should be made aware of the University policy and their obligations to preserve materials I use the archives on a number of different occasions—e.g., for research projects, to provide entry exercises for my [deleted] students, and for teaching. This is a very friendly archives; it's not difficult for faculty to get material.

ZA: Yes.

BC: Oral history series by Hy Berman
Departmental information -- if wanted it, could find that

DE: I have only worked in this office for 3 months. Prior to that I worked in the Law School, there is some effort by the library there to do some archiving.

Q5. Are there documented policies or practices for sending material to the University Archives? Who makes the decisions on what is sent?

EF: Was aware that policy existed but didn't know the details. She makes her own decision on what to archive [deleted]
CD: I asked around about that one too, and no, I don't think there are any formal procedures, but I would be very interested in thinking about that a little, as we could definitely benefit from a more formalized procedure.

IJ: We do in spurts, but not as much as I know we should.

OP: Obviously not. Decisions on what is sent would be made by me in conjunction with various assistant vice presidents and with the vice president of university Services. If I suspect that we have some [deleted] information that would be helpful to future generations or people [deleted] later on, I would talk with the vice president for [deleted] and say, "Do you think these are records that should be archived?"

GH: No written policies. (It's more our culture.)

QR: [On making decisions about what is sent:] Maybe somebody told me at some point. I just assumed it was [deleted]; maybe [deleted] is doing that. It may very well be that every document I pushed out, [deleted] (or whomever did it) was sticking it in a file and maybe it was all going over some place. But, I certainly didn't know about it.

ST: Not for this office. There may be some in the college I'm unaware of. [deleted] has some sense of what gets archived in the [deleted] office or [deleted], who works with the faculty. They could tell you who to talk to at the department level.

KL: [deleted] they have a "prior to disposal call the archives."

UV: No, policies or practices because she does not send things to the archives.

WX: She didn't know if the Foundation deposited items, but she did however, not on a regular basis and as is appropriate. She trusts Lois to help her determine that.

MN: I have no idea how to access the policy, and it wasn't part of any kind of orientation that I ever got. When the archives contacted [deleted], the e-communications person, when we went from print to electronic internal newsletters, he wasn't even aware that they were archiving the print ones. We would probably do an audit of what are we producing, what could we conceive would have long-term value, …

YZ: I'm not sure about a departmental policy. We, more than any department, recognize the value of archives (it's the lifeblood of my discipline). Ultimately, it's likely the advisory committee that decides what to send (final responsibility is with faculty). I'm not sure of any such discussions recently.

ZA: Since I've been here (almost two years), we are working on an office manual or office policy, but before me, I do not believe there was any such thing.

BC: We don't think seriously about email communications
DE: I don't think that there is anyone specifically, it's sort of [inaudible]

Q6: If you do not deposit material in the archives, what are the reasons/obstacles?

EF: [addressed elsewhere]

AB: It's thinking about it and time. When I was at another institution, [deleted] I would prepare my files for archives. They were a half a block away and I actually used the archives for my job there for looking at a 10 year history. So I'm used to, I understand the concepts because I've used the archives at other institutions. They've been very helpful and illuminating. But for my job here I haven't had to go to them. [Interviewer asks, do you think that's because of the process of storing them here for awhile and then going to the other side of campus?] I don't know. There's been a couple of times that we've wanted to look at some background history and if somebody might have a piece of information and that's been enough. I haven't had to go further down that path. But I think that the accessibility, retrieval…I know that I have an unconscious prejudice. At my little college it's like, here's my archive room. In alphabetical order. It was actually a little old nun, and they would come and ask me what I wanted and go find it for me. It was fun and I didn't have to do much work.

New statement about small colleges:
Well that's the challenge at the University. It becomes so huge, so monolithic,

CD: From my perspective, the awareness, or the lack of publicity … just the fact that we might not be aware that we have a responsibility for inputting our share into the archives.

IJ: No. Whoever happens to think of it deposits things. Some of our departments do a better job than others. I think [deleted] does a pretty good job.

OP: The fact that I've never bothered to look up the archives policy and know what they are looking for and need ... so just guessing is probably not a good way to work with the archives. It's one of those things that everyone would agree needs to be done but we all put it at the bottom of our list - which is worrisome for our history. So I think we need to be more aware of what they can do and how to access them. Really, between putting stuff in a box and Campus Courier, it's not that hard to get it over there.

GH: (skipped)

QR: I don't think there any obstacles, it is just lack of information.

ST: The impediment is simply the assumption that what we've got isn't worthy of archiving. I think there's a comfort level we have that the legal documents and information we have about [deleted] is archived, if you will, at the [deleted]. But that's really kind of an interesting question about how do you define archive.

KL: (skipped)
UV: Lack of knowledge about what we should be putting into the archives would be a reason that we do not do it. We don't have enough knowledge about what is in the archives or what we should be archiving.

WX: She does send things over to the archives at Lois' discretion.

MN: I suppose mostly it would be "top-of-mind." Not necessarily an obstacle, but certainly in our time-crunch environment now. We are aware of things that we ourselves should be keeping, for example searches - when we have a search committee, we should be retaining those records. We know about retention of certain types of legal documents. But these are not necessarily archival types of things. But those types of things are more "top-of-mind" for us. Like what are the requirements for HR policy or legal reasons, letters that we need to retain, financial documents.

YZ: The data privacy question may be an issue. Also, my department's space needs are so critical that there is not space for new faculty; retiring faculty must hastily vacate their space (there isn't time to organize materials and send them to archives).

ZA: [INTERVIEWER noted that the question had already been answered—the office does deposit materials]

BC: No conversations about this in the [deleted] department

DE: (skipped)

Q7: Does your unit/department have a procedure for creating, storing, and archiving publications and unit information existing in electronic format (i.e., web pages, e-mail, or other documents that reside on computers)?

EF: Some more specific guidelines would be useful. She saves her own research drafts, etc. Perhaps a tip sheet for creating electronic records.

CD: I'm the [deleted]. I think most of that stuff happens ad hoc. Myself, I keep a sort of archive of our web site at various stages and of various documents that I use, and I think most people keep things, but there's not a formal archiving procedure, nor procedures out there for retrieving this stuff. It's all floating around out there, but to get at it is another thing entirely. I've been trying to take a snapshot of the web site quarterly. I am split between the two departments, and with the [deleted], they have all these subsidiary units, and as far as the web site goes, they have become more independent from what I do, so I'm in more of a managerial or facilitator role, so I'm not doing so much archiving there, but with the [deleted] I do try to maintain a sort of snapshot periodically of that web site - even for my own benefit so I can look back and see the progress, and hopefully not make any mistakes or redo work that I've already done.

IJ: Not having that mentality, that culture. Probably never even talking about it as something important.
OP: No.

GH: Not that I know of. You might want to have a short conversation with [deleted] whose office is directly behind you. She does the [deleted] stuff and handles the Web pages. She may do some archiving that I'm just not aware of.

QR: No to my knowledge. Now, again, whether somebody is doing the stuff I'm sending to the Provost or whomever, I don't know. I store it. I mean I have my [deleted] file, I have my [deleted] file, I have my [deleted] file—I mean, I've worked with about seven [deleted] and five [deleted]. I suspect there are files floating around here that might be of interest, that the Archives might be interested in having.

ST: I'm not sure that we have procedures. We just now started archiving, if you will, a photo library held on the Web with our central files, our electronic files, and those are photographs that we've taken over the years, either for stories in [deleted] or for donor or student events. That's the same way that we're archiving CLA Today, by having it on the Web, I think.

INTERVIEWER: Is that information accessible to others outside [deleted]?

QR: Yes, they have to go through our communications office but some of the photos are available to non-[deleted] folks and some of them are not.

KL: There is no procedure for creating or storing in her office.

UV: Yes, our technical support people take care of these things for us and let us know what we need to do be doing.

WX: No policy on this

MN: Our press and our electronic publications are stored, but it's not a formal policy or procedure. So for example, in our internal publication, we have an archive that goes back to 1997. We have some newsletters that are stored electronically and can be accessed on the Website. [deleted] itself is searchable. The most recent two years of [deleted] are available electronically on the web; older versions are stored electronically on the AHC server and print versions are stored in our office. The most recent AHC community report is always available on the AHC Website and print versions are stored in the office.

YZ: For hard-copy materials we do have procedures: Hard-copy publications of our faculty (e.g., books, articles, documentary films) are kept in the department's Ford Room. I don't know that we keep electronic copies of any of this material. We have a good Web page, but I think it's not retained when it is refreshed. We have a Web person in the department who maintains our Web page.

ZA: No, not currently, but we are in the process of getting to do our filing (archiving) by document imaging, and so what I'm having difficulty with is how these images are going to get to Archives and how Archives is going to store those images.  INTERVIEWER: How far along are you with document imaging?

ZA: Well, we have a computer, we have the software and we have the scanner. I started in the fall—or probably late summer—doing the indexing of our
filing, and I stopped because document imaging is getting an update of the software, and the update of software is going to allow us better searching capabilities. And with the [deleted]-type of filing we need—in order to retrieve easily—we need very extensive searching capabilities. So, I've kind of held off a little bit until we have the updated software. [INTERVIEWER shared the Graduate School's early experience with document imaging and its plans, that also include eventually scanning the Graduate School's historical documents.] As far as a policy on the computer related archiving, no we don't have anything. We're not that far along. And archiving our computer documents—we place them on our server, so that's currently how we're archiving.

BC: The producer in the interpreter. We are not conscious of how we save documents

DE: If I do something substantial or significant, I print it off.

Q8. Is managing your unit's archival information a part of a specific individual's job responsibilities? Is there a plan for transition in the event of staff changes in your unit?

EF: The record becomes a book. Your own perceptions of what becomes important.

AB: I would assume it's the office staff here. We're a very new team In terms of assigned,.. I've asked her to look at the files and what's the best way to keep them. But we're still learning all the systems. [deleted] has been here 9 years, he's the chief finance person and he would know more about the archives than anyone around here. It's something that I will find out, what is that process, where should I go, who prepares those files. Usually it's good to know, no hand written notes. It's good to work with somebody on that.

CD: No, it's no one's specific responsibility, but we could definitely benefit, if for nothing but our own sanity and to organize all this stuff we create on a daily basis and be able to mine that for information we'll need in the future.

IJ: No.

OP: No, it's not right now.

GH: No. We all just do it.

QR: No.

ST: I don't think so. The photo library (is the responsibility of) our technology person, [deleted], I guess has that. And I do think that if she were to , the person who would replace her would have that responsibility (to keep the photo archives up to date).

KL: She manages archivable material for her office and answers question on archiving for other units on campus. She is often the contact person because of her level of familiarity with many staff members and her archiving knowledge. She understands the importance and the
significance of the archives within the University as a whole and does what she can to make others aware.

Staff change is actually something they have talked about, with the recognition that many things are known by her and no one else. One of the things that people need to know is that when she is not available that they should call the "office of the person" with their questions. It is important that people to know how to find out the answer when the person they contact is unavailable.

UV: Not that she knew about except that there is no one who has managing archival materials as part of their specific job responsibilities.

WX: There is a task force looking at archiving for the [deleted]. She is not a part of that so could not address what they were working on at this point.

MN: No, it's mostly the publications group.

YZ: This is part of the chair's or associate chair's responsibilities, as far as I'm aware. No particular individual is charged with this role.

ZA: Yes, me. And once we get this document imaging up, I will share it with more people in the office, and also the retrieval part of it will be much easier because people will be able to retrieve documents themselves. So, more people will become involved. [INTERVIEWER: When you say you will share it with more individuals, with whom will you share? People inside the [deleted] office? Outside this office?] Within the office. Currently these duties are attached to my position, so my replacement would have this responsibility.

BC: (skipped)

DE: (skipped)

Q9. Are you familiar with standards for creating and storing digital content? What policies are in place for creation, storage of digital content produced by your unit?

AB: No Response.

CD: We don't have any formal standards. Each person's work in our unit is quite different, so I think that's probably part of that - they've developed their own work flows, and I deal with all their work. So there isn't a specific standard. Everyone does have their own way of doing things, and we could benefit from a standardization so if somebody bows out and someone else needs to come in. Especially with my job, that's a huge obstacle, because if I bowed out now, it's dubious as to whether someone could follow in my footsteps, even though I try to document where I've been. There are people all over our unit who have twenty and thirty years of knowledge just in their heads, so it's kind of hard to get it out of there. There's the historical aspect to the archive, but then there's also a very pragmatic aspect to archiving information, to not recreate work that you've already done.
MN: The [deleted] group provides server backup to make sure that digital information we have on the web is not lost. We do have news releases going back to fall 2001 stored; we have a Dear colleague, an internal piece, available on the website for the most recent two years with older ones on the server. State of the [deleted] is on the website. The image library is maintained on the [deleted] server--images of current and former faculty, staff, and students. Documents related to the [deleted] merger are available on the website. We don't have preexisting standards. We've just been moving along a common sense path and a usability path--how do we utilize these pieces, how often do we need to go back is based on usage and need versus policy.

OP: To some extent, but I'm not an expert. We have policies for the creation of web pages, and we are working on policies for storing them, for taking them down, how long we keep them, ... But in terms of long-term storage, we haven't even begun to think about it. When I got here, I looked at our web pages and there were things that hadn't been updated in five years, and things that had been updated every five minutes, because somebody just liked to play with the content. So we are trying to put our whole web site onto sort of a schedule of updates, and decide which pages need to be there but can be static and which pages actually need active monitoring and updating. If there are pages about a project, at what point do those need to come down - those are the kinds of questions.

EF: Not aware of standards. Perhaps, like with other data on campus, the 2nd week of Fall semester could be the snapshot date for digital content. Would allow you to do some comparative work.

GH: No. [INTERVIEWER: You do now routinely put all of the minutes and policies on the Web?] Yes, and reports.

QR: No. None.

ST: No. I have great confidence in our OIT people, and I bet they know! And that's who I would turn to.

BC: No. As a side note, his students are doing projects where they are accessing websites and are find that the content has changed when they go back. Consequently they are now downloading and printing out paper copies

UV: No, she is not familiar with standards for creating and storing digital content. Any policies would be taken care of by the technical support people.

WX: Not familiar with storing digital content

YZ: No, but I know what standards I'd like: Preservation of digital content that reflects ongoing activities of a unit that is now being lost—e.g., e-mail is the preferred method of communication. How do we keep a record of critical e-mails? How do we decide what's critical? Put this information on CD's.
ZA: Ummm, no. And no policies are in place.

KL: She is familiar with storing digital content. Currently, there are no policies for the creation and storage of digital content produced by her unit. However, she is keenly aware of the need for policies for creating and storing digital content. "When we were paper, we were fine. It is imperative that some of this information be saved. I am completely behind electronic information, but we have to be able to save it. We don't have facilities or budgets for this and it is going to be lost. For example, potentially the loss of CUFS data as it becomes electronic. We have to be able to find, access, and read these types of information."

DE: Nope. I just push the print button.

Reflections On The Present

Q10. Discuss your perception of the value in the University's maintenance of archival information—that is, documentation on the publications, services, programs, and activities of the University.

AB: I very much see the value, because it's history. It's hard to proceed without knowing history and knowing trends, knowing what was tried, was it accurate. You know we have our interpretations of history.

CD: The problem with something like this is that at the present, you have to "sell" it because in the present the value isn't perceivable at the outset, when you start to do these types of things, you have to sort of justify why you're doing them. In the future you can't really perceive what type of data is going to be useful - you might be storing massive amounts of data that is only minimally useful. There's a lot of thinking that needs to go into predicting. There are two strategies for doing it - one is just to sort of collect everything, hoping that some of it will be of use in the future, or try to focus your efforts on particular subset of that data that you've created and archive that. The only problem with the second one is that you're not sure that you're getting everything. I think it's extremely valuable for history's sake alone and documenting progress being made over time, but also for internal use, too, being able to look at where we've been and relate that to where we're going.

IJ: We just finished doing a history of [deleted]. In fact, I've got it sitting over on my desk right now. We have used the archives in that process but probably not as much as we should have. But we realize how important it is to have all in one place. Because of all the various offices, we've had to go back and dig through for information. It would have been much easier to have had our own archives here in our office. Some things are probably lost because we never archived them.

MN: Archives in general are the stuff of history. It is the record that gives us proof that things happened. It's very important to be able to say "wow! That's what they were thinking at the time,
particularly with this strategic positioning effort. I think it's fascinating to say "what is now is not the way it always was, so why should we think that what is now is the way it always should be?" I think it is illustrative and instructive.

OP: You're talking to someone who's very soft on this stuff; I think it's very key to understanding decisions we need to make. We need to understand decisions we've made in the past. It's easy for me to keep going back to construction. As an example, before we go and renovate another great big building, we're going to look at decisions that we made around Coffman that caused some real headaches for the University. And I know that we're doing that, but what happens in 50 years when it's time to renovate Coffman? Someone's going to need that kind of material and they're not going to have it on their bookshelf anymore. Having that type of information in the archives can really give people an idea of what's been done and gone through in the past. Then in terms of scholarly and academic work, it's essential for understanding how the college of Agriculture has contributed to the University, and Extension has contributed to the life of the state - both in archival documents, and also I would love to know if we have an oral history project that tells some of those stories. You can't place a value on it. We are a University; we are all about knowledge, and we need to maintain our own.

EF: MN has a big archive, professorial papers, policy help, breadth of mission impacts, helps administrators do their jobs. The alternative is no record whatsoever—it would be like having no Library of Congress. We have one of the largest University archives in the country. [deleted], I've found the archives valuable; I have used them a lot and have been impressed. "Recovery of identity" is one reason to use the archives. There is much more frequent turnover among administrators now; would think the archives would be of use to them.

GH: Well, I'm by nature both a packrat and an historian. So I would find it appalling if we didn't save all our stuff about ourselves. I personally am of the view that when circumstances demand it, it can be very useful to go back and find out what we did in the past—if for no other reason than to avoid reinventing the wheel.

QR: I think there are lots of reasons for keeping information. One is just general historical interest. Providing a record of what happened that's accurate. I think we do a lot of management by anecdote. We forget a lot of what we've done in the past, and I think gaining access to that information can help make for smarter decisions—provided you can get it to the people in a timely manner and can sort through it. 'Cause you know part of the problem is that there's a lot of clunk in a lot of this documentation, so you really need to get to that. So, I also think that may have some legal ramifications about who did what to whom and when and why. I do believe a lot of that past information can inform present decisions.

ST: I think the value is quite substantial. I mean, how do you know who you are if you can't figure out where you've been? And this University has had great challenges in the past; I suspect it will have great challenges in the future. Some Presidents have been able to steer rocky waters more successfully than others, and there are lots of lessons to learning that. And I suspect that at this institution, because it has a history of having its legislative, or its controls...the emphasis...it's so faculty dominated. This is really one of the hallmarks of this institution, at least traditionally. I don't know...I think there could easily come a time where that would be
pretty interesting for somebody who didn't know anything about the U to really develop an understanding about how that changed—or maybe it won't change.

BC: (skipped)

UV: I think maintaining the University's archives is very important particularly because of the nature of the University's work. It is very important for us to have the information in the archives because we will need it for the future.

WX: "How can we do without it?" We need the archives and the money to maintain them including the salaries to support the staff needed.

YZ: (Already discussed.)

ZA: I think the value is being able to research the past to improve the future. In order to make informed decisions, we need to have background materials to see how it was done in the past so we don't make the same mistakes.

KL: We are desperate for someone to look at this issue as a real issue. We need remember the value of the archives and the importance of its maintenance.

DE: It is important particularly for the work the gets done in the [deleted] office. For things, plan in the future, it's good to know what's been discussed or tried or failed in the past.

Q11. What challenges do you see in maintaining archival information in our current technological age?

AB: No Response.

CD: I think one of them is deciding how much to keep. Before, I'm sure that not every memo slip has been saved, and e-mail is equivalent to those types of things. How much of that day-to-day stuff do you really want to keep, because every bit that you save is another bit of effort on the other side to try to mine that and get some sort of meaning out of it. That's one of the main challenges, and then related to that is how do you organize and catalog it, and retrieve it after it's deposited.

IJ: I think it's very important to think about archiving. You've got things on the computer and on e-mail. It's easier to throw things away on the computer than when you have an actual hard copy. Somehow you feel like you've got more invested when you print something out so you want to keep it. I'm one of the worst; "I'm done with that. Get it out of my life."

MN: What we've learned from storing things electronically is that media change. The old 1/2 inch videotapes I have from TV stations, where do you play them now? Like the 8-track phenomenon, things come and go so what we think is a long-lasting permanent media to store something may not be. The DVD's we're preparing now for various purposes, who knows if we'll be able to use them in 100 years. So it's both the vehicle and how long does digital work
last. I think that's a huge question for materials that are stored electronically. For example, in our cornerstone for the [deleted] building, we put a palm pilot, so later people will think "How interesting they thought that was important."

**OP:** I think in a lot of ways we are very challenged about information right now, because it is so available, and we always hear stories about students not checking the source and assuming everything they find online is current and correct. But I think we also have the sense that we can store things wherever and we can own stuff wherever. We're not thinking through the long-term life of some of the information that we put out digitally. I just found a bag of disks that were my backup from when I was at the [deleted] center in the early nineties, and I had kept them at home in case the [deleted] center burned down. But then, it's the kind of thing you just throw out because nobody uses those kind of disks anymore. So what information is historical, what information could be of value to researchers etc. ...

**EF:** Voluntary institution -- culture of institution. Create an atmosphere where people do the voluntary part but HAVE to do the institution part
Data management person to encourage people to archive
Appearances before Dean's meetings, every 5 years, review of criteria, suggestion of managing records, a brochure, a Web site with information about archiving

**GH:** I've thought about this, but haven't given it enough thought that I've actually reached any serious conclusions. But I have wondered to myself, what in the world is going to happen to all of this stuff? Now, I tend to print things out because of course I'm still of the generation where I'm used to paper—I'm getting better, but… I'm about, for example, to ship this entire stack to the Archives which just has to do with this one little group that I belong to—the [deleted]. Well, I dutifully print out 90 percent of the e-mail exchanges and the articles that the group is looking at and put them in this stack, and at some point I'm going to get tired of looking at the stack and I'm going to send it over to the Archives. So, if somebody in 50 years wants to know what was going on, they [unintelligible]. So, my personal solution to the challenge is to print things out and send the paper copies to the Archives. [INTERVIEWER reported that Archives is also doing that currently with some items, like BRIEF.]. Then one of my recommendations to Wendy would be to buy acid free paper, or her archives are going to crumble in her hands in about 50 years!

[INTERVIEWER mentioned the Strategic Planning documents and correspondence around this initiative as being largely in electronic form—on the Web or in e-mail. I imagine people who feel they need to retain this information doing just as we do—they are printing this information.] I wouldn't be so sure about that! I think people, more so than I do, tend to (at least those more sophisticated than I am) categorize and file things on the computer itself and just save the stuff electronically.

[INTERVIEWER asked about changes to the [deleted] Web page—does the office print a copy of its "old look" to retain for its records, or keep a copy on a server?] I don't know the answer to that question. [deleted] would be the one to ask

**QR:** Well, there's probably a whole series of issues. One is just how do you get access. Because this is the Wild West. And then not only the question of access—access to what? What precisely do people want? One advantage of having digital stuff as opposed to the paper stuff is
that that there are the data mining and search engines on this stuff that allow you to extract
information in ways that you can't do as easily with paper.
I think there's a whole bunch of security issues. The more these electronic documents float
around in cyberspace, the more accessible they are to people. I don't even know what we have in
the Archives—I mean, do we have stuff in the Archives that we consider classified for awhile?
[INTERVIEWER explained that is possible.] So I think that may be a concern. I mentioned
earlier the fact—about the lawyers and conflicting messages about what to keep and when to
keep it and what not to keep. Security is I think primarily transmission issues, and I think you're
also going to have issues about whether it's been transmitted accurately or not. One thing about a
hard copy as opposed to a digital copy [unintelligible]...somebody can more easily get in and
modify text or what's in the record than they could do with a piece of paper.

ST: I think I'm a prime example of being guilty: It just doesn't occur to me. And I think the
other thing is, it's hard at the rate with which one communicates now to really be able to pull up
25 emails and say, THIS is an important document. They all tend to look alike and then we use
templates so we can work faster and more efficiently, so even more and more things look alike.

BC: (skipped)

UV: There will be challenges. We have tech support to keep us up to date on things and telling us
what to do. However, it is important that we keep current with information and make it
accessible. The archives needs to continue to have the most current ways to update and save
materials.

WX: She thinks that there is a bigger challenge in storage. Things still need to be stored in their
original form. She sees storage as an ongoing problem. Scanning works for things, but how do
you continue to store the historical things that are too delicate or in a format that is difficult to
store. We need to think about the future and what the results will be if we do not keep this issue
on the forefront.

YZ: The challenge is one of preservation. This is ephemeral information; it exists in the air.
There is a huge chance it could be lost. How do we preserve this information for the next
generation? I'm not enough of a guru of new technology to know how to answer this question.
On access to such information, the Library of Congress (LOC) for the last decade has been
developing its collections—books, but primarily archival information—in electronic form.
Digitizing its collections. Some books are now online via the LOC. So now it's possible to do
research online. As a graduate student, I had to go to many different archives and libraries
around the country to do my research. I had to secure funds to go. I had to physically go. I had
to leave my infant child at home. (Access to these materials electronically would have made it
much easier…) One of my former graduate students—John Earl Haynes—is currently the chief
historian at the LOC. Over the last decade, he worked out with Russian, British and German
(and other) national archives the capability of making the full papers of the Communist
International available in part online via the LOC. Hundreds of thousands of pages. This is a
tremendous achievement. All of these papers will eventually be put online. The indexing guide
is already online.
I recommend your group or Wendy talk to Haynes (or have the new archivist talk to him).
ZA: My main concern is retrieval, being able to retrieve and making sure that whatever is archived is easily retrievable and found in a reasonable amount of time. Especially with this new document imaging, I don't want to put an image on the computer and not be able to find it. That's my biggest fear. Another thing is to have other people being able to retrieve documents as well and not just ask the person responsible for the [unintelligible]. And when you're talking about emails, too, being able to make sure things don't get lost. [INTERVIEWER digressed by explaining [deleted]'s reliance on email.] One example here is we got an email when [deleted] was out of town, and that day the electricity went out and an issue came up and no one had printed out the e-mail. Of course we resolved it, but it was on his computer and how do you get to it?

KL: Someone needs to be worrying about the information that we will need in 2010. "We must be guardians of our history." The U needs to understand this and get it into everyone's minds. We still have boatload of paper. We still need to handle paper and process the backlog. Everything is in flux, and we need to be planning. The U needs an archivist to be proactive in collecting.

DE: A major challenge is just making sure people understand what to save or send to the archives.

Q12. How do you make use of older material about the University (e.g., committee reports, publications, news publications, photographs, etc?) Where do you get this information?

AB: At my old job I was in charge of helping people tell story, I was in institutional research, so I would look at old data, looking at students over a 20 or 30 year timeline. I would go and see if they were asking the same questions today, you know, sort of a longitudinal look. It was pretty interesting.

Here, I would, in terms of reorganization, it would be good to do a review of Yudof's initiatives, [there were some initiatives about [deleted] about 5 years ago] we were doing a self study and getting documents. You know the thing is that I found some of them here or in other offices. If I couldn't have found them you know I would have thought of archives. But I don't know the policies of when do documents go to archives. And that's one there here, our college is a two campus college, half of it is in Minneapolis, half of it is here, the dean's office is here. You know the department heads and how are their files kept and how do their administrators, what are their policies and they might be very different than the Dean's office's.

Internal kinds of things, when's the last time we changed this major, etc?

Internal administrative things, data of the kind I'm interested in, I'd probably go to the IRR and talk to them, go into their archives and look at historical data. Because we are such a little place over here, you know exactly who to talk to and over here, there are so many offices, so centralized.

You know I must say the obstacle would be the thought of going to the West Bank, talking to somebody, would it take me days, and we're very very busy. Would we just say, you know, that information is just not around, would I take the time to do that.

SO part of it is knowing how long would it take me, if I asked a question would I get a 24 hour turn around. I just have no idea. I remember taking a tour of Anderson library and it's just amazing and incredible, the stacks, But that was also awe,
Knowledge in the head of archivist

The other thing is how much people respect what happened 10 or 20 years ago. We're doing strategic planning now and I don't know if people are going into the archives and saying there was this plan, what happened, how were these decisions made. It's sort of like well that was a different regime, we're new. It's an interesting attitude, you know, we have to move fast. I don't know if it's not a good thing, it's just an observation.

Telling stories at other job:
Advancement function at my other job. Development, Alumnae, and PR report to me. I'm thinking along those lines in terms of telling stories. What I would do is I would go to [Natural History area of U] and they already have historical documents. Cedar Creek, I wouldn't have to go to the archives because they have that seminal information there. They are not going to let go of that, they need it for themselves. I don't do that work myself, but I would say to the development officer we need a key statement for this, great quotes. They did do some digging and they found it. But they just did it here in what we have. Other than that, the college 10 years ago and that's from memory. We're doing strategic planning for the future, you're looking at current trends, where are things going. A ton of research is on the websites, what are they doing, what's the competition, and the archives wouldn't necessarily have that kind of information.

CD: I really don't. I'm mostly concerned with our web site, and the current things, so I haven't used it a lot.

IJ: With this timeline and history that we just did, we were pulling things out here and there. One of the main things we did was to go back and look at trends in student enrollment or graduation rates and things like that. A lot of that we find on the web, and a lot of it, I have a filing cabinet behind me that's full of regents' reports and various things that I have tried to keep track of. I go to those quite a bit; I guess we have our own little archive. The history project was part of our strategic plan. We were charged to put together an assessment of our office, and use that assessment both internally and externally to put together a strategic plan for the next three to five years. A part of our internal assessment was to pull together a history--which has never officially been done in this office. So we have a 25-page document of the history, as well as we could pull it together, with all the various units and entities that this office has had over the years. We'll be including the history with the assessment, and will also be on the web to read and find problems with I'm sure, as people say "Well, I was here then and that's not how it happened."

Which is good because that's what we need to hear. It's been good to get it on paper and feel that there will be some continuity. People that were around when a lot of these things happened are either not around any more or could be retiring soon.

MN: The history that we operate with here is more recent history like two years and four years. For the most part we're operating on a day-to-day basis so if I need to go find old reports of the faculty committees, it's all online, so most of the research that we need to do is online. We're highly dependent on the Web.

OP: Actually, I don't make use of a whole lot of things, because we don't do a whole lot of publication, so I don't have to go back and get photographs and older publications. But, I am moving into a master planning process, and I know that we will not only look at the most recent
master plan, but we will go back into the archives and pull materials from other master planning processes - so that we will not only see the final master plan but we will also see who they went to in the community to help craft that plan - to really understand what was going on at the University at that time.

EF: [Already addressed]

GH: (skipped)

QR: Well that really is a hit or miss. I think the reality is that because a lot of this isn't well known, we don't use it. I mean, if it isn't quick or easy, at least from the perspective of senior administrators, it's not going to happen.

ST: [INTERVIEWER noted that [interviewee] had already commented on this. Is the Archives the first place you would go for very old materials?] ST: Probably. Yeah, I'm sure. Unless I was doing something very specific to the [deleted] School, then I might try to hit the J School first thinking they might have archives. I don't know that they do. But I think my first foray would be to the Archives.

BC: Thinks that on the departmental level it's well organized. But no knowledge of it beyond that

UV: I rarely use older materials. Since I am involved with budgeting, most of what I do is look at past expenses and things like that.

WX: The University archives are the first place she checks for publications or photos and other subject matter. Recently, I used it to reconnect an alumnus to some personal memories he had of the U. I can connect alumni with memories of organizations, like the band, or with information on a particular professor, they had when they were here.

YZ: [We ran out of time and did not get to the remaining questions.]

ZA: I've never had to retrieve anything. But an example of—well it's hard to give examples without giving out information. Let me try to think of an example I could use. It would be like a committee—the final results of—well like your report. We would go to look at maybe a report on athletics. What task force came up with what decisions, so now they can reflect back and see if that's what they should still be doing, or do they need to get a new task force together? Those kinds of things. More, you know, task force and committee results.

KL: She mostly directs people to the archives.

DE: (question not included in document)

Q13: What kinds of documents or publications do you think are potentially being lost due to the current lack of infrastructure to support digital archiving? How critical is this loss to the University?
EF: Web pages
Larger paradigm questions -- what's left out when looking at whole process and types of
information being kept

AB: Certainly it's a more nuanced information, reports, outcomes of an external review. You're
going to have a report and it's going to be on-line and in writing and you're going to have a copy
on your computer. And you don't need to send somebody over to the archives. What would be
in a paper file that's now captured in an email, in an electronic system? As people want to think
about saving money and paper and people want to think about putting stuff on CD and we need
instructions. DO we save a snapshot? Not everything would go. It's more problematic. Who's
going to read your documents? That's all going to be archived and you can follow along. Here's
the minutes of the meeting, those minutes are very terse. When I changed jobs from [deleted] to
here, I brought a CD of all my email. I thought I should have this in case I need to refer to any of
it. And you know I never refer to any of it. Should I toss this, is there anything critical in it?
And anything that was business for the [deleted] or the [deleted], other places would have copies
of it. I was not the official repository of that information.

CD: There is the e-mail question. I know there are efforts at some other universities or larger
organizations to archive all that stuff, so that's a huge bulk of stuff that may or may not have any
value later on, it's hard to say, and it's really hard to organize. Coming from a web background,
I think web sites are a big challenge, because of the amount of information that is presented on
web sites. If you take a snapshot of a current program at the U, it's a snapshot of their structure,
what kind of degrees they offer, current news, all kinds of things that may or may not get
archived in any other way. [deleted], it would be interesting to see the development of graphic
design from a web perspective - if not terribly useful, just really interesting to see the progression
of technology and graphic design. It's hard to say how critical the loss is to the University. If
you don't archive, in the future, will you even notice it? That's one of the questions - are we even
going to know? We might not even feel it. But it's hard to say.

IJ: With this timeline and history that we just did, we were pulling things out here and there.
One of the main things we did was to go back and look at trends in student enrollment or
graduation rates and things like that. A lot of that we find on the web, and a lot of it, I have a
filing cabinet behind me that's full of regents' reports and various things that I have tried to keep
track of. I go to those quite a bit; I guess we have our own little archive. The history project was
part of our strategic plan. We were charged to put together an assessment of our office, and use
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could pull it together, with all the various units and entities that this office has had over the years.
We'll be including the history with the assessment, and will also be on the web to read and find
problems with I'm sure, as people say "Well, I was here then and that's not how it happened."
Which is good because that's what we need to hear. It's been good to get it on paper and feel that
there will be some continuity. People that were around when a lot of these things happened
are either not around any more or could be retiring soon.
GH: One of the biggest things being lost is what normally would have been correspondence between officers, or between anybody at the U. Now it's all e-mail. And of course that's very evanescent. You know, it was enormously helpful to me to have all of President Coffman's and President Morrill's correspondence on the subjects that I was doing research on. Why, I bet there isn't nearly the same thing now. On the other hand, I did a history of the tenure debate here that went on from 95-97, and several of the people who were involved in that are also technology geeks. And I had two or three different faculty members give me CDs; they saved all the e-mail exchanges. I literally had megabytes of e-mail exchanges. So, if people are methodical as these people were in putting these e-mail exchanges in files, then this stuff is preserved. I had to clean it all out to be able to work through it, to be able to read it all. So, in that case I joked I had a problem that Gibbert didn't have in writing the Decline and Fall of the Roman Empire in that I was buried in information. ….. I've still got all of the information somewhere, in one or more of these drawers—or maybe in a couple of these boxes are all of the tenure debate files. I haven't checked with the Archives, only because I haven't gotten around to it.

It seems to me you could have an occasional reminder, or an annual reminder from somebody—I don't know, the President probably—to deans and department heads telling them to send stuff to the Archives might help. I don't know if there is a general reminder sent out; is there?

[INTERVIEWER said no and reported that several interviewees had already mentioned this.] That's almost a no-brainer for Bob to send out a one paragraph, 3-sentence email—in fact, it could almost go to the all faculty list. I remember as I was looking through cartons and cartons of stored materials, there were files—huge boxes—from individual faculty members (Stakeman, from Stakeman Hall, some of the other people on the St. Paul Campus). I did notice they were there. So a lot of times individual faculty will have things that departments may not even be aware of. ..This is certainly a rich part of the University's intellectual history.

QR: In one sense that's going to be a dilemma for any archivist—how much do you keep? In principle, almost any document could be useful. I mean, you've got what you might want to call macro history of the University and you've got micro history, so how important is it to document the history of the Scandinavian Department, for example? And for somebody who's been involved with it would find it interesting also. Is it critical? Well, I mean, there's critical and critical. I guess when I think about the other place I was involved with—[deleted]—those documents were important to all kinds of people. It wasn't just the history of some group in the state, but families were interested in finding out where grandma came from. So, there's some public relations… I think there's a public responsibility to store this information for the public good, the public benefit.

ST: Well you know, I don't know what happens to faculty employment records, for example. In this work that I do, I hear a lot about [deleted]. I've never gone to the Archives to look at [deleted]'s material. But given how much is being done electronically now, if we have in 15 years a Nobel prizewinner from the University of Minnesota, what are the things, what materials—and they have left (to go elsewhere)—well, Ed Prescott. Ed Prescott leaves, gets a Nobel prize, what do we have in our files about Ed? Maybe we have a lot; maybe we don't. I don't know. And maybe the Econ Department has never even stopped to think about some of the things that could be archived. But given that the majority of the work that he did for that prize
was done on this campus, I think the U should have some of that. And I have no idea; it could have gone with him to Arizona. I'm not saying that from a legal point of view; I'm saying it from the point of view of somebody down the road wanting to learn about Ed Prescott.

KL: She mentioned the general ledger and e-mail. We are losing budget information as offices go to e-filing. "We are losing how decisions are made." Things like the course catalog are not as big an issue as they can be placed on a CD. That form is maybe not as easily searched, but the information is there.

UV: With the decentralization of things like HR information and grants, I am concerned about keeping good information in one spot. Tracking will be come difficult if we do not have a central repository for these kinds of information. We need to have access to a number of different departments and this makes tracking down information difficult. We need to keep information accessible in one central place.

WX: She did not feel she was in a position to answer this question because she lacked perspective. I rely on Lois to determine what needs to be saved.

MN: I think having a shared understanding of what is critical to those people who truly understand and work daily in historical archiving would be helpful to all of us who produce material and create and distribute material. For me, when I need it I need it, and it's usually only two or three years old, so I don't necessarily operate in the world of historic archives. I think it would be very helpful to know what the standards should be. The Department of [deleted] has a newsletter that is cutting edge, and I have no idea what's happening to that. It could be lost. So for the history of the Department of [deleted] that would be tragic. Our internal e-mail and how decisions are made are certainly being lost. Convening a group on a listserv, what's there is surely being lost, and at some point when we try to recreate why we decided to upgrade our [deleted] facilities, it would make more sense if the entire documentation were online, but it's on e-mail, so we'll have to do it based on memory.

YZ: (did not finish rest of interview)

ZA: Well, what I put for us [i.e., what jotted down for the [deleted] office in response to this question] is that we typically don't toss anything we have on computer. The thought of documents being lost is very distressing! We cannot afford to lose documents and must have policies and procedures in place to prevent such loss. We were talking about emails. Gosh, what types—just exactly what I just said: Committee reports, the final results, what the committee came up with, emails, it's very vast—you can't really pinpoint all the stuff that we could be losing via email. [Brief digression to consider the notion of institutional repositories.] You've really opened my mind a little because I handle [deleted]'s email or the [deleted] email (which is our office e-mail) and I archive things on my email, but as far as taking them off and putting them on a disk... I've never really thought beyond my little folders that I've got. So, as far as that type of archiving, I really don't do anything with that and that really is an issue. Sometimes it depends on the issue, if it's a recurring issue that someone is learning about, I will print them off and put them in our folder, but most times, it's just random. People write about random things.
BC: It's an important thing to do. Make it someone's job duty to be archiving these documents.

DE: (skipped)

Q14: What consequences do you foresee arising from the loss of information? Give specific examples.

EF: A healthy institution has an institutional memory. Importance of a big university to society (and in US history) means we should keep as complete a record as possible.

AB: Sure. Just in terms of how we work efficiently. In one of my job changes in [deleted], I couldn't find a lot of important documents from the collegiate units, from the Deans. Performance reviews. This wouldn't be important for our purposes because it's not historical data, but we had no baseline to be able to say, how was this done before. And I thought, what am I going to do? I sent people here and there and finally we found a box that had some of it. It was very helpful to be able to say ok, we're not going to do it this way or we are. But otherwise it's like starting fresh when somebody has already invented this wheel. I think, it's a public institution and use of resources! We have to justify our time, this is what we accomplished we did this piece. It's sort of like accountability, what are the outcomes, have we reached our goals, this is our work. You know the archives shows our work. Like a graduation record, it's a product. How did we get there. What decisions did we make?

CD: With my web site, we've gone through a number of re-designs. I took a snapshot when I first got there of the site, which was someone else's doing, and I've been doing it all along that way, which has been very enlightening.

IJ: We know that some things happened, but we don't know exactly why they happened or what the thought process was that led to that decision being made. We have found some memos that were very helpful for that kind of information, and if those documents are not there, we know what happened but may never know the reason. I think it's helpful for current administrators to know the history of why things happened, so they can make better decisions. So for us that's the biggest thing I can see. I probably am guilty of that too--getting rid of e-mail after a decision has been made. It's over and it's too much of a commotion to remember things and where I saved them. I can imagine programs that have been in place for a number of years and are gotten rid of, and then we find out later that's original intent was to do something that it never quite did. We've had instances where the initial ideas were lost, and the people that were there when it first started are no longer around, so there's no one to stick up for it.

OP: Not being able to understand how decisions were made, reinventing the wheel, doing another task that we've done before - finding out that the water-table in a certain area of the University is too high to build a building - maybe we already knew that, and if we had looked at the decisions made ... those kinds of things. A lot could be lost - time, money, ...

GH: [It was noted that interviewee had already addressed this question.] Another thing that would have been lost is the history of the relevance of the inscription on the front of Northrop. It was actually a very long struggle to decide what was going to be put on the façade of Northrop.

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Auditorium. Again, it was reflected—you know, of course, that more went down than what is reflected in the surviving paper correspondence. Obviously people talked in the hallways and had telephone conversations. But at least the surviving paper correspondence gives you a glimpse of what was going on and it was quite a struggle. No one would have any record of that if that correspondence didn't exist, so I think that's the biggest loss—that email has basically substituted for correspondence except for all of the most formal situations where there is a need for a letter or a memo. ...If that stuff is not saved in some fashion, it's just gone. For those of us who like to dabble around in history, it's a terrible loss.

QR: Well, I think it's what I said earlier. It really is having some kind of concrete record as to why a decision was made or not made. You just lose a lot of the context...and that just goes back to the quality of decisions, etc. I mean, if I'm sitting here as an historian, I obviously have a different perspective on this than if I'm sitting here as an administrator. So, I think a lot depends on just whom you're asking as to how important all this is.

ST: Well I mean the consequences are that if we don't have that material and 20 years down the road somebody wants to do a biography of Ed Prescott and he's passed on, not to be too indelicate, but don't we just look stupid not to have the information? I don't think the world will end, I don't think the legislature will like us less, but I think we will just look stupid. Because here was a highly prized faculty member and we didn't take care of his things. It makes us look like we're not very thoughtful, or that we don't care about things, or the work that people have done.

KL: As higher education changes, budgets tighten today what about in the next twenty years, will we know how we handled the transitions of today? How did the U handle the pressure of this period? How will we go forward if we lose the lessons of the past and the knowledge of the past?

UV: We had a change in the budget system in the last few years and have a new electronic processing system. Historical budget information prior to 1992 is more difficult to access from our department.

WX: Everything is moving so fast. Web pages, for example, one forgets to save a copy of those and it is a pity to lose these kinds of things. We should be saving those kinds of things on a regular basis because they change so fast. I am not sure what is a reasonable way to collect this kind of information and the best way to capture it. It seems like saving more would be better than saving less. We never know what might be valuable to the future.

MN: A former faculty member died and one of his supervisors insisted that he had had a specific role in the founding of the department, but the staff of the department had another story to tell and disputed the recollection, and there was no way to know what was true--memory is very fallible.

YZ: (did not finish interview)

ZA: Well, for example a committee report. Someone has sent it out by email, no one printed it off and 10 years later someone asked for that committee report. So that would be a good
example of how I can see information being lost. And another thing would be if the President charges a task force and if someone sent it out by email, we might not have a record of that charge—which is important. I have folders of these task forces. [INTERVIEWER: Are those charges now sent electronically?] Well, no. Some might be sent…there's no set procedure that I know of. Sometimes I have letters. Sometimes I don't have anything. I don't know if it was by an email or if it was just by a phone call. Or if in a meeting they said lets do this and there's no documentation.

BC: (skipped)

DE: I imagine there are people who can't find substantial things or that there might be things put on websites that take [inaudible]

Q15: What other types of electronic materials would you like to make available if there were an easy method of doing so?

EF: [addressed elsewhere]

AB: Oh sure, I think there would be certain things that we would want. For the Provost, we had to do 4 or 5 documents last fall. What are the big ideas in the next 5 years, 10 years, or 50 years in your discipline. That's a two page thing that took a lot of work and thinking about. What is our mission and how do all our programs relate to that mission? That's a good snap shot, a good picture of this college. That should be archived. It's all electronic. If we could shoot it over there and archive it for nothing, you don't have to think about it. You wouldn't have to save paper copies, you don't have to think about it. It's just right there.

You know, this is an education process. I haven't thought about these issues. If we were asked to do this every 5 years, how easy it would be to trace changes, to see how we looked at things, it would be fascinating.

For planning you always want to look at the past.

It's an education process and communication, knowing that there are the people you can call, the people you can email, turn around time depending on request,

Question: They do a fantastic job…

I remember working on a project for the provost where I needed some help collecting some books from a certain point in time and they were wonderful.

CD: That's the thing, if there were an easy method of doing so. This is something I deal with in various facets of my life. I'm kind of a pack-rat at the core of me. With the trajectory of searching and browsing technology, it is getting easier. The easier part is the storage places and procedures; the harder part is getting meaning back out of the information. There are a lot of emerging technologies now that make the input and output quite a bit easier. We need good ways to tag things - to associate metadata with items, so that instead of just placing everything in file folders like we do in the current very rigid structure, we could just pile everything together, and the fact that we've tagged it and described it intricately means that it would just sort of self-associate. Meaning could then be gleaned relatively easily.
**IJ:** My biggest problem with the archives that it's over on the west bank. There have been a couple of times when I think, if only I could run somewhere close by and check something, but the idea of having to physically go over to archives … I think I would use it if it were more accessible. If there were things in the archives that were available electronically, I think I would use it more. If we put some of the material for meetings and such that we now put on the web into the archives, like reports and presentations, that would show the history.

**OP:** There's this part of me that still remembers my undergraduate time - I was at the University of [deleted]. I would constantly be looking at old magazines - I was a film major so I looked at old scripts, and pages would be torn or even torn OUT!! It was horrible. There's a part of me that thinks, "Let's not let anyone touch the real stuff unless we're watching them." So I know there are a lot of materials that could be micro-filmed, microfiched, whatever - I there's a lot better technology now - making them really accessible to a wide range. There will always be historians and archivists and caring people that need to see the primary documents. So, University publications, committee reports, that will eventually become yellow and crackle.

**GH:** None that occurs to me. Not that it's necessary. There are things that might be interesting and useful to some extent but not essential for the conduct of the business of this office… We've now been in an age where stuff is electronic for long enough now (a decade or more) and the vast majority of what we need, we've got. [Unintelligible]

**QR:** Well, as a kind of principle, if we have users who want to get it, they should define what they need and want, not necessarily me…[unintelligible]

**ST:** From my point of view, from just viewing that external piece, I can imagine a really good photo archive done digitally would really be great. That would be very slick. If that were doable, it might help feed through the advocacy piece at a very elemental level about why the Archives are important and why departments need to keep this in mind. Because I think it's hard to get into thinking about "it's important to know how policies are made": at some level, they just think there will just be more policies. But a photo is something that people could use.

**KL:** Equity and athletics disclosure
Opportunities in photos and publications
Ledger information, salary information might be good to be able to access
Will these things be there for the future? How long can we keep on neglecting this important issue?

**UV:** Budget materials and human resource information. It would be nice to have an idea of the type of people that have a particular job and be able to examine pay and job equity. I would like to see a consolidation of general data.

**WX:** This is hard for me to tell. I use electronic things much less than paper. So, it would be hard for me to imagine what might be lost when people need to look back in the future and things are only in some electronic version. How do we determine what is special enough to save in its original and then we have to have the space we need for proper storage.
MN: It's not about new materials or other materials, it's about the way we manage materials. It's about being able to query and get a response that's meaningful, and having it in one searchable place. The patient who is interested in diabetes should be able to just query when they get to the website about diabetes at the University of Minnesota and have it come up with not only the department and the division where diabetes is studied, but the faculty who have done research on it, the history of diabetes at the U. To be honest, it's similar to the thing Spielberg has created, it's one of the coolest things I've ever seen. Interviews are done with holocaust survivors, and when the person starts speaking a map of the region comes up, and you click there and get a history of the whole region and any other related photographs and materials also pop up on the side--it's actually a good use of pop-up. It's very cool and the software is all written with this in mind. It is a profound meaningful learning tool only available a few places in the U.S. It's based in the Universal Studios in L.A. There is one place in the Twin cities where you can access it. When I think of providing information to people who are interested in knowledge, that kind of electronic tool is what I think of.

YZ: (did not finish interview)

ZA: I don't know. My main concern is retrieval. Being able to easily retrieve things when I need them and I don't know what kind of materials. I guess again back to those major committees and task forces. That seems to be the things that we're the most interested in retrieving.

BC: Likes the idea of a digitized, searchable finding aid. Be able to transfer materials electronically.

DE: (skipped)

REFLECTIONS FOR THE FUTURE

Q16: Do you have suggestions of steps to be taken to insure better compliance with the Board of Regents policy?

EF: Departments with a model of archiving that you would promote or how do other archives think about it?
Presentation to Deans every 5 years.
College have workshop every 3 years.
Budgetary crunches may impact ability of archives to save info (recordings, tapes, movies, etc) so have a standards for the most crucial things

AB: A marketing campaign. It's sort of why is history important, probably the most effective way is to have every Dean's office send in every three years. A quick survey, how are you doing, do you need more information. Also, can the Archive track what's coming? Can they see, we don't have information from CBS? And we say, oh that's right, we have a huge stash here. We don't throw everything out. Is it a matter of packing up boxes. If it's a day project and we just have to do it. Like a benevolent pest. Remember we're here, we want your things,. And making sure you're dealing with the staff who are actually in charge of doing it. Get to the executive assistants, get it on their calendar so they can get it on my calendar. Connecting with
the person who is in charge of all the filing in the Dean's office. Would it be her role to go to all
the heads of departments and say, please send over the past 5 years.
I just have a feeling that it's being done because people want to move things on. But we have
Jane Goodall materials that I think are taking up space but we don't want to pass them on
because they are very valuable. We don't want to just dump them in archives. We are looking
for funding to do the kind of work on them. It might take 2 million dollars and we're not
fundraising for that.
CD: Making people aware and getting them to think about the fact that in their day-to-day work
at the U, they're creating documents and things all the time that may have some value in the
future. It will take a lot more awareness - first of all that the Archives is even an option.

IJ: For us it is a matter of knowing what the policy is, and leadership in this office to make sure
that other people know. Probably the archives getting information out and pushing how
important it is. I don't that I ever actually heard from the archives exactly what it is they do and
how we can help them. I don't know if I just missed it or have never really seen it. I mostly
connected with the archives office when we worked with Anne Pflaum, and she was doing some
history for the sesquicentennial and trying to get diversity in there as much as she could. At that
time another woman that was working with Anne put together a list of how to encourage people
to put things in the archives. That was the first time I'd really ever heard about it. I knew it
existed, but I didn't realize we should be shipping our things over there. More publicity and more
information on what it is they do and what they would like to see and how their information is
accessible to us. They are a hidden treasure. The first time I went over there with Anne, it was
just amazing. I would like to stop in there more if it were closer. I know that they have an
[deleted] file and information on some of our [deleted]. We should have looked at those to do
this history, but I think we got the high points. I shouldn't say that. I've gone through it a little,
but I should have really gone back and really delved into it more. We can always go back and
update our history.

OP: Awareness, awareness, awareness. I'm thinking about how I first heard of the archives. I
think I became aware of them before I was in [deleted]. Of course, we're aware of them because
we built them. We need to start talking both with the big guys- I know that Wendy Lougee goes
around and meets with deans once a year, and of course that should be part of her message - but I
think we need to start with more grassroots, like talking with the Communicators Forum, the
people who might actually be the ones having to do this work, and having them think more
broadly about the importance of their department or their unit. With all the work we're doing on
strategic positioning, if departments are going to be folded into one another, or whatever they're
planning to do, it's going to be really important that we document some of these centers and units
and work that we're doing, as they were when we made these decisions. So that as we look to
performance measures in the future and say was that a good choice, we have some information
from what it used to be before we all just get nostalgic and say, "It was better then." It's always
scary when things change, but we're going to go through some changes in the next couple of
years, and we want to make sure that we document that process and the materials that are being
lost. Whether they are being lost for good reasons or not, we want to make sure we know what
was there. Someone once told me that when she was looking through the University Archives to
prepare for Nicholson, she came across the original plans for where Northrop auditorium was
before it was an auditorium. It was an experimental garden of the College of Agriculture, and
they grew marijuana there. That is one of my favorite trivia items about the U, is that we used to grow pot on the Northrop Mall. I think that's important to know. [laughter] I say let's rip the thing down and let's go back. But stuff like that is great - to think about an era when that was perfectly fine. I think that Northrop was built in the late teens or early twenties. But it really reflects a whole culture and time. So awareness among both the top - because unless toe top thinks it's important it will never get done, but also among the workers and the communicators and people who will have an investment about information - the knowledge workers. It's easy to just kind of snort and say that every faculty member will think all of their work should be archived, but when you put a faculty team together, they will come up with what are some of the critical issues being considered by faculty in their research. I'll be very interested in what comes out of the work that you guys are doing, and I'm looking forward to reading the policy.

GH: I certainly urge you to start to figure out a way to start saving this stuff! How you get a grasp on it, especially the email exchanges, is going to be tough. You need somebody to be able to click on the computer, "Send this to Archives," and it just does it automatically. One possibility—this is just off the top of my head and it may be entirely unworkable—but one possibility might be for everything except sensitive personnel stuff (which you can't [unintelligible] for a variety of reasons, including legal ones) would be to BCC the Archives. Now, if you actually had a lot of people doing this, they'd need to have a lot of computers over there and somebody would have to sit down religiously and save that stuff into appropriate files for the Archives. But that might be one way to do it. You could at least suggest this to people who want to do it; it might be kind of hit or miss, but at least you'd have some hit there. Right now, I think it's all miss.

QR: I just think the Provost or somebody should send out a message (it could be done on e-mail, too). I don't think it's malicious on anybody's part, it's just that when you see somebody sitting where I've been sitting, and as diligent as I've been—and I can't believe I'm atypical. I think the frustration you must feel, or some of you must feel, is how can these people not pay attention to this? It is Regents policy, and what I think it does look like is how—I don't want to say how little it's valued, because that's wrong—but how little this resource is used because of lack of information and not knowing what is there and how to get it, etc.

[INTERVIEWER: Any further thoughts or suggestions?] No. Good luck! I'd be actually interested to see what you ultimately do with this electronic stuff, because I now work with this [a center for applied research]. We've never paid much attention to archiving—sadly; I do think we've spent some time paying attention to data mining and what tools would help you get at such stuff. The archives would be an interesting nuance on that.

[Brief consideration of the notion of institutional repositories…]

QR: I remember when I was working honestly for a living as a faculty member I would go into the archives (I don't even remember where I did it) but we'd have those books that people hadn't used for 30 years in big boxes. At the time I was interested in Norwegian constitutionalism (I don't have to explain why, but I was), and we actually had more of these old books than—nobody had written on this for 15 or 20 or 30 years. But, not only was of use to be able to get back at the books, but what was very fascinating was who had read them before me. Because the names had been written on the…and I'm sitting here saying, that's interesting now I see why so and so may have written, or taken this position, because I knew he had now used these materials,
or at least checked them out and presumably they had influenced his thinking. [Unintelligible] ... Knowing who was reading what has got to be really problematic. But, sometimes there's a legitimate value to it. And that's what I'm saying—that what's got to be hard (not really having thought about it) is, what do you save and what's of use to somebody? It could be something as crazy as just seeing the names on the cards of who had taken the book out. It was also sometimes funny to say you've stored this book for seven years; I'm the guy who's ever read it!

ST: I bet there's a lot of people who don't know about that policy! I think your timing on this project is quite brilliant because there's a huge bubble of faculty—at least in CLA, and I think it's probably the age across the campus—of those folks hired in the 60's who are retiring. And we're working on phased retirement plans, so that reminding departments of this policy know might still capture a significant amount of information. You wait five years and that window will have closed.
I haven't thought this much about the Archives in a long time!

KL: "We need knowledge and training so people understand what is important and why it is important. Educate, educate, educate." This issue has to become a priority. Archival concerns need to be addressed.
Electronically we need to be very specific about what to collect. What are we really going to prioritize? That is what we need to go after first.

UV: One thing I would like to see is an end to the inconsistency of information given to new employees. It would be helpful if there was some standardization and perhaps archival information could be explained at employee orientation sessions. Perhaps the HR person for the department should be a contact for that type of information.
We need more education so we can make the right archiving decisions.

WX: She was not familiar with the Regent's policy. I sent it to her following the interview. Her comment was that the archives are an "invaluable resource, which I cannot imagine the U without. I have barely even touched on its value. It is hard to say what a tremendous loss we might experience without these records."

MN: Compliance requires knowledge, so people have to know there is one. This is a university wide issue. It's not just the archives. One of the lines we use frequently is "Gee, I wonder if there's a policy on that?" About the time you wonder, there are about 35 of them. Policies can be cumbersome but at the same time they are helpful. Right now we are on a heavy recruitment effort of faculty members, and we bring them here and we say, "All right, go be successful in this incredibly complex place, but without giving them any guideposts. We're thinking of developing a program something like "So you want to be successful at the U." and introduce them to all of the things. They have to understand the faculty plans, the research compliance guidelines and where to go for more information, the interaction of this [deleted] office with [deleted] and [deleted] … you get the picture. Usually faculty spend a full year being confused. Same thing with Regents policies. We don't do a very good job of introducing people to the fact that the Regents make policy. We need a more query-able website on policies. I don't think there's much knowledge of a Regents policy on archiving.
YZ: (did not finish interview)

ZA: Well, obviously this digital technology needs to be addressed, and I'd like more information on this document imaging—how does that…what policies will be created? I know a lot of departments are using it now. I have spoken with Susan McKinney in University records management and she was going to work with University archives to try to address issues or figure out how we can archive our now document-imaged records; but like I said, we're still in the early stages.

BC: The archive represents an interesting look into the conflicted history of the University. Brings up issues of Free Speech and the University. For Better Compliance with academics: put together a speaker series on the topic that looks at the larger context of the issue.

DE: An annual or semi-annual memo that could say it's time to send over documents for the past year or the following documents, please do so within the next X days.
The official repository of retired U.S. government records is a boxy white building tucked into the woods of suburban College Park, MD. The National Archives and Records Administration (NARA) is a subdued place, with researchers quietly thumbing through boxes of old census, diplomatic, or military records, and occasionally requesting a copy of one of the computer tapes that fill racks on the climate-controlled upper floors. Researchers generally don't come here to look for contemporary records, though. Those are increasingly digital, and still repose largely at the agencies that created them, or in temporary holding centers. It will take years, or decades, for them to reach NARA, which is charged with saving the retired records of the federal government (NARA preserves all White House records and around 2 percent of all other federal records; it also manages the libraries of 12 recent presidents). Unfortunately, NARA doesn't have decades to come up with ways to preserve this data. Electronic records rot much faster than paper ones, and NARA must either figure out how to save them permanently, or allow the nation to lose its grip on history.

One clear morning earlier this year, I walked into a fourth-floor office overlooking the woods. I was there to ask Allen Weinstein--sworn in as the new Archivist of the United States in February--how NARA will deal with what some have called the pending "tsunami" of digital records. Weinstein is a former professor of history at Smith College and Georgetown University and the author of Perjury: The Hiss-Chambers Case (1978) and coauthor of The Story of America (2002). He is 67, and freely admits to limited technical knowledge. But a personal experience he related illustrates quite well the challenges he faces. In 1972, Weinstein was a young historian suing for the release of old FBI files. FBI director J. Edgar Hoover--who oversaw a vast machine of domestic espionage--saw a Washington Post story about his efforts, wrote a memo to an aide, attached the Post article and penned into the newspaper's margin: "What do we know about Weinstein?" It was a telling note about the mind-set of the FBI director and of the federal bureaucracy of that era. And it was saved--Weinstein later found the clipping in his own FBI file.

But it's doubtful such a record would be preserved today, because it would likely be "born digital" and follow a convoluted electronic path. A modern-day J. Edgar Hoover might first use a Web browser to read an online version of the Washington Post. He'd follow a link to the Weinstein story. Then he'd send an e-mail containing the link to a subordinate, with a text note: "What do we know about Weinstein?" The subordinate might do a Google search and other electronic searches of Weinstein's life, then write and revise a memo in Microsoft Word 2003, and even create a multimedia PowerPoint presentation about his findings before sending both as attachments back to his boss.
What steps in this process can be easily documented and reliably preserved over decades with today's technology? The short answer: none. "They're all hard problems," says Robert Chadduck, a research director and computer engineer at NARA. And they are symbolic of the challenge facing any organization that needs to retain electronic records for historical or business purposes.

Imagine losing all your tax records, your high school and college yearbooks, and your child's baby pictures and videos. Now multiply such a loss across every federal agency storing terabytes of information, much of which must be preserved by law. That's the disaster NARA is racing to prevent. It is confronting thousands of incompatible data formats cooked up by the computer industry over the past several decades, not to mention the limited lifespan of electronic storage media themselves. The most famous documents in NARA's possession--the Declaration of Independence, the Constitution, and the Bill of Rights--were written on durable calfskin parchment and can safely recline for decades behind glass in a bath of argon gas. It will take a technological miracle to make digital data last that long.

But NARA has hired two contractors--Harris Corporation and Lockheed Martin--to attempt that miracle. The companies are scheduled to submit competing preliminary designs next month for a permanent Electronic Records Archives (ERA). According to NARA's specifications, the system must ultimately be able to absorb any of the 16,000 other software formats believed to be in use throughout the federal bureaucracy--and, at the same time, cope with any future changes in file-reading software and storage hardware. It must ensure that stored records are authentic, available online, and impervious to hacker or terrorist attack. While Congress has authorized $100 million and President Bush's 2006 budget proposes another $36 million, the total price tag is unknown. NARA hopes to roll out the system in stages between 2007 and 2011. If all goes well, Weinstein says, the agency "will have achieved the start of a technological breakthrough equivalent in our field to major 'crash programs' of an earlier era--our Manhattan Project, if you will, or our moon shot."

Data Indigestion
NARA's crash data-preservation project is coming none too soon; today's history is born digital and dies young. Many observers have noted this, but perhaps none more eloquently than a U.S. Air Force historian named Eduard Mark. In a 2003 posting to a Michigan State University discussion group frequented by fellow historians, he wrote: "It will be impossible to write the history of recent diplomatic and military history as we have written about World War II and the early Cold War. Too many records are gone. Think of Villon's haunting refrain, 'Ou sont les neiges d'antan?' and weep....History as we have known it is dying, and with it the public accountability of government and rational public administration." Take the 1989 U.S. invasion of Panama, in which U.S. forces removed Manuel Noriega and 23 troops lost their lives, along with at least 200 Panamanian fighters and 300 civilians. Mark wrote (and recently stood by his
comments) that he could not secure many basic records of the invasion, because a number were electronic and had not been kept. "The federal system for maintaining records has in many agencies--indeed in every agency with which I am familiar--collapsed utterly," Mark wrote.

Of course, managing growing data collections is already a crisis for many institutions, from hospitals to banks to universities. Tom Hawk, general manager for enterprise storage at IBM, says that in the next three years, humanity will generate more data--from websites to digital photos and video--than it generated in the previous 1,000 years. "It's a whole new set of challenges to IT organizations that have not been dealing with that level of data and complexity," Hawk says. In 1996, companies spent 11 percent of their IT budgets on storage, but that figure will likely double to 22 percent in 2007, according to International Technology Group of Los Altos, CA.

Still, NARA's problem stands out because of the sheer volume of the records the U.S. government produces and receives, and the diversity of digital technologies they represent. "We operate on the premise that somewhere in the government they are using every software program that has ever been sold, and some that were never sold because they were developed for the government," says Ken Thibodeau, director of the Archives' electronic-records program. The scope of the problem, he adds, is "unlimited, and it's open ended, because the formats keep changing."

The Archives faces more than a Babel of formats; the electronic records it will eventually inherit are piling up at an ever accelerating pace. A taste: the Pentagon generates tens of millions of images from personnel files each year; the Clinton White House generated 38 million e-mail messages (and the current Bush White House is expected to generate triple that number); and the 2000 census returns were converted into more than 600 million TIFF-format image files, some 40 terabytes of data. A single patent application can contain a million pages, plus complex files like 3-D models of proteins or CAD drawings of aircraft parts. All told, NARA expects to receive 347 petabytes (see "Definitions") of electronic records by 2022.

Currently, the Archives holds only a trivial number of electronic records. Stored on steel racks in NARA's 11-year-old facility in College Park, the digital collection adds up to just five terabytes. Most of it consists of magnetic tapes of varying ages, many of them holding a mere 200 megabytes apiece--about the size of 10 high-resolution digital photographs. (The electronic holdings include such historical gems as records of military psychological-operations squads in Vietnam from 1970 to 1973, and interviews, diaries, and testimony collected by the U.S. Department of Justice's Watergate Special Prosecution Force from 1973 to 1977.) From this modest collection, only a tiny number of visitors ever seek to copy data; little is available over the Internet.

Because the Archives has no good system for taking in more data, a tremendous backlog has built up. Census records, service records, Pentagon records of Iraq War decision-making, diplomatic messages--all sit in limbo at federal departments or in temporary record-holding centers around the country. A new avalanche of records from the Bush administration--the most electronic presidency yet--will descend in three and a half years, when the president leaves office. Leaving records sitting around at federal agencies for years, or decades, worked fine
when everything was on paper, but data bits are nowhere near as reliable--and storing them means paying not just for the storage media, but for a sophisticated management system and extensive IT staff.

Data under the Desk
The good news is that at least some of the rocket science behind the Archives' "moon shot" is already being developed by industry, other U.S. government agencies, and foreign governments. For example, Hewlett-Packard, IBM, EMC, PolyServe, and other companies have developed "virtual storage" technologies that automatically spread terabytes of related data across many storage devices, often of different types. Virtualization frees up IT staff, balances loads when demand for the data spikes, and allows hardware upgrades to be carried out without downtime. Although the Archives will need technologies far beyond virtual storage, the commercial efforts form a practical foundation. The Archives may also benefit from the examples of digital archives set up in other nations, such as Australia, where archivists are using open-source software called XENA (for XML Electronic Normalizing of Archives) to convert records into a standardized format that will, theoretically, be readable by future technologies. NARA will also follow the lead of the U.S. Library of Congress, which in recent years has begun digitizing collections ranging from early American sheet music to immigration photographs and putting them online, as part of a $100 million digital preservation program.

But to extend the technology beyond such commercial and government efforts, NARA and the National Science Foundation are funding research at places like the San Diego Supercomputer Center. There, researchers are, among other things, learning how to extract data from old formats rapidly and make them useful in modern ones. For example, San Diego researchers took a collection of data on airdrops during the Vietnam War--everything from the defoliant Agent Orange to pamphlets--and reformatted it so it could be displayed using nonproprietary versions of digital-mapping programs known as geographic information systems, or GIS (see "Do Maps Have Morals?" Technology Review, June 2005). Similarly, they took lists of Vietnam War casualties and put them in a database that can show how they changed over the years, as names were added or removed. These are the kinds of problems NARA will face as it "ingests" digital collections, researchers say. "NARA's problem is they will be receiving massive amounts of digital information in the future, and they need technologies that will help them import that data into their ERA--hundreds of millions of items, hundreds of terabytes of data," says Reagan Moore, director of data-knowledge computing at the San Diego center.

Another hive of research activity on massive data repositories: MIT. Just as the government is losing its grip on administrative, military, and diplomatic history, institutions like MIT are losing their hold on research data--including the early studies and communications that led to the creation of the Internet itself. "MIT is a microcosm of the problems [NARA] has every day," says MacKenzie Smith, the associate director for technology at MIT Libraries. "The faculty members are keeping their research under their desks, on lots and lots of disks, and praying that nothing happens to it. We have a long way to go."

Now MIT is giving faculty another place to put that data. Researchers can log onto the Internet and upload information--whether text, audio, video, images, or experimental data sets--into DSpace, a storage system created in collaboration with Hewlett-Packard and launched in 2002
DSpace makes two identical copies of all data, catalogues relevant information about the data (what archivists call "metadata," such as the author and creation date), and gives each file a URL or Web address. This address won't change even if, say, the archivist later wants to put a given file into a newer format--exporting the contents of an old Word document into a PDF file, for instance. Indeed, an optional feature in DSpace will tell researchers which files are ready for such "migration."

Because the software behind DSpace is open source, it is available for other institutions to adapt to their own digital-archiving needs; scores have already done so. Researchers at MIT and elsewhere are working on improvements such as an auditing feature that would verify that a file hasn't been corrupted or tampered with, and a system that checks accuracy when a file migrates into a new format. Ann Wolpert, the director of MIT Libraries (and chair of Technology Review's board of directors), says DSpace is just a small step toward tackling MIT's problems, never mind NARA's. "These changes have come to MIT and other institutions so rapidly that we didn't have the technology to deal with it," Wolpert says. "The technology solutions are still emerging." Robert Tansley, a Hewlett-Packard research scientist who worked on DSpace, says the system is a good start but cautions that "it is still quite new. It hasn't been tested or deployed at a massive scale, so there would need to be some work before it could support what the National Archives is looking at."

Digital Marginalia
But for all this promise, NARA faces many problems that researchers haven't even begun to think about. Consider Weinstein's discovery of the Hoover marginalia. How could such a tidbit be preserved today? And how can any organization that needs to track information--where it goes, who uses it, and how it's modified along the way--capture those bit streams and keep them as safe as older paper records? Saving the text of e-mail messages is technically easy; the challenge lies in managing a vast volume and saving only what's relevant. It's important, for example, to save the e-mails of major figures like cabinet members and White House personnel without also bequeathing to history trivial messages in which mid-level bureaucrats make lunch arrangements. The filtering problem gets harder as the e-mails pile up. "If you have 300 or 400 million of anything, the first thing you need is a rigorous technology that can deal with that volume and scale," says Chadduck. More and more e-mails come with attachments, so NARA will ultimately need a system that can handle any type of attached file.

Version tracking is another headache. In an earlier era, scribbled cross-outs and margin notes on draft speeches were a boon to understanding the thinking of presidents and other public officials. To see all the features of a given Microsoft Word document, such as tracked changes, it's best to open the document using the same version of Word that the document's creator used. This means that future researchers will need not only a new piece of metadata--what software version was used--but perhaps even the software itself, in order to re-create fonts and other formatting details faithfully. But saving the functionality of software--from desktop programs like Word to the software NASA used to test a virtual-reality model of the Mars Global Surveyor, for example--is a key research problem. And not all software keeps track of how it was actually used. Why might this matter? Consider the 1999 U.S. bombing of the Chinese embassy in Belgrade. U.S. officials blamed the error on outdated maps used in targeting. But how would a future historian probe a comparable matter--to check the official story, for example--when decision-making occurred in a
digital context? Today's planners would open a map generated by GIS software, zoom in on a particular region, pan across to another site, run a calculation about the topography or other features, and make a targeting decision.

If a historian wanted to review these steps, he or she would need information on how the GIS map was used. But "currently there are no computer science tools that would allow you to reconstruct how computers were used in highconfidence decision-making scenarios," says Peter Bajcsy, a computer scientist at the University of Illinois at Urbana-Champaign. "You might or might not have the same hardware, okay, or the same version of the software in 10 or 20 years. But you would still like to know what data sets were viewed and processed, the methods used for processing, and what the decision was based on." That way, to stay with the Chinese embassy example, a future historian might be able to independently assess whether the database about the embassy was obsolete, or whether the fighter pilot who dropped the bomb had the right information before he took off. Producing such data is just a research proposal of Bajcsy's. NARA says that if such data is collected in the future, the agency will add it to the list of things needing preservation.

Data Curators

Even without tackling problems like this, NARA has its hands full. For three years, at NARA's request, a National Academy of Sciences panel has been advising the agency on its electronic-records program. The panel's chairman, computer scientist Robert F. Sproull of Sun Microsystems Laboratories in Burlington, MA, says he has urged NARA officials to scale back their ambitions for the ERA, at least at the start. "They are going to the all-singing, all-dancing solution rather than an incremental approach," Sproull says. "There are a few dozen formats that would cover most of what [NARA] has to do. They should get on with it. Make choices, encourage people submitting records to choose formats, and get on with it. If you become obsessed with getting the technical solution, you will never build an archive." Sproull counsels pragmatism above all. He points to Google as an example of how to deploy a workable solution that satisfies most information-gathering needs for most of the millions of people who use it. "What Google says is, 'We'll take all comers, and use best efforts. It means we won't find everything, but it does mean we can cope with all the data,'" Sproull says. Google is not an archive, he notes, but in the Google spirit, NARA should attack the problem in a practical manner. That would mean starting with the few dozen formats that are most common, using whatever off-the-shelf archiving technologies will likely emerge over the next few years. But this kind of preservation-by-triage may not be an option, says NARA's Thibodeau. "NARA does not have discretion to refuse to preserve a format," he says. "It is inconceivable to me that a court would approve of a decision not to preserve e-mail attachments, which often contain the main substance of the communication, because it's not in a format NARA chose to preserve."

Meanwhile, the data keep rolling in. After the 9/11 Commission issued its report on the attacks on the World Trade Center and the Pentagon, for example, it shut down and consigned all its records to NARA. A good deal of paper, along with 1.2 terabytes of digital information on computer hard disks and servers, was wheeled into NARA's College Park facility, where it sits behind a door monitored by a video camera and secured with a black combination lock. Most of the data, which consist largely of word-processing files and e-mails and their attachments, are sealed by law until January 2, 2009. They will probably survive that long without heroic
preservation efforts. But "there's every reason to say that in 25 years, you won't be able to read
this stuff," warns Thibodeau. "Our present will never become anybody's past."

It doesn't have to be that way. Projects like DSpace are already dealing with the problem. Industry will provide a growing range of partial solutions, and researchers will continue to fill in the blanks. But clearly, in the decades to come, archives such as NARA will need to be staffed by a new kind of professional, an expert with the historian's eye of an Allen Weinstein but a computer scientist's understanding of storage technologies and a librarian's fluency with metadata. "We will have to create a new profession of 'data curator'--a combination of scientist (or other data specialist), statistician, and information expert," says MacKenzie Smith of the MIT Libraries.

The nation's founding documents are preserved for the ages in their bath of argon gas. But in another 230 years or so, what of today's electronic records will survive? With any luck, the warnings from air force historian Mark and NARA's Thibodeau will be heeded. And historians and citizens alike will be able to go online and find that NARA made it to the moon, after all.
Appendix H

Further Issues to Consider

1. What kind of digital repository will house the information? Data security is a primary consideration (the Web is not secure, for example). What data security issues are there relative to the particular platform selected for this purpose?

2. Is there need for compatibility between the technology selected for the University's purpose and the technology that other institutions or agencies might use? What about compatibility issues within the University?

3. Who will have access to the information? How will access be provided? What kind of security checks will ensure access by legitimate users? How will security considerations be weighed against ease of access? Who will develop policies around access to the information?

4. To be most useful, archived digital information should be accessible from distributed servers. Does broad access via distributed servers pose additional security issues and risks?

5. How will the authenticity (provenance) of information be guaranteed?

6. How will information be deposited? Who will deposit it?

7. What standards will govern the format and content of the information? Who will develop these standards? Who will monitor additions to the collections to make sure they are consistent with these standards? Who will develop policies in this area?

8. Do potential contributors embrace this means of information sharing? If not, what strategies will be used to generate interest in depositing digital information ("content recruitment")?

9. Are there legal issues (around copyright, for example) that must be resolved in creating digital collections? What about data privacy and HIPPA concerns?

11. Who will be responsible for developing training in the use of digital collections? How will training be provided?

12. How will changing technologies affect the stored data? Who will be responsible for converting data when technology changes?

13. How will the digital information be indexed? Who will be responsible for indexing? Initially? Ongoing?

14. Who will finance the creation of the digital collection? How will it be supported over the longer term? (How much will it cost?)
LIBRARIES AND ARCHIVES

Subd. 1. The Collections of the Libraries of the University. The resources comprising the collections of the libraries of the University consist of all books, serials, maps, manuscripts, newspapers, documents, audiovisual materials, archives, statistical and data compilations, and such other information in whatever format, including microformats and electronic formats, that are acquired for instructional and research purposes in the University. Departments may obtain with departmental funds such publications which are kept in individual offices or in laboratories for internal administrative or exclusively departmental use.

The University librarian is vested with full authority for the maintenance, development, administration, and use of University archives and of library materials on the Twin Cities campus, excluding the law library. Authority for the coordinate campus libraries is vested with the respective coordinate campus library directors.

Subd. 2. Gifts to the Libraries of the University. The libraries of the University will apply the same principles of selection in considering gifts as they do to materials they purchase. All gifts accepted by the libraries should contribute either directly or indirectly to the mission of instruction, research, and outreach of the University. (An enhanced statement about “Gifts to the University of Minnesota Library” was approved by the University Senate and the Board of Regents in June 1955.)

Subd. 3. Administrative or Operational Units in the University Libraries System. Excluding the law library, the operations comprising the University libraries system on the Twin Cities campus include all library service units that are staffed with a regularly scheduled librarian or assistant to maintain and supervise the collection and its use, and that are open for use by all students and faculty members of the University. The operations comprising the library system on each coordinate campus include those library service units similarly defined.

Subd. 4. Departmental Libraries. Pursuant to the Board of Regents policy adopted on June 17, 1924, no departmental libraries may be established or maintained without the approval of the president and the Board of Regents. Any request for such approval must be accompanied by a recommendation from the University librarian (or coordinate campus library director as appropriate) and the Senate Library Committee before it will be considered by the board.