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September 27, 2003

Mark Conrad, Director for Technology Initiatives
NHPRC
National Archives & Records Administration
700 Pennsylvania Avenue, NW
Washington, DC 20408-0001

Dear Mr. Conrad:

This is the final report (July 1, 2002 – June 30, 2003) of the first year of the NHPRC Electronic Records Research Fellowship Program: Building Research Capacity Across the Profession" project at the University of North Carolina at Chapel Hill and Duke University. The project is continuing on with NHPRC funding through June 30, 2005, but under a subsequent NHPRC allotment. Thus, this is truly a progress report at the end of year one on a three year project rather than a final report on a one year project.

I will outline what we have accomplished in the first twelve months, compare this to the original plan and measurable objectives, and discuss were we are going in year two. Because we started work on Year 1 activities a month late due to the lateness of the initial funding letter, employee appointment dates, and July vacations, we did not finish some of the activities by June 30, 2003. Most of these are now completed and we are actually farther along with data analysis than I had thought we would be so we are presently on target with our activities.

1. Immediately upon word from you that the project was definitely funded for the first year (notification letter of 3/7/02) we set to work to **establish the Assistant Project Manager position**. This requires approval by UNC Human Resources and is generally a lengthy process but poor economic conditions seemed to expedite matters. We were able to advertise the position in May and June and received 43 applications from individuals located in North Carolina and several who were planning to relocate here.

   - We interviewed five excellent candidates. Frank Holt, Ruth Monnig, and I oversaw the selection of the Assistant Project Manager.

   - Our top candidate, Kimberly Peters, accepted our offer and re-located from Baltimore in mid-July and began work on August 1st. Kim has an MLS, has worked with electronic resources in public libraries, has strong experience with high technology companies and information architecture, and has done a good deal of consumer research interviewing. Kim has been an outstanding and key member of the MDUD team, doing the lion's share of the day-to-day work with great attention to detail and a keen mind.

2. **Project Manager.** As with many university-based projects, we have had two personnel changes since the proposal submission in May 2001. Meredith Evans, who had worked on the grant proposal team,

left the project before it started. In June 2002 we requested in a letter to acting Director Burns that Ruth Monnig be appointed as Project Manager. He granted this change and Ruth started work on August 1st. She is a Ph.D. student who is focusing on medical and scientific electronic records preservation issues for her dissertation research. This was an excellent selection both for the project and for Ruth as her personal research interests are very much in line. Ruth's experience in university development, both at UNC and Duke, along with her research interest in electronic records, were strong assets for this project and gave her credibility when talking with faculty and administrators both here and at Duke. Ruth and Kim had very complementary skills and worked well together.

At the end of June 2003 Ruth Monnig left the project. While still a Ph.D. student here and still interested in the project she has physically relocated to another state and is starting married life. We miss her but have the great good fortune of replacing Ruth with Megan Winget, who started work on the project August 1, 2003 with Director Evans' permission. Megan is another SILS Ph.D. student who has a strong interest in archives and digital archiving in particular. She has worked on campus in information technology (IT) positions after she graduated with an MSIS from SILS a few years ago. Her experience assisting Arts and Humanities faculty and staff with computing problems has provided us with great insights for the interviews with IT staff on campus and is proving useful in analyzing the extensive interview data from end users at both Duke and UNC-Chapel Hill.

3. **The working group overseeing the day-to-day grant activity** met each month, May 2002 through June 2003. From May 2002 through January 2003, it consisted of: Helen Tibbo, chair; Paul Conway, Tim Pyatt; Ruth Monnig; Kim Peters, Frank Holt; Russell Koonts, and Susan Ballinger, the acting University Archivist. Roslyn Holdzkom, acting curator of the Southern Historical Collection was also involved in these initial meetings. The new UNC-CH University Archivist, Janis Holder, joined the team on February 1, 2003 and did Megan Winget on August 1, 2003.

4. Before the project began we established a separate **Advisory Board** that is overseeing the larger picture of the grant and its impact within the state. This group consists of the above listed individuals along with:

    1. Debbie Barreau, SILS faculty (has conducted research on how people organize office files)

    2. Michel Bezy, IBM, WebSphere Strategy, Program Director

    3. Elizabeth Bunting, UNC System, Office of the President, Associate Vice Provost for Legal Affairs

    4. Mark Crowell, UNC-CH, Office of Technology Development, Associate Vice Chancellor, tentative

    5. Charles Dollar, Dollar Consulting

    6. Joel Dunn, UNC-CH, Administrative Information Services, Director for Systems and Communications

    7. Kelly Eubanks, NC Department of Cultural Resources, Government Records Branch, Electronic Records Archivist

    8. Lynn Holdzkom, UNC-CH, Interim Curator of Manuscripts and Director of the Southern Historical Collection

    9. Russell Koonts, Duke University, Head, Duke Medical Archives

    10. Eric Myln, UNC-CH, Director of Robinson Scholars Program, a program that supports and facilitates inter-institutional projects and education between UNC-CH and Duke University.

    11. Madeline Perez, University of North Carolina at Charlotte, University Archivist

    12. Benjamin Speller, North Carolina Central University, School of Library and Information Science, Dean (HBCU) (Retired 6/30/03 and left Board)

    13. Johanna Carey Smith, UNC Associate University Counsel

14. Jeanne Smythe, UNC-CH, Academic Technology and Computing, Director of Computing Policy

We selected the above individuals for several reasons:

- Koonts, Perez, and Speller are from other UNC Systems schools where we will apply our guidelines and educational tools

- Bunting and Smith are from the UNC-CH and UNC System legal offices

- Dunn and Smythe represent information technology departments on campus

- Barreau has conducted extensive research into how people organize their office files (in corporate settings)

- Myln heads the program that promotes research and teaching across UNC-CH and Duke.

- Eubanks, DCR staff; DRC oversees NC Public Records Act

- Bezy and Crowell, technology development and connection to industry

- Dollar, international expert on electronic records

- Holdzkom, director of unit in which UNC-CH Archives and Records resides

    As of October 1, 2003 Timothy West will be the new head of the Manuscripts Department and the Southern Historical Collect. We will invite him to also serve on this Board.

5. We held the first meeting of the Board on November 15, 2002. Appendix I contains the agenda. The primary goals of this meeting were to acquaint the Board with the project, present the findings from the brief survey we had sent to employees at Duke and UNC-Chapel Hill regarding email usage and management, and solicit their guidance on the projects future direction. Tibbo and Pyatt presented the background and goals of the project. (http://ils.unc.edu/digitaldesktop/TibboAdv; also Appendix II) and Peters and Monnig presented the survey developments and preliminary findings of the survey (http://ils.unc.edu/digitaldesktop/MonnigPetersAdvisoryPresentation/MonnigPetersABPresentation_files/v3_document.htm; also Appendix III).

    The Advisory Board met a second time on July 22, 2003. Tibbo presented a summary of activities to date (See Appendix IV) and Tom Reding of IBM made a presentation regarding IBM's activities with Electronic Records Management Systems (See Appendix V). Board member Michel Bezy arranged for Reding to make this presentation to the Board and MDUD team.

6. Early in the fall of 2002 we mounted a **project website** at: http://www.ils.unc.edu/digitaldesktop. We update this with new data and presentations as appropriate.

7. We have updated the **bibliography** (and will continue to do so) that we submitted as part of our original proposal. This is maintained on the website. http://ils.unc.edu/digitaldesktop/bibliography.html

8. During August 2002 we finalized the questions for a **brief survey** of all faculty and staff on the UNC-CH and Duke campuses regarding email, attachments, and file management (See http://ils.unc.edu/digitaldesktop/FinalSurvey.pdf ; also Appendix VI). We had the survey approved by both UNC and Duke Institutional Review Boards and received permission to send it to the campuses via campus-wide email. Respondents could reply by either email or a web form (http://ils.unc.edu/digitaldesktop/websurvey.html). We designed this to be a brief survey that would help us strategically select individuals for the interview phase of this project. We also used the survey data to create interview protocols for faculty and staff at UNC-CH and Duke.

- We administered the survey on the UNC campus during the second week of September and at Duke during the last week of September.

- We had 3,835 total responses, 2,634 from Duke and 1,201 from UNC, with 69% of responses coming from the web form. After removing respondents we could not identify (most likely student employees) we ended up with 2,975 valid responses (1899 from Duke and 1076 from UNC). We entered all data into an Excel spreadsheet for analysis.

- In the beginning of November, we began to analyze the survey results. At the Advisory Board meeting on November 15, 2002 we presented preliminary findings that included the composition of survey respondents (status, departments, job titles), the top software used, emails per day, importance to job success and the main concerns listed by the respondents regarding email.

- In the spring, Chang (formerly Peters) and Monnig worked to clean up and analyze the data further. We created a simple fact sheet, (http://ils.unc.edu/digitaldesktop/Email%20Survey%20Fact%20Sheet.pdf; also Appendix VII) which lists the results of some of the survey questions in an easy to read, graphical format.

- We isolated the responses to the question "Do you have any concerns about email?" and coded these responses with key concepts in order to be able to determine themes. Tibbo, Chang, and Monnig each went through the responses and applied codes, and then we compared our codes to come up with a more accurate interpretation. The top concerns included: unsolicited email, software limitations, usage, security, confidentiality and time (http://ils.unc.edu/digitaldesktop/Top%20Concerns.pdf ; also Appendix VIII).

8. During November and December, the project team discussed and debated the **conceptual framework for the in-depth interviews**. This included not only what questions we are going to ask, but also who were we going to pick from our list of survey respondents to interview and why. We took significant care with these tasks so as to maximize the usefulness of the resulting interview data.

Tibbo started the framework definition by using the activities that other researchers (InterPARES, Pittsburgh Project) have identified as crucial for data to be created and preserved along with the records to create specific questions that we might want to ask the respondents. These activities roughly fell into the categories: appraisal, creation and initial preservation, arrangement, physical preservation, description, and retrieval. The initial framework proposed that we look first at how individuals are managing email and then go back and explore how they organize and preserve other electronic files. The project team reviewed and commented on these questions at our meeting in November.

After reviewing these questions and concepts, Conway and Tibbo discussed the need to avoid archival jargon, and how to translate a framework such as this into an actual interview protocol. Conway proposed using the interviews as an opportunity for participant to tell us stories about how they handle their email. The concept was to present a participant with a "scenario" or ask them to describe some activity that they have recently completed or are engaged in currently. Then we would ask them various questions about this scenario in order to elicit information from them that would address the framework issues.

For this approach, we would need to develop a secondary framework that would determine the types of stories or scenarios that participants will discuss in these interviews. We will refer to this secondary framework as "functional scenarios".

Tibbo began to identify these functional scenarios by using the functional framework of a university that was identified by Helen Samuels in her book *Varsity Letters*. This book identifies seven functional categories of a university: Confer Credentials, Convey Knowledge, Foster Socialization, Conduct Research, Sustain the Institution, Provide Public Service, and Promote Culture. This framework was written to be flexible and adaptable for a university archivist to identify key producers of documentation throughout their university.

The first Functional Scenarios Draft
(http://ils.unc.edu/digitaldesktop/Samuels%20Functional%20Framework.pdf ; also Appendix IX)
outlined the 7 functions, and began to identify specific scenarios for Administrators, Faculty, and
Staff within each functional area.

Chang created a second version of the Functional Scenarios by expanding out the "sub-functions"
within each area according to the Samuels book, and identifying scenarios and departments on the
UNC campus that would be involved in each particular function
(http://ils.unc.edu/digitaldesktop/Scenarios.pdf; also Appendix X).

Pyatt created a more simplified version involving only 5 functions, and identifying specific
participants at Duke. http://ils.unc.edu/digitaldesktop/FunctionalScenarios3.pdf; also Appendix XI).
Pyatt's simplified version has these functional categories: Academic, Administration, Development
and Outreach, Sponsored Programs and research, and Cultural Institutions.

Chang then combined Pyatt's categories with Samuels more extensive list to come up with these
functional categories: Academic Administration, Academics, Student Services, Research, Non-
academic Administration. In this document, the scenarios are divided up between administrators,
faculty, and staff and it also includes potential departments at Duke and UNC.
(http://ils.unc.edu/digitaldesktop/Scenarios_revised_12_19.pdf; also Appendix XII)

Lastly, Monnig and Tibbo simplified the categories again into Academic and Nonacademic. Under
Academic, the subfunctions were Teaching and Studies, Research, Academic Administration and
Academic Computing. The subfunctions for Nonacademic were Campus/Student Services,
Administration, Nonacademic Administration and Support, and Nonacademic Computing.

Since none of us were completely satisfied with any version of these functional scenarios, we came to
the conclusion that perhaps it would be preferable to sort participants by function after we
interviewed them. In this case, we would not use the scenarios as a tool to select participants, but
instead as a tool to analyze results and create recommendations.

We decided that we would use two methods of selection for **identifying participants** and create two
groups of respondents. 1) We would take a random sample of 25% of the respondents to the survey
who answered "yes" that they would be willing to participate in an interview and 2) We would hand
pick participants from departments that have been historically the top contributors to the archives.

Tibbo focused on the conceptual framework again and took a top level down approach this time.
Starting with the research purposes and project objectives, we **identified the central research
questions and theoretical research questions** that we wanted to answer by conducting these
interviews. These higher level questions were filtered out and translated into jargon free questions
that we could ask participants. In our December meeting we reviewed this list of questions and the
project team identified particular questions that were crucial and "required" in case the interviewer
did not have time to ask all of them.

The final Conceptual Framework describes the Interview Methodology - begins with a scenario to
discover behavior based on the responses to initial questions posed to the participant, and then follow
up with the questions we have identified and listed in this document. The Conceptual Framework
evolved into the practical final interview questions
(http://ils.unc.edu/digitaldesktop/Interview%20Questions.pdf; also Appendix XIII).

The final interview protocol was approved by the Academic Affairs Institutional Review Board at
UNC and the Institutional Review Board at Duke University. Each participant was given an IRB
Consent Form and letter

(http://ils.unc.edu/digitaldesktop/Revised%20Survey%20IRB%20Letter.pdf; also Appendix XIV) describing the project and the objectives of the interviews.

9. **Interview Data Collection.** Monnig, Chang and Tibbo scheduled a few "practice" interviews with faculty and staff in order to test out our procedures. These practice interviews allowed us to determine how much time the interviews will take to complete, what order to ask the questions in, how to record the data, and to iron out any other technical difficulties.

   - We conducted 100 interviews with faculty and staff members during the months of February - July 2003. We did 50 interviews on the UNC Chapel Hill campus and 50 at Duke. We tried to cover a wide variety of departments and job positions across the campus. See the Departments Interviewed document (http://ils.unc.edu/digitaldesktop/Departments%20Interviewed.pdf; also Appendix XV) for detailed information about the areas of campus in which we were able to interview people.

   - We did the transcription/write up of the interviews as we conducted them. We had a team of at least two people go on each interview - usually one person asked the questions and the other person typed notes on a laptop. This made the data collection very easy.

10. In April 2003 Pyatt and Tibbo **applied for and received an additional $1,000 from the Robertson Scholarship Collaboration Fund**, a program that encourages and supports joint UNC-CH and Duke cooperative projects, to support a March 2004 meeting of focus groups from the two schools. Project staff will give a status report and present early drafts of e-mail and desktop management policies for discussion and feedback to the groups.

11. Tibbo has **published an article** in the *Journal of the Society of North Carolina* archivists on the project.

    H.R. Tibbo. "Managing the Digital University Desktop: Understanding and Empowering the Individual; Preserving the Public Records and Institutional History." *Journal of the Society of North Carolina Archivists* 2/1 (July 2003): 29-40.

12. **Interview Data Analysis.** Since July 2003, we have imported all of the notes into NVIVO and will be using this qualitative research software to analyze and code the interview data.

    - Winget and Chang have created a code book for all 74 questions of the interview protocol.

    - Winget, Chang, and Tibbo are coding the qualitative data for each question using the established codes.

    We will report on the outcome of this work in the next report to NHPRC.

13. We have conducted 17 **interviews with information technology staff** on the UNC and Duke campuses. We are interviewing both top level administrators and unit level administrators and have created different lists of questions for each. When completed we will have talked to approximately 25 IT staff.

Here is a summary of what we said we would have accomplished by this time and where we are:

Original Objectives	Progress to Date
Phase I (months 1-11; July 2002-May 2003).	
1. Update literature review on e-mail and desktop records management (Peters & Monnig)	Done and ongoing as new materials arise.
2. Arrange with units for participation. (Peters, Monnig, Holt, & Pyatt)	We decided to survey all employees and take a random sample of interview participants from the survey respondents rather than target specific departments and offices on the campuses.

3.	Develop the final survey to send to study participants to ask specific questions regarding their management of e-mail and desktop electronic documents & records. (Monnig, Conway, & Tibbo; reviewed by entire Grant Advisory Committee).	Done; survey sent at UNC-CH 9/12/02; at Duke 9/26/02.
4.	Develop web-based survey form that dumped responses into a database. (Peters, Monnig & Tibbo)	Done. Duke University Library IT staff produced this for us and dropped data into spreadsheet.
5.	Collection of data from the survey. (Peters, Monnig, & Tibbo)	Finished.
6.	Analysis of the survey results. (Monnig, Peters, Tibbo,)	Accomplished. Analysis of the opened question on the survey regarding "any concerns" respondents had regarding email management engendered considerable response and took a significant amount of time to analyze.
7.	Finalization of interview protocols for in-depth data collection from a subsample of the survey domain. (Conway, Monnig, Peters, & Tibbo; reviewed by entire Grant Advisory Committee)	Finished.
8.	Training of Project Manager to do field interview (Tibbo) and training of Assistant Project Manager to do field interviews. (Monnig & Tibbo)	Accomplished.
9.	Collection of data from faculty, staff, and administrators across the Duke and UNC campuses via in-depth (approximately 45-60 minutes each) individual interviews. (Chang (Peters), Monnig, & Pyatt, Tibbo)	Tibbo, Pyatt, Monnig, and Chang conducted 100 interviews at UNC and Duke with faculty, staff, and administrators regarding their email and digital file management behaviors and motivations. We conducted almost all interviews in pairs with one person asking most of the questions and the other taking notes. Kim Peters was involved with most of the interviews so as to maintain consistency across questions and note taking procedures. She did a fabulous job with these tasks.
10.	Transcription/write up of data from interviews. (Peters & Monnig)	Chang wrote up notes from each interview immediately following the period with the respondent.
11.	Interviewing academic technology staff from participating universities as to the types/models of e-mail systems and desktop applications used on campus, technical capabilities and limitations, their involvement in e-mail and other document management, and their views of ERMSs. (Tibbo, Holt, Pyatt, Conway, Chang, Winget, and Holder)	All interviews with IT staff are complete at UNC with a few remaining at Duke.

Next Steps.

The next year will see us finishing the analysis of the interview data and snapshots of respondents' email and desktop filing schemes. We will also create draft email and desktop management guidelines/best practices manual. We will present these to focus groups from the two universities in the Spring of 2004 at a meeting funded by the Robertson Scholars Program, with the goal of soliciting feedback.

We have submitted a session proposal for SAA 2004 in which Paul Conway would Chair/comment; Tibbo would discuss project methodology; Winget would present initial findings; and Pyatt would introduce draft email/desktop management guidelines/best practices manual for the two campuses.

Please let me know if there is anything else we can send you at this time.

Sincerely,

Helen R. Tibbo

Attached:

Appendix I:	Agenda for Advisory Board Meeting, November 15, 2002.
Appendix II:	Tibbo's presentation to Advisory Board, November 15, 2002.
Appendix III:	Monnig & Peters' presentation to Advisory Board re survey results, November 15, 2002.
Appendix IV:	Tibbo's presentation to Advisory Board, July 22, 2003.
Appendix V:	Tom Reding's presentation to Advisory Board re ERMS, July 22, 2003.
Appendix VI:	Brief survey regarding email management practices at UNC-Chapel Hill & Duke University, September, 2002.
Appendix VII:	Survey fact sheet.
Appendix VIII:	Top concerns regarding email reported on brief survey.
Appendix IX:	First functional scenarios draft.
Appendix X:	Second functional scenarios draft.
Appendix XI:	Third functional scenarios draft.
Appendix XII:	Forth functional scenarios draft.
Appendix XIII:	Final interview protocol.
Appendix XIV:	Interview participant IRB letter.
Appendix XV:	Departments of interview participants.