



**ELECTRONIC RECORDS AGENDA PROJECT
APPENDICES**

**NATIONAL HISTORICAL PUBLICATIONS
AND RECORDS COMMISSION
GRANT 2002-024**

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Appendix 1: Plan of work

In 2002, the Minnesota Historical Society undertook an effort to evaluate and revise the 1991 and 1996 agendas. In the process, the project completed a survey of the work done in electronic records over the past ten years, through research, meetings with interested parties and an online survey. All that information was reviewed and compared with the agendas from 1991 and 1996.

The final product, though, is not simply a research report. Although the recommendations of this report are based on an analysis of work done in electronic records since 1991, the point of the analysis was to determine where to go next. In order to achieve that, the project staff made a particular effort to canvas as broadly as possible the archival profession, the various communities interested in electronic records, experts in information technology and the stakeholders in the NHPRC. Every attempt was made to allow as many voices as possible to participate in the conversation about an electronic records agenda. After listening, the project staff engaged in an iterative process to translate what they heard into a set of practical recommendations to the NHPRC, repeatedly inviting responses and suggestions through presentations, meetings and the distribution of report drafts.

Obviously, that iterative effort was circumscribed by the usual constraints of time and budget, as well as the scope of the intellectual challenge. The project staff recognized that, but suggested that a perfect plan and complete certainty is beyond anyone's capacity and resources. Instead, in this and in the context of electronic records in general, the staff proposed not letting some chimera of the "best" stand in the way of just doing "better." In particular, it is a real virtue to keep an open mind, because the open-ended nature of any analysis of the dynamic of information technology suggests that the goal of a new agenda should be to initiate conversations, explore potential and provide flexibility.

But that will only succeed if archivists can, in fact, continually engage new audiences in conversation and collaboration. Reflecting on this project suggests that most archivists are not well placed to achieve that end. Rather, the immediate and challenging goal is just to get a critical mass of archivists engaged in the conversation.

For example, consider this project's online survey.¹ Despite the length of time and relatively wide publicity it received, only 73 people responded to it. There could be several explanations for this. First, the survey itself might not have appealed to people, either through its content and design or the length of time it took to complete. Second, some people might have felt that they did not have enough practical experience with electronic records or with the NHPRC to warrant their responding. Third, people might not be interested enough in electronic records and/or the NHPRC to bother.

All three factors likely played some part in the low survey response rate, but the second and third should be particular concerns in formulating a future agenda. They may also help to explain the relatively low turnout at the presentations the project staff made at the annual meeting of the Society of American Archivists (SAA). Whereas the "Archives Unplugged" session on electronic records attracted a packed house of some 200 people, the presentation on the NHPRC electronic records agenda brought in perhaps 25 people.² A significant portion of those present

was the handful of “usual suspects,” who have been actively taking part in electronic records projects (many of them funded by the NHPRC) for many years. This seems to be consistent with the composition of those answering the online survey, with 57% of respondents indicating that they have worked with electronic records for more than five years and 27% claiming more than 15 years of such experience.³ While the project does not have detailed baseline data, this level of experience probably does not reflect that of the archival profession as a whole. While many archivists express interest in basic training on electronic records, high-level planning and strategies appear to be concerns of only a select few.

That, too, informs this report. Comments from various participants in this project suggest that most archivists do not have the confidence, knowledge or tools to move forward effectively in addressing electronic records. Yet models and tools are already available from a variety of sources, perhaps not in a perfect state, but useful enough for adaptation. To encourage the use of the resources at hand, this report recommends that the NHPRC support the development of a foundation for better electronic records programs through targeted initiatives to create a model toolkit and knowledge base for archivists.

Overall, this report has been designed to give voice to, as well as to address, multiple audiences: all the individuals, communities and organizations who contributed to its development and who must participate in the development of sustainable electronic records programs. The direct and immediate audience is the NHPRC, which has the opportunity to reflect on what response it will make. On the assumption that the report accurately reflects the considerable expertise and interests of the people who took part in the project, the report also seeks to inform archivists of the steps they can take to manage electronic records effectively. Most importantly, it advises archivists on what they can do to help engage the collaboration of all those whom they need to support their programs.

Appendix 2: Process

In 2001, the staff of the NHPRC asked the Minnesota Historical Society (MHS) to submit a proposal to review and consider the revision of the 1991 electronic records research agenda. The State Archives Department of the MHS responded with a proposal for consideration at the November 2001 meeting of the Commission. Bob Horton, state archivist and head of the State Archives Department, and Shawn Rounds, government records specialist, composed the project staff.

While the members of the Commission looked favorably on the concept of reviewing the agenda, they wanted to ensure that all of the NHPRC's constituencies had a voice in the process. The project did not receive the NHPRC's approval until mid-February, when Commission members agreed that a larger advisory board would address their concerns.

The MHS staff began work immediately upon the approval of the grant. The original advisory board expanded to include representatives of most of the professional organizations with a seat on the Commission: the Society of American Archivists (SAA), National Association of Government Archivists and Records Administrators (NAGARA), Association for Documentary Editing (ADE), Organization of American Historians (OAH) and American Association for State and Local History (AASLH) each named a participant.⁴ Once the additional advisory board members were identified, the MHS scheduled a meeting in St. Paul for late May, the earliest date when a critical mass of the board could attend. The MHS also hired Cal Lee as a consultant to work with the project staff. Lee had a wide range of experience in electronic records. He had worked as an electronic records project archivist on an NHPRC-sponsored effort at the Kansas State Historical Society. He also brought substantial additional expertise through his work and research in the doctoral program at the University of Michigan's School of Information.

From the very beginning, the project staff emphasized the need to give the various constituencies interested in electronic records every opportunity to communicate their ideas. The project utilized a variety of techniques for information gathering. Among these were an Internet-based survey, identification and review of electronic records literature, presentations and focus group meetings, and constant communication to the advisory board and other interested parties through a project web site.

The survey was launched in May and announced on a number of professional mailing lists, notably those for archivists and records managers. It was composed of a series of questions that asked about respondents' views on the 1991 research agenda; their experience with electronic records; and their views on the status quo of electronic records management and programs. The survey remained online until November. Despite that length of time and the relatively wide publicity it received, it prompted only 73 unique responses.⁵

At the May advisory board meeting, one topic of discussion was the modification of the project work plan. The late start and the slightly higher costs concomitant with adding more advisors had an impact on the project's schedule and budget. As a result, with the goal of completing the project by the original deadline, the advisory board and the NHPRC approved

some adjustments to the work plan. Instead of two general meetings, one to anticipate and one to review the rough draft of the project's report, the board recommended scheduling just one meeting towards the end of 2002, to review the work that the project staff had done.

This would decrease the amount of direct input different people could provide, but given the limited time available, it seemed impossible to schedule two meetings. As so much material on electronic records was available in print or online, the project staff could also cast the net widely through their research. Cal Lee's bibliography of works pertinent to the 1991 agenda, compiled in the course of this project, is confirmation of that.⁶

During the course of the project, Bob Horton and Cal Lee made presentations to two professional association meetings in order to disseminate information about the project, present preliminary findings and elicit feedback. They conducted a session at the NAGARA Annual Meeting on 11 July 2002 in Denver, Colorado and another at the SAA Annual Meeting on 24 August 2002 in Birmingham, Alabama. In both cases, the session was designed to first present the tentative themes and then provide ample time for the audience to comment. Horton and Lee took thorough notes of these discussions, which have informed the project's final products. The SAA session was available on audio tape, which enhanced the project staff's ability to further review the comments of participants. At the SAA meeting, Horton and Lee also held "office hours" at the International Archives and Information Technology Exposition on 23 August 2002 in order to gain additional feedback from conference attendees. Unfortunately, no one attended these office hours.⁷

In July of 2002, the project staff and advisory board settled on the dates of 8-10 December 2002 for the meeting to review the products of the project. The staff began to compile an invitation list, which it refined on the basis of the presentations at SAA and NAGARA's annual meetings. Invitations began to go out in September. It came as no surprise to discover that there were going to be conflicts with other meetings and with individuals' schedules, especially since the intent was to invite participants from a wide variety of organizations, disciplines and backgrounds.⁸ There were some notable problems: the InterPARES II team was meeting in Rome at roughly the same time and digital librarians were meeting in Washington, D.C. the same days.

On the other hand, there were some very pleasant surprises. ARMA members and staff were extraordinarily generous with their time and attention. This took two forms: solid participation in the general December meeting and a focus group held at the MHS in November 2002. The latter was especially important not only as an opportunity to hear from an electronic records community that had not previously worked with the NHPRC, but also an avenue for the project staff to test some preliminary conclusions and techniques before the meeting in December. The MHS is profoundly grateful to the help from ARMA and particularly to ARMA board members Cheryl Pederson and Susan McKinney.

While planning the December meeting proved to be more challenging than originally supposed, a very experienced, knowledgeable and collaborative group attended. They met for two days. On the third day, the advisory board reviewed the discussions and made their recommendations to the project staff on the final products of the project.

The meeting was structured around a series of presentations and small group discussions. After a series of reports from the staff on the project and its tentative recommendations, the participants in the meeting separated into four groups, each with the responsibility to analyze and refine one of the four themes defined by the advisory board. After these discussions, the groups reported back to the whole and responded to questions and suggestions from other groups. The project staff summarized the results of the discussions and reported back to the group some provisional conclusions and suggestions for further research. These were reviewed, validated and targeted for inclusion in the draft report of the project.

In order to provide participants with a document that represented their ideas while the meeting and issues were still fresh in their minds, the project staff set immediately to translate the material they had into a coherent form. They completed a draft report and e-mailed it to the meeting participants on 21 December 2002, with a deadline of 10 January 2003 for responses. As could be expected, the comments received were focused on individual areas of expertise or concern. There were no suggestions from the participants that the report, either broadly or narrowly conceived, needed substantive revision; instead, there was a clear and favorable unanimity that the report accurately conveyed the discussions and decisions made in St. Paul. Of course, given the speed with which the report was composed, there was certainly room for improvement and there were many useful and well-appreciated suggestions on how many elements could be amplified or refined.

One suggestion of the advisory board at the December meeting was based on the idea that the themes called for more and active collaboration with a variety of different entities, institutions and technologies, not all of whom had been represented at the process so far. In order to address that and, as well, to provide for a final review of the project's reports, this time from a new and fresh set of eyes, the project staff scheduled a meeting with a small group, in Washington DC, on 7 May 2003. The particular goal was to engage representatives of funding agencies other than the NHPRC in a conversation with representatives of available technological solutions. This generated an extremely productive discussion, of which the salient points were incorporated into a substantial revision of the project report.

The revision was completed on 20 May and posted to the project web site for review. The final draft of the report and its accompanying appendices were submitted to the NHPRC in completion of the grant on 30 June 2003.

Appendix 3: General observations and assumptions

Several observations and assumptions have informed the project staff's research and analysis. All of these were reviewed, discussed, supported, and further refined in conversations with the project advisory board and in meetings with various groups during the project. Taken together, they generally indicate that the electronic records environment has changed markedly since 1991. Briefly, these observations and assumptions are:

- Although work on electronic records over the past decade may provide us with more refined concepts and vocabulary for discussing them, the issues raised by the research questions in earlier agendas remain relevant today. This is partly because the dynamic nature of information technology keeps basic issues alive, and partly because there are different schools of thought among archivists about how to address them.⁹
- Despite these persistent challenges, there have been some tremendous achievements in the field of electronic records, many due to support from the NHPRC. To name just a few, projects at the University of Pittsburgh, Indiana University, Delaware, New York, Kansas and Minnesota have widely influenced other programs. The dissemination of knowledge about metadata and eXtensible Markup Language (XML), along with the potential of grid technology, suggested practical answers for the long-term preservation of information resources. Many projects have yielded policies, organizational models and guidance documents that have been copied and reused by others. By forming and perpetuating personal connections between individuals with a professional interest in electronic records, NHPRC funding has also generated valuable social capital.¹⁰ All of these efforts could serve as starting points for the development of electronic records programs.¹¹
- Nonetheless, information dissemination is a major challenge. There are great gaps in what archivists and their constituents know. There is a demand for practical knowledge and models, particularly those that include some cost/benefit analysis and discussion of return on investment.¹²
- To complicate the challenge of information dissemination, there is, among some groups of archivists, a perception that technology and electronic records are alien to their missions, not a way to improve programs, not a means to add value to what they deem their primary responsibilities. Many archivists consider electronic records to be an additional and unwelcome burden marked by numerous controversies. As a result, there has been uneven progress among archivists in the area of electronic records. A significant percentage of work sponsored by the NHPRC has been carried out by archivists in government and universities and, even within that sub-group, by a small minority of programs. A number of archival sub-groups have not been involved to any marked degree in work with electronic records.¹³
- These gaps and their practical implications suggest it is likely that, at best, individual archives and programs will develop electronic records programs incrementally, at different rates, with emphases on different features and functions. The individual

environment and local knowledge will greatly influence the various forms and manifestations any program can take.¹⁴

- The importance of the intellectual, organizational, technological and professional context is clear. Archivists are not alone and electronic records programs cannot stand alone, isolated from other influences and factors. Many other professions and disciplines are working with information technology; what they know and what they can offer will be of critical importance to the implementation of any archival program.¹⁵ The development of standards over the past decade and the advent of such aides to interoperability as XML testify to the recognized potential of collaboration.
- Funding is one significant factor to consider and an important reason why there are not more electronic records programs. Given that many archives do not have the resources to fulfill their traditional responsibilities, finding the additional and substantial resources for an electronic records program is daunting. It is entirely understandable that many programs are waiting for the dust to clear and a practical model to appear so that they can copy something that has proven useful, at the least risk and cost to themselves.
- The intellectual framework for archivists, against which practical models can define themselves, has begun to solidify. The 1990s witnessed substantive advances in archival education and professionalization. Archival theory and research are much more solidly based in university programs; graduate programs are more numerous, more sophisticated and more intensive.¹⁶ This has fostered an intellectual context for electronic records, with an independent, institutional base, that all projects and programs need to take into account.
- The social and political framework has changed as well. The issues identified in the 1991 agenda covered a great deal of ground, with archivists staking out potential roles and partnerships with a variety of constituencies, such as lawyers, records managers, auditors and technology professionals. These groups have developed products and programs in parallel and autonomous efforts over the past decade, sometimes in front of, sometimes behind archivists, but seldom in concert.
- One manifestation of this is that, among these stakeholders of archives, the definition of a record is blurred. The Uniform Electronic Transactions Act (UETA) and the Electronic Signatures in Global and National Commerce Act (E-SIGN) have promulgated all-encompassing definitions.¹⁷ The development of artificial and multi-media collections on the Web; the use of collections and content management tools; and the proliferation of born digital and “born again” digital information, all tend to emphasize the commonalities of digital objects as much as their disparities.
- As these different definitions imply, records have different use values, e.g., as evidence, information, history, heritage or memory. These potential values can be greatly augmented by information technology, whether the records are born digital or digitized retrospectively. They will also influence the level of investment in information technology in general and electronic records programs in particular.

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- Digitization is one area of notable investment and, as a consequence, digital preservation is a particularly active area of recent research and development. This includes not only the work of the national archives in many countries, but also libraries and other institutions responsible for managing digital resources. One very prominent example is the National Digital Information Infrastructure and Preservation Program (NDIIPP) at the Library of Congress.¹⁸ Others include the Digital Preservation Coalition in the UK,¹⁹ and a variety of initiatives related the Reference Model for an Open Archival Information System (OAIS).²⁰
- One compelling reason for such investment is the incredible growth of the Internet. This has made preservation and access key concerns of many people working with information technology. Everyone developing a web site or a web-based resource has an investment in information and, with that, a potentially persuasive motive to plan how to sustain its content and its value over time.
- Successfully making that argument will entail much more work on the appraisal of electronic records. For many reasons, economic, intellectual, professional, technological, practical etc., archivists need a far better understanding of and justification for selecting which electronic records to preserve.²¹ There is a significant lack of concern about support for archives, records management and electronic records management among many people who are in a position to make decisions and allocate resources. State governments, in particular, are seeing a severe rollback in programs in the current economic climate.
- Even so, from every perspective, expectations are much higher. In 1991, much of what was discussed in the course of developing the research agenda was hypothetical. Now archivists must recognize the advent of the Web; the explosion in the use of personal computers; and the routinization of technological applications across government and commerce. These developments all make the challenges archivists face more immediate, more complex and more real.
- As a result, electronic records and collections of electronic records should not be viewed in isolation.²² The growing appreciation for standards and enterprise-wide architectures focus attention on systems. Concomitantly, the value of records is notably increased by applications supporting data sharing, data mining, data federation and grid technologies.²³

Appendix 4: Diffusion of information and innovation

Regardless of what form they take, the products of these efforts will be valuable only if they are widely disseminated and applied. One vital component is the presentation and publication of results.

The NHPRC could more actively promote such activity by encouraging applicants to build into grant proposals more travel funds and additional time for documenting and publishing results. Conferences, project reviews and working meetings are all opportunities for people to compare notes and share information. Several other funding organizations, such as the NSF and IMLS, integrate these activities into all the projects they are funding within a particular program area for a given year. Within the framework of evaluation and analysis grants, the NHPRC could also encourage small grants (perhaps around \$1000) to projects that have demonstrated particularly noteworthy success, in order for participants to travel to and report on their project at professional conferences. It is important to recognize that exchanges at conferences flow in both directions; they are opportunities to learn as well as teach. While it is very important for grantees to report their work to groups of their peers, it could also be valuable for the NHPRC to support some travel to conferences of communities that are fostering work that could inform and improve electronic records programs.

Communication of results is not necessarily so straightforward and simple, though. Some participants at the December 2002 meeting in St. Paul pointed out that the best individuals to do the work might not always be the best individuals to disseminate the results. In some cases, it might be advisable to build into projects a third-party contractor who can take on the specific role of packaging and reporting project results. This could be particularly valuable when project participants were selected for their particular professional roles or domain expertise, rather than for their ability to write, speak or otherwise engage the intended audience of the work.

As well, even though the NHPRC currently and strongly encourages dissemination of project reports and publications, there are limitations to what it can achieve. Many of the projects sponsored by the NHPRC over the past decade have documented their work through either print publications or the Web, but many others have not. In October 2001, the US-InterPARES team compiled an annotated bibliography of many previous NHPRC electronic records projects.²⁴ In addition to serving as an excellent source of information about these projects, the bibliography also provides an indication of the extent to which projects have disseminated the results of their work. From the 41 grants and 35 projects listed,²⁵ the U.S. InterPARES team references the following resources:

Type	Number of References	Include Copies on the Web
Project web sites	15	15
Published articles	21	5
Project proposals	4	4
Project reports	15	13
Conference papers	2	2
Book chapters	1	0
Print books ²⁶	7	0

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Meeting/conference reports	2	2
Other informational or guidance documents	36	35
TOTAL	103	76

The NHPRC bibliography notes that it “does not include all NHPRC electronic records projects. Consulting grants, for example, have been omitted.” Because it was completed in October of 2001, it does not include the two rounds of projects recommended for funding in November 2001²⁷ and November 2002. Finally, excluded from the list is the work of InterPARES itself, which has produced dozens of articles, presentations and papers.

With these caveats in mind, it is interesting to note what has become of the 76 online resources. Thirty-six of them (approximately 47 percent) are no longer available at the locations identified in the bibliography.²⁸ In six of these cases, the Uniform Resource Locator (URL) has changed, but the resource is still available elsewhere on the Web. A more troubling finding is that 29 of them (more than 38 percent of the total resources cited) are no longer available on the current Web.²⁹ Four of the 14 project sites (approximately 27 percent) have disappeared, including those of Delaware, Indiana University (Phase I) and the University of Pittsburgh.

Several contributors to this project have strongly reiterated that the NHPRC should support a “clearinghouse” of information related to its electronic records projects, a recommendation that was also mentioned in the 1991 agenda. One question that this raises is the administration of such a service. Under its current regulations and guidelines, the NHPRC can neither create a standing contract with some third party nor directly commission a project to do this. As discussed elsewhere, a desirable model would be one in which some initial seed money from the NHPRC could result in a self-sustaining entity responsible for maintaining the clearinghouse. The Council of State Historic Records Coordinators (COSHRC) has discussed the possibility of establishing such a clearinghouse, although more in the form of a “portal” to resources than as a repository.³⁰

The NHPRC has also promoted the publication of products in both print and electronic form, by either engaging in such publication itself or allying with professional associations (e.g., SAA or the American Historical Association) who are already in the business of publishing literature of interest to their members. There is a diversity of possible cooperative publishing arrangements involving professional associations. For example, both ARMA and SAA carry numerous publications in their catalogs that they have not published themselves.³¹ The two organizations also recently cooperatively published a book.³² The NHPRC engaged in such an arrangement several years ago by providing financial support for the SAA series of “Case Studies on Administration of Electronic Records.” The sales of this series have been respectable, though somewhat lower than initially expected.³³ This may be due more to the format of the publications than a lack of demand for electronic records literature.

Rather than the NHPRC hosting one central repository of information, this approach would involve a more decentralized set of arrangements for the publication of targeted products. The SAA Electronic Publishing Task Force has advocated a more active exploration of genres such as white papers and reports, which are common ways to report timely information about electronic records and digital preservation.³⁴ Not only can publication promote the legitimacy

and dissemination of results, but it can also increase the chances that documents will remain available over time.³⁵ Such collaborations would not exclude the possibility of also exploring some sort of information clearinghouse. These two sets of activities could complement each other.

Focused efforts should also go beyond merely presenting or publishing information, both of which tend to be unidirectional activities. The ideal scenario is one in which audiences take action on what they learn. While these considerations directly address the concept of education, they are intimately connected with all three of the other themes promoted in this report and would have an impact on their successful realization. One of the relationships discussed at the December 2002 meeting is between program development and sustainable project results. The products of an electronic records project are more likely to be applied elsewhere if the institution that hosted the project continues to employ dedicated and technically proficient staff, who can foster and help to interpret those products. This, obviously, is beyond the power of the NHPRC to achieve, but potential applicants should always keep in mind the goal of sustainability.

Appendix 5: Survey

A major task in this project was soliciting reactions to the 1991 agenda from individuals in a variety of records-related professions. Budget constraints necessarily limited the number of people that could be brought together for meetings, so to reach as wide a group as possible in a cost-effective way, the project team developed an online survey.

Drafts of the survey were completed and circulated among the project's advisory board for comment in early 2002, with the final version opened to the general public on 1 May. People were asked to respond according to their individual experiences, not as a representative of an organization. As an incentive towards frankness, name and contact information were optional, and all were promised confidentiality and anonymity.

The survey consisted of 25 questions, some requiring an answer from a set of choices, others free text. All submitted responses were captured in a back-end database for later analysis. The questions were grouped into four categories.³⁶ Those under "Institutional Information" and "Education and Experience" sought to create a profile of the respondent's current professional work, past education, and experience with electronic records. Questions in the category of "Electronic Records Research Agenda" pointedly addressed whether the respondent had ever used the 1991 agenda in any way and solicited suggestions for revising it. Respondents were encouraged to submit further comments in the optional "Additional Information" section.

To garner the widest participation possible, the survey was publicized through printed publications and e-mail lists. A flyer promoting the project and the survey was inserted into on-site packets given to participants at the Midwest Archives Conference (MAC) annual Spring Meeting in Minneapolis, an event which drew over three hundred people. Announcements were also printed in the 2002-2 issue of *Crossroads*, the NAGARA electronic records publication, and in the September/October issue of *Archival Outlook*, SAA's bi-monthly newsletter. A number of other publications, both in print and online, were considered, but not successfully pursued due to publication deadlines and dates that conflicted with the timeline for the survey.

Announcements were also sent to over a dozen e-mail lists targeting archivists and records managers³⁷, historians³⁸, librarians³⁹, and others with an interest in electronic records management and use⁴⁰. Through these electronic means, the announcement reached over 10,000 people.⁴¹ The survey remained online through 31 October 2002. During the time it was available, 73 responses were submitted.

The 73 respondents, answering the question, "Which of the following best describes your current profession?" selected these categories:

Profession	Number	Percentage
Other	8	11
Archivist	26	36
Educator	7	10
Records manager	16	22
Student	1	1
Librarian	3	4

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Editor	2	3
Information technology professional	8	11
Historian	2	3
Museum curator	0	0
Total	73	

The respondents further indicated that they had a substantial amount of experience working with electronic records. For the question “If you have worked with electronic records, please note for how long,” the breakdown for the answers is:

	Number	Percentage
< 1 year	6	8
1-2 years	7	10
3-5 years	16	22
5-10 years	16	22
10-15 years	6	8
>15 years	20	27
Total	73	

But of these, only 30% had used the 1991 or 1996 agendas for a proposal to the NHPRC. Only 8% had used the agendas to develop an application to any other funding agency. When asked to note which of the issues in the ten questions on the 1991 research agenda had inspired or informed their work, 25% said, “None,” but the rest indicated their interest evenly among the choices.

Everyone felt that much more work had to be done. Just over half felt that none of the questions from the 1991 agenda has been adequately addressed in the past ten years. The most “votes” noting that an issue was resolved were 25% for question 1 in the agenda, “What functions and data are required to manage electronic records in accord with archival requirements? Do data requirements and functions vary for different types of automated applications?” Given the very broad scope of that question, 25% seems surprising. Almost 70% of the respondents felt that none of the questions should be eliminated from further consideration.

Most interesting were the results of a series of questions on the constraints on and challenges to successful electronic records programs [the responses are listed as percentages.

Constraint or Challenge	Unimportant	Important	Very Important
E. Lack of funds inside the organization	7	18	75
M. Lack of management support inside the organization	1	2	7
K. Lack of trained personnel inside the organization	4	32	64
I. Lack of successful models inside the organization	4	34	62
O. Other priorities inside the organization	4	36	60
A. Lack of cooperation inside the organization	11	23	66
G. Lack of IT solutions inside the organization	5	36	59

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C. Lack of IT experience and/or knowledge inside the organization	15	33	52
J. Lack of successful models outside the organization	22	36	42
H. Lack of information technology solutions outside the organization	18	47	36
L. Lack of trained personnel outside the organization	26	41	33
N. Lack of management support outside the organization	32	38	32
P. Other priorities outside the organization	32	38	30
B. Lack of cooperation outside the organization	37	32	32
F. Lack of funds outside the organization	37	34	29
D. Lack of IT experience and/or knowledge outside the organization	36	44	21

The general trend notable here is the clear acknowledgement of internal faults and problems. While the lack of external support, funds, cooperation etc., are clearly significant, the percentages of answers identifying the internal challenges as “very important” are materially higher.

It is, of course, dangerous to extrapolate too much from such a small sample, but certain conclusions appear justified. First, it is important to note that, despite diligent promotion and publicity about the survey, especially among archivists, relatively few people took the time to complete it. Of those who responded, most described themselves as having substantive and long term experience with electronic records, but few still had used the NHPRC’s agendas. Last, it is safe to say that all the questions on the 1991 agenda are still pertinent and the general perception is that the lack of progress made in answering them could be directly tied to the problems archivists have had in re-directing their own energies and re-orienting their own programs.

5.1 Survey text

Background⁴²

The State Archives Department of the Minnesota Historical Society is managing an effort to revisit and analyze the electronic records research agenda currently guiding the National Historical Publications and Records Commission. This survey is part of the information gathering phase. Your response will help us to identify priorities and set the direction for the rest of the project.

Instructions

This survey is primarily designed for archivists and records managers, but anyone interested in electronic records is encouraged to respond. Please answer as an individual, speaking from your own experience and knowledge, rather than as a representative of an organization. At the end of the survey, you have the opportunity to add whatever additional comments and suggestions you think pertinent.

All information you provide will be kept strictly confidential. Any reports on or products derived from the survey will only note aggregate data and unattributed comments. If you would like to provide contact information so that we might follow up on your suggestions or provide more on the project, please use the final section of the survey, entitled "Additional Information." Thank you for your time and attention.

Institutional Information (required)

1. Which of the following best describes your institution? Please choose one only.
{Government, Library, Archives, Business, College or University, Other}
2. If you selected other, please describe.
3. Which of the following best describes your current profession? Please choose one only.
{Archivist, Educator, Records Manager, Student, Librarian, Editor, Information Technology Professional, Historian, Museum Curator, Other}
4. If you selected other, please describe.

Electronic Records Research Agenda (required)

These are the ten questions identified as priorities in the 1991 NHPRC research agenda (<http://www.nara.gov/nhprc>):

1. What functions and data are required to manage electronic records in accord with archival requirements? Do data requirements and functions vary for different types of automated applications?

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2. What are the technological, conceptual, and economic implications of capturing and retaining data, descriptive information, and contextual information in electronic form from a variety of applications?
 3. How can software-dependent data objects be retained for future use?
 4. How can data dictionaries, information resource directory systems, and other metadata systems be used to support electronic records management and archival requirements?
 5. What archival requirements have been addressed in major systems development projects and why?
 6. What policies best address archival concerns for the identification, retention, preservation, and research use of electronic records?
 7. What functions and activities should be present in electronic records programs and how should they be evaluated?
 8. What incentives can contribute to creator and user support for electronic records management concerns?
 9. What barriers have prevented archivists from developing and implementing archival electronic records programs?
 10. What do archivists need to know about electronic records?
5. Have you used the research agenda for an electronic records proposal to the NHPRC? {Yes, No}
 6. Have you used the research agenda for an electronic records proposal to any other funding agency? {Yes, No}
 7. Which of these questions has inspired or informed your work? (identify by number, check all that apply). {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, None/No opinion}
 8. Which of these questions has been adequately addressed in the past ten years? (identify by number, check all that apply). {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, None/No opinion}
 9. Which of these questions should be eliminated from further consideration? (identify by number, check all that apply). {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, None/No opinion}
 10. Which of these questions needs further examination? (check all that apply). {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, None/No opinion}
 11. Which new questions need to be asked? (please list in question form).

12. Please indicate the importance of the following groups as audiences to whom a revised research agenda should be addressed:

- a. Electronic records archivists {very important, important, unimportant}
- b. Government records archivists {very important, important, unimportant}
- c. Documentary editors {very important, important, unimportant}
- d. Manuscript archivists {very important, important, unimportant}
- e. Librarians {very important, important, unimportant}
- f. Funding sources {very important, important, unimportant}
- g. University archivists {very important, important, unimportant}
- h. Archival educators {very important, important, unimportant}
- i. Records managers {very important, important, unimportant}
- j. IT community {very important, important, unimportant}
- k. Researchers {very important, important, unimportant}
- l. Other {very important, important, unimportant}

13. If you selected other, please describe.

Education and Experience (required)

14. If you have worked with electronic records, please indicate in what capacity (choose all that apply). {Creation, Use, Management, Education, Preservation, Systems Design, Systems Administration, No experience with electronic records, Other}

15. If you selected other, please describe.

16. Which function best characterizes your interest in electronic records? Please choose one only. {Creation, Use, Management, Education, Preservation, Systems Design, Systems Administration, Other}

17. If you selected other, please describe.

18. If you have worked with electronic records, please note for how long. {<1 year, 1-2 years, 3-5 years, 5-10 years, 10-15 years, >15 years}

19. If you have worked with electronic records, please rate the importance of the following constraints or challenges you may have encountered.

- a. Lack of cooperation inside the organization {very important, important, unimportant}
- b. Lack of cooperation outside the organization {very important, important, unimportant}
- c. Lack of IT experience and/or knowledge inside the organization {very important, important, unimportant}
- d. Lack of IT experience and/or knowledge outside the organization {very important, important, unimportant}
- e. Lack of funds inside the organization {very important, important, unimportant}
- f. Lack of funds outside the organization {very important, important, unimportant}

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- g. Lack of information technology solutions inside the organization {very important, important, unimportant}
- h. Lack of information technology solutions outside the organization {very important, important, unimportant}
- i. Lack of successful models inside the organization {very important, important, unimportant}
- j. Lack of successful models outside the organization {very important, important, unimportant}
- k. Lack of trained personnel inside the organization {very important, important, unimportant}
- l. Lack of trained personnel outside the organization {very important, important, unimportant}
- m. Lack of management support inside the organization {very important, important, unimportant}
- n. Lack of management support outside the organization {very important, important, unimportant}
- o. Other priorities inside the organization {very important, important, unimportant}
- p. Other priorities outside the organization {very important, important, unimportant}
- q. Other {very important, important, unimportant}

20. If you selected other, please describe.

21. If you have worked with electronic records, what are your successes? (please list, optional)

22. Which resources/projects/articles have you found useful? (please list citations, optional)

23. To facilitate your work with electronic records, what would you like to know more about? (optional)

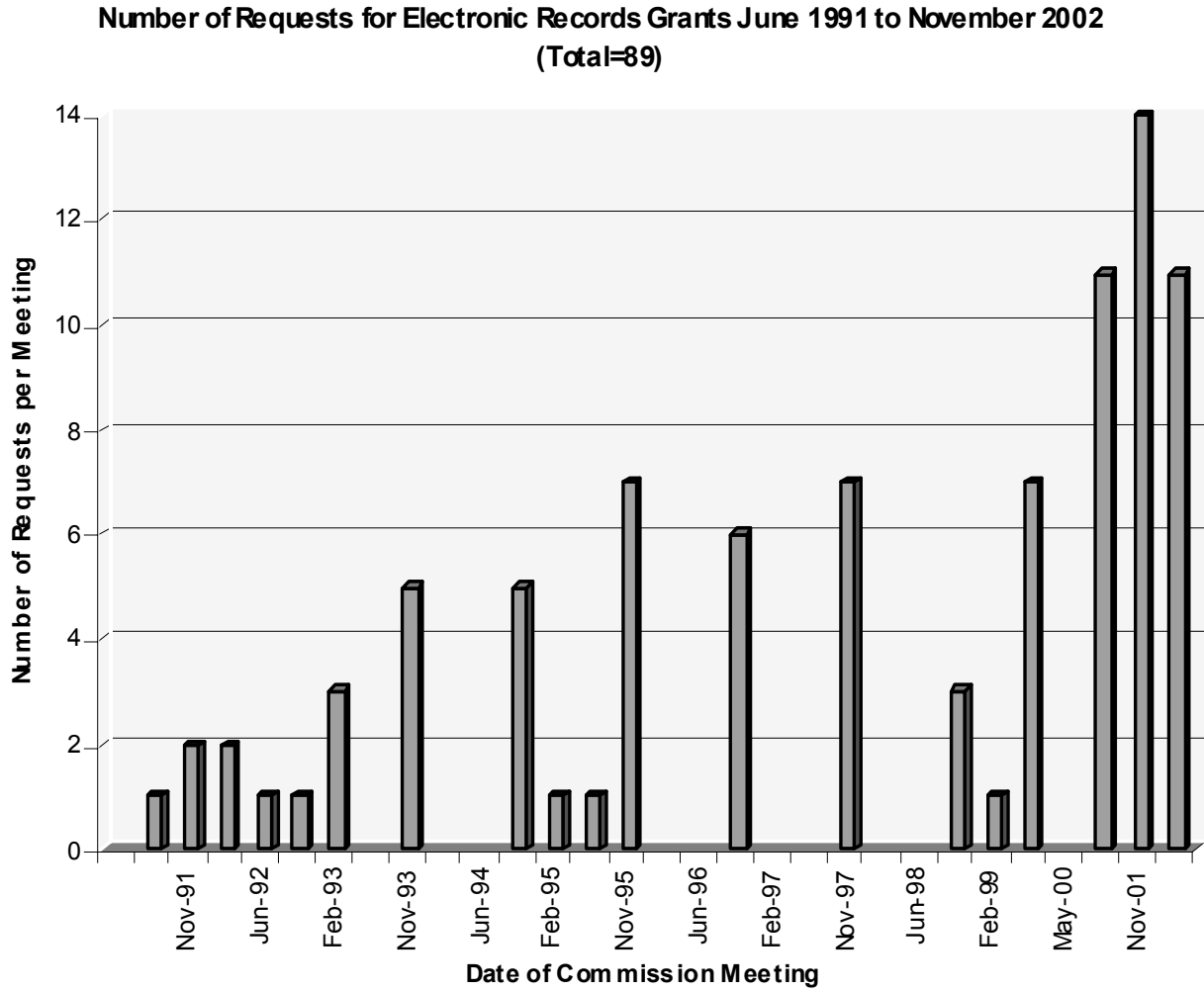
24. What is the single most important thing archivists must accomplish in their work with electronic records in the next five years? (optional)

Additional Information

25. Please add any other ideas or suggestions that you think would be useful. Please include your contact information if you would like to supply any additional information or be included in any other project activities.

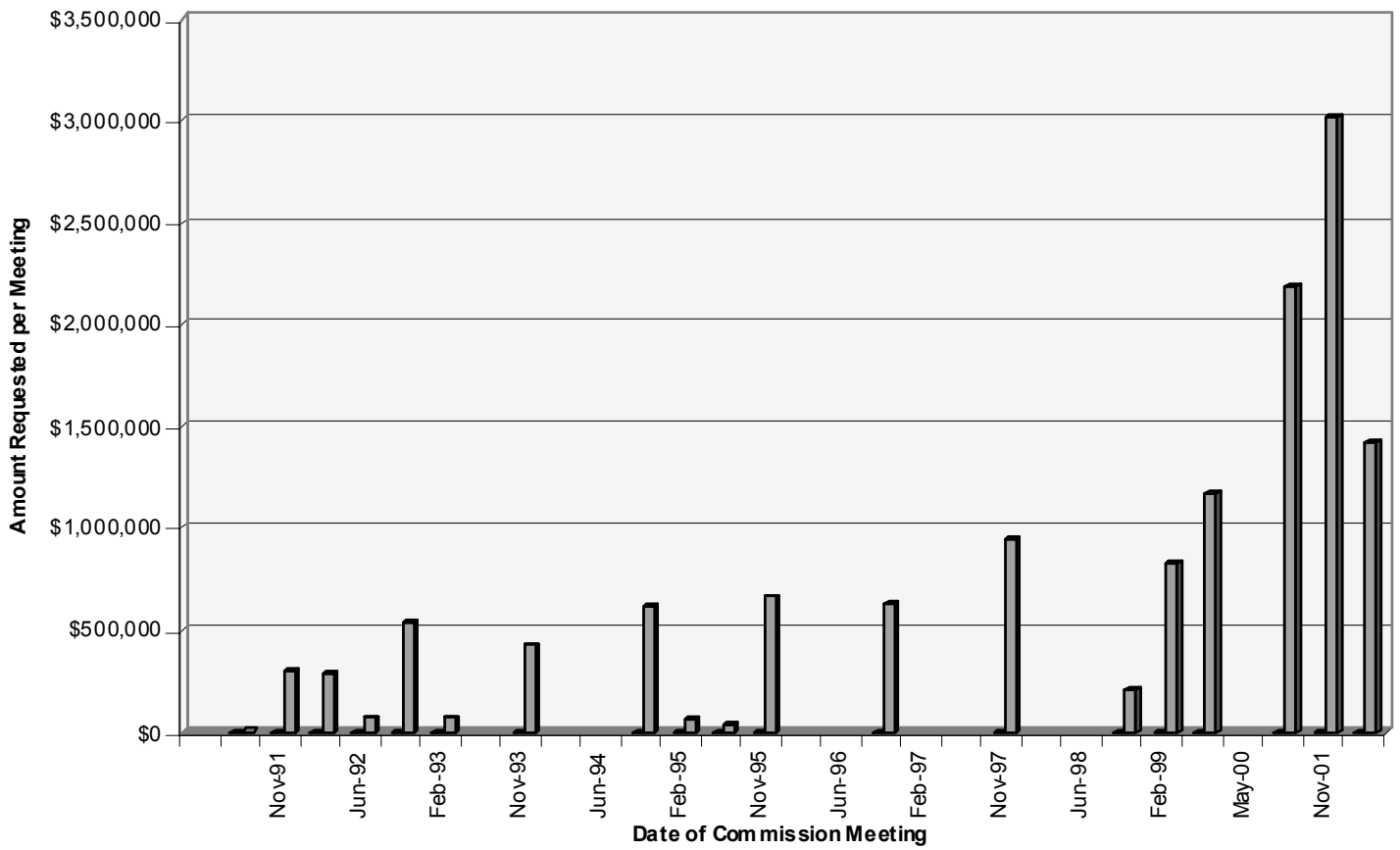
Appendix 6: Statistics on NHPRC electronic records grants and applications

[Mark Conrad, of the NHPRC, generously compiled and supplied the graphs for this appendix.]



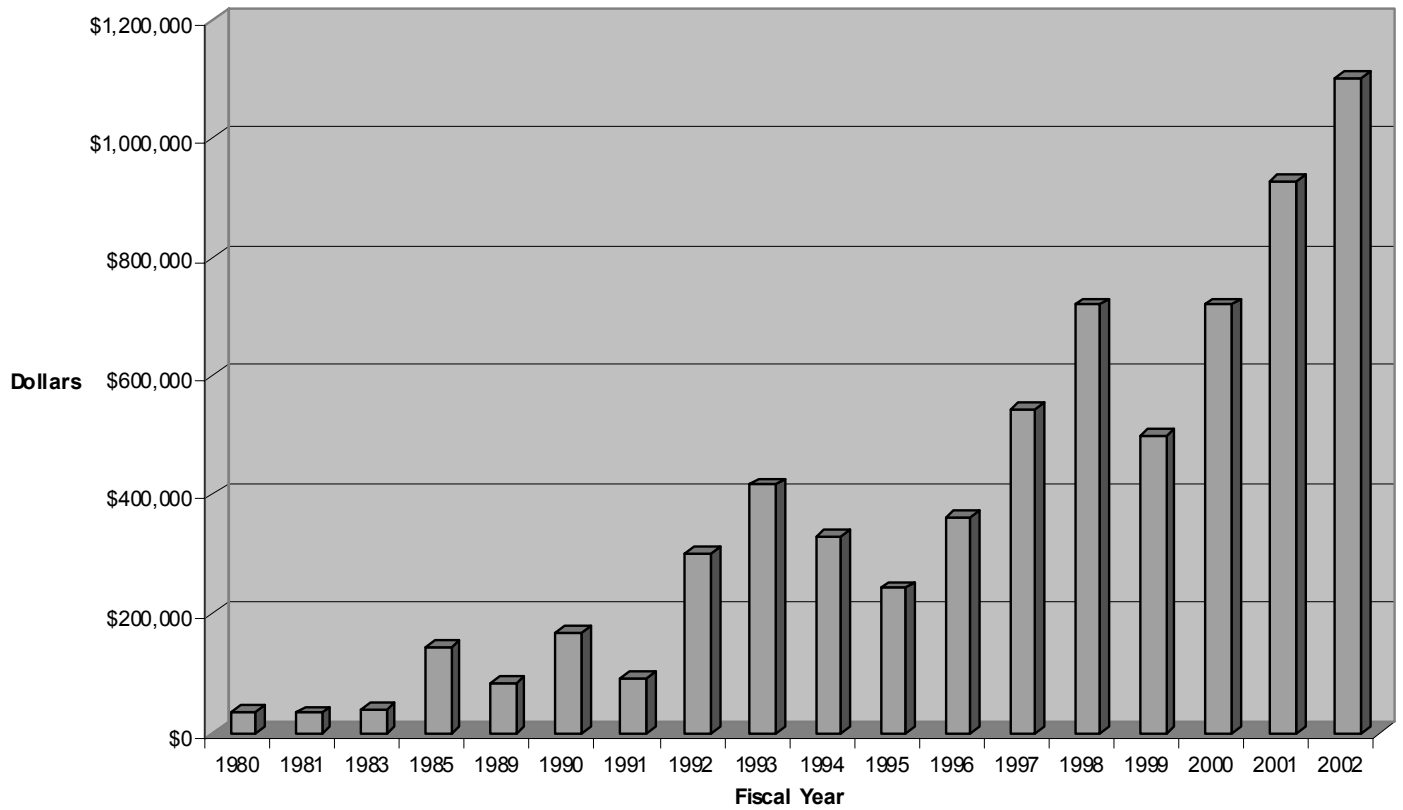
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Amount Requested for Electronic Records Grants June 1991 to November 2002
(Total=\$13,464,768)

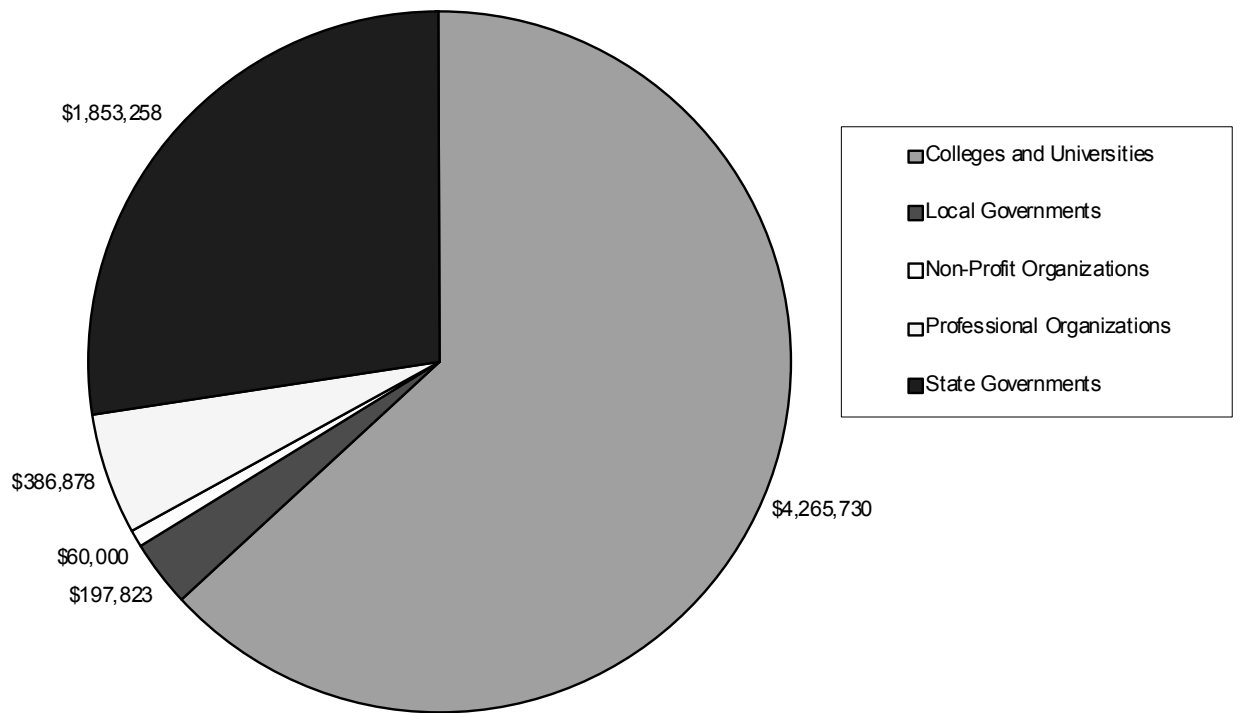


NHPRC Electronic Records Agenda

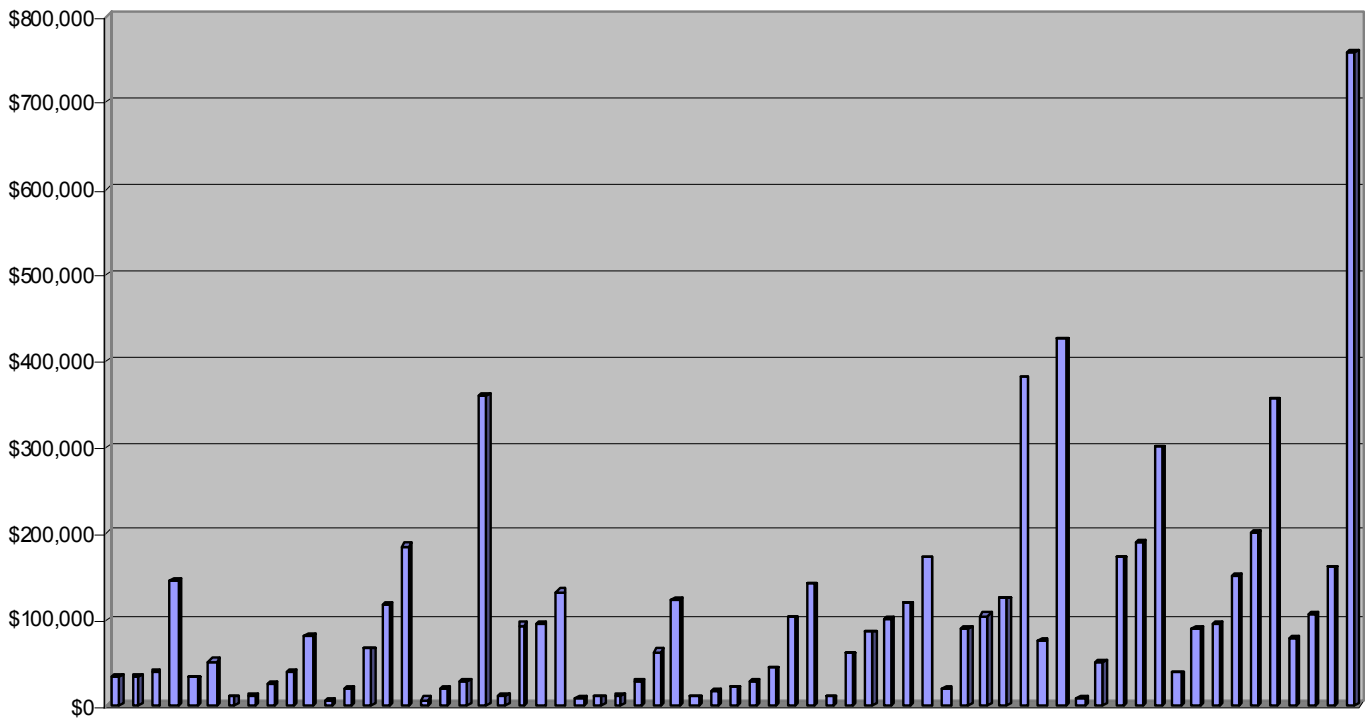
NHPRC Federal Funds Awarded for Electronic Records Projects 1979-2001 (Total=\$6,763,689)



Total Federal Funds Granted By Institution Type 1979-2001
(Total=\$6,763,689)



NHPRC Funds by Grant 1979-2001 (Total=\$6,763,689)
(Average=\$104,057) (Median=\$74,996)



Appendix 7: Performance measurement

Archivists and the NHPRC have to consider performance measurement, not just of projects, but also of the agenda itself. How will the NHPRC define success? What should electronic records projects achieve? Are archivists interested in outputs or outcomes? Looking towards an endpoint, what should electronic records projects have accomplished in five years? Ten years? How will the NHPRC measure that progress? Or even, to take the most pessimistic perspective, what would be better than nothing, which would describe the current state of electronic records programs at too many archives?

While those questions are doubtless important, everyone should recognize that there is a risk in setting the bar too high for electronic records projects. Archivists and records managers cannot point to an unbroken and universal string of successes in any area of activity. After decades of work, managing paper records is still a challenge, so it would be unreasonable to expect electronic records management programs suddenly to build uniformly and successfully on such shaky foundations. As NARA's recent analysis of its records management programs indicates and as every survey COSHRC has done over the past decade proves, records and historical documentation, in whatever medium and of whatever value, are not the highest priorities for any organization anywhere.⁴³ Archivists can certainly do better work with electronic records following an agenda that emphasizes partnerships and the use value of information and information technology. They can make a better case for support with their stakeholders, but, in the process of promoting this, they and the NHPRC should be wary of establishing greater expectations for and of exacting a more rigorous analysis of electronic records proposals than that levied on others.

That is one reason the new agenda should be complemented with a series of projects that would act as catalysts to raise the level of expertise and knowledge among archivists: given the status quo, it would be unfair to demand too much, too soon of a new agenda. Another reason to urge some caution with performance measurement is that this project's research was unable to reveal a set of measurements that could reasonably be applied across the board. For program development especially, local concerns will be important; no single, national model for performance measurement will be an appropriate template for many, diverse organizations.

Of all the possible models to follow, the Institute of Museum and Library Services (IMLS) approach is probably most worthy of emulation since it puts the onus on the individual project to define the appropriate standards for measuring success; at the same time, it provides some training to ensure that the projects' staffs share their assumptions and methodologies. The IMLS emphasizes measuring outcomes. As its web site describes, "This system of measuring results replaces the question, 'What activities did we carry out?' with the question 'What changed as a result of our work?' A focus on measuring outcomes (the effect of an institution's activities and services on the people it serves) rather than on the services themselves (outputs) is an emerging keystone of library and museum programs."⁴⁴ Critically, the IMLS requires a joint meeting of all

grant recipients to learn the techniques for evaluation, but the recipients themselves identify the outcomes they want to effect.

The NHPRC could ensure some focus to the “do it yourself” approach to performance measurement by requiring applicants to consider the list of “desirable” qualities noted below as starting points. Those are likely to promote progress; the concepts they represent should be evident in the proposals. This may help the NHPRC deal with the tension between appearing overly prescriptive, while still requiring some meaningful estimation of performance. Among those qualities, sustainability and communication are critical. Again, it would be unreasonable to demand too much, too soon. Overall, it might be useful for those working with electronic records to keep in mind as an analogy Freud’s explanation that psychoanalysis was not supposed to “cure” anyone; instead, its goal was to turn crippling neurosis into routine anxiety. Similar expectations for electronic records programs to do better than they have in the past, rather than to solve problems once and for all, would be appropriate.

In its own analysis of proposals, the NHPRC will have to weigh the value of promoting proven models against the importance of encouraging innovation. There is certainly no point to funding the ongoing invention and re-invention of the wheel, but the NHPRC must simultaneously recognize that all the factors that influence an electronic records program will continue to change and evolve. Archival programs will too, if they are to remain effective. Any adaptation of a proven model should involve some modification and improvement, to fit a different organizational framework or to reflect the progress of our knowledge and experience. Understanding and articulating those differences should be key features of a proposal and of a project’s final report.

7.1 Desirable qualities

Any agenda can only do so much. First, it is only a starting point, an indication of interests and ideas to which archivists have to respond. Second, those responses are normally defined in terms framed by individual institutions, with a circumscribed mission, reach and impact. If the NHPRC follows the IMLS’s model and encourages grant applicants to devise their own performance measures, most of those will inevitably address local concerns. Current NHPRC guidelines request that applicants identify performance objectives for their projects and indicate how the projects will be evaluated under the Government Performance and Results Act (GPRA). Even if the NHPRC were to stress program development only, that emphasis would have to fall within a larger context, as all projects should contribute to the ongoing national dialogue about electronic records. To have an overall and consistent effect on the archival profession as a whole, an agenda has to inspire proposals that have some larger impact.

There are probably many different ways to achieve this. One approach would be to ask grant applicants to identify explicitly, using standardized terminology, how project deliverables would contribute both to the local and national scenes. Applications might have a section similar to what is in many position descriptions, which are divided into “required” and “desirable” qualities. The required qualities could be a detailed plan for

performance measurement, appropriate to the individual organization and project. The desirable qualities could address larger national and professional needs. This approach would encourage applicants to develop more sophisticated proposals and also help the NHPRC as it confronts the dilemma of considering more proposals than it can fund, to identify and select the better ideas. The desirable qualities could include:

- **Compelling:** projects should persuade and demonstrate to archivists that they can benefit from doing more with technology and electronic records.
- **Inclusive:** as a whole, projects should address multiple audiences and identify how solutions provide useful information to all the NHPRC's constituencies.
- **Dynamic:** projects should provide feedback to the NHPRC, as issues, opportunities and priorities will change over time and the agenda (as well as its interpretation) should change with them.
- **Professional:** projects should be aware of and responsive to the intellectual constructs of the archival profession.
- **Practical:** projects are necessarily informed both by the agenda and an environment, so there should be some room for the interpretation and adaptation that make the agenda fit the local scene.
- **Productive:** projects should result in accessible, understandable and adaptable products.
- **Innovative:** keeping up with the potential of information technology demands creative ideas from archivists.
- **Informative:** education, communication and implementation considerations are necessary components of a worthwhile project.
- **Sustainable:** the work should have an impact beyond the length of the grant. This will often involve not only long-lived products, but also the mobilization of resources within the host institution toward a viable program for continuing the work.⁴⁵
- **Scalable:** archivists will confront both large, heterogeneous and small ad hoc recordkeeping environments.⁴⁶ They will need a "spectrum of tools and methods that scale up to very large databases and scale down to personal archiving."⁴⁷

7.2 Example

Any proposal entertained by the NHPRC in the context of the new agenda should reflect some critical mass of these qualities. Not every grant will be able to fulfill all of

them, but each should indicate that they were the objects of analysis and consideration as the grant was articulated.

For example, a project with a primary goal of educating the constituents of a university archives on electronic records management may feature small group workshops, as these could facilitate the development of partnerships. Its performance measures could include the number of workshops, the number of participants and a statistical analysis of its effects based on surveys and evaluations done over the course of the project. It could measure outcomes in terms of the number of programs that adopted the recommended best practices and policies; that supported the development of standards and enterprise architectures; and that collaborated with the archives subsequently to preserve electronic records of long-term value.

But to enhance its overall contribution to the archival profession, the project could also promise to analyze reactions to particular intellectual models and theories (“professional”); to develop standard curricula, resources and materials (“productive”); to make all those products widely available over a project web site (“informative”); and to continue to deliver workshops and to maintain the products beyond the life of the grant (“sustainable”). The net result would be a project that has both a local and a national impact. Many current projects sponsored by the NHPRC, especially within its education initiative, are already doing this. Examples are the Minnesota Historical Society’s Educating Archivists and their Constituencies Project, the University of North Carolina’s Managing the Digital Desktop Project and Indiana University’s Education Project. All of these are models on which to build.

Appendix 8: Recent projects related to electronic records

Along with and in addition to the NHPRC, there are a number of other projects which are now or have been in the recent past doing work that relates in some way to electronic records. This list is provided as a rough and ready reference source., to indicate the variety of projects underway across the world.⁴⁸

- Alexa Internet – contributes content to the Internet Archive
- Arts and Humanities Data Service – numerous publications
- The Asia Foundation – JSTOR
- Atlantic Philanthropies – New York Public Library Digital Library activities
- British Library – Digital Preservation Coalition
- Carnegie Corporation of New York – Vision 2010, symposia, conferences on computing and humanities
- Center for Research Libraries – Political Communications Web Archiving
- Coalition for Networked Information (CNI) – numerous projects, conferences and publications
- Collaborative Electronic Notebook Systems Association (CENSA)
- Consortium of University Research Libraries (CURL) – CURL Exemplars for Digital Archives (CEDARS), Digital Preservation Coalition
- Consultative Committee for Space Data Systems (CCSDS) – *Reference Model for an Open Archival Information System (OAIS)*
- Council on Library and Information Resources (CLIR) – numerous awards, projects and publications
- Defense Advanced Research Projects Agency (DARPA) – DLI2
- Gladys Krieble Delmas Foundation – CLIR projects
- Digital Library Federation (DLF)
- Digital Preservation Coalition
- Documentation Abstracts, Inc. – CLIR institutes and symposia, ISA Research Grant
- e-Science Core Programme – Digital Preservation Coalition
- The Eurasia Foundation – JSTOR
- European Commission – DLM-Forum
- Federal Bureau of Investigation (FBI) – DLI2
- Ford Foundation – support to Center for Technology in Government (CTG), RLG
- Bill and Melinda Gates Foundation – Access to Learning Award
- J. Paul Getty Trust, Getty Grant Program – NINCH Guide to Good Practice
- Harvard University Libraries
- Hewlett-Packard Company – DSpaceHumanities Technology and Information Institute (HATII), University of Glasgow – ERPANET
- IBM Almaden Research Center – Universal Virtual Computer
- Institute of Museum and Library Services (IMLS) – preservation, digitization, and collaboration projects, DLI2, CLIR projects
- International Records Management Trust (IRMT) – Evidence-Based Governance in the Electronic Age

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- Joint Information Systems Committee (JISC), United Kingdom – Distributed National Electronic Resource (DNER), Arts and Humanities Data Service (AHDS), Digital Preservation Coalition
- Library of Congress – National Digital Information Infrastructure and Preservation Program (NDIIPP), DLI2, Internet Archive, Long Now Foundation
- The Henry Luce Foundation, John D. and Catherine T. MacArthur Foundation – JSTOR, Markle Foundation – Internet Archive, Policy for a Networked Society Program, Massachusetts Institute of Technology Libraries – DSpace, Andrew W. Mellon Foundation – various JSTOR activities, including the E-Archive, Political Communications Web Archiving, LOCKSS, National Aeronautics and Space Administration (NASA) – DLI2, OAIS, National Agricultural Library
- Nationaal Archief van Nederland – ERPANET, National Archives and Records Administration (NARA) – Center for Electronic Records (CER), Electronic Records Archive (ERA), DLI2, National Archives of Australia
- National Archives of Scotland – Digital Preservation Coalition
- National Center for Preservation Technology and Training (NCPTT)
- National Endowment for the Arts (NEA) – Independent Media Arts Preservation (IMAP)
- National Endowment for the Humanities (NEH), Division of Preservation and Access – DLI2, workshops, National Institute of Standards and Technology (NIST), Convergent Information Systems Division (CISD) – Digital Data Preservation, National Institutes of Health (NIH), National Library of Australia,
- National Library of Medicine – DLI2, National Telecommunications and Information Administration (NTIA), The Stavros S. Niarchos Foundation – New York Public Library digital library activities, JSTOR Online Computer Library Center (OCLC) – Digital and Preservation Resources, Digital Preservation Coalition, several working groups with RLG, William Penn Foundation – CLIR projects, Pew Charitable Trusts – to Princeton University for a “national data archive for policy and the arts,” Congress Online Project, workshops, Public Record Office Northern Ireland (PRONI) – Digital Preservation Coalition, Public Records Office Victoria – Victorian Electronic Records Strategy (VERS)
- RAND - electronic recordkeeping and emulation, Research Libraries Group (RLG) – *RLG DigiNews*, “Long-term Retention of Digital Research Materials,” several working groups with OCLC, Resource: The Council for Museums, Archives and Libraries – Digital Preservation Coalition, Rockefeller Foundation – Independent Media Arts Preservation (IMAP)
- Schweizerisches Bundesarchiv (Swiss Federal Archives) – ERPANET
- Alfred P. Sloan Foundation – September 11th Digital Archive
- Smithsonian Institution (SI) – DLI2, Internet Archive
- Social Sciences and Humanities Research Council of Canada (SSHRC) – InterPARES II
- Spencer Foundation – doctoral and postdoctoral fellowships, e.g., Eun Park’s “Integrating Digital Resources Management Across the Curriculum”
- State Records Authority of New South Wales
- Sun Microsystems – Lots of Copies Keep Stuff Safe (LOCKSS)

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- UK Public Record Office (PRO) – Digital Preservation Coalition
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage - Memory of the World Programme, E-Heritage, Archives Portal, Free Software Portal, Records and Archives Management Programme (RAMP)
- United States Patent and Trademark Office (USPTO) – Vital Electronic Record Archive (VERA)
- Università degli Studi di Urbino (Institute for Archival and Library Science) – ERPANET
- University of London Computer Centre – Digital Preservation Coalition
- H. W. Wilson Foundation – workshops, CLIR publications
- Robert W. Woodruff Foundation – CLIR projects
- The World Bank Group – Evidence-Based Governance in the Electronic Age

Some of these players are conducting work directly, rather than funding the work of others. The line between practitioner and funder often fluctuates, however, as organizations decide that an area of internal inquiry warrants financial support of work by others. In order to refine and advance the electronic records agenda in coming years, the NHPRC and its constituencies should continue to monitor the work of organizations such as those listed above. They can benefit from considerably more resources by offering to collaborate on such efforts.

Appendix 9: Resource list

- "Appendix E: Key Reports Sponsored by SAA." In *Society of American Archivists Council Handbook*. N.d. Chicago: Society of American Archivists.
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- "Archival Issues Raised by Information Stored in Electronic Form." Society of American Archivists, 1995.
<http://www.archivists.org/statements/issues-infoelectronicform.asp>
- ARMA International Bookstore.
<http://www.arma.org/bookstore/>
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- Bantin, Philip C. "Developing a Strategy for Managing Electronic Records: The Findings of the Indiana University Electronic Records Project." *American Archivist* 61, no. 2 (1998): 328-64.
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Chandler, John S. "A Multiple Criteria Approach for Evaluating Information Systems." *MIS Quarterly* 6, no. 1 (1982): 61-74.

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Appendix 10: Advisors and participants in the process

Advisory board

Cynthia Bendroth, *Pennsylvania Historical and Museum Commission*
Mark Conrad, *National Historical Publications and Records Commission*
Anne Gilliland, *University of California, Los Angeles*
Mary-Jo Kline, *Association for Documentary Editing*
Gary Kornblith, *Oberlin College*
Reagan Moore, *San Diego Supercomputer Center*
Theresa Pardo, *Center for Technology in Government*
Tim Slavin, *Delaware Public Archives*
Lee Stout, *Pennsylvania State University*
Ken Thibodeau, *National Archives and Records Administration*
Bill Wallach, *Bentley Historical Library*

December review and approval meeting

Bruce Ambacher, *National Archives and Record Administration*
Charles Arp, *Ohio Historical Society*
Phil Bantin, *Indiana University Archives*
Cynthia Bendroth, *Pennsylvania Historical and Museum Commission*
Ben Bloom, *Minnesota Historical Society*
Brien Brothman, *Rhode Island State Archives*
Bruce Bruemmer, *Cargill*
Diane Carlisle, *ARMA International*
Chris Cialek, *Minnesota Land Management Information Center*
Patricia Cruse, *California Digital Library*
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Michael Fox, *Minnesota Historical Society*
Bob Horton, *Minnesota Historical Society*
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Nancy McGovern, *Cornell University*
Susan McKinney, *University of Minnesota*
Michael Miller, *Federal Bureau of Investigation*
Reagan Moore, *San Diego Supercomputer Center*
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Richard Pearce-Moses, *Arizona State Library, Archives and Public Records*
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Joyce Ray, *Institute of Museum and Library Services*

NHPRC Electronic Records Agenda

Steve Ring, *Minnesota Department of Health*
Charles Rodgers, *Minnesota Historical Society*
Roy Rosenzweig, *George Mason University*
Shawn Rounds, *Minnesota Historical Society*
Jason Roy, *Minnesota Historical Society*
Juanita Skillman, *ARMA International*
George Socha, *Halleland Lewis Nilan Sipkins & Johnson*
Carol Stainbrook, *Cohasset Associates, Inc.*
Lee Stout, *Pennsylvania State University*
Catherine Teti, *General Accounting Office*
Ken Thibodeau, *National Archives and Records Administration*
Kristi Tornquist, *St. Cloud State University*
Ciaran Trace, *University of California Los Angeles*
Anne Van Camp, *RLG*
William Wallach, *Bentley Historical Library*
Bradley Westbrook, *University of California San Diego*

May meeting in Washington, D.C.

Bonnie Curtin, *National Endowment for the Humanities*
Jeff Field, *National Endowment for the Humanities*
James French, *National Science Foundation*
Bob Horton, *Minnesota Historical Society*
William LeFurgy, *Library of Congress*
Reagan Moore, *San Diego Supercomputer Center*
Theresa Pardo, *Center for Technology in Government*
Joyce Ray, *Institute of Museum and Library Services*
MacKenzie Smith, *Massachusetts Institute of Technology*

Appendix 11: Contact information and acknowledgements

11.1 Project web site

<http://www.mnhs.org/preserve/records/eragenda.html>

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¹ For details, see Appendix 4: Survey.

² Another contributing factor could be the scheduling of the session for the afternoon of the final day of the conference, but the well-attended “Archives Unplugged” session took place even later that same afternoon.

³ Only 30% of respondents reported having “used the research agenda for an electronic records proposal to the NHPRC.” It is impossible from this data alone to determine how many of the respondents have actually applied for NHPRC funding for an electronic records project, since some may have applied for funding without using the agenda as guidance. This would seem to be supported by the fact that, of the 40 project proposals submitted to the NHPRC that the project staff were able to analyze, 12 of the proposals (30%) indicated none of the 1991 agenda items that the project would address.

⁴ See Appendix 10: Advisors and Participants in the Process for the names of individuals on the advisory board.

⁵ Appendix 5 provides more information about the survey process and some general findings.

⁶ “NHPRC Electronic Records Research Agenda: 1991 Research Issues and Related References,” February 2003, <http://www.mnhs.org/preserve/records/erbibliography.pdf>

⁷ The office hours were at the same time as offer of reduced prices at the SAA publications table, which drew a very large crowd.

⁸ See Appendix 10: Advisors and Participants in the Process for the names of December meeting attendees.

⁹ Some of the most recurrent points of contention within the professional archival literature of relevance to electronic records have been custody, definition of record, disciplinary affiliations of archivists, appraisal professional education, and the appropriate relationship between research/theory and practice.

¹⁰ For explanations of the concept of social capital, its importance and potential mechanisms for its promotion, see James S. Coleman, “Social Capital in the Creation of Human Capital,” *American Journal of Sociology* 94, Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure (1988): S95-S120; Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster, 2000); and Paul Resnick, “Beyond Bowling Together: Sociotechnical Capital,” In *HCI in the New Millenium*, edited by John M. Carroll, 247-72 (Addison-Wesley, 2001).

¹¹ The accompanying document “NHPRC Electronic Records Research Agenda: 1991 Research Issues and Related References” provides references to resources, organized according to the original ten questions. These include numerous products of NHPRC-funded projects.

¹² This point was brought up repeatedly during the meetings for this project. Participants representing ARMA were especially vocal on the need for such models.

¹³ See the graphs in Appendix 6 for a breakdown of NHPRC grants by type of institution.

¹⁴ See two recent collections of essays edited by Bruce Dearstyne, *Effective Approaches for Managing Electronic Records and Archives* (Lanham, MD: Scarecrow Press, 2002) and *Leadership and Administration of Successful Archival Programs* (Westport, CT: Greenwood Press, 2001).

¹⁵ While recent developments have dramatically increased both the need and potential for drawing on the expertise of others outside of the archival profession, the call to do so is not new. For example, see Margaret Hedstrom, “Understanding Electronic Incunabula: A Framework for Research on Electronic Records,” *American Archivist* 54 (1991): 334-54, and “Building Record-Keeping Systems: Archivists Are Not Alone on the Wild Frontier,” *Archivaria* 44 (1997): 44-71; “Working Together,” Coalition for Networked Information, 1998, <http://www.cni.org/tfms/1999a.spring/handout/Lippincott99Stf.html>; “Archival Issues Raised by Information Stored in Electronic Form,” Society of American Archivists, 1995, <http://www.archivists.org/statements/issues-infoelectronicform.asp>; and Philip C. Bantin, “Strategies for Managing Electronic Records: A New Archival Paradigm? An Affirmation of Our Archival Traditions?” *Archival Issues* 23, no. 1 (1998): 17-34.

¹⁶ See the special Graduate Archival Education Issue of *American Archivist* 63, no. 2 (2000). See also SAA’s “Directory of Archival Education” (<http://www.archivists.org/prof-education/edd-index.asp>), which offers a discussion of archival education, guidelines for graduate programs in archival studies, and a state-by-state listing of educational programs.

¹⁷ For E-SIGN and UETA, see <http://thomas.loc.gov/cgi-bin/query/z?c106:S.761>: and <http://www.law.upenn.edu/bll/ulc/fnact99/1990s/ueta99.htm>. The E-Government Act of 2002 is also

worthy of note, with its emphasis on information sharing and an enterprise architecture (<http://thomas.loc.gov/cgi-bin/bdquery/z?d107:hr2458>).

¹⁸ "Preserving Our Digital Heritage: Plan for the National Digital Information Infrastructure and Preservation Program" (Washington, DC: Library of Congress, 2002), http://www.digitalpreservation.gov/ndiipp/rep/rep_plan.html

¹⁹ <http://www.dpconline.org/>

²⁰ *Reference Model for an Open Archival Information System* (Washington, D.C.: Consultative Committee for Space Data Systems, 2002), http://ssdoo.gsfc.nasa.gov/nost/isoas/ref_model.html.

²¹ See, for example, Robert Horton, review of *The Myth of the Paperless Office* by Abigail J. Sellen and Richard H.R. Harper, In *American Archivist* 65, no. 1 (2002): 124-128, on the use-value of electronic records.

²² For the importance of considering entire systems rather than isolated components, see David Bearman, "Record-Keeping Systems," *Archivaria* 36 (1993): 16-36; Philip C. Bantin and Gerald Bernbom, "The Indiana University Electronic Records Project: Analyzing Functions, Identifying Transactions, and Evaluating Recordkeeping Systems – a Report on Methodology," *Archives and Museum Informatics* 10, no. 3 (1996): 246-66; Susan Myburgh, "Information Systems and Records Management," *Records and Information Management Report* 15, no. 2 (1999): 1-12; Shawn P. Rounds and Mary P. Klauda, *Trustworthy Information Systems Handbook*. (Saint Paul, Minnesota: State Archives Department, Minnesota Historical Society, 2002), Version 4, <http://www.mnhs.org/preserve/records/tis/tis.html>

²³ National Partnership for Advanced Computational Infrastructure (NPACI), <http://www.npaci.edu/>; DigitalGovernment.org (dg.o), Digital Government Research Center and University of Southern California Information Sciences Institute, <http://www.digitalgovernment.org/>; "NSF Workshop on Research Challenges in Digital Archiving," 12-13 April 2002, Warrenton, Virginia, <http://www.si.umich.edu/digarch/>

²⁴ According to personal correspondence with Kevin Glick, who was a member of the US-InterPARES team, the bibliography was initially completed in May 2000 and then updated in October 2001. Glick also indicated that some links in the bibliography may already have been broken by the latter date. US-InterPARES, "NHPRC Bibliography," 2001, http://is.gseis.ucla.edu/us-interpares/bib_NHPRC.htm

²⁵ Five of the projects span more than one NHPRC grant.

²⁶ These are all part of the SAA electronic records case studies series, which actually included eight total works.

²⁷ Of the six grants approved in November 2001, five have web sites associated with their efforts.

²⁸ These numbers are accurate as of 8 February 2003.

²⁹ Many of these pages are still available through the Internet Archive. One can access a resource by either copying its original URL into the query box of the WayBack Machine (<http://web.archive.org>) or entering an address of the following form into a browser's location window, where "ORIGINAL_URL" should be replaced with the URL where the page previously could be found:

http://web.archive.org/web/*/ORIGINAL_URL

³⁰ See www.coshrc.org. Alternatively, NARA's Archives Library Information Center (ALIC) seems logically suited and prepared to manage this function. As its web site explains, "ALIC provides access to information on American history and government, *archival administration*, *information management* [italics added], and government documents to NARA staff, archives and records management professionals, and the general public." http://www.archives.gov/research_room/alic/about_alic.html

³¹ See ARMA International Bookstore, <http://www.arma.org/bookstore/> and SAA Publications Catalog & Online Resources, <http://www.archivists.org/catalog/>

³² *Sample Forms for Archival and Records Management Programs* (Lenexa, KA: ARMA International and Society of American Archivists, 2002).

³³ The cumulative number of copies sold for the series through fiscal year 2002 is 1,544. In 2002, all eight case studies together sold 89 copies. The NHPRC funded a print run of 700 for each title. The project staff would like to thank Teresa Brinati, SAA Director of Publications, for compiling and sharing these sales figures.

³⁴ See SAA Task Force on Electronic Publishing, "Exposure Draft for Public Comment," 9 August 2002, <http://www.archivists.org/governance/tfep-report2.asp>

³⁵ While there is some irony to a report on electronic records noting the importance of print publications, there is a disappointing history even to the short-term preservation of project results. Although appropriate

strategies for their long-term preservation are being actively debated, there is good reason to believe that printed reports and electronic publications from well-established organizations will be accessible for much longer periods than the typical project web site.

³⁶ See Appendix 5 for the complete text of the survey.

³⁷ ARCHIVES, ERECS-L, GOVERNMENT RECORDS (SAA), NAGARA-TALK, RECMGMT-L, MN-GRIN (Minnesota Government Records and Information Network), TCART (Twin Cities Archives Round Table)

³⁸ H-LOCAL, H-NET Announcements, MNLOCALHISTORY

³⁹ DIGLIB, E-DOCS

⁴⁰ GMIS-DISCUSSION (Government Management Information Sciences)

⁴¹ The ARCHIVES, ERECS-L, and RECMGMT-L lists alone claim almost 7,000 members.

⁴² This survey was originally presented online from 1 May through 31 October 2002. Questions 2, 4, 11, 13, 15, 17, 20-25 allowed respondents to enter free-text answers. All other questions (those asking for a choice among given options) featured check boxes. At the end, respondents were given the choice of submitting the survey as completed or re-setting the form to start over.

⁴³ For NARA, the various components of its records management redesign initiative are online at http://www.archives.gov/records_management/initiatives/rm_redesign_project.html. COSHRC's products from 1996 to the present are online at <http://www.coshrc.org/reports/index.htm>.

⁴⁴ IMLS, "Outcome Based Evaluation," http://www.ims.gov/grants/current/crnt_obe.htm.

⁴⁵ Several years ago, Richard E. Barry argued about electronic records management specialists that the "NHPRC cannot fund very many such positions or any one of them indefinitely. There is therefore a lesson for other organizations expecting to undertake projects of this kind. It is that there is a prima facie case for the establishment of positions for information management and technology specialists within the archives and records management organization." "Making a Difference: Comments on Electronic Records Management R&D Projects at Ohio State University, Indiana University and City of Philadelphia," paper presented at the Society of American Archivists (SAA) Annual Meeting, 29 August 1996, <http://www.mybestdocs.com/SAA-PAP.html>

⁴⁶ For a discussion of the need for an architecture that can scale to large collections of data, see the work of the San Diego Supercomputer Center, at <http://www.sdsc.edu/NARA>, and "It's About Time," National Science Foundation and Library of Congress, 2002, p. 67, <http://www.si.umich.edu/digarch/Report.DFt.2.doc>.

⁴⁷ "It's About Time," p. 41. The designers of individual tools and methods should be attentive to issues of scalability. Those implementing systems should also recognize the limitations of particular technologies and seek creative ways to combine components in ways that are appropriate to their particular environments. See <http://www.sdsc.edu/NHPRC> for further discussion of the issues.

⁴⁸ Further detail on the activities can be found in the accompanying document, "NHPRC Electronic Records Research Agenda: 1991 Research Issues and Related References." The identification of organizations and the examples of work they have funded are meant simply to be illustrative, not exhaustive of all activities related to electronic records. Future investigation would undoubtedly add many items to the list.