NARA Agreement Gives Impetus to Electronic Archives Research and Development

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I am delighted to report that the National Archives and Records Administration (NARA) has just entered into an interagency agreement with the National Science Foundation (NSF) that will give impetus to research-and-development work on the creation of an Electronic Records Archives.

Earlier in this space, I briefly described to OAH members the possibility of such an archives, which could be useful to archival institutions besides NARA. We are on the verge of a major technological breakthrough for the preservation of computer-generated records. Research-and-development work done for us by the San Diego Supercomputer Center indicates that a practical Electronic Records Archives is possible.

In simplest terms, this Electronic Records Archives will be able to preserve any kind of electronic record, free it from the format in which it was created, retain it indefinitely, and enable requesters to read it on computer systems now in use and coming in the future. Moreover, it will be able to handle large quantities of electronic records such as e-mail messages, which are proliferating in the Federal government. But because the system promises to be scalable, it could be useful also for smaller archives than ours, including those of state and local governments and private institutions. In fact, the National Historical Publications and Records Commission, which as most historians know is administered within NARA, has made a grant to the San Diego Supercomputer Center aimed at accomplishing just that.

In short, this is a promising development in the effort NARA and other archives are making

to ensure that records created electronically will not be lost to historians.

Under the new agreement, NARA has joined the National Science Foundation in support of the National Partnership for Advanced Computational Infrastructure. This partnership is part of an NSF program for taking advantage of newly emerging developments in high-performance computing and communications.

NARA, like other government archival institutions, has been faced with the unprecedented challenges of determining how to guide Federal agencies on the management of electronic records of all sorts, and how to preserve such records of continuing value. Available information technology has not provided adequate means for responding to these challenges. But recognizing that emerging high-performance computing and communications might provide solutions, we collaborated with the Defense Advanced Research Projects Agency (DARPA) and the U.S. Patent and Trademark Office in support of research performed by the San Diego Supercomputer Center.

Out of this research, the Supercomputer Center has produced an information-management architecture and related methods capable both of preserving diverse collections of electronic records and of enabling historians and other users to access those collections indefinitely into the future even as computer technologies evolve. The Supercomputer Center also has demonstrated the effectiveness of this information-management architecture for processing collections NARA provided of records in various formats and from various sources in the Federal Government.

NARA's need for preserving and providing access to electronic records of the Federal Government adds to the NSF research agenda an important archival component: we must be able to carry the records created using computer and communications technologies forward into the future while protecting their integrity and authenticity. Given the rapid pace of technological change, the need to carry digital-born information forward in a reliable manner is increasingly important to historians as well as to governments, businesses, and other institutions. The life span of many government activities extends

over multiple generations of information technology. Such activities could be crippled if important records cannot be accessed because they exist only in formats that have become obsolete.

The approach recommended by the Supercomputer Center builds on the same data-intensive computing technology that the National Partnership for Advanced Computational Infrastructure is developing. By joining NSF in support of the partnership, NARA will be able to elevate and accelerate the pace of research needed to translate the Supercomputer Center's promising beginnings into operational capabilities. The collaboration will give NARA access to the world-class expertise and the extensive resources of forty-six institutions that are in the National Partnership for Advanced Computational Infrastructure.

We are collaborating on a parallel and complimentary track with other archivists in the InterPARES project for "International Research on Preservation of Authentic Records in Electronic Systems." This project is identifying fundamental requirements for preserving electronic records with authenticity and reliability across generations of information technology. There are currently no well-established standards for demonstrating authenticity either in the archival field or in related areas.

For a long time, members of the OAH and other historians have been concerned about the preservation and access challenges posed by electronic records. Now, through our work with the San Diego Supercomputer Center, through our new agreement to collaborate with NSF in moving that work forward, and through the InterPARES project, I feel optimistic that the challenges can be met. These developments are exciting, and of great potential value to all historians whose research will depend on records created electronically as well as on paper.