

## **Electronic Records Activities at the U.S. National Archives and Records Administration**

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The National Archives and Records Administration (NARA) has had an ongoing program for dealing with the electronic records created by the Federal Government since 1972. Today, NARA's efforts in the area of electronic records are focused in the Center for Electronic Records; nonetheless, there are activities in many other parts of NARA concerning the large and complex challenges posed by the increasing use of computer technology for creating and storing records.

The Center for Electronic Records (CER) is located in NARA's Office of Special and Regional Archives. It was established as a division level organization in October 1988 with a staff of 17. Since then, it has grown to 42 full time employees, and 12 part time. The Center's mission encompasses a range of archival responsibilities starting with the appraisal process which determines which electronic records have sufficient enduring value to warrant preservation in the National Archives. The Center is responsible for effecting the transfer of such records from Federal agencies, for accessioning them into the holdings of the National Archives, preserving them and providing them to researchers on demand. The Center's functions are performed by its two branches. The Archival Services Branch, staffed by archivists, archives specialists, and archives technicians, performs the basic archival functions of appraisal, accessioning, description, and reference. The Technical Services Branch, staffed by archivists, archives specialists, computer specialists, and technicians, has total responsibility for the preservation of electronic records in the National Archives. It also provides computer support for the Archival Services Branch. Technical Services is also responsible for research and analytical work to keep abreast of new applications of computer technology in the Federal Government and new opportunities for application of technology in the Center.

The growth in the CER's holdings and workload has far outstripped the growth in its staff. In the last fiscal year before the CER was created, 1988, the National Archives received 22 reels of magnetic tape containing 159 files of electronic records from Federal agencies. By fiscal 1992, the volume had grown to over 1600 reels and files. In the first three quarters of fiscal year 1993, Federal agencies transferred over 5,200 files to the CER! This phenomenal growth is overshadowed by the prospects of future increases. Between 1972 and 1992, the National Archives had appraised 612 series of electronic records as permanently valuable. In 1991-92, NARA sponsored a study of Federal databases by the National Academy of Public Administration (NAPA). That study resulted in recommendations that NARA preserve data from another 430 databases, an instantaneous increase of over 70% in the number of archival databases. CER staff have initiated negotiations with agencies concerning more than half of the recommended databases to get them to schedule and transfer these records. To date, over 500 files have been transferred to the National Archives as a result of these initiatives.

The majority (470) of the 612 databases which NARA had previously identified as archival are on-going: they will continue to generate files which are to be transferred to the National Archives indefinitely, and the majority of these are scheduled for annual transfers. The databases recommended by NAPA appear in large part to be on-going.

**Preservation of Scientific Data:** NARA is currently sponsoring a study by the National Academy of Sciences/National Research Council. This study of the long-term value of scientific data deals with very large volumes of data involved and very complex fields of research. It comprises five case studies, dealing with data resulting from research in earth sciences, ocean sciences, atmospheric sciences, space science and experimental sciences. Expert panels have been formed to develop recommendations in each of the five areas. The members are principally scientists from universities and other organizations outside the Federal Government, but there are also archivists, historians and specialists in information technology and management involved. This study focuses on the long-term value of the data for scientific research. It does not address evidential value or historical research. Hopefully, the study will provide a foundation for articulating a national policy on preserving data for science.

NARA has been joined by the National Oceanic and Atmospheric Administration as a co-sponsor of this study. NARA has also been asked to join the Interagency Working Group on Data Management for Global Change, specifically to contribute to the development of criteria for prioritizing global change data sets for preservation.

**Improvements in capacity and efficiency:** Since its inception, the CER has been engaged in business process engineering to enable it to handle an increasing workload. Advances have been made by eliminating unnecessary procedures, better organizing work flow, improving coordination, and other procedural enhancements. The systems analysis and design for two new systems which will dramatically increase capacity and capability:

1. **Archival Electronic Records Inspection and Control (AERIC):** This system has been designed to automate the process of accessioning data files by using database management technology for automated inspection of data. AERIC is currently operational for this function. It is being further enhanced with the capacity to reestablish the structure of complex databases independently of the original software. As a by-product, AERIC will be a repository for metadata about accessioned databases. This metadata will be useful for archival control and for researcher access to the data.

2. **Archival Preservation System (APS):** This system embodies 20 years of experience in the preservation of electronic records. It automates both the process of producing archival copies of digital files and the audit trail for each file and volume. The system is in development and is expected to be in operation later this year.

A prototype of the system has already proven the value of the APS in an important test. In response to a court order in the *Armstrong V. Executive Office of the President* lawsuit, the CER was able to produce copies of hundreds of reels of highly classified information in a span of less than three weeks this June. The significance of this accomplishment must be measured in light of the fact that the CER had only been assigned responsibility for these items in late April; that it had to start processing the materials literally as soon as they could be moved to CER space; the move had to be completed before the space was ready; and the CER had to define procedures and go into mass production with an incomplete and untested system doing work which had never before been done in house.

The CER has also started the systems analysis and design for a system which will provide on-line access to accessioned databases.

Priorities for Future Action: In a terse statement in its Strategic Plan, NARA has recognized the epochal significance of electronic records keeping and committed itself to taking appropriate actions on a broad front. A task force has been organized to recommend strategies for action. Even before the task force has drafted its recommendations, NARA has launched several initiatives. Among them, NARA is sponsoring an independent review of prominent information systems in the Federal Government. The systems will be selected from those which have been designated for inclusion in the Office of Management and Budget's Program for Priority System. The review will assess how well archival and records management functional requirements have been addressed in systems development and management methods, and will recommend ways to ensure that these requirements are addressed effectively. NARA is also collaborating with the Agency for International Development (AID) in a systems development effort which is moving towards a paperless office. More specifically, the project aims at distributed (worldwide) access and electronic communication of basic records of AID projects. AID sought NARA's participation in order to ensure that archival and records management considerations are integral to the design and operation of the system.

NARA is also participating in the Administration's Information Infrastructure Task Force, the Interagency Electronic Mail Task Force, the Federal Geographic Data Committee, the Public Access Group, the OMB Information Management Improvement Initiative, the Federal Information Resources Management (IRM) Policy and Operations Committee, and the Interagency Advisory Committee on IRM. Charles Dollar has recently been elected as chair of the last committee.

The *Armstrong v. EOP* litigation, concerning the management of records created via electronic mail, is a major focus of attention for NARA. However, we are still in litigation in this case, so that no definitive statement can be made at this time.