

**WRITTEN STATEMENT SUBMITTED BY J. TIMOTHY SPREHE BEFORE  
THE HOUSE SUBCOMMITTEE ON TECHNOLOGY, INFORMATION POLICY,  
INTERGOVERNMENTAL RELATIONS, AND THE CENSUS  
ON THE SUBJECT OF ELECTRONIC RECORDS MANAGEMENT  
JULY 8, 2003**

My name is J. Timothy Sprehe and I am president of Sprehe Information Management Associates, a consulting firm based in Washington, DC, and in recent years specializing in electronic records management. It is a pleasure to appear before this Subcommittee to discuss the subject of electronic records management or ERM.

**1. Lack of Electronic Recordkeeping.** The National Archives' 2001 report on current federal recordkeeping practices stated:

**Government employees do not know how to solve the problem of electronic records – whether the electronic information they create constitutes records and, if so, what to do with the records.**

Electronic files that qualify as records—particularly in the form of e-mail, and also word processing and spreadsheet documents—are not being kept at all as records in many cases and are frequently not being scheduled. Employees lack guidance and knowledge concerning how to identify electronic records and what to do with them once identified. Technology tools for managing electronic records do not exist in most agencies. The agency information technology environments have not been designed to facilitate the retention and retrieval of electronic records. Despite the growth of electronic media, agency records systems are predominately in paper format rather than electronic. Virtually every agency visited indicated that the official policy is that their records will be maintained in paper format. Yet the agencies recognize that most records are now created in an electronic environment—in word-processing documents, spreadsheets, databases, and the like. The predominant e-mail policy is to print out e-mails that are considered records and to save the paper copies. The chief paradox of today's Federal RM is the disconnect between paper and electronic recordkeeping.

**2. Records and the Cultural Chasm.** One reason for this condition is the cultural chasm between the records management community and the information technology community. Generally, records managers do not understand IT and IT managers do not understand records management.

**2.1. Records within records management culture.** Within U.S. federal law, the term "record" is defined as:

All books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them. (44 U.S. Code Sec. 3301).

For purposes reaching beyond the U.S. Government, a simpler and more general definition of records is found in ISO 15489-1, the international standard for RM issued by the International Organization for Standardization:

**Record:** Information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business.<sup>1</sup>

Within this meaning, the term "record" denotes information to which special characteristics adhere.

- **Authenticity.** An authentic record is one that can be proven
  - a) To be what it purports to be,
  - b) To have been created or sent by the person purported to have created or sent it, and

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<sup>1</sup> International Organization for Standardization, *ISO 15489-1, Information and Documentation -- Records Management: Part 1: General*, First Edition, September 15, 2001, Geneva, Switzerland, p. 3. Recently, NARA has announced its intention to move toward the ISO standard. In its Proposal for a Redesign of Federal Records Management, July 2002 ([http://www.archives.gov/records\\_management/initiatives/rm\\_redesign.html](http://www.archives.gov/records_management/initiatives/rm_redesign.html)), NARA states that in its redesign of RM guidance and training NARA would: "incorporate the concepts in the ISO records management standard 15489 to the extent possible under Federal law. Specifically, incorporate into our theoretical framework the idea of trustworthy records that have the qualities of authenticity, reliability, integrity, and usability over time sufficient to meet the needs of stakeholders."

c) To have been created or sent at the time purported.

- **Reliability.** A reliable record is one whose contents can be trusted as a full and accurate representation of the transactions, activities or facts to which they attest and can be depended upon in the course of subsequent transactions or activities.
- **Integrity.** The integrity of a record refers to its being complete and unaltered.
- **Usability.** A useable record is one that can be located, retrieved, presented and interpreted.<sup>2</sup>

**2.2. Records within information technology culture.** Within the realm of computers and IT, "record" has a very different meaning.

In database management systems, a record is a complete set of information. Records are composed of *fields*, each of which contains one item of information. A set of records constitutes a *file*. For example, a personnel file might contain records that have three fields: a name field, an address field, and a phone number field.<sup>3</sup>

By way of explanation, a database management system is a collection of computer programs that enables one to store, modify, and extract information from a database; a database is an organized collection of information such as an electronic filing system. A field is the space allowed for a particular item of information, the smallest unit of information the user can access within the database.<sup>4</sup> The above meaning of "record" is a relational concept in the sense that the term has no meaning except in relation to other terms.

In the area of document technologies, "record" has other meanings, some related to the above and some not related.

**Record** -- (1) Group of one or more words containing information about a common subject. One or more records make up a file. (2) To copy or set down information in some form for future use. (3) Any information that is stored by any device. (4) Number of fields that relate to a single item within the database. (5) In workflow, collection of individual items of data treated as a unit. Refers to items in a database. Each item is represented by a record that consists of one or more fields.<sup>5</sup>

For personnel trained in IT specialties, the above series of definitions is most likely to be the meaning they assign to the term "record."

**2.3. Conclusion.** The IT meaning of "record" bears little resemblance to the RM meaning of "record." The IT record carries none of the evidentiary, legal, and transactional connotations associated with the RM record. To say that a given piece of information is an IT record is to say nothing about its authenticity, reliability, integrity, and usability, defining characteristics of a record. Differences in the meaning assigned to the same term by various disciplinary specializations represent cultural and linguistic barriers to common understanding. RM and IT professionals have difficulty understanding one another when using such common terms such as "record."<sup>6</sup>

**3. NARA Has the Institutional "Slows."** A second reason that ERM is sadly wanting in federal agencies is because the National Archives and Records Administration has been painfully slow to address ERM, let alone get out in front of it. Bold, out-in-front policy guidance on ERM comes very slowly in NARA's culture of archivists and historians, compounded by the agency's extreme – and perhaps well justified -- fear of adverse litigation.

One among many examples of NARA's institutional slowness is the subject of websites as records. In 1998, a study sponsored by the National Historical Publications and Records Commission dealt with the subject of guidance

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<sup>2</sup> *Ibid.*, p. 7.

<sup>3</sup> Source: *Webopedia*, URL <http://www.webopedia.com/TERM/r/record.html> (December 2, 2002). For other definitions see, for example, the High-Tech Dictionary at URL <http://www.computeruser.com/resources/dictionary/>, or TechWeb at URL <http://www.techweb.com/encyclopedia/>, all as of December 2, 2002.

<sup>4</sup> *Ibid.*, following the hyperlinks found therein for "database," "database management system," and "field."

<sup>5</sup> Association for Information and Image Management International, *Glossary of Document Technologies*, an ANSI Technical Report prepared by AIIM International, ANSI/AIIM TR2-1998, p. 76. "ABSTRACT: This technical report provides definitions for the terms used in the micrographic, electronic imaging, and workflow fields. This technical report also includes telecommunications/Internet terms related to these fields." From the title page.

<sup>6</sup> "Archive" is another term that carries very different meanings in RM and IT. To the records manager, the word "archive" is a noun only, not a verb, and denotes an agency, place, or set of records intended for permanent long term preservation. To the IT professional, "archive" is both a noun and a verb and refers to the copying of files to a storage medium for backup of indeterminate but certainly not permanent duration.

for ERM on state and federal agency websites.<sup>7</sup> NARA posted a hyperlink to the study on its website, but not until January 2002, four years later, did NARA circulate a **draft** of its own guidance for website records management. Today, eighteen months later, NARA's guidance has still not been issued publicly. In fairness to NARA, we should note that the Office of Management and Budget, which enjoys but a superficial understanding of records management in general and ERM in particular, acts as a constant brake on NARA initiatives. Regardless of which political party is in power, OMB is consistently very conservative about records management policy, seeing always large dollar signs as the budgetary consequences of new records management policy initiatives.

Another major example of NARA's institutional "slows" is the Electronic Records Archives program.<sup>8</sup> Although NARA is now putting major resources into this program for the long-term preservation of digital information, it is my opinion, shared by many others in the field, that NARA is at least twenty to twenty-five years later in seriously addressing this issue. For decades, NARA's Center for Electronic Records has limped along on inadequate funding and low management priority.

**4. Lack of Funding for ERM.** A third reason for the slow spread of ERM is obstacles the agencies face, namely lack of funding for ERM and indifference on the part of senior management. Too many agency heads and Chief Information Officers consider ERM a back-burner low priority. They believe their top priorities are more immediate and include such items as security and risk management, not appreciating that ERM improves security and lowers risks.<sup>9</sup>

Thus, as the volume of electronic records multiplies exponentially in the agencies, progress in ERM creeps along inch by inch. Records management disasters such as happened at the Bureau of Indian Affairs and the Federal Bureau of Investigation are the tip of a large iceberg; many more records management disasters are out there waiting to happen.

**5. The Plus Side of ERM.** On the bright side, a few agencies have achieved significant advances in making ERM an integral operating component in their information architectures. The most notable examples are the Nuclear Regulatory Commission, the Office of Civilian Radioactive Waste Management, or Yucca Mountain Project, in the Department of Energy, and the Office of the Comptroller of the Currency in the Treasury Department. These are agencies that take records very seriously by the nature of their missions, agencies where top management has issued a mandate that ERM shall occur enterprise-wide.

**5.1 Leveraging ERM Investment to Benefit Other Business Functions.** Agencies reaching full ERM implementation discover that an electronic records repository is an asset with many beneficial applications *beyond* records management. ERM gives the agencies *instant access to institutional memory starting yesterday*. They can leverage this asset to provide economies and efficiencies to other business functions.

For example, the Nuclear Regulatory Commission's ADAMS, which stands for Agency-wide Document Access and Management System, is a combined electronic document and records management system.<sup>10</sup> NRC has made ADAMS a core component of its public website so that ADAMS not only performs records management functions but also provides important public information functions.

Even more, NRC has coupled ADAMS with electronic signature capability so that ADAMS can receive electronic submissions from nuclear reactor licensees. Hence, NRC also has leveraged its ERM investment to carry out the Government Paperwork Elimination Act and improve its performance under the Paperwork Reduction Act.

**5.2 More Limited Example.** ADAMS is an enterprise-wide solution that NRC has leveraged significantly. Other agencies have been able to multiply their investment dollars on even more limited applications. The Defense Advanced Research Projects Agency has a narrowly focused ERM application in its Comptroller's

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<sup>7</sup> Charles R. McClure and J. Timothy Sprehe, *Guidelines for Electronic Records Management on State and Federal Agency Websites*, Report of a research study sponsored by National Historical Publications and Records Commission, January 1998.

<http://www.jtsprehe.com/newpage12.htm>

<sup>8</sup> See [http://www.archives.gov/electronic\\_records\\_archives/index.html](http://www.archives.gov/electronic_records_archives/index.html).

<sup>9</sup> In a reorganization several years ago that resulted eventually in the Office of Environmental Information, the Administrator's office in the Environmental Protection Agency decided to abolish records management on the grounds it was an unnecessary function. When lower management protested loudly, the Administrator's office then decided to place records management in a unit with facilities maintenance and physical security (or "cops and mops," as the agency wags put it). Eventually, wiser heads prevailed but the episode is indicative of the abyss of ignorance from which many top management officials view records management. EPA, it should be noted, is an agency that in recent years has had one of the federal government's very best records management programs, motivated in substantial part by the fact that the agency experiences a high volume of litigation and Freedom of Information Act requests.

<sup>10</sup> See <http://www.nrc.gov/reading-rm/adams.html>.

Office. The application automatically copies all “ARPA Orders,” a key research funds disbursement document, into an ERM system. DARPA’s Executive Information System draws data from numerous agency sources, including the electronic records repository, to keep top management abreast of agency performance on a current basis. Note that the records management function is **not** the same as executive information functions, yet DARPA has arranged to have the former support the latter in an efficient and effective manner.

**6. ERM Recommendation.** My single recommendation regarding federal ERM is this.

The Office of Management and Budget should change Exhibit 300 on Capital Planning and Budgeting in its annual budget directive, Circular No. A-11. The section of Exhibit 300 that deals with IT systems should state that no new IT system will receive funding for development and acquisition unless the justification for the new system adequately explains how the system will provide for records created by or passing through the system.

NRC and the Yucca Mountain Project are already implementing such a policy.

Exhibit 300 already mentions electronic records in conjunction with the Government Paperwork Elimination Act. But GPEA affects only a handful of the tens of thousands of federal IT systems, namely, those systems that pertain to the collection of information from the public. The Department of Defense, for example, collects very little information from the public and yet has thousands of IT systems that create and/or process federal records.

All agencies have records management policies and many have electronic records management and email records management policies. The problem is that the agencies establish no linkage between ERM policies and IT system design, acquisition, and management policies. Having an ERM policy is meaningless unless the policy is linked to policies governing the IT systems in which the electronic records reside.

**7. Conclusion.** We can only hope that the many agencies planning today for ERM will receive the funding and leadership they deserve. From my research and consulting, I have come to believe that ERM is the bedrock of what is known today as Enterprise Content Management. Without ERM, Enterprise Content Management is incomplete and hollow at its core.

Thank you for inviting me to testify.

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