

Rhode Island State Archives & Public Records Administration

Managing Electronic Records

Permanent Electronic Records & Preservation Microfilming

Bulletin No. 2

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Years from now, both Rhode Island state government officials and private citizens will need information currently residing in certain digital/electronic records that state agencies have created. This bulletin provides summary advice on preservation strategies for digitized/scanned records, and for “born electronic” records that require permanent or long-term retention.

1. State Archives Division Statutory Responsibilities

Rhode Island General Law (RIGL) designates the State Archives and the Public Records Administration (hereafter the State Archives Division) as the agencies responsible for providing advice and establishing standards for the preservation of the state’s public records. In line with this responsibility the State Archives Division has developed two documents:

[Rules and Regulations for Microfilm Standards](#)
[Rules and Regulations for the Making and Management of Imaged Public Records](#)

2. Agencies Statutory Responsibilities

Agencies share responsibility with the State Archives Division for ensuring the preservation of records for their entire retention period, regardless of the medium. RIGL §42-8.1-17 and §38-3-7

3. What Computer Technology Can’t Do (Yet)

Information technology has not yet matured to a point that it can sufficiently ensure the effective preservation of digital (computer generated) records that need very long or permanent retention. This is the case for many reasons, including the ongoing changes of information technology and the financial implications of adaptation to frequent technological change: Thus, potential threats to the long-term survival of records in electronic form include:

- Frequent hardware and software changes.
- Recurrent IT system maintenance/upgrade costs.
- Government’s unpredictable fiscal health and agencies’ fluctuating technology budget levels and priorities.
- Agencies’ variable IM/IT skill sets over time.
- Increasing technical complexity of electronic documents.

Currently, too many things still have to go right over a long time to guarantee the survival of electronic records that require permanent or long-term retention.

4. State Imaging Regulations and Microfilm Requirements

The state imaging regulation, in line with many other government and private organizations, requires that agencies digitizing government paper records that have permanent or long-term retention periods either retain the original paper records or produce microfilm of the records to replace the paper.

5. What is Preservation Microfilming?

Preservation microfilming involves the strategic identification and selection of long-term and permanent records stored on unstable media – such as optical and magnetic media – for

transfer or copying onto more durable media, namely microfilm. Proper microfilming of valuable records can allow agencies to destroy paper records in accordance with the regulations. See 1.

6. Hybrid Solutions: Film First, Digitize First?

The question is whether to set up the process to scan paper first and then produce microfilm from digital images, or to scan microfilm first and then produce digital images.

Many vendors currently offer both options. Numerous interrelated factors determine the choice of solutions, including image quality requirements, frequency of retrieval for use, the physical condition of the original paper records, their uniformity and legibility, the nature of the records’ content, time constraints, immediate costs and budget forecasts, and the pre-existence, or not, of microfilm and/or original paper records.

7. Microfilming, “Born Electronic” Records, and COM

“Born electronic” records are records initially made using computers and in which no paper copy is ever made. Computer-Output-to-Microfilm (COM) technology offers a means of automating the microfilming of such records.

COM is comprised of a high-speed recorder that transfers digital data onto microfilm. It can operate “on-line” or “off-line,” meaning it can be connected to a single computer, a local or wide-area network, a minicomputer, or a mainframe computer. COM provides a relatively inexpensive way to preserve records that have long retention requirements. Indexing features speed up identification and retrieval of microfilm data.

8. Cost/Benefit Issues

Digital records offer an optimum document retrieval and delivery mechanism. Microfilm’s strength lies in long-term survival (potentially several hundred years) rather than speed of retrieval. Microfilm offers a hedge against the loss of records resulting from episodes of technological failure and system security breaches, as well as lapses in preservation practices due to unforeseen fiscal and other crises. Microfilm offers a hedge against the loss of records from such causes as: technological failure, system security breaches, lapses in preservation practices, unauthorized records destruction, or other unforeseen crises. Current technologies make microfilm fast and easy to produce. Microfilm is also relatively inexpensive to produce in the short term, and it is much easier and cheaper to maintain than electronic data over the long term. And, even if microfilm readers disappear, future technologies will undoubtedly be capable of digitizing the film inexpensively should the need arise. Thus, the current state of technology makes up-front investment in microfilming an optimal strategy for ensuring the preservation of those state records that need long-term or permanent retention.

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