



CORPORATE ACCOUNTABILITY. THE NEW IT LIABILITY.

**GETTING STORAGE ON TRACK
WITH INFORMATION LIFECYCLE MANAGEMENT.**

H. Andrew Lawrence, Worldwide Product Marketing Manager
Document Imaging, Eastman Kodak Company

**FROM THE SARBANES-OXLEY
ACT OF 2002 [H.R. 3763]
SEC. 802. CRIMINAL
PENALTIES FOR ALTERING
DOCUMENTS.**

(a) IN GENERAL.—Chapter 73 of title 18, United States Code, is amended by adding at the end the following:

“§ 1519. Destruction, alteration, or falsification of records in Federal investigations and bankruptcy

“Whoever knowingly alters, destroys, mutilates, conceals, covers up, falsifies, or makes a false entry in any record, document, or tangible object with the intent to impede, obstruct, or influence the investigation or proper administration of any matter within the jurisdiction of any department or agency of the United States... shall be fined under this title, imprisoned not more than 20 years, or both.”

“§ 1520. Destruction of corporate audit records

“...retention of relevant records such as workpapers, documents that form the basis of an audit or review, memoranda, correspondence, communications, other documents, and records (including electronic records) which are created, sent, or received in connection with an audit or review and contain conclusions, opinions, analyses, or financial data relating to such an audit or review...”

Deliberate or accidental, even the appearance of misconduct can entangle managers such as yourself in expensive, lengthy legal proceedings.

**THE NEXT CORPORATE REQUIREMENT:
PUTTING A SAFETY NET UNDER HIERARCHICAL
STORAGE MANAGEMENT.**

**PREPARE FOR THE POSSIBILITIES
YOU CAN'T PREDICT.**

An unidentified activity occurring in your enterprise can have unforeseeable future consequences.

Here's the catch: you won't know the importance of that activity until a customer complains or a subpoena arrives. Suddenly you're looking for a sensitive email exchange, a questioned ecommerce transaction, or a spreadsheet used in an SEC filing. And you have to produce it within a reasonable time or face dire consequences. Your career and your company's survival could be on the line.

How sure are you that your organization can produce a trustworthy record? According to some analyst reports, confidence levels among IT professionals are 50 percent or less.

**WELCOME TO THE NEW
RISKS OF INFORMATION
MANAGEMENT.**

The record may be unavailable because it was accidentally deleted or is corrupted due to missing metadata. This “digital shredding” is what lawyers cite as the negligent or willful spoliation of evidence. Deliberate or not, new accountability rules, such as the Sarbanes-Oxley Act (*see sidebar at left*), make managers like you liable to criminal charges and civil actions for flawed record management systems.

If your systems go down, your disaster recovery systems will restore from backups and resume critical business processes. However, backup systems do not create a continuous business record capable of providing litigation support. And reconstructing records from data is an expensive and error-prone process, open to challenge in court.

Fortunately, there's light amidst the

gloom and doom. Organizations can protect themselves, achieve cost savings, and add operational efficiencies by thinking it through and applying the right technology to the information lifecycle. You can implement automated background processes that are easy to operate and include audit trails.

**TAKE A FRESH LOOK
AT STORAGE FROM MULTIPLE
POINTS OF VIEW.**

Most conventional storage and record management schemes were designed to support event-driven, paper-based business processes. They fell by the wayside in the rush to satisfy the wired organization's requirements for digitization, speed, and improved customer service. The growth in the diversity and volume of records requires a reevaluation of the approaches available to businesses.

Kodak has identified a new strategy that addresses these issues by augmenting existing storage systems. Rather than relying on a one-technology-fits-all solution, you choose multiple archiving targets that leverage the different strengths of different technologies as they best suit the attributes and uses of a given record.

Today, your expanded storage options include servers, hard copy vaulting, off-line tape and CD libraries, and a recent Kodak innovation, the Reference Archive. This captures and renders analog snapshots of selected enterprise activities as they happen. (*See opposite page.*) You can limit your exposure by weaving your storage options together to create a multi-dimensional archive. This will provide access to trustworthy records for processing, short-term validation, long-term proof and deep disaster recovery. This same strategy can also lower your total cost of ownership.

REFERENCE ARCHIVING FROM KODAK

DISCOVER THE LINK YOU NEED TO FORGE A COMPLETE RECORDS MANAGEMENT SOLUTION.

Reference Archiving is simple, cost-effective, and easy to implement. Your system makes highly compressed copies of the records you wish to secure on ISO-standard archival media. All the information included in the original record at the moment of creation is presented in context. These non-volatile analog images are accumulated in an off-line Reference Archive that has a life expectancy of 500 years.

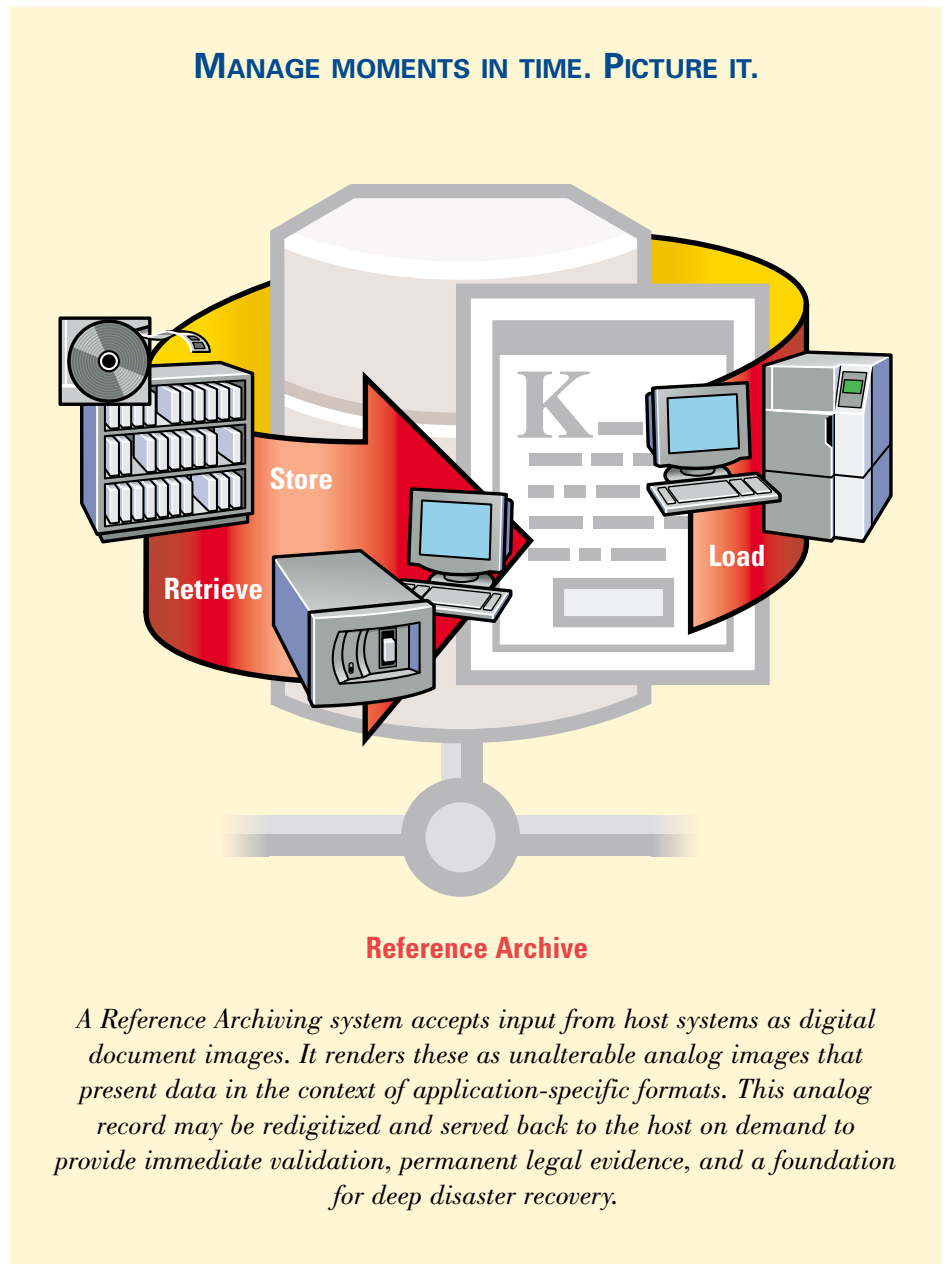
A Reference Archive provides low-cost insurance in the form of trustworthy evidence to authenticate current activities and support audit activities. It assures you of ongoing accessibility—without the expense of software migration or media refreshes. Electronic source material and metadata can expire naturally and be purged as part of an overall records retention policy.

At any time, the related application database can be queried and the Reference Archive images redigitized and served back to requestors. Because there is no reconstruction involved, error and uncertainty are virtually eliminated.

AUTOMATIC ARCHIVING THAT INTEGRATES WITH YOUR OTHER STORAGE SYSTEMS.

As shown in the diagram, a Reference Archive System manages capture and retrieval behind the scenes. The system accepts digital files, organized by your selected records management attributes—such as class, date, or

destruction schedule. Copies are written to KODAK Reference Archive Media. Self-describing indices provide built-in audit trails and help make your Reference Archive Repository accessible digitally through host applications.



ADOPT A MULTI-TARGETED ARCHIVE APPROACH THAT ALIGNS YOUR STORAGE STRATEGIES WITH YOUR BUSINESS REQUIREMENTS.

BEGIN WITH THE END IN MIND.

Your archiving strategy should be driven by what drives your business. The need to provide proof of contract to properly collect and disburse funds, to buy and sell goods and services, to backup ERP and CRM systems. The legal requirement to provide documentation to meet regulatory filings. The desire of shareholders and management to protect the company and themselves from litigation and criminal prosecution.

ANALYZE YOUR OPTIONS AND KEEP THEM OPEN.

With these goals in mind, you can start to identify records that merit archiving based on the activities they support. Some you will be able to discard in months. Some in 5 to 7 years. Others, such as corporate minutes and insurance policy contracts, need to be kept into perpetuity. These records are likely to reside across multiple business processes in multiple formats. Taking a Reference Archive “snapshot” of records at the moment of creation or transaction offers the best evidence come what may.

MATCH YOUR STORAGE CHOICES TO YOUR RECORDS’ LIFECYCLES.

At the end of your discovery process, you’ll find that your record containers have a variety of lifecycles and need to serve a variety of needs. Backup, disaster recovery, vaulting, and research may be distributed in your organization, but in terms of the records involved, these processes are all interconnected. Which makes a strong argument for a multi-dimensional approach to archiving that covers all the bases.



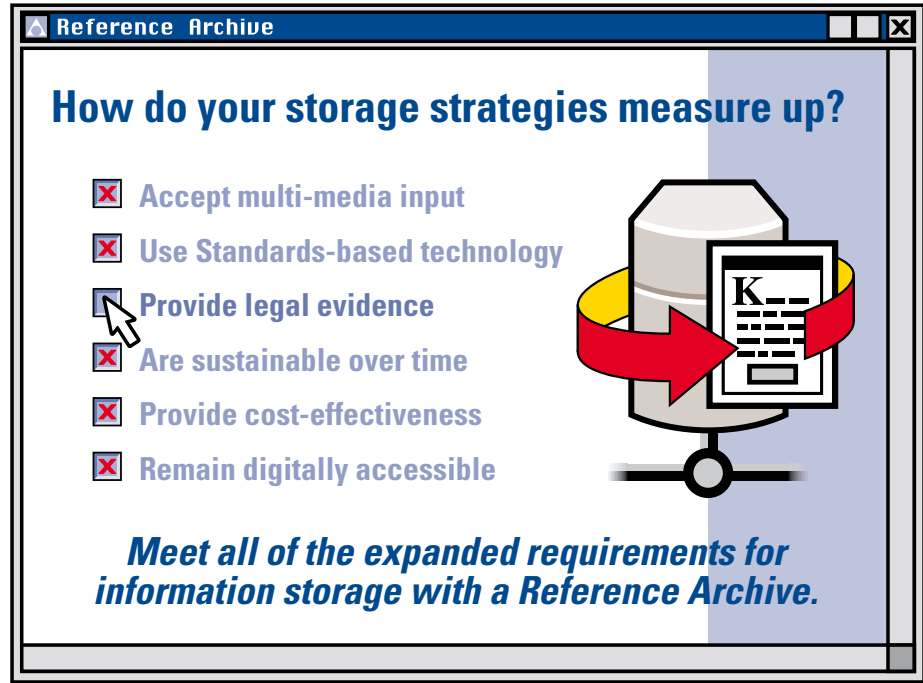
As you proceed, remember that the needs of support operations and data/transaction processing differ from those of records management. Again, a multi-targeted approach makes it much more easy to align archiving with the daily needs of the enterprise and with the need for disaster protection. The different technologies available all have their particular strengths and weaknesses. You can set your system up to parse classes of records out to various storage targets based on how each serves the needs of the enterprise and records lifecycle.

LIMIT YOUR EXPOSURE AND LOWER YOUR COSTS.

The recent introduction of Reference Archiving from Kodak makes it possible to implement a cost-effective, multi-targeted archive. As described earlier, the Reference Archive sets down a trustworthy, non-volatile store of records that can be drawn from virtually any and all line of business applications.

No longer do you need to worry about malicious or accidental digital shredding. Electronic assets can remain online for near-term processing, allowed to age in place and be purged with the confidence that the records remain available in the Reference Archive for short- and long-term validation. The Reference Archive also securely backs up offline digital assets migrated to tapes and CDs and used for near-line access and restoration.

An additional benefit of including a Reference Archive as part of a records management strategy feeds directly back to the bottom line. Rather than spending between \$800 and \$5,000 a year per gigabyte*



Reference Archive

How do your storage strategies measure up?

- Accept multi-media input
- Use Standards-based technology
- Provide legal evidence
- Are sustainable over time
- Provide cost-effectiveness
- Remain digitally accessible

Meet all of the expanded requirements for information storage with a Reference Archive.

The graphic features a checklist of six storage requirements. The third item, 'Provide legal evidence', is highlighted with a mouse cursor. To the right is an illustration of a server tower with a document icon on top, with a red arrow pointing from the server to the document. The entire graphic is framed as a window titled 'Reference Archive'.

to keep data on a server, you can leverage your Reference Archive instead. The result should be a substantially lower total cost of ownership.

Finally, to take the discussion to a higher level, implementing Reference Archiving eliminates the headaches of supporting legacy systems past an economically worthwhile point. Your organization can adopt new technology without the burden of migration or media refreshes for seldom-accessed data.

**NOW. IT'S THE BEST
TIME TO BEGIN.**

Reference archiving is based on Kodak's unique perspective on records management. We invented business microfilming in 1928 in response to the need for secure, compact, easily duplicated records storage. Since then, the company has pioneered electronic systems for document imaging, workflow, and records management. We understand how our technology can be used to complement other vendors' systems to strengthen your overall records management environment.

Please contact Kodak or one of our authorized resellers to learn more about how Reference Archiving can enhance your records management programs and protect you and your business from loss and liability.

**Source: Hurwitz Group study, cited in August 5, 2002 ZDNet Tech Update: "Assessing storage management ROI costs and productivity assessment," by Stephen Elliot. Includes hardware, software licensing, and human resources. "Hurwitz Group estimates that the cost of storage management is \$800-\$2,500 per gigabyte (GB) a year for multiterabyte data centers and \$5,000 a year per GB for medium-sized networks."*

