



Storage Decisions

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Compliance Beyond E-mail

Risks, requirements and strategies for storage of unstructured data


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Compliance Beyond E-mail

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Abstract


E-mail is the easiest and most visible part of the electronic-records compliance problem. But other data types will face similar scrutiny, and they present different risks and more difficult problems.

How and when will your organization address retention and archiving of unstructured documents and data that are kept in file systems on servers and backup tapes? Or on desktop hard drives and CD-ROMs?

Learn how to: assess risks, determine requirements, utilize best practices, and evaluate emerging technologies

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What I assume you know

- ***This session assumes intermediate familiarity with storage technologies***
- ***Also some familiarity with electronic documents and data files***

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What are your retention policies?

- **Do you have well-defined retention policies for electronic documents and files?**
 1. No clear policies
 2. Policies exist for paper, but not updated for e-docs
 3. Policies exist, but not fully implemented
 4. Complex retention schedules and rules
 5. Simple default: keep everything for X years ...

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What are your retention practices?

- **What are you doing now, to capture and preserve electronic documents and files?**
 1. No archive or backup
 2. Backup is the archive
 3. Using file-system, HSM or SRM tools
 4. Using content management or document archiving software
 5. Hoping for a better solution to emerge next year ...

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Slide 5

JMC1 Make it more provocative. HOOK ?!
Mike Casey, 5/23/2005

Slide 6

JMC4 Make it more provocative. HOOK ?!
Mike Casey, 5/23/2005

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By the end of the session, you'll know the following:

- **What unstructured data is ... how it's different ... and why you should care**
- **How compliance requirements impact unstructured data and document retention**
- **How to:**
 - Assess risk and determine requirements
 - Utilize best practices
 - Evaluate emerging technologies


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What is unstructured data?

- **What is it?**
- How is it different?
- Why should I care?

Examples ...?



Metadata ...?

File name	Date created
File type	Last modified
Owner	Last accessed
Permissions	File size ...

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How is it different?

- **Well, it's kind of ... you know ... unstructured ...**
 - Harder to classify ... and get agreement
 - Harder to automate retention policy, with limited metadata
 - Requires more human intervention to declare or save a record
- **People save too much of the wrong stuff, in the wrong place**
- **People save too little of the right stuff, in the right place**
- **Less immediate compliance pressure, but the problem keeps growing and the rules are changing, raising the bar ...**
- **Cost issues tend to dominate the conversation**
 - What will it cost to comply?
 - What will it cost if we don't?

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JMC3

how how how ?

Mike Casey, 5/23/2005

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Why should I care?

- **Performance** – service level, response time, agility
- **Compliance** – regulatory requirements and litigation risks
- **Costs** – storage, administration, productivity

DATA TYPES	BUSINESS NEEDS		
	Performance	Compliance	Cost
Structured: Databases	+++	++	++
Semi-structured: E-mail	++	+++	++
Unstructured: Documents	+	++	+++

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The regulatory compliance landscape

Financial Services			Health Services		Life Sciences	
Securities	Banking	Insurance	Health Insurance	Health Care	Drugs	Medical Devices

United States:

Sarbanes-Oxley Act		
Gramm-Leach-Bliley Act	HIPAA	21 CFR 11, GxP

Europe:

Data Protection Act (UK) and similar laws implementing EU Directives	GMP Directive (EU)
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Global:

Basel II	ISO 9000
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Litigation readiness – risks & costs

Discovery depends on effective archiving

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Key elements of a retention POLICY

- **Retention**
 - Scope
 - Duration
- **Security**
 - Confidentiality
 - Integrity
 - Availability



ARMA
NARA
aiim
ISO

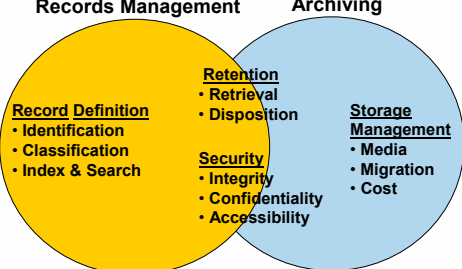
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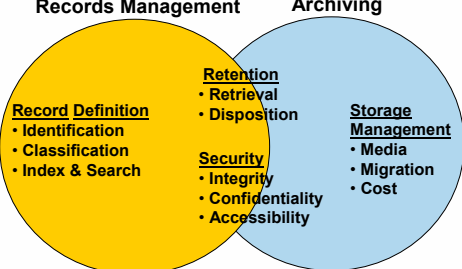
Foundations of document retention

Records Management



What to save

Archiving



How to save it

Record Definition

- Identification
- Classification
- Index & Search

Retention

- Retrieval
- Disposition

Storage Management

- Media
- Migration
- Cost

Security

- Integrity
- Confidentiality
- Accessibility


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Key elements of a retention SOLUTION

- **Retention**
 - Unique document ID
 - Expiration date (perhaps many?)
 - Metadata tagging for search and retrieval
 - Classes for policy management & automation
- **Security**
 - Availability – including search & retrieval (application or file system?)
 - Confidentiality - secure erase? encryption? (storage layer)
 - Integrity - media management? WORM? (storage layer)



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Enabling storage technologies

- Cheap disk
- Redundancy elimination (CAS, SIS, etc.)
- Smarter SRM, HSM
- Smarter NAS, file servers
- Better backup
- Remote replication
- Archiving applications:
 - Document archiving
 - Content management
 - Records management
- CAS heads on the SAN?
- WORM?

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Vendor scoop: The myth of WORM

- Do regulations require WORM?
 - Rule 17a-4 obsession
 - SOX paranoia
 - HIPAA -- the healthy alternative
- When is WORM a good idea?

Evidentiary quality, litigation readiness, another layer of security, protection from tampering or accidental over-write
- When is WORM a bad idea?

No need, higher cost, harder to administer, media migration issues (e.g., the history of optical WORM media ...)


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Back at the office (1): requirements definition

- Regulatory Compliance
- Litigation Readiness
- Stakeholder Expectations



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Stakeholder expectations

Application Perspectives <ul style="list-style-type: none"> • End User • Application Admin 	Operational Perspectives <ul style="list-style-type: none"> • CEO • CFO • Records Mgr • Compliance Officer
Legal Perspectives <ul style="list-style-type: none"> • Legal Counsel 	Technology Perspectives <ul style="list-style-type: none"> • Storage Admin • System Admin • CIO

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Back at the office (2): Policy development

Example - retention scope

POLICY CHOICE	IMPACTS		
	Regulatory Compliance	Litigation Readiness	Stakeholder Expectations
Save Almost Nothing			
Selective Deletion			
Selective Retention			
Save Nearly Everything			

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Back at the office (2): Policy development

Example - retention periods

POLICY CHOICE	IMPACTS		
	Regulatory Compliance	Litigation Readiness	Stakeholder Expectations
Many, Content Based			
Few, Organization Based			
One for All			

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Back at the office (3): Define architecture and processes

- Provide required and recommended capabilities for retention and security
- Use tiered storage to enable cost-effective retention, storage placement and migration over life cycle
- Start with point solutions and information silos if needed – but move toward an integrated archive and ILM architecture as technology evolves through 2008

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Link compliance with tiered storage and ILM to minimize risks and costs

- Compliance initiatives minimize risk by establishing policies and processes for response to regulations – and for anticipating future regulations and standards
- The best policy response is commonly to retain more of the right data, for longer retention periods – *and* do it intelligently
- At the same time, look for “dead data” that can be deleted to liberate resources for storing the required data
- Tiered storage and ILM can help reduce storage and management costs, making increased data retention feasible and affordable

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Conclusions

- Recognize that unstructured data is different
 - Harder to manage and automate
 - Easier to ignore, in the short term
 - Potentially the biggest area of cost and risk, over the longer term
- Understand the common compliance goals and technical capabilities
- Start with business needs assessment – compliance, litigation and stakeholder requirements
- Use standards and best practices to guide policies, processes and architecture
- Define tiered storage and ILM strategies to enable cost-effective retention and management of unstructured data

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FOR MORE INFORMATION

● Ask the Expert

- I'll be available at the Ask-the-Expert booth today from 4:00 PM to 6:00 PM.
- Also on-line at:
searchstorage.techtarget.com/ateQuestion/0,289624,sid5_tax295552,00.html

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