

# INFORMATION MANAGEMENT

AN ARMA INTERNATIONAL PUBLICATION

JANUARY/FEBRUARY 2013



**Rolling the Dice with**

# Predictive Coding



**Leveraging Analytics Technology  
for Information Governance**

Page 22

**A Roadmap for Effective  
Information Governance**

Page 27

**Thinking Outside the Box:  
Use Predictive Coding  
as a RIM Tool**

Page 30





# The Official Sponsor of Information Governance

twitter

Information Governance



**RIM Manager** (Records Manager)  
Help! [@RSDig](#) We have 2 much information to manage.



**RSDig** (RSD InfoGov)  
Are u **SURE** u aren't over-retaining information?



**LegalMgr** (General Counsel)  
I hope not, I have to reduce business [#risk](#) and [#eDiscovery](#) costs.



**RSDig** (RSD InfoGov)  
Have u considered implementing [#IG](#) (information governance)?



**RIM Manager** (Records Manager)  
What is [#IG](#)?



**RSDig** (RSD InfoGov)  
[#IG](#) enforces desirable behavior in the creation, use, archiving, and deletion of ALL corporate information.



**IT Manager** (VP of IT Infrastructure)  
Hey, but I have way too many [#ECM](#) and [#RIM](#) systems to manage. And what about [#ContentInTheWild](#), like [#SharedDrives](#)?



**RSDig** (RSD InfoGov)  
Use **RSD GLASS** to ensure policy is enforced on all content, wherever it resides.



**RIM Manager** (Records Manager)  
Finally!! +1 [RT@RSDig](#): Use **RSD GLASS** to ensure policy is enforced on all content, wherever it resides.



**RSDig** (RSD InfoGov)  
This is why we are the official sponsor of **information governance** :-)

## Trending topics:

[#InformationGovernance](#)  
[#PolicyEnforcement](#)  
[#BYOD](#)  
[#InPlaceGovernance](#)  
[#SharedDrives](#)  
[#GovernanceAsAService](#)  
[#eDiscoveryReadiness](#)  
[#MultipleJurisdiction](#)  
[#LifecycleManagement](#)

THE OFFICIAL SPONSOR



of Information Governance



For more information,  
please visit [www.rsd.com](http://www.rsd.com)  
or scan the QR code.

# INFORMATION MANAGEMENT

JANUARY/FEBRUARY 2013 **VOLUME 47 NUMBER 1**

**DEPARTMENTS** 4 **IN FOCUS** A Message from the Editor

6 **UP FRONT** News, Trends & Analysis



**FEATURES** 22 **Rolling the Dice with Predictive Coding: Leveraging Analytics Technology for Information Governance**

Leigh Isaacs

27 **A Roadmap for Effective Information Governance**

Sam McCollum

30 **RIM FUNDAMENTALS SERIES**

**Thinking Outside the Box: Use Predictive Coding as a RIM Tool**

Doug Smith

**SPOTLIGHTS** 34 **GENERALLY ACCEPTED RECORDKEEPING PRINCIPLES® SERIES**

The Principles at Work in Cargill: Tools for Assessment, Communication  
Julie Gable, CRM, CDIA, FAI

38 **TECH TRENDS** Fellows Forum Provides Snapshot of E-Records Management in Organizations  
Susan Cisco, Ph.D., CRM, FAI; Fred Diers, CRM, FAI; April Dmytrenko, CRM, FAI; John Isaza, Esq., FAI;  
Dave McDermott, CRM, FAI; John Montaña, J.D., FAI; and Wendy Shade, FAI

42 **IN REVIEW** Drowning in Information: Proactively Managing the Onslaught  
Sheila Taylor, CRM

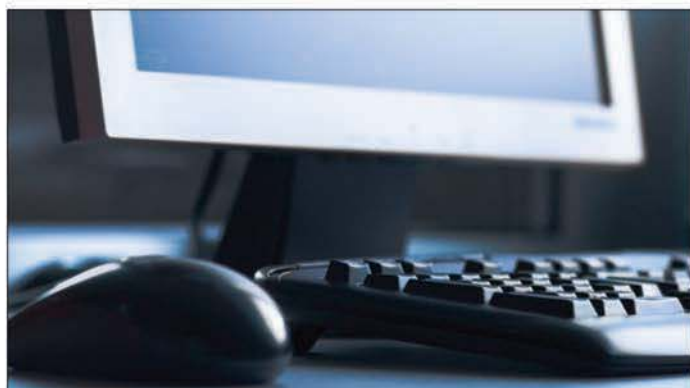
43 **IN REVIEW** Needed: An Information Consultant  
Clare Cameron

44 **IN REVIEW** The Shifting Landscape of Electronic Personal Information  
Andrew Altepeter

**CREDITS** 47 **AUTHOR INFO**

48 **ADVERTISING INDEX**





GET MORE ONLINE

WWW.ARMA.ORG  
INFORMATION  
MANAGEMENT

# INFORMATION MANAGEMENT

AN ARMA INTERNATIONAL PUBLICATION

**Publisher** Marilyn Bier

**Editor in Chief** Vicki Wiler

**Managing Editor** Amy Lanter

**Contributing Editor** Cyndy Launchbaugh

**Art Director** Brett Dietrich

**Advertising Sales Manager** Elizabeth Zlitni

**Editorial Board** Barbara Benson, Director, Records Management Services, University of Washington • Alexandra Bradley, CRM, President, Harwood Information Associates Ltd. • Marti Fischer, CRM, FAI, Corporate Records Consultant, Wells Fargo Bank • Paula Harris, CRM, Director, Global Records Management, Georgia Pacific • John Montaña, J.D., FAI, General Counsel, Montaña and Associates • Preston Shimer, FAI, Administrator, ARMA International Educational Foundation

*Information Management*, (ISSN 1535-2897) is published bimonthly by ARMA International. Executive, editorial, and advertising offices are located at 11880 College Blvd., Suite 450, Overland Park, KS 66210.

An annual subscription is included as a benefit of membership in ARMA International. Non-member individual and institutional subscriptions are \$140/year (plus \$25 shipping to destinations outside the United States and Canada).

**ARMA International** ([www.arma.org](http://www.arma.org)) is a not-for-profit professional association and the authority on managing records and information. Formed in 1955, ARMA International is the oldest and largest association for the records and information management profession with a current international membership of more than 10,000. It provides education, publications, and information on the efficient maintenance, retrieval, and preservation of vital information created in public and private organizations in all sectors of the economy.

*Information Management* welcomes submissions of editorial material. We reserve the right to edit submissions for grammar, length, and clarity. For submission procedures, please see the "Author Guidelines" at <http://content.arma.org/IMM>.

**Editorial Inquiries:** Contact Amy Lanter at 913.217.6007 or by e-mail at [editor@armaintl.org](mailto:editor@armaintl.org).

**Advertising Inquiries:** Contact Karen Lind Russell or Krista Markley at 888.277.5838 (US/Canada), +1 913.217.6022 (International), +1 913.341.3742, or e-mail [Karen.Krista@armaintl.org](mailto:Karen.Krista@armaintl.org).

Opinions and suggestions of the writers and authors of articles in *Information Management* do not necessarily reflect the opinion or policy of ARMA International. Acceptance of advertising is for the benefit and information of the membership and readers, but it does not constitute official endorsement by ARMA International of the product or service advertised.

© 2013 by ARMA International.

Periodical postage paid at Shawnee Mission, KS 66202 and additional mailing office.

Canada Post Corp. Agreement No. 40035771

**Postmaster:** Send address changes to *Information Management*, 11880 College Blvd., Suite 450, Overland Park, KS 66210.



# **TOTAL RECALL™**

## **Records Management Software**

**global innovation**

### **Manage and Protect Your Information**

- Unlimited Users and Unlimited Records
- Physical and Electronic Records
- Robust Retention Scheduling and Legal Hold Management
- Organization-Wide Charge-Backs
- SCAN ON DEMAND™ and High-Speed Digital Imaging

**DHS WORLDWIDE™**  
SOFTWARE SOLUTIONS

Call 1-800-377-8406 • [www.dhsworldwide.com](http://www.dhsworldwide.com)



## 2013 Tech Trends for Information Governance – and for *IM*

If you haven't already responded to the recent e-mail notification about the digital edition of this issue of *Information Management (IM)* magazine, you're in for a surprise when you do: we have launched a new and improved digital version that uses Flip Book technology.

You'll find this digital magazine is user-friendly and packed with features, including hyperlinked URLs, sticky notes, favorite flags, content and advertiser menus, and options to e-mail it, download it to your local device as a PDF, or print it. You also have the option to customize your settings. For example, if you don't like the page-flipping sound, you can turn it off.

Take *IM* magazine wherever you go. It can be viewed using flash or HTML, and it can easily be read with tailored mobile apps that optimize the content for iPads, iPhones, Android, and Kindle devices. The app feature respects your space – storage space that is. This means fast downloading that allows you to begin exploring quickly.

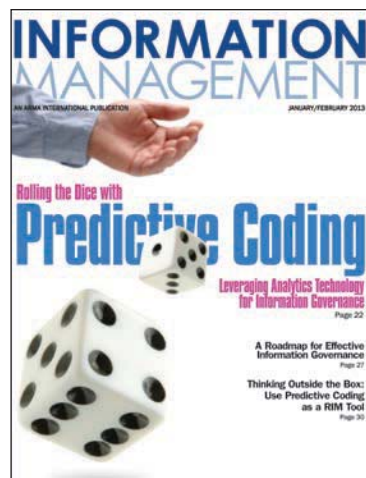
Go ahead and share! The Flip Book can be shared easily among all types of social media sites. This is only the beginning. We will continue to enhance your experience with the Flip Book by adding more interactive features as time goes on. We hope having this new tool at your fingertips will make it even easier to keep up with the latest in-

dustry trends and cutting-edge content that will help you continue to grow in your profession.

One of those trends that is getting a lot of attention these days is the use of predictive coding and analytic technologies. Though developed primarily for use in e-discovery, predictive coding has the potential to be used for other information governance (IG) purposes. In this issue's RIM Fundamental Series article, Doug Smith provides a primer on predictive coding. Leigh Isaacs takes it to the next level with our cover article, describing how predictive coding can be leveraged for such things as data security, remediation, and classification.

Sam McCollum provides yet another tool for more effective IG – a 13-step process for developing a strategic information management roadmap and plan, which he describes as the foundation for the IG function. You'll discover that this process depends heavily on the Generally Accepted Recordkeeping Principles® (the Principles) and the Information Governance Maturity Model (Maturity Model).

Another thing that depends on the Principles and Maturity Model is the IG program at Cargill, one of the largest privately held companies in world. Julie Gable, CRM, CDIA, FAI, interviewed Cargill's global records and information manager, Cheryl Pederson, CRM, FAI, to find out how Cargill uses



these tools.

This issue wraps up with a snapshot of the state of e-records management, which is based on the interactive discussion and polling that took place at the Fellows of ARMA International (FAI) Forum at the 2012 ARMA International Annual Conference & Expo. While the FAI panelists were encouraged to discover that IT, legal, and risk/compliance are collaborating more with RIM in IG efforts, they learned that many organizations are still struggling with many aspects of e-records management.

I should mention one more important feature of our digital magazine: the e-mail button. With one click, you can send me an e-mail to share what you would like to see in *IM* this year. Please do! **END**

**Amy Lanter**  
Managing Editor



# DO DILIGENCE

Data protection regulations require organizations to demonstrate due diligence when selecting service providers to destroy discarded data, including:

- Verifying service providers' policies and procedures appropriately reference regulatory requirements
- Verifying service providers are capable of providing the necessary security
- Training their employees on data destruction policies and procedures



## NAID is there with help!



**Service Provider Qualifications:** NAID AAA Certification is the only verification program for the secure destruction industry. NAID uses announced and unannounced audits by accredited security professionals to validate compliance with security and regulatory requirements.

**Employee Training:** The NAID Customer Employee Training Program provides a simple way for customers to meet their requirement to provide employee training. And, it's available at little or no cost through participating NAID Member companies.



Learn more about these programs by watching "Beyond the Claims and Promises" and "NAID Information Destruction Training Program" on **NAIDTV**.

[www.naidonline.org](http://www.naidonline.org)



NAID, the NAID logo, and the NAID Certification logo are registered trademarks of the National Association for Information Destruction.

## GOVERNMENT RECORDS

### Audit Faults SEC's Records Management Practices

In a public July 2012 letter to Sen. Charles E. Grassley (R-Iowa) on behalf of a former long-time Securities and Exchange Commission (SEC) official, the SEC said it had violated federal law by destroying financial records related to investigations of various financial institutions from 1993 to 2010. The 9,000 records in question pertained to the initial investiga-

tion of institutions that reportedly included Goldman Sachs, Bank of America, Morgan Stanley, and Wells Fargo.

The documents were shredded in compliance with an SEC policy in effect during that time period that stated that documents related to an inquiry that didn't become an official investigation should be destroyed. Unfortunately, that policy

conflicted with federal law requiring such documents to be retained for 25 years.

SEC spokesperson John Nester told *The Washington Post* that the agency changed the policy in 2011, requiring employees to follow the agency's records management policy. He also pointed out the retention requirements "pertain to documents that meet the definition of a record, not every document that comes into an agency's possession in the course of its work."

Former SEC enforcement lawyer Darci Flynn contacted the National Archives and Records Administration (NARA) last year. NARA responded with an audit of the agency's records management practices.

NARA released its findings in an audit report dated September 30, 2012. According to *Government Executive.com*, the report faulted the SEC for unclear records management policies and inadequate employee training. The audit findings reportedly included 12 recommendations, including more visits to offices by records management specialists, better internal document controls, and policy training in records retention. An implementation plan was due before the end of 2012.



## DATA SECURITY

### Android Apps May Leak Personal Data

German security researchers recently determined that some Android applications may pose certain serious security risks.

Researchers at the Leibniz University of Hanover in Germany studied the potential security threats posed by some Android applications that use Secure Sockets Layer and Transport Layer Security (SSL/TLS) protocols to protect data transmissions. According to the study report that was released in October 2012, "Why Eve and Mallory Love Android: An Analysis of Android SSL (In)Security," researchers specifically looked at 13,500 popular free apps in Google's Play Market because "the lack of visual security indicators for SSL/TLS usage and the inadequate use of SSL/TLS can be exploited to launch man-in-the-middle (MITM) attacks."

Using MalloDroid, a tool researchers built to detect potential vulnerability against MITM attacks, they determined that 8% of the apps contain code that could be vulnerable. No actual attacks have been reported; however, the researchers concluded the potential is definitely there.

According to the researchers' report, there are a variety of ways to minimize the problem of unencrypted traffic or SSL misuse. They can be categorized into three groups: (1) solutions integrated into the Android operating system, (2) solutions into app markets, and (3) standalone solutions.

The MalloDroid web app is an example of a standalone solution that the researchers intend to make available to Android users.







## DATA SECURITY

### India to EU: Declare Us Secure

India has asked the European Union (EU) to formally recognize India as a data-secure country. *The Times of India* reported the issue came up for discussion in a recent meeting between Commerce and Industry Minister Anand Sharma and Algirdas Semeta, the European Commissioner for Taxation and Customs Union, Audit and Anti-Fraud.

The issue is an important point of contention in the proposed Bilateral Investment and Protection Agreement (BITA), a free trade agreement between India and the EU that has been in negotiation since 2007.

Sharma pointed out that India's access to the EU market depends on it being declared data secure. The lack of such recognition prevents the flow of sensitive data, including patient information for telemedicine, to India under current EU data protection laws.

"It is our clear analysis that our existing law does meet the required EU standards. We would urge that this issue is sorted out quickly and necessary comfort in declaring India data secure in overall sense needs to be given as almost all the major *Fortune* 500 companies have trusted India with their critical data," Sharma said in an official

statement.

The EU is reportedly undertaking a study to determine whether India's laws do indeed meet the EU's directive.

According to *The India Times* October 18, 2012, article, lifting the data flow restrictions on India would significantly increase India's \$100 billion IT business processes outsourcing industry; 30% of the industry's exports are to the European market.

## CLOUD COMPUTING

### The State of Cloud Computing in Canada

The 2012 CloudLaunch conference held in mid-October 2012 in Ottawa was generally regarded as a frank and, at

times, divisive discussion of what it will take to advance the adoption of cloud computing in Canada.

Andrew Fisher, executive vice president at Wesley Clover, was quoted in an October 16, 2012, blog posting by *expertIP* editor Shane Schick as saying the biggest barrier to adoption is a lack of interest from organizations, including the government, to stimulate the purchase of cloud computing services.

According to the blog post, Misha Nossik, chief technology officer of Afore Solutions and founder of the Ottawa Cloud Council, suggested that government chief information officers (CIO) are more concerned with protecting their budgets than embracing the cost-savings cloud computing can offer. Some feel, however, that cloud computing will never take off in the private sector until the government embraces it.

Schick contended that "adoption in Canada won't get much farther unless CIOs and vendors can forge a new kind of trusted partnership, one that looks a lot different in a world of ongoing services than it did in the previous one of on-premise sales."

This will be a serious test to those vendor relationships, Schick added. A test they can't afford to fail.





## FOIA

## NARA, Other Federal Agencies Launch FOIA Online System

The U.S. National Archives and Records Administration (NARA), the U.S. Environmental Protection Agency (EPA), and the U.S. Department of Commerce have developed an online system to expand public access to information requested under the Freedom of Information Act (FOIA).

According to NARA, *FOIAonline* (<https://foiaonline.regulations.gov>) offers the public one place to submit FOIA requests, track their progress, communicate with the processing agency, search other requests, access previously released responsive documents, and file appeals with participating agencies.

For federal agencies, *FOIAonline* provides a secure website to receive and store requests, assign and process requests, post responses, generate metrics, manage records electronically, create management reports, and electronically generate the annual report the FOIA requires from each agency.

The new system leverages the infrastructure developed for the EPA's *Regulations.gov*, the federal rulemaking portal that allows people to comment on federal regulations and other agency regulatory actions. This helped *FOIAonline* avoid many startup costs and is expected to save the government \$200 million over the next five years if broadly adopted.

## RISK MANAGEMENT

## Gartner: A Good Offense Is Best Defense

A good defense isn't enough when it comes to ensuring an organization's data security, Gartner analysts told participants at the firm's Symposium/ITxpo 2012 held in October in Orlando. With the speed at which technology is changing and the agility of hackers is increasing, threats to security are growing faster than the means to defend against them. The time has come to stop just reacting and begin taking proactive measures, said Gartner analysts.

According to *InformationWeek.com*, Gartner Research Vice President Greg Young stressed the need for enterprises to focus on three main areas: protection of infrastructure (keeping the bad guys out); managing identity and access (letting the good guys in); and business continuity, compliance, and risk management (policies that keep the wheels on).

Young cited several factors that have made protecting infrastructure increasingly difficult, including emerging trends around software-defined networking, virtualization, cloud computing, and mobile smart devices. Strategic infrastructure planning, he concluded, doesn't try to address all threats, but rather requires aligning security mechanisms with an effective, carefully considered user-access policy.

Gartner Vice President Earl Perkins addressed the identity and access management issue. He suggested that enterprises could take advantage of social networking processes to improve user access management. Enterprises already manage access through permissions and entitlements; however, Perkins speculated that social media profiles could eventually be used in enterprise security mechanisms. This may be a decade away, said Perkins, but the integration of social media for effective user management has already begun.

Gartner Vice President Paul Proctor echoed Young's point that the processes should not try to protect against everything. The key lies in behavior changes. Enterprises need to increase their focus on employee training, he said. This is especially critical with the bring-your-own-device trend.

Keeping score by reporting security incidents is another area in need of a behavioral shift, contended Proctor. Instead of focusing on the number of incidents, enterprises should focus on identifying protection levels applicable to their needs. These needs will vary from industry to industry. Some organizations (e.g., manufacturing) possess intellectual property and little personal data, while others (e.g., financial institutions) have personal data and relatively little intellectual property to protect. The latter are going to be more likely targets for hackers.



The Sedona Conference® Institute<sup>SM</sup>  
presents its Seventh Annual eDiscovery Program on  
**Staying Ahead of the eDiscovery Curve:  
Living on eDiscovery's Cutting Edge**



**Thursday-Friday, March 21-22, 2013  
Paradise Point Resort & Spa, San Diego, CA**

The Sedona Conference® Working Group  
on Electronic Document Retention & Production created  
*The Sedona Principles*, *The Sedona Guidelines on the Management of Information  
in the Digital Age*, and many other commentaries addressing real world issues  
in today's eDiscovery environment. In the unique Sedona style, an  
expert faculty of experienced practitioners & judges will engage in dialogue  
on cutting-edge topics, including:

- ◆ Preservation & discovery of ESI in a cloud-based, mobile media environment:  
do *The Sedona Principles* apply?
- ◆ Is Technology Assisted Review (TAR) practical for my litigation?
- ◆ Ethics & eDiscovery: a survey of recent decisions & the new ABA Model Rules
- ◆ eDiscovery in specialized environments: Government investigations & regulatory  
actions, labor & employment actions, mass tort & class actions & IP/Tech actions
- ◆ The evolution of the eDiscovery Team
- ◆ Recent case law, new rules & court pilot projects
- ◆ And, of course, the Judicial Roundtable

**EXHIBITOR SPONSORS:**

AccessData Group ◆ Exterro, Inc. ◆ QuisLex, Inc. ◆ Relativity ◆ Recommind, Inc. ◆ UBIC

**ASSOCIATION SPONSOR:** ARMA International

Members of The Sedona Conference® Working Group Series and in-house RIM & IT professionals  
who are ARMA members receive a \$100 discount, and government employees receive a \$250 discount  
(discounts not combinable); if you qualify for a discount, please email [info@sedonaconference.org](mailto:info@sedonaconference.org) to obtain your  
unique discount coupon code before you register.

**For further details and TO REGISTER please go to:  
[www.thesedonaconference.org](http://www.thesedonaconference.org) and click on the program title.**



## GOING GREEN

## Paper Still Rules in Many U.S. Federal Agencies

The U.S. government's digital transformation is well under way. However, a study by Open Text and the Government Business Council that was published in October revealed that only 22% of the 150 federal managers surveyed gave their information management systems an "A" or "B" grade. The average grade given was a "C" largely because of the agencies' reliance on paper records and even older media (e.g., microfiche and microfilm).

Fortunately, 82% of the respondents recognize that electronic information management (EIM) plays an essential or important role in agency operations. Almost half (48%) of the respondents see EIM as essential to operations. Unfortunately, only 28% consider their agency's EIM as being "adequate." The majority (58%) labeled it "inefficient," "confusing," or "outdated," primarily because of the amount of redundancy and the continued prevalence of paper records, despite available technologies. Nearly one-quarter (24%) said their agencies still manage

microfiche or microfilm.

Even though paper still seems to rule, 54% of the agencies reported that between 34% and 80% of their information is currently available in a digital format.

Fifty-seven percent of the managers agreed that EIM can reduce time spent looking for records – time that can be reinvested in other tasks that serve the needs of citizens. And in many cases, EIM can improve the bottom line: 30% of federal managers say EIM can reduce operating costs.

Predictably, the biggest roadblock to fully implementing an EIM system is the lack of resources, followed by the lack of a clear information management strategy or policy.

When asked what they needed to fully implement EIM in their agency, two-thirds of the managers answered "agency-wide approach to information management," 57% cited a change in agency culture, and 56% said increased funding.

Read the full research report at [www.opentext.com/EIMreport](http://www.opentext.com/EIMreport). (Registration required.)

## DATA SECURITY

## Singapore Passes Data Protection Act

Singapore's data privacy act was to take effect January 1, 2013. Enforcement, however, is not scheduled to begin until mid-2014 to give businesses enough time to adjust.

The new law gives individuals more control over their personal data, requiring or-

ganizations to apprise their constituents of the purpose for collecting, using, or disclosing their personal information.

The law also gives individuals the right to seek compensation for damages suffered directly as a result of a breach of the data protection rules. Organizations found guilty of violating the rule may be fined up to S\$10,000 (\$8,181 U.S.) per customer complaint.

A national do-not-call registry is established by the new law, as is a Personal Data Protection Commission (PDPC), which will be the country's primary authority on matters relating to personal data protection and enforcement of the new rule. PDPC could impose a penalty of up to S\$1 million (\$818,150 U.S.) if an organization doesn't comply.

The new law applies only to organizations in the private sector. The government already had its own data protection rules in place.

An element missing from the law is the requirement that organizations notify individuals when a breach occurs. Mandatory notification is standard in European and American data protection laws and will undoubtedly be added to Singapore's in time.



## CYBERCRIME

# Firm Lists Top Tricks Used by Spear Phishers

Early on, cybercriminals discovered that e-mail is a great avenue for spam and mass-distributed malware. It still is, according to a recent report from FireEye, a provider of threat protection for web and e-mail.

FireEye's "Advance Threat Report 1H 2012" recorded a 56% increase in malicious e-mails getting past organizations' security defenses between the first and second quarters of 2012.



Cybercriminals use certain common words in file names that trick large number of unsuspecting recipients to download or install files containing malware to their local drives. According to FireEye's "Top Words Used in Spear Phishing Attacks to Successfully Compromise Enterprise Networks and Steal Data," the top five draws in the first half of 2012 were "dhl," "notification," "delivery," "express," and "2012."

Interestingly, with only a couple of exceptions, the first half of 2012's list of the top 20 words is completely different from those deemed successful in the second half of 2011.

The percentage of attachments containing those words is also sig-

nificantly higher. For example, the top draw in the first half of 2012 ("dhl") was included in the name of nearly 23% of attachments, while the most common word in the second half of 2011 ("label") was included in the name of just 15% of attachments.

FireEye found additional trends between the second half of 2011 and the first half of 2012. For example, the percentage of file names containing words related to shipping (e.g., "postal") grew from 19% to 26%. The number of words associated with urgency grew even more dramatically from nearly 2% to almost 11%.

On a somewhat more positive note, using the .EXE file extension was much less successful in 2012. Unfortunately, today's cybercriminals are using .ZIP and .PDF file extensions more successfully.

To guard against these threats, FireEye stressed that enterprises need to better educate users on how to recognize malware threats and employ more advanced technologies to detect and stop the advanced threats.

## CLOUD COMPUTING

# EU Looks to the Cloud for Economic Relief

The European Union (EU) is hoping that cloud computing will help its economy recover from its four-year debt crisis and recession. Specifically, CNBC reported the EU is looking to cloud computing to help boost the economy by creating 2.5 million new jobs and increasing the EU's gross domestic product by €583 billion (\$760 billion U.S.) between 2015 and 2020.

International Data Corp., which

helped the EU develop its cloud computing strategy, is even more optimistic, predicting that the new policy could develop close to 3.8 million new jobs.

Katherine Thompson, an analyst at Edison Investment Research, told CNBC she's not as optimistic. "I'm not sure I strictly agree that it will give such a boost to the economy," she said, "as the move to the cloud is often a shift from one form of expenditure to another, as opposed to incremental spend, and in many cases will be deflationary."

She added that she does agree with the EU's thinking that cloud computing will help create new types of companies and business models, which she said is already happening.

"The EU wants to focus on four key aims to help cloud computing realize its full potential," reported *CNBC.com*'s Matt Clinch. "They want users to be able to easily move providers, a certification for trustworthy companies, contracts that would simplify regulations, and clear communication between providers and the public sector so work doesn't drift overseas to the U.S."

Of course, security remains a serious concern, regardless of how many jobs are created and where the data centers are located. It's critical that data security can be ensured.





## CYBERCRIME

## FTC Targets Computer Support Scams

In October 2012, the Federal Trade Commission (FTC) announced that it had launched “a major international crackdown on tech support scams.” The commission took aim at telemarketers masquerading as being associated with major tech companies to scam consumers into believing their computers “are riddled with viruses, spyware, and other malware” and then charging hundreds of dollars to remotely access, fix, and monitor the consumers’ computers.

A U.S. District Court judge ordered a halt to six alleged tech support scams and froze the defendants’ assets. In announcing the judgment, FTC Chairman John Liebowitz stated that the defendants had “taken scareware to a whole other level of virtual mayhem.”

The six operations, most of which were based in India, targeted English-speaking consumers in the United States, Canada, Australia, Ireland, New Zealand, and the United Kingdom (UK). They contacted the consumers by telephone and reportedly claimed they were affiliated with legitimate companies, such as Microsoft, Dell, McAfee, and Norton, and told the consumers that they had detected malware that posed an imminent threat to their computers. They directed consumers to a utility area of their computer and falsely claimed it demonstrated the computer was infected.

According to papers the FTC

filed with the court, the scammers sought to avoid detection by consumers and law enforcers by using virtual offices that were, in fact, mail-forwarding facilities. The scammers allegedly used 80 different domain names and 130 different phone numbers.

The commission has publicly acknowledged the assistance it received from the Australian Communications and Media Authority, Canadian Radio-Television and Telecommunications Commission, and the UK’s Serious Organised Crime agency, as well as from Microsoft and other computer companies.

The FTC cases targeted 14 corporate defendants and 17 indi-

vidual defendants in the six legal filings.

Liebowitz announced the filing of the international scam case the day after the FTC won a final judgment in a \$163 million case against an operation that used computer “scareware” to trick consumers into thinking their systems were infected with malware.

In this particular case, which was filed in 2008, the FTC charged the defendants with scamming more than 1 million consumers using elaborate and technologically sophisticated Internet advertisements. The ads displayed a bogus “system scan” that detected several malicious or otherwise dangerous files on the consumers’ computers and urged consumers to buy the defendants’ software for \$40-\$60 to fix their computer.



## TECH TRENDS

## Mobile Devices Top Gartner’s 2013 Strategic Tech Trends List

Gartner’s 2013 top-10 IT trends is an evolution of items from previous years, Gartner Fellow David Cearley told *PCweek.com*’s Michael Miller. Many of these issues have moved slower than expected, Cearley observed, but they still have the highest potential for significantly affecting enterprises over the next three years.

Mobile devices, mobile apps and HTML5, cloud computing, Internet of Things, and big data top the list for 2013. Their placement on the list may have changed from last year, but the only new trend is personal cloud computing.

### Top 10 Strategic Technology Trends for 2013

1. Mobile Devices Battles
2. Mobile Applications and HTML5
3. Personal Cloud
4. Internet of Things
5. Hybrid IT & Cloud Computing
6. Strategic Big Data
7. Actionable Analytics
8. Mainstream In-Memory Computing
9. Integrated Ecosystems
10. Enterprise App Stores

Source: Gartner





## 7.0 LIABILITY AND WARRANT

7.1 Acceptance/Limit of Liability. Contractor shall be responsible for financial damages and loss of any materials deposited in bins or otherwise delivered to it for secure destruction due to accident, negligence or willful misconduct up to \$1,000,000. For purposes of this contract, data breach notification expenses incurred by Customer due to Contractor's actions, including accident, negligence or willful misconduct, shall be considered recoverable damages.

7.2 Ownership Warranty. Customer to deliver for confidential data

legal custodian or otherwise has the right  
Customer provides Contractor hereunder

Service Provider Contract v. 8762

Did we  
verify they  
have the  
proper  
coverage?

Page 2

**Some customers assume their service providers have the proper liability insurance to cover their mistakes.**

***Unfortunately, that is not always true.***

*The National Association for Information Destruction (NAID), the non-profit watchdog for the secure destruction industry, discovered that most professional liability products do not offer adequate protection. So NAID created Downstream Data Coverage, a policy that better protects providers and customers.*

- Includes data breach notification coverage to the full limit of the policy
- Requires periodic, unannounced audits of service providers
- Covers liability for electronic media destruction to the full limit of the policy
- Eliminates exclusions that make other policies useless

*To protect your organization, encourage your service provider to look into Downstream Data Coverage today.*



**Downstream®  
Data Coverage**

[www.downstreamdata.com](http://www.downstreamdata.com)

## HEALTH RECORDS

## U.S. Doctors High on Electronic Information Sharing

The final rules for stage 2 of the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs (also known as the Meaningful Use Program) go into effect in October 2013 for hospitals and January 14, 2014, for practitioners. Stage 2 contains requirements intended to facilitate electronic sharing of health information to support transitions in care.

An October 2012 report on a survey conducted by the Bipartisan Policy Center (BPC) and analyzed by Doctors Helping Doctors Transform Health Care, more than 80% of clinicians surveyed “believe that the electronic exchange of health information across care settings will have a positive impact on improving the quality of patient care, as well as the ability to coordinate care, meet the demands of new care models, and participate in third-party reporting and incentive programs.”

The report, “Clinician Perspectives on Electronic Health Information Sharing for Transitions of Care,” also shows that more than half (57%) of the respondents believe the electronic exchange of information will actually reduce healthcare costs.

There are some serious obstacles, however, that must first be overcome. Most of the physicians (71%) surveyed consider the lack of interoperability and an exchange infrastructure – and the cost associated with implementing and maintaining that infrastructure – a major barrier to electronic information sharing.

Stage 2 of Meaningful Use attempts to address these concerns by including requirements for the electronic transmission of a summary of care record 10% of the time and at least one successful ex-

change with a hospital or clinician that uses a different EHR vendor. The goal is to advance interoperability across vendor systems.

Stage 2 also contains standards and certification criteria that were either weak or nonexistent in Stage 1. “Stage 2 standards and certification criteria are more robust, requiring certified EHR technology to receive, display, and transmit considerably more types of data – using standards,” explained the BPC in a companion report, “Accelerating Electronic Information Sharing to Improve Quality and Reduce Costs in Health Care.”

The 2014 Standards, Implementation Specifications, and Certification Criteria require certified EHR support for data-transport methods and standards that push data. This is in line with clinicians’ preferences. According to the clinician survey, the majority of clinicians prefer to receive information they consider “essential” to be pushed to them; the rest they want to be able to access through a query.

BPC added that “the development, coordination, evaluation of, and effective communication and dissemination of implementation guides and specifications that will support the actual use of standards in practice ... is crucial.”

It offered several recommendations:

- Develop a national strategy and long-term plans for standards and interoperability to support a broad set of healthcare priorities.
- Provide sub-regulatory and explanatory guidance from the federal government to support query access to priority information and transmission of imaging test results.
- Explore principles, policies, stan-

dards, and strategies for improving the accuracy of matching using consumer-facilitated approaches.

- Issue comprehensive and clear guidance from the U.S. Department of Health and Human Services on compliance with federal privacy and security laws.

The clinician study and the resulting reports on electronic information sharing in the healthcare sector is part of BPC’s Health IT Initiative. Its goal is to identify “real-world examples and best practices that facilitate coordinated, accountable, patient-centered care,” and to ensure “that health IT efforts support delivery system and payment reforms shown to improve quality and reduce costs in health care.”





## PRIVACY

### Data Retention vs. Privacy

Australia's proposed data retention laws may conflict with the intent of the national privacy principles, according to international lawyers James Halliday and Sylvia Li from Baker and McKenzie, who raised the concern in an article on *ITnews.com*. They explained that "the data retention laws will make it mandatory for all Australian tel-

cos [telecommunications companies] and ISPs [Internet service providers] to store the non-content usage records of all individuals for up to two years without the consent of the individuals involved."

The Privacy Amendment (Enhancing Privacy Protection) Bill 2012, on the other hand, will "prohibit the use of all personal information for direct marketing, unless exemptions apply."

Halliday and Li contend that the data retention laws do not meet the basic community expectation of privacy provided for in the Privacy Amendment.



## WEB

### FTC Still on the Google Case

The Federal Trade Commission (FTC) has moved forward in its antitrust investigation into Google, which it began in 2011. This isn't the first antitrust inquiry Google has been involved in, but it does look like it's one that will have a significant impact.

The FTC staff has been investigating whether Google unfairly ranks its search results to favor its own businesses and whether it restrains competition by engaging in exclusive agreements to provide search services to online publishers and other websites. Google has also been accused of charging higher advertising rates to its competitors, making it difficult for other advertisers to compete with Google and its various businesses.

The European Union is looking into these allegations based on complaints it has received from smaller companies.

*The Washington Post* reported the FTC is also looking into whether Google is using its influence in the Android market to discourage smartphone and device makers from using rivals' applications.



Is this what  
you looked  
like for most  
of 2012?



Access Sciences  
can help.

AccessSciences.com/  
ClientServices

FileLogic™  
The file migration utility.

Modus™  
Records & Retention

Access Sciences  
www.accesssciences.com



## GOVERNANCE

## New IGRM Version Recognizes Value of Privacy, Security

The Information Governance Reference Model (IGRM) has been updated to include privacy and security as primary functions and stakeholders in the effective governance of information.

The Electronic Discovery Reference Model (EDRM), which published the IGRM, announced the change in the third quarter of 2012, stating the release of IGRM version 3.0 “reflects broad industry support and collaboration across the expert communities of ARMA International and CGOC (Compliance, Governance and Oversight Council).”

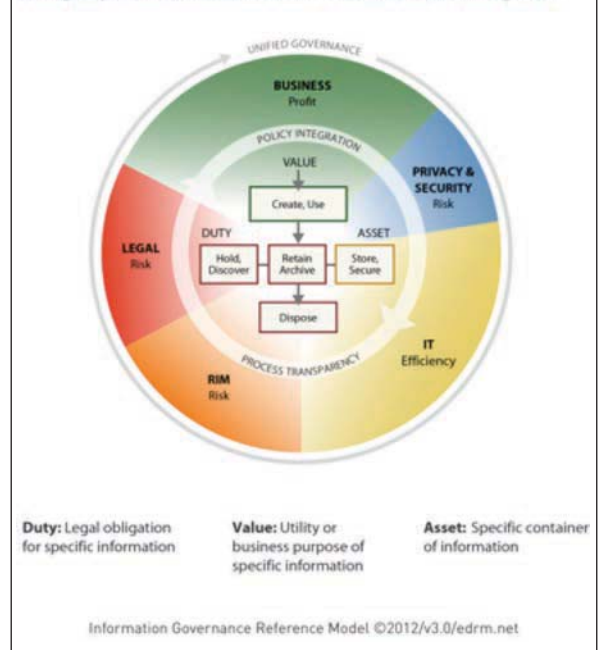
The IGRM provides a common, practical framework enabling organizations to establish information governance programs that more effectively deal with the rising volume and diversity of information and the risks, costs, and complications this presents. The model helps facilitate dialogue and coalesce disparate information stakeholders and perspectives across legal,

records management, IT, and business organizations.

“The Model helps organizations more effectively associate the duties and value of information to information assets through policy integration and process transparency so they can maximize information of value, meet their legal obligations, efficiently manage information and defensibly dispose of it at the right time,” explained the EDRM.

Incorporating privacy and security as key stakeholders reflects the increasing importance of privacy and security duties and the efficiencies organizations can achieve when these efforts are more holistically integrated with other essential gover-

**Information Governance Reference Model (IGRM)**  
Linking duty + value to information asset = efficient, effective management



nance practices and programs.

As the volume and variety of data (e.g., social media, geo-location data, and website tracking data) grow, so do the risks and costs associated with amassing it. Data typically loses its value steadily, yet the costs and risks of managing it increase over time, which inversely means that data without value often costs companies more than data with value.

When information and data are no longer required for business, legal, or regulatory purposes, it must be defensibly disposed. Privacy regulations often require timely disposal of information, and privacy-related litigation is spotlighting weak privacy management process.

“Chief privacy officers must collaborate with their IT, business, records management, and legal counterparts,” summarizes the EDRM. The IGRM provides an integrated process and policy framework for that collaboration.

## DATA SECURITY

## New Zealand Investigates Alleged Breach

Freelance journalist Keith Ng announced on his blog on October 15, 2012, that he had accessed thousands of files on the New Zealand Ministry of Social Development’s national accounting server. Some of the invoices stored on the server included private information.

The ministry closed down kiosks at the office through which the journalist was able to access the files, then it engaged an independent security expert to investigate the breach.

The journalist accessed four other servers, but he was not able to gain private information from them. The journalist has cooperated with the ministry rather than release the information.

The ministry’s chief executive said the ministry does not know if other breaches had occurred, but he confirmed that no client files were accessed. Once it is certain what information was accessed, the ministry will decide accordingly whether any clients needed to be advised.



## CLOUD COMPUTING

# Cloud Use Can Complicate E-Discovery

As is true in most cases, people tend to get what they pay for in cloud computing. And, those using free, consumer-grade cloud services for their corporate data may discover that what they are paying nothing for is likely to make e-discovery much more difficult.

In an October 1, 2012, article, *zdnet.com* published the result of its interviews with various analysts and industry veterans about how the unchecked use of cloud computing is complicating e-discovery efforts. The focus was on the “unruly use and management” of cloud services, exemplified by organizations choosing cloud service providers (CSPs) that have no understanding of compliance requirements and no real plans for backup and orderly retrieval.

Organizations that use consumer-grade cloud services for their corporate data are especially vulnerable to legal complications.

Additionally, when employees store data on these consumer-grade sites and there are no records that track the action, the data may be undiscoverable if that employee leaves the organization.

Analyst Barry Murphy of the E-Discovery Journal Group agrees with the idea of due diligence, specifying that organizations must work closely with CSPs on the e-discovery details and on defining the requirements for defensible collection and preservation.

ARMA International has published a number of resources to guide the decision-making and implemen-

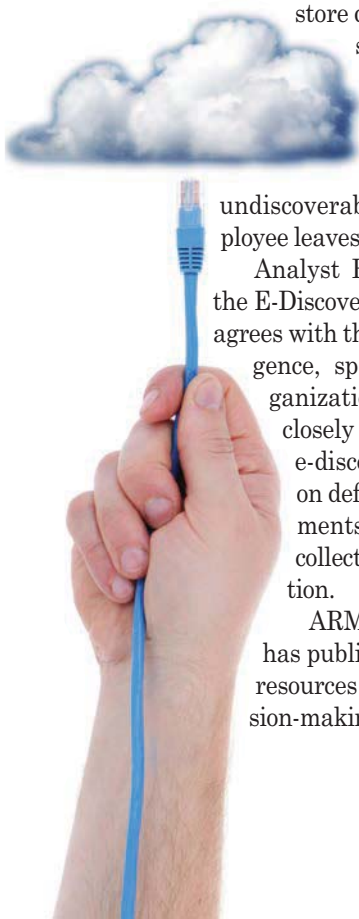
tation of cloud computing into an organization’s technology infrastructure.

For example, *Outsourcing Records Storage to the Cloud* highlights a number of factors that should be considered when moving records storage to the cloud, including suggestions for how to mitigate legal risk. Here are a few of the key points excerpted from the book (which is available for purchase at [www.arma.org/bookstore](http://www.arma.org/bookstore)):

- Establish clear rules for employee use of corporate information systems that include use of systems outsourced to the cloud, including access to the employees’ personal accounts.
- Establish ownership of data and include language in any cloud provider’s service contracts that addresses the organization’s ownership.
- Establish the allocation of liability for loss or wrongful disclosure of data, preferably as part of the contract.
- Establish a mechanism with the cloud provider for communicating and implementing legal holds. Make it clear in the service contract what the cloud provider’s obligation is for implementing and, possibly, managing legal holds.

These factors must be addressed in the service level agreement with the cloud provider, the guideline stresses.

The fall 2012 issue of ARMA International’s *Hot Topic*, “The Shift in Information Control: E-Discovery of Information in the Cloud and on Mobile Devices,” specifically addresses the records and information management, legal, and technology issues surrounding this topic. It is available as a free PDF download from [www.arma.org/publications/hottopic](http://www.arma.org/publications/hottopic).



Try a new  
look for the  
new year.



Call for a free  
30 minute  
assessment.

1.800.242.2005

**FileLogic™**  
The file migration utility.

**Modus™**  
Records & Retention

 **Access Sciences**  
[www.accesssciences.com](http://www.accesssciences.com)

## DATA SECURITY

## Big Data Working Group Tackles Privacy and Security

Just over two months after its launch, the Cloud Security Alliance's (CSA) Big Data Working Group published in November 2012 its initial list of the "Top Ten Big Data Security and Privacy Challenges." After interviewing CSA members and security practitioner-oriented trade journals, the working group determined that these challenges are:

1. Secure computations in distributed programming frameworks
2. Security best practices for non-relational data stores
3. Secure data storage and transactions logs
4. End-point input validation/filtering
5. Real-time security/compliance monitoring
6. Scalable and composable privacy-preserving data mining



- and analytics
7. Cryptographically enforced access control and secure communication
8. Granular access control
9. Granular audits
10. Data provenance

The working group's report, which is available at [cloudsecurityalliance.org/research/big-data/](http://cloudsecurityalliance.org/research/big-data/), describes these challenges and narrates use cases for each.

Formed in August 2012, CSA's

Big Data Working Group is tasked with providing specific actionable information and creating standards for big data security and privacy.

According to a Fujitsu press release, the working group will focus on six themes:

- Big data-scale crypto
- Cloud infrastructure
- Data analytics for security
- Framework and taxonomy
- Policy and governance
- Privacy

"Everyday 2.5 quintillion bytes of data are being created resulting in a myriad number of data security and cloud-computing security concerns," said Sre-eranga Rajan, director of Software Systems Innovation at Fujitsu Laboratories of America and a co-chair of the working group. "By collaborating as a global community of thought leaders and researchers, we are not only looking to help the industry overcome these challenges but also to leverage new opportunities for the monitoring and detection of security threats enabled by big data."

Along with Rajan, Neel Sundaresan of eBay and Wilco Van Grinkel of Verizon co-chair the working group.

Those interested in learning more about the group's activities or in joining the group should visit [cloudsecurityalliance.org/research/big-data/](http://cloudsecurityalliance.org/research/big-data/).



## LEGAL

## Courts Broaden Liability for Data Theft

U.S. federal courts are widening their definition of the damages caused by data breaches, according to an October 29 article on [csoonline.com](http://csoonline.com). Whereas courts previously dismissed these lawsuits unless the victims could show specific damages, judges increasing are now awarding them class-action status – a trend that puts organizations at greater risk of huge payouts.

These payouts can be significant. A study conducted by the Temple University Beasley School of Law and published in early 2012, "Empirical Analysis of Data Breach Litigation," found that although the mean value of settlements awarded per plaintiff was just \$2,500, the mean amount paid for attorney fees was \$1.2 million.

To mitigate damages, law firm Pepper Hamilton suggests that organizations fortify their technical and physical security, which will not only help prevent breaches, but will demonstrate a "best practices" approach that can influence the courts positively. The law firm also advises organizations not to link information to individuals and to have an effective notification policy in place.



2013

# Managing Electronic Records Conference

May 20 - 22, 2013  
Chicago, Illinois

**26 Sessions**  
**5 Pre-Conference Tutorials**

[www.merconference.com](http://www.merconference.com)

Presented by



**Cohasset  
Associates**

All sessions  
ICRM accredited

Co-sponsored by



## PRIVACY

## Google's Regulatory Woes Continue in EU, U.S.

Google has been under fire in Europe regarding privacy issues for quite some time. In mid-October, France's privacy rights regulator ruled that Google's new privacy policy violates the European Union's (EU) data protection rules. According to *BusinessWeek.com*, the problem was that Google did not set a "limit concerning the scope of the collection and the potential uses of the personal data" or give users adequate means to opt out. The search giant was given three to four

months to change the policy or be fined. Google maintained that it was confident its privacy notices "respect European law."

Although this action was taken by France alone, other countries are expected to follow suit. EU authorities asked the French regulator, CNIL, to conduct the review. *BusinessWeek.com* reported that European national regulators and data protection authorities in Australia, Canada, and several Asian countries reviewed CNIL's findings before they were presented to the EU.

Jeffrey Child, associate profes-

sor of communications and privacy expert at Kent State University, told *eweek.com* that any changes Google and Microsoft have to make to meet EU requirements could eventually be felt in the United States.

In the meantime, French media petitioned the government to require Google and other search engines to pay for their content. Agence France-Presse (AFP), a French news agency, reported that Google sent a letter to several French ministerial officers warn-

ing that such a move could force it to exclude French media sites from its search results. Google added that requiring search media to pay for displaying links to content would threaten Google's existence and be harmful to the Internet.

Google said it "redirects four billion 'clicks' per month to French media sites." The media argue that readers aren't paying for subscriptions because they can get so much content free on the Internet.

French Culture Minister Aurelie Filippetti told AFP she was surprised by the tone of Google's letter. "You don't deal with a democratically elected government

with threats," she said.

Media association IPG criticized Google's attitude, contending that "the objective of discussions should be finding an acceptable compromise that would recognize the value [the media] bring to search engines and would help the further development of [the media and search engines]," AFP reported.

None of this plays well at a time when Google is under the microscope in the United States and Europe for alleged anti-trust violations. Privacy issues don't typically play a role in antitrust enforcement, but in Google's case they do.

"The issue of privacy is absolutely connected to antitrust and competition," Nick Pickles, a lawyer and director of Big Brother Watch, a British advocacy group for civil liberties and privacy protections, told *BusinessWeek.com*. He said that Google's ability to collect data from multiple services gives it an unfair advantage in competing for advertisers.

Microsoft apparently learned from the Google experience when it introduced its new privacy policy complete with an opt-out. Instead, the EU was scrutinizing Microsoft for allegedly violating a 2009 commitment to allow European Windows users to have a choice of web browsers. The agreement struck in 2009 required that Microsoft offer a screen of browser choices to European Windows users through 2014. European regulators weren't pleased when Microsoft failed to live up to its end of the bargain. Microsoft has since admitted that it had "accidentally violated" the earlier agreement and would make corrections. **END**





# The Only **3 Letters** That Matter

If you're ready to take your career in records management to the next level, there are only 3 letters that matter. Becoming a **Certified Records Manager** shows that you're ready for today's complex and changing information environment.

**Stand Out** The CRM designation shows a solid mastery of records management

**Confidence** You'll prove your ability to apply records and information management knowledge

**Career Opportunities** It's the well-known competitive advantage you need in business today


For more information, call **877.244.3128**  
or visit **[www.ICRM.org](http://www.ICRM.org)**







# Rolling the Dice with Predictive Coding



Leveraging  
Analytics  
Technology  
for Information  
Governance

Leigh Issacs

**W**ith increasing frequency, organizations are realizing the importance, value, and benefits of implementing an information governance program. Information continues to proliferate at an insanely rapid pace, and the combination of legacy unmanaged information and the plethora of new information that is being generated in mountainous volumes becomes overwhelming.

New types of vehicles and repositories that deliver and store information are also increasing exponentially. Structured and unstructured data are found stored in archives, e-mails, hard drives, and other data repositories, resulting in significant pockets of information that are difficult to access and search. The financial, productivity, and time costs of maintaining storage systems for so much data are prohibitive.

To complicate matters, it is difficult to gain a clear picture of what this data contains, posing significant business risks and adding to the time and expense of discovery or investigation exercises. As such, it is imperative that organizations act on better identifying and reducing their volumes of data.

mation governance challenges will continue to grow as organizations attempt to separate the wheat from the chaff to determine what is useful versus what is not and what information exists beyond its usefulness or identified retention requirement.

At the same time organizations are struggling to find the magic wand to conquer their information governance woes, technologies are emerging to address large volumes of electronically stored information (ESI) for purposes of e-discovery. Organizations should consider whether it is possible to leverage these tools for identifying, managing, and appropriately governing their information.

### Technologies for Tackling IG Challenges

When used innovatively, the solutions used during e-discovery and litigation to avoid cost and time to address legal hold, data collection, data processing, and document review can also be expanded to add value into other areas, such as information storage, records retention, and data security.

*Predictive coding*, which is an evolving technology that combines people, technology, and workflows to find

**Information governance is a strategic framework composed of standards, processes, roles, and metrics that hold organizations and individuals accountable to create, organize, secure, maintain, use, and dispose of information in ways that align with and contribute to the organization's goals.**

**Source:** *Glossary of Records and Information Management Terms*, 4th Ed. (ARMA TR 22-2012).

The data growth projections and statistics are staggering. Recent estimates by analysts and research indicate that:

- Each year 1,200 exabytes of new data will be generated, according to the IDC Report “Business Strategy: Business Analytics and Big Data – Driving Government Businesses.”
- Enterprises will experience 650% data growth in the next five years, says David Rosenbaum in his report “That New Big Data Magic” on *cfo.com*.
- 80% of this data will be unstructured and generated from a variety of sources, such as blogs, web content, and e-mail, states Adrian Bridgewater in a report on CWDN: The Computer Weekly Application Developer Network.
- 70% of this data is stale after 90 days, notes Big Data Bytes in “90% of Everything Is Crud.”

At a glance, these statistics make it clear that infor-

key documents and identify and review large data sets, is one of those solutions. More specifically, predictive coding is machine-learning technology that “trains” the computer program to automatically predict how documents should be classified, based on initial human guidance. The computer program then applies what it has learned to the universe of information.

Predictive coding can be used in three ways to actively address the classification issues associated with current information: data remediation, classification of information already in repositories, and classification of information upon its creation.

For data that can't be classified automatically, technologies can be used (e.g., sampling and manual review) to make content-driven decisions that can then lead to defensible retention and disposition. (See Doug Smith's RIM Fundamentals article, “Thinking Outside the Box: Use Predictive Coding as a RIM Tool,” on page 30 of this

issue for a primer on how these technologies work.)

The combination of these technologies and processes allows organizations to:

- Highlight data that may present a business risk
- Find, retain, and profit from valuable data
- Remove redundant, irrelevant, or stale data

In February 2012, Hon. Andrew J. Peck of the U.S. District Court for the Southern District of New York entered an order authorizing the parties in *Da Silva Moore v. Publicis Groupe, et al.* to rely on predictive coding for identification of responsive documents during discovery in lieu of traditional document review and search terms.

Peck's decision cited statistics indicating human review is no more accurate, and perhaps less accurate, than computer-assisted review and lends support to the accuracy of these technologies.

In fact, according to a blog posted by Maura R. Grossman, Esq., by lever-



## Predictive coding and analytics can search and manage the abyss of existing archives to identify data that should be kept or deleted ...

aging such things as document type, language, content, party, timeframe, individual name, and conceptual meaning, predictive coding has been known to generally deliver more than a 95% accuracy rate.

When considering the capabilities of predictive coding technology, it is not a stretch to connect its usefulness in e-discovery with the potential to add benefits to a proactive IG program. It is difficult and time-consuming to sift through e-mails, texts, contracts, spreadsheets, and other types of ever-increasing media. While subject matter experts are still necessary, predictive coding eliminates much of the manual work and time from the task.

### Areas Where Predictive Coding Can Help

Predictive coding technologies allow for the identification, review, and tagging of information – and can frequently apply and execute specific workflows. Thus, a few areas of an organization's digital landfills that can benefit from the use of predictive coding and analytics tools are listed below.

#### **Retention, Disposition**

Organizations have an obligation to manage information appropriately. Many industries are highly regulated and subject to other legal or legislative recordkeeping requirements. Utilizing subject matter experts paired with predictive coding technologies increase the accurate identification of information and thus pro-

vide a sound foundation for defensible disposition and prevent over-retention of expired or unnecessary content.

#### **Archives**

Believing that archiving was the panacea of information management and would solve all of their data storage woes, many organizations jumped on the archiving bandwagon. In reality, the archive resulted in the equivalent of throwing hundreds of thousands of loose papers in a room and shutting the door. Content was not identified and organized in a manner that allowed it to be governed and managed, and archives were not designed to be searchable in any meaningful way, resulting in a mess.

Predictive coding and analytics technologies can search and manage the abyss of existing archives to identify data that should be kept or deleted, and often minimize the costs and risks of potentially moving

unnecessary data. These technologies can span the archives and locate data that:

- May be subject to litigation hold
- Is important intellectual property or a vital record
- May contain sensitive information
- Can be defensively deleted, such as duplicate data

#### **Legal Holds, Protective Orders**

It can't be preserved if it can't be found. It will be over-retained if an organization can't figure out what it is. Holds can't be lifted if an organization doesn't know what it has, and retention cannot be reinstated once the hold is lifted. Predictive coding solutions can add value long before and long after the collection process.

#### **Data Remediation**

How often has an organization found important, business-critical information that has been misfiled? Predictive coding solutions can provide a tool to locate various types of vital records and contracts, and, if necessary, move them to other repositories where they can be secured and managed. It can also delete redundant, obsolete, and trivial files, which, as learned earlier, can consist of up to 70% of the organization's data.

#### **File Transfers**

Some organizations (e.g., law firms) have accepted information mobility and lateral movement as a routine course of business. Ethical requirements often dictate what types of, to whom, and when information can be re-



leased. The ability to quickly and efficiently identify, segregate, and filter various types of electronic information is critical. Predictive coding and analytics solutions can assist in reducing the manual efforts historically performed by higher value timekeepers that could be better utilized on billable activities.

### ***Intellectual Property, Knowledge Management***

Appropriately identifying, maintaining, and securing an organization's intellectual property can be the difference in its success or failure. Using these technologies, it is possible to cull through data to identify potential pockets of information that should be retained as valuable intellectual property, and thus, protect the organization's vital assets. Many organizations also rely heavily on their bank of information that serves to support and pass along various pockets of knowledge and templates. To do this effectively, an or-



**Predictive coding tools can help classify and manage the data in the file shares to help remediate these challenges.**

ganization must have efficient tools with which to identify and segregate this information from other classifications of data and, in some cases, move it to another repository.

### ***Business Intelligence***

Analytics technologies can reveal the value (or lack of value) of specific unstructured data by mining it for business insights and intelligence. Once the value has been identified, it can then be leveraged in various ways to benefit the organization, including strategic planning and decision making.

### ***Sensitive Information***

Organizations continue to see growing regulations and requirements for the management and security of sensitive information. Sensitive information may be created and stored across the enterprise, often in unstructured systems. Analytics technologies can aide in the identification of this type of content to better support compliance.

### ***Data Security, Fraud***

Data security and fraud continue to be a concern. Finding clues to these issues amongst the vast amount of information can be daunting. Often, by the time a security breach or fraud has occurred, it is already too late. A proactive approach that provides an opportunity to appropriately deal with offenders can protect the organization and its information.

Using dynamic indexes, workflows, and automated risk analysis and monitoring, these types of technologies can help identify fraud and other breaches. These technologies can also provide the ability to flag risky content for review and escalate potential risks appropriately within the organization. Having such programs in place can help lower an organization's insurance premiums as it has taken measures to proactively identify potential risk.

### ***File Shares***

There are various strategies to attack the monster of uncontrolled file shares that are notorious for containing masses of poorly classified, and sometimes irrelevant, data. Even if processes exist to address the information lifecycle of file share content, organizations typically lack the tools to defensively delete the information after it is no longer useful or required to be kept.

The sheer nature of file shares promotes the proliferation of duplicative content or unnecessary data. However, in the haystack of this unnecessary information may be the needle – pockets of valuable information that need to be kept or information that needs to be securely maintained and managed. Predictive coding tools can help classify and manage the data in the file shares to help remediate these challenges.

### ***The Next RIM Tool?***

As many records managers will attest, it's often difficult to get buy-in and budget approval to acquire the tools helpful and necessary to automate and support IG and accomplish the tasks outlined above. However, given the recent e-discovery boon and the footprint that predictive coding and analytics technologies have already developed in that area, there is an increasing trend for organizations to have these types of solutions in-house.

It is no longer effective to govern information by leading with a "big stick" and setting strict rules and regulations for individuals to follow. Risk and compliance will always be a key requirement of an efficient IG program. However, an organization cannot lose sight of the fact that to be effective, its IG program must support the business rather than be a hindrance to it.

Smarter, more efficient approaches to coding and classifying information – such as by using predictive coding technologies – not only help organizations manage risk and achieve compliance, they also allow them to operate more effectively and efficiently.

When individuals are able to do their work without worrying unnecessarily about overly burdensome retention schedules or belaboring where information should be filed – and are still able to find the information when they need it – the organization has added a layer of operational efficiency while at the same time governing its information assets.

After having seen practical ways in which predictive coding technology can be an asset for routine functions performed on information throughout every phase of its life cycle, it begs consideration that it may emerge as the next

tool in the records professional's toolkit.

These technologies are here to stay and, while disputes about their uses and limitations from a litigation and e-discovery standpoint will continue to be debated in our courts, there is value to exploring them for real, practical, tangible tasks in governing information throughout its life cycle. **END**

*Leigh Isaacs can be contacted at leigh\_isaacs05@yahoo.com. See her bio on page 46.*



## ARMA LIVE! ROAD SHOW

# BRINGING SHAREPOINT® TO A CITY NEAR YOU!

ARMA International is offering the Sharepoint Records Management Certificate. In this interactive, fast-paced program, you'll learn how to successfully implement large and complex electronic document and records management systems (EDRMS). The program is facilitated by best-selling author **Bruce Miller**, an expert in electronic recordkeeping.

### Places and dates:

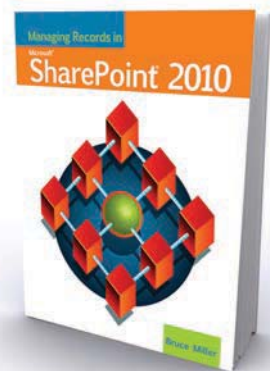
**Atlanta**  
Feb. 25-26, 2013

**Los Angeles**  
March 4-5, 2013

**New York**  
June 10-11, 2013

**Kansas City**  
June 17-18, 2013

**Philadelphia**  
June 24-25, 2013



For **\$399** (a \$549 value) you'll get:

- Bruce Miller's book *Managing Records in SharePoint® 2010*
- Project Modeler to track project costs and resources
- All course content in reusable electronic format
- Discussion Guide
- Project Template

**Register now at [www.arma.org/sharepoint](http://www.arma.org/sharepoint).**



# A ROADMAP FOR EFFECTIVE INFORMATION GOVERNANCE

An effective information governance program is based on a corporate-level information management strategy. This article describes a 13-step process for developing the two key deliverables of this strategy: a strategic information management plan and roadmap.

## Sam McCollum

**T**he records and information management (RIM) function is no longer sufficient to meet the demands placed on organizations by the current regulatory environment and by internal and external risk management expectations. A stronger accountability aspect needs to be added.

The emerging discipline of *information governance* – which is an accountability framework that includes the people, processes, policy, and technology that ensure the effective management of information to enable an organization to achieve its strategic goals and business programs – fulfills this role most effectively. This definition emphasizes IG as a *strategic* (accountable) function rather than as an *operations* function. It considers the input and effect of people (culture), business processes, policy, and information tech-

nology in ensuring the proper management of information and the proper balance between an organization's compliance requirements (part of its corporate strategy) and its business goals.

### Principles for Developing SIM Roadmap, Plan

The final component of the IG definition is very significant, as it presupposes that the first step in developing an IG program is to develop an information management strategy that is consistent with business objectives and balances those objectives with compliance requirements.

*Information management* is an enterprise-centric function that includes the compliance focus of corporate-level classification, consistent metadata, retention, disposition, e-discovery processes, auditing, risk reduction, version con-





trol, security, access control, and any other management functions that assist the corporation in proving due diligence of its information management program.

The two key deliverables of an information management strategy are 1) a strategic information management (SIM) multi-year roadmap and 2) a SIM plan.

Among other strategic tools, organizations use the Generally Accepted Recordkeeping Principles® (the Principles) and its complementary Information Governance Maturity Model (Maturity Model) to develop their information management strategy. However, many organizations face the challenge of how to use them to develop the SIM roadmap and plan.

## The SIM Plan Design Process

The 13-step SIM process flow chart shown in the photo illustration on page 27 can be used by an organization's SIM team to design its SIM plan, which then will be the foundation upon which the IG function operates.

### Step 1 – Develop a Company Overview

The first step in designing a SIM plan is to create an organization overview that will be used to assist in developing the Principles statements in Step 4. The overview consists of basic information about the organization, including such items as what industry it operates in, its strategic objectives, staff count, products offered, and geographical location.

### Step 2 – Review the Four SIM Dimensions

To ensure that the design team considers all aspects of SIM when developing the SIM roadmap and plan, it needs to have a clear understanding of the four SIM dimensions:

1. People (changes to the organization, cultural issues, incentives)
2. Legal (policies and penalties)
3. Business units (revisions to business processes to improve information flow)
4. Information technology (use of software and hardware)

### Step 3 – Complete an Infrastructure Questionnaire

Complete a questionnaire to identify and document the current status of the information technology infrastructure that supports the information management function (e.g., classification system, databases, indexing, information retrieval, auditing, e-discovery searches, and tech support).

Using the four SIM dimensions as a guide, look at resources, infrastructure, controls, and processes to understand what the starting point is for the SIM design. For example, the questionnaire should ask about:

- Organization and culture – Does the organization have a formal change management process? Does it have an information management advisory committee?
- Policy and compliance – Does the organization have a formal disposition process? Does it have a legal hold process?

- Business process – Does the organization have a program to reduce the volume of hardcopy information? Does it have a business continuity program?
- Technology – Has the organization rationalized its information repositories? What enterprise content management initiatives has it considered?

### Step 4 – Write Principles Statements

Completing the infrastructure questionnaire will provide a multitude of answers that will need to be distilled down into a Principles statement that describes the current state of the RIM program for each principle. Each statement can be compared to the Maturity Model scope notes to determine the maturity level for each principle.

For example, a Principles statement for the Principle of Accountability might be:

There is no IMAC [Information Management Advisory Committee] or coordination between senior management and no regular auditing of IM procedures in departments. IM policy and procedures are developed at the provincial level and adopted by the client. Senior management needs to ensure training of staff in procedures. There is a senior management person responsible for IM, but the IM function does not report directly to that person. The IM committee currently exists with the mandate to develop and implement an IM strategy and solicit senior-level support. The organization meets level 2 maturity requirements; level 3 requirements for active strategic initiatives and senior officer responsibility are not met.

### Step 5 – Identify Current Maturity Model Levels

The Maturity Model was developed by ARMA International to “paint a more complete picture of what information governance looks like.” The determination of the five current maturity levels and their plotting on the Maturity Model provides a baseline for determining what improvements need to be made to the RIM program and to identify those areas that need the greatest attention. The maturity level for each principle is considered separately in order to better understand the interrelationships and dependencies each principle might have on one or more of the other principles.

### Step 6 – Complete an Environmental Index

Determining the desired maturity level for each principle requires understanding what targets would be most acceptable and achievable. The environmental index provides concrete indicators of corporate and staff support of, or resistance to, possible upgrades or improvements to the existing maturity levels. It documents how changes would be welcomed and what support can be expected. It measures risk tolerance, user appetite for changes, and cultural issues that may affect proposed RIM changes.

Create the environmental index by answering questions like these:

- Does the organization have key performance indicators related to RIM?
- Is the corporate emphasis on managing volume or quality of information?
- What particular employee culture or tendencies might affect proposed RIM initiatives?

### **Step 7 – Identify Acceptable Maturity Levels**

Analyze the results of the environmental index and use that information to decide for each principle what increase in maturity level would be feasible and supported by all parties affected by the proposed changes.

### **Step 8 – Complete a Gap Analysis**

The first step in achieving the desired maturity level is to perform a gap analysis between the current and desired maturity level. The gap analysis allows the SIM design team to determine how wide the gap is for each principle and what specific areas require improvement to reduce that gap. Then, the design team will be able to identify what projects need to be implemented to make those improvements.

### **Step 9 – Review Project Directory**

The project directory is a mind map of all the possible RIM projects that could be implemented, sorted under each of the four SIM dimensions: people (changes to the organization, cultural issues, and incentives), legal (policies and penalties), business units (revisions to business processes to improve information flow), and information technology (use of software and hardware). Select those projects that would best narrow or eliminate the identified gaps that need to be closed.

### **Step 10 – Create Project Status Report**

Once the list of possible RIM projects has been selected, investigate each project to determine its status (i.e., not started, in progress, or completed). Document the status on a corporate-level status report that takes into account other projects that might have been started by other departments and for other purposes. The status report will also document the purpose of the proposed project and provide the scheduling information that can be input into the draft SIM roadmap.

### **Step 11 – Design the SIM Roadmap**

The SIM roadmap provides a graphic representation of the timing for each proposed project, identifies interrelationships between projects, assists in budgeting and project tracking efforts, and provides input into the SIM plan. Each project is organized within one of the four SIM dimension swim lanes.

### **Step 12 – Identify Required Discussion Papers**

Some of the proposed projects may require standards or guidelines to be developed in order to successfully implement them or to manage their deliverables. It is also critical that all affected departments or interested parties have input into each of the proposed projects. Create a discussion paper for each proposed project that lists the required infrastructure and resources needed, documents its justification, and identifies the issues that it would resolve. The purpose of these papers is to provide feedback to revise the roadmap, to garner support, and to determine possible resistance.

### **Step 13 – Document the SIM Plan**

The SIM plan is a summary of all of the SIM design team findings, including a proposed plan of action over a multi-year budget period. It is a written proposal to senior management providing a plan of action to achieve the desired maturity levels. It is a training resource and offers the justification for the proposed SIM budget.

## **Beat the Odds with a Long-Term Plan**

In an Iron Mountain press release about its “2012 Compliance Benchmark Report, A View into Unified Records Management,” which examined more than 3,000 public, private, government, and non-profit organizations to determine how well their information is protected, available, and destroyed, the company provided some interesting statistics related to IG:

Ninety-four percent of respondents will apply more budget and staff to information management. The growing investment is noteworthy, particularly given the still uncertain economy. Yet, less than one third (28 percent) indicated they have a long-term, strategic plan with executive-level support for records and information management. Lacking a formalized, executive-sponsored plan, many organizations will continue to spend valuable time and resources struggling to implement and enforce effective, long-term best practices.

Experience has shown that the development of an effective IG function within an organization is not only highly desirable but is also within the capabilities of many organizations. Following the SIM design process can result in the draft design of a multi-year roadmap and plan within a relatively short period of time. **END**

*Sam McCollum can be contacted at sm.mccollum@gmail.com. See his bio on page 46.*



# THINKING OUTSIDE THE BOX: USE PREDICTIVE CODING AS A RIM TOOL

Doug Smith



**P**redictive coding is causing quite a stir, receiving increased attention in the past year due in large part to two cases being litigated in New York and Illinois. (See the sidebar “Predictive Coding in the News.”) But, what is predictive coding – and is it really a new technology?

Sharon D. Nelson, Esq., on her “Ride the Lightning” blog, offers a comprehensive definition of predictive coding that helps make it clear that it is not new. She says *predictive coding* is a “combination of technologies and processes in which decisions pertaining to the responsiveness of records gathered or preserved for potential production purposes ... are made by having reviewers examine a subset of the collection and having the decisions on those documents propagated to the rest of the collection without reviewers examining each record.”

E-discovery systems have been using processes like this for many years. Predictive coding was developed because the proliferation of electronically stored information (ESI) being created and stored made it extremely difficult and expensive to locate relevant information that needed to be preserved and produced for litigation and investigations. So, while there have been new developments in the technology, predictive coding is not a new process.

### Explaining Predictive Coding

Most predictive coding processes operate in one of two fundamental ways – either through sampling or observation.

*Sampling* is done by computer software, which randomly selects a subset of electronic records from all those available, presents it to a human coder for review, monitors the coder’s decisions, notes the characteristics of the records that are coded (e.g., date, recipients, author, subject,

and keywords), and then uses these recorded decisions to predict the value of the remaining documents in the collection.

In the *observation process*, the coding system monitors human coders’ actual decisions as they review records, begins to predict how a record will be coded before presenting it for coding, and then compares the predicted coding to the actual coding. Eventually, the system’s predictive coding will reach the level of accuracy that was predetermined to be sufficient. At this point, the system can be used to predict the coding decisions automatically.

Neither sampling nor the observation process relies on the computer to know anything. Each uses human decisions as a calibrating mechanism to learn about the coding details, and each could be used by an organization to classify information in use.

### Using Predictive Coding for Classification

Predictive coding provides the ability to perform tasks that historically had to be done by individuals with subject matter expertise. Although the technology was developed in the e-discovery space, increasingly, organizations are discovering that it holds promise for a number of purposes. One of those purposes is information classification.

When an organization’s records are maintained using the Generally Accepted Recordkeeping Principles®, the records needed to demonstrate compliance or maintain continuity of business operations have been retained and are secure, available, and authentic. Unneeded records have been appropriately and defensibly disposed of in the normal course of business.

Maybe, though, an organization’s records are not in perfect compliance with the standards above. It is possible that people have been stashing electronic information on local drives.

And, probably not all of the information in that collaborative environment IT rolled out without the records department’s involvement is appropriately classified.

Most likely, even the document management system that is so diligently used is not as accurate as it should be since users are not perfect or uniform in making classification decisions.

Predictive coding can alleviate this situation. Using knowledge an organization already has in its systems, this technology can create classification schema for identifying and categorizing data currently held in unstructured or less formal systems.

Predictive coding is a wonderful tool in the records professional’s arsenal; it can help put an organization’s “house” in even better order than planning and training alone are able to achieve. Predictive coding also can identify areas of conflict in materials that have already been classified and provide uniformity going forward.

### Begin with a Seed Set of Information

The first step is to determine what types of information the organization has that is classified in accordance with the organization’s records taxonomy. The technology underlying predictive coding can use this information as a seed set for classifying or verifying the accuracy of the organization’s classifications.

### Leverage Context Provided by Data Sources

Just as the information within an organization’s financial system is classified in such a way that it can be used to provide context to other information, the document management system can be utilized in a similar fashion.

For example, any database that manages contacts for sales and marketing information will yield detailed data linking certain names to certain

lines of business or projects. And, human resources information can be used to identify when certain personnel were working in different capacities.

All of this data, when combined by the analytical tool used for predictive coding, can provide predictively classified documents for the records staff to verify. The classification system will watch the decisions of the records staff to fine tune the classification decision-making already developed.

### **Use the Classification Tool**

In this scenario, the two models of predictive coding described at the beginning of this article were combined to provide a finely tuned classification tool. Once a classification scheme has been developed and tested using the records department's affirmations or corrections to coding, the classification system is ready to go.

With the system primed with intelligence, the records professional can now turn it loose on the data stores within the organization. Let it filter those SharePoint® pages. Depending on the complexity of the network, it may be able to access local drives, thumb drives when connected, or even remote computers when connected to the network.

Before long, information will be classified with a higher, though not likely perfect, accuracy rate.

### **The Bottom Line**

Information needs to be classified correctly to be appropriately managed throughout its life cycle. Manual classification systems offer too many inefficiencies and inaccuracies to be used without attempting to identify more reliable systems.

Predictive coding offers a developing alternative to the manual, subjective process of coding and quality review. This technology, while currently in use as an early case assess-

## **Predictive Coding in the News**

As courts become more familiar with predictive coding, some are explicitly endorsing and recommending the practice, lending additional credibility to the use of the technology. Three recent cases are highlighted here.

In the Circuit Court of Loudoun County Virginia, *Global Aerospace, Inc. v. Landow Aviation* defendants argued that, with more than 2 million documents to review, it would take reviewers more than 20,000 hours to perform the task – 10 man-years of billable time. But with predictive coding, it would take less than two weeks at a cost of roughly 1% of the cost of manual, human-review. In April 2012, the court ordered that defendants could proceed with the use of predictive coding for processing and production of electronically stored information (ESI).

The *Global Aerospace* decision stopped short of an unqualified approval of predictive coding. For example, predictive coding cannot work effectively if a representative corpus is not used for the initial training. The *Global Aerospace* court noted that the receiving party was free to challenge the completeness of the contents of the production and the manner in which predictive coding was used for new documents.

In the 2011 New York case *Da Silva Moore v. Publicis Groupe LLC, et al.*, the defendant proposed using predictive coding technology to cull the responsive documents from a collection comprising more than 3 million documents. The plaintiffs objected to the methodology employed by the defendants. The Hon. Andrew J. Peck of the Southern District of New York stated in his *Da Silva Moore v. Publicis Groupe* decision that predictive coding “is not a magic, Staples Easy-Button, solution appropriate for all cases.”

Peck delivered a useful definition for this technology, also known as computer-assisted coding. “By [predictive coding], I mean tools (different vendors use different names) that use sophisticated algorithms to enable the computer to determine relevance, based on interaction with (i.e., training by) a human reviewer.” Peck continued, “This judicial opinion now recognizes that computer-assisted review is an acceptable way to search for relevant ESI in appropriate cases.” This sanction of the use of predictive coding was a judicial first.

In Illinois, the plaintiffs in *Kleen Products, LLC, et al. v. Packaging Corporation of America, et al.* moved to force the use of predictive coding by the defendants to produce a more accurate production than the documents that were collected using the more traditional method of keyword searching. This motion was made moot in August 2012 by an agreement between the parties to forgo the use of predictive coding at that time.

Predictive coding has been used in many cases that have received no attention simply because there was no dispute about its use.

ment tool in e-discovery, holds promise for wider use in the records and information management arena.

Records professionals should reach out to e-discovery colleagues and technology partners to explore

the prospects for utilizing this technology. **END**

*Doug Smith can be contacted at [dsmith@wileyrein.com](mailto:dsmith@wileyrein.com). See his bio on page 46.*



Introducing the official

## **GENERALLY ACCEPTED RECORDKEEPING PRINCIPLES® ASSESSMENT**

ARMA International's new assessment evaluates more than **100 information governance attributes**. It can be deployed across the enterprise to determine how a department, division, location, or your entire organization measures up against the **Generally Accepted Recordkeeping Principles®**. Take advantage of this set of **organization-improving attributes** today!

**Now Available! [www.arma.org/assessment](http://www.arma.org/assessment)**

Special thanks to our  
Generally Accepted Recordkeeping  
Principles® outreach sponsors:





# The Principles at Work in Cargill: Tools for Assessment, Communication

Julie Gable,  
CRM, CDIA, FAI



Information is one of the most vital strategic assets any organization possesses. Organizations depend on information to develop products and services, make critical strategic decisions, protect property rights, propel marketing, manage projects, process transactions, serve customers, and generate revenues. In short, well-governed information is critical to the success of any organization.

Despite its importance, there is often uncertainty and disagreement about what constitutes good *information governance* – which Gartner Inc. describes as an accountability framework that “includes the processes, roles, standards, and metrics that ensure the effective and efficient use of information in enabling an organization to achieve its goals” – and even more uncertainty as to how to achieve it.

Yet, this issue gains in importance daily as regulators, shareholders, courts, and constituents are increasingly concerned about organizations’ business practices and the records – which are defined as “any recorded information, regardless of medium or characteristics, made or received and retained by an organization in pursuance of legal obligations or in the transaction of business” – and the non-record information that support and document those practices.

In addition, society as a whole is concerned about governmental and business transparency and other information-related issues, such as privacy and security of personal information. These concerns are magnified by ever-growing data volumes and complexity that demand increasingly sophisticated governance and management.

To address these needs, ARMA International developed and promulgated the Generally Accepted Recordkeeping Principles® (the Principles).

*Editor's Note: Past issues of Information Management magazine have featured a series of articles discussing the individual components of the Generally Accepted Recordkeeping Principles® (the Principles) and the potential benefit of using its complementary Information Governance Maturity Model (Maturity Model) to assess recordkeeping effectiveness. This article, the first in a series, shares the knowledge of an information professional who has implemented the Principles and who generously shares her experience.*

**C**heryl L. Pederson, CRM, FAI, is the global records and information manager for Cargill, an international producer and marketer of food, agricultural, and

ways been part of the RIM program,” said Pederson, “Perhaps not spelled out the way they are now. Most of the Principles are part of the records lifecycle, the idea that information must be managed from creation through disposition.”

### **Taking RIM on the Road**

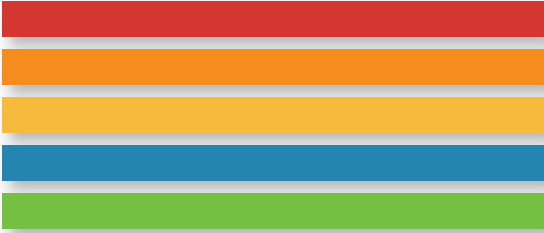
One of the first challenges Pederson took on was finding a way to instill accountability for records management in diverse business units. The current RIM organization structure began in November 2002, when Cargill created a task force comprising representatives from the audit, RIM, tax, and controller functions, and went on the road to visit the organization's largest business units to find out how records were

records management policies, procedures, best practices, consulting, and training to Cargill business units.

The RIM COE functions on a global basis to manage paper and electronic records. Pederson's staff of eight includes five records managers, whom she describes as “passionate” about what they do, with expertise in retention schedules, databases, and other specialties, such as electronic records and data archiving.

One of Cargill's major accomplishments has been to extend the Principle of Accountability far beyond the RIM department, putting in place a global RIM organization structure.

Pederson explained, “RIM reports



**... executives ... recognized the challenges of recordkeeping, the records silos that evolve, and the need for a standardized approach.**

industrial products and financial services headquartered in Minneapolis. Founded in 1865, it has grown to become one of the largest privately held companies in the world, employing 140,000 people in more than 65 countries.

Beginning her career with Cargill in 1972, Pederson held legal secretary, paralegal, and legal records administrator positions in the law department, then moved on to manage corporate records. She has managed the records and information management (RIM) function within Cargill since 1998.

“Cargill has always had records management – there are retention schedules dating back to the early 1950s – and the Principles have al-

being managed in the field.

The project lasted six months, culminating in a presentation to Cargill's chief executive officer that was allotted 20 minutes on the agenda, but lasted an hour, largely because the executives present had all been in the field during their careers and recognized the challenges of recordkeeping, the records silos that evolve, and the need for a standardized approach.

### **Creating RIM Center of Expertise**

With sponsorship from the vice president and senior controller, Pederson formed the Records and Information Management Center of Expertise (RIM COE) to provide

through Finance and the Controller's organization. Controllers have major responsibility for RIM at Cargill and have responsibilities regarding records management that are considered part of their job performance. The Controller's organization appointed approximately 225 records coordinators around the world – many of them management level. Each of them has site coordinators at their location – so there are about 1,000 people involved.”

There are also four RIM region managers who are available to answer questions within their region, so help is available regardless of time zone differences.

General objectives for each coordinator include tasks associated

with the Principles of Integrity, Retention, and Disposition. For example, coordinators must:

- Maintain a records inventory
- Provide RIM education within the business unit
- Update country-specific records retention schedules as part of a team that includes the tax manager, attorney, and controller, so the organization can respond to new laws
- Comply with records destruction requirements

"We are working to implement a new tool to provide graphs, percentages, and other reports to show where each business unit is as far as compliance with the RIM program and their required objectives," said Pederson. "The RIM COE does conference calls each quarter with records coordinators as well."

### Working with IT

Pederson has found the Principles helpful in working with the design team for the product Cargill purchased for its enterprise content management. Like many other products, this one requires the organization to have a strong model and vision of how the system will work within their specific environment and culture.

"As we worked through the information that must be input into the system to make it work – for example, classification plans, retention rules, metadata, and so forth – all of the Principles have come into the discussion, and they have been very helpful in trying to communicate with members of the IT team as to what had to be inherent in the way the system will work and why," Pederson explained.

She believes the Principles also have been useful in discussion with the legal team regarding automatic deletions – specifically, regarding the issue of pre-disposition searches to make sure the system is accurately identifying records that can be disposed of. The ability to demonstrate that the system will follow repeatable, consistent processes across the enterprise was very important.

The plan is to perform Maturity Model level 4 disposition as highlighted in the Principles' complementary Information Governance Maturity Model (Maturity Model) – meaning that disposition will be applied consistently, as will the suspension of disposition.

### Supporting Corporate Governance

Like many large organizations, Cargill has a statement of ethics and compliance that sets forth standards for conducting business throughout the world and serves as a guide for employees. Unlike some others, however, three of Cargill's seven guiding principles address RIM specifically, acknowledging the role the Principles of Compliance, Integrity, Transparency, and Protection play in good governance. (See sidebar "Cargill Ethics and Compliance Guiding Principles (Excerpt).")

More than just text on a webpage, all Cargill employees must sign off on the ethics and compliance statement. Pederson notes that Cargill's guiding principles have helped give the RIM program teeth and that her department references them in every presentation, training, and education session.

"There are thousands of laws involved in our 67 country-specific retention schedules," said Pederson, "and we establish retention time periods to ensure compliance with legal and business requirements. Retention schedules also indicate records subject to tax holds, such as books of account or records that support matters ad-

## Cargill Ethics and Compliance Guiding Principles (Excerpt)

**We obey the law.** Obeying the law is the foundation on which our reputation and Guiding Principles are built. As a global organization privileged to do business all over the world, we have the responsibility to comply with all of the laws that apply to our businesses.

**We keep accurate and honest records.** Accurate and honest records are critical to making sound business decisions and maintaining the integrity of our financial reporting. Our business information, in whatever form, must reflect the true nature of our transactions.

**We protect Cargill's information, assets and interests.** We count on one another to act as stewards of the organization. To preserve the value of Cargill, we protect the information and assets entrusted to us and avoid situations that may let personal interests influence our business judgment.



dressed on tax returns. Cargill also has mechanisms in place to impose litigation holds on paper and on electronic records, and holds are indicated on the RIM COE website.”

Protection of information assets is ongoing, explained Pederson. “Cargill has different levels of protected information. There is already a group responsible for information protection that actually does office walk-throughs to make sure protected information is not sitting out in the open or exposed to those who should not have access to it.”

Pederson cautions, however, that RIM is one component of information governance, not the be-all and end-all of it. Information governance has strategic aspects, as well as control elements.

### Assessing Maturity Levels

When the Principles first appeared in 2009, Pederson used them to do a self-assessment of Cargill’s RIM program to judge how the organization compared to the Maturity Model. As might be expected for a mature RIM program, Pederson found that many aspects of the program already operated at high levels.

Outstanding, of course, was the structure of the global program that has worked for 10 years. Another was the excellent program documentation and the many policies, procedures, and documented best practices on a wide range of information-related topics, including e-records archiving to offline and online storage media; official records identification; office and plant closings; outside

depends on the level of risk that a particular company is comfortable accepting. It also depends on the costs associated with attaining the higher level.”

### Using the Principles to Communicate

At Cargill, it’s never been a matter of trying to retrofit the Principles to the existing RIM program — they’ve been at work for some time, underpinning a strong, information-aware environment.

As the Cargill example shows, the Principles are tools that can enhance the participation of RIM, IT, and legal in designing new systems to deal with RIM implications. This is not a bad thing in an era of bring-your-own-devices, Facebook at work,



## The Principles are tools that can enhance the participation of RIM, IT, and legal in designing new systems to deal with RIM implications.

According to *Glossary of Records and Information Management Terms, 4th Ed.* (ARMA TR 22-2012), *information governance* is “a strategic framework composed of standards, processes, roles, and metrics that hold organizations and individuals accountable to create, organize, secure, maintain, use, and dispose of information in ways that align with and contribute to the organization’s goals.”

The Sedona Conference® Working Group on Electronic Document Retention and Production (WG1) proposes that there is a hidden value and return on investment in corporate information, and the reasons to govern it well go far beyond the need to manage risk and answer e-discovery requests efficiently.

service providers; web records; and backup tapes.

One revealing moment in the self-assessment was the realization that the RIM COE had not provided written guidance for records involved in joint ventures, acquisitions, and divestitures. There are now best practices and guidelines for the records’ aspects of these corporate transactions. Future plans include a best practice guideline dealing with conversions, migrations, and abandonment of electronic records and information systems.

While the self-assessment was useful, Pederson cautions on taking the Maturity Model too far. “We need to realize that not every organization wants or needs to be at a level 4 or 5 in every principle. It de-

instant messaging, and e-mails on tablets.

From a business perspective, the Principles and the Maturity Model are aids to conversations about where an organization perceives its information management risks and how it chooses to accept or ameliorate those risks. They also lead to a common understanding of which aspects of information management provide the greatest value and so deserve additional investment of resources. **END**

*Access the Principles and Maturity Model at [www.arma.org/principles](http://www.arma.org/principles).*

*Julie Gable, CRM, CDIA, FAI, can be contacted at [juliegable@verizon.net](mailto:juliegable@verizon.net). See her bio on page 46.*

# Fellows Forum Provides Snapshot of E-Records Management in Organizations

**Susan Cisco, Ph.D., CRM, FAI; Fred Diers, CRM, FAI;  
April Dmytrenko, CRM, FAI; John Isaza, Esq., FAI;  
Dave McDermott, CRM, FAI;  
John Montaña, J.D., FAI;  
Wendy Shade, FAI**

**W**hile attendees of the 2012 Fellow of ARMA International (FAI) Forum held September 23 at the 2012 ARMA International Conference & Expo in Chicago revealed that organizations are still struggling with many aspects of electronic records management, the audience polling indicated one particularly positive shift.

The percentage of legal, IT, and risk/compliance representatives among the standing-room-only crowd of 200+ people that attended the forum is an indication that these key disciplines are increasingly coming together with records and information management (RIM) to address the management of records and information assets.

Together, these three disciplines constituted nearly 30% of all attendees – up from just over 10% of attendees at the 2011 FAI Forum. Of these, 12% were legal (up from 7.4%), 10% were IT (up from 2.9%), and 7% were risk/compliance (up from 0%). RIM attendees made up 68% of the total (down from 77.9%).

While this result is encouraging, attendee polling also revealed that there was just a slight increase in executive leadership's understanding of the importance of information governance – from 52.2% in 2011 to 54% in 2012 – which the panelists found disappointing.

The forum, which was facilitated by April Dmytrenko, CRM, FAI, and



Wendy Shade, FAI, produced many insights into the present state of managing electronic records in the attendees' organizations. For this article, several panelists summarized the perspectives they presented on various aspects of the theme, "Pushing Unconventional Change: Redefining RM Practices," and the conclusions they drew from the interactive discussions among panelists and attendees and the audience polls that followed. Each of the summaries begins with a redefining statement in italics.

## **Few Practice Defensible E-Record Disposition**

**Susan Cisco, Ph.D., CRM, FAI**

*Organizations have invested in technology to manage structured, semi-structured, and unstructured information; in retention schedules to establish retention periods for records; and in information lifecycles to determine retention for everything else. However, the actual disposition (deletion) of electronic records is still elusive for most organizations.*

In fact, 81% of the attendees responded that their organizations are not systemically deleting electronic records according to their records retention schedule (unless records need to be preserved for legal holds). Just 15% said their organization is doing so, and 4% did not know.

The central business problem in the disposition of electronic records is that managing the entire information lifecycle in multiple applications and repositories is complex. Organizations may not know who owns the information, how it is used, or its value. To mitigate the unknowns, more than half of the participants expect to apply to electronic records a pre-approval process with required signoffs by stakeholders currently used for disposing of boxed physical records stored off-site.

Though in the minority, there are strong voices among RM professionals who think applying the paper disposition process to electronic records will not work due to their large volumes and disparate repositories. According

to Gimmel Group's Brian Tuemmler, it takes one employee more than five years to apply retention and activate a pre-approval process to dispose of records in one shared drive. This suggests that a pre-approval disposition process may be impractical and unrealistic due to the sheer volume of electronic records.

### Conclusion

Lack of appropriate technology is no longer a major barrier to defensible electronic record disposition. The biggest obstacles are associated with people and process, including determining:

- Best practices for applying retention to duplicates and to valuable informational material that may be useful for three or more years
- Whether notification/pre-approval is necessary for defensible disposition
- Best practice for initiating the event "triggers" that start the retention clock for event-based retention periods
- How to get people to make the behavioral changes required for defensible electronic record disposition

### Digital Data Preservation Plans Are Rare

Fred Diers, CRM, FAI

*Compliant and sustainable retention programs must incorporate authenticated preservation and disposition of object database management systems' (ODBMS) data with effective controls in place.*

ODBMS or enterprise resource planning (ERP) systems for managing financial and human resource data, such as SAP, Epicor, Infor, and Oracle, have proliferated during the past 20 years. These systems retain data elements or objects enabling unlimited variation of report generation. They are often associated with *data analytics*, the science of examining raw data with the purpose of drawing conclusions about that information and creating business intelligence.

## ARMA International Company of Fellows, Fellows Forum

The ARMA International Company of Fellows, with 47 members throughout the world, was established in 1990 to honor association members who have distinguished themselves through their outstanding achievements and contributions in records and information management and their noteworthy accomplishments at all levels of the association.

Each year, a panel comprising several Fellows of ARMA International (FAIs) presents a Fellows Forum on a topic meant to challenge conventional thinking. Created in 2008 by April Dmytrenko, CRM, FAI, the current FAI chair, and Wendy Shade, FAI, the forum opens with each panelist providing a brief perspective on an aspect of that year's topic, followed by audience polling and an animated and passionate exchange of opinions among panelists and attendees.

An organization can set retention requirements on the reports created, such as invoices, ledgers, reconciliation reports, purchase orders, budgets, payroll, personnel summary reports, and many others. The problem for records managers and IT is that even when the report created by the system is disposed, the data element in the ERP system used to create the report is still available and can be used to recreate the report.

When asked whether their organization had a digital preservation plan to preserve both the data elements and the electronic records created from them for specified retention periods, the alarming result was that only 21% indicated they did. Sixty-two percent said they did not, and 17% said they didn't know.

Due to implementation costs, lack of long-range strategies, and organizational ignorance, both public and private organizations can be entering the "digital dark ages" when it comes to ensuring access to critical information into the future.

### Conclusion

Too often, information professionals debating this issue become embroiled in the details: archivists argue

whether the data elements are a record or non-record; IT professionals debate the value of disposing of the data elements as a means of ensuring compliance; and records professionals argue that the data elements are not records. None of these arguments addresses the overarching issue, which is the effective management of ODBMS tools to meet risk and compliance issues related to the access, duplication, and spoliation of data elements within these systems.

### Regulation Is in Sight for Cloud Computing

John Isaza, Esq., FAI

*Cloud computing vendors will soon become as ubiquitous and comprehensive as utility companies. A whole new set of Federal Energy Regulatory Commission (FERC)-like regulations will result for the cloud computing industry.*

There are many parallels between the evolution of the cloud computing and electrical utility industries. When electricity began to reach people's homes in the late 18th century, homes had to have their own generators to claim it. Soon, enterprising providers created power grids that provided access to a much more scalable, reliable,

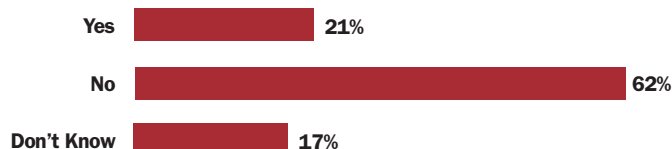


## Snapshot of E-Records Management in Organizations – September 2012

My organization is systemically deleting electronic records, following the records retention schedule, unless records need to be preserved for legal holds.



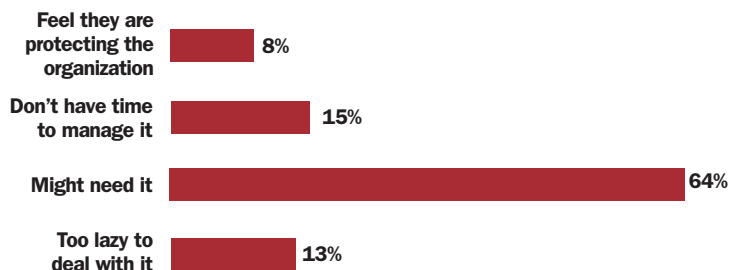
Does your organization have a digital preservation plan to preserve both object oriented data and electronic records for specified retention periods?



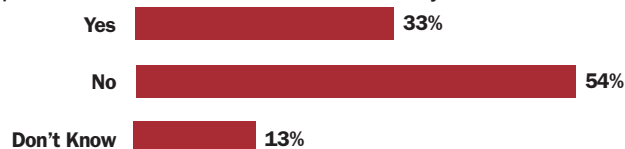
Do you know the exact location where your data resides in the cloud?



Why do you think people hoard outdated electronic information?



Does your organization employ a strategy in place for retiring outdated or superseded electronic records and data systems?



Source: Fellows of ARMA International Forum Attendee Poll, September 23, 2012, Chicago

and less intrusive source of electricity. Today, people don't really know or care how or from where they get electricity, but utility companies are subject to compliance requirements and controls like FERC.

Similarly, in the last few years, the cloud has become like those power grids created by the utility companies. The service is now offered from a central location to serve many people at once, while at the same time offering alternatives that are more scalable and reliable and take up less space inside the home or office. Organizations and individuals can "turn on" the cloud in the same way they can simply turn on their lights.

And, just as people don't really know how or from where they get electricity, the FAI Forum poll revealed that 83% of attendee respondents said they do not know the exact location where their data resides in the cloud. Additional polling also indicated they do not know if they have custody or control of their data stored in the cloud.

### Conclusion

Knowing where data resides in the cloud and whether that data is in the custody or control of the organization is critical for e-discovery and compliance. This is likely to lead to governmental intervention similar to what has occurred in the electric utility industry. Regulation will become necessary not only to guarantee protection of the consumer's wallet in using the services, but also to protect the consumer's data, ensure access to it when needed, and control it for retention, disposition, and, of course, for litigation.

### Must Hit 'Delete' on Information Hoarding

Dave McDermott, CRM, FAI

*Whatever the reason behind hoarding, if organizations are unsuccessful in promoting legally compliant electronic disposition by employees, they will have to take on disposition without employee intervention, as the risks are significant.*

The practice of hoarding electronically stored information (ESI) has become epidemic in both the business and personal world. Storing digital information is easy and cheap (e.g., an 8GB flash drive can be bought for \$6), although in many cases the stored information is irretrievable.

Organizations are increasingly at risk because of employees' retention of outdated ESI. The FAI Forum poll indicated that 64% of attendees believe that employees hoard data because they "might need it," 15% "don't have time to manage it," 13% are "too lazy to deal with it," and 8% "feel they are protecting the organization."

In many cases, the organization's answer to electronic hoarding is to simply add more storage. Another common option is for the IT department to send out a blast e-mail asking everyone to delete what is no longer needed. However, both of these options should draw severe criticism from the records manager.

Organizations need to evaluate why the hoarding is occurring. This entails determining the mind-set of the hoarders and whether they understand the consequences of retaining. Then, organizations need to be willing to punish those who choose to ignore policy and continue to save outdated electronic information.

### **Conclusion**

First, organizations must have in place the proper processes, policies, and tools for managing ESI. They must promote legally compliant electronic disposition, and, if necessary, they must accept the risk of destroying information without employee intervention (i.e., employ automated destruction of information). Ultimately, management must make a risk assessment, document its decisions, and be willing to delete, delete, delete.

### **Big Data Brings Big Risk**

John Montaña, J.D., FAI

*Organizations will never manage*

*their big data systems properly until they come to terms with the fact that they don't really know much about what's in them. A lot of the time, they're flying blind and confronting unquantified risks.*

Organizations' data is out of control. In its 2012 big data forecast, IDC projected data sets would grow at 60% a year or more. Whatever is done to manage it, every year will need to grow by 60% just to keep pace with the status quo.

Unfortunately, 54% of the FAI Forum respondents said their organizations do not employ a strategy for retiring outdated or superseded electronic records and data systems. One-third said they do, and 13% said they don't know.

This means that next year, organizations will still be trying to manage this year's data. And in five years, they'll be buried – if they're not already.

Pretending that the traditional rules work is a fallacy. They don't. Their basic assumption – that organizations can name, find, and touch every data object in their organization – wasn't true 20 or even 30 years ago. It certainly is not true today. So, what now?

### **Conclusion**

First, throw out the old playbook. Use it, and be doomed – data growth will outstrip any resources that can be thrown at the problem. So, throw out the tweezers and get out the axe.

Second, live with risk – it is built in. So, think like an insurance company. While organizations can't predict exactly when or how bad the "big event" will be, they can estimate and monetize the cost. It becomes part of their business model.

The goal shouldn't be to avoid risk and uncertainty, but to embrace it and plan for it. Both the wins and the losses should be part of the overall strategy and the resources allocated accordingly. *That's a winning strategy.*

So, welcome to the 21st century. It's going to be an exciting time, but not one for the faint of heart. The future belongs to the bold.

### **The Time Is Now to Redefine RIM Practices**

Most, if not all, organizations are struggling with effective and legally compliant management of their electronic records, data, and content. Further complicating the struggle are the related challenges of discovery, regulations, global management, disparate technology, legacy data, and merger, acquisition, and divestiture.

As an industry that traditional, sound records management practices have served well for decades, reimagining those practices in a whole new context is daunting. From effective destruction strategies to the challenges presented by hoarding massive quantities of information, the message from all of these panelists was clear.

RIM professionals must think differently and evolve their programs and approaches in order to effectively deal with this paradigm shift. What worked in the past will not work in the future without significant modification.

*Susan Cisco, Ph.D., CRM, FAI, can be contacted at [susan.cisco@gimml.com](mailto:susan.cisco@gimml.com). Fred V. Diers, CRM FAI, can be contacted at [fdiers@grmdocument.com](mailto:fdiers@grmdocument.com). April Dmytrenko, CRM, FAI, can be contacted at [admytrenko@huronconsultinggroup.com](mailto:admytrenko@huronconsultinggroup.com). John Isaza, Esq., FAI, can be contacted at [John.Isaza@RIMonLaw.com](mailto:John.Isaza@RIMonLaw.com). Dave McDermott, CRM, FAI, can be contacted at [davidm@fhbsea.com](mailto:davidm@fhbsea.com). John Montaña, J.D., FAI, can be contacted at [jcmontana@montana-associates.com](mailto:jcmontana@montana-associates.com). Wendy Shade, FAI, can be contacted at [wendy.shade@ironmountain.com](mailto:wendy.shade@ironmountain.com).*

*See FAI Forum panelists' bios on pages 46 and 47.*

# Drowning in Information: Proactively Managing the Onslaught

Sheila Taylor, CRM

If you are a “modern knowledge worker with several e-mail accounts, the latest smartphone and an insatiable appetite to know – that is, to consume all available information . . . [often] to the point of unhealthy and unproductive bombardment” – then *Information Bombardment: Rising Above the Digital Onslaught* is for you.

Divided into three parts, the book explores the many varied reasons for information bombardment, analyzes its implications, and offers some guidance for combating it.

## Impacts of Information Overload

The first 11 chapters explore the context and issues related to information bombardment. Author Nick Bontis, Ph.D., examines why humans crave knowledge and illustrates how technological advances resulted in today’s explosive volume of information.

He also illustrates how newer technologies that allow constant access to vast amounts of information, such as the Internet, negatively impact our quality of life because we lack the ability to filter, organize, and prioritize.

Chapters 12-16 address the impact of information bombardment for individuals, groups, organizations, and societal institutions (e.g., government):

- Individuals – Bontis examines the chronic stress of trying to manage too much information and how it negatively impacts personal relationships and impairs health by causing such things as memory loss.
- Groups – He discusses the “information hoarding” behavior that

emerges when knowledge sharing is not encouraged.

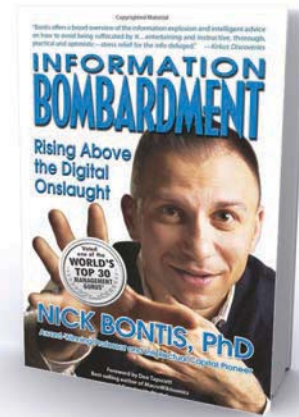
- Organizations – He explains why there is a loss of intellectual capital because knowledge is not easily transferred or codified, and knowledge obsolescence occurs at an alarming rate.
- Institutions – Bontis argues that the inability to efficiently and effectively convey information can have significant, widespread societal impacts. He uses as an example the deaths that might have been prevented during Hurricane Katrina had information sharing been better coordinated.

## Solutions: In Short Supply

Chapters 17-20 provide “therapeutic solutions” or “prescriptions” for combating information bombardment. For the most part, these solutions are generalized ideas that don’t cover new ground or offer specifics for implementation.

Bontis allocates just less than 200 pages to describing information bombardment, another 100 pages to examining its implications, and a mere 36 pages to providing guidance for combating it. This uneven distribution, coupled with his repetition of several examples, builds impatience and frustration.

The last part of the book is particularly unsatisfying given its brevity and the simplicity of many of the recommended solutions (e.g., use auto-folding rules to tame your inbox). Bontis also provides little detail about organizational solutions in Chapter 19, instead referring the reader to several of his published articles. Because knowledge management is the au-



## Information Bombardment: Rising Above the Digital Onslaught

Author: Nick Bontis, Ph.D.

Publisher: Institute for Intellectual Capital Research Inc.

Publication Date: 2011

Length: 432 pages

Price: \$28.95

ISBN-13: 978-0-9867945-0-6

Source: [www.iicr.ca](http://www.iicr.ca)

thor’s recognized field of expertise, this should have been the strongest section of the book.

The book lacks a final, summarizing chapter or footnotes for the numerous cited statistics and studies. While the further readings at the end of each chapter presumably include the sources of the cited items, a reader shouldn’t have to work that hard to find a source.

## Parting (from Information) Is Sweet Sorrow

*Information Bombardment* is engaging and easy to read, and the author uses humor and anecdotes to illustrate many of his arguments. For example, he illustrates how information bombardment has negatively affected him (and his family) by



recounting his inability to enjoy the beauty of a Grecian sunset when he couldn't get reception on his BlackBerry. However, while an entertaining read for general audiences and marketed as a resource for "working smarter, not harder," the book's value to records and information management (RIM) practitioners is somewhat limited.

RIM practitioners can benefit from the book in two ways. First, they can leverage through RIM training and communications the insights as to why employees find it so difficult to part with information. Second, they can gain an appreciation into how many employees, managers, and other stakeholders interact with information and learn about the infor-

mation management solutions offered by providers. It is prudent for RIM practitioners to be aware of such perspectives, especially when (as in *Information Bombardment*) they do not consider RIM best practices. **END**

*Sheila Taylor, CRM, can be contacted at [staylor@eimc.ca](mailto:staylor@eimc.ca). See her bio on page 47.*

## Needed: An Information Consultant

**Clare Cameron**

**F**or information management professionals working in large organizations, the idea of being an independent consultant can have universal appeal: working from home in your favorite sweatpants, choosing your own hours, and getting away from corporate politics. The reality of consulting as a career, however, can be extremely challenging and uncertain. *Information Consulting: Guide to Good Practice* offers a basic foundation for understanding the skills and talents required for success in this unique and growing field.

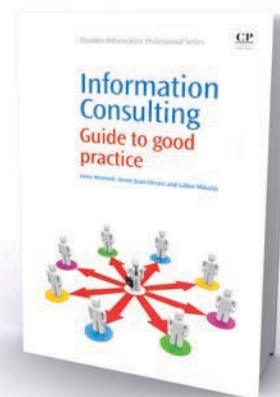
*Information Consulting* is co-authored by three individuals with ample academic and professional experience in library and information studies, information science, and IT. Irene Wormell, Annie Olesen, and Gábor Mikulás offer a broad and high-level perspective on the information consulting profession from their years spent working internationally. The publication is relatively short, simply worded, and easy to navigate as a practical handbook for assessing skills and establishing standards for an information consulting business.

The authors target the information consulting beginner and offer very lit-

tle knowledge of the dynamics and processes involved in consulting. This is an unfortunate shortcoming, as much of *Information Consulting* reads as a fairly generic how-to guide on consulting best practices for all professionals. While effective communication, networking, and relationship building are described as essential skills for consulting success, these points will come as no surprise to readers who have even a basic understanding of essentials in the typical consultant-client relationship.

An entire section on business planning similarly reads as a quick guide for starting any new entrepreneurial venture. With all of their combined years of experience, it is disappointing that the authors do not distinguish this aspect of *Information Consulting* more clearly from other general consulting guides available in the marketplace today.

The authors' practical knowledge finally shines through in the final chapters, where they offer an impressive collection of real-client feedback and case studies. An overview of current issues in the information management industry, along with a discussion of changes affecting traditional librarian



### **Information Consulting: Guide to Good Practice**

**Authors:** Irene Wormell, Annie Olesen, and Gábor Mikulás

**Publisher:** Chandos Publishing

**Publication Date:** 2011

**Pages:** 218

**Price:** \$45

**ISBN-13:** 978-1-84334-662-3

**Source:**

[www.chandospublishingonline.com](http://www.chandospublishingonline.com)

roles, covers some of the current issues facing information professionals.

At this point, the authors use straightforward and engaging language to illustrate the genuine challenges and possible routes to success in several real-life information consulting scenarios. This is an outstanding and truly beneficial section, as it offers the

most particular and believable illustration of the complexity involved in consulting on information management issues as a profession.

Throughout *Information Consulting*, the authors reference an impressive collection of academic and media publications, including client surveys from existing information consultant partnerships. Readers will gain an extensive bibliography for further research on the information consulting industry.

Common measures for organizational dynamics, such as the Hofstede

and Trompenaars scales, are also referenced as a way of placing the information consulting field in a broader business context alongside such issues as power distance, assertiveness, and uncertainty avoidance.

While the introduction of *Information Consulting* suggests that readers will receive an in-depth look at this unique branch of consulting services, the authors offer plenty of good, but wide-ranging, advice that could apply to anyone interested in starting a management consulting career.

Though the book will be most valu-

able as an initial starting point for understanding the idea of information consulting, more experienced readers will appreciate the real-life scenarios, practical checklists, and case study appendices. Perhaps the authors will consider issuing an expanded edition of this guide, offering more specific advice and recommendations directly from their own experiences as independent information consultants. **END**

Clare Cameron can be contacted at [clare.cameron@niagararegion.ca](mailto:clare.cameron@niagararegion.ca). See her bio on page 47.

## The Shifting Landscape of Electronic Personal Information

Andrew Altepeter

**T**he way people create, store, and manage their personal information is in the midst of a radical transformation. In the course of a few short decades, most people will have moved from paper to local electronic storage to largely cloud-based solutions to manage their information.

In the coming years, correspondence, personal photographs, critical medical and financial records, and other personal records not only will be stored electronically, but they also will be accessed through websites hosted remotely across countless servers in different parts of the world.

This presents numerous new challenges, both for individuals hoping to manage the infinitely expanding amount of personal information and for information professionals who hope to preserve it for business use or historical study.

### Getting Ahead of the Curve

Unfortunately, the literature in

personal information management always seems to be one step behind the moving target and, according to Christopher A. Lee in his publication *I Digital: Personal Collections in the Digital Era*, "limited to a few scattered journal articles and research project websites." This book, featuring nine other contributors, is a forward-looking attempt to fill that gap and bring experts from other fields into a new, unified body of literature.

Lee divides the book into three parts. The first deals with the foundations of personal collections; the second identifies the types of electronic personal information; and the third offers strategies for managing these types of data. Each part contains several chapters offering approaches to the larger themes by authors from a variety of backgrounds.

In his opening chapter, Lee identifies two existing streams of literature from which he draws personal



### **I Digital: Personal Collections in the Digital Era**

**Author: Christopher A. Lee**

**Publisher: Society of**

**American Archivists**

**Publication Date: 2011**

**Length: 384 pages**

**Price: \$70**

**ISBN-13: 978-0838911556**

**Source: : [www.archivists.org](http://www.archivists.org)**

information management (PIM) and archives and records management (ARM). Traditionally, PIM has emphasized the ways individuals create

and manage their own information, and ARM represents the methods organizations and institutions use to manage and preserve their collective information.

However, the boundaries between these two fields are quickly disappearing as individuals often co-mingle their personal information with work information, and IT organizations move toward a “bring-your-own-device” model.

### Grappling with the Issues

Readers will find useful updates to traditional archival concepts. The abundance of cheap storage, search technologies, multiple provenances, and Web 2.0 applications (e.g., Facebook, Twitter, and Flickr) fundamentally impact information management and ownership issues.

One only needs to access a corporation’s Facebook page to see that the information exchange between the organization and its customers has fundamentally changed. Internal social media and wikis, each mingling company data with employee personal information, add further complexity.

*I Digital* is backed by scholarly sources cited in easily accessible endnotes, and a detailed bibliography offers a starting point for readers looking to further explore and develop the challenges and opportunities in personal information management.

An issue the book’s contributors often overlook is the growing challenge surrounding data privacy and the protection of personally identifiable information, perhaps due to the bias toward museums and archives, rather than organizations that manage active records. A spirited discussion addressing the tension between the need to make active records accessible and the need to protect personal information in cloud-based environments would strengthen the book.

### Learning from Other Disciplines

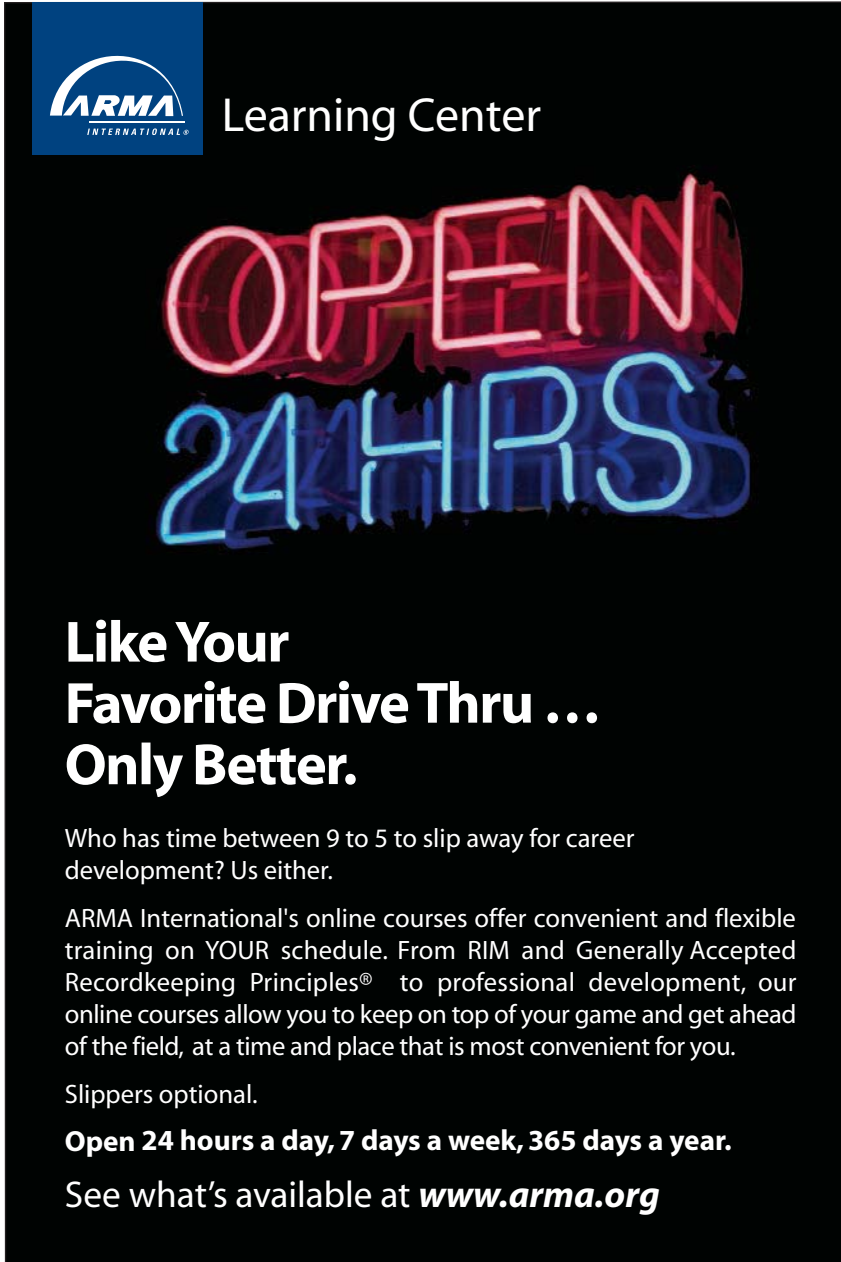
Readers of *Information Management* will find much of use within *I*

*Digital*. The challenges of archivists who manage personal collections are often similar to those as corporate information governance professionals who must ensure access, preservation and integrity across rapidly transforming platforms of digital storage and collaboration on employee-owned devices.

Perhaps even more important, *I Digital* invites information governance professionals to a discussion on

personal collections that had long been reserved to archivists, librarians, and museum professionals. This inclusive approach will ensure that information professionals with unique goals are nevertheless able to learn from principles and methods of the other. **END**

*Andrew Altepeter can be contacted at [andrew.altepeter@gmail.com](mailto:andrew.altepeter@gmail.com). See his bio on page 47.*

The advertisement features a dark background. In the top left corner is the ARMA International logo, which consists of a blue square containing a white stylized 'A' and the text 'ARMA INTERNATIONAL' below it. To the right of the logo, the words 'Learning Center' are written in a white, sans-serif font. Below this, the words 'OPEN' and '24 HRS' are displayed in large, glowing, 3D-style letters. 'OPEN' is in red and '24 HRS' is in blue. Below the glowing text, the headline 'Like Your Favorite Drive Thru ... Only Better.' is written in a large, bold, white sans-serif font. Underneath the headline, there is a paragraph of white text: 'Who has time between 9 to 5 to slip away for career development? Us either.' This is followed by another paragraph: 'ARMA International's online courses offer convenient and flexible training on YOUR schedule. From RIM and Generally Accepted Recordkeeping Principles® to professional development, our online courses allow you to keep on top of your game and get ahead of the field, at a time and place that is most convenient for you.' Below this, the text 'Slippers optional.' is written in a smaller white font. Then, 'Open 24 hours a day, 7 days a week, 365 days a year.' is written in a bold white font. Finally, at the bottom, the text 'See what's available at [www.arma.org](http://www.arma.org)' is written in white, with the website address in a bold font.



# AUTHOR INFO

## Contact Information



Altepeter



Cameron



Cisco



Diers



Dmytrenko



Gable



Isaacs



Issacs



McCollum



McDermott



Montaña



Taylor



Shade



Smith

### Rolling the Dice with Predictive Coding: Leveraging Analytics Technology for Information Governance page 22

**Leigh Isaacs** is director, records and information governance, for Orrick, Herrington & Sutcliffe LLP. She has more than 25 years of experience in the legal field and more than 10 years of experience in information management. An active member of ARMA International since 2004, Isaacs serves as president for the ARMA International Greater Washington, D.C., Chapter. She has published numerous works, regularly speaks on records management issues, and has provided records consulting services to other law firms and organizations. Isaacs can be contacted at [leigh\\_isaacs05@yahoo.com](mailto:leigh_isaacs05@yahoo.com).

### A Roadmap for Effective Information Governance page 27

**Sam McCollum** is the president of SIMC Coaching, which assists organizations in developing their information governance and strategic information management capabilities. He has more than 28 years of records and information management consulting experience in North America. McCollum has developed and presented at educational institutions and at regional and international conferences. He has created strategic design tools that complement the Generally Accepted Recordkeeping Principles® and assist in designing strategic information management deliverables as a foundation for information governance. McCollum can be contacted at [sm.mccollum@gmail.com](mailto:sm.mccollum@gmail.com).

### RIM Fundamentals Series: Thinking Outside the Box: Use Predictive Coding as a RIM Tool page 30

**Doug Smith**, business solutions manager for Wiley Rein LLP, has been managing legal records and information for more than 20 years. He has worked extensively to develop systems to ensure the efficient, effective, and compliant handling of records. He recently co-led the revision of the ARMA International *Glossary of Records and Information Management Terms*, 4th Ed.

(ARMA TR 22-2012) and has assisted with developing guidelines about records and information management and IT relations, litigation support, and electronic messages as records. Smith can be reached at [dsmith@wileyrein.com](mailto:dsmith@wileyrein.com).

### The Generally Accepted Recordkeeping Principles® Series: The Principles at Work in Cargill: Tools for Assessment, Communication page 34

**Julie Gable, CRM, CDIA, FAI**, is president and founder of Gable Consulting LLC. She has more than 25 years of experience specializing in strategic planning for electronic records management, including business case development, cost-benefit analysis, requirements definition, and work plan prioritization. In 2003, she was named a Fellow of ARMA International. Gable has authored numerous articles and frequently speaks at national and international conferences. She holds a master's degree in finance from St. Joseph's University and a bachelor's degree in management from Drexel University. Gable can be contacted at [juliegable@verizon.net](mailto:juliegable@verizon.net).

### Fellows Forum Provides Snapshot of E-Records Management in Organizations page 38

**Susan Cisco, Ph.D., CRM, FAI**, is a director in Gimmal Group's Enterprise Content and Records Management (ECRM) services organization. She holds a master of library science degree and a Ph.D. in library and information science from the University of Texas at Austin. Cisco can be contacted at [susan.cisco@gimmal.com](mailto:susan.cisco@gimmal.com).

**Fred V. Diers, CRM, FAI**, has 40 years of records and information management experience for multi-national organizations. He has successfully implemented sustainable programs for companies operating in 80 countries. A significant component involves developing business rules for information, including indexing, metadata, and retention standards. Diers can be contacted at [fdiers@grm-document.com](mailto:fdiers@grm-document.com).

**April Dmytrenko, CRM, FAI**, is managing director with Huron Legal, serving as part of the RIM consulting leadership team. Her expertise is in advising major corporations on strategic initiatives, best practices, information governance, and enterprise-wide programs and retention policies. Dmytrenko is chair of the Fellows of ARMA International. She can be contacted at [admytrenko@huronconsultinggroup.com](mailto:admytrenko@huronconsultinggroup.com).

**John Isaza, Esq., FAI**, heads the records and information management (RIM) practice at Rimon Law. He has developed RIM programs for *Fortune* 100 companies, including retention research in 135+ countries. Previously, Isaza served as general counsel to a publicly traded medical device manufacturer, now owned by Abbott. He can be contacted at [John.Isaza@RIMonLaw.com](mailto:John.Isaza@RIMonLaw.com).

**Dave McDermott, CRM, FAI**, is the records manager for the Federal Home Loan Bank of Seattle. He has been in records and information management for more than 30 years, has served as president of ARMA International, and is the president elect of the Institute of Certified Records Managers. McDermott can be contacted at [davidm@fhlbsea.com](mailto:davidm@fhlbsea.com).

**John Montaña, J.D., FAI**, is a principal of Montaña & Associates Inc., a records and information management (RIM) consulting firm. He advises corporations, law firms, and non-profit organizations on RIM. Montaña is widely recognized as one of the foremost records management experts in the country. He holds a juris doctor from the University of Denver. He can be contacted at [jcmontana@montana-associates.com](mailto:jcmontana@montana-associates.com).

**Wendy Shade, FAI**, is program manager with Iron Mountain. She has more than 30 years of experience in the field, served as president of ARMA International in 1990, and received the Distinguished Service Award in 1997. Shade can be contacted at [wendy.shade@ironmountain.com](mailto:wendy.shade@ironmountain.com).

guished Service Award in 1997. Shade can be contacted at [wendy.shade@ironmountain.com](mailto:wendy.shade@ironmountain.com).

## Drowning in Information: Proactively Managing the Onslaught page 42

**Sheila Taylor, CRM**, is a partner and the chief executive officer at Ergo Information Management Consulting (formerly the Southern Ontario office of CONDAR Consulting Inc.). She has more than 20 years of records and information management (RIM) experience as a consultant, practitioner, and educator. A frequent speaker at ARMA International events at the chapter, region, and international levels, Taylor also presents RIM education sessions at industry-specific conferences in various fields, such as municipal government and association management. Taylor can be reached at [staylor@eimc.ca](mailto:staylor@eimc.ca).

## Needed: An Information Consultant page 43

**Clare Cameron** is an information management coordinator with Niagara Region and a director at large for the Southwestern Ontario Chapter of ARMA International. Cameron can be contacted at [clare.cameron@niagararegion.ca](mailto:clare.cameron@niagararegion.ca).

## The Shifting Landscape of Electronic Personal Information page 44

**Andrew Altepeter** is an information governance analyst at Motorola Solutions Inc., where he is responsible for records management and IT audits for Sarbanes-Oxley and Payment Card Industry compliance. He has previous experience in records management and institutional archives. He earned a bachelor's degree in history from Marquette University and a master's degree in public history from Loyola University Chicago. Altepeter can be reached at [andrew.altepeter@gmail.com](mailto:andrew.altepeter@gmail.com).

Vendors, Products & People

# BULLETIN BOARD



## Zasio Enterprises, Inc.

Versatile Retention™  
Versatile Retention International™

Zasio Enterprises is pleased to announce the release of Versatile Retention and Versatile Retention International v9. Zasio's Retention Software Solutions for Domestic and/or Global Retention Schedule Management

Call Zasio sales at **800.513.1000, opt 1**, to learn more.



RSD has released its RSD GLASS 3. This new version enables governance of content in the "wild," such as shared drives and e-mail stores. Governing content on shared drives is a concern of many information governance and records management professionals, so RSD recently held a webinar titled "Solving the Information Governance Challenge for Shared Drives." The webinar covered the need to establish an information governance program that manages all content, wherever it resides. To view the recording of the webinar, please visit [www.rsd.com/ig-shared-drives-webinar](http://www.rsd.com/ig-shared-drives-webinar).



## Reach Your Target: Information Management Decision Makers and Influencers



There's only one source  
you can count on  
to give you the impact  
you want:

ARMA INTERNATIONAL'S  
**INFORMATION  
MANAGEMENT  
MAGAZINE**

**Karen Lind Russell/Krista Markley**  
Account Management Team  
+1 888.277.5838  
[Karen.Krista@armaintl.org](mailto:Karen.Krista@armaintl.org)

# AD INDEX Contact Information

- 15, 17 **Access Sciences**  
800.242.2005 – Intl. 904.213.0448 – [www.accesssciences.com/contactus](http://www.accesssciences.com/contactus)
- FC **Archive Systems**  
800.899.3975 – [www.archivesystems.com](http://www.archivesystems.com)
- 3 **DHS Worldwide Software**  
800.377.8406 – Intl. 904.213.0448 – [www.dhsworldwide.com](http://www.dhsworldwide.com)
- 13 **Downstream Data Coverage**  
[www.downstreamdata.com](http://www.downstreamdata.com)
- 21 **Institute of Certified Records Managers**  
877.244.3128 – [www.ICRM.org](http://www.ICRM.org)
- BC **Iron Mountain**  
[www.ironmountain.com/advantage](http://www.ironmountain.com/advantage)
- 19 **2013 MER Conference**  
[www.merconference.com](http://www.merconference.com)
- 5 **NAID**  
[www.naidonline.org](http://www.naidonline.org)
- IFC **RSD**  
[www.rsd.com](http://www.rsd.com)
- 21 **The Sedona Conference® Institute<sup>SM</sup>**  
[www.thesedonaconference.org](http://www.thesedonaconference.org)
- IBC **Zasio Enterprises Inc.**  
800.513.1000 Opt. 1 – [www.zasio.com](http://www.zasio.com)





## Thinking about advancing your career?

**ARMA International's CareerLink** has helped hundreds of members find new and exciting positions in the information management profession.

**The Job Board** lists current openings from companies around the globe. You can find valuable resources and tools to help your career evolve.

Create your confidential profile and get started today at [www.arma.org/careers](http://www.arma.org/careers).



“ Is there an **easy-to-use, intuitive**, software tool that will help me **create** and **manage** a legally compliant retention schedule? ”

*Yes! Zasio can help.*



**ZASIO**

RECORDS & DOCUMENT MANAGEMENT EXPERTS

**Versatile Retention™ & Versatile Retention International™.** Zasio's powerful and intuitive records retention software will keep your schedule up-to-date, under control, and legally compliant. Finding and complying with ever-changing retention rules has become increasingly burdensome for companies due to the growing complexity and breadth of the law. For a comprehensive solution to this business challenge, Zasio can help.

*Call the experts at Zasio to discuss your Records Information Management questions and challenges today.*

**800 513 1000, Opt. 1**  
**[www.zasio.com](http://www.zasio.com)**



# EMPLOYEES WASTE VALUABLE HOURS EACH WEEK CHASING HARDCOPY DOCUMENTS.

(SOMETIMES, THEY EVEN FIND THEM.)

Companies today are trying to find new ways to cut costs. Chances are, yours is too. And yet, you may well be missing out on a major opportunity. Simply by making your records management more efficient, you can dramatically cut operational costs.

Eliminating the time employees waste searching for documents is just one way to potentially put money back on your bottom line.

Learn more about how Iron Mountain® can help you cut costs and turn records management into a source of opportunity at: [ironmountain.com/advantage](http://ironmountain.com/advantage)

