

INFORMATION MANAGEMENT

AN ARMA INTERNATIONAL PUBLICATION

JANUARY/FEBRUARY 2014



Taking **Control** of E-Mail with **Uniform Retention** **Rules**

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Order in the Courts!
RM Principles for
the Judiciary

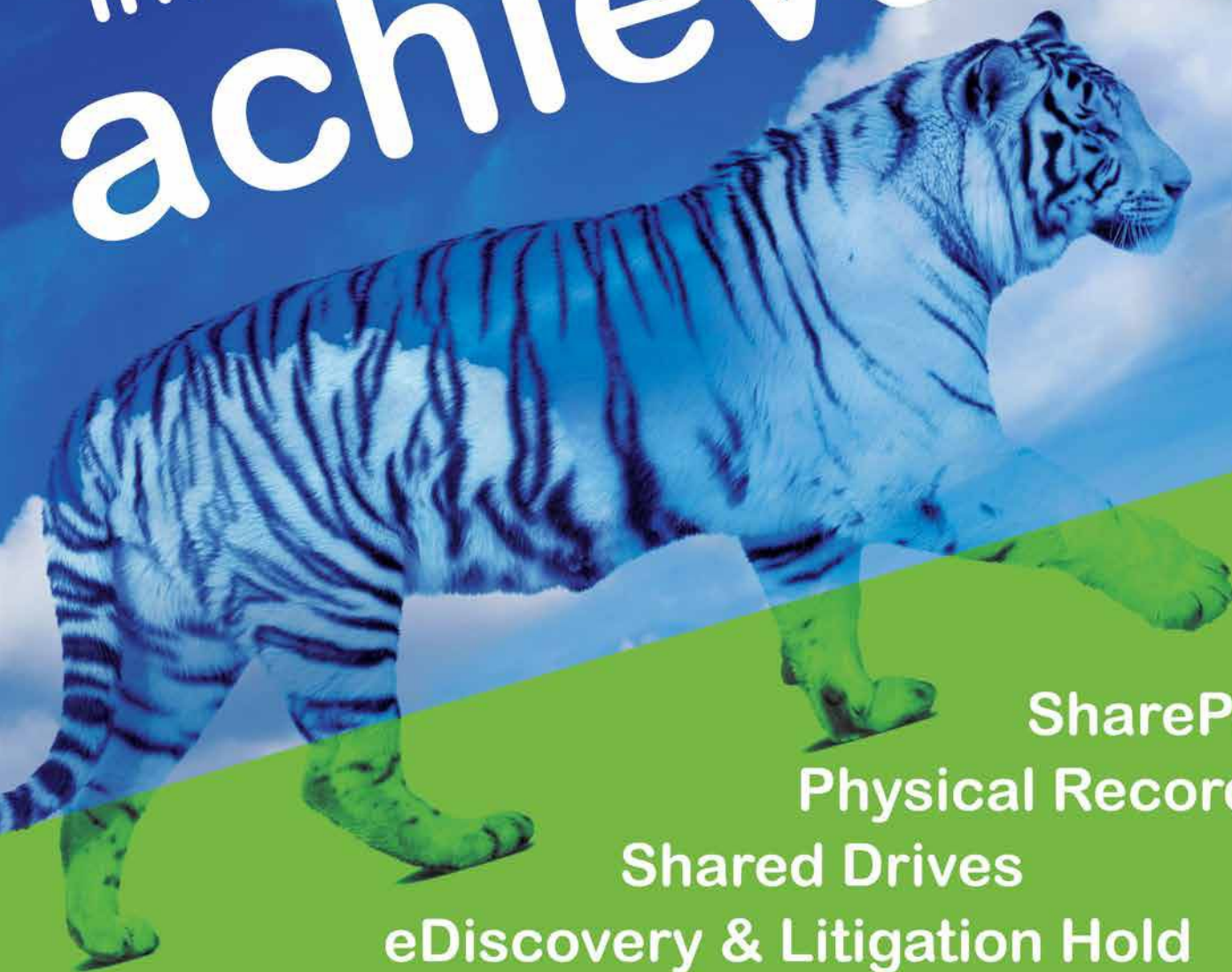
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The Big Demand for
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INFORMATION MANAGEMENT

JANUARY/FEBRUARY 2014 VOLUME 48 NUMBER 1

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Setting Career Goals for the New Year

The New Year is a time when we typically reassess our lives, including our professions. If you are thinking about your goals for 2014, you will find the articles in this issue rich with ideas for advancing – or even changing – your career.

If your organization is struggling to get control of the escalating volume of e-mail in users' mailboxes, you might consider whether implementing uniform retention rules could be the solution. Bill Saffady, Ph.D., writes that compared to schedule-based retention, the uniform retention approach is easier to understand, requires less decision-making and interpretation by mailbox owners, and can be implemented quickly with a minimum of employee training. Saffady's article provides a practical method for taking this approach. Stepping up to solve the e-mail challenge in your organization this year would certainly be a career booster!

Perhaps your organization is looking to wring more value out of its big data. The big data explosion has produced a big demand for data analysts and a great opportunity for RIM professionals to take a new career path, Nancy Barnes, Ph.D., CRM, CA, writes. Barnes explains the big data trend and shares the research she did to identify graduate degree and cer-

tificate programs that could help you get the education you might need to move into a data analyst career.

Or, are you interested in working in a different industry sector? Nial Raaen, CRM, writes in "Order in the Courts!" about the unique challenges of judicial records management and the principles that were recently published to help U.S. state courts assess and implement effective judicial records management. Because they are based on the Generally Accepted Recordkeeping Principles®, you likely are well-versed enough already to be able to make a smooth transition.

Unless you are planning to make the jump to another profession altogether, expanding your information governance (IG) skills and knowledge this year is sure to help you move forward in your career. Read "Making the Leap to an Information Governance Role" to learn how to assess your skills and knowledge relative to those needed to play an enterprise-wide strategic role in your organization and how to gain those skills and knowledge.

One strategy for expanding your knowledge in the other IG disciplines of legal, audit, privacy, and IT is to meet with your organization's leaders in those areas to learn what they do, what tools they



use, and what their challenges are. That also could lay the foundation for "Forging a Partnership with IT to Build a Solid IG Program," as Blake Richardson, CRM, CIP, suggests must happen for effective IG. IT's challenges around retention storage, data migration, and data backups are all areas where RIM could collaborate with IT, Richardson writes. "Today, IT and RIM must rely on each other to ensure the proper management of all information."

Here's our best wishes for you to meet your goals in 2014! Please let us know what topics you would like to learn more about in these pages this year by e-mailing editor@armaintl.org.

Vicki Wiler
Editor in Chief

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COMPLIANCE

Credit Card Transaction Standard Updated

Version 3.0 of the Payment Card Industry Data Security Standard (PCI DSS) and Payment Activity Data Security Standard (PA DSS) became effective January 1, but organizations will have until at least December 31 to make the transition.

According to the PCI Security Standard Council, version 3.0 helps organizations make payment security part of their business-as-usual activities by introducing more flexibility and an increased focus on education, awareness, and security as a shared responsibility.

There has been some debate in the security industry about the effectiveness of the standard, particularly in light of major data breaches – such as the Adobe breach in October – by organizations that have been in compliance with the standard.

“Whatever your opinion, the new PCI DSS 3.0 appears to be moving from a security check box posture to a more holistic risk management approach,” said Bernard Zelmans, general manager for EMEA at security management firm FireMon, in an e-mail to *ComputerWorld UK*’s Lucian Constantine. “This will hopefully entail a more security centric approach to PCI compliance rather than the least common denominator approach of earlier versions of PCI.”

One area not addressed by the

RIM TRENDS

5 Trends Reshaping Records and Information Management

Changing technology and increased regulation have made it imperative that enterprise architecture and records management professionals work more collaboratively to protect and manage the enterprise’s information. That’s why information governance is “emerging as a term that better describes and supports a holistic, life cycle view of the creation, use and protection of digital information,” wrote Forrester’s Cheryl McKinnon in a recent *KMWorld* article. She went on to describe the top five trends that are reshaping the profession:

1. **Records management shifts to information governance.** Many businesses still lack confidence in their electronic records management programs, compliance initiatives, and e-discovery preparedness. Meanwhile, vendors are taking fresh approaches to addressing compliance, categorization, and retention requirements. The shift to a more comprehensive and proactive management of information across its entire business life cycle – rather than just at the end – has begun.
2. **Cloud and social platforms render “file and declare” ineffective.** As the shift to the cloud continues, McKinnon urges enterprise and information architects to realize that traditional records managers and records management systems are slow to make that leap. Furthermore, current records management systems tend to be already missing many forms of electronically stored information.
3. **Digital preservation forces itself onto the governance agenda.** “Digital records that have a long-term retention schedule are at risk when hardware devices, software applications and file formats decay or become obsolete,” wrote McKinnon.
4. **Open standards and open source change the sourcing landscape.** Between 2011 and 2012, several national governments directed their IT, records, and procurement managers to learn more about – and select – open-technology platforms.
5. **Auto-categorization becomes viable and approachable.** Opportunities to use auto-classification technologies for routine, high-volume, predictable electronic content are increasing as technology matures, McKinnon said.



changes is mobile security. According to Michael Aminzade, a director at security firm Trustwave, “Merchants are struggling with how to protect mobile payment solutions and integrating mobile devices into

their organizations. The Council released a best practices guide for mobile security more than a year ago, but it would be more beneficial to release additional guidance pertaining to mobile data security.”



CLOUD

Gartner: Cloud Will Be Bulk of IT Spending by 2016

Cloud spending is growing so fast that it will comprise the majority of new IT expenditures by 2016, according to an October press release from Gartner Inc. The IT research company further predicts that 2016 will see the private cloud give way to the hybrid cloud. By the end of the following year, Gartner expects nearly half of all large enterprises will have hybrid cloud deployment, meaning the enterprise will be both a user and provider of cloud services.

David Linthicum, chief technology officer and founder of Cloud Technology Partners, disagrees with part of this prediction. "Enterprises will use a variety of cloud models, including private and hybrid, resulting in a multi-cloud reality rather than a hybrid one. Already, enterprises are finding the cloud deployments that meet their requirements are more complex than private, public, or hybrid," he wrote in his October 29 *InfoWorld* blog.

In an earlier blog, Linthicum wrote that *multicloud* "add[s] more

clouds to the mix, perhaps two or more public IaaS [infrastructure as a service] providers, a private PaaS [platform as a service], on-demand management and security systems from public clouds, private use-based accounting..." This is in contrast to a *hybrid cloud*, which he defined as "typically a paired private and public cloud."

In the more recent blog, he added that business – not IT – will drive cloud growth. Those in the business who want more cost-effective ways to provide IT services, decrease time to market, and increase agility will provide the impetus. The growth will be more around application development and application migration than infrastructure conversation and expansion, predicted Linthicum.

According to Chris Howard, research vice president at Gartner, the very real trends toward cloud platforms and "massively scalable processing" are giving companies and individuals more freedom to decide how they'll acquire or deliver IT services. Further, according to Howard, "Services delivered through the cloud will foster an economy based on delivery and consumption of everything from storage to computation to video to finance deduction management."

Along with the benefits mentioned above, there are several risks for organizations that use external cloud services, putting their information outside their immediate control. These risks need to be considered at the time of contracting and include:

- Ensuring 24/7 access to the information
- Ensuring the security of the information; the service provider's policies, controls, and staff training must meet the enterprise's requirements

- Ensuring that information is stored in a specific, physically identifiable location
- Ensuring there is an exit strategy if a provider goes out of business or the business relationship is terminated

INFO TECHNOLOGY

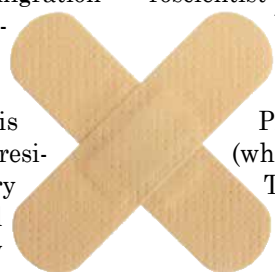
Computer, Heal Thyself?

One day, help desks and IT departments will be redundant as computers will be able to mimic the human brain and self-heal. At least that's the vision of Jeff Hawkins, the neuroscientist who founded the mobile computing companies Palm (where he invented the Palm Pilot) and Handspring (where he invented the Treo smart phone).

Hawkins' latest endeavor is Grok, a company whose goal is to simultaneously create a theory of how the brain works and a computer algorithm to implement this theory. In other words, Grok is developing true artificial intelligence, machine intelligence software based on the brain's neocortex, which controls sensory perception, motor commands, and language, among other functions.

"It is basically machines that learn like the human brain learns," explained Hawkins in a recent article in *The Sydney Morning Herald*. "This is going to have as big an impact in the world as computers had. It is that big a concept."

The technology, which operates in the cloud, is in its earliest of early-stage development. It is available to Amazon Web Services customers to monitor server behavior and is being used by Phase 6, a language learning project based in Austria.





MOBILE DEVICES

Good News for Travelers

The next time you board an airplane you may not hear the request to turn off all electronic devices before taking off and landing. The U.S. Transportation Department's Federal Aviation Administration (FAA) has determined that airlines can safely expand use of portable electronic devices (PEDs) during all phases of flight.

According to the FAA, implementation will vary among airlines due to differences among fleets and operations. The agency expected many carriers would prove that their planes allow passengers to safely use their devices in airplane mode, gate-to-gate, by early 2014. Since the airlines must be approved by the FAA, the agency issued a tool to help carriers assess the potential risk of "PED-induced avionics problems" for their airplanes and operations. Specifically, carriers need to evaluate avionics as well as changes to stowage rules and passenger announcements. Each airline must also revise its manuals, checklists for crewmember training materials, carry-on baggage programs, and passenger briefings before expanding use of PEDs. It's up to each airline to determine how and when it will allow broader use of PEDs.

Yes, that means you will be able to read e-books, play games, and watch videos from gate to gate, with very limited exceptions. Electronic items, books, and magazines will still need to be stored in the seat back pocket during takeoff and landing. Additionally, cell phones should be in airplane mode or with cellular service disabled – no signal bars displayed – and cannot be used for voice communications, based on Federal Communications Commission (FCC) regu-

lations that prohibit any airborne calls via cell phones. (The PED Aviation Rulemaking Committee recommended the FCC reconsider these regulations.) If your air carrier provides Wi-Fi service during flight, you may use those services, and you can continue to use short-range Bluetooth accessories such as wireless keyboards.

E-DISCOVERY

Prepare Yourself for Keyword Disclosure

An emerging trend in the courts has some attorneys increasingly concerned: Courts are ordering defendants to disclose the keywords used to produce discovery documents.

Recently, a federal court in Nebraska ordered a defendant to report all the sources – and keywords – it used to perform searches in response to an e-discovery request. The plaintiffs had filed a motion to compel production based on the fact that they had expected to receive more documents than they did. They didn't point to any missing documents or even types of documents they expected to receive; they merely asserted the production of only 25 e-mails was in itself a good reason to order the defendant to produce more information. The judge didn't buy the argument and denied the motion. The court did, however, order the defendant to disclose the sources and keywords that were used.

This isn't the first instance of a court ordering the disclosure of search keywords. Last year, in a trade-secret theft case, a court in California issued a disclosure order despite defense counsel's contention that it would reveal sensitive trade secrets. The court again didn't buy into the argument. Thus, the trend seems to be that the plaintiff needs only to request the disclosure; a compelling reason is not required. Some trial lawyers contend this erodes the attorney-client privilege regarding work product.

One attorney, Ralph Losey, voiced just such an opinion on his blog *e-Discovery Team*: "[M]any lawyers have long considered the particular methods they used to find documents that are responsive to a request for production to be obvious work product. It was, after all, their own thought processes and legal techniques. If they used keywords to find the relevant documents, then they should not have to disclose what words they used. They argued that it would unfairly require them to disclose their theory of the case, their mental impressions of how to find relevant information."





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E-DISCOVERY

Automated Legal Hold Tracking Lags, Survey Says

Most organizations are lagging in automating their legal hold management and tracking. The *Legal Holds and Data Preservation Survey 2013* revealed that 53% of organizations today use manual/written processes for tracking litigation holds, while only 34% have automated processes. One of 20 organizations still relies on verbal legal holds.

In many ways, automating the legal hold process has proved to be much more efficient and reliable than manual options, resulting in a higher satisfaction level with the current system/process. Survey results showed that such automation increases efficiency as well as the likelihood of issuing litigation holds. "When a litigation hold takes more effort, respondents are less likely to proactively implement one," explained David Steinberg, the founding partner of the Steinberg Group LLC, which conducted the survey.

Those using automated processes are also more likely to observe best practices. Compliance with sub-processes such as issuing reminders, requiring custodial compliance, following up with custodians, and sending release notifications was much more like-

ly (85%) among automated users than manual ones (57%).

Overall, 62% of respondents expressed confidence in their current process, but those on manual processes were nearly 20 times more likely than automated users to indicate a "below standard" self-assessment. Similarly, automated users were 80% more likely to give their current system/process a favorable rating.

Training continues to be a problem area for most organizations. Although 70% of organizations train employees on legal holds, only 45% think the employees fully or mostly understand their preservation obligation.

The study surveyed 525 legal professionals responsible for overseeing the legal holds process, making it the largest study of its kind focused specifically on how organizations are currently handling legal data preservation.

CYBERSECURITY

Users Are Cybersecurity's Achilles Heel

A recent study released by MeriTalk shows that U.S. federal agency cybersecurity professionals have become so focused on data security they fail to consider how the security measures will affect users. As a result, nearly a third (31%) of agency users said they use workarounds regularly to circumvent security measures they say are time consuming and hinder productivity. That explains why about half (49%) of federal security breaches are blamed on user noncompliance.

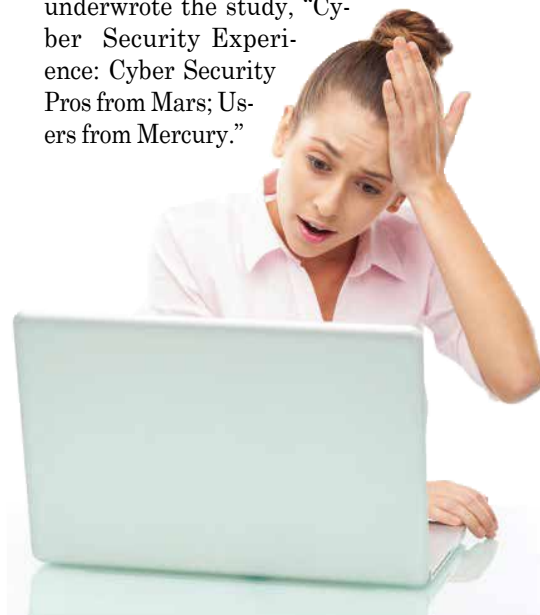
The survey found that very few federal cybersecurity professionals feel prepared for cyber threats. Nearly three-quarters (74%) said they are not prepared for an inter-

national cyber attack or to support secure access for mobile devices. Almost as many (70%) said they are not prepared for a denial-of-service attack or to secure cloud computing environments.

The activities that cybersecurity professionals said are the most likely to cause a security breach are the same activities in which end users encounter the most frustrating security measures: surfing the Internet, downloading files, accessing networks, and transferring files. E-mail, external websites, and Internet access via agency work stations are not only the most challenging end-user applications to secure, they are also the tools that more than 80% of end users rely on daily.

Dealing with security measures has reportedly become so burdensome that 20% of end users said they can recall an instance where they were unable to complete a work assignment on time because of a security measure. End users' responses to this study should make it clear to data security professionals that end user experience needs to be given higher priority.

"Without question, federal cybersecurity pros have a tough job, but they must start working with end users as partners instead of adversaries. It is a team game, and better support for users will deliver better results for security," concluded Tom Ruff, vice president public sector for Akamai, which underwrote the study, "Cyber Security Experience: Cyber Security Pros from Mars; Users from Mercury."



Transborder E-Discovery on the Rise

As if you didn't have enough to think about in being prepared for e-discovery, what if some of the information needed is stored in another country? It's up to you to ensure you won't run afoul of that country's privacy laws.

And some countries have much more stringent privacy laws than others. For example, European Union member states have based their data protection

laws on the EU Data Privacy Directive, which closely regulates how and when personally identifiable information (PII) may be collected, processed, stored, and transferred by an organization. Those controls are much stricter than in the United States.

In addition, according to the global legal services firm Mayer Brown, "Several European countries have enacted blocking statutes designed to protect sovereignty and shield foreign nationals from intrusive U.S.-style litigation. Violations of these foreign laws may result in serious consequences for the organization, including criminal charges."

It's up to legal counsel and information governance professionals to ensure their organizations can meet both their U.S. and foreign legal obligations. Now – before litigation arises – is the time to evaluate those risks and implement the necessary standard controls. In a *Mondaq* article on the subject, Mayer Brown suggested the following steps:

- **Know your data and your legal obligations.** Involve local counsel and data privacy professionals in the litigation process

to help minimize the risk. This is especially important given proposed changes to the EU directive, which include considerably steeper fines for violations.

- **Limit collection.** Consider implementing collection procedures that are

specifically targeted at identifying relevant data from the outset, rather than employing a broad collection philosophy and relying on

the review process to narrow the data for production.

- **Consider onsite, in-country review.** In some instances, it may be easier to collect and process data relevant to a U.S. litigation by conducting the review in the country in which the data resides with the goal of identifying the relevant information before it is transferred, minimizing the amount of PII at issue.

- **Consider redaction or anonymization.** Use of anonymization techniques or redaction of PII may address an organization's data privacy obligations.

- **Evaluate transfer options.**

An organization retains responsibility for ensuring that PII is protected in accordance with the laws of its place of origin, even after the data is transferred to the United States. There are several options for such transfer, including the use of "Safe Harbor" vendors, employing the Hague Evidence Convention procedures, negotiating vendor contracts that include model contractual language or other provisions designed to ensure the data protection, or implementing strict protective orders.



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PRIVACY

Online Privacy: A Global and Ageless Concern

If you think teenagers and twenty-somethings don't care about online privacy, you are wrong. J.D. Power's research report "Consumer Concerns About Data Privacy Rising: What Can Businesses Do?" found that consumers believe they're losing control of their online privacy, no matter how old they are or where they live.

Findings showed that data privacy concerns increase with age. Almost 80% of 14-17 year olds said they were somewhat or very concerned about their online privacy, compared to 92% of people 67 years old or older. At least half of the people in these

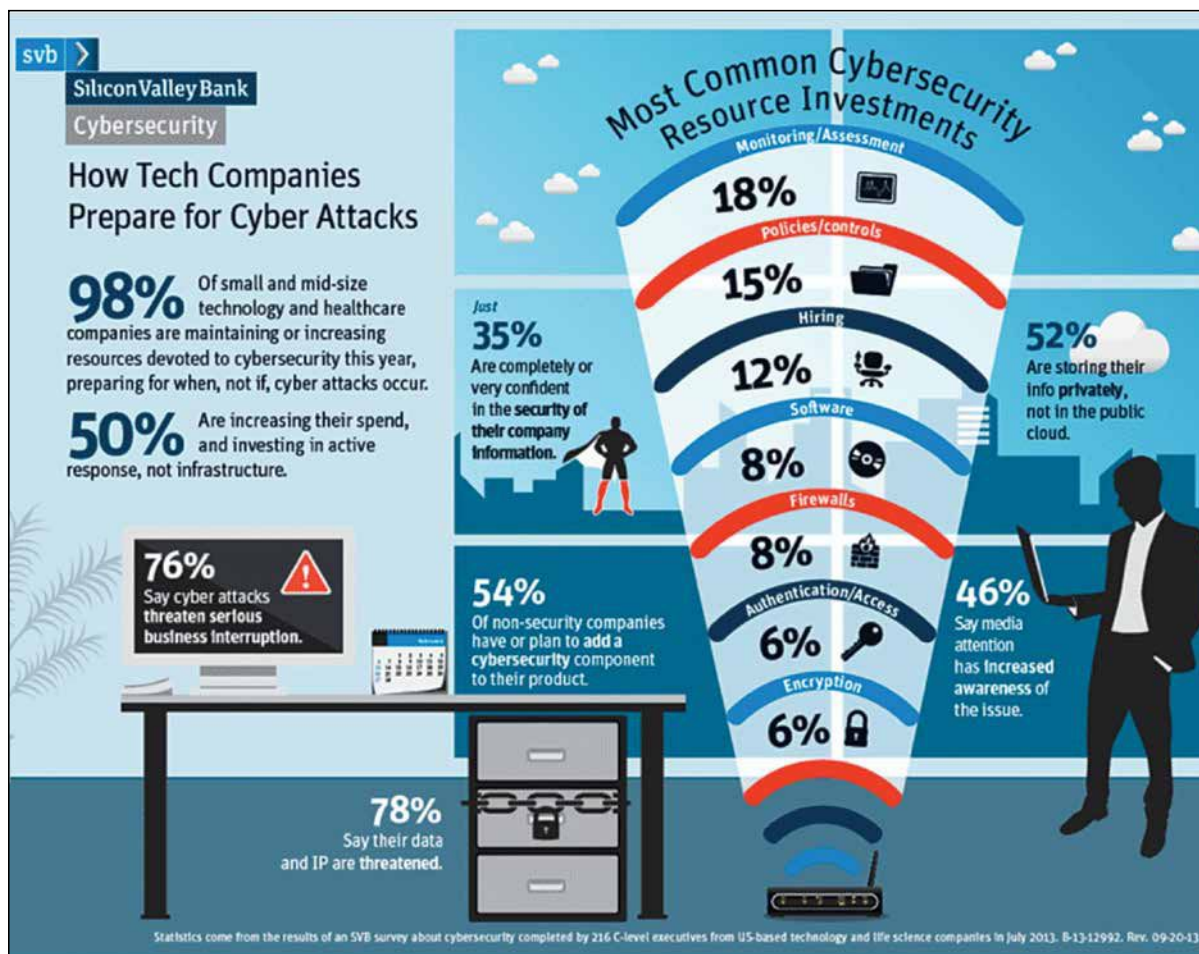
two age groups also report they usually or always set their social networks to private, compared to only 20% of pre-Boomers. Younger users also admitted to providing false information on websites. Nearly 30% of people 13-17 years old (Gen Z) and 18-35 years old (Gen Y) admitted to falsifying information. J.D. Power's Chief Research Officer Gina Pinitore pointed out that this could prove challenging for companies and market researchers.

The research also showed that privacy fears know no borders. The percentage of consumers in India who reported being highly concerned about privacy is equal

to that of U.S. consumers (41%). Both countries were slightly lower than China, where 50% of consumers were highly concerned.

"For companies that value the use of online data as a source of consumer insight, it is important that they and the market research community work together to manage actual and perceived efforts to maintain privileged and confidential consumer privacy information," the researchers concluded.

In other words, privacy does matter, and it will continue to matter until consumers feel they have more control over how and where their information is used.



Source: Silicon Valley Bank Cybersecurity Impact on Innovation Survey, 2013

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INFO SECURITY

Google on the Hot Seat in EU

Changes to Google's terms of service have drawn fire from 14 European countries. On Nov. 11, Google started featuring names and photos of users in "shared endorsements," reported *PCWorld*. Thus, if a user follows a company on Google+, the user's name, photo, and endorsement could show up in the company's advertisements. When users signed up for a Google+ account, however, they were not informed that to use other Google services would mean releasing their information for commercial purposes outside the Google+ environment, according to privacy advocate Simon Davies.



That violates the European data protection law, stated Davies, who filed complaints with the data protection authorities of Norway, Sweden, the Czech Republic, Denmark, France, Spain, Italy, Slovenia, Austria, Belgium, Germany, Lithuania, the Netherlands, and Poland.

"On the basis of my initial assessment it appears that the changes will substantially violate Data Protection law," Davies wrote in the complaint. He requested that the authorities investigate and seek the immediate suspension of the changes pending the outcome of the investigation.

"The general position is that



RISK MANAGEMENT

Survey Reveals Info Governance Gap in U.S., UK Companies

Too many companies are relying on employees to self-manage their information, which may be putting them at risk. According to independent research published by Recomind, almost half (49%) of UK companies surveyed rely on employees to self-categorize data; that percentage is even higher (52%) among U.S. companies.

Interestingly, 75% of UK companies and 58% of U.S. companies claim to have an information governance policy in place, an indication that they at least understand the risks posed by their information. The over-reliance on employees to manage their own data, however, is a clear sign that they are not "tackling the issue head-on to proactively reduce risk," concluded the report. The research also found that of the U.S. companies surveyed, 82% agreed that some form of auto-categorization and tagging of data is a key component of effective information governance; 86% agreed that auto-categorization needs to be based on content and not just keywords. Only 24% of UK organizations said they knew how much data they hold. Thus it comes as no surprise that it takes an average of three hours for employees to retrieve specific information before they can begin to manage and analyze the data to understand its risks.

Attorney David Horrigan, an information governance analyst at 451 Research, pointed out that "[n]ot having a proactive [information governance] policy leaves companies open to substantial fines, litigation risk, security breaches, and compliance issues. This research shows that there are still too many organizations exposed to these unnecessary risks."

the ground rules shouldn't be changed half way through the match. Google acquired the data under one condition, and I'm asserting that it cannot change the purpose of that data after the fact," Davis said.

Although users have the right to opt out of shared endorsement programs in some companies, Davies stated that Google's opt-out

mechanism creates another data protection issue. He said that opt-out mechanisms in principle do not deliver users' consent according to Europe's privacy watchdog, the Article 29 Working Party.

Google is also being investigated by data protection authorities over its policy changes that allow it to share personal data across all its products and services.

TRENDS

IDC: 3rd Platform Will Dominate in 2014

It's that time of year again. All the research analysts are issuing their predictions for 2014. The International Data Corp.'s (IDC) top-10 information and communications technology (ICT) trends, summarized in the following, were heavily influenced by the emergence of the "3rd platform" – the "emerging platform for growth and innovation built on the technology pillars of mobile computing, cloud services, big data and analytics, and social networking."

1. Worldwide IT spending will reach \$2.1 trillion in 2014. It will be driven by 3rd Platform technologies, which will capture 89% of IT spending growth.
2. Emerging markets will return to double-digit growth of 10%, driving nearly \$740 billion or 35% of worldwide IT revenues and, for the first time, more than 60% of worldwide IT spending growth.
3. Within the 3rd Platform, value will start to migrate "up the stack," from infrastructure as a service (IaaS) to platform as a service (PaaS) and from generic PaaS to data-optimized PaaS. Expect Amazon Web Services to roll out several PaaS offerings for developers and higher value services for businesses, forcing incumbent IT suppliers (including new-to-the-market Google) to urgently reconfigure themselves to fight for position.
4. The mobile device onslaught will continue in 2014 with sales of tablets growing by 18% and smartphones by 12%.



5. Cloud spending, including cloud services and the technology to enable these services, will surge by 25% in 2014, exceeding \$100 billion. IDC expects to see a dramatic increase in the number of data centers as cloud players race to achieve global scale.
6. Spending on big data technologies and services will grow by 30% in 2014, surpassing \$14 billion as demand for big data analytics skills continues to outstrip supply.
7. Social technologies will become increasingly integrated into existing enterprise applications over the next 12-18 months. In addition to being a strategic component in virtually all customer engagement and marketing strategies, data from social applications will feed the product and service development process.
8. Cloud-dedicated data centers will grow in number and importance, and the market for server, storage, and networking components will increasingly be driven by cloud service providers.
9. The 3rd Platform will deliver the next generation of competitive-advantage apps and services that will significantly disrupt market leaders in virtually every industry.
10. The 3rd Platform will continue to expand beyond smartphones, tablets, and PCs in 2014 to the Internet of Things. IDC expects to see new industry partnerships among traditional IT vendors, global telecom service providers, and semiconductor vendors to create integrated offerings.

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PRIVACY

UN Adopts Internet Privacy Resolution

The United Nations (UN) General Assembly's human rights committee unanimously adopted a resolution to protect the right to privacy against unlawful surveillance. Germany and Brazil sponsored the resolution following the revelation of U.S. eavesdropping on foreign leaders, including Brazil President Dilma Rousseff and German Chancellor



Angela Merkel.

According to Brazil's U.N. ambassador, Antonio de Aguiar Patriota, the resolution "establishes for the first time that human rights

should prevail irrespective of the medium, and therefore need to be protected online and offline."

The Associated Press reported that the United States did not fight the resolution after successfully lobbying the "Five Eyes" Intelligence-sharing group – the United States, Britain, Canada, Australia, and New Zealand – to dilute some of the draft language. The key compromise dropped the contention that the domestic and international interception and collection of communications and personal data, "in particular massive surveillance," may constitute a human rights violation.

Despite the "watering down" of the language, the five major human rights and privacy groups – Amnesty International, Human Rights Watch, The Electronic Frontier Foundation, Access, and Privacy International – said the resolution will guarantee that the privacy issue stays on the front burner at the United Nations. The resolution directed the U.N. human rights chief to report to the Human Rights Council and the General Assembly on the protection and promotion of privacy "in the context of domestic and extra-territorial surveillance...including on a mass scale."

The unanimous vote assured the resolution's final passage by the 193-member General Assembly in December. (The final vote had not occurred as of press time.)

CLOUD

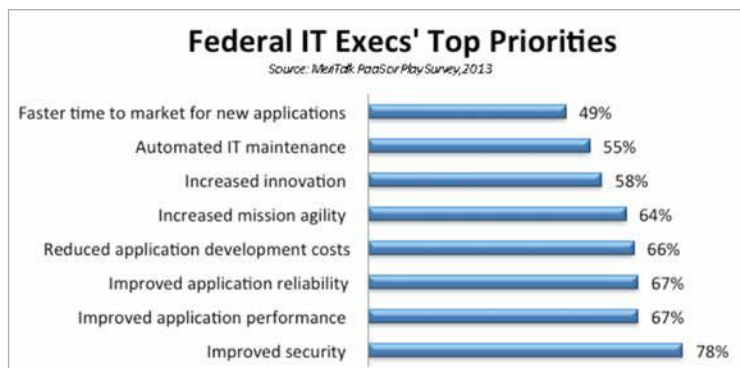
Cloud Computing Could Save Government \$20 Billion a Year

A recent MeriTalk survey suggests that many U.S. federal IT professionals believe that the platform as a service (PaaS) functionality could cut federal IT costs by \$20.5 billion a year by speeding up the development of software.

"PaaS or Play? Cloud's Next Move," which was underwritten by Red Hat Inc., reported on the survey of 153 federal IT professionals. The survey found that current software development is slow and expensive; the average duration for developing an application is 3.5 years.

Some 92% of the respondents believe that PaaS offers vital support for cloud computing and could reduce the development time significantly. The perceived advantages of PaaS include data center consolidation, shared services, improved agility and security, and better management of big data.

Currently, 12% of U.S. government agencies are using PaaS, 20% are transitioning to it, and 51% are considering the technology.



Source: Ponemon Institute, 2013



CYBERSECURITY

Cybersecurity Not Ready for Professionalization

The U.S. cybersecurity work force is too broad and diverse to be treated as a single occupation or profession, concluded a recent report from the National Research Council of the National Academy of Sciences titled “Professionalizing the Nation’s Cybersecurity Workforce? Criteria for Decision Making.” The researchers did, however, recognize that the cybersecurity field requires specialized knowledge and intensive advanced training; it’s simply too young and diverse a discipline to introduce professional standards.

“Many aspects of the cybersecurity field are changing rapidly, from new technologies to the types of threats we face to the ways offensive and defensive measures are carried out,” said Diana Burley, co-chair of the committee that wrote the report and associate professor of human and organizational learning at the George Washington University in Washington, D.C. “Premature or blanket professionalization strategies will likely hinder efforts to build a national cybersecurity workforce of sufficient quality, size, and flexibility to meet the needs of this dynamic environment.”

The cybersecurity work force encompasses a wide variety of roles and responsibilities and requires an array of skills and abilities, including behavioral and management skills, as well as technical expertise. While there are indications that demand will continue to be high for cybersecurity workers, the evolving nature of the field makes it difficult to forecast the number of workers that will be required or the mix of knowledge and skills that will be needed, the report says.

There’s no doubt that professionalization has its advantages, including enhancing the quality of the work force, but standardizing education or certification requirements also has disadvantages, particularly in a field where much of the work force is self-taught. Requiring formal education or training could actually deter potential employees from entering the field.

The report suggests that only specific occupations within the field should be professionalized based on how well-defined and stable they are and whether the benefits of professionalization would outweigh the costs.

In the meantime, companies and governments continue to train and encourage the development of cybersecurity experts from an early age.

CYBERSECURITY

Singapore Increases Cybersecurity Training for Youths

Singapore IT Security Authority (SITSA) hopes to increase public awareness about security threats while providing students with hands-on training based on real-world experience. The training will be provided through an advanced cybersecurity training facility in 2014, according to Masagos Zulkifli bin Masagos Muhammad, senior minister of state for Singapore’s home affairs and foreign affairs, who spoke at the GovernmentWare 2013 conference.

In his opening speech to the conference, Masagos stressed the need to build a “sustainable national ecosystem,” reported ZDNet. Such a system will include academic institutions and industry players working together to increase the country’s cybersecurity talent pool.

Masagos also announced the release of a new interactive game, CyberShock, which is intended to raise public awareness of how national security includes cybersecurity. The game reportedly simulates the effects of a cyber attack on essential services such as power and public transportation, and participants play their part in helping to defend against the attacks.



INFO SECURITY

BYOD Brings Security Challenges

The bring-your-own-device (BYOD) trend poses serious security challenges for enterprises. A 2012 Trend Micro survey report “Mobile Consumerization Trends & Perceptions” revealed that nearly half of enterprises surveyed that allow employee-owned devices to connect to a company’s network have experienced a data breach. Furthermore, 86% of the IT decision makers from the United States, United Kingdom, and Germany reported that smartphone data security is their number one concern when consumer devices are connected to corporate networks.

According to an October 13 *New York Times* article “Bolstering a Phone’s Defenses Against Breaches,” a handful of technology companies are trying to capitalize on the BYOD trend that people in charge of securing corporate networks say has become their biggest headache. In the past, the author wrote, they could mandate that

employees use company-approved BlackBerry smartphones, which came with a tightly controlled network. However, with BlackBerry’s future uncertain and an increasing number of employees requesting to use their iPhones, iPads, and Android-powered devices at work, IT managers have been forced to consider alternatives – and to deal with those alternatives’ security threats.

Data security managers are struggling to keep tabs on sensitive information as employees import data to their personal devices and download mobile apps that have access to corporate assets. Experts and threat researchers warn that these applications have little or no safeguards. According to the article, in the 2013 “Application Security Testing Magic Quadrant” report, Gartner Inc. predicts that by 2015, 75% of mobile applica-



tions will fail basic security tests.

Businesses and government agencies are already finding that employees’ mobile devices have become a crucial way for attackers to reach a network.

“An enormous amount of applications out there have been Trojanized,” Scott Borg, the director and chief economist at the non-profit group United States Cyber Consequences Unit, told the *New York Times*. “They have become one of the main stepping stones for getting into the enterprise.”

Borg explained that the information collected from mobile Trojans “was the first step in ‘spearphishing’ campaigns, in which criminals use that data to tailor e-mails to employees with malicious links or attachments that, once clicked, give attackers a foothold into companies’ systems.”

In a recent press release, Gartner predicted that 30% of consumer product selection criteria will be based on requirements to secure new mobile computing platforms by 2015. The research firm encourages product managers to include all mobile device platforms alongside traditional desktops and laptops when assessing and deploying security measures. Pricing is especially important since consumers have shown they are less likely to pay for security programs for their mobile devices.

DIGITAL PRESERVATION

Building a Cyber Archive of the World’s Monuments

Imagine if Mt. Rushmore or the ancient pyramids disappeared from the earth. How could they ever be replaced? Thanks to the efforts of the nonprofit CyArk (abbreviated from Cyber Archive), these and hundreds of other monuments are being digitally preserved using 3-D laser scanning technology, which can be used to reconstruct the damaged or destroyed monument.

CyArk is partnering with more than 170 organizations around the world to scan the 500 most at-risk places within five years, after which it will document another 500, and another 500 after that. The CyArk 500 project launched in October 2013; at that time 40 sites had been digitally preserved.



CLOUD

How Green Is Your Cloud?

Adoption of the cloud as a viable IT solution has grown exponentially during the past several years. In 2010, Forrester Research found that cloud investments were valued at \$40.7 billion; by the end of 2013 it was expected to reach \$150 billion as businesses of all sizes realize its increasing viability.

The rationale for moving IT services to the cloud centers on increasing efficiency and efficacy. Some also see it as an environmentally responsible choice; they consider the cloud to be a key feature of IT environmental sustainability.

According to the nonprofit association Business for Social Responsibility (BSR), cloud services are positive for sustainability: "The cloud encourages important clean-tech applications like smart grids and it also encourages consumers to use virtual services such as video streaming to replace resource-heavy physical products. The cloud also draws resources to where they are used most efficiently and its jobs tend to be cleaner and safer than those of more traditional industries."

Another nonprofit group, the Carbon Disclosure Project, estimated in a 2011 report that large U.S. companies that use cloud computing can achieve annual energy savings of \$12.3 billion and annual carbon reductions equivalent to 200 million barrels of oil – enough to power 5.7 million cars for a year. Additionally, Pike Research predicted in its 2011 "Cloud Computing Energy Efficiency" report that

data center energy consumption will drop 31% from 2010 to 2020 as a result of increased adoption of cloud computing.

On the flip side, data centers tend to have a sizeable carbon footprint. BSR stated that the majority of the top U.S. data centers are fueled by coal: it's inexpensive but dirty. To be environmentally sustainable, data centers need to draw their power from renewable energy sources.

Google has made significant investments in renewables and is using that energy to power 34% of its business. It recently entered into two 20-year agreements to purchase power from a wind energy developer with locations in Iowa and Oklahoma, two states in which Google operates large data centers. Recognizing the business opportunity presented by its impressive investment of more than \$1 billion in renewable energies, Google formed Google Energy, a subsidiary that allows it to buy and resell electricity to wholesalers.

Yahoo and Facebook have made notable strides by locating to sites where they could secure large amounts of existing hydropower. Yahoo expanded its data center in Lockport, N.Y., which is drawing power from Niagara Falls; and Facebook built a 100% hydroelectric-powered operation in Lulea, Sweden, earlier this year.

It's likely we'll see more of these types of investments as more and more cloud services are powered by renewable energy.

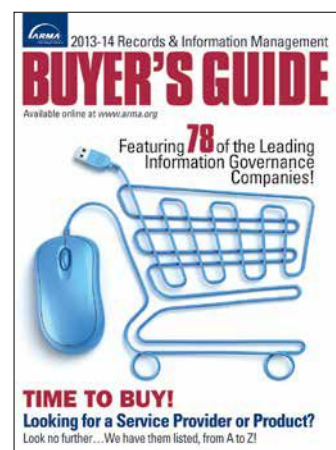


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Taking **Control** of E-Mail with **Uniform Retention Rules**

Compared to schedule-based retention, the uniform rule approach to e-mail retention is easier to understand, requires less decision-making and interpretation by mailbox owners, and can be implemented quickly with a minimum of employee training, according to this excerpt from *E-Mail Retention and Archiving: Issues and Guidance for Compliance and Discovery*.

William Saffady, Ph.D.



Schedule-based retention of e-mail is consistent with half a century of records management practice for other types of written communications, but its practicality is questionable. Given the large quantity of e-mail sent and received by an organization's employees, it is not reasonable to expect that mailbox owners will dedicate a significant portion of each workday to deciding how long individual messages must be kept.

Unless a schedule-based retention decision is made immediately after a message is sent or read, it may not be made at all. Pressured by a heavy workload, a well-intentioned but busy employee is unlikely to set time aside for daily, weekly, bi-weekly, or monthly mailbox cleanup. Mailbox owners need retention rules that are easily implemented with a minimum of labor-intensive decision-making.

The Uniform Retention Approach

As an alternative to schedule-based retention, the uniform rule approach is straightforward.

A single predetermined retention period applies to official copies of most e-mail messages with exceptions for certain messages that need to be retained for a longer or shorter amount of time as determined by legal, operational, or historical considerations.

A message saved on e-mail servers will be deleted automatically, without action by or notification to the mailbox owner, when the uniform predetermined retention period elapses – unless the message has been identified as relevant for pending or ongoing litigation, government investigations, arbitrations, audits, or other legal or quasi-legal proceedings.

Manual deletion at the end of the uniform retention period is required for messages that are saved apart from an e-mail server on local or network drives as well as for messages that are transferred to e-mail archiving systems, records management applications, or other digital repositories. Manual purging is also required for messages that were printed for filing as official copies.

Attachments can be separated from messages at any time and stored apart from the e-mail system. If this is not done, the uniform retention period will apply to attachments, which will be deleted with their associated messages when the uniform retention period elapses.

(Note: If a message merely conveys an attachment that must be kept longer than the uniform retention period, and the attachment is considered the official copy for retention purposes, it should be saved elsewhere – in a content management or records management application, for example – or printed for filing. If a message contains contextual information that is essential to an understanding of the attachment, the message and the attachment should be retained for the same amount of time.)

Compared to schedule-based retention, the uniform rule approach to e-mail retention is easier to under-

E-mail Retention Rules

To satisfy records management requirements, e-mail retention rules – whether schedule-based or uniform rules-based – must:

- Be legally compliant with recordkeeping laws and regulations to which an organization is subject
- Meet the duty to preserve messages that are relevant for pending or reasonably foreseeable litigation, investigations, audits, or other legal proceedings
- Provide assurance that messages and attachments will be available when needed
- Be reasonable, clear, and practical
- Have broad applicability
- Cover both current and closed accounts

stand. It requires less decision-making and interpretation by mailbox owners, although some effort will be required to identify messages that need to be retained longer than the uniform period, as explained below.

The uniform rule approach can be implemented quickly with a minimum of employee training. It can be applied to an organization's existing accumulation of messages, including messages of former employees. To be effective, however, the uniform rule approach must specify a broadly applicable predetermined retention period. Exceptions must be clearly identified and kept to a minimum.

Determination of Uniform Retention Period

As defined above, a uniform retention period will be the default for official copies of all messages except those that are specifically designated for longer or shorter retention. A uniform retention period must be long enough to satisfy an organization's legal and operational requirements for most messages.

The longer the uniform retention period, the fewer the required exceptions, as explained below, but more messages will be kept longer than necessary. This can compromise the performance of e-mail servers and client software, and it will require more storage. Longer retention can also increase an organization's discovery burden.

A short uniform retention period will reduce the quantity of messages in user mailboxes, thereby minimizing performance problems and possibly reducing discovery costs, but it will require more exceptions to fully satisfy legal and operational requirements.

Acceptable uniform retention periods for official copies of e-mail messages range broadly from three years to 10 years.

Uniform Retention – 3 Years

A uniform retention period shorter than three years is not recommended. To be considered legally acceptable, an organization's retention practices must be reasonable for the types of records involved and for the circumstances in which the records are used. In records management work, three years has long been regarded as a reasonable minimum retention period where a law or regulation does not mandate a longer period and a shorter period cannot be confirmed as permissible.

There is some basis for this three-year presumption in statutory law: According to the Uniform Preservation of Private Business Records Act (UPPBRA), business records can be discarded after three years unless a longer time period is required by law.

(Note: Although it has been withdrawn by the National Conference of Commissioners on Uniform State Laws, the Uniform Preservation of Private Business Records Act remains

in effect in the following states: Colorado, Georgia, Illinois, Maryland, New Hampshire, North Dakota, Oklahoma, and Texas.)

Uniform Retention – 10 Years

For many organizations, 10 years is the longest practical time frame for uniform retention of e-mail messages.

After 10 years, the transactions, operations, activities, or other business matters to which e-mail messages relate will likely be concluded,

for written communications.

After 10 years, it is possible that an organization will have changed its e-mail application, which may pose readability problems for older messages. There is no assurance that messages created by e-mail software in use today will be readable by future e-mail products. Maintaining the usability of large quantities of older messages with obsolete content will likely involve burdensome data migration.

...a seven-year uniform retention period is a reasonable compromise for many organizations

and other records related to those matters may have been discarded.

Within a 10-year period, most statutes of limitations (prescription periods) for tax audits and civil litigation – including lawsuits related to breaches of contract, personal injuries involving adults, product liability, and employment-related matters for which e-mail messages may be relevant – will have elapsed.

(Note: As a notable exception in the United States, the statute of limitations on contract-related litigation in Kentucky is 15 years. Some other countries have statutes of limitations exceeding 10 years for contract-related litigation and other legal proceedings. The limitations period typically begins when a claim is discovered, but some jurisdictions have a maximum time period for commencement of litigation. In Ontario, for example, the basic limitation period is two years after discovery of a claim, but there is an ultimate limitation period of 15 years for commencement of legal proceedings.)

As discussed in Part 1 [of *E-Mail Retention & Archiving*], 10 years is also the retention period specified by many national commercial codes for business correspondence. This is an important consideration for multinational organizations that want a globally harmonized retention period

Uniform Retention – 7 Years

Where three years is considered too short and 10 years too long, a seven-year uniform retention period is a reasonable compromise for many organizations.

A seven-year retention period equals or exceeds the statute of limitations on contract-related litigation, personal injury litigation involving adults, product liability, and employment-related legal proceedings in many jurisdictions. (Note: Seven U.S. states – Illinois, Indiana, Iowa, Louisiana, Rhode Island, West Virginia, and Wyoming – have 10-year statutes of limitations on contract-related litigation. In Montana and Ohio, the statute of limitations is eight years.)

This is an important consideration for e-mail messages that interpret the terms and conditions of contracts, that authorize work to be performed under contract, or that contain significant information about procurement solicitations, monetary transactions, or personnel matters.

A seven-year retention period will also satisfy the operational requirements of most employees, and it exceeds the time period during which tax returns are subject to audit in most countries.

Some jurisdictions, including

many U.S. states (Alaska, Arkansas, California, Delaware, District of Columbia, Florida, Idaho, Kansas, Maryland, Missouri, Nebraska, New Hampshire, North Carolina, Oklahoma, Pennsylvania, South Carolina, Texas, and Virginia) have a five-year statute of limitations for most legal proceedings for which e-mail may be relevant. A five-year uniform retention period for e-mail may be acceptable for organizations that do business principally or exclusively in those jurisdictions, assuming that there are no regulatory or operational considerations that require longer retention.

Uniform Retention – Tiered

If there is no agreement about a single retention period as the default for e-mail accounts, a tiered solution based on uniform retention concepts is possible. A five-year or seven-year retention period might be the enterprise-wide default, but individual employees could request that their messages be retained for 10 years based on job responsibilities or other demonstrable needs.

Alternatively, e-mail sent and received by certain types of employees identified by job title or category – clerical employees, for example, who are unlikely to have many official copies or messages with mission-critical content – might be retained for three years while messages of management-level employees are retained for a longer period of time – seven or 10 years, for example. This tiered approach should be approached with caution. It will complicate the implementation of retention rules, and there are likely to be many requests for inclusion in the category with the longest uniform retention period.

The foregoing discussion applies to official copies of e-mail messages. An organization may prefer a shorter uniform retention period – one to three years, for example—for other copies of e-mail messages, with the provision that such copies can and should

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be discarded at an earlier time if no longer needed.

Special retention rules for duplicate messages are not required in organizations that have implemented an e-mail archiving system with single-instance storage. As explained in Part 3 [of *E-Mail Retention and Archiving*], such systems consolidate all copies of a given message. There is no storage

cult to implement and enforce where e-mail messages are stored apart from e-mail servers or other designated repositories, such as the e-mail archiving systems discussed in Part 3 [of *E-Mail Retention and Archiving*]. Consequently, saving e-mail messages as external files on network or local drives should be forbidden unless the messages must be retained for longer

Like other records, e-mail messages are subject to legal holds

or performance penalty for retaining multiple copies.

E-mail of terminated employees should be subject to the same uniform retention rules as messages of active employees. Where messages of former employees are considered official copies, they must be kept for the uniform retention period. Other copies can be deleted at any time following termination of employment.

Uniform retention rules are diffi-

cult to implement and enforce where e-mail messages are stored apart from e-mail servers or other designated repositories, such as the e-mail archiving systems discussed in Part 3 [of *E-Mail Retention and Archiving*]. Consequently, saving e-mail messages as external files on network or local drives should be forbidden unless the messages must be retained for longer


than the uniform retention period, as discussed below, and no other repository has been designated for message retention. External e-mail files that pre-date implementation of a uniform e-mail retention rule should be reviewed for expired retention periods when personal computers are due for replacement. Messages with elapsed retention periods must be deleted manually.

Messages to Be Retained Longer than the Uniform Period

The uniform retention rules described above can be applied to most e-mail, but exceptions must be made for certain messages that require longer retention in order to fully satisfy an organization's legal and operational requirements and for permanent preservation of e-mail of historical value. For such messages, uniform retention rules must be supplemented by schedule-based retention decisions. Examples include the following.

E-mail that contains valuable, unique information about significant policies, decisions, financial matters, legal issues, or regulatory matters. Many retention schedules specify long-term or permanent preservation for written communications of this type. The holder of the official copy must determine whether a message falls into this category, but this determination should be used sparingly.

The mere fact that an e-mail mes-



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sage deals with a significant policy, decision, issue, or other matter does not mean that it must be kept longer than the uniform retention period. To be considered an exception to the uniform retention rule, the e-mail message must contain information that is: (a) significant, (b) not documented elsewhere, and (c) likely to be consulted longer than the uniform retention period.

Thus, an exception to the uniform retention rule is required for an e-mail message that contains a definitive interpretation or clarification of an organization's policy regarding employee leaves of absence. That message will be retained permanently or for a specified number of years after the policy to which it pertains is superseded. A message that merely asks a question about or comments on such a policy does not warrant an exception to the uniform retention rule.

Similarly, a pharmaceutical company or financial services company will require long retention or perma-

nent preservation of certain e-mail messages sent to or received from regulatory agencies, especially where such messages contain regulatory interpretations that are not documented in other records; but intra-company messages that merely comment on such interpretations may not warrant an exception to the uniform retention rule.

E-mail that interprets, clarifies, or amends contracts, legal agreements, or purchase orders that are in effect for multiple years. As discussed above, the minimum acceptable retention period for messages related to contracts and agreements is typically determined – or, at least, strongly influenced – by applicable statutes of limitations for civil litigation in the jurisdictions for which the messages are relevant.

The retention period for such messages should begin upon termination of or final payment on the contract, legal agreement, or purchase order to which the message pertains. For mes-

sages related to multi-year contracts and agreements, a uniform retention period cannot satisfy that requirement where the uniform retention period for a given message will elapse before the contract or agreement terminates.

Even a 10-year uniform retention period may not be long enough for multi-year contracts in jurisdictions with long statutes of limitations for civil litigation. This exception to the uniform retention rule must be reserved for messages that contain significant interpretations, clarifications, or amendments for contracts, legal agreements, or purchase orders. (Note: As a complicating factor, some contracts and agreements, including those scheduled for termination by the current year, are subject to repeated extensions or renewals.)

Messages that merely comment on such matters are excluded. Messages that pertain to contracts, legal agreements, or purchase orders that terminate on or before the end of one

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Madison, WI	May 6-7	Foundations of Information Management Certificate
St. Louis, MO	May 29	Becoming a Certified Information Governance Professional (IGP)

fiscal year will be subject to the uniform retention period, provided that it equals or exceeds applicable statutes of limitations.

E-mail that contains valuable, unique information about an organization's major projects, programs, initiatives, and events. According to most retention schedules, important project-related records,

work warrants an exception to the uniform retention period. A message that merely asks a question about or comments on some aspect of a program or project does not.

Certain messages that deal with employment matters in general or with personnel issues related to specific employees. This category applies to employment-re-

lated messages that are equivalent to correspondence or other written communications which, if printed, would be included in an employee's official personnel file maintained by a human resources department, in a grievance file maintained by a labor relations department, or in another established file.

E-mail relevant for legal matters. Like other records, e-mail messages are subject to legal holds. A blanket exception to the uniform retention period must be applied to messages that are considered relevant for litigation, government investigations, arbitrations, audits, or other legal or quasi-legal proceedings, as determined by an organization's general counsel or other legal authority. The uniform retention period for such messages is suspended until the matters to which they pertain are fully resolved and resumption of regular retention practices is authorized.

Compared to schedule-based retention, the uniform rule approach ... is easier to understand

including written communications, must be kept for a specified number of years after completion or other termination of the project, which may be many years after the project begins.

Messages that contain important, unique information about a construction project, a drug development project, or a scientific research project may require multi-decade retention. A subset of project-related messages may warrant permanent preservation for historical or other scholarly reasons.

The same retention practices apply to messages that contain valuable information about programs, initiatives, and events. Thus, long or permanent retention may be warranted for e-mail related to an acquisition or divestiture handled by an investment bank, a community outreach program initiated by a corporation, a research symposium sponsored by a medical school, or an exhibition curated by a museum. Mailbox owners must determine whether a message or attachment falls into this category.

As discussed above, the e-mail message or attachment must contain information that is: (a) significant, (b) not documented elsewhere, and (c) likely to be consulted longer than the uniform retention period. Thus, a message that contains a definitive interpretation or clarification of a government program's purpose or an engineering project's scope of

lated messages that are equivalent to correspondence or other written communications which, if printed, would be included in an employee's official personnel file maintained by a human resources department, in a grievance file maintained by a labor relations department, or in another established file.

E-mail messages in this category may deal with assigned duties, performance evaluations, compensation, investigations, reprimands or other disciplinary actions, leaves of absence, workplace illnesses or injuries, contract negotiations, complaints about working conditions, or other matters.

In most organizations, personnel files, including significant communications contained therein, are retained for a specified number of years after termination of employment. Files related to complaints, grievances, disciplinary actions, or other labor relations matters are typically retained for a specified number of years after all issues are resolved.

Depending on the uniform retention rule and the duration of employment, e-mail messages of this type

Summary

With the uniform retention approach, a single predetermined retention period applies to official copies of most e-mail messages with exceptions for certain messages to be retained for a longer or shorter amount of time as specified by organizational policy.

Compared to schedule-based retention, the uniform rule approach to e-mail retention is easier to understand, requires less decision-making and interpretation by mailbox owners, and can be implemented quickly with a minimum of employee training. **END**

William Saffady, Ph.D., can be contacted at wsaffady@aol.com. See his bio on page 47.



Editor's Note: *E-Mail Retention and Archiving: Issues and Guidance for Compliance and Discovery*, from which this article was excerpted, is available for purchase from the ARMA online bookstore at www.arma.org/bookstore.

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Order in the Courts!

RM Principles for the Judiciary

Nial Raaen, CRM

The dramatic increase in electronic records is profoundly affecting records management practices in the courts. In response, a judiciary conference has published six recordkeeping principles that are intended to serve as a framework for assessing and implementing effective judicial records management practices. The six principles were influenced by ARMA International's Generally Accepted Recordkeeping Principles®.

In her May/June 2013 *Information Management* article on the application of the Generally Accepted Recordkeeping Principles® to Canadian Regional Government, Julie Gable points out the important distinctions between recordkeeping in the private sector and in government institutions.

While all organizations create and maintain records as part of their business function, Gable writes that the purposes and uses of records in a governmental organization are often directly related to maintaining the democratic process and preserving the rights and obligations of citizens and organizations. Nowhere is this more the case than in our courts.

Recordkeeping has always been a critical component of the judicial process. Since the early colonial times when judges “rode circuit” and local court clerks maintained files in county courthouses, the preservation of an accurate record of actions taken by the court and the parties in a case has been essential. An effective records management program in the judiciary supports these functions:

- Judicial decision-making
- Documentation of legal status and rights
- Public access to court proceedings and decisions
- Enforcement of court orders and judgments
- Preservation of records for appellate review
- Preservation of historical information

Judicial records management includes the creation, use, and preservation of records directly related to the adjudication of cases, as well as non-case-related records that support administrative activities. Court records have been defined in *Developing CCJ/COSCA Guidelines for Public Access to Court Records: A National Project to Assist State Court*, which was jointly developed by the Conference of Chief Justices (CCJ) and the Conference of State Court Administrators (COSCA):

Any document, information, or other thing that is collected, received, or maintained by a court or clerk of court in connection with a judicial proceeding; any index, calendar, docket, register of actions, official record of the proceedings, order, decree, judgment, minute, and any information in a case management system created by or prepared by the court or clerk of court that is related to a judicial proceeding; and information maintained by the court or clerk of court pertaining to the administration of the court or clerk of court office and not associated with any particular case.

Court record systems must meet the diverse information needs of judges, court staff, litigants, and the public. The control, maintenance, and preservation of court records must be conducted in a way that ensures public trust and confidence in the judicial process. Despite the importance

of records management to the functioning of our judicial system, until now the development of a unifying set of principles has been lacking.

Principles for Judicial Records

Each year COSCA, which is a professional association of the administrators of state courts and the courts of the District of Columbia, Puerto Rico, and Guam, selects a topic of interest to address in an annual white paper. For 2013, COSCA and the National Center for State Courts (NCSC), which is an independent, nonprofit court improvement organization that serves as a clearinghouse for research information and comparative data to support state court judicial administration improvements, collaborated on the recently released white paper “To Protect and Preserve: Standards for Maintaining and Managing 21st Century Court Records.”

This paper sets forth six principles as a framework for assessing and implementing effective judicial records management practices, which were based on ARMA International’s Generally Accepted Recordkeeping Principles®. The paper identifies these judicial principles as central to judicial records management: compliance, access, integrity, preservation, disposition, and governance.

Compliance

The legal framework for judicial records includes not only laws and rules of procedure that apply to case-related records, but also local, state, and federal laws and regulations that govern records supporting administrative activities such as personnel management, accounting, and purchasing.

Compliance with the recordkeeping requirements of case records is particularly critical, as these records are the evidence of decisions and actions that create and enforce the rights of individuals and organizations. This includes adherence to statutes and rules in individual cases, as well as compliance with requirements for complete record series.

The shared responsibility for maintaining judicial records among various elected and appointed officials requires collaboration. The development of local policies, clear lines of responsibility, and regular reviews or audits is necessary to enforce continuing compliance with the statutory and regulatory frameworks that govern both case and non-case-related records.

Access

Access to court records is vital to the public’s perception of transparency and fairness in our judicial system. Records provide information that allows the public to follow the progress of individual cases, monitor judicial performance, and hold courts accountable for the timely and fair disposition of matters under their jurisdiction. Accessibility also applies to the ability of judges and court

staff to retrieve and accurately update records within the shortest time frame possible.

In the U.S. state courts, most case records are open to the public, except where specifically prohibited by statute or court rule. Restricted records include juvenile cases, adoption records, and information within court records that is considered private or confidential, such as psychiatric and medical evaluations.

The ways courts provide access to records are changing profoundly. Previously, when records were limited to bound docket books and paper files, public access was limited by the “practical obscurity” created by the inconvenience

Part of this emerging trend has been the growing use of court records for commercial research purposes

of going to the courthouse and waiting for staff to pull a file. The ready availability of court records via web interfaces, real-time feed of court proceed-

ings, and other methods of electronic access has greatly increased the responsibility of court records managers to maintain the integrity of records and to have systems and procedures in place that ensure confidentiality.

Accessible public records have become an increasingly important part of our information economy, impacting consumer credit, housing and employment decisions, and individual rights. Part of this emerging trend has been the growing use of court records for commercial and research purposes. The availability of large amounts of court information in electronic form has made it feasible to access and distribute court-based information on an unprecedented scale. Courts must weigh the presumption of open access against the potential invasion of privacy that could occur by granting unrestricted access to records that contain personal information.

Integrity

Recently, the importance of the integrity of court records was dramatically highlighted when two Florida inmates serving life sentences for murder were able to gain their release using forged court orders bearing the signatures of the state attorney and a judge in the Ninth Judicial Circuit, as well as the seal of the Orange County Clerk of Court. Further investigation revealed at least seven cases in which inmates at the same Florida prison had attempted to forge court documents.

Maintaining the authenticity and accuracy of case records is a fundamental responsibility of courts. In the paper world, the familiar tools of embossed seals, certification stamps, and original signatures help ensure that

documents are what they purport to be. Maintaining the integrity of electronic information requires a new set of tools and capabilities.

Courts need to be sure the digital documents they receive or create are complete and unaltered, and that the signature on the document was actually made by the person it names. Technologies such as digital signatures, digital rights management, electronic “stamps,” metadata, and document audits are part of the new tool box for court records managers.

Preservation

Electronic case management systems have been in place in most jurisdictions for decades. More recently, electronic filing of court documents and the adoption of document management systems have moved many courts closer to “paper on demand” systems for managing case information.

For the foreseeable future, however, most courts will continue to operate in a hybrid records environment with responsibility for preserving both paper and electronic materials. Courts frequently maintain a legacy of microfilmed records and digital or audio recordings of court proceedings in addition to their electronic and paper collections. The variety of formats and approaches to medium and long-term retention further complicates the task of preservation.

The increasing reliance on electronic records has heightened the need for dialog about approaches to long-term preservation. The nature of some court proceedings requires preservation of these records for long periods (more than 10 years), if not permanently.

A review of current state retention schedules reveals a wide variation of policies and approaches to long-term preservation. Many states have developed guidelines and standards for long-term preservation, and efforts are currently under way in several states to update retention schedules. Part of this effort includes a re-assessment of the need for permanent retention of records that do not have long-term legal or historical value.

Disposition

Most state court systems and archives already have clear retention requirements for case files and related records. However, there are considerable differences between states concerning the appropriate retention periods for various types of case records. One state lists 143 record types for which permanent retention is required; others have fewer than a dozen permanently retained record series. While some records, such as adoption files and land rights documentation, are clearly candidates for long-term or permanent preservation, the appropriate life cycle for more routine civil and criminal matters is less clear.

Responses to a 2011 survey distributed on the COSCA listserv illustrate the variety of policies on approved media for long-term preservation of case records. Most respondents

7.0 LIABILITY AND WARRANTY

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 Agreement, data breach notification expenses incurred by Customer due to Contractor's actions, including accident, negligence or willful misconduct, shall be considered recoverable damages.

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Did we
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proper
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Page 2

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indicated their state had adopted standards for short-term retention of records in both paper and digital form, but only a few had adopted standards for long-term digital preservation. The respondents were about equally divided on the use of microfilm versus digitization for long-term records retention. Fortunately, the growing awareness of digital preservation issues has prompted the judiciary in several states to convene stakeholder groups to consider standards and guidelines in this area.

Governance

A unique challenge in managing judicial records is that the responsibility is often shared between elected and appointed people, as well as between departments or divisions

A unique challenge in managing judicial records is the responsibility is often shared between elected and appointed people

that may not be part of the judicial organization hierarchy. For this reason, the principle of governance is of primary importance.

Clerks of court (or their equivalent) are typically the individuals with legal responsibility for the maintenance of case-related records. The selection or appointment of clerks, however, varies considerably across the country. In many states, clerks of court are independently elected executive branch officials. In some instances, elected county clerks have responsibility for court records in addition to other non-judicial functions such as recording property transactions, issuing passports, and maintaining marriage records. Other states provide for clerks to be appointed directly by the judiciary.

The responsibility for maintenance of supporting technology also varies. Larger courts may employ their own staff for information technology (IT) support and maintenance. Economies of scale in smaller courts often require these functions to be performed by IT staff and support services that reside in departments under control of the local executive branch.

Even when IT support staff are employed by the judicial branch, some functions, such as state-wide case management systems and networks, are managed by central administrative offices under the direction of state supreme courts.

Although individually elected and appointed officials such as judges and clerks are guided by statutes, rules, and administrative orders, they may retain considerable latitude in determining local policies and strategies for records under their direct control. In addition, the responsibility for software and infrastructure that support

electronic records is often viewed as a separate function, despite the increasingly critical role technology staff have in managing the life cycle of electronic records. The result is that records management policies and practices may be inconsistent or conflicting. The responsibility for court records clearly requires collaboration among elected and appointed officials, court support staff, and technology professionals.

Long-term preservation and archiving of judicial records is another area where responsibility is often shared. The roles of state archiving agencies in preserving state court records vary from complete responsibility for maintaining records over a certain age, preservation of historical records only, or no role at all. As state archival agencies continue to cope with budget limitations, it is even more critical that the judiciary coordinates its efforts with these partner institutions.

Promoting These Judicial Principles

The use of performance standards and measures to assess court performance is well established in the judicial community. Performance standards for judicial records were first addressed in the 1997 Bureau of Justice Assistance monograph *Trial Court Performance Standards*.

The NCSC has since expanded on the Standards with the development of *CourTools*, a set of 10 basic measures covering a variety of court performance areas. The tools include methods for measuring case file integrity, access, and consistency. Other methods have been developed by trial courts across the country to assess the effectiveness of their records management systems.

In conjunction with the release of COSCA's white paper, the NCSC has completed a draft version of a records management maturity model that provides courts with a self-assessment instrument to identify areas for improvement under each judicial principle. The maturity model has been released to the court community for comment. Events are being scheduled this year with state and national court management organizations to promote these principles and encourage courts to utilize the tool.

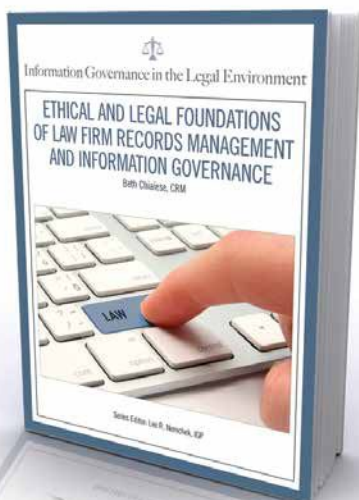
COSCA's endorsement of a unifying set of records management principles for the judiciary will be a catalyst for a broader discussion of issues associated with the increasing complexity of records management in the courts. Among the major tasks that lie ahead are addressing long-term digital retention needs and capability, promoting greater collaboration among judicial records stakeholders, encouraging more dialog between the courts and records management communities, and providing the tools to help court managers improve records management practices and performance. **END**

Nial Raaen CRM, can be contacted at nraaen@ncsc.org. See his bio on page 47.



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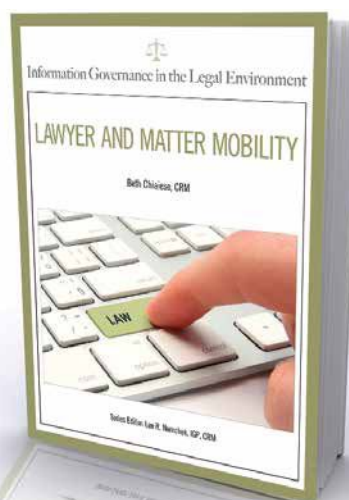
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Analyze This: The Big Demand for Big Data Professionals

Nancy Dupre Barnes, Ph.D., CRM, CA



The explosion in big data has led to a shortage of data analysts. This article explores records and information management professionals' options for pursuing opportunities in this burgeoning area of interest.

Big data – which ARMA International defines as “An information dataset that grows so large it becomes awkward to work with using traditional information management tools” – is an expansive, transformational force that can produce value and innovation within an organization. With its capacity to encourage scientifically based, data-driven decision making, it is an economic game changer.

Through its capacity for robust data analysis, big data is driving improvements in operational metrics pertaining to product improvement, cost reduction, customer loyalty, sales expansion, and marketing effectiveness.

For example, as the nation's largest non-profit provider of health coverage, Kaiser Permanente gathers petabytes of data on its nine million customers. (A petabyte is approximately equal to 1,000 terabytes.) It was an analysis of Kaiser Permanente's patient outcomes data conducted in conjunction with the U.S. Food and Drug Administration that led to the 2004 withdrawal of Vioxx®, an often-prescribed pain reliever that was determined to be associated with increased cardiovascular problems.

'Internet of Things' Drives Trend

A major factor in the big data trend may be machine-to-machine innovation, or the *Internet of Things*, defined by Gartner Inc. as the “network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment.”

With the advent of wireless (and mobile) communications and the deployment of these virtually connected devices, data collection efforts have evolved to include the capture and storage of auto-generated information.

For instance, in the utility sector, embedded components report on various electrical power or water consumption-related activities. And, in the transportation sector, the Internet of Things provides site-specific traffic flow monitoring to assist law enforcement in community safety initiatives.

Analysts Are in High Demand

At Gartner's October 2013 Symposium/IT Expo, it was reported that more than four million new big data jobs would be created worldwide by 2015. However, due to a shortage of qualified individuals, only one-third of those positions are expected to be filled.

Depending upon the specific position, industry sector, and organization, big data jobs can demand expertise in information technology, information management, research methods, mathematics, statistics, and software applications. To be successful in a big data career, individuals

should have expertise in many of these areas:

- Advanced mathematics and statistics for creating/modifying data algorithms and detecting statistical relationships within/between datasets
- Research methods to provide input into the synthesis of multiple datasets or the design of new data collection protocols
- Programming languages, such as JAVA
- Analytical/statistical applications, such as SPSS® and SAS®
- Network/information/data systems design and management
- Information governance principles
- Written and oral communications skills for delivering data-based reports and presentations to diverse audiences
- General business management principles

In addition, experience with tools and applications popularly associated with big data (e.g., Hadoop, Cassandra, and various visualization techniques) is beneficial. All big data jobs may not require the same level of expertise in each of these knowledge domains and tools. Certainly, some industries or organizations may have unique skills-related preferences that synch with their sector's business needs.

RIM Professionals Have an Advantage

Big data's connection to records and information management (RIM) is indisputable. A solid understanding of the records life cycle and the tenets of information governance

Certificate Programs in Big Data

Central Connecticut State University, New Britain, Conn.

Certificate in data mining

<http://web.ccsu.edu/datamining/graduatecertificate.html>

Columbia University, New York, NY

Certificate of professional achievement in data sciences

<http://idse.columbia.edu/certification>

Stanford University, Stanford, Calif.

Certificate in mining massive datasets

Certificate in data mining and applications

<http://scpd.stanford.edu/ppc/massive-datasets-courses.jsp>

Syracuse University School of Information Studies

Syracuse, NY

Certificate of advanced studies in data science

<http://ischool.syr.edu/future/cas/datascience.aspx>

Academic Programs in Big Data

In January 2013, *Information Week* magazine prepared an online slideshow of an annotated roster of North American-based graduate (master's) degree programs related to big data. While this roster does not claim to be all-inclusive, it is a launching point from which RIM professionals can explore new academic ventures.

The programs offer diverse perspectives, varying durations (full-time programs can be completed in less than one year; part-time programs can take more than two years), and a range of enrollment criteria. Many public and private institutions are listed, including MIT, Harvard, and Columbia. Some programs provide an IT-centric educational plan while others have a business management or engineering orientation. A few schools provide a statistics-based approach.

Some schools require specific preparation and credentials, such as standardized test scores from the Graduate Record Exam or Graduate Management Admissions Test, or an undergraduate degree in a science-based knowledge area such as engineering or mathematics. Others require only a bachelor's degree that reflects attainment of a minimum grade point average.

Online Graduate Degree Programs

As noted in the *Information Week* slideshow, many universities offer full-time and part-time options for individuals pursuing big data graduate degrees. And, while several of these universities offer specific or select courses in a virtual setting, exclusively online programs of study are rarer. For RIM professionals who seek the convenience of an online program, these big data graduate degree programs and certificate programs may be worth investigating.

City University of New York, New York, NY

Master of science in data analytics

http://sps.cuny.edu/programs/ms_dataanalytics

DePaul University, Chicago, Ill.

Master of science in predictive analytics

www.cdm.depaul.edu/academics/Pages/MS-in-Predictive-Analytics.aspx

Harrisburg University of Science and Technology,

Harrisburg, Penn.

Master of science in analytics

<http://online.harrisburgu.edu/online-graduate-degrees/masters-in-analytics/degree-program>

Northwestern University, Evanston, Ill.

Master of science in predictive analytics

www.predictive-analytics.northwestern.edu/request-info

University of California, Berkeley, Berkeley, Calif.

Master of information and data science

<http://datascience.berkeley.edu/>

are foundational elements from which sound data analysis can be conducted.

Iron Mountain's 2013 "Emerging Trends in Law Firm Information Governance" report highlights the synergy between RIM and big data in the legal setting. In the e-discovery process, for instance, there are many tools and applications that can uncover and manage previously un-mined information troves. As a result, the importance of records-related security, retention, preservation, and disposition is magnified.

In law firms, RIM professionals are now expected to shepherd a vast landscape with an ever-widening horizon. As the report states, big data is heralding a "movement from a relational, structured, database-driven world toward a semi-structured, social media-driven world."

Career Growth Demands Education

Although it may be possible to work in some capacity as a data analyst without a college degree, it is unlikely that an executive or management position in big data would be attainable without advanced knowledge and academic preparation. The complexity of the massive datasets being programmed and manipulated for organizational decision making demands well-developed, scientifically based analytical skills.

It is possible to find a college or university with a non-degree, certificate program in big data studies; often, however, the entry requirements mandate an undergraduate degree. (See sidebar "Certificate Programs in Big Data" for schools offering this option.) Increasingly, organizations are seeking candidates with graduate-level education to fill big data jobs. (See sidebar "Academic Programs in Big Data" for a list of universities.)

Check Career-Guidance Resources

Many factors should be taken into consideration when considering a career change. An individual's knowledge, skills, aptitudes, attitudes, and preferences should be inventoried and examined as candidly as possible. It may be helpful to consult a career development professional to more accurately investigate your options.

There are numerous career interest inventories, including John Holland's Self-Directed Search® and the Strong Interest Inventory®, that can help increase self-knowledge and self-awareness for vocational planning purposes. The professionals in the career services office at a college or university can offer help with these assessment inventories and can provide other career-related guidance.

Personal insights also might be found in volunteering, job shadowing, or networking (both in-person and online via social media platforms). Many multi-media career development books and materials are available for research as well.

For general advice pertaining to careers in information fields, *The New Information Professional: Your Guide to*

If data analysis-related experience is already on your resume, then big data certification may be a career development route to consider

Careers in the Digital Age, which is available at www.ama.org/bookstore, is very useful. Most notably, its “Career Action Plan” can be a particularly effective aid. In addition, the well-known favorite *What Color Is Your Parachute?* by Richard N. Bolles is updated annually and continues to serve as a useful handbook for job seekers everywhere.

Consider Professional Certification

Many RIM professionals have already discovered the career benefits of obtaining the Certified Records Manager

(CRM) or Information Governance Professional (IGP) certifications. If further academic training is not desired and data analysis-related experience is already on your resume, then big data certification may be a career development route to consider.

The Maryland-based Institute for Operations Research and the Management Sciences offers a designation for Certified Analytics Professionals (CAP®). This association provides networking opportunities, publications, and continuing education in operations research, management science, and analytics. Certification candidates must meet eligibility requirements prior to sitting for the exam. Test fees, as well as a schedule of testing dates and locations, may be found at www.informs.org/Certification-Continuing-Education/Analytics-Certification.

Look Before You Leap

Career mobility is an important consideration in today’s business world. However, in challenging economic times, opportunities for advancement may not be plentiful, and job security can be elusive. Against that backdrop, the prospect of a position in big data can represent an enticing sea change – but, it is wise to explore all options before taking the plunge and sailing into uncharted waters. **END**

Nancy Dupre Barnes, Ph.D., CRM, CA, can be contacted at ndbarnes@ymail.com. See her bio on page 47.

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Making the Leap to an Information Governance Role

Vicki Wiler

Though the term “information governance” (IG) has been in use for at least a decade and has been widely used in records and information management (RIM) circles since 2009, many RIM professionals are still struggling to understand what it is and why it should matter to them.

If you are among that group, it should matter to you because it represents a tremendous opportunity for you to catapult yourself into a strategic leadership role that will be even more valuable to your organization – and your career.

What Is Information Governance?

ARMA International defines *information governance* as “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.”

Because RIM – with its focus on developing and implementing policies,

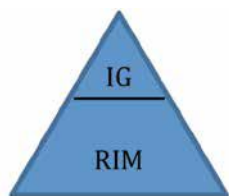


Figure 1:
RIM: Foundation for IG

systems, and procedures to manage information throughout its life cycle – is the foundation that supports IG (as illustrated in Figure 1) moving from that role into an IG role is the natural next step.



How IG and RIM Are Different

An IG professional’s roles are to maintain a strategic focus and work with upper-level executives to ensure cohesive information governance across the enterprise. For example, IG professionals work to understand the business structure and processes, determine what industry regulations and legal requirements are relevant to the business operations, identify what policies and procedures are needed to address the requirements, and initiate the change management processes needed to ensure enterprise-wide changes are made.

Although some RIM professionals are also involved in higher-level strategic discussions and are an essential part of the information governance team, they are usually more focused on the tactical aspects of managing information. For example, they are responsible for writing the policies and procedures IG has identified as being needed, working with business units to implement them, and monitoring compliance with them.

“There is not a wide demarcation between the two roles,” said Diane Carlisle, IGP, CRM, the executive director of content for ARMA International. “They are a team; each has a different area of focus, both of which are critically important.”

Both, for example, must have an enterprise-wide perspective. Although RIM works with business units across the enterprise, Carlisle said that often not all units in an organization will take RIM seriously. An effective IG program supports RIM by developing strategies that help ensure that business units across the enterprise comply with RIM mandates.

Carlisle gave some examples of how the IG and RIM perspectives and some of their responsibilities would differ in the three scenarios below.

Acquiring Technology

IG professionals are responsible for identifying emerging technology trends, facilitating a relationship with IT to understand IT’s strategies for those technologies, and raising infor-

mation governance issues to ensure they are addressed before technologies are purchased or implemented.

For example, IG professionals in an organization considering the use of cloud-based services would need to understand cloud technologies and how they might be used in business operations; identify any operational changes that would need to be addressed if moving information to the cloud; determine whether policies and procedures would need to be created or revised; and identify requirements to be negotiated with the provider.

In this scenario, RIM would draft or revise the policies and procedures that have been identified, which would include identifying retention and disposition requirements for any information being moved to the cloud; work with business units to implement the policies and procedures, which would include providing any needed training; and monitor business units for compliance.

Implementing Legal Holds

Implementing legal holds is problematic for many organizations; IG and RIM professionals both have important roles to play in ensuring that legal holds are properly implemented in anticipation of or in response to triggering events, such as receiving a subpoena or the threat of a lawsuit.

Instituting an effective legal hold process requires IG professionals to work with the legal department to ensure it understands the role of IG in legal holds; be the bridge between legal and business units to help legal understand the business processes and where information is found; help build the framework by which legal holds are to be implemented; and play a continuing role on the litigation support team to address specific litigation.

RIM professionals are responsible for applying hold notices to information under their control and to work with business units to protect the units' information that is being held.

Developing a Retention and Disposition Program

IG professionals work with upper-level management to: give them a strategic view of retention – why it is important, why a retention and disposition schedule needs to be followed, and what the risks are if it is not followed; secure adequate resources to develop the retention program; and facilitate the relationship with the legal department.

RIM professionals work with business units across the organization to identify business requirements for

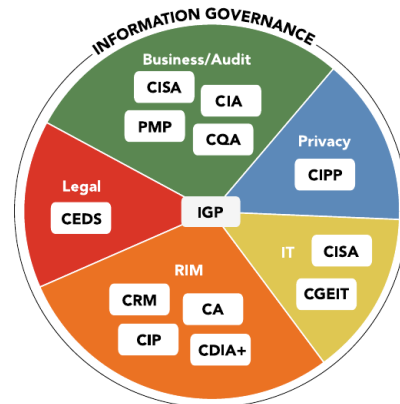


Figure 1: Information Governance Disciplines

retention; build the retention and disposition schedule; create procedures by which disposition will be carried out; and monitor business units to ensure these procedures are followed.

Making the Jump to IG

Those who are desiring to expand their skills, seeking opportunities to play a more strategic role, and willing to take a risk by stepping outside of their comfort zone are good candidates for transitioning to an IG role, Carlisle said.

The three scenarios above make it clear that the ability to collaborate with key IG stakeholders – RIM, IT, legal, and business unit leaders – is imperative. For that collaboration to occur, stakeholders must understand

the others' responsibilities. It follows, then, that Carlisle recommends "internal fact-finding" as one of the first few steps for those who want to move into an IG role.

Assess Your Skills

Initially, Carlisle says, you should familiarize yourself with the information governance DACUM Chart available at www.arma.org/r2/igp-certification. It lists the duties and tasks IG professionals must be able to do; the knowledge, skills, ability, and attributes they need to do them; and the tools, equipment, and resources they use to do them.

Assess your knowledge, skills, and abilities for the six major duties and tasks listed on the DACUM chart:

1. Managing Information Risk and Compliance
2. Developing an IG Strategic Plan
3. Developing an IG Framework
4. Establishing an IG Program
5. Establishing IG Business Integration and Oversight
6. Aligning Technology with the IG Framework

You will see in the DACUM that most of these IG responsibilities require analytical, strategic thinking, negotiation, and financial skills, as well as specific knowledge related to IT, legal, and audit processes, that may not be required for a RIM position. Carlisle recommended going on a fact-finding mission to begin building that knowledge.

Take a Fact-Finding Mission

To broaden your understanding of the business and the industry in which it operates, expand your network of professional contacts, Carlisle said, especially with those in the other IG disciplines identified in Figure 2: "Information Governance": privacy, IT, legal, and audit.

Set up meetings or find opportunities to chat with leaders in these areas and ask them what they do, what they worry about, what tools

and techniques they use, what they do with their information, and how they *know* what they are supposed to do with it.

If your organization has an internal audit department, ask what

Resource Guide that was packaged with this issue of the print magazine or browse the online bookstore to see the recommended publications for each of the six major areas of responsibility listed in the DACUM chart.

ARMA International encourages professionals to demonstrate their knowledge and skills by earning any of these recognized certifications.

kinds of things it audits, whether it audits for IG compliance, and what problems it is finding. These discussions also will give you an opportunity to share your RIM perspective with these leaders.

You should also broaden your understanding of your industry, particularly the relevant laws and regulations and its codes of conduct.

Do Your Homework

Josh Hargrafen, IGP, CIP, manager of corporate records with ACT Inc., said he felt fairly confident about having most of the skills and knowledge shown in the DACUM chart. So, when studying for the Information Governance Professional (IGP) exam last fall, he spent a lot of time reviewing the *Generally Accepted Recordkeeping Principles*®. “I printed out a copy of them from the ARMA website and used that as an ad hoc study guide,” Hargrafen said.

Take advantage of the myriad educational resources available on the ARMA International website and from other organizations in the IG disciplines. The responsibility to manage information risk, for example, could lead you to Vicki Lemieux’s outstanding book *Managing Risks for Records and Information Programs*, the ARMA International guideline *Evaluating and Mitigating Records and Information Risks*, and the online course “Assessing and Mitigating Risks,” all available at www.arma.org.

Check out the *2014 Professional*

Consider Certification

Earning a professional certification can raise your profile, bring recognition from your employer and professional network, and be the determining factor in salary increases and promotions.

As noted in Figure 2 on page 39, “Information Governance Landscape,” there are a number of certifications available in the IG disciplines of RIM, legal, business/audit, privacy, and IT. Check out the March/April 2013 *Information Management* article by Jeff Whited, “Selecting from the Alphabet Soup of Certifications,” for information about many of these major IG certifications.

ARMA International encourages professionals to demonstrate their knowledge and skills by earning any of these recognized certifications. To facilitate this, ARMA International is working to partner with other organizations to make their certification preparation resources available to ARMA members at discounted prices. For example, you will find discounted resources from ISACA to help you prepare for the Certified Information Systems Auditor and the Certification in the Governance of Enterprise IT certifications.

Of course, ARMA International encourages RIM professionals to consider the IGP certification, in particular, which is the only certification that demonstrates a person has the strategic perspective and the requisite knowledge to help an organization

leverage information for maximum value while reducing the costs and mitigating the risks associated with using and governing information assets. According to Carlisle, it represents a more comprehensive grasp of IG expertise than those certifications that are focused on one specific area of IG.

Hargrafen counts earning the IGP in the inaugural class last fall as his greatest professional success. “I believe it went a long way to demonstrating to my new employer that I was able to step up to the challenge before me,” he said.

Jason Stearns, IGP, director of information management and discovery services for UBS – who helped New York Life win the Cobalt Award for excellence in RIM in 2008 and was also in the inaugural class of IGPs – also promotes its value for RIM professionals.

“The skills and experience needed to be successful in the field of records and information management have been changing rapidly as we mature and grow into information governance,” Stearns said. “The IGP represents this maturation and next phase for our field by identifying the skills and information that professionals need. By earning this credential, I can demonstrate that I have the foundational base necessary to be successful.”

Take Action

Whatever the first step, those that want to become an IG professionals must take action to heighten their profile and make themselves more valuable to their organizations. “It’s a proactive role,” Carlisle said. “You don’t wait to be invited to the table; you set the table yourself or put yourself forward to be included in those conversations to bring forward the IG considerations.” **END**

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AIIM

How do you manage your information assets when they are growing faster than you can digest them? Get records and content management strategies and best practices at The AIIM Conference taking place April 1-3, 2014 in Orlando, FL. Learn more and register today at www.aiimconference.com.

NAID

NAID is the non-profit trade association for the secure destruction industry, which currently represents more than 1,900 member locations globally. NAID's mission is to promote the proper destruction of discarded information through education, the NAID 'em initiative, and encouraging the outsourcing of destruction needs to qualified contractors, including those that are NAID-certified. www.naidonline.org.



RSD

RSD announced its partnership with Exterro Inc. (www.exterro.com), the leading provider of workflow-driven e-discovery software, to provide customers with enhanced capabilities for identifying, governing, and preserving electronically stored information (ESI) dispersed across today's demanding IT infrastructure. The integration between RSD GLASS® and Exterro Fusion® will deliver robust discovery technology, enhanced capabilities for in-place preservation, and full lifecycle information governance to circumvent potential legal issues. To learn more, view the full press release at www.rsd.com/en/press-releases/rsd-and-exterro-partner-deliver-integrated-information-governance-and-e-discovery-pla.

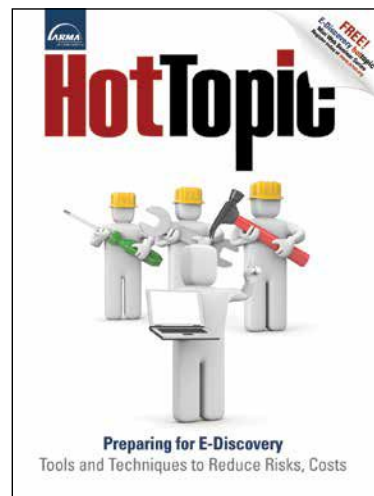


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Forging a Partnership with IT to Build a Solid IG Program

Blake E. Richardson, CRM, CIP

Corporate information vacuums and silos continue to be a point of employee frustration, the cause of ineffective business decisions, and, ultimately, an inhibitor to revenue growth. This issue is not exclusively related to technology; it also involves having a “turf” ownership mentality and not understanding the benefits of collaboration. Finally, after years of departments working in parallel, infrequently reaching out to others for advice or assistance, this is beginning to change.

Companies are surveying the in-

formation landscape and realizing that today’s complex records and information management (RIM) issues, such as e-discovery, e-mail management, storage, backups, structured data retention, and migration, are growing. They are beginning to understand that to meet these challenges, they not only must control the information explosion, they must manage information properly as an asset to generate value, reduce expenses, and increase corporate compliance. The reality is that no single department is equipped to address

these challenges; it takes a group effort.

IT and RIM Must Partner

The needed collaboration between RIM and IT, in particular, is in stark contrast to the traditional stereotypes for their roles, where RIM was tucked away in a centralized file room concentrating on managing physical information, while IT focused its efforts on electronic application and network availability and backups. In those old roles, there was no logical need for interaction.



Today, IT and RIM must rely on each other to ensure the proper management of all information. They can no longer base the success of their respective operations on network availability and the management of paper records – their paths have crossed and are now intertwined.

Forging an Effective Partnership

If you have not forged an effective partnership with IT, you must be the initiator to open the lines of communication. Once the dialog begins, it should not take long for IT to understand the benefits of partnering on RIM-related issues. IT should be hungry for RIM guidance, and you, as a RIM professional, need IT insight to ensure a compliant RIM program.

Once you understand how the department is structured and what its various responsibilities are, you will see there are several opportunities for approaching IT. Typically, the IT department will be configured in the following sub-departments or sections with a few typical responsibilities:

- **Hardware** – Configures and installs hardware products and supports network printers
- **Software**: Conducts planning and feasibility studies pertaining to the development and implementation of organizational software solutions
- **Database Administration**: Ensures the proper performance of the organization's databases and conducts prescribed maintenance
- **Infrastructure**: Designs, implements, and monitors the performance of information solutions, including hardware, software, and communications systems
- **Architecture**: Establishes policies, principles, services, common solutions, standards, and guidelines for deploying and using technology to ensure technical compatibility
- **Information Security**: Ensures electronic security of sensitive organizational data
- **Data Center Operations**: Oversees

Benefits of a RIM/IT Partnership

IT	Records Management
Awareness of data retention requirements	Increased understanding of data applications
Deletion of expired information	Increased RIM compliance
Reduced backup and restore time	Compliant application design and implementation
Guidance for active, semi-active, and inactive media storage	Increased RIM policy adherence
Increased understanding of e-discovery requirements	Creation of data maps
Establishment of data migration requirements	Establish foundation for information governance
Reduced storage needs	Enhanced e-discovery response

technical and IT issues, including computer- and server-related matters, and manages application-related issues

- **Field Services**: Assists end users in resolving IT-related computer and application issues
- **Help Desk**: Takes employees' calls for help with computer and applications issues, attempts to resolve them by remotely accessing their computers, and – if unsuccessful – assigns a field services representative to remedy the problems
- **Communications/Telephony**: Deploys and maintains land-line communication, telephone systems, and mobile telephony devices

Initially, your goal for collaboration is to begin to understand each other's issues and "pain-points," not to get immediate resolution. This will help build the foundation for effective collaboration. To break the ice, ask to attend an IT staff meeting or schedule an introductory meeting with the objective of discussing each other's roles and responsibilities. This will be enlightening for you and for IT professionals who may be unaware of advancements in the RIM discipline and still view its members as the "paper and box people."

Collaboration Opportunities

Following are some specific areas where you will find common ground for collaboration.

Retention of Data

An area of primary importance to IT operations is data retention, and partnering with IT to gain control of the retention life cycle of data will enhance the organization's effectiveness, comprehensiveness, credibility, and compliance.

Typically, IT has ensured network, application, and data accessibility for organizational business units without being provided guidance as to how long the data needs to be retained. This results in information being kept indefinitely, which has many negative consequences:

- Extended backup and restore cycles
- Acquisition of additional storage
- Increased total cost of ownership for additional storage

With electronic information doubling approximately every 18 months, (according to a June 2011 EMC-sponsored IDC Digital Universe study), many IT departments are now seeking assistance from information owners and the RIM department for managing this growing volume.

...there are records management issues to consider when migrating digital information

The RIM department, with its appraisal, research, and retention scheduling expertise, can help. Even if the organization's retention schedules were developed to manage only physical and unstructured electronic records, you can leverage them to create a starting point for managing structured data found in enterprise resource planning (ERP) and other database applications and backup tapes.

For example, your accounts payable department may retain paper or imaged invoices for seven years, but in the ERP financial application, the corresponding structured data may not have an assigned retention period. This issue provides a great opportunity to collaborate with IT to initiate an appraisal of structured data and determine if the retention periods for the physical, unstructured information can be used to manage the retention of structured content.

You could also work with IT to develop a documentation tool for all existing applications, upgrades, and new application implementations. It would include the following elements:

- Application name
- Project number if applicable
- Application owner(s)
- Application owner contact information
- Backup frequency of the application
- Maximum downtime of the application
- Total retention period of data
- Active period of data
- Semi-active and inactive period of data
- Application server name

The document should be completed and approved by IT, RIM, and the respective business sponsor prior to any upgrades or new implemen-

tations. It will provide IT with the tools it needs to effectively manage applications going forward and RIM with the information needed to ensure comprehensive retention schedules.

Media Storage

Another area of concern for IT is determining the active period of information – when it needs to be readily accessible to business owners – and the semi-active (if applicable) or inactive period, when it needs to be accessed less frequently and can be migrated to near-line or offline storage on less expensive media. You can call on your physical records management and archive experience to assist IT with this.

For example, the active period of an accounts payable physical invoice is typically several months, usually not to exceed one year. During this period, invoices reside in departmental file cabinets where they are readily accessible. After one year, physical invoices can be placed in boxes and stored onsite or offsite and still be accessible within 24-48 hours.

There are clear parallels between managing a physical invoice and managing the electronic invoice data in an ERP application. Just as a physical invoice is typically active and stored in a departmental file cabinet where it is immediately accessible for up to a year, electronic data should be available on a server, providing expedient retrieval for the same time period.

After one year, just as a physical invoice would become semi-active or inactive and boxed and stored onsite or offsite where it would be accessible within 24-48 hours, an invoice's electronic data enters a semi-active period and can be migrated to other forms of less expensive storage. This allows

server space to be managed efficiently but still provides the business user access to the information within a reasonable time frame.

If it is determined after two years that the invoice's electronic data is now inactive, IT can digitally archive the information until the retention period expires, at which time the data can be deleted.

You and your RIM department can work with IT and business owners to develop and document the active, semi-active, and inactive electronic data periods.

Migrating Data

Hardware, software, and operating systems become obsolete, requiring the migration of data from one storage type to another, to a different format, or to a different operating or computer system. However, there are records management issues to consider when migrating digital information, such as preserving authenticity and accessibility.

In the 2012 *Migrating digital records a guideline for Queensland public authorities*, the process is referred to as "digital continuity":

...the ability to ensure that despite organisational, business and technological change, the access, readability and the authenticity of digital records is maintained for as long as they are required to be kept for business, legal and/or archival requirements."

Data migration creates another RIM/IT collaboration opportunity. You should work in tandem to understand the data migration process: determining what information is targeted for migration or is at risk of loss or becoming inaccessible, identifying the targeted data's retention requirements, and evaluating the results of the migration.

Backing up Content

Magnetic backup tapes, which are still widely used for system and file restores, disaster recovery, and

archive backups, are considered by many to be the nemesis of an effective and compliant RIM program.

Although tapes used for basic recovery and disaster recovery are overwritten on a scheduled basis, those used for digital archiving are typically sent to offsite storage – often without adequate information about their nature and date ranges. It is not uncommon for large organizations to have in storage more than 100,000 backup tapes spanning two or three decades of activity, resulting in retention and deletion issues.

As digital information continues to grow, IT departments are looking for guidance on managing the volume of information that is backed up. Working with IT to apply RIM principles to this electronic content can not only reduce the existing volume, it can control the rate of accumulation, make information easier to identify

and retrieve, and ensure that it is appropriately disposed of.

Determining what needs to be backed up and how frequently requires a group effort.

Using the Cloud

Whether your organization is considering or is already moving information to the cloud, it is imperative that you partner with IT to educate others about the benefits, risks, and things that must be considered. RIM and IT can help the organization assess information types and risk levels to determine if specific content is a good candidate for a cloud solution or whether it is best suited to be managed within the company's IT infrastructure.

Work together to create internal and external checklists for evaluating the organization's integration points, risk sensitivity, and bandwidth, the

provider's security and accessibility, and the information's retention requirements.

Information Governance

Both RIM and IT play a vital role in the success of the organization's information governance (IG) program. Though each contributes different skillsets, when working together they are a team that possesses a comprehensive and proficient understanding of the organization's information management needs, including for identifying structured and unstructured information and repositories, data retention time frames, regulatory requirements, e-discovery obligations, and potential risks. By working together, RIM and IT can create a solid IG foundation. **END**

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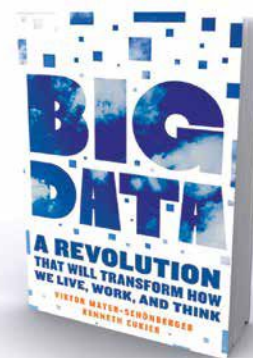
IN REVIEW

Shifting Information Analysis: Big Data's Implications for the Information Sciences and Professions

Marc Kosciejew, Ph.D.

In *Big Data: A Revolution That Will Transform How We Live, Work, and Think*, Viktor Mayer-Schönberger and Kenneth Cukier present the emerging trend of big data and its various political, economic, social, and professional implications. This book is intended for a diverse academic and professional audience in various disciplines. It should be of particular

interest to scholars and practitioners in the information sciences and professions because of its focus on the information concepts and practices inherent in, and influenced by, big data. The chapters are divided by big data's major components, thereby providing a clear framework in which to approach and understand this emerging trend. A detailed section



Big Data: A Revolution That Will Transform How We Live, Work, and Think

Author: Viktor Mayer-Schönberger and Kenneth Cukier

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Length: 242 pages

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ISBN: 978-0-544-00269-2

Source: www.amazon.com

for notes on each chapter is included, along with a bibliography and index.

Emphasizing Information

The book's central argument is that big data is transforming the ways in which we approach, understand, measure, study, and interact with the world (of information) around us. *Big data* refers to the massive amounts of information generated and collected by agencies, companies, and institutions for diverse purposes and the advancements in computing power and storage that allow for the efficient and effective management and use of this information.

While technology plays an important role, information is the bedrock of the big data era. Big data opens up novel avenues of research and practice that were not possible when only smaller datasets were available, thereby providing opportunities for new kinds and sources of economic activity, value, innovation, and work.

Further, the authors argue that big data permits *datafication* (not to be confused with digitization) – that is, processes and practices that render more aspects of reality into data points, data formats, and data sets to be used to better understand phenomena.

Shifting Information Analysis

Of particular interest to information scholars and professionals is the discussion on the emerging changes in information analysis. The authors argue that big data demands three

major shifts in analyzing information, which they call “more,” “messy,” and “correlations.”

The first shift is big data's information surfeit: there is much more data that reveals details about phenomena that could not have been examined before this trend.

The second shift is big data's messiness: examining more data allows for the relaxation of precision. We are no longer constrained by the rigid exactitude demanded by small data; instead, with much larger and more comprehensive datasets we can gain greater insights at various analytical levels, from categories to sub-categories. Messiness does not mean discarding exactitude, only our devotion to it.

The third shift is big data's correlations: the information profusion helps reveal patterns and relationships that show *what* is happening in a particular case or phenomenon instead of *why*. We no longer have to obsess over causality, an obsession that can often lead to mistakes and misinformation; instead, we can concentrate on what is happening in order to discover new insights. Incidentally, once these correlations are established, they can then be used to help improve causation analysis.

Neglecting the Information Professions

A weakness of the book, however, is it neglects to recognize the integral roles played by information professionals in the big data era. The au-

thors state that for too long we have concentrated on the “T” (the technology) in IT, and it is now time to recast our focus on the “I” (the information). If that is so, the authors have ignored an essential part of the “T”: the important and long-standing information professions. The authors barely discuss the information professions – from librarians to records and information managers and practitioners – that are directly, intricately, and intimately involved with the management of information and its life cycle in many contexts, past and present.

The authors do, however, discuss the so-called emerging data specialist who deals with big data. This discussion would be richer, more detailed, and more nuanced if the authors mentioned, at the very least, that information professionals are the original, current, and future data specialists, instead of presenting the data specialist as a new and unique kind of professional.

Nevertheless, the seventh chapter's discussion of how big data affects the skills, ideas, and mindsets essential to information management illuminates new directions and insights for information professionals as they embark on big data initiatives and projects.

Approaching Big Data

This book provides an excellent foundation on which to approach, build, and expand one's knowledge and understanding of big data and its many implications for diverse actors, cases, settings, and scenarios. Although overlooked in the book, scholars and practitioners in the information sciences and professions will find its arguments, examples, and prescriptions informative for their approaches to, and their work with, big data. **END**

Marc Koscieljew, Ph.D., can be contacted at mkoscieljew@gmail.com. See his bio on page 47.



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William Saffady is a Professor at the Palmer School of Library and Information Science, Long Island University in New York City, where he teaches courses on information management topics. He previously held similar faculty positions at the State University of New York at Albany, Vanderbilt University in Nashville, Tennessee, and Pratt Institute in New York City. He is the author of over three dozen books and many articles on records management, document imaging, information storage technologies, office automation, and library automation. In addition to teaching and writing, Saffady serves as an information management consultant, providing training and analytical services to corporations, government agencies, and other organizations. He can be contacted at: wsaffady@aol.com.

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Shifting Information Analysis: Big Data's Implications for the Information Sciences and Professions Page 45

Marc Kosciejew, Ph.D., is a lecturer of library, information, and archives sciences within the faculty of Media and Knowledge Sciences at the University of Malta. His current research interests include the intersections of society and technology, records and information management, concepts and practices of information, and the histories of libraries and information. Kosciejew received his master's degree and Ph.D. in library and information science from Western University (formerly the University of Western Ontario) in London, Ontario, Canada. He also holds certificates in web search strategies, records management, and freedom of information and protection of privacy from the University of Toronto. He can be contacted at mkosciej@gmail.com.



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