
Best KM Practices in Government

- Andy Moore 2 **Overture Article: Government: The Mirror Image of Information Management**
The governor of the great state of Maine, Angus King, often brags about his state's advanced technology by pointing out that "any Mainer can now buy a fishing license at 3 AM in his underwear." Well, I can tell you that as a citizen of Maine, I am delighted by my state's accomplishments in technology (and a little repulsed by the mental image).
After years of observing technology in business, it's sort of odd to look at the ways in which government approaches the subject. For me, it's like a fun-house mirror—a distortion of my usual expectations, but interesting nonetheless. . . .
- Jay Weir, Hummingbird..... 4 **Transforming Information into Intelligence**
Today's economic climate has both corporations and governments looking to information technology to provide added value. By leveraging knowledge assets, corporations can generate new opportunities, and governments can better serve their constituents. Rather than attempt to build a patchwork solution, both are leveraging existing investments in IT and endeavoring to build a "360° view" of enterprise content. Their goals are: enhanced productivity; streamlined business processes; fully secured information management; accelerated "time to knowledge"; cost savings; improved efficiencies. . . .
- Bassam Zarkout, eManage. 6 **Next-Generation Records Management**
In recent times, governments have experienced a sharp increase in the use of electronic systems both for internal operations and for communication and collaboration with all external audiences including citizens, lawmakers and businesses. This new reality is generating enormous quantities of electronic records—particularly e-mail, most of which is not being professionally managed.
Such unprofessional practices have led to the accidental or sometimes deliberate destruction of official documents, to the unnecessary and expensive retention of obsolete records, and most importantly, to the loss of organizational knowledge. Broad consensus now exists about the necessity to improve records management practices. . . .
- The IBM Content Management Group..... 9 **Content Management—The Winning Ticket at NY State Lottery**
Operating efficiently and delivering high quality service to both citizens and business are top priorities for any government agency. For the New York Lottery, operational efficiency continues to be as critical as ever for the organization to ensure that a significant portion of the collected funds support education, not administrative functions.
Determined to streamline its operations, the New York Lottery sought an electronic document imaging and management solution. The impact on their productivity has been significant. . . .
- Sybase 10 **E-Government Portals: A Sybase Vision**
Existing government Web sites provide customers with access to government information, allow simple transactions and provide links to other relevant agencies. But it's clear that e-government is no longer just about "webifying" government agencies. The imperatives are to re-engineer enterprise processes across agencies, to integrate disparate systems and applications and to provide secure and responsive access to citizens and businesses. Over the last five years, governments worldwide have launched thousands of programs to deliver public services online. . . .

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Government: The Mirror Image of Information Management

By Andy Moore, Editorial Director, *KMWorld* Specialty Publishing Group

The governor of the great state of Maine, Angus King, often brags about his state's advanced technology by proudly pointing out that "any Mainer can now buy a fishing license at 3 a.m. in his underwear." Well, I can tell you that as a citizen of Maine, I am delighted by my state's accomplishments in technology (and a little repulsed by the mental image).

After years of observing technology in business, it's sort of odd to look at the ways in which government approaches the subject. For me, it's like a fun house mirror—a distortion of my usual expectations, but interesting nonetheless.

Government Is Different

"Government has to learn to do more with less," says The Man.

I am writing this on Tax Day, April 15, so I don't feel very generous to The Man right now. But I AM satisfied that certain legislation (the Freedom of Information Act and the Privacy Act in particular) has ratcheted up the demand on government agencies to manage all communications and documentation with far greater seriousness than ever.

The fact that we're currently in a state of war—with much of the backfiring taking place in the communications systems and electronic transmissions crisscrossing the globe—has certainly upped the ante for increased scrutiny.

And I know that scandals such as Enron and Andersen have focused a spotlight on records management that wasn't there before. Paper shredding hasn't had this bad a rap since Watergate.

I suppose that agencies at all levels are feeling the public pressure to provide better service to the electorate. Self-service Web access to simple forms and everyday transactions (such as buying fishing licenses, paying traffic tickets, etc.) has led to longer coffee breaks for civil service workers everywhere.

But in government, as in no other sector, information management is usually a reflex-

ive and defensive act. There is no competitive pressure; after all you can't decide to take your business to a competing government down the street (no matter what those wackos in the hills of Idaho think).

There IS economic pressure, just like in business. Money's tight all over. But when a government agency messes up, there's usually a friendly legislation to vote them back to life. Remember those times when the federal budget was unapproved, and the government was "out of business"? Besides keeping David Letterman going for a while, what real consequence did it have?

The REAL consequence for government agencies is regulation and law. It's all stick, and little carrot. There are laws that require—mandate—government agencies to dot their "i"s and cross their "t"s. So government views information management though a rather wavy mirror that seems just weird to those of us who live in the private sector.

There are two primary forces causing government agencies to create highly automated information repositories and equally transparent means of distributing information out. First is simple efficiencies, and as crabby as I am right now about it, they've got a point. A bloated bureaucracy doesn't play very well anymore. The more citizens who can get their answers online (and feel good about the experience) the better.

"All of our government installations tend to fall into one of two categories," says Andrew Pery, Chief Marketing Officer and Senior Vice President of Hummingbird. "Gaining efficiency or mitigating risk. Governments are moving toward the electronic delivery of services ... government on-line. They want therefore to create a centralized repository of their knowledge assets, and the ability to manage that effectively is their key interest."

Then I point out to Andrew that the "customer service" aspect is missing from that equation. "That's actually very interesting," he says. "It depends on how you define customer service"



Andy Moore

Andy Moore has often been a well-known presence in the emergence of new technologies, from independent telecommunications through networking and information management. Most recently, Moore has been pleased to witness

first-hand the decade's most significant business and organizational revolution: the drive to leverage organizational knowledge assets (documents, records, information and object repositories) and the expertise and skill of the organizations' knowledge workers in order to create true learning organizations. He can be reached at andym@mint.net and welcomes feedback and conversation.

I'm shaking images of Bill Clinton's videotestimony from my brain as Andrew explains: "In government, service tends to be document-centric: to be able to deliver that agency's specific information efficiently—say, the revenue side delivering information and forms about e-filing of taxes (damn, I'd almost forgotten) is the 'equivalent of customer service.'"

And having a centralized repository for the disbursement of forms, policies, manuals, is in some ways driven by the same dual forces of efficiencies gained (internal cost savings) and satisfaction enjoyed (by customers ... or in this case, "the constituency of customers," as it's known in this topsy-turvy world).

See what I mean? It's sort of the same, but undeniably different ... like a fun house mirror.

The Law of E-Mail

The day they invented e-mail, everyone's life got more complicated. But none so much as the records managers who are tasked with controlling, filing, sorting and providing access to the records of the zillions of transactions that occur every day in business AND government.

"E-mail contains the most recent information and is the up-to-date snapshot of an organization. And many of those e-mails fit the definition of records," points out Bassam Zarkout, VP Product Management for eManage. "If I make a business commitment to you, whether I e-mail it or print it and send it in the mail is irrelevant. That communication has to be made accessible and auditable according to law."

I've said it before and I'll say it again: Records management (and records managers themselves) has taken the upfront position in any organization's information and

knowledge-asset management. No longer do records managers represent the "end of the line" for information.

Records managers in government have a hierarchy of responsibility: to comply with the law demanding that certain types of records are preserved for certain prescribed lengths of time; to protect the interests of the government and its employees by documenting the activities of the particular agency; and increasingly to provide access to information to the public, in response to FOIA requests.

The reassessment of the role of records managers is due, in large part, to the higher public profile of the records themselves. Media attention has mounted, starting a few years ago with the discovery of damning evidence in the e-mail records of certain tobacco company executives, moving through the Microsoft mess and Bill Gates' own faulty memory (which came rushing back after e-mails were discovered that refuted his testimony), and now beginning to have an impact in the Enron/Andersen investigations.

"Records management used to be on the sideline, not part of the information management vision and strategy. It's becoming that now," says Bassam. This change in profile for records managers is met by some records people grudgingly, he says, "but many, many of them have migrated to that vision."

This consolidation of IT and RM has created the need for education—"they use different terms for the same thing," Bassam points out—and has led to some interesting new strategies.

Take e-mail, for example. In traditional records management, a "record" (in this case an e-mail) would be first created or received, the business transaction it is associated with would be completed, and at the end of the line, the record of that transaction would be sent along to the RM—where it would be analyzed, assigned a retention policy, stored for the appropriate amount of time, then eventually destroyed.

But the "new" RM recognizes that e-mail as an asset of the organization, not an artifact of an historical event. So the FIRST action that takes place on the e-mail is analysis: "What is this about?" "Who is it addressed to?" "Is it high-priority?" "Is it important to anyone else?"

Next, the e-mail (call it an "active record") initiates action. It may simply go to the intended person. But it may also trigger a workflow that, in turn, triggers an action that involves many people and processes. Only after it's determined that no other value can be derived from this active record does it enter its final stage, as a mere "record," and it lives out its days in a retirement village in Boca playing shuffleboard and watching Christopher Lowell...

Kidding aside, this is an enlightened view of information-asset management, and

it places the e-mail—the current snapshot of the activities of the organization—in its rightful front-line position. And it places the records manager at his and her rightful seat at the head of the table.

Are records managers ready to accept this role? "Reality has to prevail," says Bassam. "The needs are there. I see records management as the hub of knowledge management." Yet the application of "upfront" analysis of all e-mail (and other) records that enter the organization is mainly confined to the financial industries, Bassam says. At the government level, the decision to submit an e-mail to the records-management system for proper analysis and retention is still mainly left to the individual government worker, he says.

For some reason that doesn't make me feel any better about that tax check I just cut...

Starting to Get the Picture

Preserving the decision process ... the capture and dissemination of best practices ... automated transactional processes (such as supply chain management) ... automated processes that facilitate the effective management of intellectual content...

All of this sounds familiar. Could government be hearing the gospel according to KM?

The common factor is that both private industry and the public sector are looking at ways in which they can "formalize the ways they manage intellectual content" says Hummingbird's Andrew Pery and focus, through intellectual capital management, "not only on the technology but methodologies, by which organizations can more effectively capture, manage and disseminate intellectual assets."

***"It's sort of the same,
but undeniably
different ... like a fun
house mirror."***

What's interesting is that the technologies at work are the same, even though the end result is very different. In the public sector, applying all that intellectual strength is in the service of process improvement and efficiency. In the private sector, it's all for productivity and competitive advantage.

And yet ... it's the same thing! Both sides are using the same tools and attempting to build remarkably similar infrastructures.

"The technology is the enabler," Hummingbird's Andrew Pery says. "Whether it's a policy and procedure document, or an HR

application, or a collaborative product development application, it's just a different context in which it is deployed."

Maybe he should add, "when" it is deployed. Electronic records management will have its ultimate impact when substantially all records are electronic. But to a remarkable degree, the world is still paper-based, as was pointed out to me in a recent Hummingbird White Paper ("Hummingbird Enterprise: Fostering a 360° View of Enterprise Content"). Banks still routinely reference microfiche to check signatures. The majority of the world's scientific information is microfiche-archived in libraries. The entire US healthcare system runs on paper and faxes—and most state, federal and government agencies are scrambling to implement EIMS systems.

According to Gartner Group less than 50% of all organizations worldwide currently have an enterprise information management, and/or document management system. Recently a Centers for Disease Control and Prevention representative said that it would be four years before a bioterrorism warning system could be implemented because most hospital emergency room reporting systems and labs were paper-based.

The contributors to this white paper are trying to reverse that reality. Each has taken the position that effective management of electronic documents and communications can save money, provide better service and allow the users to exceed all expectations, whether their targets are customers or voters.

There remains a lot of work to be done. There are federal mandates that can drive the adoption of centralized repositories of information and the advanced services that emerge from them; it's already happening in North America and in certain places abroad. But at the U.S. state level, there is almost no cross-pollination or knowledge transfer that would help one state's agency pass along crucial information that could speed the adoption. It is left up to the IT professionals and agency heads to figure it all out.

Companies like eManage and Hummingbird and the others who have contributed to this White Paper may have vastly different approaches, but their goals are similar: to provide the tools that can be intelligently applied to make life a little easier for their customers, and ultimately for all of us.

Now, if you'll excuse me, I have to get back to work ... next year's tax day is just around the corner. ■

Andy Moore has often been a well-known presence in the emergence of new technologies, from independent telecommunications through networking and information management. Most recently, Moore has been pleased to witness first-hand the decade's most significant business and organizational revolution: the drive to leverage organizational knowledge assets (documents, records, information and object repositories) and the expertise and skill of the organizations' knowledge workers in order to create true learning organizations. He can be reached at andym@mint.net and welcomes feedback and conversation.

Transforming Information into Intelligence

Governments and Corporations Seek Similar Goals

By Jay Weir, Product Marketing Manager, Hummingbird Enterprise Portals Solutions, Hummingbird Ltd.

Today's economic climate has both corporations, agencies and departments at all levels of government looking to add value to their businesses. By leveraging knowledge assets, organizations can generate new opportunities, and governments can better serve their constituents. Rather than attempt to build a patchwork solution, both are leveraging existing investments in IT and endeavoring to build a cohesive 360° view of enterprise content. The ultimate goal is to realize tangible, significant, and rapid returns including:

- ◆ Enhanced productivity—via customizable workspaces, interoperable solutions and increased collaborative capabilities.
- ◆ Streamlined business processes—via collaboration, knowledge sharing, best practices replication and communities.
- ◆ Fully secured information management.
- ◆ Accelerated “time to knowledge” provided by an integrated model for accessing, analyzing, sharing, managing, and organizing information.
- ◆ Cost savings—a lower total cost of ownership provided by an integrated solution set, rapid deployment time, streamlined

application integration and decreased administration.

- ◆ Improved efficiencies—eliminate redundancy of knowledge-based work, and reduce time involved with finding information.

Organizations and governments need a robust framework if they are to maximize competitive advantage, accelerate speed to knowledge, and increase customer or constituent relationship efforts.

Each element of the wheel (below) has specific information- and knowledge-based solutions that enable them:

Access

Access is provided by the user interface, presentation layer, query tools and other elements used to interact with business systems, repositories and other users.

Connect

As much as 80% of enterprise structured data resides in legacy data systems—mainframes, midrange systems, and UNIX data stores. Connectivity to this data is essential.

Manage

With the amount of unstructured information generated by today's organizations,

industrial-strength document management is one of the most strategic investments to be made.

Protect

A common security framework is required to: perform the absolutely critical role of sentry of information and application integrity; to facilitate simplified user-access in providing single sign-on; and to streamline profile maintenance by avoiding multiple security directories for administrators, and multiple passwords and IDs for users.

Find

Search and categorization solutions must interoperate (delivering search and categorization functionality via a common interface) and deliver true unified search capabilities (access to structured and unstructured, internal and external sources) to generate a 360° view of Enterprise Content.

Analyze

Solutions capable of getting at information, transforming it into query- and analysis-conducive formats, and loading and replenishing data stores and applications, coupled with reporting and analysis tools, are required to satisfy this element of the 360° model.

Share

Collaboration tools should not be deployed solely as a means of communication. Rather, collaboration functionality—both asynchronous (e-mail, discussion boards, groupware, calendaring, etc.) and synchronous (application sharing, whiteboarding, chat, etc.)—must be tied to business processes and embedded within information- and knowledge-based solutions.

Publish

With respect to integrated document management, “publish” means the ability to not only check-in new documents, but also speaks to lifecycle management, workflow, routing, and other components of managing unstructured data. The most important factor is ensuring that users are able to publish content from whatever application they are working in to wherever it needs to be.

It is important to keep in mind that fostering a 360° view of content involves not only the interoperation of technologies and business solutions, but also the commitment of users to support it.

Fortunately, the 360° model benefits both constituents and government agencies. It not only generates concrete business value (bottom line return, reduced cost of ownership, etc.), but also drastically changes the efficiency and manner in which constituents or government employees access, manage, work with, and leverage content—for the better.



The 360° Model of Enterprise Content

Taking the 360° View in Government

The basic technologies behind the 360° model, such as document management, business intelligence and records management, have already been applied by many visionary implementers in the public sector toward the task of making government work better. The following are just a few examples of how enterprise information management systems are improving many aspects of daily life for millions of citizens.

Getting to the Games

The Utah DOT's need for a better document management system started coming into focus in April of 1997, when the agency began a reconstruction project on a 17-mile stretch of Interstate 15 through the Salt Lake valley. The \$1.5 billion project came with a deadline: all work had to be completed by October 2001, so as not to affect traffic during the 2002 Winter Olympics.

Karen Gross, imaging specialist for the Utah DOT, says the agency implemented an innovative construction approach called "Design-Build", in which construction starts and moves forward rapidly before final design plans are finished.

"For the I-15 team, the response time to project correspondence was minimal, because any member of the team could access the system and keep response documents moving," says Gross. Using the old paper-based system, searching for documents was often frustrating and unfruitful, since the people who entered the data or filed the documents weren't always around to help locate the needed files.

"One person may have been the only one who knew how to find a certain piece of data," she adds. "Sometimes, nobody else could find the information." With the new document management solution in place, search speed and functionality improved like a car moving from a rutted, dirt road to a smooth stretch of blacktop.

Putting Content into Constituents' Hands

To improve the flexibility, responsiveness and efficiency of federal ministries and agencies, the Government of Canada recognized the need for a document management system that could liberate information stored and duplicated in multiple ministries, departments and agencies. Hummingbird partner CGI Group Inc. was chosen to design, build and implement the Records, Documents, Information Management System (RDIMS) for the Canadian federal government.

"RDIMS allows users to classify their own records, search for records and submit

retrieval requests from their desktops," says Richard Spratt, Senior Consultant, CGI. "Putting records into the hands of users extends benefits to people who formerly had no experience with records management." Through RDIMS, word-processing documents, spreadsheets, presentations, photos, forms, images and e-mail messages can all be created, archived and searched.

First Nations Come First

Indian and Northern Affairs Canada (INAC) is primarily responsible for meeting the federal government's constitutional, treaty, political and legal responsibilities to First Nations, Inuit and Northerners. Its mandate is derived largely from more than 50 statutes. Consequently, INAC's mandate is complex and its responsibilities encompass a broad range of services. Ron Patterson, CIDM Project Manager at INAC, was part of an inter-departmental working group tasked to define the Canadian federal government's records and document management needs, evaluate the bids and select the winning solution.

"The advantages of electronic document management are easily observed," says Patterson. "We've realized savings in shutting down shared drives, and basic things like cabinets and office space, as well as a reduction in overall handling and records management workflow from the previous paper environment."

INAC will also realize significant savings in general litigation costs related to pre-trial research and document assembly. "We anticipate a savings of millions of dollars based on the improved ability to track down documents and pre-existing research relevant to litigation. Now that everything can be easily searched, we don't have to worry about re-doing work that has been done in the past," says Kirk Douglas, National CIDM Coordinator. Hummingbird's open architecture incorporates virtually any computing environment to manage and control network-based information across a variety of applications, platforms, databases, networks and geographic locations.

Putting the Intelligence Back into Crime Fighting

When the task at hand is solving or preventing crime, there is no substitute for accurate, timely information. Although law-enforcement agencies have been automating the use of crime-related data for many years, a large number of the older systems are mainframe-based, using batch-processing methods that can only produce limited

queries and reports. For the justice officials of Oakland County, Michigan, a quickly growing "world technology center," the old reporting system was no longer meeting policing needs.

For three decades the Oakland County-based Courts and Law Enforcement Information System (CLEMIS) has been servicing a part of the Detroit metropolitan area that spans three counties, with a population of approximately two million.

Justice officials wanted a solution that could more quickly and flexibly analyze and report on the data that officers collect. They wanted to take data sitting in computers and put its power back into the police officers' hands, to help them better investigate crimes, or recognize patterns of criminal activity, using the knowledge and analysis possessed by the entire department.

Joe Sullivan, manager of the CLEMIS project, says Oakland County's main goal was to provide officers with easy and timely access to records data for crime investigation, as well as management and administrative reporting.

"The mainframe system was too complex for casual use. CLEMIS is an investigative tool, and a strategic planning tool. The police were putting information into the system, and they wanted to get it back out quickly," Sullivan explains.

"With a PC-based reporting system, data can be extracted daily," says Sullivan. "The data now is much more current, much more powerful, and there are a greater number of users with access to it."

From a "design-build" project to get the highways built for the 2002 Olympics in Utah, to the Indian and Northern Affairs Department in Canada, where decades-old treaties are administered and enforced, to a county government policing initiative, governments are increasing their responsiveness to citizens' needs through the use of information technology. The 360° model provides a framework which will allow the government to easily leverage existing investments to quickly improve efficiencies by enhancing productivity, streamlining business, securing and allocating information, providing cost savings, and ultimately accelerating users' "time to knowledge." ■

Headquartered in Toronto, Canada, Hummingbird Ltd. is a global enterprise software company that employs 1300 people in 40 offices worldwide. The company's revolutionary Hummingbird Enterprise™, an integrated information and knowledge management solution suite, manages the entire lifecycle of an organization's information and knowledge assets. Hummingbird Enterprise creates a customized 360° view of enterprise content with a portfolio of products that are both modular and interoperable. Today, five million users representing 90% of the Fortune 500 and 85% of the Fortune 100 companies rely on Hummingbird products and solutions to connect, manage, access, collaborate, publish and search their enterprise content.

Next-Generation Records Management

Achieving Digital Transparency in Government

By Bassam Zarkout, VP Product Management, eManage Inc.

In recent times, governments have experienced a sharp increase in the use of electronic systems both for internal operations and for communication and collaboration with all external audiences including citizens, lawmakers and businesses. This new reality is generating enormous quantities of electronic records—particularly email, most of which is not being professionally managed.

These practices have led to the accidental or sometimes deliberate destruction of official documents, to the unnecessary and expensive retention of obsolete records, and most importantly, to the loss of organizational knowledge.

As a result, a broad consensus now exists about the necessity to improve records management practices, which is only being strengthened by the sheer scale of the problems and loss of confidence caused by recent record-shredding incidents at Enron and Andersen.

Department of Defense

One exciting example of the possibilities for innovation in online digital government is the Department of Defense (DoD) ASD C3I Defense Information Technology Test-bed (DITT). The functional requirements created by DITT may very well become the next generation of records management.

The required solution called for a DoD 5015.2 certified records management application to provide additional capabilities related to the automated pre-screening and processing of electronic records into the records center and the intelligent dissemination of records. Without this solution, these processes are manual, labor intensive, and disjointed from the records management function.

“Our vision went beyond the current state-of-the-art in records management and the DoD 5015.2 standard. It called for a seamless knowledge management (KM) solution using a certified records management application

supporting a myriad of business processing including: the automated processing of records; the analysis and identification of their content in relation to virus, Privacy Act, security accreditation, and candidate Thesaurus terms; the application of actions based on that content; the management of the retention and disposition of these records; and the provision of redacted versions of these records for dissemination purposes,” says Mr. William Kinsey, Program Manager.

DITT selected eManage to provide this solution for implementation at the U.S. Army CALL-DITT in Fort Leavenworth, Kansas. The Center for Army Lessons Learned (CALL) collects and analyzes data from a variety of sources including Army operations and training events, and produces lessons for military commanders, staff and students. CALL then disseminates these lessons through a variety of media.

“The benefits of this solution to the government and industry are significant, and included productivity gains in the records management operation and enterprise knowledge bases (repositories) with transparent records management, and more effective processing of Freedom of Information Act (FOIA) requests. Above all, the solution promotes more reliable access to records and the management

of records throughout their life cycle. The eManage solution we implemented provided these capabilities seamlessly and in a manner that leveraged our technology infrastructure,” says Mr. Kinsey.

The CALL-DITT KM system implemented by eManage allows users to submit documents to the records center for processing. This is done through the messaging system (Microsoft Exchange). When they reach the records center, eManage performs a number of automated pre-screening actions on these documents and eventually processes them as records or quarantines them. The solution starts by performing virus checking on these documents and applying to them the necessary cleaning, quarantining and notification actions. eManage then performs content interpretation on these “record candidates” using intelligent content analysis policies that were developed to meet DITT’s functional requirements. The process identifies the security markings, Privacy Act content, and various record attributes (including file codes), and generates candidate terms for the Army Thesaurus. The content analysis is done using advanced artificial intelligence (AI) and pattern recognition tools.

During their life cycle, records can be requested for dissemination (FOIA requests for example). eManage automatically performs content analysis on the requested records and identifies phrases that require redaction (Privacy Act, classified terms, other types of content). Authorized users can then redact some or all of the highlighted phrases and send copies of the redacted documents to the requesters.

Electronic Records Management in Government

Electronic records management in government is a key enabler of digital transparency. Its main mission is to: implement laws and regulations; protect the interests of the government and its employees; document the business activities; schedule records; manage information through its life cycle; provide reliable access to records; and enable the dissemination of records to the public.

***"Records are corporate knowledge
and managing them is part
of managing knowledge."***

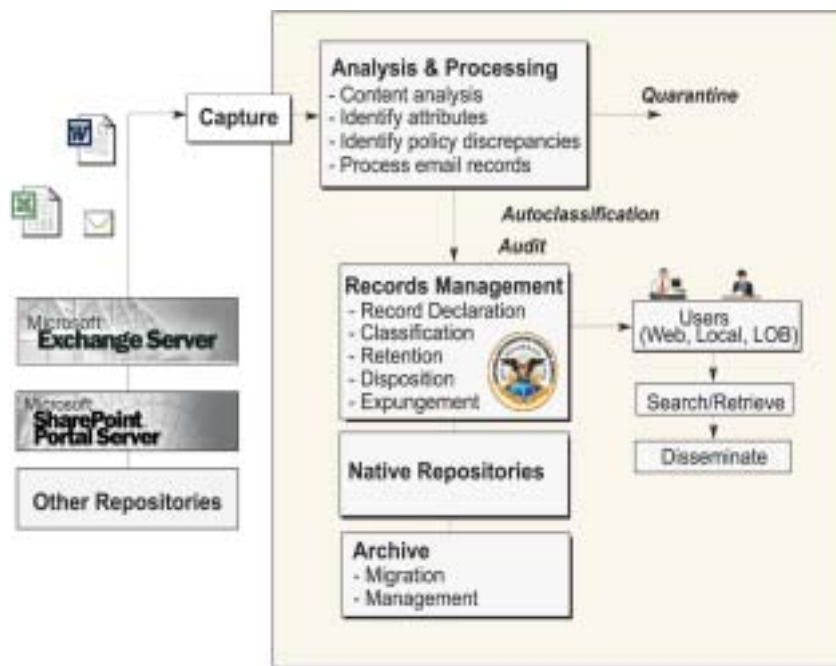
A major challenge facing government today is how to carry out the records management mission effectively and efficiently while the scope of this mission keeps growing and increasing in complexity and while the record sources, formats and volumes continue to proliferate.

In order to increase productivity, minimize business and legal risks, and adhere to corporate and industry regulations and policies, government, like any other organization, is striving to adopt a coordinated knowledge management strategy that will enable it to seamlessly integrate various technologies and applications to achieve its objectives. In doing so it is required to implement an auditable and automated process for the management of all its electronic records throughout their life cycle, from their creation to their disposition, thus achieving digital transparency.

Records Management and Knowledge Management

Overall, records management is emerging as a core component of knowledge management. It will continue to move from a standalone function to become part of the infrastructure. It is evolving from a separate dedicated tool to a core technology that touches on all business activities within the organization. This evolution is moving along four main trends:

- 1) The first trend is that records management is becoming more encompassing. In addition to managing traditional forms of records (paper and electronic), the same methodologies are being applied to new forms of records such as email and e-transactions (XML records exchanged between e-business applications). In particular, managing email is one of the most pressing records management issues. The government recognizes that email is a source of records. The DoD 5015.2 electronic records management standard recognized that fact as early as 1997 and legal precedents involving email records were established long before that. However, email is the worst managed form of records. In most government organizations, it is left unmanaged in user mailboxes, subject to random retention and disposition by users. The result is non-compliance with laws and regulations.
- 2) The second trend is driven by government's need to use the records management environment as a building block for an array of new functions. One of these functions is the automatic analysis of record content as the records are being captured and processed into the records center for the purpose of identifying and flagging content that may affect compliance with laws and regulations. In particular, the government needs to be aware of the content of its records in



eManage multi-stage real-time process for email and records management

relation to the Privacy Act. In security-sensitive applications, it needs to assess and be aware of the secrecy level of its records content. More generally, the government needs to make sure that record attributes are captured and important content is acted upon appropriately. The government also needs to service information requests from the public such as FOIA and some of this content needs to be redacted (Privacy Act and other content) before dissemination.

- 3) The third trend is the integration of the corporate file classification with business applications and processes. This allows knowledge workers to access the corporate file classification and the records within it through their business applications in a collaborative and secure way.
- 4) The fourth trend is driven by technology. Government needs records management solutions that are scalable and economical to implement and operate. Records management applications need to leverage the existing IT infrastructure rather than build their own. One example of such infrastructures is the Microsoft Exchange messaging system, which has been widely implemented within government.

eManage—The Next-Generation Records Management System

eManage is an advanced records management application certified to the DoD 5015.2 Records Management Application standard. It offers a unique multi-stage real-time process for document and records acquisition that de-

finies, at each stage, subsequent actions to be taken on captured documents. This is achieved by using intelligent content interpretation, resulting in a high level of accuracy in determining what actions are to be taken.

eManage provides a unique set of capabilities for the management of corporate records from the creation and capture, to the analysis and interpretation of record content, to the processing, records management, retention, archiving and final disposition of these records. eManage provides access to corporate records within a secure and collaborative environment. It makes the most of an organization's existing business system environment through its integration with line-of-business applications (ERP, CRM, etc.), and its utilization of existing information repositories for record storage (for example Microsoft Exchange and SharePoint Portal Server).

The benefits of this solution include lower total cost of ownership of the IT infrastructure, lower operating costs for the records management function, productivity improvements for knowledge workers, mitigation of legal risks, compliance with regulations, and many others. ■

eManage is a developer of email lifecycle management and electronic records management products that enable organizations to manage corporate records at an enterprise level. These products address the market's need for a complete solution that includes intelligent content analysis, record management and archiving. They also enable organizations to improve productivity, reduce the total cost of ownership of their messaging infrastructure, mitigate legal costs and risks, ensure compliance with corporate policies, and enable regulatory compliance. eManage products are DoD 5015.2 certified and compliant with SEC 17a-4, HIPAA and FDA rule 11.

Making an Impact in the Corner Office

A Year of Best Practices

By the *KMWorld* Specialty Publishing Group

When we started the *KMWorld* Best Practices White Paper series, we imagined it as a new, more appropriate platform for the exchange of information between buyers and sellers of information-technology goods and services.

Our theory was that information management, and the document and content sciences in particular, need a little more exposition to augment a branding message. Content management is more than a means of storing and retrieving information; it is strategic in a way that few previous corporate initiatives can claim. It deserves a little more space.

So, one year into the experiment, what's the verdict?

The *KMWorld* White Papers have become a must-read each month for thousands of corporate decision makers and technology planners. "Offline" (i.e., on good, old-fashioned printed paper), these White Papers reach about 100,000 pairs of eyes each month.

Online reading has been more interesting. According to WebTrends, 70,900 senior decision-makers have either read or downloaded a *KMWorld* Best Practice White Paper within the past 11 months. That doesn't count the corporate libraries and departmental "must-read forwards" (for instance, Coca-Cola, The

Home Depot and J.P. Morgan have asked for and received permission to distribute *KMWorld* White Papers through their internal content-dissemination routes).

Lessons learned? Straight talk and reasoning still count. Experience (shared through case studies of successful solutions) is the best teacher. The best information rises to the top.

As long as that remains true, we'll continue providing the *KMWorld* Best Practices White Paper series.

How It Works

The *KMWorld* Specialty Publishing team has created an editorial calendar (see below) for a full calendar year.

Our editors review all submissions for adherence to strict editorial guidelines. We do not allow "hype." We DO allow reasoned explanations of the solutions, and how they can help. As a "business solutions" paper, we have every desire for our sponsors' messages to come through loud and clear.

Our editorial calendar is not immovable. If you have a suggestion for a new topic, vertical market or technology space to explore, please contact us. ■

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Content Management— The Winning Ticket at NY State Lottery

Eliminating Paper and Creating Efficient Workflow

By the IBM Content Management Group

Operating efficiently and delivering high-quality service to both citizens and business are top priorities for any government agency. For the New York Lottery, operational efficiency continues to be as critical as ever for the organization to ensure that a significant portion of the collected funds support education, not administrative functions.

Determined to streamline its operations, the New York Lottery sought an electronic document imaging and management solution. After examining the benefits it brought to the state's Department of Environmental Conservation, the lottery chose IBM ImagePlus VisualInfo, now known as IBM Content Manager, on Windows NT. IBM Business Partner IKON-Image Systems Solutions helped with the implementation.

The impact on their productivity has been significant. Content Manager is enabling them to route electronic images of documents between headquarters and the regional offices, instead of photocopying and mailing paper files back and forth. This has helped reduce the time for processing sales agent applications from 75 to 60 days—a 20% improvement. And, because multiple users can view documents on their screens instantly, it is now much easier and faster to track vendor applications and answer inquiries, thus improving customer service.

***"It was amazing
how quickly we
progressed from
paper to electronic
documents."***

"It used to take us days to respond to inquiries about applications because our regional staff had to search their files for the information and then mail it to us at headquarters," says Jeffrey Allen, sales manager at the New York Lottery. "Now I just look up the document using Content Manager and provide an immediate—and more detailed—response."

Cutting the Paper Trail

New York Lottery's staff of 350 manages roughly 17,000 sales agents across New York, from gas stations to bars to grocery stores. Each week, the organization processes as many as 100 applications from prospective sales agents. These applications each come with at least 20 sheets of paper, from forms accompanying background checks to written evaluations and approvals. In the past, this has meant shuffling reams of paper between the organization's Schenectady headquarters and six regional offices.

Before implementing Content Manager, employees at headquarters would receive completed applications, enter the information into the existing application tracking program and mail the documents to the appropriate regional office for evaluation and final approval by the regional director. More copies would be made at the regional offices and, once they were finished with the file, they would send photocopies of the documents back to headquarters for review and filing.

Content Manager has eliminated the need to photocopy or mail paper documents between headquarters and regional offices. Instead, all documentation is available online, indexed and filed in electronic folders. After an application has been scanned and indexed, the paper file is discarded 30 days later.

"With all the time spent mailing documents from site to site, it took about 75 days

to process an application," says Allen. "With the workflow capabilities of Content Manager, we can route in-process applications so that I can see how many new applications we've received each day and find out instantly how long an application has been in the system."

A New Way of Working

According to Allen, the 25 New York Lottery employees who handle document scanning and other employees who use the imaging equipment have adapted quickly to their new way of working, thanks in part to the training provided by IKON-ISS. Says Allen, "Our employees, who are now scanning 200 documents a day, have become accustomed to our faster, more efficient business processes very quickly. The training that IKON provided was superb." Indeed, with its help, the New York Lottery deployed the imaging solution ahead of schedule and without interruption to day-to-day business.

"The day Content Manager was implemented at our largest regional office was the last day that office sent us paper. It was amazing how quickly we progressed from paper to electronic documents," notes Allen.

The organization continues to use its existing license application and sales tracking programs. Combined with Content Manager, these systems are providing the New York Lottery a detailed picture of its workflow as well as the revenue-generating capabilities of the retailers it manages.

The Ticket to Greater Efficiency

The New York Lottery plans to archive all of its past data on the imaging system within three months. Since it will no longer keep paper files, the organization can also remove more than 150 filing cabinets from its facilities.

The organization has begun evaluating e-business tools and laptop computers in order to allow employees who visit sales agent sites to access the electronic images on the corporate network and communicate remotely with their peers at headquarters. Such capabilities would further enhance information sharing.

"I'm still amazed that I can look up sales applicant information right from my PC," says Allen. "IKON-ISS has helped us leverage Content Manager into a solution that is assisting us in achieving our longstanding commitment toward efficiency." ■

IBM Software offers the widest range of applications, middleware and operating systems for all types of computing platforms. For more information on IBM Content Manager Solutions please visit www.ibm.com/software/data/cm

E-Government Portals: A Sybase Vision

e-Gov Comes of Age

Sybase, Inc.

Existing government Web sites provide customers with access to government information, allow simple transactions, and provide links to other relevant agencies. But it's clear that e-Government is no longer just about "webifying" government agencies. The imperatives are to re-engineer enterprise processes across agencies, to integrate disparate systems and applications, and to provide secure and responsive access to citizens and businesses.

Portal Initiatives Skyrocket

Over the last 5 years, governments worldwide have launched thousands of programs to deliver public services online. Consider that:

- ◆ Every week, the governor of Minnesota gets 13,000 emails from the public.
- ◆ 75% of Australians file income taxes online.
- ◆ Brazilians vote electronically in all national and local elections.¹

When governments go online, savings are realized instantly. For example, when the U.S. General Services Administration implemented *GSAAdvantage!*—the largest procurement portal in the world—the organization slashed procurement costs 80%, from \$150 to \$30 per transaction.

Sybase GSA Portal Raises the Bar

Forbes calls *GSAAdvantage!* the "mother of all digital marketplaces." Built with Sybase Enterprise Portal (EP) technology, the site saved the GSA almost \$1 billion in 2001.

Sybase EP provides a single sign-on and integration platform for all back-end *GSAAdvantage!* systems. EP's ability to leverage the GSA's existing IT infrastructure accelerated time-to-market from 4 years to 6 months.

"Without Sybase Enterprise Portal, it would have been extremely difficult for

GSA to have implemented a comparable architecture, especially considering the technology disparities and proprietary systems we had," says Al Iagnemmo, director of the GSA's E-Business Division.²

ENTERPRISE PORTAL OPENS ONE ELECTRONIC DOORWAY

Sybase Enterprise Portal provides one electronic doorway to all of a government's departments, services, records, and personnel.

Brings Big Benefits

Sybase EP lets governments extend knowledge management and business processes in previously unimaginable ways. The portal:

- ◆ **Leverages existing investments** by integrating legacy systems from formerly incompatible silos.
- ◆ **Automates application integration** using pre-built integration technology.
- ◆ **Extends knowledge management** by enabling groups to organize and share information from different applications.
- ◆ **Reduces costs and errors** associated with manual processes for tagging and indexing with integrated search, categorization, and auto-indexing tools.
- ◆ **Simplifies information access** through a single sign-on to network applications.
- ◆ **Lowers training and support costs** with a personalized, common look-and-feel user interface and pre-built templates users can customize. One intuitive graphical browser lets employees with minimal computer skills post and revise information.
- ◆ **Raises revenues** by slashing transaction processing and overhead costs, increasing efficiency, and making it easier to do business.
- ◆ **Provides the highest levels of security** to enable departments and agencies to collaborate and share data seamlessly and safely.

- ◆ **Offers anytime, anywhere communications** via wired and wireless connections to PCs, PDAs, and cell phones.
- ◆ **Scales to accommodate growing numbers of users** to meet even the heaviest traffic loads.

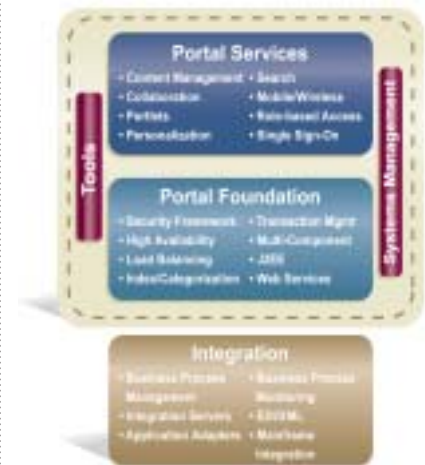
EP Architecture

Enterprise portals can be built on Intranet, Extranet, or Internet Web sites. While all portals are Web sites, not all Web sites are portals.

Some people think of an enterprise portal as just a Web site. But the Web site is only a thin veneer through which people interact with Sybase EP. Whether internally or externally facing, the basic building blocks of a Sybase portal are portal services, a portal foundation, and integration tools.

Portal Services

A personalized presentation layer gives legacy systems one look and feel. Smart



windows or "portlets"—with built-in navigation and content feeds—create a framework to view legacy data.

Users point-and-click on one interface to work in all network applications. Search, categorization, and automatic indexing tools gather, organize, refine, and disseminate data seamlessly to manage knowledge.

Portal Foundation

An advanced back-end foundation ensures secure, continuous 24/7 availability. Users get access to all designated enterprise applications and information with a single sign-on.

An arsenal of protections creates layers of access controls. Integral and flexible security features meet "top secret" standards.

The foundation lays a firm infrastructure to keep the portal working. Reliability, scalability, fault tolerance, and load balancing are all part of the solution.

Integration Tools

Sybase EP provides the infrastructure to migrate legacy applications to the Web and

connect applications to exchange information seamlessly. Back-end integration melds disparate systems into an extended enterprise so people can transact business without knowing how government is organized.

Integration tools also accelerate time to market. EP eliminates the need for extensive hand coding and provides reliable connections between mainframe and legacy systems. Adapters and integration servers ensure effective data transfer.

The Sybase portal's open architecture and standards-based environment are critical to its success in linking disparate technologies. Sybase EP works well with most embedded systems, databases, applications, and standards.

KNOWLEDGE MANAGEMENT AND SECURE SELF-SERVICE SOLUTIONS

Sybase EP realizes the "connect and collect" knowledge management dream. Governments use the Sybase portal to create a knowledge management framework and move business processes online for secure self-service—without redesigning or discarding other IT investments.

Builds Knowledge Management Framework

Smart portlets transform department-centered applications and data into user-centered information sources. Portlets collect facts and figures from throughout the enterprise.

Since there is a common interface, users can gather data from any source without learning how a particular system works. The portlets control who can access various data sources and their authority.

Offers Secure Self-Service

Broadening information access raises security demands. Sybase EP's stringent access controls make it feasible to erect one gateway to legacy applications and data, while tightly restricting and monitoring admittance.

Single sign-on and multiple access controls let governments push more content to Web sites while protecting sensitive data. Single sign-on also boosts productivity, minimizing chances that a forgotten password will bring business to a halt.

Stringent Personalized Access Controls

Role-based access controls are one of the Sybase portal's toughest security features. Personalization tools let portal administrators determine which content and functions to offer each user.

Sybase EP enables three levels of personalization: role, individual, and context. While certain roles need access to a broad set of

content and tools, individuals require only a subset of the whole.

Security considerations and need-to-know guide a government's initial personalization decisions. Then users can further personalize presentation based on changing roles and contexts.

Comprehensive Security Arsenal

A Sybase portal creates an integrated information environment that lets officials sleep soundly at night. Sybase EP:

- ◆ Includes an 128-bit encrypted Secure Socket Layer (SSL) that meets the most stringent security standards.
- ◆ Encrypts all communications between a user's browser and the portal, regardless of physical location, and can store data in encrypted form.
- ◆ Creates levels of accountability to match transaction importance. Protection ranges from auditing to requiring digital signatures.
- ◆ Enforces workflow security checks and balances. Rules can ensure that if one person requests a check, a different person must approve disbursement.

"When governments

go online, savings are

realized instantly."

- ◆ Integrates easily with other security frameworks such as Lightweight Directory Access Protocol (LDAP), Verisign, and Entrust.

Independent Information Repositories Protect Data

Sybase EP supports strict information separation through an organizational tree structure that offers more protections than separate systems. The portal can enforce practically an unlimited number of independent information repositories at no additional cost—without creating islands of information.

SYBASE PORTAL LEADS MARKET

Sybase pioneered portal technology for the public and private sectors. Top technology research firms such as Gartner, Inc. rate Sybase a leader in the portal market.

Public Sector Know-How

Sybase understands the unique requirements of the public sector, where the bottom line is more subjective and complex than in private enterprise.

In addition to building the world's largest procurement portal for the GSA, Sybase has provided Web-enabled solutions to the:

- ◆ Colorado Department of Justice
- ◆ Federal Bureau of Investigation
- ◆ New Jersey Department of Health
- ◆ Oklahoma Department of Health
- ◆ U.S. Department of Agriculture
- ◆ U.S. Department of Commerce
- ◆ U.S. Department of Defense

An Incremental E-Gov Transition

A Sybase portal lets governments incrementally Web-enable enterprise applications. Gartner says that "iterative development and deployment is the most important best practice for launching portals." Gartner's prescription for success is:

- ◆ Develop a first release of your portal quickly.
- ◆ Pilot the portal to a limited audience.
- ◆ Implement lessons learned to add features.
- ◆ Then, deploy the portal in stages to larger and more diverse audiences.³

That's just what Sybase's Enterprise Portal technology lets governments do.

To smooth the e-Gov transition, Sybase Professional Services has dedicated portal development specialists with strong public sector experience. Their expertise is migrating technology to the Web with the greatest speed and lowest cost.

Starting the Portal Process

How do most successful e-Government implementations begin? Launching a portal is a process—you take one step at a time.

The portal process is one of continual expansion and refinement to meet changing needs. The outcome is a knowledge management and secure self-service solution with benefits that dwarf system costs. "Everything works better when everything works together," and, for governments today, a Sybase Enterprise Portal makes that happen. ■

¹ Douglas Holmes, *e gov: ebusiness Strategies for Government* (Nicholas Brealey Publishing: London, 2001), "Introduction."

² Demir Barlas, *Line56, The GSA's Portal Window*, Friday, February 01, 2002.

³ Gene Phifer, "Enterprise Portals: Growing Up Quickly," Gartner Symposium, Ixpo Presentation, May 2001.

Sybase provides enterprise-class software solutions that fuel e-Business and enable access to information anytime, anyplace. With its industry-leading Enterprise Portal (EP), mobile and wireless, and vertical market solutions, Sybase is one of the largest global independent software companies in the world.

For more information on any of the companies who contributed to this white paper, visit their Web site or contact them directly:



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