

Best Practices in Enterprise Content Management

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Whether it's the documents we write or the e-mails we send or even the videos we create, the raw material that powers e-business is content. Always has been. Today's smart business managers have figured out the power in content, and its potential to create action. We asked the industry-leading sponsors of this white paper to share their high-altitude views of this exciting, developing space...
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Content, the Once and Future King

Enterprise Content Management emerges as the key factor in employee empowerment

By Andy Moore

In his opening comments at a Web-marketing conference last year, Jesse Kornbluth—editorial director for America Online and thus arguably the most-read content guy in the wired world—leaned into the microphone and said quietly: “I propose that we find whoever coined the term *content* and kick the living **** out of them.”

Funny line. The 500-or-so Web executives in the room roared with laughter, and approval.

But I’m not sure why. There are lots of trite business terms that are far more regularly abused and misunderstood (if you don’t believe me, take the term “knowledge” out for a spin sometime).

It’s relatively easy: Content is the digital stuff we use everyday in our work lives to sell and service, help and maintain our customers, our partners and ourselves. Content is the evidence of what we do. Carl Sagan said about life on Earth, “We are star-stuff.” In our business lives, we are content-stuff.

So it stands to reason that “content”—the documents, messages, collaborations and results—should emerge at the top of management’s to-do list. Because, as David Weinberger likes to point out, that’s what we do: We Manage Things. “If it moves, manage it” is the bumper sticker for the age.

But just exactly *how* should we manage our most precious items of corporate property. And more importantly ... just exactly *why*?

“Sure, the Web has been a great catalyst, but I don’t think it has fundamentally changed the nature of the beast,” insists Martyn Christian, Senior Vice President, Applications and Corporate Marketing for FileNET Corporation. “Whether content comes over the Web or the U.S. mail is irrelevant; content IS the feeder mechanism for all business processes. And always has been.”

The E-business evolution

Content may be the once and future king, but it hasn’t always been recognized as such. Just as row-and-column database systems defined the nature of business automation in the ‘70s and ‘80s, it can be said that the automation of the creation, storage and delivery of a more random (call it heterogeneous, if you must) mix of

with all our other digital assets, and view content management as an extension of database management.”

Whittle goes on to list the things we’ve learned from the history of database management: “One, islands of data should be avoided; two, the need to support multiple platforms and multiple operating systems when we’re planning infrastructure; and three, making those various platforms and file types seamless to the web interface is key.”

Sounds familiar. But however much *déjà vu* one may sense in this latest evolutionary stage, there is something that sets content management apart from previous information management initiatives: Content, the king, serves many masters.

An example is “zero latency,” a term familiar to hardware geeks as a measurement related to computer hard drives but re-defined by Compaq as a term of enterprise efficiency. Instant access to all of an enterprise’s many sources of business intelligence allows it to respond proactively to any stimuli sensed from any of the enterprise’s points of awareness. Call it *applied business intelligence*.

“Take customer relationship management (CRM) as an example,” explains

“The realization that there are incredible information sources at our disposal if we could just get at them...that realization really changed the role of content.”

—Teresa Whittle, IBM

data types has only penetrated business-asset management activities over the past decade or less.

“Early in the evolution of e-business, the idea of integrated information sources was foreign,” explains Teresa Whittle, Worldwide Segment Executive for Content Management, IBM. “The realization that there are these incredible information sources, mostly in non-traditional forms, at our disposal if we could just get at them ... that realization really changed the role of content.”

Whittle continues, “You can draw a complete parallel analogy to database systems. At first we had desktop file systems scattered all over. And this person couldn’t use my file, and I couldn’t get to another person’s data. We solved that problem with universally accessible, centralized systems. I see the exact same thing happening now

Adrian Kasbergen, Director, Messaging & Collaborative Solutions, Enterprise & Mid-Market Solutions, Compaq Computer Corporation. “In the traditional sense, it just means having the ability to get to customer information and use it to your benefit.” But why stop there? What if you could *direct* the decision-making and action-taking process based on a change or reversal in the expected course of a customer relationship? “The simple example is a customer who suddenly stops or drastically reduces ordering the usual amount of product. This information should be, first, identified as important and then delivered to the sales force,” says Kasbergen. “CRM is then no longer a single-employee-to-single-customer application.”

Nope. It’s much more significant; it’s a complete business solution that is self-aware,

that directs decision-making and forces action. Something database-, document-, image-, bla bla- management never was and could never be. And there, my friends, is the difference.

(There's actually another huge difference between content as we now understand it and good ole fashioned data: New Web authoring and metadata technologies allow content to be created in such a way that it can be pre-disposed to cross-departmental use. It can be made for versatility with planning aforethought, not as an after-the-fact kludge. With that kind of long-view applied to the creation, capture and maintenance of enterprise content, the future for its application is exciting indeed.)

Employees and Empowerment

Allow your minds to continue expanding for a moment, while we talk a little about decision-making. I say you could make the exactly correct decision every time, every day, provided you had ... what? *The correct information?* Yep. *The experience of smart people to advise you?* Uh-huh. *And all the time in the world to think about it?* Bingo.

But you don't.

"Every day, employees are tasked with making decisions, little and big. Do I call this customer? Should I offer this discount? Etc., etc.," Randall Eckel, President and CEO of InfoImage explains. "At the same time, managers have been trying to push decision-making down to the workers, for all the right efficiency reasons. But the IT tools are aimed at the top of the organization, and the folks who have to make the decisions don't have them."

Eckel says, "The people who have the facts don't have the tools. The people who have the tools (*which tend to address transactional and logistical business functions because, hey, that's where the money is*) don't have the facts ... or at least a different set of facts.

"So how do we solve this problem?" asks Eckel, rhetorically, since his team decision management products are designed to do just that.

Take a wider view, that's how. Business intelligence, and even so-called knowledge management, tools tend to be individually focused. I can produce reports ... for me. I can do decision analysis ... for me.

"The problem is that decisions are gated by time. I have 30 seconds, a minute, maybe an hour to make a decision," says Eckel. And if we've learned anything about winning, when we're in knowledge-based enterprises, bedeviled with geographical-ly dispersed teams, challenged with stupidly fast Internet time, well ... let's just

say the immunity idol is probably not going home with our tribe tonight.

Now what?

So what advice can we get? There's a lot, actually. And the news is pretty hopeful for a change.

"It's a promising time," declares Anoop Garg, Director, Enterprise Ready Microsoft Practice Group, Compaq Global Services. "Yes, it depends on perseverance and finding some successes, but I think those days will come. The next level of competitive advantage will come from making employees more effective. People will see that."

IBM's Teresa Whittle sees it as an "enabling" evolution ... you have to do one thing before you do the next, but at least the path is clear: "Knowledge management has become a front-burner issue. And the greatest challenge to KM is the content management piece.

"At the base is a view of a fundamental content repository that manages all different forms of content," says Whittle. "Digital documents, audio, video ... having that single repository is critical to any portal or KM infrastructure..."

"...BUT," she continues (*there's always a "but"*), "realistically, when there are acquisitions and departmental solutions get deployed, there are bound to be separate sources and repositories. And the problem for decision makers is 'where do I get the information I need?' Well, that 'where to go' question brings up search technology and how critical that is."

Which leads us to portals. Attempts to institute specialized and efficient views into vast corporate and external information sources through portals is worthy of another white paper, which (surprise, surprise) is already under way. For now, we'll remain satisfied with a most intriguing view of portals that is held by Compaq's Adrian Kasbergen: "Portals are not a full solution, but they're better than nothing. Think of portals as a 'leading indicator:' if your employees are demanding a customized desktop view into information in order to do their jobs better, that should tell you and your IT management where and how to invest your next round of technology dollars."

Just what you needed...someone telling you—again—where to spend money. But the inescapable truth is: you need to. There are opposing schools of thought on this. You can choose to attack departmental, single-function business problems, but you risk creating yet another impenetrable information silo. Or you can perform drastic, open-heart surgery on your

entire process...but you better have the stomach for it.

Best advice? Take a good, long cold-eyed look at your business problems and opportunities. Think about how you would finish this sentence: "Everything in my business would be great if we could only ..."

In other words, figure out what, exactly, it is you're trying to solve. Then call in the cavalry.

Advice, and consent

How important strategic assistance is to those who are about to deploy content management technologies cannot be overstressed. Of the dozen or so people I interviewed and whose work I researched for this paper, all agreed: we are in early adopter times. "It's a logical step to accomplish B2B interactivity through Web content management, but is anyone doing it?" asks FileNET's Martyn Christian. "Not that much. Supply chain is a mature idea to the manufacturing space, but for banks and financial services institutions ... it's very foreign so far."

Off-the-shelf solutions do not exist, to much of a practical extent, and the engagement of a trusted advisor is inevitable. And that's not a bad thing.

"Most customers are focused on specific point solutions (*such as CRM, which hands-down is the favorite function in which to apply content management technologies today*), even though that's a slow and evolutionary process," says Compaq's Anoop Garg. "We try, through our professional services group, to bring a broader view, and show the overall architecture necessary for total employee empowerment. Because that's what it's all about."

And that's what this paper is all about. The articles here range from the rather exotic (multilingual translation on the fly, a global must-have) to the wisely cautious (preventing the financial damage caused by corporate and Wall Street rumors) to the just plain helpful (what do I do *now*?!?!).

It is with pride and hope that we present this collection of deliberate and powerful essays. Pride, in our association with the authors and their colleagues; and hope, that the words you read can accomplish our goal of helping you create a world-class business organization. ■

Andy Moore is chair of this White Paper series and former editor of *KMWorld Magazine*. With 20 years in senior editorial positions in the technical, trade and business automation press, Moore has covered technology advancements in networking, telecom, business productivity and process improvement from just about every angle. He can be contacted at andy@dotcontentstore.com and welcomes feedback and conversation.

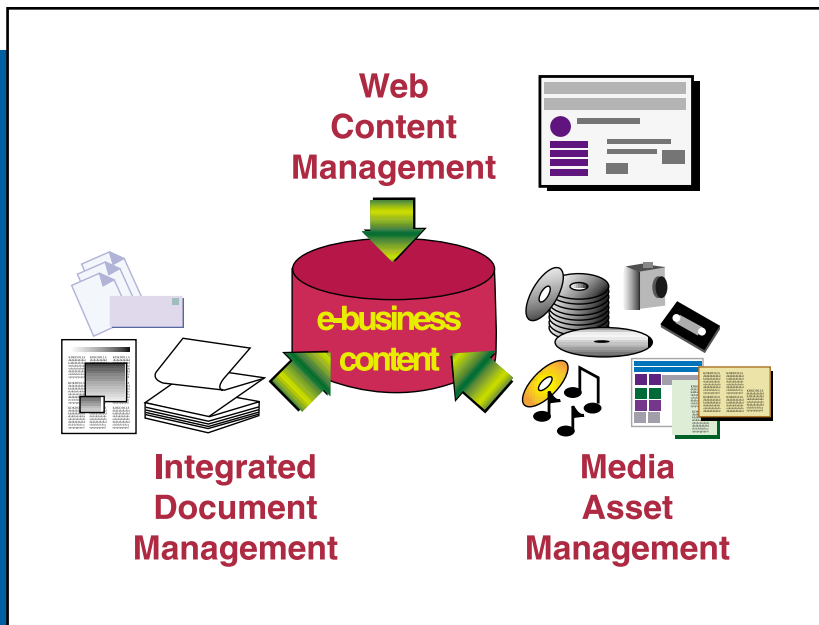
Enterprise Content Management is a Key Success Factor for an e-Business Infrastructure

By Mike Zimmer, Worldwide Marketing Manager, IBM Corporation

The growth of e-business is driving organizations to manage and distribute digital content, including images, computer-generated output, business documents, (IDM) market, the media asset management (MAM) market, and the web content management market. Enterprise Content Management is a key component of an

Worldwide Content Management Sales, IBM. "Why? Because you want your customers and employees to have seamless access to your company, and this requires managing all types of content and delivering it in a personalized way. IBM accomplishes this with tight integration between IBM Content Manager and the WebSphere ebusiness platform with partners' web authoring tools. With an IBM infrastructure,

"ECM is the the heart of e-business. You want your customers and employees to have seamless access to your company."



rich media and more. Many people believe that more than 85% of today's business information resides in sources beyond traditional databases.

Enterprise Content Management (ECM) is a new market formed by the convergence of several existing markets including the traditional integrated document management

e-business infrastructure and IBM Content Manager provides a full range of capabilities to capture, manage and distribute any kind of content, and is uniquely capable of handling all three types of applications.

"Simply put, Enterprise Content Management is viewed as the heart of e-business," says Marcel van Hulle, Director,

the same content in CRM or ERP business applications can be delivered to web sites for the most up-to-date accurate information, without the need for multiple copies. This is enterprise content management for successful e-business deployment."

IBM provides the core infrastructure software (IBM Content Manager, IBM Enterprise Information Portal (EIP), IBM WebSphere ebusiness platform, and IBM MQSeries Workflow) to support the needs of all three content management areas. A rich layer of API's enables partners to build or integrate applications on top of this middleware.

IBM Content Manager is an end-to-end product designed to electronically manage, protect and share critical business information, in any format, including XML and HTML. IBM Content Manager is the only offering of its kind, providing a single, consistent, open programming interface that enables rapid application development with unparalleled scalability and flexibility.

IBM EIP provides information integration so that companies can have a single point of access to multiple information repositories throughout the enterprise and beyond. The IBM WebSphere platform for e-business provides tools for personalization and web site analysis for creating a valuable end user experience. For Web Content Management, IBM plans to partner with multiple companies to provide the web authoring tools for assembling,

approving and publishing content to web sites, linked to IBM Content Manager for leveraging information throughout the enterprise.

Archiving for mySAP and Lotus Domino

IBM Content Manager also provides capabilities to archive and retrieve content from ERP and E-mail systems. Content Manager allows mySAP users to archive inactive SAP data into Content Manager and access print lists (reports), invoices, images, and other documents stored in Content Manager directly from their SAP GUI. Archiving of data and objects in an SAP environment can improve system performance and user response times, while giving mySAP users fast access to the documents that support their mySAP applications and significantly improving their productivity and customer service.

Lotus Domino customers can archive e-mails, attachments, and other Notes documents in Content Manager. The volume of e-mail within and between organizations has literally exploded. Compounding the situation is the content of the e-mails. Critical business information, that once was on paper and mailed, filed, and stored, is now routinely sent via e-mail. Space-hungry attachments, a feature that users love, are consuming disk space at an accelerated rate. Archiving e-mail can reduce overall e-mail infrastructure costs, improve system performance, and provide a critical audit trail for this information.

"Tools are now at the fingertips of the small business owner and quantifiable added revenues have been achieved."

Customer Relationship Management

An Enterprise Content Management system is particularly critical to Customer

Relationship Management solutions. IBM has teamed with Siebel Systems, Inc., the world's leading provider of e-business applications software, to increase productivity of call centers by integrating IBM's Content Manager with Siebel Call Center. The integrated solution can cut response times and increase productivity at customer call centers by enabling call center representatives to access customer bills, correspondences and transactions regardless of the format in which they originated.

"The integrated solution can cut response times and increase productivity at customer call centers."

Tryg-Baltica, one of Denmark's largest insurance companies and the third largest purveyor of life and pension products worldwide, implemented a solution from IBM and Siebel Systems to provide more personalized service to its customers, giving representatives faster and more complete access to policies, agreements, and claims status.

"Insurance customers demand easy and immediate access to personalized service," says Carsten Dalsgaard, director of development, Tryg-Baltica. "To continue to improve our ability to meet this demand, we have made significant investments in Customer Relationship Management (CRM) systems. We chose products from Siebel Systems and IBM, the world's two leading e-business software vendors. Our CRM project will deliver a technological quantum leap that will include electronic document management, elimination of unnecessary case processing steps, and the first step towards web-based customer service."

e-Bill/e-Statement Presentation

Another key application for Content Management technology is electronic bill (e-Bill) and electronic statement (e-Statement) presentment. IBM Content Manager OnDemand excels at capturing,

archiving and presenting (via the web) large volumes of bill, statements, invoices, and other transactional documents. This enables customer self-service and when combined with applications from IBM Business Partners can also provide a total solution for electronic payment as well.

AT&T Corp., a leading global voice and data communications company, partnered with IBM and CheckFree Corporation to extend its internal bill presentment solution

to its small business customers, allowing them to interactively manage their bills and statements online. The company created a number of applications targeted at improving customer service for its small business customers, including e-bill presentment and, more recently, online bill payment. The initial results of the AT&T Small Business Center show improved customer self-service and satisfaction. Tools are now at the fingertips of the small business owner and quantifiable added revenues have been achieved through promise-to-pay commitments from online customers. AT&T is currently working on extending its bill presentment solution with easy online payment choices for its small business customers.

Whether the technology derives from integrated document management, web content management, or media asset management, IBM provides the infrastructure and integration for key e-business applications. ■

IBM Corporation

IBM is the world's largest information technology company, with 80 years of leadership in helping businesses innovate. IBM Software offers the widest range of applications, middleware and operating systems for all types of computing platforms, allowing customers to take full advantage of the new era of e-business. The fastest way to get more information about IBM Content Management Software is by visiting our home page at www.ibm.com/software/data/cm

Using Content Management to Realize a Competitive Advantage

By Martyn Christian, Senior Vice President, Corporate Marketing, FileNET

Pundits claim that the Web “levels the playing field” for many businesses today. And yet, few have been able to field a truly winning proposition online. Those that have are fundamentally changing the industries in which they compete—the others have yet to realize the promises and potential of eBusiness.

The level playing field is, in fact, not level at all—there is actually a steep slope. How well a company manages its content and its processes online dictates where they are on the slope—rising to the top or sliding to the bottom.

Defining Content Management

GartnerGroup explains that “content management is an ambiguous phrase with meanings that vary depending on what a user may need or a vendor may offer.”¹ Yet, no matter how it is defined, all agree that Content Management is and will continue to be a critical success factor for implementing any eBusiness application that is content and/or process centric. As a starting point, it is important to understand the two fundamental components that are the essence of anyone’s definition of Content Management.

Content

The Web has permanently altered the way organizations communicate with their customers, employees, and business partners. We still communicate information with sound, pictures, and the written word, but in the digital economy, this information is changed and re-used faster than ever before. Organizations must keep up with the modifications of Web content for competitive, contractual, financial, and even legal reasons.

Process

Much of the content that organizations need to provide to their customers, employees, and business partners is part of a business process. The process can be

as simple as an approval of certain documents prior to posting them on the Web, like a new employee personnel policy or an updated price list, or as complex as evaluating the risk of underwriting a large corporate insurance policy. These business processes represent critical corporate assets for organizations, and the Web allows them to extend these processes to engage directly with their partners and consumers.

Managing content and processes online are the cornerstones of high-performance, personalized Web sites and most, if not all, eBusiness applications.

End-to-End

It is not enough to manage content and processes in select areas of an organization. Successful eBusiness initiatives demonstrate end-to-end planning. An end-to-end Content Management capability involves everything from the back-end content repositories to the presentation of that content within a Web browser. Across the enterprise, this means addressing the demands for capture, creation and management of multiple data types, streamlined editorial/approval processes, publishing processes to multiple distribution channels, and total document life-cycle management. End-to-end also means integrating processes between functions within the business and then extending processes beyond the corporate firewall to vendors, partners, and customers.

Mission Critical

As mentioned earlier, those at the top of the slope are transforming their industries. The business transformation potential of eBusiness is contingent on how well the business manages its mission-critical content and processes on both sides of the commerce chain.

On the supply side, Content Management is a vital component for mission-critical eBusiness initiatives such as Enterprise Resource Planning, Supply Chain Management, and B2B commerce activities. With



Lee Roberts

Lee Roberts, CEO and Chairman of FileNET, joined the company as president and COO in May 1997 and was named CEO in April 1998 and chairman in December 2000. He has made his mark with a number of initiatives aimed at leveraging FileNET’s extensive customer base,

global marketing presence and vast research and development resources. His innovations include the globalization of FileNET’s sales, marketing and support organizations to build on the company’s presence in more than 92 countries. Roberts joined FileNET after 20 years at IBM in a variety of sales, marketing, and product management and general management roles.

end-to-end Content Management capabilities, businesses can integrate with their vendors and suppliers. This leads to automating transactions and better managing the resources involved in buying, making, and moving products and services.

On the service side, Content Management is a vital component of Customer Relationship Management (CRM). As CRM becomes a mission-critical initiative shared across the different functions of Sales, Marketing, and Customer Service, the content and processes that drive transactions and manage the customer relationship need to integrate across those functions. With end-to-end Content Management capabilities, businesses can integrate the different functions that touch the customer and better manage each and every customer relationship, from acquisition to ongoing service.

An end-to-end Content Management solution that is capable of handling mission-critical content and processes requires a best-of-breed approach. In order to understand what best-of-breed approach is right for you, start by defining your specific requirements.

Defining Content Management Requirements

A well-structured end-to-end Content Management capability is not easy to achieve. There are numerous challenges businesses need to overcome as they develop their capabilities. GartnerGroup¹ states that enterprises that fail to recognize appropriate Content Management requirements will suffer numerous implications, ranging from lower efficiency to massive legal liability. To assist in defining requirements, they identified different segments along the consideration path:

Enterprise Internal Content Management: the process for integrating digitized

data of multiple types, in multiple formats and from multiple sources, so that users can access a cohesive set of relevant information about a topic. This includes information internal to the business as well as information the business needs to drive external activities.

Web Site Content Management: the creation, organization, delivery, and maintenance of non-transactional Web site-oriented content.

eBusiness Transactional Content Management: The content relevant to a B2B or B2C customer transaction along with the set of business rules used to process the transaction.

Shared Content Management: the processes that allow shared information to be managed and accessed jointly. This involves the management of the document life cycle along with robust search capabilities.

Note that the considerations set forth by Gartner include both content and process issues. There are other sources that define a similar Content Management consideration path. For instance, Meta Group classifies the content and process requirements and considerations into several major categories including:

- ◆ Content Delivery/Personalization
- ◆ Site Development/Management
- ◆ Document Life Cycle
- ◆ Authoring
- ◆ Commerce

Conclusion

eBusiness initiatives promise great opportunities for operations of all sizes throughout different industries. Success for many will be contingent upon how well they manage their content and processes online today and create a solution that can carry the load in a future that will surely be more complex and sophisticated.

Case Study: Bellagio Resort

The Bellagio Resort demonstrates how content management can be successfully applied to a function every company must manage—Human Resources.

In front of the Bellagio Hotel in Las Vegas, more than a thousand sparkling fountains surge skyward in a dazzling dance of water, music and light. A different kind of choreography—but even more intricate—was required behind the hotel's majestic facade in 1998. The Bellagio Resort, subsidiary of MGM Mirage, was about to open and more than 10,000 new employees needed to be hired.

The Challenge

Arte Nathan, vice president of Human Resources for the Bellagio Hotel, had pre-

viously hired armies of employees to open new resorts in Las Vegas. He knew from experience that paper job applications would be ineffective—approximately 10% of them would be lost. And scanning in the handwritten applications would only result in unreadable files. Nathan wanted a paperless system that would not require a large human resources staff just to key in data.

“Then it dawned on me that after I hired the employees, I didn't want to print out 10,000 applications to store in 10,000 paper jacket file folders. So I decided we needed completely electronic personnel files,” said Nathan. The project then took on an even greater dimension.

The FileNET Solution

After reviewing other solutions, Nathan realized that only FileNET's Panagon eProcess Management products provided the Web-based, open architecture they would need as the basis for the system. Nathan partnered with Western Office Systems, a FileNET ValueNET® partner to tailor Panagon to fit Bellagio's needs. Western Office System designed the implementation and continues to support it. “We started with the out-of-the-box functionality from FileNET and fully customized it to deliver the exact features that Mr. Nathan and his staff needed,” said Ray Hughes, general manager of Western Office Systems.

In the first phase of implementation, a custom-developed applicant tracking system was used to capture data from more than 75,000 job applicants in five months. Using a simple ATM-style format, job applicants entered their own data when applying for positions. The interface was modified so it would be easy for all applicants to use, especially those who don't traditionally use computers.

The next goal was even more complex—to create a completely paperless human resources infrastructure. This meant setting up a system to make more than half a million electronic documents accessible to Bellagio's managers via the corporate intranet.

The resulting system takes a Web-based approach to HR management. Active server pages (ASP) are displayed via a custom-made browser that interfaces with Panagon Content Services. Thanks to Panagon's open architecture, it also leverages the hierarchical security features in Bellagio's legacy AS/400-based system. Finally, the new system allows the retrieval of data residing on disparate platforms, such as the AS/400, Windows NT and SQL Server.

Bellagio managers can now access data on more than 10,200 personnel files using a common Web interface. Once a manager logs on, “look-down” security features limit his access to his employees' files only. Each file contains a photo ID and employee signature to verify the employee's iden-

tity. Nearly every form, from the interview rating form to the job offer card, exists electronically. The work history of each employee is captured, and the system even tracks who has reviewed the file and when.

Yet Bellagio's system delivers much more than data access. It helps supervisors perform all aspects of HR management faster and more efficiently, without generating paper forms. The system is used to verify and change employee status, work shifts, attendance, vacation schedules, commendations, and more. Managers can post electronic “sticky” notes on any file to keep all information in one place. Bellagio has even automated its Personnel Action Notice, which is used to initiate any action such as wage changes, shift changes, promotions and more. This electronic form is routed via email, approved electronically by supervisors, and posted and filed automatically.

In short, the new Human Resources system has delivered everything Nathan had on his wish list—and more. “If you can dream it, you can do it with FileNET,” said Nathan. “It isn't hard to do.”

The Bottom Line

To help Bellagio Resort hire staff for its grand opening, FileNET's solution:

- ◆ Captured more than 75,000 job applications in five months.
- ◆ Eliminated the need for 15 human resources personnel to input the data.
- ◆ Resulted in the near-paperless hiring of 10,000 new employees.

The new Panagon Human Resources system now in place has:

- ◆ Saved the Human Resources operation approximately \$1 million in the resort's first 14 months in time, staff and administrative costs.
- ◆ Replaced paper files, which would contain an average of 50-60 documents each, with electronic files, saving storage and retrieval costs.
- ◆ Provided supervisors with all the information and tools they need to perform their management duties more efficiently.
- ◆ Decreased input errors by Human Resources personnel, and freed managers from continually retrieving existing data and keying it in.
- ◆ Shortened the processing time of personnel actions by enabling electronic routing, approval, posting and filing of forms. ■

¹The GartnerGroup Framework for Content Management, January 28, 2000

FileNET delivers the Substance Behind eBusiness™ by optimizing an organization's Web-based business processes and associated content to deliver a competitive advantage, maximum efficiency and increased revenue.

Streamlining the Decision Cycle Through Collaborative Decision Management

By **Randy Frid, Ph.D.**, Principal Scientist, and **Randall Eckel**, President and Chief Executive Officer, Infolmage

Over the last 20 years, management philosophy has shifted dramatically from command and control organizational methodologies that focused all decision-making at the top of the organization, to a more distributed and enabled management philosophy that pushes decision-making to the front line through “empowered” knowledge workers. Unfortunately, the information systems deployed throughout the organization don’t fully support “empowered” knowledge workers.

The hierarchical organizational model of the command and control era greatly influenced the deployment of business automation systems. Even today, process-improving transaction-oriented systems are deployed department by department. These applications are designed to improve the departmental front- and back-office processes. However, decision-support systems are aimed only at the top of the organization. In other words, decision-making information flows upward, and decisions (and their accompanying instructions) flow downward.

What is needed is an application that improves the productivity of the decision process throughout an organization, with emphasis on improving the process for front-line knowledge workers. To understand how a software application can improve the productivity of the decision process, we need to understand more about this process. Let’s explore two important concepts—the “decision cycle” (the process used by knowledge workers to make a decision) and the “decision network” (the network of people knowledge workers reach out to for information and experience).

The Decision Cycle

In its most basic form, the decision cycle involves gathering relevant information, analysis of that information, collaboration for opinion and insight, making the decision, and taking action. Most decisions are constrained by time. There is a finite amount of time that can be spent in each step of the decision process. Research shows that almost 80% of the time currently spent in the decision cycle is in the information-gathering and collaboration

phases, and little time is spent on the actual decision and even less for action.

The Decision Network

When knowledge workers make decisions, they reach out to a network of people who they believe possess relevant information and/or experience. This network of experience usually does not reflect the hierarchical way in which organizations function, but instead cuts horizontally or diagonally across an organization. The size and shape of users’ decision networks are usually limited by span (who do I know that can help?), technology (how do I collaborate with them?), and experience (have I gone down this path before?).

Unfortunately, when time is the limiting factor in decision-making, using the existing non-integrated tools that are at the disposal of most knowledge workers (phone, fax, e-mail and meetings) makes moving through the decision cycle a very slow and inefficient process.

Collaborative Decision Management— Optimizing Decision-making Across the Enterprise

A solution is now available that solves this problem. It represents the confluence of collaborative software, knowledge management methodologies and business intelligence solutions—in other words, collaborative decision management. At the center of this solution is a software application called an enterprise decision portal. An enterprise decision portal creates a decision workspace that brings together all the information and experience users need to make fast, quality decisions.

Information and experience from across the organization are now synchronized around a specific task, project or process. These workspaces can be shared across the decision network regardless of location or time zone. Relevant information is now delivered to knowledge workers as opposed to discovered by them.

To see how a decision portal improves the productivity of decision-making, let’s examine how it affects each step in the decision cycle.



Randall W. Eckel
President and Chief Executive Officer

Randall W. Eckel, a co-founder of Infolmage, has been President and Chief Executive Officer of Infolmage and a member of the Board of Directors since 1992. Mr. Eckel is a recognized expert in collaborative and knowledge management software solutions and is regularly quoted in trade and business publications.

Information Gathering

Delivering relevant information is made possible by technology that creates a multi-dimensional meta-data model of the information and experience within a business. This allows users to access the information via easy-to-use taxonomies. Meta-data, or data about data, resident in the decision portal allows for navigation to information without actually searching the information itself. A meta-data repository acts like a directory to information stored in the recesses of the organization or Internet. By exploring or searching the directory, response time is greatly improved and knowledge workers no longer have to know where to look for data.

Collaboration and Experience

While it is important to have relevant information for decision-making, what really contributes to great decisions is experience. Being able to identify and access individuals with relevant experience and facts results in efficient and effective decisions. Decision portals create this opportunity by both identifying relevant experts and then making it easy to share a decision workspace with them.

The Streamlined Decision Cycle

Decision portals fundamentally change the way knowledge workers approach decision-making processes. Their tangible benefit is to speed the information gathering and collaboration processes so that knowledge workers can bring significantly more information and experience to bear, as well as spend more time in the “decision” step of the process. Decision portals provide the technology to truly decentralize and optimize the decision-making process throughout an enterprise and the extended enterprise. ■

The Enterprise Information Portal and eBusiness

Compaq Computer Corporation

The rapid advance of technologies such as the Internet, groupware, relational databases, and search engines allows knowledge workers to come together and share ideas and information as never before. The promise of universal connectivity made possible by the Internet and intranets has enabled almost every industry to adopt better means of communication, collaboration, and commerce between employees, partners, customers, and suppliers. But how do you transform information assets and intellectual capital into enduring value for your organization, your partners, and your clients?

And how do you provide easy yet secure access to collective information and expertise so the right information is available to the right person at the right time? The answer increasingly falls under the rubric of Knowledge Management (KM). The effective practice of KM by the enterprise is now widely perceived as an essential ingredient of eBusiness success. And the marketplace now acknowledges that an essential tool for the practice of KM is the enterprise information portal (EIP).

In the competitive world of eBusiness, a company's knowledge assets have never been more valuable. The key to success is unlocking the knowledge within the company and sharing it with the right people at the right time. Businesses and organizations invest in KM solutions so that employees can do their jobs more efficiently and effectively.

The Enterprise Information Portal helps eBusiness by enabling the effective use of shared knowledge assets so that everyone on your team can work collaboratively and securely across global boundaries. And you can manage that flow of information more efficiently for empowered decision-making.

There are two key concepts that define an EIP: access and integration. The EIP gives workers access to the information and resources they need to do their jobs. It integrates both information sources and applications. It is a single unified interface connecting workers to widely scattered and diversely structured information repositories. Closely related to the notions of access and integration is the concept of personalization, meaning workers receive the information they choose in a desktop environment whose appearance they can control.

In eBusiness, the EIP helps achieve competitive advantage by providing a framework on which to build KM practices. KM, in turn, supplies the intelligence for the decision-making and rapid action that enable Customer Relationship Management (CRM) and Global Value Chain (GVC) activity to be effective in support of eBusiness. Working in close harmony, KM, CRM, and GVC help an eBusiness survive and grow.

KM involves collaboration, and the EIP is proving to be a good tool for it. The greater the quality and consistency of exchange among workers in the eBusiness, the greater the likelihood that the eBusiness will achieve another vital goal, that of fostering innovation.

The following sections discuss typical steps in the implementation of EIPs.

EIP Assessment

To prepare a successful portal strategy, it is advisable to engage a systems integrator to evaluate the benefits of implementing an EIP to achieve your business objectives. This will help you identify how a single point of access to information and applications will enhance your knowledge workers' productivity. It will enable you to:

- ◆ Understand the benefits of a portal solution.
- ◆ Validate and define the portal implementation that will complement your business requirements.
- ◆ Identify the process involved in designing and implementing a corporate portal.

EIP Planning and Design

You should develop a blueprint for your portal implementation that is practical, robust, and scalable. The solution should accommodate your business and information needs and technical requirements, but also your enterprise culture and environment. Plan and prepare to migrate your knowledge worker environment to an integrated EIP.

EIP Rapid Deployment

In order to lay a strong foundation for a more widely deployed and full-featured EIP, many businesses like to start with a low-cost entry into portal technology. This approach helps you:

- ◆ Determine the type and extent of customization you need for your enterprise portal.
- ◆ Find a solution that matches your business needs.

This need is served by well-designed kits that provide a core set of portal functionality and that can be up and running quickly for group pilots.

EIP Implementation

In deploying your portal in a department or across the enterprise, you will use the integration applications and architecture developed through the planning and design stages mentioned above. Results include:

- ◆ A smooth implementation with minimal disruption to your business.
- ◆ A portal tailored to your environment.
- ◆ An environment that enables employees to find critical information quickly, work and collaborate more productively.

In summary, your strategy for adopting an EIP should spell out all solutions including:

- ◆ Hardware and platform validation and optimization.
- ◆ A complete life cycle of services (including planning, design, implementation, and management).
- ◆ A flexible choice of industry-leading application software.

Think big, but start small. Many solutions available today scale well for the growing enterprise. Set achievable goals and make sure that successes are acknowledged and publicized along the way. Promote the new portal tools continually to the audience that will be using them—adoption of EIPs involves not only technological change but also cultural change. Finally, choose an expert consulting organization to accompany you throughout this vital project, knowing that you are equipping your enterprise with a mission-critical system. It should, like Compaq, have an excellent track record in delivering end-to-end EIP solutions that include all the products, integration, and services required by this complex technology.

About Compaq

Compaq Computer Corporation, a Fortune Global 100 company, is a leading global provider of technology and solutions. Compaq designs, develops, manufactures, and markets hardware, software, solutions, and services, including industry-leading enterprise computing solutions, fault-tolerant business-critical solutions, and communications products, commercial desktop and portable products, and consumer PCs that are sold in more than 200 countries. Information on Compaq and its products and services is available at <http://www.compaq.com>. ■

Maximizing Corporate Bandwidth Utilization and User Satisfaction ... at the Same Time!

By Scott Warner, CEO, AccuSoft



Scott Warner

Scott Warner is the founder and CEO of AccuSoft Corporation in Northborough, Massachusetts. He also serves as a board member for other technology firms as well as an advisor to a number of growth companies. Prior to

AccuSoft, Mr. Warner spent his years as a consultant to over twenty-five firms building complex software applications. He is also a fourth-degree black belt and martial arts instructor.

"We are drowning in a sea of information," write University of California researchers Peter Lyman and Hal Varian. "The challenge is to learn to swim in that sea, rather than drown in it. Now society must figure out how to manage all that information." Their recent study titled "How Much Information" summed up just how quickly we are gathering, storing, and disseminating information.

As corporations accumulate, digest, and disseminate this information, the sheer volume strains the sturdiest of corporate infrastructures, as well as the external pathways through which to access this data. Look at our Web pages (and even e-mail!) which reflect this dramatically, as we have moved from simple text messages to full-motion video with CD-quality sound!

Fields including Legal, Human Resources, Accounting, Geographic Information Systems, Medical, Real Estate, as well as Application Service Providers, are all faced with the increasing problem of how to extend corporate knowledge to employees, partners, suppliers, and customers, while maintaining control, source integrity, and containing costs. The ability to review, annotate, and update documents and images in a variety of formats, without the necessity to run native client applications on all client workstations, is a key to increasing the productivity of information users wherever they may be located. This also leads to shortened document processing cycle times and improved product quality and customer satisfaction.

How is this functionality being utilized?

MonsterDaata, Inc.'s (a leading provider of Internet information utility geared to Real Estate) Remote Content Delivery (RCD) system facilitates simple, efficient delivery of Community, Property, and

School reports to any Web browser, in either HTML or XML formats. MonsterDaata provides the capability to integrate 2.5 terabytes of NeighborhoodPlace data into users' Web sites, with total flexibility to incorporate charts, tables, graphics, colors and page placement into provider applications, all without data management hassles. In fact, RCD system (which is enabled by AccuSoft's platform-independent NetVue server software) is implemented as part of Yahoo Real Estate, Homestore.com, and move.com, a further testament to its robustness.

"The ability to review and update documents is a key to increasing productivity."

This capability helps companies like MonsterDaata provide cost-effective, secure, highly scalable application "plug-ins" and/or overlays to a broad variety of customer applications. Designed as a Web-based imaging solution to a broad range of applications, NetVue provides a client-server environment capable of delivering large quantities of data, in over 100 formats, to a remote desktop within seconds, even with end users on 28.8Kb modems. The patented NetVue Document Streaming™ technology is the core piece of the solution, providing users with the ability to view, annotate, and update a variety of documents and images without requiring the native application to be resident. In addition, NetVue has an extensive set of Web application server tools, which provide system administrators with control of the product as well as easy access to information being generated from users of the application.

NetVue works by pre-processing large document and image files on the server,

leveraging the power of today's high-performance servers and storage systems, and then providing delivery via a Web browser and a high-speed, zero-administration client, available in ActiveX or Java. A variety of management and tracking reports is included, complete with common reports already built in. These reports take a few input variables and generate HTML pages with the results, which can be shared with anyone interested. NetVue stores every transaction into a simple Xbase-type database that any report writer can access. Any number of additional reports can be created for more specialized requirements.

The benefits of Document Streaming

- ◆ It's fast; up to 20 times faster than the closest available alternative.
- ◆ It minimizes network traffic substantially. On average only 1/10th of the bandwidth, compared to other solutions, is required.
- ◆ The system administrator and individual users can control the type of streaming used.
- ◆ It's secure; NDS images are intrinsically secure as the data protocol is not reversible and no performance-reducing encryption is required.

Businesses now can have the flexibility to accommodate existing documentation and images, scalability via the server-side implementation, and ease of access—while providing the functionality to help improve customer and knowledge-worker satisfaction. This flexibility is a key benefit for all companies that experience change in their operations, personnel, and markets.

NetVue technology allows your company to facilitate the rapid deployment of imaging and document management solutions throughout an enterprise and beyond. ■

Bridging the Back-Office/ Front-Office Gap

By Mitchell Gross, CEO and President, Mobius Management Systems, Inc.

“As competition continues to grow via the e-economy and as customer/partner relationship management becomes more sophisticated, the need for organizations to leverage the wealth of information in documents, images and reports will increase.”
(Meta Group, September 1999)

“How effectively organizations deal with mission-critical information and expose it as usable content to support employees, partners and consumers is becoming a recognized differentiator.”
(Meta Group, January 2001)

With 75% of your organization’s information contained in unstructured (non-database) format—documents, reports and images—can you transform it into “usable content” to support your e-business initiatives? According to AMR Research, the problem that e-business exposes most often is *inadequate integration*. In other words, the vital information about customers, products and transactions produced by back-office systems such as enterprise resource planning (ERP) often isn’t available as Web content or at Web speed to employees, customers and suppliers.

The challenge for the enterprise is to manage, Web-enable and Web-present content in multiple formats from multiple sources. Documents and reports required for presentation in customer-facing applications may be generated by ERP or other back-office applications, or may be converted from paper to electronic format by scanning. These documents will be of many different types—bills, statements, purchase orders, invoices, remittances, output reports, e-mail, policies, correspondence and more. And they will be in many

different formats, including AFP, PostScript, PCL, PDF, text and others.

The project manager planning to use content in a front-office Web application must ask a number of questions:

1. What is the source of the content I need to present? Are the documents application-generated? Scanned?
2. What format are the documents in?
3. How can I capture these documents and ensure that they can be linked through shared values such as vendor number, account number, territory and product?
4. How will I want to present the documents over the Web: HTML, XML, image?

All these questions must be answered in order to implement an effective solution to manage and present enterprise content.

Content management comprises a number of activities associated with making documents Web-ready, including capturing, indexing, integrating, transforming and displaying content. The robustness and flexibility with which your solution addresses each of these steps will determine the success of your implementation. The first step is to capture the documents, regardless of format, from the scanning system or from the applications that produce them and store them in an integrated repository. This process indexes the documents, making them accessible based on key identifiers.

A robust indexing capability will support multi-level, multi-key indexing to make retrieval easy and flexible. Name, policy number and customer number, for example, might all be used as access keys. A true enterprise indexing architecture will let you create logical folders of related documents, such as all the records for a customer or a particular transaction. It will let you index and logically group documents, regardless of format, across time, across



Mitchell Gross
CEO and President

Since co-founding Mobius Management Systems, Inc. in 1981, Mitchell Gross has become widely regarded as a leading authority on software solutions that help corporations worldwide manage huge volumes of information, often in the form of documents, reports and images. Under his direction, Mobius has delivered software used to build e-business and customer service solutions for nearly 1,300 major organizations worldwide, including more than half of the Fortune 100. Mr. Gross holds an M.B.A. in Finance from The Wharton School, University of Pennsylvania and a B.S. in Mechanical Engineering from Columbia University School of Engineering and Applied Science.

platforms, across storage devices and across applications. The indexing structure is what enables an employee to research all the claims made in the Southeast region during the week of March 12, and enables a customer to retrieve and compare the electric bill from December 1999 and the one from December 2000.

Presenting Web content means transforming it, if necessary, and displaying it in a Web browser. Different applications require different types of Web presentation. For example, for an electronic bill/statement presentation application, you might parse the document, extracting only the data elements needed to display on a formatted Web page. You might even need to integrate values from multiple documents into a single Web page. This *flexible content presentation* allows you to define what information should be extracted and where and how it should be placed on your Web page.

Automatic content presentation converts the entire document into a Web-ready format such as HTML or SVG (scalable vector graphics) and displays it in the browser. This form of presentation preserves the display characteristics of the original document and would be used, for example, to give a customer service representative a display that is an exact replica of the paper document, facilitating communication with the customer.

These services bridge the gap between back-office information and Web content that can be deployed to support a wide range of front-office applications including customer relationship management, e-presentation and payment, customer self-service and more. With an effective strategy for managing and presenting enterprise content, you will be able to fully exploit your information assets. ■

The Rise of Web Intelligence

How rumors, leaks, and news online have transformed the Internet's impact on business

By Nick Denton, CEO, Moreover



Nick Denton

Nick Denton, formerly a reporter with *The Financial Times* and *The Economist*, is CEO of Moreover. Moreover searches thousands of news sites, message boards, and other quickly changing Web sources every 15 minutes, delivering business-quality content to Web sites, portals and intranets. The company counts among its customers and licensees Hoovers, Wells Fargo and Ernst & Young, and offers its Business Intelligence solutions through partnerships with Inktomi, Epicentric, Microsoft, and others. Moreover was recently named "Best Specialty Search Engine" by *Search Engine Watch*. Prior to founding Moreover, Denton founded First Tuesday. He is also co-author of *All That Glitters*, an account of the collapse of Barings bank, short-listed for the Global Business Book Awards.

We live in a market of instant information, where perception and image are increasingly linked to stock prices, and the best strategic plans can be undermined in the course of a morning. With 56% of the population online, gossip spreads like wildfire—from thousands of sources that lie beyond the reach of search engines and traditional information services.

As a handful of high-profile cases in the past seven years have shown, companies pay a heavy price for gossip initiated online. Perhaps most distressing for companies is the way gossip—whether true or false—can move from the Web to the Business section of print news in the matter of one day. Consider:

- ◆ Over the past seven years, the proliferation of gossip online—from uncontrolled leaks to quickly spreading rumors—has significantly impacted the success of companies nationwide. In a climate where 60% of print journalists would report an online rumor with one confirmation and almost 20% would report a rumor directly from a major online source, the risks incurred by staying out of the loop are high (Ross Report on Cybermedia, May 2000).
- ◆ Data leaks: In 1999 the online site BlueOvalNews.com posted confidential Ford documents that undermined the automobile maker's lobbying efforts against tighter emissions and fuel-economy regulations. The negative publicity exposed a contradiction in Ford's policy and caused an ensuing loss of credibility.
- ◆ Product secrets: In spring 2000, Yahoo chat rooms were buzzing with unreleased information about new Apple mouses and dual-processor PowerMacs. Apple sued Yahoo, as Apple competitors profited from the secret information by

tailoring new product releases to counter Apple's efforts.

- ◆ Valuation loss: In summer 2000, a false press release, issued by a newswire intern, stated that Emulex was restating its earnings and firing its CEO. Emulex watched as \$2.5 billion dollars was knocked off its market cap in the course of one morning, with most of the damage done in the first half an hour after release. Likewise, Oracle's stock plunged last year after false rumors of owner Larry Ellison's death surfaced and caught on fire in chat rooms. Oracle became the most heavily traded stock of that day, losing as much as 30% before snuffing out the rumor.

What is Web Intelligence?

Companies like these have learned that having access to rapid online content before it reaches traditional news venues can effectively make or break a company's competitive positioning. This "Web Intelligence" includes the vast amount of transient digital information—news, rumor, speculation, and public commentary—that can have a significant impact on a company's reputation, sales strength and ultimately its stock price. Access to Web intelligence is most valuable to a company within the first few hours that it appears online. In this vulnerable window of opportunity, strategic planners can take advantage of breaking competitor news or squash a potentially dangerous rumor.

To fill this critical information gap, Moreover uses dynamic database technology to deliver relevant Web Intelligence to companies from over 2400 online sources—including major news sites, niche sites, complaint sites, Web logs, discussion boards, and message groups. Near real-time updates

posted to company intranets allow employees company-wide to respond to information while it is still within action range. Instead of being forced into a reactionary stance, companies wield Web Intelligence to maintain a competitive edge and plan accordingly.

According to Aberdeen Group research director Guy Creese, many companies can benefit from adding Web Intelligence to their information arsenal. "Information-intensive industries ... need to complement their traditional news services with Web-based intelligence in order to quickly act on new developments," said Creese. "Moreover takes the labor out of being Web-aware by automatically pointing to the up-to-date, Web-sourced information that these types of companies need to remain competitive."

Internal departments that stand to benefit from Web Intelligence include sales, marketing, knowledge management, and PR, as well as CIOs, intranet and extranet managers and corporate librarians. For one company, spotting earnings speculation on a CBS Marketwatch discussion board enabled the marketing team to respond immediately, restoring confidence and keeping the rumor from making Monday's morning paper. Another company found an industry-first opportunity for the sales team in an update from the *Korea Post*.

The difference between the Web as curse and the Web as blessing for corporate communications lies in the ability to find and identify critical information early. Web Intelligence, in all its forms, gives companies a chance to create an environment of action and strategy, where bad news may be managed quickly, and good news converted into profit. ■

Multilingual Knowledge Management Empowers Global eBusiness

By Benjamin B. Sargent, Lionbridge Technologies, a provider of multilingual content management software and services to the technology, telecommunications, life sciences and financial services industries.

With the wholesale penetration of Internet technologies into global business operations, employees at every level of an organization are collaborating across multiple geographies. But with no common language, knowledge workers—be they colleagues, customers, suppliers or partners—face a new challenge in communicating ideas and sharing information effectively.

To bridge this linguistic gap, global companies are adopting knowledge management and globalization platforms that support ongoing translation and dissemination of multilingual content. Whether content repositories include file systems, databases, Web-based applications or all of these, achieving the critical transformation of eBusiness information into multilingual eBusiness knowledge requires astute planning and robust localization management tools.

Five Critical Questions Before You Start

There are five factors that must be considered before embarking on any globalization initiative because they will directly impact the design of your knowledge management system.

1) What languages will your constituents require? Success in supporting a second language invariably spawns pressure to add others. The key is to adopt a globalization platform that can easily accommodate additional languages, as need demands.

2) How quickly must content be translated? A multilingual knowledge management system needs to be optimized for the velocity of new information coming into the repositories and the criticality of information going out. Virus warnings necessitate turnaround in hours. Technical manual updates require a longer, more intricate workflow.

3) What data formats will be handled? Are you looking strictly at HTML pages? Or will you need to handle other formats like Word documents, QuarkXPress, soft-

ware resource files, and database strings with XML tagging? Translation is a linguistic task. But localization involves engineering and creative disciplines to preserve design values in the new language. To give you long-term flexibility, the platform you choose should be sufficiently versatile to handle any and all formats.

4) Where does the content originate and where will the localized version reside? The multilingual knowledge management system you implement must be able to detect, extract, and route new or changed content whether it originates in an application repository, file system or database. It needs to automatically route this content through the localization process and various approval stages, then insert it to a target location. Quality control and data security must be maintained at every stage of the publishing process.

5) Who will be responsible for handling content? Accountability is key. Other duties may impede in-house staff from completing translation assignments in a timely manner. A string of freelancers may make it difficult to maintain quality standards. To improve accountability on scheduling and quality issues, establish an ongoing partnership with one external supplier. Maintain sufficient in-house staff to manage the partner relationship.

Selecting the Best Globalization Platform

Implementing a multilingual knowledge management system is a complex process. Here are four ways to ensure that you invest in the right platform.

1) Choose the right vendor. Get off to a good start by selecting a business partner with the expertise and global presence to help you make it work. This partner should not only have consulting experience in the IT infrastructure of global companies but

expertise in critical areas such as internationalization engineering, translation engines, workflow management, and content localization as well.

2) Choose a platform with the right connectivity. Make sure that the globalization platform you adopt is capable of connecting diverse and distributed content repositories to an automated multilingual workflow. The workflow itself should follow a rigorous discipline—from preparing files for translation to routing content between editors and publishers, to easy incorporation of verification and compliance reviews.

3) Choose a platform with intelligent language processing. The language processing technology needs to include two key components: translation memory and terminology management. Translation memory ensures that once any sentence or paragraph has been translated and stored, these text strings can be reused time and again. This not only eliminates redundant translation, but speeds translation turnaround—saving time and money. A terminology management system ensures that translation teams consistently employ key words and phrases.

4) Choose a platform that provides project transparency and a detailed audit trail. To maintain process efficiency and control costs, implement a solution that allows you to track the whereabouts of each translation unit through every step of the workflow. Real-time visibility helps you avoid bottlenecks and delays. Detailed reporting not only helps you manage budgets and turnaround, but also enables you to audit costs and system performance over time.

Empowering eBusiness in a Global Economy

Whether your initiative is eLearning, eSupport, or eCommerce, the right globalization platform dramatically improves the way colleagues, customers, suppliers and partners communicate and collaborate around the world. A multilingual knowledge management system both increases revenue capture and reduces operating costs to empower eBusiness growth in a global economy. ■

For additional white papers on the technical aspects and ROI of multilingual knowledge management, log onto www.lionbridge.com/KM.

About Lionbridge

Lionbridge Technologies, Inc. integrates data repository connectivity with language management technology and global workflow systems to create and maintain Web-based products and dynamic databases in multiple languages and cultural formats. Based in Waltham, MA, Lionbridge operates sites in Canada, Ireland, the Netherlands, France, Germany, China, South Korea, Japan, Taiwan, Brazil, and the United States.

Enterprise Profiling

A Strategy for Enterprise Document and Records Management

By Karen Strong, President, Clarity



Karen Strong

Karen V. Strong is president of Clarity, Inc. and the Clarity Document Management Institute (Clarity DMI), an Austin-based consulting and education firm specializing in innovative approaches to enterprise document content management. Ms. Strong developed the Enterprise Profiling strategy and led the design of the EDMS Profiler

application. Clarity is currently working with several firms, including multi-national organizations, to implement enterprise document and records management solutions based on the Enterprise Profiling strategy. Karen Strong can be reached at 512-346-6300, fax 425-952-1215, E-mail kstrong@claritydmi.com, www.claritydmi.com.

Documents play a vital role in Enterprise Content Management. Business documents—in all forms and formats—represent a source of content that is vital to the success of e-business applications. Unlike other content sources, ‘document’ creation and capture can occur at every desktop, in every process, and by every on-line application. The management of e-business content in electronic document formats is an enterprise issue.

An enterprise document management perspective recognizes the value of sharing document-based information (content)—internally and externally. A business case exists for the consistent application of technologies to ensure the access and protection of document-based information assets. The challenge is that every document management application has specific requirements for organizing, processing, storing, retrieving, distributing, publishing, securing, and archiving documents. As a result, the typical approach is the implementation of compartmentalized workgroup, application, or departmental solutions that fall short as ‘enterprise’ solutions.

More technology is not the answer. Traditional document technologies such as document imaging, workflow, COLD/Enterprise Reports Management, and electronic document management have been integrated with tools for content searching, Web access/publishing, and collaborative work management. These technologies can be implemented departmentally and scaled to enterprise levels. With this approach, however, the technology drives the enterprise solution.

Enterprise Profiling: A New Strategy

The answer to the problem is a new approach for enterprise document management: a strategy that recognizes the unique document management needs of individual business areas while capturing the value of universal document sharing. This strategy, called Enterprise Profiling, establishes a common organization-wide framework for document and records management. The

Enterprise Profiling strategy is comprised of three components: (1) an underlying business model, (2) a Web-based technology tool, and (3) an integrated project methodology.

The Business Model

The underlying business model captures the common elements of document life-cycle applications and processes enterprise-wide. This model, the Enterprise Usage Model, is valid across the organization regardless of application type, document life-cycle requirements, and document usage patterns. It establishes standard operating models for workflow (document organizing and processing), repositories (document storage and retrieval), publishing (document distribution and publishing), retention (document archiving and destruction), and security (document user groups, permissions, and administration). In addition, the Enterprise Usage Model incorporates enterprise rules relating to each of the operating models. The enterprise rules define ‘universal’ requirements of any document management solution and are applied based on specific document usage patterns. The Enterprise Usage Model allows any workgroup in an organization to ‘map’ their specific operational requirements and determine the enterprise standards and rules that apply.

The Technology Tool

In order to define the unique characteristics of a specific document life-cycle application or process, it is necessary to gather and analyze a significant amount of information. ‘EDMS Profiler’ is a Web-based technology tool designed to automate data collection and analysis. EDMS Profiler is an application that consists of a structured, on-line interview questionnaire that respondents (end users) complete. The questionnaire gathers information about the general document management application, specific document and records management requirements, and the information technology environment. EDMS Profiler analyzes the questionnaire data collected and produces multiple output reports—or Profiles.

These profiles include: a General Application Profile, Document Life Cycle Profile, Electronic Document Management System (EDMS) Requirements Profile, Unique Usage Model Profile, and an Information Technology Profile.

The Project Methodology

Project activities and deliverables specific to the creation and analysis of EDMS Profiler output reports are integrated into a standard IT project methodology. Profile information can be used to develop functional and technical specifications and guide vendor/solution selection. Profile information can also be used to define improvement opportunities, identify specific operating characteristics, and establish the basis for project recommendations early in a project life cycle. From an enterprise perspective, the profile information can be aggregated to ‘view’ workgroup solutions, develop knowledge of shared enterprise requirements, establish ‘common profiles’, and build the business case for resource requirements and allocation.

Conclusion

Enterprise Profiling is not more technology—it is a structured business strategy. It applies to organizations that are shifting from departmental implementations to a common framework for document and records management. It helps project teams expand their reach and range to support the needs of the organization. Enterprise Profiling allows organizations of any size in any industry, operating in single or multiple locations, to implement ‘true’ enterprise solutions—those based on consistent business models, operating environments, and enterprise rules.

Organizations that embrace the Enterprise Profiling approach will realize more productive document technology implementations. They will be able to effectively manage e-business content in electronic document formats as an enterprise issue—now and in the future. ■

Managing Email Content—Challenges and Benefits

The absence of structured email management can increase costs in IT infrastructure, cause lost productivity and lead to decreased efficiency

By Bisher Abaza, President & CEO, eManage Inc.

As more organizations embrace email as their primary method of communication, the majority overlook the fact that email content contains evidence of business decisions, actions and transactions. These email messages become documents and records with the same legal requirements, restrictions and standards as any other record produced in any form or medium. Public and private organizations are quickly discovering that, in connection with the transaction of business, they have an obligation to apply the appropriate retention for email created or received, and an equal obligation to provide access to the email.

While email management is a large and rapidly growing industry sector, organizations have been slow to adopt this technology due to both the complexities involved in properly managing emails as documents, and the sudden explosion in the use of this method of communication. Organizations in both the public and private sectors are increasingly faced with issues related to compliance with industry, legal and government regulations and standards (i.e., GRS 20, DoD 5015.2, SEC 17a-4, etc.) relating to the management of email documents and records. In most organizations today, email management is either non-existent or is done using existing technologies such as email delivery software, document management systems, and/or records management systems. Many organizations are realizing that email management requires specialized capabilities not presently found in existing products.

The evolution in the way organizations are conducting business highlights the need to automatically capture and classify email content in its entirety and native form within the corporate file structure

based on rules specific for each organization. Knowledge workers must also be allowed to search, retrieve, and manage the life cycle of email within a secure environment that allows true collaboration between all. A comprehensive structured email management system provides many benefits including reduced IT costs, reduced downtime and improved ROI of the messaging infrastructure, and reduced legal costs. By capturing email and organizing it into corporate knowledge maps, email content is accessible to authorized users thus allowing for better and faster decision making, efficient implementation and execution of business processes, and improved knowledge worker satisfaction. Organizations will have better control over their information (measure of work performed) and knowledge (ability to execute work planned) assets.

When implementing an email management solution, organizations should avoid the following shortcomings during their selection process:

- ◆ When email-based knowledge is not captured, the organization abdicates its legitimate right to be the custodian of its knowledge.
- ◆ Relying on users to make decisions about which email message is a record will result in the loss of important emails that are corporate records.
- ◆ The complete random purging of email leads to knowledge drain.
- ◆ The blanket purging of email leads to the loss of email-based documents, records, and ultimately evidentiary records.
- ◆ Email-based documents and records are not organized in the corporate file plan classification, with one potential problem being that the process of legal discovery becomes very difficult and expensive.

- ◆ Email records are not subject to the corporate life-cycle retention rules.
- ◆ The storage requirements of the personal email workspaces swell.
- ◆ The content duplication problem (cc/bcc/forward) is not addressed.
- ◆ Retention of convenience copies extends the organization's risks.

Technologies that address the challenges associated with structured email management are just beginning to emerge. One of the most challenging technologies to develop, that is expected to continue to evolve and mature, deals with the automatic classification of email and electronic documents. To achieve accurate auto-classification there is a need to implement several technologies in concert; including the implementation of rules based on the organization's business requirements and auto-categorization based on content analysis.

The eManage solution is a leader among the solutions presently available for structured email management. It organizes and manages email, along with its metadata and attachments. eManage allows organizations to implement a secure and structured knowledge map to link and understand the relationship between information and knowledge holdings. It provides a single point of access to corporate knowledge regardless of storage location or format. Knowledge objects (word documents, spreadsheets, images, email, web content, etc.) are organized in a logical hierarchy that features compound folders and sub-folders. These folders contain documents (and virtual documents) that are located within multiple repositories. eManage can be configured to automatically monitor and capture knowledge objects from various sources and to automatically classify them within its knowledge map. Its built-in rules-based engine allows users to set "capture rules" defining how objects are automatically captured and classified.

By capturing messaging-based knowledge, organizing it into a dynamic corporate file classification, and making this knowledge accessible from other applications, eManage ensures compliance with legal and industry regulations and standards. As the percentage of email-based business documents increases, implementing a structured email management solution leverages the investment in ebusiness and ecommerce applications. Organizations without structured email management solutions will lag behind as their competitors surge ahead, armed with better control over their email records and profiting from true collaboration between their knowledge workers. ■

eManage Inc. is a leading provider of Structured Email Management, KM and RM solutions. Its award winning product, eManage, is DoD 5015.2 certified and SEC 17a-4 compliant.

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