
Best Practices in Document to Digital Management

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What began as a pilot program to improve timesheet processing is now transforming Montgomery County's invoicing and accounts payable procedures into an adept system that dramatically reduces inefficiencies and greatly improves accuracy.
With more than 10,000 timesheets to process every other week, this Maryland county previously spent two days scanning documents and another three days reviewing them to correct errors in key pieces of data—such as employees, identification numbers—during the process, said Mayland Lin, department of technology services. . . .
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Imagine your business without boundaries: paper and electronic forms merge; you can capture information in any form, from any place; you can exchange information more efficiently to drive business processes, ensure traceability of information and eliminate points of failure as information is managed throughout its lifecycle. Intelligent capture and exchange keeps information, and your business, moving.
Information drives business and 80% of all corporate content is unstructured in nature. The volume of information produced is growing at 50% annually. On average, a knowledge worker generates about 800MB of content each year. . . .

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Capture Moves to the Head of the Class

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

Document conversion has a stinky reputation of being: (1.) Expensive; (2.) disruptive; and (3.) difficult to cost-justify. One of the reasons is that, historically, imaging is thought of in a very binary way. You either image, or you don't. No gray area.

But that mood is changing. What used to be the final act in a business process—scan the paper and shred it—is increasingly at the “front-end” of the process, and is tied to the ensuing business process...whatever it might be.

I talked this month with two very thoughtful representatives of the imaging trade, who come at the problem from very different perspectives. And from these chats, I have come away with two basic beliefs:

1. Imaging ain't what it used to be; and
2. It probably never was.

A Different Kind of Capture

It's purely lucky that as I sat down to write up the notes from my recent interviews, an unexpected present arrived. This year's anticipated “Worldwide Document Capture Software Market 2006-2010” report by Harvey Spencer Associates (HSA) has just been published. Anyone who knows Harvey knows that he watches and understands the document capture and forms processing markets better than anyone else on the planet. Therefore, his observations usually set the stage (and probably the mood around the office) at every imaging vendor out there for the year.

I'm here to tell you that the mood is hunky dory; I can hear the champagne flutes clinking from here.

According to HSA, in 2006 the overall document capture market grew at a “healthy” 16.6% and that growth “should be sustainable for the foreseeable future.” Continuing: “The market is being driven by increasing demand for data, to support governmental compliance, privacy needs and other regulations, as well as from corporations looking for cost savings and a competitive edge,” says the press release on the report.

This is a radical, comprehensive interpretation of the role of imaging. Harvey's

team is saying, in effect, that document capture has infiltrated—expanded, really—from mere “data input” into functioning at many strategic levels in the organization as well. Whatever it is, imaging has become a heck of a lot more valuable to an organization than emptying out file cabinets and storage boxes.

Wasn't always the case. Toni Eddleman, senior strategic marketing manager at EMC, reminds me that document capture has only recently reversed its fortune, and has consequently gained several new value propositions along the way.

“Image and capture have changed significantly,” says Toni. “The whole picture has rounded out. Now the capture process is tightly integrated with business process management and records management through to archive.”

From this holistic view of “the document lifecycle,” the whole subject of document capture rises to a higher profile. “At first, people just wanted to get rid of the paper. Then they realized that the information they were capturing (*at great expense, by the way*) was stored in various silos where the capture was taking place. Only a handful of people could get access to the documents,” says Toni.

That has changed. “People are now opening up the entire information infrastructure to include scanning and capture.”

Old School; New Tricks

Support for this notion also comes from a rather unexpected source, albeit with a few slight spins on the specific approaches its customers can take.

Iron Mountain is decidedly old-school; a “box-on-shelf” archival storage company is how Chris Churchill, Iron Mountain's vice president of document management solutions, describes his company's reputation. But even an old-school vendor can learn new tricks, and Iron Mountain is a great example.

“We used to get involved only at the end of the useful life of the document,” says Chris. “An HR document after the employee leaves, for example. But increasingly, our



Andy Moore

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He has been fortunate enough to cover emerging areas of applied technology for much of his career, ranging from telecom and networking through to information management. In this role, he 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) to improve performance and improve lives.

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customers are asking us to manage information earlier in the lifecycle. For instance, we used to take over healthcare records after a couple years. Now, they want us to take them over after one year, or six months. Or, in fact, they say ‘*why don't you just take the whole fileroom over?*’”

What's driving such an extreme shift in this venerable archive company's position within the information food chain? Money, of course.

“If there is no immediate business value to a document, it should be stored physically. It's cheaper. At 10 cents a page, it would cost \$200 to convert a box of paper documents. We'll store it for \$5 per year. You can store it an awfully long time and still never justify the cost of conversion. Besides, once you convert it, it still costs money to store it electronically. I've never seen the numbers work when you're converting documents to digital purely to avoid storage costs,” says Chris. “So there has to be a business purpose to convert a paper document. These purposes range widely; disaster recovery; facilitating distributed access or facilitating a business process that is managed electronically, such as processing a mortgage or hiring a new employee.”

Iron Mountain has adapted to a changing environment. It perfected physical archive storage—huge storerooms of aging documents. Along the way, it learned a thing

or two about indexing and retrieving documents...and more importantly, *portions* of documents—the key pages that you just HAVE to get back from the storeroom. Why not apply that to a new paradigm of capture: “intelligent capture”?

“A customer thinking about an ECM solution has two challenges. One is implementing and customizing the technology itself. Just getting it up and running is not trivial,” says Chris. “The second challenge: they still have business processes based on paper documents. So in order to have a consistent process with the new ECM system, they need to image every document that comes in. AND they need certain of their old documents converted also.

“But it’s too expensive to convert 100% of existing physical documents. So we store the physical documents, and if access is required, we image and deliver it to their new document management system for them,” explains Chris.

Seems sensible enough. But there is still a kink or two I need to work out. The current nature of many common business processes—take insurance claims as an example—practically demands that they be all-electronic. If you want to be competitive with the accident claims management portion of your insurance business, you want people in the street with digital cameras and laptop computers. A paper process doesn’t cut it anymore.

“That doesn’t mean the mailroom is going away, though,” cautions Toni. “Corporations still receive a large volume of paper documents. But the best practice is to scan, identify and extract information from those with little human interaction. The trend I see,” continues Toni, “is toward a ‘digital mailroom,’ where documents are identified, captured and sent out to the correct business processes.”

And she’s right. “Digital mailroom”—besides being a good name for a rock band¹—has become more than just another well-worn buzzword. Still, Chris looks at it a little differently, without quite managing to disagree with Toni at the same time (tricky stunt, that). “A hybrid solution makes the conversion component most cost-effective,” says Chris. “Image-on-demand, for example, makes sense in a credit-card receipt application, where 99% of the time, those receipts are never viewed. They only become important when the purchaser disputes the purchase. And it’s really expensive to image 100% of your documents when you only view 1%,” reasons Chris.

“Another example is called ‘abstracting.’ You have a mortgage application with 10 important pages and 90 pages of boilerplate. Or a medical chart, with a few important pages and a lot of stuff you don’t need to look at. You can convert the critical

information in these examples, and keep 90% of it in physical form. Much less expensive,” Chris says.

I don’t think Toni and Chris have mutually exclusive ideas. They both start with the premise that the conversion of paper to digital form is not only desirable, but these days downright necessary. There are few arenas in information management where you can enjoy the best of both worlds, but I’d say document capture is one. It is applied with equal vigor to reduce operational costs while simultaneously creating an asset of great business value.

“Whether capture is aimed at saving money or making money...depends,” agrees Toni. “In loan or mortgage processing, it’s definitely about deriving the revenue. In finan-

“People are now opening up the entire information infrastructure to include scanning and capture.”

cial services and insurance, the competitive advantage of speeding up the processes—and they tend to be front-end processes that benefit here—is definitely a big driver. In invoice processing, you’re doing both: saving money in terms of productivity while making a little by taking advantage of (fast-pay) discounts,” says Toni.

This spectrum of possible business justifications has occurred, reckons Toni, pretty much organically (although she quickly adds that executive support and communication play a strong part). “A lot of our customers invested in capture to address a specific problem—say, claims or insurance processing. But once it was established, they moved to a sort of ‘shared service’ model, leveraging scanning and BPM in additional departments. They used one application to get understanding and get the foundation set, then they leveraged those best practices into other departments,” she says. “It’s human nature: If you

give people a tool they like that makes them more productive, they talk about it at the water cooler.”

She adds: “Looking back, our customers’ biggest problem at the time was that they were buried in paper. Now, a lot of them have that under control and they can look around for the big picture and realize the opportunities.”

Spreading the Word

There’s been a lot of toner under the bridge since document scanning was considered exotic and restricted to only the largest insurance and financial services operations. As steadily as document capture has become embedded into mission-critical business functions, so has it inched into the corporate zeitgeist. Hard to imagine some businesses existing without it. Distributed capture is a prime example of that curve; MFPs, common in many offices, have become the point of entry for document capture that illustrates, perfectly, the evolutionary path that document capture has followed. Harvey’s study reports that the “ad hoc capture” portion of the market (a segment which probably didn’t exist two years ago) is driven by the adoption of MFPs into scanning and has—in relative terms—outstripped the rest of the capture market by growing at 19% over its previous year.

Toni attributes these growth indicators, in large part, to the unavoidable benefits that can be easily cross-pollinated...if there’s an opportunity for the various “silo managers” to get together. “It’s all about constant communication. We facilitate ‘software days’ at our customers’ locations. Various departments get together and share information about the advantages and benefits they’ve discovered in THEIR jobs, and are eager to spread the word.”

It’s been a long time since I felt genuinely excited to look at document capture and forms processing in a KMWorld White Paper. I knew the promise of image data capture, workflow, business processing and document lifecycle management had legs a long time ago. It has taken a while, but the participants in this paper “get it” too, and I am hopeful that reading their contributions will facilitate YOUR “data capture” as well.

Their approaches may be different; they may emphasize one benefit over another, but (as with Chris and Toni) there is an underlying unified vibe throughout these articles: No matter what you call it—document capture; forms processing; imaging—document scanning has become part of the information management landscape. Get used to it. ■

¹ Apologies to Dave Barry

Intelligent Imaging

Scanning Only What You Need, Only When You Need It

By Jim Stephenson, Document Management Consultant for Iron Mountain

Many businesses come to imaging frustrated with the problems of managing their paper records and, quite often, overly enamored with the vision of life in the digital world. The pain of paper is fresh in their minds and the vision of a paperless Camelot shines in the distance—an image often reinforced by the last imaging salesperson to call on the business.

The path from today's pain to tomorrow's utopia is not a smooth one. In today's business environment, most organizations are faced with an imposing legacy of paper records and numerous paper-based business processes that continue to churn out paper despite the digital industry's promises of less paper. What viable options are available to businesses facing these real pressures and looking for real-world solutions?

Today's Challenge— The Hybrid Record

The reality of business is that related business information and documents are frequently stored in multiple formats throughout distributed storage locations. Rarely does one find information that is stored in one central structure. Increasingly, business records are geographically dispersed and stored in electronic files, emails, file cabinets and record storage boxes. Regrettably, business rules and regulatory mandates are notoriously inflexible in accommodating an organization's very real challenges in managing this record environment. As a result, businesses must be very innovative to effectively manage their document and record assets to achieve business efficiency, enhance customer service and maintain regulatory compliance.

There are many companies that can provide quality guidance to businesses that are interested in more effectively managing their physical records and there is no lack of companies that are willing to assist businesses in navigating their way through the digital maze. Unfortunately, there are too few companies that can step up to one of today's biggest business challenges—the compliant management of hybrid records.

As businesses face the challenges of the hybrid record, business options have become highly polarized. There are two strong advocacies—paper and digital—one attempting to hold onto its constituents and the other trying to live up to its hype and perceived value. With this ideological battle as a backdrop, it is easy to lose focus of the fact that the best solutions for many

“Business rules and regulatory mandates are notoriously inflexible in accommodating an organization's very real challenges.”

businesses may lie somewhere in the middle of the two warring factions.

The solution landscape between physical and digital records management is shifting and businesses are benefiting. Instead of being driven to one of two solution extremes—maintain the paper “status quo” or “imaging everything”—more attractive options are emerging that leverage the cost-effectiveness of physical storage with the convenience of digital delivery. These include:

- ◆ **Image on demand:** Scan records as they are requested;
- ◆ **Selective scanning:** Using predictive tools, scan records with a high likelihood of retrieval; and
- ◆ **Abstract scanning:** Scan a small subset of high-value images within a larger record.

Physical vs. Digital— Which is Cheaper?

This is a question asked by all businesses seeking ways to more effectively manage their information and document assets. Unfortunately, the answers that are being provided too often reflect market biases of those providing the answers and do not help businesses better understand the available options and their financial implications. Let's attempt to provide directional price guidance with a “back of the envelope” analysis:

Assume that hardcopy documents will be stored in standard record storage boxes. Each storage box holds approximately 2,000 pages (2,500 images) of business documents. Eight storage boxes will contain the equivalent of 20,000 digital images or approximately 1GB of digital storage.

Record storage costs for a box will average approximately \$5 per year including a low level of file retrievals. At prevailing conversion rates, it will cost between \$200 and \$300 to convert the documents in one box to digital images. Therefore, the cost of digital conversion is equivalent to the cost of retaining the documents in paper form for a period of 40 to 60 years. Adding the costs of a digital storage and retrieval solution to the costs of conversion often creates a significant financial barrier to implementing a full digital conversion project.

Under most conditions, physical archival storage is a cheaper alternative than digital storage when the cost of conversion is included. A compelling business value proposition may justify digital storage over physical storage, but, absent the business case, physical storage is the more cost-efficient alternative.

Digital Conversion— The 800-Pound Gorilla

It is important to elevate the dialogue from a discussion of cost to a discussion around business value. The financial case for a major document conversion effort is stronger when the conversion occurs early in the business process. At this point, businesses have the potential of capturing significant process-related business value from the conversion and the justification of the expenditure is often a fairly straightforward financial exercise that can be justified by improved productivity, better process standardization and control and improved customer service.

When does a full conversion not make sense? Certainly, converting after a significant amount of the business process has been completed limits the impact to only

the remaining value and justification becomes more challenging. In these situations, more businesses are asking if there are other viable options.

The answer is yes. Businesses now can consider a number of options designed around intelligent scanning that offer significant business value without the excessive cost of full digital conversion projects. Intelligent conversion is based upon the fact that external factors cause certain documents to have significantly higher business value than the average document. What are these factors? They are typically relatively significant business events that increase the business' need to access the information. One pertinent example would be records that are identified for audit. The conversion of these records to digital format often provides significant value and improved productivity in the audit process to more than offset conversion costs.

A representative healthcare example would be the patient record for an existing patient that has scheduled follow-up service within the same healthcare system. Scanning patient charts for patients that present for follow-up service can be financially justified when a full backfile scan cannot. A full backfile conversion would include records of patients that may seek future services from the healthcare provider and other records for patients that will not seek subsequent services from the provider. The overall value of the full conversion is seriously diluted by the expense incurred in scanning records for patients that will not be generating future revenue for the healthcare provider.

Let's now look at a couple of examples that show how the effective use of intelligent scanning can produce measurable business value.

Credit Card Disputes

A large entertainment company generates a significant portion of its revenue through

millions of annual credit card purchases. As a highly visible market leader, the company realizes that it is a very appealing target for fraud and has decided to aggressively defend itself against all potentially fraudulent credit card activities. As part of this program, the company actively responds to all disputed credit transactions and provides credit card companies with supporting documentation to substantiate that the cardholders authorized credit card transactions for disputed claims.

The company evaluated both physical and digital options and found the options lacking in key areas. A purely physical solution was logistically unwieldy and a solution built upon a full digital conversion of all credit card transactions was unnecessarily costly and labor-intensive. When they evaluated intelligent scanning options, the company found a way to design a highly functional solution that met their strategic business needs while effectively managing the overall cost of the initiative.

The company now collects the physical credit card receipts and stores them by date, point-of-sale location and cashier ID. When a dispute is registered by a credit card company on behalf of a card member, the entertainment company identifies the envelope that contains the disputed receipt and record center staff identifies the disputed receipt and scans it to a content management system. The combination of a well-crafted physical storage system and a robust electronic delivery and storage solution helps this company protect its revenue stream and defend against fraud in a cost-effective manner.

Human Resource Records Management

After completing an acquisition of a regional restaurant brand, a major restaurant chain needed to consolidate HR records to facilitate consistent HR management practices. In some locations, records from the acquired chain were centralized. In other locations, HR records had been retained by the hiring restaurants.

The restaurant analyzed their business needs and determined that they needed to centrally manage all HR records to achieve their goal of uniform HR administration across their brands. After thorough evaluation, they realized that they had two distinct business issues—the management of active HR records and the management of inactive HR records—that required different business approaches. The business value required to justify the digital conversion of active records was easily identified. The value proposition for converting the inactive records was not as evident.

In the restaurant industry, staff turnover in excess of 100% annually is often the norm. Therefore, established restaurants typically have high numbers of inactive HR files. Restaurant management could not determine a compelling business reason to convert all inactive HR files. Therefore, they evaluated their intelligent scanning options.

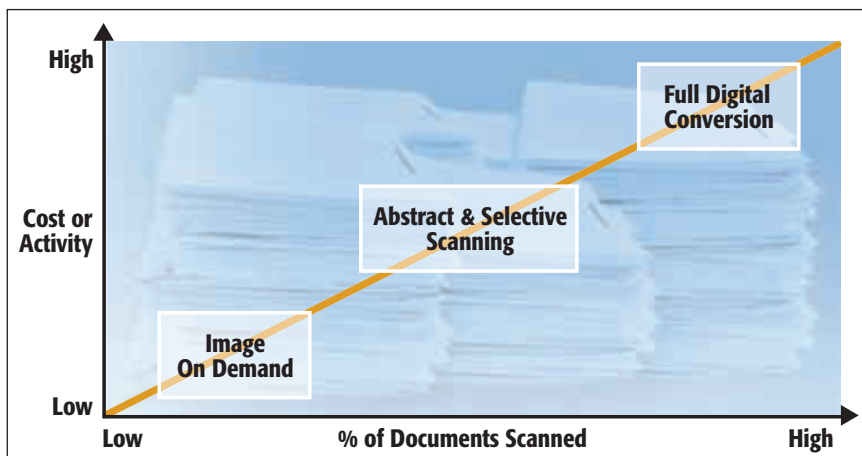
In the vast majority of cases, there were no reasons to access inactive HR records. In a small percentage of cases, there were issues associated with employees that justified investing in the scanning of the inactive HR record. These business reasons included involvement in active litigation, disputed pay or benefit issues, medical issues and employment verification issues.

This company found that its most effective approach to the management of its HR folders involved scanning all active employee records and storing the information in a content management system. Because access to inactive HR records was not routinely required, the company decided to place inactive employee hardcopy records into off-site record storage and use image on demand to electronically deliver the records if they were needed.

Scan What You Need, When You Need It

Organizations that are looking for effective hybrid record strategies may find that their best options combine cost-effective physical storage with the digital conversion of selected high-value documents. This approach is feasible when there are discrete business events that elevate the value of certain records. These records can be identified, scanned and stored in a digital repository that provides easy and secure access to the information. The highest value solution is frequently structured around intelligent scanning—*"Scan only what you need, only when you need it."* ■

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Conversion costs for intelligent scanning options.

Managing Mission Critical Content

By Toni Eddleman, Senior Marketing Manager, EMC Corporation

For centuries, business has run on paper. For many industries, that's still the case. But as the pace of business has accelerated, paper has become a burden and a bottleneck. It slows productivity because only one person can handle a paper document at a time (unless it is copied, which takes more time and further erodes efficiency). In an increasingly stringent regulatory environment, paper is also a legal risk. Having to search for content in response to a legal demand could lead to costly penalties and lost productivity if a document is lost or missing.

To avoid these and other problems, organizations are streamlining manual, time-consuming processes. The newest trend is the use of digitization and other capture technologies (such as document classification engines, optical character recognition and distributed capture) to integrate information into workflow at the very beginning of the process, as soon as it arrives in the mailroom. Designed for a large range of paper-intensive industries such as financial services, insurance, healthcare, oil and gas and manufacturing and horizontal processes such as accounts payable, accounts receivable and employee onboarding, these technologies are engineered to convert large volumes of paper documents and other content to digital form and make them available for automated business processes.

The benefits of getting rid of paper can be immediate and dramatic: increased customer responsiveness, reduced cycle time, improved efficiency, lower costs and better compliance. And based on the typical experience of EMC customers—they'll enjoy a 30% to 50% gain in overall cost and process efficiencies.

The key to utilizing information successfully—rather than being overwhelmed by it—is the ability to efficiently capture and manage large volumes of information from disparate sources. Business-critical information arrives in many forms: paper, fax and a variety of electronic data formats. All of it must be transformed into intelligent content that can feed enterprise applications such as enterprise content management (ECM), business process

management (BPM), enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM) and other systems.

Often a business faced with these challenges will apply a point solution where it feels the greatest need. Soon there are many point solutions. Then coordinating and integrating several point solutions compounds the original information management problem. The answer to this dilemma is transactional content management (TCM). TCM enables organizations to cope with enormous volumes of information, accelerate information time to value, manage the information from capture to archive and reduce the IT burden of supporting multiple point solutions.

The steps of managing transactional content:

1. CAPTURE: The more customer interactions with mission-critical business applications and supporting documentation that can be captured, managed and stored electronically in a single repository, the more valuable the content becomes and the easier it is to automate business processes.

- ◆ **Capture:** Scanned images may be refined through de-speckling, de-skewing, border removal and other image pre-processing so that “noise” and irrelevant material can be removed or ignored and only transactional content retained.
- ◆ **Classification:** Utilization of text, image and knowledge-based analysis techniques to automatically identify documents and prepare them for processing without the need for manual sorting or separator sheets. Such analysis identifies various document types, such as an appraisal form or a W-2, for example, and enables these documents to be automatically routed in accordance with business rules. Documents are then indexed or “tagged” so they can be easily retrieved from an ECM repository or other systems.
- ◆ **Extraction:** In many cases, data from documents needs to be extracted and made available to users in a variety of other applications. For example, a hand-



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written new account application might be optically recognized and translated to machine-readable text.

- ◆ **Validation:** Once it has been extracted, data can be validated against line-of-business (LOB) applications to ensure its accuracy and integrity. As an example, an invoice could be compared to business rules to ensure all fields have been filled out.
- ◆ **Export:** During the export process, data and documents are made available in the appropriate format—such as PDF, XML or file system—and converted directly for use in Microsoft, Oracle and other databases.

2. PROCESS: Once documents have been captured in a content management repository, they can be put to work. The business process management (BPM) system allows automation of human interaction. Steps may include:

- ◆ **Business rules:** Applying business rules via BPM services to automate repetitive tasks that have traditionally been manual processes.
- ◆ **Queues:** Establishing queues where work or tasks can be prioritized and routed or pushed to the correct knowledge worker based on skill level and/or bandwidth.
- ◆ **Integration:** Integrating with LOB applications such as ERP and CRM systems as well Microsoft Office, so additional information is made available for correspondence, research and collaboration.
- ◆ **Compliance:** Enforcing records management and retention policies to determine what documents are kept, under what security measures, and for how long.
- ◆ **Document generation:** Merging acquired content with appropriate document output management templates to create highly personalized communications, such as customer service letters.

The ideal solution ensures all related transactional content is housed in “virtual files,” which contain all relevant docu-

ments and content for a single case, file, transaction or customer. Virtual files can be efficiently routed and organized so nothing is lost or ignored. And queue management may be used to automatically route information to the right people so responses to inquiries can be prompt.

3. DELIVER: Managing business files in digital form gives employees the global, on-demand access to content that ensures a 360-degree view of customer data, business transactions and digitized images of the documents.

Once documents are digitized and stored in a single repository, critical data can be easily accessed, allowing employees to search, view and annotate documents so that they can quickly process customer requests.

Having immediate access to information also facilitates collaboration that can improve the speed and quality of decisions and service. Now, all members of a particular case, for instance, have instantaneous access to all the information available as part of the file. Collaboration can also be triggered automatically as part of business processes; for example, corporate officers might be summoned by e-mail to a virtual conference room to review certain claims based on criteria defined in business rules.

In customer service organizations, better access to a holistic view of information leads to better customer satisfaction and fewer lost customers due to service problems. It also saves time and money because more issues can be resolved on the initial contact.

Enabling greater access delivers benefits, but access must also be controlled to protect customer confidentiality and assure the integrity of records.

4. ARCHIVE: There is a point in the document lifecycle where a document is no longer active. At that point it can be logically laminated and placed under formal records management control. It can be checked in and out but, if it is altered in any way, a new record will be made including metadata that describes who made the change and when. This ensures the record is protected in

Defining the Terms

Transactional content: Content which typically originates outside an organization from external parties—customers and partners—and relies on workflow or business process management (BPM) to drive transactional, back-office business processes. In some cases, the content not only triggers internal processes, but is based for the transaction itself.

Transactional content management: A software solution that enables organizations to capture, process and access electronic images of documents all on a unified content management platform. Content may include paper and electronic documents, photos, reports, computer-generated reports, XML data and electronic forms, and is appropriately managed and integrated with your data-driven line-of-business systems.

compliance with regulatory and business rules. It also sets into play any retention policies as to how long it is stored and its eventual disposition.

After a document has been processed, how does a company effectively store the information? The choice of an adequate storage strategy is very important because of the sheer volume and size of documents involved. An organization can realize significant savings by moving archived documents from primary high-performance, high-value storage devices to disk-based storage devices for less frequent access. Key requirements in storing this content include:

- ◆ **Authenticity:** The validity of documents must be protected with appropriate security measures which control access and limit the ability to revise or delete. The system must also provide an audit trail to show everything that happens to documents in storage.
- ◆ **Longevity:** The system needs to have built-in protection against media failure, system shutdowns or external threat. Typically data is automatically replicated at secondary locations, and self-healing features continually monitor data integrity and make repairs as needed.
- ◆ **Accessibility:** Regulatory compliance might involve the rapid recovery of hundreds or thousands of archived records in response to a subpoena or other

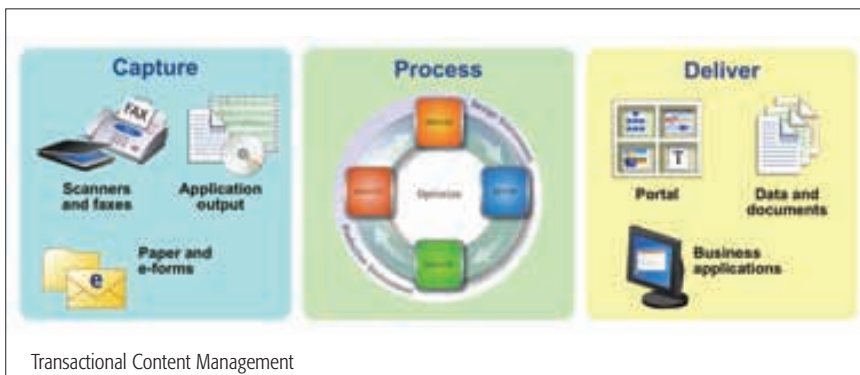
legal request. In such a scenario, the ability to respond quickly might have an impact on litigation costs and help companies avoid penalties for non-compliance.

Complete Transactional Content Management Solution

If you'd like to start enjoying the benefits of managing transactional content, there are several places where you might begin: reducing the amount of paper, addressing a specific department or functional area or embracing an enterprise platform which allows you to buy the pieces you need and then integrate other content management solutions.

But whatever approach you take, your effort to transform the way your organization captures, processes, accesses, archives and meets compliance regulations for transactional content should bring significant benefits including:

- ◆ Improving customer service with better, faster, more complete responses;
- ◆ Eliminating the inefficiency, expense and risk of a paper environment in which documents are handled sequentially and can be easily misplaced or lost;
- ◆ Managing and appropriately associating all types of related business information, from scanned documents to digital pictures, application documents, e-mail and more, in a common virtual folder;
- ◆ Providing overall control for business processes as required by your operations, industry standards, or regulatory factors; and
- ◆ Enhancing your market position relative to competitors who still struggle with manual processes and paper documents. ■



EMC Corporation (NYSE: EMC) is a leading developer and provider of information infrastructure technology and solutions that enable organizations of all sizes to transform the way they compete and create value from their information. Information about EMC's products and services can be found at www.EMC.com.

Time is Money

Data Capture Software Saves Government Agency Days

By Tsai-Ling Merrem, Director of Marketing, ABBYY USA

What began as a pilot program to improve timesheet processing is now transforming Montgomery County's invoicing and accounts payable procedures into an adept system that dramatically reduces inefficiencies and greatly improves accuracy.

With more than 10,000 timesheets to process every other week, this Maryland county previously spent two days scanning documents and another three days reviewing them to correct errors in key pieces of data—such as employees' identification numbers—during the process, said Mayland Lin, department of technology services at Montgomery County government in Rockville, MD.

"We're able to do corrections in only one morning, rather than over the course of three days."

The department knew that it wanted to increase the flexibility and speed of its data capture and began investigating data capture solutions that could integrate seamlessly with its existing document imaging solution. Montgomery County had been using a zonal OCR program. Unfortunately, that program was highly sensitive and all-too-often inaccurate, she said. In other instances, the county ended up manually keying in data—a more accurate but far more time-consuming process, said Lin.

Ultimately, they elected to use ABBYY FlexiCapture, a data capture solution which anchors on a document's key fields and then extracts the information—vastly improving and abbreviating the once time-intensive process, she said.

"With the other program, there was a lot of manpower wasted," she said. "Now we're able to cut down and do corrections in only one morning, rather than over the course of three days."

Multiple Choices

Like any organization, Montgomery County receives thousands of pieces of paperwork a week. Lin and her team considered different ways in which the county could use the same technology to save time and increase efficiency in other county departments.

Now, Montgomery County, which has more than 665,000 residents, also processes the Department of Liquors' invoices for the state-run stores. In May, 2006, Ray Belden at American Heritage, a solution provider, integrated the FlexiCapture solution into its existing document imaging system. The county immediately enjoyed vastly improved accuracy and a speedier invoice-processing schedule, said Lin.

But the county did not stop there. Satisfied with the results from its timesheet and liquor store applications, Montgomery County expanded its use of the capture solution into its entire accounts payable department, Belden said.

"They are a neat customer, because they process lots of different things for a lot of different departments," said Belden. "They save the scanned information into an image that is stored in their imaging program. They process all of the Department of Liquor's invoices, but they also use it in accounts payable, so every vendor that submits a bill to Montgomery County comes through the capture system."

Implementation Process

Before launching its capture solution, Belden spent about six months discussing various solutions to Montgomery County's paper nightmare. "They needed lots of technical support. Because they are a government IT department, they don't have a lot of manpower."

To make matters even more complex, the county had many disparate paper-based systems in place—forms that used a variety of

fonts, printers with varying degrees of clarity and a veritable rainbow of paper and print colors, said Lin. "If you look at the metadata, it's gobbledygook," she said.

Unlike the earlier scanning system, the new data capture solution is flexible and forgiving of human or technical foibles, said Lin. "The technology intelligently analyzes the elements and data on the county's timesheets and invoices, and captures the critical data elements the county needs to do its work," she said.

"With some solutions, if the document's not aligned perfectly, it doesn't work," Lin continued. "When the page was off a hair, our old OCR system couldn't read it."

Forward-Looking Statements

Having enjoyed the initial results of its year-long work, the county plans to further extend its use of capture software, its partnership with American Heritage and its investment in computerized solutions, said Lin.

"Having enjoyed the initial results, the county plans to further extend its use of capture software."

"Montgomery County is in the process of putting in an electronic system for timesheets, but it's going to be at least another two years before it's completed," she said. "I have a lot of potential to make use of the new data capture system. There are a lot of powerful tools that we can use to improve our productivity here. I want to leverage our continuing investment in technology and the training Ray provided to my department." ■

ABBYY is a world leader in document recognition, data capture and linguistic technologies. Product offerings include FineReader Engine, a comprehensive recognition SDK that combines full page/zonal recognition, PDF conversion and data capture; Recognition Server, a server-based OCR and PDF conversion solution; and FlexiCapture line of dynamic data capture solutions for forms and semi-structured documents.

ABBYY licenses its award-winning OCR and recognition technologies to many market-defining capture and ECM vendors. ABBYY is headquartered in Moscow, with offices in the United States, the UK, Ukraine, Japan and Germany. For more information, visit www.abbyy.com.

Keep Information Moving With Intelligent Capture and Exchange

By Andrew Pery, VP of Marketing, DICOM Group

Imagine your business without boundaries: paper and electronic forms merge; you can capture information in any form, from any place; you can exchange information more efficiently to drive business processes, ensure traceability of information and eliminate points of failure as information is managed throughout its lifecycle. Intelligent capture and exchange keeps information, and your business, moving.

The Problem

Information drives business and 80% of all corporate content is unstructured in nature. The volume of information produced is growing at 50% annually.¹ On average, a knowledge worker generates about 800MB of content each year.² At the same time, corporate governance standards require rigorous business practices that ensure the traceability and security of not only paper-based information, but also the countless emails,

instant messages and other electronic information that a business sends and receives.

Historically, the processing of these interactions was predominantly a centralized, high volume, batch function; but this is rapidly changing. The sale of distributed capture devices provides an indicator of this changing landscape. In the last three years, unit sales of high-volume scanners have been flat, whereas unit sales of workgroup scanners grew by 80% each year and are expected to grow an additional 40% through 2009.³

Information capture and exchange needs to be tightly coupled with mainstream IT processes. Not surprisingly, information lifecycle management (ILM) has emerged as a discipline to bring together the key elements of content-enabling technologies (such as information capture) and integrate them into business processes. ILM is defined as a "set of policies, processes, practices and tools used to align the business value of information with the most appropriate and cost-effective IT

infrastructure from the time information is conceived, through its final disposition."⁴

The primary value of an integrated approach to intelligent capture and exchange is to reduce the potential points of failure within the discrete processes that support interactions between customers, partners and suppliers. For example, a 25% reduction in error handling cost will represent a 2% improvement in business margin.⁵ An integrated solution will accelerate business transactions, minimize points of failure and improve ROI by a factor of three.

Document capture issues: Document capture is not as simple as installing a scanner. Historically, document scanning has been a Microsoft Windows-based process involving driver installation and other administrative details. This can turn into a security and configuration management challenge as each user must have administrative access to the associated PCs. Additionally, the scanner vendor must ensure that it continues to update its drivers to support OS upgrades and the user must be mindful that scanner driver updates don't conflict with the OS in use.

Information classification issues: When information gets captured, it's often a manual process to validate it, separate it from other content and classify it based on content type or sensitivity. This type of manual process is inefficient, insecure and error-prone. There are many potential points of failure, no built-in security measures and no built-in compliance management. Mistakes made in these areas can destroy a business' credibility and reputation and result in costly legal fees.

Information exchange issues: Increasingly the greatest source of economic value for many companies is a set of relationships with a core group of powerful, loyal and repeat customers.

Frederick Reichheld, author of *The Loyalty Effect and Loyalty Rules*, found that loyalty leaders grow, on average, more than twice as fast as the industry average across a wide variety of industries.⁶ In a recent study, Walker Information found that IT industry leaders outperform "laggards." A survey of more than 4,000 people in September, 2004, found that IT vendors with high customer loyalty generated an average operating margin of 12%, while laggards experienced a negative 11% margin.⁷ ■

To read this full white paper and learn more about Kofax Intelligent Capture & Exchange, visit www.kofax.com.

Kofax Intelligent Capture & Exchange

Kofax Intelligent Capture & Exchange is the first comprehensive framework to offer a single, end-to-end, auditable, transaction model that provides document capture, routing, management and compliance conformance, from a Web browser. It provides an integrated framework to consolidate and normalize the content at the point it enters your organization.

With Kofax Intelligent Capture & Exchange, you can achieve the following:

- ◆ Implement an automated process to capture content in any paper or electronic format, from any device, from any place, regardless of our deployed desktop platform technology;
- ◆ Extract the appropriate information from varied content sources and deliver it to your organization's existing ERP, CRM and line-of-business systems;
- ◆ Proactively notify the proper departments, partners, vendors and customers when critical information is received or when pre-emptive action is necessary;
- ◆ Automate the straight-through-processing of data and business decisions based on new information as it is captured;
- ◆ Increase customer satisfaction by providing them with accurate information when they require it, regardless of how that information was captured;
- ◆ Reduce errors by eliminating manual, error-prone processes;
- ◆ Increase efficiency by implementing automated, information-driven business processes; and
- ◆ Transaction-based capture, distribution, routing, classification and validation.

Kofax Intelligent Capture & Exchange offers a high-level of automation and integration to deliver the following benefits:

- ◆ Adapt to the way knowledge workers work by scan-enabling any business application;
- ◆ Automate and integrate paper and electronic documents directly into your business process to remove points of failure; and
- ◆ Integrate with business-critical applications to reduce risk.

1 Gartner, 2006

2 University of California at Berkley, 2003

3 IDC, 2005

4 Storage Network Industry Association (SNIA), 2004

5 Internal Kofax Invoice Processing Research, 2006

6 Reichheld, Frederick: *The Loyalty Effect*, 1996 Bain & Company, Inc.

7 The Walker Loyalty Report Series, 2004

KMWorld ²⁰⁰⁷ & Intranets

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This year's theme, KM 2.0: A New World for the Enterprise, emphasizes that there are new ways to exchange knowledge within the enterprise that are totally integrated into daily business and work processes and are having a major impact on organizational innovation and success. A reality check for the business manager, this year's KMWorld & Intranets Conference and Exhibition looks directly at improving business processes, solving urgent business problems, and expanding communication, creativity and innovation.

As always, the conference program covers the strategies, practices, processes, tools, and solutions for enterprises. This year, the emphasis is heavily in favor of practical, hands-on advice and real-world experience as well as interactive forums and networking activities. This is a conference that stresses solutions that businesspeople can use immediately in their organizations.

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