Document Imaging Report

Business Trends on Converting Paper Processes to Electronic Format

July 3, 2009

ACQUISITION GAINS HYLAND HOOKS INTO LEADING APP

Ever since it was announced that the U.S. government would be spending $20 billion to encourage adoption of electronic medical records (EMR), there has been a lot of buzz in our industry about the potential of the healthcare market. In that respect, **Hyland Software** is well ahead of the game. A strong focus on healthcare over the past several years has helped make it the Westlake, OH-based ISV's number one vertical market, now accounting for over a quarter of Hyland's business. This week, Hyland further expanded its healthcare business with the acquisition of Salem, NH-based ISV **Valco Data Systems**.

Valco's primary focus is adding imaging and ECM capabilities to applications installed by healthcare information systems specialist **Meditech**. "Valco's technology is very similar to what we offer in the healthcare space," said Bill Priemer, a senior VP and COO of Hyland. "What they have that we don't are some deep hooks into Meditech applications.

"We have integration with Meditech at the interface-level, but Valco has a much deeper, database-level integration. We have that type of deep integration with **Epic**, for example, which is one of the reasons we've had so much success in Epic environments."

Based in the Boston area, Meditech is one of the leaders in the healthcare IS market. Its Web site lists 2,200 customers worldwide. According to Priemer, Valco has 300 customers. "The bulk of Meditech's customers are community hospitals," Priemer said.

Hyland will retain 35 Valco employees across multiple areas of the company and continue to sell and support Valco's software. "We also

E-Discovery Preparedness: The Killer App for ECM?

Ever since the early 2000s, compliance, records management (RM), and slightly more recently, e-discovery have all been hot buzzwords in the document management industry. In presentations, I like to refer to applications that address these areas as the defensive side of document management. In other words, they are designed to stop bad stuff from happening to a user. I contrast this with workflow and automated data capture, which I consider offensive document management—as they often provide immediately quantifiable ROI.

Historically, the document imaging industry has been driven by offense. While there has been a lot of talk about installing document management and imaging for compliance, the rubber hitting the road still most often occurs where there is a clearly demonstrable ROI. However, we are starting to see some signs that it is possible to find ROI related to defense.

Most of this has to do with the emergence of e-discovery. Basically, e-discovery involves the expansion of the pre-trial discovery phase of a lawsuit (during which both sides request information, documents, and evidence) to include electronically stored information (ESI), such as e-mails, other Office documents, databases, and images—as well as meta data. In the U.S., e-discovery was legitimatized by some 2006 changes to the federal Rules of Civil Procedure [*see DIR 1/20/06*]. The U.K. apparently has made similar changes to its discovery regulations, and even though other countries and regions have different standards, these are often overridden when organizations in these areas are involved in litigation with a U.S.- or U.K.-based company.

So, where does document imaging fit into e-discovery? Well, because e-discovery involves a wide range of electronic information, i.e. all of an organization's unstructured information, it's really an ECM application, and imaging is an important component of ECM.

Reducing the cost of e-discovery

Netherlands-based ISV **ZyLab**, which has its U.S. headquarters in McLean, VA, has been one of the

pioneers in the e-discovery market, with applications going back almost 25 years. "At that time, we called it investigation," said Dr. Johannes Scholtes, president of ZyLab. "Our early customers included organizations like the **FBI**, police and law enforcement, the **U.S. Navy**, and some law firms. ZyLab was one of the first to market with PC-based search tools and the FBI, for example, would confiscate hard disks and run our technology on them."

As defined in today's market, the e-discovery process can be divided into multiple steps, with this "investigation" step called "processing," according to the popular Electronic Discovery Reference Model, which can be found on www.EDRM.net. Other steps include identification (determining where relevant records are stored), preservation and collection, review and analysis, and production and presentation.

> "Proper records management means that e-discovery becomes more manageable and causes less disruption to an organization's everyday business."
>
> **– Johannes Scholtes, ZyLab**

As you can imagine, implementing all these steps can get expensive, especially when dealing with law firms that charge by the hour. We've seen average cost per case estimates for e-discovery as high as $1.6 million. We've also seen numbers that indicate that the vast majority of companies with revenue over $1 billion are facing an average of more than 100 lawsuits at any time. Obviously, many of these are settled out of court, but what can organizations do to reduce costs associated with cases that do make it to the discovery stage?

Modernizing the process

Well, the most expensive step in e-discovery is the review stage, which typically involves legal personnel studying documentation that has been deemed relevant in the processing stage. The cost of personnel is the most expensive element in review. In 2007, document management services provider **Anacomp** purchased e-discovery review specialist Caselogistix, to address this issue.

"Caselogistix' application was designed with the new paradigm of e-discovery in mind," said Wayne Ford, Anacomp's senior VP of marketing, channels, and strategic alliances. "Legacy review products, while they might have a larger install base, lack the usability and flexibility of newer products like ours. They were designed around older, paper-based workflows. For example, they don't work well with native electronic formats—rather everything has to be imaged before it can be reviewed.

"Caselogistix also has an intuitive user interface that enables quicker review. This is very helpful, especially in today's

economy, when even law firms are competing on price."

ZyLab's Scholtes added that the review process can also be streamlined through improved processing or investigative techniques. "If you give a lawyer 250 gigabytes, it's going to be less expensive than if you ask him to review 500 GB," he said. "The trick is not to give a lawyer too much data, but to do it right, so the opposing council can't protest.

"When doing processing, it's important to distinguish between portal and legal searches. Portal searches are good at finding the best hits, but not all the hits. You also have to have good reporting that explains why you didn't get certain hits. It's also important to have formalized quality control and sampling.

"We've been at this for 25 years, so our software has an established reputation. We've actually run into situations in which the opposing council has said that they were familiar with our technology from having used it themselves. Because of that, they trusted it had come up with the right documentation when used by opposing counsel."

Is good RM key to future?

Of course, despite improved review and processing methods, most people seem to acknowledge that addressing a step at the very left side of the EDRM chart, at the very beginning of the e-discovery process, may be the most cost-effective way to manage the process. That's the "information management" stage of the game.

"E-discovery is just a symptom," said Scholtes. "At the end of the day, organizations need to implement better records management."

Scholtes said that improved RM is the third stage in the evolution of e-discovery software implementations. "At first, it was lawyers and professional investigative organizations using our software," he said. "Now, we are focused on organizations looking for in-house solutions. Typically, we sell to an organization defending itself in a lawsuit. This has driven tremendous growth for us in the past few quarters.

"The next step will be for these organizations to utilize our software to implement in-house records management. Proper RM means that e-discovery becomes more manageable and causes less disruption to an organization's everyday business."

While Anacomp does not offer its own RM solution, it does have close relationships with several ECM ISVs that it could potentially leverage, along with its hosted docHarbor environment, to create a best-of-breed SaaS (software as a service), end-to-end, e-discovery option. Anacomp's Ford also sees a movement toward organizations bringing e-discovery in-house. "Today, our Caselogistix' business primarily comes from law firms, and a few in-house legal departments at Fortune 1000 firms," he said. "In the near future, I see that ratio moving close to 50/50. After that, I think it will swing in favor of corporations."

WHAT FILES DOES E-DISCOVERY COVER?

What exactly are ECM/RM systems being asked to account for to bring a user into e-discovery readiness? This is a complex issue, as thousands of file types can be classified as records. Even if an ECM system supports all these, for e-discovery, the files must be able to be searched and preserved in a consistent manner. For review, and perhaps even in the "processing" stage, they may also need to be converted to an image format with meta data.

ZyLab President Dr. Johannes Scholtes discussed the evolution of file types relevant to e-discovery. "We were one of the pioneers in applying full-text OCR search methods to scanned images of paper as part of the investigative process," he told *DIR*. "Right now, however, the biggest e-discovery challenge is e-mail. Five years from now, I think it will be multimedia files. Five years from that, it will be everything stored in SaaS [software as a service] applications."

The bottom line is that effective e-discovery and RM systems need to continue to evolve and embrace the evolving means that organizations utilize to do business. Information being exchanged through online social networks is probably a good area to start exploring now. The good news is that most successful ECM players have been expanding their horizons in regards to file types for the past several years.

George Socha, in his white paper *Bringing e-Discovery in-house: risks and rewards*, also cites the importance of an infrastructure that enables collaborative RM among multiple departments: "Effective information management requires close collaboration among a wide range of internal personnel (legal, IT, records management, information security, human resources, audit, business units, and so on).... The organization will be better able to understand what ESI it has, where that ESI is located, who has control over it, and what will be done with it throughout the e-discovery process." This would appear to be a vote in favor of ECM over departmental document management to address RM for e-discovery.

For more information: www.sochaconsulting.com.

A natural pairing

And, as people move e-discovery in-house, records and document management is definitely on their minds. "I was recently at a **Gartner** conference where I talked with Debra Logan [an ECM, RM and e-discovery analyst]," said Andy Wang, manager of strategic solutions at imaging and document management ISV **Laserfiche**. "She said that 90% of the calls she gets related to e-discovery also involve discussions on imaging and document and records management. That infers that people view these technologies as a natural package."

Wang added that Laserfiche recently won a deal with the **City of Anaheim** that includes all of the above mentioned technologies. "Anaheim's public works department had to perform e-discovery for a lawsuit it was facing,' he said. "Because it had to put in an RM infrastructure to make it work, Anaheim eventually decided to go with a city-wide RM project.

"I can't quantify exactly what percentage of our current sales is coming because of e-discovery, but we typically get a laundry list of reasons why customers are implementing our technology, and e-discovery is always on it. I can't say for sure how often it provides the final push, but it definitely helps."

Despite this progress, evidence indicates that the market for improved RM to facilitate e-discovery is far from mature. According to an excellent white paper authored by George J. Socha, Jr., Esq., of **Socha Consulting** entitled *Bringing e-Discovery in-house: risks and rewards*, "Perhaps, surprisingly, statistics have indicated that only around 1% of organizations are actually prepared for full-scale e-discovery activities." (A copy of the entire whitepaper can be downloaded at (http://www.zylab.com/Document_center/document_center.html#wp).

Putting the offense and defense together

In addition to reducing the costs of e-discovery, a good RM solution should provide users with more insight into what exactly they are storing as records. We've heard many stories of organizations opting for settlements just so they don't have to go through a discovery process.

"RM enables organizations to make more intelligent decisions on whether to offer a settlement before a lawsuit even reaches the review stage," said Scholtes. Socha's white paper describes this as the ability to make "earlier and more well-informed assessments of the circumstances surrounding disputes, which can lead to more effective strategies for handling disputes."

As gravy on top of all this are the traditional "offensive" benefits that an ECM system (which is typically where a user is going to get RM functionality,) provides in areas of workflow and process automation. And as legal departments look to cut costs—a recent survey of corporate legal departments conducted by *Corporate Counsel* magazine indicated that 67% feel pressured to cut spending—these offensive benefits might just provide the cost justification for an ECM/RM/e-discovery system that the legal department can't pay for out of its own budget (even if better RM practices could save the legal dept. e-discovery costs in the long-run).

The bottom line is that we see tremendous opportunity for document imaging, ECM, and RM technologies being generated by the costs of e-discovery. As e-discovery itself is still in its nascent stages, organizations are just starting to learn its costs. And only as they get their initial bills, and experience sticker shock, will they begin to move towards reducing them. That's why maybe e-discovery hasn't generated the avalanche of business for ECM vendors, at least initially, that many people thought it would.

But that time is coming. And all the convergence of document imaging, RM, and ECM technology over past half-dozen years or so will start to bear some fruit in this market. And, if as Socha suggest, the market for e-discovery preparedness is currently only 1% penetrated, it should be a bountiful harvest.

For more information: http://www.zylab.com; http://www.anacomp.com; http://www.laserfiche.com; http://tinyurl.com/legalcostcuts

Intermec Introduces Mobile Capture Option

Barcode and mobile computing giant dives into document imaging

Recently, we've talked a lot about mobile document capture as the next step in the evolution of distributed applications. We've written articles about portable scanners, capture from smart phones, and even capture with scanners attached to PDA-sized appliances. This week, we're going to talk about mobile scanning being done with bar-code scanners.

Well, maybe we're simplifying things a bit, as **Intermec's** new CN50 and CN4 devices are actually mobile computers that offer bar-code scanning as one of their functions. They also offer features like signature capture, a GPS system, and

wireless connectivity, as well as the ability to run software in a Windows environment. But it's the bar code scanner, with the help of an internally developed document capture application, which is actually doing the imaging.

Targeting Transportation

Last month, with the launch of the CN50 and CN4, Intermec announced its new Enhanced Mobile Document Imaging (eMDI) technology. Intermec is an Everett, WA-based AIDC (automated information and data capture) specialist with close to $900 million in annual revenue. Initially it is aiming eMDI at the transportation industry, one of the four focus markets for the company.

The CN50 is one of two new Intermec mobile computers that offers a document capture option. Images are captured through an imager/bar code reader on the top of the device and processed in firmware.

"In a less-then-truckload situation, a driver might make 15-20 stops in a day and pick up five to seven documents at each stop," said Jeff Sibio, director of industry marketing, Intermec. "He collects all these documents and puts them in a briefcase or in the cab of his truck. At the end of the day, if he works at a satellite office, he might have to send them by courier to the main office where they'll be scanned, indexed and integrated into a workflow. Or maybe he'll submit them to a scanning service that captures them for his company.

"Either way, there is at least an overnight delay before the documents are captured. If his company's using a service, they might not be processed for 72 hours. Because the trucking company can't send an invoice until these documents are processed, their time to cash is being delayed. With eMDI and our mobile computers, we are enabling drivers to scan, index, and submit documents into a workflow as soon as possible after they receive them.

A new approach to capture

Intermec's approach to document scanning is fairly unique. Although its new mobile computers feature a 3.2 megapixel camera, document scanning is actually handled through the 1 megapixel imager that doubles as a bar code reader. "We can control the imager in ways we can't control the camera," explained Sibio. "Because of high turnover rates in some of our target markets, it's important that we make the application very easy to use. And, because in a transportation environment, it's hard to get someone to do a re-scan, you pretty much get one shot. So, the process has to be reliable."

Basically, eMDI works like this: The user lays the document to be scanned on a flat surface like a desk, pallet, or the seat of their cab. The user activates the imager and then, much like they were scanning a bar code, they point a light at the center of a document, starting at a fairly close distance. They move the device upwards until it beeps. They press the button again, and the image is captured. They can preview it on their screen.

"Behind the scenes, prior to the beep, the device is taking several sample images, and when it determines it has a good one, it will automatically apply techniques like flattening, dekeystoning, and brightness adjustments," said Sibio. "We tried our best to emulate the bar-code scanning process, because most of our customers, in fact, today mostly everybody, is familiar with how to capture a bar code."

I had never heard the term "dekeystoning." "When you lay a document on a flat surface to take a picture, unlike on a scanner, you don't have a perfect angle on the edges, so you end up with an image that might not be perfectly square or rectangular," Sibio said. "We have algorithms to correct that."

According to a video on eMDI (www.intermec.com/emdivideo), the technology can account for the camera being aimed up to 35 degrees off center or rotated up to 10 degrees. Images can be captured as either bi-tonal TIFF or grayscale JPEG files. "We don't offer any color capture in the initial version, partly because the images typically are going to be delivered to a back-office application over a wireless WAN," said Sibio. "This makes it difficult to work with larger file sizes,"

When capturing 8.5 x 11-inch documents, Intermec recommends users work with images with 10-point font or larger to ensure readability. "Of course, with a smaller piece of paper, like a lunch receipt, you can hold the camera closer, and the resolution will be several times greater, so you can read smaller font sizes," said Sibio.

Indexing through integration

eMDI does not feature any OCR. Rather, Intermec is counting on ERP and other types of clients running on its mobile computers to supply indexing data for images. "Integration with back-end systems is very important to us," said Sibio. "Our original vision was to create a solution that can capture and index images on the spot and communicate that information to back-office workflow and document management systems—bypassing all traditional scanning, imaging, and indexing steps.

"To enable this, we've set up eMDI to accept XML feeds from line-of-business systems. These feeds should include appropriate indexing information like truck number, order number, document type, date, etc. We worked very closely with a leading ERP vendor in the transportation industry to make sure we set up our integration the right way.

"eMDI can package this XML data in three different ways. The first is as part of the image file name in a pre-determined format. The second is as meta data. The third is as a text file with a common name to the corresponding image file. We've found this covers most document management applications. Assuming the user already has an integration between its ERP or line-of-business system and its document management system, the image and indexing information captured on the mobile device can be added to the flow of information between those two systems."

The CN50 and CN4 are scheduled to be released for general availability in the middle of July. eMDI is an optional feature that should list for below $200. "We view it as an alternative to mobile scanners and scanning services," said Sibio. "We are also starting to receive interest from some of our other target markets—such as field service."

For more information:
http://www.intermec.com/products/emdi/index.aspx

BancTec Introduces Real-Time Image Quality Monitor

Straight-through processing (STP) is a term that has been used in the transaction processing world for quite some time. Basically, it means that when a remittance or another type of transaction is captured, it can be posted without any human intervention. Recently, we've begun hearing STP used in the invoice capture market—related to posting information in ERP/financial/accounting systems.

Effectively achieving high STP rates is dependent on user confidence that data is being captured correctly, which reduces quality assurance (QA) requirements. A lot of ink has been spilled in *DIR* (or should I say bytes utilized) on how the integration of IDR (intelligent document recognition) with back-end ERP/financial/accounting systems reduces the QA requirements for invoice capture. But, what about the front end? What sort of QA is being done to ensure IDR applications are being fed quality images that they can read?

"Depending on service level agreements (SLAs),

we know of service bureaus that review every image they capture before releasing it [for data capture and/or archiving]," said Peter Caporal, director, portfolio management, for document imaging and transaction processing technology specialist **BancTec**. "We know of others that review almost nothing and wait for end users to provide feedback on which images are unusable."

Caporal said that while today's scanners do a pretty good job of capturing quality images, they don't address everything that can go wrong. "Every scanner vendor offers built-in functionality like despeckling, deskewing, and grayscale thresholding," he said. "And everybody says, 'we provide the best images.'

"However, there are still cases in which the user can't get all the information they need from an image. What if there is a folded corner covering an invoice date or number? What if there isn't much contrast between the text and background on a page, and the image comes out too light or too dark. Sure, most scanners offer some sort of preview feature where images go flying by on a screen, but can an operator really detect errors in that sort of environment?"

To address these issues, BancTec has introduced IQA (Image Quality Assurance), a set of technologies designed to alert scanner operators of errors during the scanning process—before images are committed to a capture workflow. Embedded in the operating controls of BancTec's IntelliScan high-speed scanners, IQA runs a series of tests in real time as documents are scanned. It provides immediate feedback if images fall outside a pre-established set of guidelines.

Red-flag tests

"Initially, we are offering handful of tests, each of which can be turned on or off," said Nancy Scanlan, portfolio manager for BancTec. "These include a corner test, a shape test, a size test, and a darkness test. The parameters can be adjusted by the user. For example, the corner test can be set up so that if a quarter of an inch is missing, the image will pass unflagged. But, if there's an inch missing, the user will be notified.

"The darkness test looks at pixel density. It detects the percentage of pixels that are black. If it's less than X or greater than Y, IQA flags the image. We have additional tests that will be added in the future. We started out by focusing on the ones we think will increase productivity the most."

What users choose to do with images flagged by IQA will vary. "In a lower-volume environment, they

may choose to stop the scanning process and immediately do a re-scan," said Caporal. "In a higher-speed operation, they will probably retrieve the documents and re-scan them later.

"Certain issues, such as images being too light or too dark, may be able to be fixed through image processing tools, without rescanning. For example, users could set up their scanner so they are capturing color images as back-ups that will be discarded unless an image is flagged and needs to be manually thresholded."

Along with the visual "flag" that appears on the IQA user interface, image quality information can be included in the data file captured with the image. "A back-end system or capture application could be set up to look for information in the data file that indicates an image has a suspicious characteristic and should be reviewed," said Caporal.

In distributed capture environments, IQA can be set up to run as part of *ImageSentry*, BancTec's standalone image processing application. "It wouldn't be run in real time with the scanning, but could still catch images before they are sent downstream," said Caporal.

A market differentiator

According to Caporal, BancTec views IQA as a product differentiator and will continue to build on it in the future. "IQA is the culmination of 20 years of work by BancTec in the document and check imaging industries," he said. "For our customers, it can help eliminate costs by reducing the number of unusable images passed to downstream workflows. It can also reduce their QA costs and increase the confidence that service bureau customers have in the product the service bureaus are delivering.

"We've already received favorable reactions from both our internal service bureaus, as well as some external customers."

For more information:
http://www.documentimagingreport.com/BancTec_IAQ.1725.0.html
http://www.banctec.com

NovoDynamics Upgrades Classification App

Pattern recognition specialist **NovoDynamics** has released a new version of its *Coronado* auto-classification technology. Ironically, the Ann Arbor, MI-based, which is probably best known for Arabic OCR technology [*see DIR 12/7/07*] differentiates itself by not using any OCR in *Coronado*. "We analyze patterns on a page," said NovoDynamics president

and CEO David Rock. "Not using OCR enables us to process a page in 10s of milliseconds."

In addition to being fast, *Coronado* is designed for easy installation. In a demo we saw, the auto-classification was set up using a sample set of documents, and image preview and confidence-level functionality. It was all done through a GUI with no programming.

Coronado was originally launched last year [*see DIR 9/19/08*], and NovoDynamics has made a couple significant improvements since. "One thing we've done is enable users to submit sample sets, so now *Coronado* knows what the right answers are when it is being trained," said Rock.

Previously, users would scan a set of documents and then *Coronado* would sort the images based on their patterns. Users could use a slider to select how granular they wanted a sort to be. Now, they can aid this process by submitting sample images of the groups they'd like documents sorted into. "Ideally, you'd like approximately 20-30 representations of each group, but the software will work with whatever you give it," said Rock.

Users can break out a certain percentage of their samples and use them for testing. In the demo, Rock used 70% of the sample documents as a data set and the other 30% as a test set. "If, for some reason, a testing document doesn't get classified into the right group or have an acceptable confidence level, the user has immediate feedback," said Rock. "They can probably correct the problem by adding to the sample set."

NovoDynamics has also added automatic orientation detection (AOD) to *Coronado*. "AOD is totally based on pixel analytics, there is no OCR used," said Rock. "Because of this, even if you increase the sample set by four times to account for all possible orientations, it doesn't slow down very much. Basically, as you add documents to your sample set and increase your number of examples, processing will take longer because there are more fingerprints to compare images to. But, it's by no means a linear relationship."

According to Rock, NovoDynamics largest *Coronado* customer is scanning 250,000 pages per month and separating them into about 120 groups. "We've been working with some BPO providers as well as high-speed scanner vendors," he said. "Some of the document types we've been working on include medical and insurance forms, invoices, and property and real estate documents."

Currently, *Coronado* does not offer any data

extraction, but NovoDynamics has plans to introduce it in the future. "The good news is that we have expertise in OCR," said Rock. "We are working on customizing our technology in that area to work in IDR applications."

Rock said it is hard to estimate how much time it will take a customer to set up *Coronado*. "So far, we've found that each customer has a unique situation," he said. "We work with them to understand their needs and come up with a pricing model that works for them. We typically charge based on an annual or monthly page volume."

Because of *Coronado's* ease of set-up, Rock sees it as competitive in the mid-market, as well as in higher-volume applications, where IDR has mainly thrived to date. "We will offer lower-end pricing for lower-end users," he said. "But, *Coronado* is also scalable enough to work with larger volumes. Our goal is to have a simple to use application with high accuracy rates, which works well even on documents where the text has been shifted and scaled. And, it needs to be fast."

NovoDynamics is currently focused on setting up OEM partnerships with ECM and capture vendors interested in reselling *Coronado*. It is also targeting BPOs and looking to expand its sales team.

For more information:
http://www.novodynamics.com/coronado.htm

HYLAND ACQUISITION, FROM PAGE 1

plan to leverage their integration points into Meditech software to integrate our *OnBase* software

more tightly."

Meditech offers its own imaging and document management software, so, according to Priemer, it does not formerly endorse Valco. "Valco did its integration with Meditech a long time ago," he said. "Meditech doesn't make those hooks so readily available now that it has its own offering.

"When selling to Meditech customers Valco used a similar strategy to ours when selling against the ECM offerings of healthcare application providers. If you buy document management from Meditech, for example, it might be a great add-on to your EMR system. But, we are offering a document management infrastructure that can be deployed across an entire organization. This includes integration with EMR, but it also includes integration with the accounting system, the lab system, x-ray and risk management systems, and so on."

Premier concluded by saying that the federal stimulus package adds a little more heat to an already hot market for Hyland. "The increased attention on a national electronic healthcare record system has a lot of people focused on EMR," he said. "No matter how many records you make electronic, however, there are still certain elements coming in on paper, whether it be referrals or results from a lab. That's where we come in. All this attention on EMR will illuminate a gap and help drive hospitals to round out their applications with content management. That's not to mention other areas in the hospital that can benefit from our technology."

For more information: http://www.valco-data.com/; http://www.onbase.com/English/IndustrySolutions/Healthcare/