

Document Imaging Report

Business Trends on Converting Paper Documents to Electronic Format

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May 3, 2002

THIS JUST IN!

FORMER TREEV LOOKING FOR A BUYER

CEYONIQ, Inc., the former TREEV, is up for sale. The company's German-based parent, CEYONIQ AG of Germany, filed for insolvency last month. According to David MacWhorter, president and CEO of CEYONIQ, Inc., CEYONIQ's U.S. operations are continuing unchanged.

"I would fully expect that the court-appointed receiver will search for a buyer for the U.S. operations," MacWhorter said in a press announcement. "Several parties have already expressed interest, and we'll work closely with the receiver on any alternatives brought forward.... We remain committed to the mutual interests of our customers, investors, partners, and employees." MacWhorter did not rule out the possibility of an employee buyout.

Originally announced as a merger, the deal between TREEV and what was then known as CE Computer Equipment of Germany was star-crossed from the start. The deal took more than a year to complete and ended up with CE acquiring TREEV. The new name CEYONIQ was announced at AIIM 2001.

At the time the deal closed CE had approximately \$11.8 million in cash and short-term investments and \$37 million in debt. TREEV brought an additional \$10 million in debt to the deal. By the end of September 2001, the combined company was more than \$68 million in debt with only \$2.1 million in cash on its balance sheet.

For 2001, CEYONIQ's revenue was \$91.5 million with an EBITDA \$5.7 million. In its final nine months operating as TREEV (Jan.-Sept. 2000), CEYONIQ, Inc. reported revenue of \$16.7 million with an EBITDA of -\$7.3 million. **DIR**

What's The Killer App For ECM?

Is enterprise content management (ECM) for real? I have had several interesting conversations on this subject recently with document imaging industry analyst Harvey Spencer. We've gone round and round. Harvey seems convinced that ECM is mainly hype. He has called it a technology looking for a solution and compared it to knowledge management—a greatly publicized theory that swept through our industry a few years ago. While proving an interesting discussion topic, I'm not sure how many document management systems have actually been sold as KM solutions.

Harvey, who has a more technical background than I do, insists that a technology must solve a tangible problem before it will be adopted. He is very applications focused and insists that instead of chasing after ECM, **AIIM**, our industry's foremost trade organization, should have tailored itself around the vertical applications where its document processing technologies have historically been successful. This success has come in markets like insurance, financial services, government, and healthcare—where document management can provide a hard ROI.

On several occasions, I admit, Harvey has had me convinced. But then I always seem to get sucked back in to believing in ECM. Call me a simple writer easily led astray by fancy marketing lingo. After all, that's all that ECM is, isn't it? (At least that's what my friends at f***edcompany.com would have me believe—check out last week's message board on **Interwoven**). Despite the esteemed naysayers, for some reason I can't give up on ECM.

I don't remember knowledge management ever having the backing that ECM does. Maybe my memory is short, but I don't remember **Oracle**, **IBM**, and **Microsoft** throwing as much weight behind KM as they have behind ECM. I mean, if these giants are going to go after the market, there's got to be something there, right? Maybe?

Well, I recently received an interesting report by **Frost & Sullivan** that seems to address Harvey's main concern about ECM—that it offers no tangible ROI. The report

came out of F&S's European office and seems designed to promote Swedish ECM vendor **Day Software**. Day promotion aside, analyst Andrew Ball makes some interesting points about the value of ECM, which he defines pretty much the same way *DIR* has in the past—as the convergence of traditional document management and web-content management (WCM) technologies.

It's Ball's contention that ECM's killer application is to provide an infrastructure to feed e-business applications:

"ECM will provide the data infrastructure on a business level that will ease the challenges and improve the efficiency of e-business – what the Internet was really designed for. This is because e-business interactions are dominated by the exchange of information. This information has to be captured, managed and distributed, but this needs to be done by business users, not IT folks. The demands this places on easy-to-use software in distributing and interacting with information will drive the emergence of the ECM market."

"ECM will provide the data infrastructure on a business level that will ease the challenges and improve the efficiency of e-business."

Andrew Ball, Frost & Sullivan

Pretty heady stuff. In an e-mail correspondence with *DIR*, Ball did admit that as e-commerce adoption has slowed down, so have the projections for ECM adoption. However, F&S is by no means counting e-commerce as dead (of course where would they be if they did?) and is still projecting 29% growth for the combined document management and WCM software market in Europe in 2002. This would mean that the market for ECM in Europe would grow from \$485 million in 2001 to \$625 million in 2002. And that's just software. For 2003, as the world economy, and presumably e-commerce spending, rebounds, F&S is predicting a jump of 54% in ECM sales in Europe to \$963 million. After that the firm is predicting growth to stabilize at around 20% annually with the European ECM market reaching \$2.6 billion by 2008.

Of course, all this growth is predicated on the fact that e-commerce spending will grow, which is another debate entirely. But, let's say you believe in e-commerce, then why should you believe in ECM? Well, for one, as we mentioned before, all the big database players do. Oracle, Microsoft, and IBM own the technology that manages the content for data-dependent applications like CRM and ERP. Now they want to own the market for repositories that feed the content-centric applications used e-commerce. So, they've all made ECM entreaties.

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3. Integrated Document Management
4. Content Management/XML
5. Document Output
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Charging in from another angle are vendors from the traditional document management and WCM spaces. As Harvey has pointed out, these vendors have historically made their mark with application-centric software. Now they see the opportunity to take their technology enterprise wide. They have visions of riding e-commerce to the same type of explosive revenue growth that database vendors enjoyed 10 to 15 years ago when data-centric applications took off.

And just as the initial field of many database vendors has now been narrowed down to three major players, the ECM market will likely go through a similar paring. And, just as Oracle rode the database market out of obscurity to take its place alongside technology giants IBM and Microsoft, the opportunity exists for a traditional document management or WCM vendor to ride the ECM wave to a similar status. That of course is where the attraction lies. ECM could make someone the next Oracle. Of course, those that fail to become Oracle, well if they're lucky, they'll get acquired.

For those of you that aren't so ambitious or audacious as to compete with the giants, my advice is not to ignore ECM but to study it closely. As ECM is adopted as part of the IT infrastructure, there will be increasing opportunities to leverage it in applications. Sure, an ECM infrastructure may make basic document management technology obsolete, but as Harvey stresses, successful document management vendors are application-centric anyway.

Just as **Documentum** leveraged Oracle's database functionality to build a \$100 million business in the mid-1990s around pharmaceutical compliance, today's document management vendors should be able to leverage Documentum's ECM functionality in other hot applications. **Siebel** and **SAP** are two even more successful examples of application vendors that leverage database functionality.

The bottom line is that while ECM is an emerging technology, applications still need to be built to leverage it. So, while as an infrastructure ECM bears watching, its emergence does not mean that document management vendors should abandon their application-centric focus. While applications will not make you the next Oracle, they could very well make you the next Documentum, Siebel, or SAP. And for software businesses, that's not bad company at all.

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Scan-Optics Represents Top Image's Latest U.S. Strategy

Israeli software developer **Top Image Systems** (TiS) is looking for a few good North American integrators and may have found its first one. Long-time scanner vendor **Scan-Optics**, which is attempting to make the transition from a manufacturing to a service-oriented model, recently announced a teaming agreement with TiS. Under the agreement, Scan-Optics will market TiS' high-end forms processing platform in the United States, while TiS will market Scan-Optics' high-end hardware internationally. (Not surprisingly, each company does 90% of its business in the geographical market where it will be focusing.)

"TiS is a product oriented company," explained Jim Mavel, chairman, CEO, and president of Scan-Optics. "We want to take advantage of some of their technology. Over the past couple years, we have reshaped ourselves into a services oriented company to complement our product line. We now have a lot of services capacity to utilize to integrate TiS' technology in the United States."



Jim Mavel,
chairman, CEO, and
president, Scan-
Optics.

In 2001, Scan-Optics generated 64% of its revenue from services. This represented a 12% increase over 2000. TiS, meanwhile, generated only 17% of its 2001 revenue from services, and 5% in 2000. According to Ido Schechter, CEO of TiS America, the teaming arrangement is hopefully the beginning a beautiful relationship. "Our goal is to be right in the middle of Scan-Optics' forms processing and recognition technology," he told *DIR*. "Right now, we are at the beginning of our marriage. As in every marriage you need to live together and teach each other. Our vision is that Scan-Optics has the capabilities to act as a long arm for us in the United States."

Scan-Optics already has its own forms processing technology, which it acquired when it bought Southern Computer Systems (SCS) for \$7 million in 1998 [see *DIR* 7/3/98]. "TiS' technology is complementary to the SCS software," Mavel told *DIR*. "TiS has some stuff on the table in areas like unstructured forms processing and forms for mobile computers that is pretty cutting edge and advanced. We are finding niches within our customer base where there is demand for that kind of technology.

"Plus, TiS has an R&D team [at its headquarters] in

Israel capable of doing more. For instance, there is a desire, if not a current need, by our customers for electronic transaction capabilities. We are counting on TiS to bring those type of capabilities to the table."

In 2001, TiS' R&D spending was 18% of its revenue, while Scan-Optics' was just 9%. According to Schechter, TiS has 30 people focused solely on R&D. "In the United States we want to focus on sales through the channel and Scan-Optics is a great partner for us," he said. "They are exactly in the niche market we are focused in. So, they understand our product line and can provide us with valuable input regarding future R&D. They also have at least 100 customers who have the potential to upgrade."

The Scan-Optics agreement represents at least the fourth strategy in a like number of years that TiS has employed to establish itself in the U.S. market. In 1998, it granted forms processing vendor **dakota imaging** exclusive rights to its U.S. business [see *DIR* 7/17/98]. The deal came apart within a year because of slow sales [see *DIR* 6/4/99]. TiS then hired former **Cardiff** executive Joe Busque to head its U.S. operations and presumably build a reseller program similar to the one Cardiff uses. However, after a disappointing year in 2000, Busque left the company. TiS has also considered acquiring a service bureau business in the United States, leveraging a large investment made in the company by **Charterhouse Group International** [see *DIR* 2/16/01]. However, that plan has yet to come to fruition.

Schechter was named CEO of TiS America last year after successfully growing the company's Latin American operations. Scan-Optics represents the first reseller signed under his plan to cover the United States with a handful of large, document imaging-focused integrators. TiS has already done U.S. installations with the help of integration giants like **PricewaterhouseCoopers** and **Lockheed Martin** and the **FedEx** integration team. "We are looking for integrators that do more deals specifically in our market," Schechter told *DIR*. "We promise not to compete with them, like some of our competitors do. Also, we do not want to have resellers competing with each other. We are offering exclusivity on a geographical or vertical basis."

Scan-Optics has established practices in the local and state government, healthcare claims, and education markets.

As far as reciprocating Scan-Optics' U.S. sales efforts with its own efforts worldwide, Schechter was

TALE OF THE TAPE

Scan-Optics

	2001	2000	1999
Total Revenue	\$30.7	\$38.5	\$52.0
Product	\$11.1	\$18.1	\$23.8
Services	\$19.6	\$19.9	\$27.6
R&D	\$2.9	\$3.7	\$5.7
R&D as % of Rev.	9.4%	9.6%	11.0%

Top Image Systems

	2001	2000	1999
Total Revenue	\$12.0	\$10.6	\$8.3
Product	\$9.9	\$10.1	\$8.0
Services	\$2.0	\$0.5	\$0.3
R&D	\$2.2	\$2.2	\$0.9
R&D as % of Rev.	18.3%	20.7%	10.8%

The recent teaming agreement between Scan-Optics and Top Image Systems is being promoted as a marriage of technology (Top Image) and services (Scan-Optics). Recent numbers appear to back that up. [All figures are represented U.S. millions.]

optimistic about the possibilities. "Scan-Optics' scanner is pretty unique," he told *DIR*. "We deal mainly with the high-end of the market and run into situations where it will be applicable. Also, once we integrate our software with that type of scanner, it will create some added value."

For more information: **Scan-Optics**, Manchester, CT, PH (860) 645-7878, FX (860) 645-7995; **TiS America**, Carlsbad, CA, PH (760) 918-1660, FX (760) 918-1661. *DIR*

Regulated Industries Must Regulate E-Mail Archives

According to Charlie Weeden, president of integration firm **17a-4**, regulated industries are currently being hit by "the perfect storm" in regards to e-mail management. "Dependency on e-mail and instant messaging (IM) for business communication is growing exponentially," he told *DIR*. "At the same time, however, there is a casualness to electronic correspondence. People treat it like they treat verbal communication and not written messages. They are not being trained properly on the problems that can arise from traceable, casual communication."

"When you add the fact that technology has been developed that enables you to search terabytes of e-mail and attachments in extraordinarily effective ways compared to the methods used to search a warehouse full of paper documents, you are dealing with a very hazardous situation."

Weeden's business is based on helping other

businesses defuse potential e-mail and IM disasters. His company's name refers to an SEC regulation passed in 1998 that tells SEC-regulated securities firms how they must archive their business related e-mails and instant messages. Some of the requirements include the use of WORM media, duplicate indices, and specific search criteria. Regulated correspondence includes information on trades, customer grievances, proposals, and performance reports.

According to Weeden, 17a-4 was passed after brokers began asking the SEC for interpretations on how the rules for managing paper correspondence applied to electronic communication. "The SEC not only gave them an interpretation, they implemented regulations that are enforceable with fines," he said.



Charlie Weeden,
president , 17a-4.

Weeden uses software from **OTG** to help securities firms comply with 17a-4. He resells OTG's *EMAILxtender*, *IMxtender*, and *EMAILxaminer* solutions. He said an average installation costs between \$50,000 and \$100,000 and covers approximately 1,000 brokers. "We have only a dozen or so customers right now," he said. "However, it was only at the end of last year that the SEC really increased the pressure on securities firms to get into full compliance."

According to Weeden, there are approximately 1,500 securities firms that are potential customers for 17a-4. However, he does not believe the need for regulated e-mail archiving is limited to the securities industry. Earlier this year, Weeden watched in disbelief as **Enron** executives testified before a Congressional Subcommittee.

"Everybody was up there playing the 'I didn't know' game," he said. "You mean to tell me that in an organization like Enron, where everybody e-mails stuff back and forth, that nobody searched the e-mail archive and came to the hearing with a definitive list of e-mail messages that could show beyond the shadow of a doubt what these people knew?"

After watching the hearings, Weeden said he wrote a spontaneous and "a bit presumptuous" letter to Harvey Pitt, the chairman of the SEC, suggesting that Pitt consider expanding some elements of rule 17a-4 to communications between auditing firms and the financial

officers at the companies they are auditing. "Shareholders and board members have a right to know what is being discussed," said Weeden. "If there is correspondence about tickets to a ball game, they have a right to know. If there is correspondence about future job opportunities, they have a right to know that too."

Weeden acknowledged that it was to Enron executives' benefit that an e-mail archive management system was not in place. "Nobody is going to install that type of thing voluntarily," he said. "The audit committee on the board doesn't want the responsibility. And the audit team and the financial auditors clearly don't want that kind of system. The SEC is going to have to mandate it."

According to Weeden, however, the best chance for the SEC to pass e-mail archiving regulations for auditors may have slipped by. "If early in the game somebody had said, 'Let's not talk about blue-ribbon committees and things we plan to do in the future. Let's put some real hard recommendations on the table as to what should happen, and let's get specific,' it would have made a statement and grabbed some support."

"My letter to Chairman Pitt was supposed to be one such very specific recommendation. I thought it would be an interesting thing for the subcommittee and for the SEC to consider. It's not the only thing I thought they should consider, and it may not even be a good thing, but it is specific."

WHOOOPS! COULD I TAKE THAT BACK?

Following is a list of five of the most unfortunate e-mail messages released to the public. Better e-mail management systems could probably have prevented these gaffes:

■ **Bill Gates:** "Do we have a clear plan on what we want Apple to do to undermine **Sun**?" (December, 1998)

■ **Monica Lewinsky:** "Nice that the Big Creep didn't even try to call me on V-Day." (February, 1997)

■ **Oliver North:** "You will recall that over the years Manuel Noriega and I have developed a fairly good relationship." (August, 1986)

■ **John Poindexter to Oliver North:** "I have nothing against him other than his illegal activities." (August, 1986)

■ **David Duncan's** (partner at **Arthur Andersen**) secretary: "Stop the shredding." (November 9, 2001)

This list was compiled by **Walek & Associates**, the public relations firm for **17a-4**. For more information: David Rosen, PH (212) 832-1811, e-mail: david@walek.com.

Weeden received a letter from Chairman Pitt's staff saying the SEC would consider his proposal. That was back in February. Since then, the House Financial Services Subcommittee has approved the Corporate and Auditing Accountability, Responsibility and Transparency Act—effectively known as the Enron Act. As of our press time, it was scheduled to go before the full House for a vote and a Senate version was also being drafted.

According to *Forbes'* columnist Ari Weinberg, the bill, "aspires to set up a regulatory organization for the accounting industry, limit consulting services by audit houses, and create more regulations on corporate disclosure and trading.... The proposed bill simply makes disclosure and best practice recommendations while passing the literal accountability down to the SEC and a to-be-created public regulatory agency comprised of accounting professionals and public members."

So, the ball for e-mail archiving regulations seems to still be in the SEC's court. Perhaps Weeden's letter will eventually have some sway. "It's going to be tough to get anything implemented unless somebody is lobbying for it and really pushing it," Weeden told *DIR*. "From what I've seen, it seems like Congress has come out with a very lukewarm proposal regarding any type of regulation."

But, don't sell Weeden's ideas short. Weinberg at least made one comment that would seem to directly support a solution such as managed e-mail archiving. "The goal of any accounting and trading reform should be to remove the incentive for illegal activity," he wrote. "In the long-term, that will be accomplished less by punishing those who get caught in the current system, but more by removing the loopholes in the system that allow such activity to take place."

Weinberg went on to say that the government should not be held totally responsible: "In fact, it's not a different bill the public needs. It needs action by companies, accountants, analysts and even the exchanges to police themselves before a real crisis of confidence chases the public itself out of the market."

Keep an eye on the regulatory e-mail archiving market. There just might be enough pressure coming from enough different sources to make it explode.

For more information: **17a-4**, New York City, PH (212) 949-1724, e-mail: cweeden@17a-4.com. **DIR**

HIPAA Driving DRM Installations

In addition to the scrutiny it is receiving in the financial world, the management of electronic communications is also being examined closely in another regulated market—healthcare. However, whereas guaranteeing access to old e-mails is one of the main concerns of financial traders, healthcare organizations are more concerned about limiting access to their e-mail. And the pending HIPAA (Heath Insurance Portability and Accountability Act) legislation is forcing them to take action.

"HIPAA has been a huge driver for our business, especially in the last three months of 2001 and early 2002," Jim Hickey, VP of marketing for DRM (digital rights management) vendor **Authentica**, told *DIR*. "Particularly, the insurers, or payers, feel a need to get ahead of the curve."

According to Hickey, Authentica signed up three HIPAA-related customers late last year and has already landed two this year. "We are seeing quite a few HIPAA-related RFPs being issued, and we are also receiving calls from insurance companies asking us for information," he said. "One insurance company invited us to meet with its chief privacy officer, chief security officer, and CIO. These types of audiences are very hard to muster on your own efforts, and here we are being asked to attend."

Authentica was founded in 1998 and develops software to securely control and distribute electronic documents. "The DRM market can be somewhat confusing," explained Hickey. "Most people think about DRM as pertaining to e-books and music. However, Authentica has always been about corporate information and personal privacy, and we are starting to see quite a bit of traction in those areas."

Authentica's software controls things like who can view a document, who can print it, and who it can be forwarded to. The software also can ensure that a document is not tampered with after it has been sent out; it can implement an expiration date on a document, and even recall an e-mail that has been issued in error. "We have solutions that address the three major ways companies communicate electronically," said Hickey. "These are e-mail, electronic documents, and Web content."

Hickey said that like many businesses in the document management market, Authentica is still waiting for the security-specific HIPAA regulations to be finalized so it knows exactly what it needs to do to make its customers HIPAA-compliant. "The

privacy regulations, which have been finalized, really don't say you have to do too much aside from appointing a chief privacy officer," he said. "They make a lot of suggestions, but the security standards, once they are finalized, will tell healthcare organizations what they have to do. There are preliminary security standards already published, and we are taking the stance that if you comply with those, you will also be in compliance with the privacy standards."

Organizations in the healthcare industry have been given until April 14 of next year to comply with the privacy standards, although that date may be pushed back as the final security standards continue to be delayed. A precedent has been set as the House of Representatives recently delayed the implementation of the transactional standards of HIPAA by one year [see *DIR* 12/21/01].

According to Hickey, HIPAA is not the only factor driving healthcare organizations to adopt DRM. "A couple of well-publicized cases over the past year and a half have shown that without better control over their electronic communications, many organizations are leaving themselves open for a black eye."

Hickey cited the case of a well-known drug manufacturer that accidentally sent out the e-mail addresses of everyone that had requested information on an anti-depressant through its Web site. He also cited an insurer that e-mailed more than 500 medical records to the wrong people. "Insurers especially want to be perceived as ahead of the game when it comes to HIPAA," he said. "The providers seem to be lagging behind a bit, so they are a secondary market for us right now. Providers seem to be taking more of a wait-and-see approach. Of course, information management is not their core business."

Hickey said that a solution to address all three aspects of electronic communication at an insurance company can cost a minimum of \$200,000. "This includes external and internal communications, as well as Web sites," he said. "And typically, all three get put on the table."

Hickey concluded by saying that although Authentica offers just one part of a HIPAA solution, it can be a very important part. "We have a solution specific to the privacy and security aspects of HIPAA. In terms of driving the cost of healthcare down, which is a part of the HIPAA initiative, it's probably a non-factor. But in terms of public exposure, it probably addresses the largest part."

"Because of this, hopefully HIPAA will act as a

launching pad for us into other markets. The publicity HIPAA generates may help people better understand the value of security technology."

For more information: **Authentica**, Waltham, MA, PH (781) 487-2600, FX (781) 290-0424. *DIR*

Revisiting XML Document Management

Remember **Interleaf**. Back in the day, right before the Web boom, the \$50 million vendor of electronic document management software, introduced its *BladeRunner* XML platform [see *DIR* 2/19/99]. Interleaf then watched its stock value soar from less than \$4 per share to close to \$100 per share almost a year later. At the height of its valuation, Interleaf was acquired by Web content management pioneer *BroadVision*.

Today, we are not sure what has become of *BladeRunner* (we hear it has been discontinued), but we stand by our original belief that its concept was good. Interleaf's core business was document management systems for manufacturers that had giant support manuals for each of their products. Its customers included **Boeing** and **McDonnell Douglas**. *BladeRunner* was designed to convert manuals into XML so they could be parsed and distributed more effectively. *BladeRunner* was the first true XML document management system we were introduced to.

Recently, we've had some discussions with **Interwoven** about its platform for XML document management, *TeamXML*, which was released last year [see *DIR* 10/5/01 and 3/1/02]. But, the product is in its early stages and when we talked with them, Interwoven didn't have any implementations it could discuss. That's why we were pleasantly surprised to come across another, much smaller vendor, **e-doc Architects**, that has approximately 10 XML document management customers—and employs a similar model to the one Interleaf was proposing way back when.

e-doc Architects actually began life as an offshoot of exercise equipment manufacturer **Life Fitness**. "At Life Fitness I was in charge of the technology used in the service division," explained Pete Leonard, VP of operations and founder of e-doc Architects. "To reduce the time it was taking dealers to access service information, it was part of my job to manage the creation of an extranet."

Once the extranet was created, Leonard said the Life Fitness dealers began asking that the company's

service manuals be posted on it. "While going through the process of determining what to put online, I found out that we had stuff stored in every format imaginable," said Leonard. "This included Quark Xpress, Word, PDF, and even paper. [I've since found this is typical of most manufacturers.] And the only format close to being suitable for the Web was PDF. Unfortunately PDF required that you download an entire document before you can go to a specific part of it. In the case of 400-page service manual, that doesn't make sense. I figured there had to be a better way."

According to Leonard, at the same time he was pouring through service manuals, the specification for XML 1.0 was ratified. "We looked at products like *BladeRunner* that were on the market at the time, but it was too expensive and didn't even deal with Quark Xpress," he told *DIR*. "Eventually, we figured out how to transform all of Life Fitness' content into XML. Then we had some software written to facilitate the process. We also wrote some style sheets and integrated it all into Life Fitness' extranet."

Leonard quickly realized that potentially any manufacturer could utilize the technology he had just developed, and e-doc Architects was born. "Extranet specialist **Click Commerce** actually built Life Fitness' extranet," said Leonard. "When we showed them what we did with XML, they said all of their customers could use our system. Their customers include blue chippers like **Motorola, Qualcomm, Kawasaki, Hyundai, and Mitsubishi**. That's when I got excited."

e-doc Architects actually began life as a service bureau. Charging per document, the company

converted its customers' documents to XML and also created the style sheets for Web posting. "We will always offer that service," said Leonard. "However, the key to our long-term survival is increasing our income through software sales. After document conversion, we figure the next step for our customers is managing their documents in an XML repository, so we partnered with XML database vendor **IXIASoft** to offer that. We've also formed partnerships, so we can offer XML-document creation software. For customers that aren't ready for that, we will resell our XML-conversion software or even software that can wrap any type of document in an XML header."

XML document management is still a long way from taking the world by storm. However, according to Leonard, customer knowledge of XML is much more advanced than it was a couple of years ago. "Initially we were educating a lot," he said. "People wanted to know what XML was, why they would want to use it, what it could do for them, and if they needed it. We don't have to answer those questions anymore. Companies are coming to us and saying, 'I hear a lot about XML, and we think we want to go in that direction with our content. Can you help us?'"

And why wouldn't they be saying this? XML offers a potentially standardized and Web friendly way to manage documents. This should facilitate document exchange among both multiple applications and multiple systems. Isn't this type of exchange the key to successful e-business?

For more information: **e-doc Architects**, Wheaton, IL, PH (877) 596-0419, e-mail: pleonard@e-docarchitects.com. **DIR**

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