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BY SEAN FITZSIMONS

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[FROM THE **INSIDE**]

It's The Economy, *Stupid!* ... Or Is It?

This issue's cover story explores the question, **"How has the recent economy affected the MultiValue market?"**

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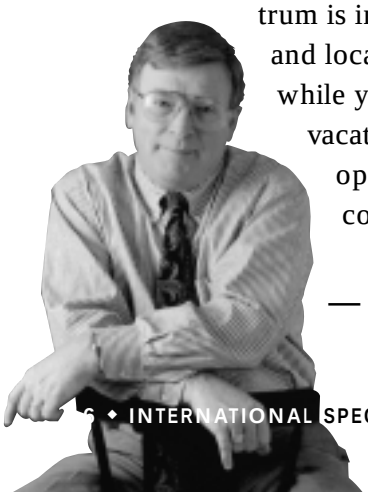
Check out this revealing article to compare your experience to others as *Spectrum* magazine asks a representative sample of MultiValue VARS, software houses and consultants to tell us how business is, and what they see happening in the future.

Meanwhile, outside the USA, Spectrum is getting prepared to revisit the MultiValue market in the United Kingdom and Australia this Fall for the first time in 15 years, and compare economic notes. Early indications are that it's going to be a terrific reunion. People on all three sides of this international relationship are anxious to resume the networking opportunities of the International Spectrum Shows in the past, which were interrupted in 1988 when the minicomputer giants began to crumble in the face of the PC revolution.

The London Spectrum is in September and the Sydney Spectrum is in October. Check our Web site for dates and locations (**www.intl-spectrum.com**), and, while you're at it, why not consider combining a vacation or holiday to coincide with these rare opportunities to meet your international counterparts?



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NEWS RELEASES/UNSOLICITED ARTICLES
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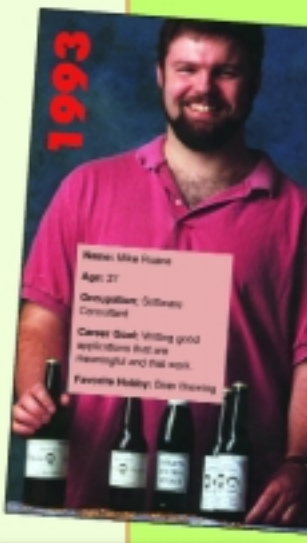

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BY GUS GIOBBI

The History of MultiValue

CHAPTER 12

PICK's Suitability to Business Applications

In the 1980's, the PICK Operating System was way ahead of the competition in the business sector. At the heart of PICK was a database management system that handled variable length records, variable length field within record, and variable length sub-fields (multi-values) within fields. Further, there was no requirement for records within a file to have the same number of sub-fields within fields.

In describing his database philosophy, Dick Pick would tell his students that he designed it to match the way data existed in the real world. In his favorite example, Pick would say, "Invoices in a real company don't have the same number of line items, so why should we design systems that require an invoice file to have a standard (maximum) number of line item fields?"

The second most important feature was PICK's virtual memory management system, which enabled the hard disk to be considered an extension to the computer's real memory. The combination of these two features allowed remarkable performance on many fronts in the 1980's. First, hard disks were very expensive and the transfer rates from disk to memory were relatively slow, so the conservation of data in the PICK model allowed an application to use much less disk space.This compaction of the number of characters being transferred from memory to disk and vice versa added significantly to the overall speed of the system. On top of that, the virtual memory scheme allowed many more simultaneous tasks to be performed by the computer system.

The cost advantage of PICK in the '80s was even more remarkable. It was not uncommon for PICK dealers to meet a customer's real-time multi-user needs with an $80,000 mini-computer system that would have cost a million dollars on a mainframe.This advantage propelled PICK to an early lead in some significant business vertical markets. is

The Top 15 PICK Business Vertical Market Software Applications in 1989

Accounting (Receivables, Payables, General Ledger, Payroll)	20.3%
Distribution (Accounting, Order Entry, Inventory Control)	11.1%
Manufacturing (Accounting, Distribution, MRP)	6.8%
Medical (Doctor's Practice and Medical related)	5.7%
Government (Particularly City and Local)	5.3%
Direct Marketing	3.0%
Sales & Marketing	3.0%
Legal	2.2%
Insurance (Claims Processing, Risk Management)	1.8%
Construction	1.7%
Education	1.7%
Publishing	1.6%
Property Management	1.3%
Automotive	1.3%
Transportation	1.1%

Source: IDBMA 1991 PICK Industry Impact Study

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It's The Economy, *Stupid*! ... Or Is It?

International Spectrum **magazine explores the question, "How has the recent economy affected the MultiValue market?"**

Based on the number of people singing the blues these days, it would be easy to jump to the conclusion that nearly all companies in our market are feeling the pain, but after going right to the source, that turns out not to be true. Even more interesting, many of the companies that have experienced a downturn, don't necessarily blame it on the economy. This month, *Spectrum* magazine asks a representative sample of MultiValue VARS, software houses and consultants to tell us how business is, and what they see happening in the future.

"Do You Need Any Programming Help?"

It's a question that Jim Felice of Chicago's J. Glaser & Company heard a couple of times a week for about a year. The MultiValue consulting community in the Chicago area is very tight-knit, so the calls stopped coming about six months ago when all of the out-of-work locals had cycled through all of the normal opportunities.

"Will there be a job board at the show?" Spectrum used to have a job board at its shows in the '90s that were filled with listings by companies who were looking to hire programmers, but never a board that listed people out of work. Now it's a regular question.

Welcome to today! Ask most people why they are experiencing a business slowdown, and they'll tell you that it's all post-9/11 uncertainty. They'll tell you that everybody's closed their wallets until the future becomes clearer. But is that all there is to it, or are there other factors involved? And is everybody feeling the pain, or are there some MultiValue companies thriving in spite of these uncertain times?

Independent Consultants Hardest Hit

In 1999, thanks to the Y2K crisis, they couldn't keep up with the demand. Now, many consultants can't find work. The independent consultants and consulting shops that have no product to sell other than consulting time are taking the hardest hit in the current economic downturn, and the immediate future doesn't look much better. Adding to their woes, much of the usual subcontracted work from MultiValue software houses and VARs has disappeared.

"We used to farm out conversions to independent consultants," said Monolith's Ray Methvin, "but when things tightened up, we decided we could do that business ourselves, and we found that we could do it better. So now, that's a new and important revenue center for the company."

Add this to the fact that many companies have indeed put the brakes on development projects and that independent consultants traditionally do not promote or advertise their services, and you have a situation where praying for the next upturn cycle is the best hope for a return to prosperity.

One exception that should be noted—some lucky MultiValue consultants have made a successful career of serving one or two "marquee" accounts over a long period of time—in some cases, they have even found continual work spanning multiple decades. In these cases, their clients are in a high-growth industry and they are willing to retain the consultant on an almost full-time basis to serve the company's unique needs.

The Y2K Hangover

Some think the current economic woes have little to do with the general economy, and a lot to do with what one *Wall Street Journal* article dubbed, "The Y2K Hangover". With the hindsight of a Monday morning quarterback, Judd Van Dervort Jr. of Pennsylvania's Keystone Information Systems explains. "In 1999, we were scrambling to keep up with the Y2K demand. Being in the school district and local government vertical markets, we were somewhat insulated from the general economy. Our clients spent what they needed to spend to make sure they were Y2K-compliant, and we didn't think about the fact that this was an abnormal spike in business. We ramped up on employees to handle the crunch, and when the Y2K crisis was over, we didn't adjust quickly enough to avoid some pain."

Frank Eperjesi of BAI agrees. "Our best year ever was 1999. Everybody who could buy protection from the Y2K bug was buying. We added staff to handle the increased level of business, and then had to adjust later when we realized that Y2K was an anomaly."

How's Everybody Else Doing?

"The MultiValue companies that are surviving in today's economy have one thing in common—product!" Monolith's Metvin said. "We deal mostly through VARs, so we feel everybody's pain. Our sales have been up during

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It's The Economy, Stupid! ... Or Is It?

Continued from page 11

the past two years, but there's no question that our VARs are working many-fold times harder to get in the door and get a sale. The VARs that are vertically driven are by and large doing okay, but all of them have experienced leaner times. The people without a vertical or horizontal package are in a heap of trouble."

AccuSoft's Pete Schellenbach agrees. "The individual sales volume of our resellers has decreased in the past two years, but our overall sales have remained steady through the addition of new resellers." AccuSoft produces many utility software packages for the MultiValue market.

Some MultiValue VARs have actually been experiencing exceptional sales during the downturn. AdvancedWare's Paul Batten reports record-breaking sales for the past two years. Batten attributes this to several factors. "We are a small company with a limited overhead. Our company operates totally within the MultiValue market, specializing in Web-based, hand-held products and services." Another key to AdvancedWare's success: "We don't believe in telling a customer that becoming Web-based is an all or nothing proposition. We'll Web-enable one portion of their operation at a time, like sales, so they can absorb the cost and training over a reasonable period of time."

Geographic Differences

As with most economies, there are marked differences and difficulties depending on what part of the country you're talking about. New England Computer Solution's Ron MacPherson observed that in his East Coast area, the past 12 months have been the worst. "People are holding off doing anything until the economy turns around," MacPherson said. "We are holding steady because we have adjusted our mix of business and reduced our overhead." Like Monolith, NECSI has taken some consulting work "in-house" that they used to farm out.

Geographic attitudes also come in to play in some areas. "I can't believe it, but in the Chicago area, most customers look at Web-enabling as something that's way down the road," said J. Glaser's Felice. "They are content to stay with their green screens, and I don't see that changing for some time." To bolster sales, Felice also changed the business mix some time ago to

increase the IT support side by selling more products and services such as servers, O/S upgrades and mail servers.

The Next Y2K?

Keystone's Van Dervort observes that "people will always spend money when they perceive the need to do it. During the Y2K scare, our clients felt they had to spend whatever it took to be sure their systems were secure."

But what will be the next Y2K equivalent? Many MultiValue VARs are betting it will be the competition spurred by the Personal Data Assistant (PDA) revolution. The PDA will allow companies to provide an unheard of level of instant customer service. The salesman in the field will be able to have access to order status, inventory availability, and place an order on the spot at the customer's office anywhere in the world. Every application will eventually be affected. Emergency Medical Technicians (EMTs) will be able to access medical records at the scene of the accident; building contractors will enter change orders at the site; you name it.

Things like Microsoft's Tablet-PC go way beyond those elementary advances and allow construction of single displays that are made up of bits of information from multiple Web sites. Methvin notes that many of Monolith's more savvy VARs are aware of these trends and are wisely using this down period to re-tool their offerings so they will be in position to roll when the turnaround comes.

BAI's Eperjesi added this advice. "When the economy turns around, as it always does, it will not be enough for your software offerings to have the best functionality; they'll also have to look the best to win the business." **is**

Opinions that Count:

MultiValue VARs and Software Developers Express their View

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newsmakers

Zumasys Partners with Citrix and Sierra Wireless to Provide Strategic Wireless Solution

Citrix Systems, Inc., Sierra Wireless, and Zumasys, Inc. announced that Momentum Group, a leading supplier of contract textiles, has equipped its North American sales force with a mobile solution using Citrix access infrastructure software and the Sierra Wireless AirCard. This new implementation gives Momentum's sales representatives wireless access to critical business applications, improving response time and overall customer satisfaction.

Based in Irvine, Calif., Momentum Group creates textiles including woven fabrics, vinyl, leather and cubicle cloth, and provides extensive custom services. The company's primary goal was to increase the effectiveness of its sales representatives during on-site customer visits by providing them with real-time wireless access to the company's intranet to obtain information about their fabrics and upholstery, such as inventory availability, styles and prices. Additionally, Momentum wanted its sales representatives to have wireless access to its SQL-based CRM (Customer Relationship Management) system, a UNIX order entry system, as well as corporate email.

Zumasys provided a complete mobile solution for Momentum Group that included a lightweight, two-pound Panasonic Toughbook, Citrix MetaFrame XP Presentation Server and the AirCard 550 and AirCard 555, wireless wide-area PC cards from Sierra Wireless, which operate over the enhanced Sprint Nationwide PCS Network and TELUS Mobility's next generation 1X wireless network. The solution also included application testing along with a variety of services that facilitated a smooth implementation.

"In an industry where having the right product at the right time is critical, we can now provide immediate responsiveness to our customers," says Roger Arciniega, vice president of sales for Momentum Group. "By equipping our sales force with the right tools, they now have real time access to our entire fabric line at anytime, from anywhere -- which dramatically increases our opportunity to make sales and gives us a unique competitive advantage."

About the Wireless Solution

Citrix MetaFrame XP Presentation Server, the foundation of the Citrix MetaFrame® Access Suite - a comprehensive access infrastructure for the on-demand enterprise - is the world's most widely deployed presentation server. It enhances the performance of custom or commercially packaged Windows® or Web applications that are accessed wirelessly by eliminating the traditional requirement of transferring entire applications over a network. Since application processing takes place on a central server, only keystrokes, mouse clicks and screen captures are securely transferred between the mobile device and server. Citrix access infrastructure software also addresses security concerns through robust authentication and encryption features and the fact that no data is required to be stored on the mobile device.

Wireless access from the Sierra Wireless AirCard 550 and AirCard 555 improves overall application performance through superior connection times to the enhanced Sprint Nationwide PCS Network and TELUS Mobility's national 1X network, respectively. The AirCard provides mobile professionals with instant access to business applications when using a high-speed

wireless network, which delivers average data speeds between 50 to 70 Kbps, with peak performance of up to 144 Kbps. As a result, Momentum's sales force can instantly access almost any size application on a laptop or other handheld device improving customer responsiveness and employee productivity while working away from the office.

"Over the last six to nine months we've seen numerous companies embrace the Sierra Wireless AirCard and the faster speeds of CDMA 1X and GSM/GPRS cellular data networks to provide basic Web browsing and email to their mobile users. Few, however, have deployed cross-platform, mission-critical business applications," says Paul Giobbi, president of Zumasys. "By introducing Citrix access infrastructure software into the equation we were able to leverage the technology to deploy both Windows and legacy applications — and the speed is fantastic."

For more information, visit www.zumasys.com, www.sierrawireless.com, or www.citrix.com.

ONwareTAnnounced for 64-bit Platforms

ONgroup **has announced that ONware is available and installed on 64-bit platforms including IBM AIX, HP-UX and SUN Solaris. And, with Microsoft's recent announcement of the 64-bit version of SQL Server with faster performance and ability to support more concurrent users, the Windows platform is not far behind.**

The features that distinguish 64-bit technology are significant: the large cache, extended precision and large dataset support. SUN Microsystems reports that the 64-bit platform, "can address 4 billion times the amount of data handled by 32-bit applications." As stated in the IDG News Service on April 25, 2002: "With the dramatic increase in memory space and the large dataset support, organizations benefit with increased performance for their data warehousing, data analysis and web servers."

"The 64-bit platform is a technological advance that our customers are quick to adapt," stated Charles Stauffer, ONgroup CEO. "Our clients have chosen ONware to bring their business systems into mainstream computing and gain the advantages therein," he said. ONware enables mainstream relational database management systems, such as Oracle, to run and maintain business systems originally developed for the common MultiValue DBMS such as UniVerse, UniData, D3 and Prime INFORMATION.

For more information, visit www.ongroup.com.

Larry Christensen Joins Management Information Tools

As the MITS OLAP/BI solution continues its strong growth within the MultiValue industry, MITI brings MultiValue veteran onboard to assist in the company's expanding market share.

Management Information Tools, Inc. (MITI), has announced the appointment of Larry Christensen to the newly created role of director of Sales. Based in the Los Angeles area, Christensen will assist in all areas of sales for the MITS suite of products and services. MITS, the acronym for Management Information Tool Software, is an OLAP/BI suite of products designed to gather, manage, distribute and analyze data for improved strategic and tactical decision-making.

"We are impressed with Larry's significant record of successful, strategic account sales and management experience in the MultiValue market," said Pat Gilbrough, MITI's president. "The addition of Larry to our team will provide a measure of talent, professionalism, expertise, and energy that will further ensure that MITI can meet the demand we are experiencing for our OLAP/BI MITS solution."

Christensen has over 20 years of experience and knowledge of distribution channels in the MultiValue industry. Most recently, he served as vice president of Worldwide Sales for General Automation. His first priorities at MITI will be to enhance the sales communication structure to help expedite and manage the growing demand for MITS products and services.

"In today's economy, organizations are looking to their software suppliers for tools to help generate more revenue, save on expenses and identify critical trends to bolster the business," Christensen said. "MITI has the strategic vision, leading technology, market validation, and resources necessary to help resellers and their customers achieve these goals. I'm eager to help MITI attain even greater success in its burgeoning role as a market leader, and to enhance this opportunity to bring MITS sales to the next level."

The company has been experiencing a strong, steady growth, which began while IBM's U2 group represented the product exclusively for two-and one-half years. And, since this marketing arrangement with IBM reverted to a non-exclusive as of December 31, 2002, MITI has continued this expansion with new reseller agreements, service contracts, and a growing staff to meet the needs of a growing customer base.

"Our goal is to build long-term, satisfying partnerships with our clients that evolve as technologies and new needs arise." Gilbrough said. "MITI has the most knowledgeable and experienced team of people to do this. With the addition of industry professionals like Larry Christensen, we're getting the right people into the right positions to ensure our customers receive superior technology and service." **is**

MultiValue API Available with Oracle9i AS

UniVerse, UniData, PICK and Prime INFORMATION applications run on Oracle9iAS

Oracle Corporation, in partnership with ONgroup, is providing a MultiValue feature set with Oracle9iAS that supports applications developed on the common MultiValue platforms.

When licensed through ONgroup or its distributors, the Oracle9i Application Server now includes a MultiValue API. Dozens of large organizations, including VARs, government agencies, universities, healthcare and financial institutions, and Fortune 100 companies are redeploying mission-critical, MultiValue applications on Oracle. Few if any changes to the MultiValue applications are required to make the transition from PICK or U2 to Oracle.

BASIC Programs, Dictionaries, Paragraphs, PROCS, Sentences, Commands such as COPY, LIST, GET.LIST, CREATE.FILE, DELETE, SELECT, SORT and other common MultiValue features are implemented and work the same as they do in your MultiValue environment. Oracle9iAS offers a UniObjects-compatible interface as well; so, graphical applications that use the UniObjects feature set of U2 will continue to work the same after the transition to oracle.

With Oracle9iAS, the firewall between the MultiValue environments and the relational world is gone. Now, existing MV applications can run on Oracle and use industry standard tools such as Crystal Reports and JAVA to create new applications and update the old.

For more information, visit www.ongroup.com.

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Raining Data™ Advances Pick Technology

Pick Data Provider for .NET allows for new application development with Microsoft Visual Studio .NET

Released only two months ago, the Pick Data Provider for .NET from Raining Data hit the ground running and has received high marks from its partners acting as early adopters. This new software tool allows IBM UniData, IBM UniVerse and Raining Data D3 database platform users to take advantage of the .NET Framework by utilizing Microsoft Visual Studio .NET.

According to Mario Barrenechea, SVP of Sales and Marketing for Raining Data, the demand for this product has been high since the product's announcement in February 2003. "We had more than 100 customers request to become early adopters for the Pick Data Provider," he said. This Early Adopters Program was a means for Raining Data to generate key user feedback and optimize the quality of the Pick Data Provider for .NET. "We interviewed a select few and chose a first group of progressive VARS based on decisive criteria, such as technical background, client/server experience, programming language knowledge, etc.," Barrenechea explained.

The Pick Data Provider component for Visual Studio .NET is tightly integrated with the .NET Framework. Both products are an enterprise class technology combination for building and deploying mission-critical applications for client/server, the Web, mobile devices and Web Services. The Pick Data Provider uses any of the programming languages supported in Microsoft Visual Studio .NET., including, but not limited to, ASP.NET, VB.NET, C#, C++.NET and J#. IBM UniData, IBM UniVerse and Raining Data's D3 database platform users are able to take advantage of the .NET Framework by utilizing Microsoft Visual Studio .NET.

> "It has been a while since a new product introduction has generated as much excitement early on as the Pick Data Provider for .NET has done."
>
> – Mario Barrenechea
> *Raining Data SVP of Sales and Marketing*

Barrenechea continued to say that Raining Data introduced this new product based on repetitive appeals from its channel partners. "Developers are always working hard to jump onto the GUI bandwagon, integrate their existing applications with Windows and embrace the latest Microsoft technology to overcome competitive pressures," he said. "The problem is that most of the available tools in the market that seek to accomplish this, never get it quite right and the level of effort is quite significant. Developers today are more sophisticated and no longer willing to invest in technologies that simply get them 'almost there.'"

Raining Data's new solution seems to be "exactly right" for those developers who are ready to deploy solutions within the latest Microsoft architecture, need to leverage their existing application code, and cannot afford to endure additional development time. "The combination of the Visual Studio .NET development environment with the Pick database technology creates the ability for our existing customers to protect their investment while at the same time leverage the latest Web application and XML Web Services deployment architecture," said Barrenechea.

Brooks Equipment Leads the Charge

Raining Data began with a core group of 10 developers upon the Pick Data Provider's release in May and quickly expanded to 20 developers within the first few weeks. Today, there are in excess of 75 developers using the new technology. One of the first early adopters was Brooks Equipment, the nation's largest business-to-business wholesale distributor of fire and safety products based in Charlotte, NC. It selected Raining Data's Pick Data Provider for .NET for the development of its internal applications.

"The Pick Data Provider for .NET product will allow us to quickly extend the existing functionality of our in-house UniData application to a more modern GUI client/server and web interface, utilizing Visual Studio .NET," said Richard Goff, Chief Information Officer at Brooks Equipment. "In addition to the highly functional visual components provided in the product, the Pick Data Provider offers an extensive class library that allows us to control the most critical aspects of transactional data, directly from Visual C#."

Brooks has already begun to re-write its existing in-house applications in C# using Microsoft's .NET development environment and utilizing the Pick Data Provider to provide access to the company's existing IBM UniData database.The Brooks applications support business-critical areas such as order fulfillment and back office processes, including accounts receivable, accounts payable and warehouse management.With 20 locations across the United States, Brooks' customers have access to an inventory of over 26,000 items, and that number is growing weekly.

"It has been a while since a new product introduction has generated as much excitement early on as the Pick Data Provider for .NET has done," continued Barrenechea. "For many years, database vendors have tried to add value to their offerings in order to keep up with advances in technology. Pick DP.NET bridges core functionality of Pick with .NET without compromising the simplicity of the Pick data model or the reliability of the transactional capabilities of the Pick database engine.

"By leveraging the Internet as the communication infrastructure, the development of distributed applications with multi-device support using a wide array of popular programming languages is now readily available to all Pick and non-Pick developers," Barrenechea explained. "For companies like Brooks, we've built a long-needed bridge and closed the complex gap on true Microsoft technology development."

The Pick Data Provider for .NET is only available for D3, UniVerse and UniData. "To provide others in this market access to this technology, we are allowing Northgate and jBASE users to upgrade their licenses to D3 for free, so they too will be able to take advantage of .NET development while continuing to utilize the Pick technology that we all believe in", concluded Barrenechea. **is**

Product Features

THIS PRODUCT IS AVAILABLE from Raining Data as development and deployment software licenses: the Pick Data Provider for the Visual Studio .NET Integrated Development Environment (IDE); and the Pick Database Server Access License Upgrades for .NET Deployment.

Key features of the Pick Data Provider for .NET include:

- **Application-to-application bridge between .NET and server-based business rules**
- **Smart binding and caching between visual objects and data fields and queries**
- **Optimistic and pessimistic locking handler**
- **Extensions to the event handler to allow pre and post processing of server data files**
- **Method extensions for file I/O and updates**
- **Multiple connections handling to different databases and systems**
- **Data management administration tool for accounts, tables, records and server-based code**

IMHO

BY STEVE VANARSDALE

Strategic Migration Maturity Model

HIGHLIGHTS FROM PART 2 IN THE MAY/JUNE ISSUE: **Lurking behind successful systems are some gruesome project catastrophes. The Standish Group survey at** http://www.scs.carleton.ca/~beau/PM/Standish-Report.html **estimates that an incredible** 72 percent **of all IT projects fail. The average cost overrun is 189 percent of the budget. But that's just the average. In my own experience the record-setters are often** migration projects, **and the price is paid in both dollars and human suffering.**

So we are looking at a less-than-fifty-fifty proposition. What we need is a way to improve the odds. It's been said that a good way is to make a model of a perfect approach, and then imitate it. So let's talk about a Strategic Migration Maturity Model, loosely based upon the Carnegie Mellon University's Software Engineering Institute (SEI) "Capability Maturity Model" or CMM, and Kent Crawford's definitive work on the "Project Management Maturity Model" (PMMM)[1]. Our SMMM **would be a measurement of the readiness of an organization for the wrenching task of re-engineering a system's environment. and perhaps one's self.**

Our SMMM is loosely structured along public-domain aspects of Crawford's Project Management Maturity Model (www.pmsolutions.com), but is focused on the particular requirements of successful migrations. And our SMMM is somewhat faster. While the PMMM has a three-to-five-year benefit to an organization, the SMMM is a reliable method for immediately lowering the risk, and reducing the cost, **of any strategic IT migration project.**

Level 1 - Initiation
Level 2 - Orderly process
Level 3 - Optimized criteria and standards
Level 4 - Managed process
Level 5 - Optimized process

(This is the third and last article in the series about the migration maturity model. Levels One and Two are mostly common sense: a proper start and an orderly path to follow. Most well-organized IT shops have an initiation procedure and, what they believe is an orderly process to do a project. So most shops are, or believe they are, at Level Two. However, despite how well organized an organization becomes, the organization will rarely reduce much cost, nor lower any risk, by remaining at migration maturity Level Two. The minimum level to do some good begins at migration maturity Level Three**. Here, the "good start" in Level One and the "tidy sequence of events" in Level Two are used to create *real* value.)**

If Level One is the achievement of a process of some kind, with management awareness of the start and end, and Level Two is a pre-defined orderly phased procedure, with estimates and schedules, then what is Level Three?

SMMM Level Three is the obvious maturation of Level Two: the migration process is standardized, and generalized, and then formalized, so as to be applicable to all future migrations. Moreover, there must be detailed estimates for each activity in the migration process, or at least for each meaningful group of activities (i.e., a "work package"). Finally, there is an assessment of the migration. So it follows that in SMMM Level Three, the detail project data such as actual time and real costs are tracked and recorded during the migration.

(Note: Always seems like a big troublesome burden, but is often brought about by necessity. It's an unfortunate fact that the achievement of Level Three usually occurs when an organization has gone through more than one migration and has had a bad experience. This is tragic, when one considers how much time and money may have been wasted, not to mention the cost in human collateral damage. As an example, the QVC Television Network, during its early phenomenal growth, performed a mainframe migration at least twice a year. Each migration project was more costly and more chaotic than before. Dollar cost overruns were difficult to track at that pace, but the cost to the staff became clear when one morning the QVC IT operations manager, a former Navy Seal, collapsed in the hallway from the stress.)

Avoiding death-march migration projects isn't simply important to fulfill an organization's strategic plans. It is equally essential for the organization's health and its people. The key to surviving migrations starts by achieving the first and second levels of maturity, which basically means actually planning the process. But the way to ensure the maximum benefit from the migration effort, is SMMM Level Three. Achieving this level involves analyzing the migration process to establish sound practice standards and criteria for completion of the migration tasks. It's how you know what to do, what not to do, and when you're done.

The good news is that achieving Level Three in our Strategic Migration Maturity Model does not require a test. Nor does it require an audit by an international certification agency, nor a painful inquisition by a panel of high priests with nasty tools. All that Level Three requires is doing the next project right, and that an organization "walks the talk" of Level Two.

Continues on page 22

IMHO

Continued from page 21

Here's how I do it:

Establishing a Repeatable Migration Process:

◆ Make a list of deliverables or desired results (the "work breakdown structure"). Use nouns; any item in this list that has a verb in it is usually wrong.

◆ Generalize the list. Reword or eliminate any deliverable or result that would not be found in most, if not all migrations. Examples: "Get Approval from Bob" should be reworded as "User Sign-Off." And maybe "XYZ-202 Nuclear Reactors" should be reworded as "Hardware."

◆ Insert your organizational requirements, such as the formal project approval processes, budgetary reviews, implementation kick-off, and the customary formal acceptance meeting (even if it's usually done over a pint at the local micro-brewery). "Got the verbs out? Congratulations! You've got a real Work Breakdown Structure.

◆ Now the fun begins. "Decompose" each deliverable or result into the specific things necessary to achieve it. This is the first place that you can use verbs. "Hardware" now becomes "Get the nuclear reactors," if that is an activity common to the general migrations that you're planning. (But I hope that I'm not working on them).

◆ Assemble the list into sets of activities, within phases. Don't be too concerned about strict sequencing beyond a general logical order. Many activities in a migration project are concurrent, while others are iterative, and the sequence is established later by the project schedule.

Formalizing the Migration Process:

◆ Obtain a consensus on the Activities list. A word of warning: this is never as easy as is seems.

◆ Time to get down to specifics for the project that you are planning. Add/adjust those activities that are unique to the specific migration being undertaken. Now you can change "Get nuclear reactors" to "Install XYZ-202 Meltdown Specials" (and again, I hope that I'm not there).

◆ Divide the activities into work packages, using subject matter experts, or your own experience. Here's a valuable tip: for absolute and certain failure, create work packages that exceed a month (or 100 person-hours) to accomplish.

On the other hand, if you interested in succeeding, create work packages so that:

A) one person and one person only can be responsible, and

B) the total effort required is less than one week (40 hours). Trust me on this.

◆ Make estimates on the technical and human resources that will be required for each work package. Next, distribute them to the individuals most likely to be responsible for them. Step back until the shrieking slows to whine. Then revise your estimates. Grudgingly.

Assessing the Process: (Here it's a good idea to first look at step "B" before "A")

B) Compare the estimates to the actual time that it took and the dollars it cost to do the work packages. Don't be too concerned about wide variations at the work package level; look instead at the roll-up totals at the deliverable or project phase level. This level of performance is usually the factor that will facilitate (or block) your next bonus.

A) Since it was your bonus at stake, don't you wish that you had set up a good time and cost tracking method before you started?

If so, do "A" before "B". And while doing "A" and listening to everyone complain, keep in mind how much trouble that you are saving them and yourself later.

There you have it. You're at Strategic Migration Maturity Model Level Three.

Let me give you one last word on ***real*** Level Three maturity. That word is Criteria. In my experience, most people settle for "ooptimized" criteria. No, that's not a misspelling. Imagine that you are completing a work package in a migration project. You think it's finished. Everyone else thinks it's finished. Your boss wonders why it took you so long to finish. This is normal. But as you prepare to turn the deliverable over, you're suddenly unsure. "What if it's not good enough? Was there more that I could do? What about the downstream activities that depend on this deliverable-will it be adequate for them? Could it have been better? Oh, crap, who cares? Here, take it, and let's get on with it."

Later you learn: it was O.K. You allow yourself a silent sigh of relief, and notch this memory into your personal body of knowledge, your "subject matter expertise." Next time you do this task (fat chance!) or somebody asks you about it (more likely), you're going to tell him or her how you did it, and that it worked out fine.

Congratulations again. You just created "ooptimized" criteria. That is, "Well, I'm done. Oops, it worked." This is a major career limiter. Nobody is fooled. More importantly, you've doomed that poor "somebody" to the same fate, over and over again.

The preferable method? You need to know what it takes to get the work package done right, before you start it. Look it up. Ask somebody. If you're desperate, ask the poor schmuck who will have to use the results of your work. Or, just figure it out for yourself. In any case, know the minimum and maximum criteria before you start. (I have a form for this if you like.) If you really want to shine, know the Six Sigma "delighter" as well. (Don't you just love that name? A "delighter" is the superior alternative to a "deliverable" that happens when the result that you deliver fits the specs so well and exceeds the expectation so much that everyone is delighted. including you. Like a good chip shot, the occasional delighter makes projects worth doing. and life worth living.) When you know the criteria before you start, you have a better than 50/50 chance of making it once in a while. ***=/srv***

ps: For those who are interested (or still awake), this will be the last article in this series. It has been reliably determined that more than 80% of organizations have yet to reach the third level of project management maturity. Since migration projects are considered one-off efforts, my own experience is that more than 90 percent of organizations are below the third level of our Strategic Migration Maturity Model. More often than not, they are in Level Zero, since most companies just pick a direction to migrate and sail until they run into something. So you'll probably have long-forgotten these pearls by the time your organization wants to know how to achieve the rare fourth level (making migration excellence a standard) or the rarer-still fifth level (creating new bodies of knowledge). Level Three produces most of the bang for the buck, lowering risk and reducing costs, and that's usually the limit of interest. If I'm wrong, and your organization is that rare case, call me and we'll talk. In any case, these articles take a lot of time, and there are other subjects of general interest to talk about. Be well. =/s

STEVE VANARSDALE (steve@vanarsdale.com) is a consultant and project manager in Chicago (which he calls "the heartland"), and now under contract as senior project management consultant for the renowned firm, PM Solutions, Inc. This company, he says, makes sense, and he is finally getting to put his "heartland" into the work.

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PDA

Choosing the Correct Input Control

User Interface Guidelines Part 1

I'VE DISCUSSED PDA PROGRAMMING design in the past, but have not really talked much about the UI (user interface) requirements and considerations for PDAs. There are really two parts to UI design: choosing the right input control and designing the screen to fit the user.

I've talked more in-depth about this topic in my Spectrum Conference presentations, but here I will try to consolidate them into one general guideline. This guideline will work well for Pocket PC, Palm, and most any other handheld device. Keep in mind, however, that each handheld device has a different general look and feel, so the screen design guidelines will be different.

BY NATHAN RECTOR

There are many different input controls to choose from and they all have a valid use, so choosing the correct one is very important.There is really no "ultimate" control that fits all uses. The best screen design uses different controls for different purposes:

The Check Box allows the user to select multiple "like" items, or allow the user to enter a "True/False"-style answer. When using a Check Box, make sure the Check Box is clearly labeled so the user cannot confuse it with other information on the screen.

Too often, due to limited screen space, many designers will group Check Boxes together when they are not related to each other. They also have no clear definition of what information on the screen works with what Check Box.

Generally, Check Boxes only work well when you have plenty of room on the screen to display the information necessary to differentiate between Check Boxes.

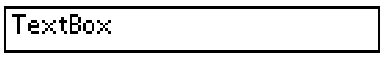
Radio Buttons are similar to Check Boxes except they only give the user the ability to select one value from the list instead of multiple values. Again, Radio Buttons only work when you have plenty of room on the screen to display all the values. If you have limited room, but want a similar function, look at the List Box or Drop Down List.

Buttons are used to do a specific command or action on the device. Buttons are not good data selection or input devices. Use buttons to process a specific action only, not as data collection.

When grouping multiple buttons together, be sure to leave plenty of room between them so they do not run together. Also, keep the buttons the same width, if possible. This makes them easier for the user to read and focus on. If buttons are different sizes, then it forces the user to read the screen to find what they are looking for.

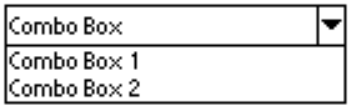
The Tabstrip is a variation of the Button. Tabstrips are best used when you need to show the user that there is more relevant information on other screens. It allows the user to switch between multiple screens quickly to gather all the information that they need to do their job.

Do not use a Tabstrip every time you have multiple screens, i.e., if you have a summary screen and the user must select an item from it to display detail information. But if you have multiple detail screens, then you should use the TabStrip to display all the available detail screens once the user selects the specific information he wants to see.

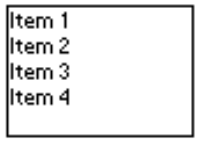


The Text Box is the only tool for free hand or alphanumeric data entry, but is a poor primary data entry tool for a PDA. Now, don't get me wrong, there are many places where you have to use it. And sometimes, it's the best tool for the job (when used in conjunction with another control like a Spinner Box or Drop Down List). Personally, I would try to find a different input control to use if I could.

The reason I say this is that the PDAs do not have keyboards, and entering data through graffiti can be quite slow at times. There are even some users that just can't seem to figure out how to make graffiti work, or are in an environment that makes using a stylist very hard (cold, rain, gloved hands, and so on).

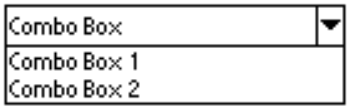


The Drop Down List allows the user to conserve screen space, but still give the user the ability to select from a list of predefined information. There is a shortcoming to the Drop Down List, however. If there are too many items in the list, it can be difficult to find the information to select. Keep the list realistic. If you have a large list of items to select from, try to come up with a different way for the user to select the information.

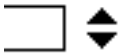


The List Box is similar in function to the Drop Down List, but it allows the user to see a group of items that can be selected without doing anything specific. There is a major difference between the Drop Down List and the List Box, though: The Drop Down List only allows the user to select one value from the list, while the List Box allows the user to select multiple items from the list. *Continues on page 26*

PDA *Continued from page 25*



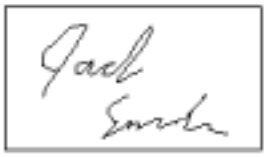
The Combo Box is more flexible than the Text Box in that it incorporates the best of both the Text Box and Drop Down List. It allows the user to enter free hand information as well as select from a predefined list of information in the Drop Down List. This allows the user to quickly enter information by selecting a "stock phrase," or to enter a specific value that may not be in the list.



The Spinner Box works best in conjunction with numbers and a Text Box. There are many times when incrementing a number by "one" is all a user needs to do when working with numbers. The Spinner Box allows the user to increase or decrease a value in a Text Box. When a user needs to change the value by more than one, they can edit the value manually in the Text Box.

The Barcode is generally overlooked as a data entry tool because most developers only think of using it as a database record selector. Anyone that has taken a close look at barcodes will know there are several different formats that can be used and read. There are even RFID (radio frequency) tags that can contain more information than a standard barcode.

By combining multiple barcode formats and the information in the barcode, a developer can simplify data entry. One way is to put multiple barcodes on a sheet of paper, which the user selects from to enter a single piece of information or multiple pieces of information with one scan.



The Signature Box allows the user to digitally collect customer signatures. This information can then be stored in the company database and

retrieved anytime the customer or someone like the accounting department needs to see it.

Even though the Signature Box was originally designed to capture signatures, it can be used for much more than that. The Signature Box is basically a freeform paint box that the user can use to draw freehand pictures. There is a drawback to this, though. Since this information is captured as a picture, the handwriting in the box is not converted to text or something computer-readable.

The advantage to the Signature Box is that the information captured in it is stored as coordinates, not as a picture. This means that it can be stored as text and take up less room in your database.

I have just scratched the surface of the available controls and combination of uses for these controls. The real trick is not in choosing which control to use, but how the controls are put together on the screen. Next month, I'll talk about how to do this. **is**

NATHAN RECTOR, a regular contributor to Spectrum, is owner of Natec Systems, a consulting firm that specializes in D3, AP and R83 environments and custom programming. He can be reached at nrector@natecsystems.com or www.natecsystems.com.

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A "One Man Band" IT Department Sounds Like a Symphony after Adding MITS to its Eclipse Distribution Management Solution

The Company

T. Christy Enterprises, Inc. is a leading provider of products to the waterworks, irrigation, plumbing, industrial, pool and electric, and fencing markets, selling exclusively to wholesale distributors that service these industries. Founded in 1976 by plastics industry pioneer Tom Christy, the company operates as independent sales representatives, manufacturers and master distributors of a variety of products and product lines. Its sales network includes 12 inside sales/customer service professionals and 15 outside representatives and distributors. T. Christy's sales professionals are supported by 65 employees in its distribution centers in Anaheim and Sacramento, Calif.

The company uses the Intuit Eclipse distribution package on an IBM UniVerse platform, allowing many of its customers, distributors and outside sales reps a direct link to their specific account information and T. Christy inventories. Because wholesale distributors are constantly searching for ways to empower their inside and outside sales staff to be more productive, generate more revenue, and save on expenses, T. Christy was a ready and willing candidate for the new IBM MITS Integration for Eclipse. MITS is a powerful OLAP/BI (Online Analytical Processing/Business Intelligence) solution developed by Management Information Tools, Inc. (MITI) and now offered by Eclipse to its distribution software customer base.

T. Christy's product scope includes all types of piping, valves, fittings, fixtures, marking products specialty chemicals, lighting and accessories. The company can be found at www.tchristy.com.

"MITS puts any segment of sales analysis information into our salesperson's hands quickly, and in a format that is easily understood by everyone."

— JON CHRISTY
President of T. Christy

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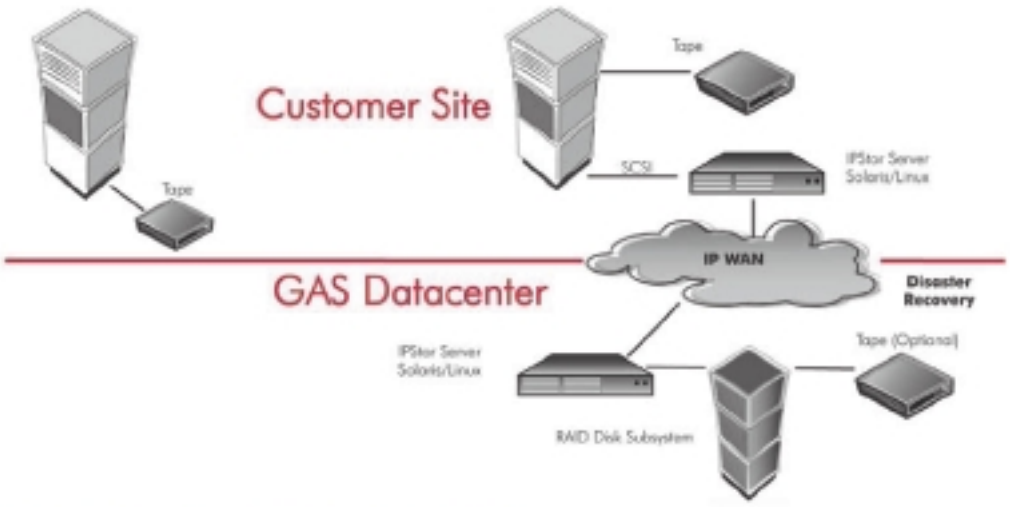

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Consumer Chronicles

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The Circumstances

Todd Noe, T. Christy's MIS coordinator, proudly refers to his IT department as a "one-man-band," a common designation in many companies running MultiValue applications, including UniVerse from IBM. His responsibilities include all systems administration, communications management and e-commerce functions. He also manages all internal computer and telephone systems for the company's two locations, and provides technical support for its internal and remote staff.

Noe managed T. Christy's migration to an IBM UniVerse platform in early 2002, and became an Eclipse customer a few months later when the company converted its sales data from Sage's MAS90 accounting package to the Eclipse distribution management solution.

> "MITS is probably the single-best addition we've made to our Eclipse system to date. Eclipse gives us unbelievable control of our inventory, and MITS allows us to view where our inventory is going in a matter of seconds."

After joining the company about three and one-half years ago, Noe said he realized early-on that some changes were required to ensure his IT department ran efficient and lean. "Our biggest problem was getting timely and accurate sales reports out to our sales force with enough detail to be helpful, but without the customization and paper usage that made it a burden for I.T.," Noe explained. "We would run reports once a month, and they would be mailed or picked up by the sales rep at the office, who would then leaf through 400-plus report pages. If a rep wanted numbers for a specific customer in more detail, an additional report would then need to be run, or even designed from scratch."

Noe said it was hard to view trends, and the reps dreaded having a 12-inch stack of paper to go through every month. The nationwide companies that represent and distribute T. Christy's products in the United States were getting the same reports, which had to be mailed as well.

The Search

Noe and the president of the company, Jon Christy, first heard about MITS at the Eclipse User's Conference in Denver in early 2003. MITS, the acronym for Management Information Tool Software, is an Online Analytical Processing and Business Intelligence (OLAP/BI) suite of products designed to gather, manage, distribute and analyze data for improved strategic and tactical decision-making. Intuit Eclipse began to integrate the MITS solution into its flagship distribution product in late 2002, and soon thereafter invited MITS to demonstrate the solution at its user conference.

"We walked by the booth, saw a demo of MITS, and were instantly hooked," Noe said. "We were immediately impressed by MITS' ease of use and depth in which a company could drill-down into its own data. It seemed unbelievable."

It didn't take long for T. Christy to analyze the product and make the final decision to implement MITS into the company. "We went live with MITS shortly after the Eclipse User's Conference because our president wanted to be the first Eclipse customer to have MITS," Noe said. "We didn't mind being the guinea pig for Eclipse because we saw how powerful this tool would be for our sales force, and wanted it live as soon as possible."

According to Noe, the MITS implementation went very smooth because of the synergy between MITI (Management Information Tools, Inc.) and Eclipse. "Eclipse was very supportive from the start, and the staff at MITI was awesome," Noe said. "Any issue that came up was handled very quickly, and the teamwork between MITS and Eclipse was evident."

"The Eclipse and MITI partnership is designed to support aggressive sales efforts and provide top-notch after-sales service and support," said Pat Gilbrough, president of Management Information Tools. "Eclipse has integrated MITS into its core distribution package, so Eclipse customers will find it a natural fit. Our staff of engineers and developers at MITI act as an extension to Eclipse's professional services, offering a high level of installation and on-going support for all of its new MITS customers."

Intuit acquired Eclipse in 2002 and renamed the company Intuit Eclipse. It is a leading provider of business management software solutions for wholesale distributors in a number of market segments, including plumbing-heating-cooling-piping, electrical, building materials, industrial, janitorial and floor coverings. The company's flagship product, the Eclipse Distribution Management System, enables wholesale distribu-

tors to increase productivity, revenue and profitability by managing critical business components, including order processing, inventory control, accounting, purchasing and customer service.

"The Eclipse software platform provides companies with the required technology to address today's most pressing distribution business requirements," said Michael Honig, director of Business Development, Intuit Eclipse. "MITS, therefore, is a natural fit as an enhancement to our system. It brings easy-to-use reporting capabilities and business intelligent functionality to our customers that rely heavily on inventory and sales analysis. And based on the overwhelmingly positive reaction MITS received at our recent user's conference, I'm optimistic that it's the right tool at the right time for our marketplace."

In addition to integrating the MITS product with its supply chain solution, Eclipse is also offering MITI's unmatched OLAP/BI technical expertise to its customer base. "For over a decade, we've been providing a wide-range of professional services to help our customers maximize the return on their software investment," Honig continued. "The alliances we forge help ensure that our customers are maximizing the latest technologies and best practice techniques. The MITI organization meets our high expectations. I've been quite impressed with the quality of customer support and training that the MITI staff has already provided to our first group of MITS installations."

As the first MITS implementation for Eclipse, T. Christy wasn't disappointed in the level of customer service received from both companies. The initial training on MITS was provided by MITI, and Noe said he discovered that the learning curve for MITS was short and that training new users was a breeze. "We went through the menus in about an hour, and logged each user in as themselves. As a preliminary exercise, they each chose an area that they felt was their strongest in sales, and I had them start drilling around. When they could see their own numbers, curiosity took over, and they took off."

The Solution

T. Christy is currently using two MITS data cubes: SALES and EXPENSES. Although Noe plans on building more cubes on his own in the future, these first data cubes were created jointly by MITI and Eclipse. "Our Accounting, Marketing, and Sales departments are all using MITS extensively," said Noe,

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"A Big Little Black Book"

BY MELVIN SORIANO

Introduction to LDAP

ISN'T IT GREAT THAT THERE'S so much info on the Internet? The big drawback is that there's just too much info on the Internet...

It's something many of us think of as a given. The Web and the Internet are loaded with information, but there's so much of it that it's impossible to quickly scan through it all. Indexes carry the biases of the Indexer. Google does a great job of searching through everything, but the site still merely compiles and indexes published material.

What happens, though, if you're searching for Joe Schmoe's email address; you're certain that he works in Pasadena at Silly Video. Perhaps you're looking for the phone number of quirky Uncle Jeb, who moved out west a few years ago and hasn't called since. I'm sorry to say that the search engines, including Google, can't help you.

To do that, you need an Internet concept of the phone book, but much bigger and more appropriate for the Net. It should be a publicly available database of people and their various organizations, locations, and general contact data that you could access using a browser. One would like to think that it's possible to do a Google-style search for resources such as people, hardware, and companies. The searching could be through different fields or attributes, in a publicly accessible manner, and flexible enough to be deployed by almost any application.

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Vitamin Shoppe Industries
"The choice was clear once we evaluated the options that were available in the marketplace. The fact that ViaODBC handles MultiValues properly and has the ability to display user friendly column names were both key in our evaluation."
Jeff Bender, COO Harris Computer Systems
"We immedately saw the benefit of easily moving data from our Unidata files into commonly used Windows applications. And, I have been particularly impressed with the improvements that Better Results has effected in the product since we became a customer."
Chris Schiffhauer, Dayton Metropolitan Housing Authority
Just thought I would let you know about a project I have been working on that has used the (ViaODBC) software. Payroll Budgeting info to an EXCEL spreadsheet. It works really great. By using the software, I have avoided writing a huge program to generate the data."
David Calvert, IT dir, Oklahoma City Housing Authority
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MULTIVALUE

Webonomics 101

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Hey. What about LDAP?

OK, so I've introduced yet another acronym for you. That's what Gus mandates me to do around here: come up with random letters and write a column about it.

And LDAP is next on the list.

LDAP means Lightweight Directory Access Protocol, and according to the governing bodies that be, is "designed to provide access to the X.500 Directory while not incurring the resource requirements of the Directory Access Protocol (DAP)". It's not a vendor-specific product. It's meant to be used by simple applications and Web servers. LDAP should streamline the very large and very cumbersome X.500 Directory concept. If you need even more details, check out www.ietf.org/rfc/rfc2251.txt.

And yes, that's still pretty vague.

Obviously, you can't define LDAP without talking about X.500 Directory-a standard protocol and type of directory service. This type of service is really nothing more than a publicly available database.

Aha! Databases. Now I have your attention.

Think of it as the yellow pages phone book. The database contains names, addresses and contact numbers of different companies, cross-indexed by industry type. The fields are all indexed, so that the database can be easily searched through a browser.

LDAP attempts to make it easy to allow quick, effective, efficient searches of one or several directory services. It's based on the Internet versus a proprietary network. With LDAP, you can update and query directory services over TCP/IP connections. On the meatier side, it also includes powerful features, including security, access control, and data replication.

Like MultiValue databases, directory services come in many flavors. The service could be small and local to a specific company (such as the business's internal phone book) or huge and international (such as a national yellow page phone book). The data can be quite detailed, as some could include names, various phone numbers and various email addresses. You could even reference various domain names and their corresponding IP addresses. Hey, it's a database.

Directory services exist in different shapes and sizes and can reside at multiple locations. You could have a single LAN-based database, or a huge network of databases at different physical locations on the global Internet, or even an extranet.

The key is that they are managed similarly: they are all databases of fielded information; they have browsing and search capabilities; and they facilitate cross-indexing.

Clearly, organizing information in a directory is an obsessive-compulsive's dream come true. But putting things in order isn't the same as being able to do something once it's organized. You need a way to get that data out. In the phone book, you do this by going through the index or table of contents. Online, however, you'll probably need something a tad fancier.

And thus we arrive at LDAP.

LDAP attempts to make it easy to allow quick, effective, efficient searches of one or several directory services. It's based on the Internet versus a propri-

etary network. With LDAP, you can update and query directory services over TCP/IP connections. On the meatier side, it also includes powerful features, including security, access control, and data replication.

LDAP is mostly designed out of DAP, the Directory Access Protocol. DAP was designed to use the X.500 standard to communicate between directory servers and clients. But hey, DAP lacks the "L", so it's not a light and easy technology to use. In fact, it's pretty hopeless with the Web. LDAP, however, is simple and fast, and a much better alternative that gives much of the same functionality. Especially important is that it does so without the huge performance hit, learning curves, and deployment problems of DAP.

LDAP was built for a network, so it is used on a client/server model. Here, you would have one or more LDAP servers that maintain the directory service. You would also have multiple clients that connect to the LDAP servers for performing queries. Nowadays, you will find LDAP clients written into many common address book applications. It's also in some of the most popular email packages, such as Eudora and Outlook.

Since LDAP directories are databases, they can store almost any data on top of more than just address book information. LDAP software is now starting to show up in programs unrelated to address books.

Imagine a system that has two LDAP servers. They can each handle different components of a global directory. A client can attach to one of the servers. If that client's query cannot be resolved at that server, the query is forwarded to the other server to see if it can answer the question.

This interaction between servers is pretty powerful. That's what makes LDAP so appropriate for the Web and its distributed architecture. One directory may be scattered across multiple servers in who-knows-where locations, yet appear as one large database. In many ways, the MultiValue world has solved this problem itself with some of its database offerings.

Maybe you already understand how the DNS (Domain Name System) works. It's fairly similar. LDAP and DNS are global directories and they're split across many servers. They both contain redundancy and replication features, which is one of their great strengths. Both also include forwarding ideas, so that information not on one server can check with other servers on the Internet.

In the next column, we'll peer further into this world and see how it all works together. Stay tuned! **is**

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IBM Management

Stands Up and Speaks Out on the U2 Product Family—Today and Tomorrow

Susie Siegesmund manages all components of IBM's U2 business worldwide with the exception of sales. She has dotted line management of the worldwide U2 sales teams, whom report into their geographic sales organization. Her overall focus is to grow the U2 business by delivering products, support and services that meet partners' and customers' needs. In this role, she spends a fair amount of time meeting and talking with customers to gauge how IBM is doing. She determines strategy and sets priorities for the U2 management team, working to align its goals with those of the IBM Software Group and the DB2 Information Management Division, of which the U2 family is a part.

"It's frustrating to say that the question of IBM's future commitment to the U2 products continues to be our biggest single issue."

SUSIE SIEGESMUND
Business Unit Executive for IBM U2Products

Spectrum magazine asked Siegesmund if we could throw some candid, hard-hitting questions her way. Her answer? "Absolutely!" The overall issues up for discussion: What are IBM's intentions with the U2 family and its resellers today, and in the future? Her response? "We're ready and eager to answer anything you ask. So let's get started!"

IS: Which of the U2 products has the most activity, in regards to new sales, new upgrades?

SS: While sales of both the UniData and UniVerse databases through our existing partners continue to be strong, we've had some major recent wins with UniVerse. Both Reynolds & Reynolds, (Australia and AMS), have announced that the new releases of their software will be delivered on UniVerse, which is a closer fit to their legacy database for ease of migration. As the move towards Web services grows, we've seen partners move directly from green-screen to the Web using RedBack.

> "With almost four million licensed end users worldwide, IBM is very interested both in maintaining the existing customer base and in growing this base."

IS: What do you consider to be the U2 flagship product, for example, the one you see as having the brightest future?

SS: IBM U2 will always have two flagship products-UniVerse and UniData. We have very successful partners running on each, with large installed bases of customers and continued strong sales. We looked at combining the databases when we merged Unidata and Vmark to become Ardent, and decided not to do it. Instead, we leverage our engineering by having the combined U2 engineering team design new features once, and then implement them in both databases.

IS: Can you give us a sneak preview into some of the exciting new technological advancements coming from IBM's U2 business unit?

SS: The SQL- and XML-based external database drivers that will be part of UniData 7.1 and UniVerse 11.1 are the most exciting, although the increased XML functionality is a close second. We are able to

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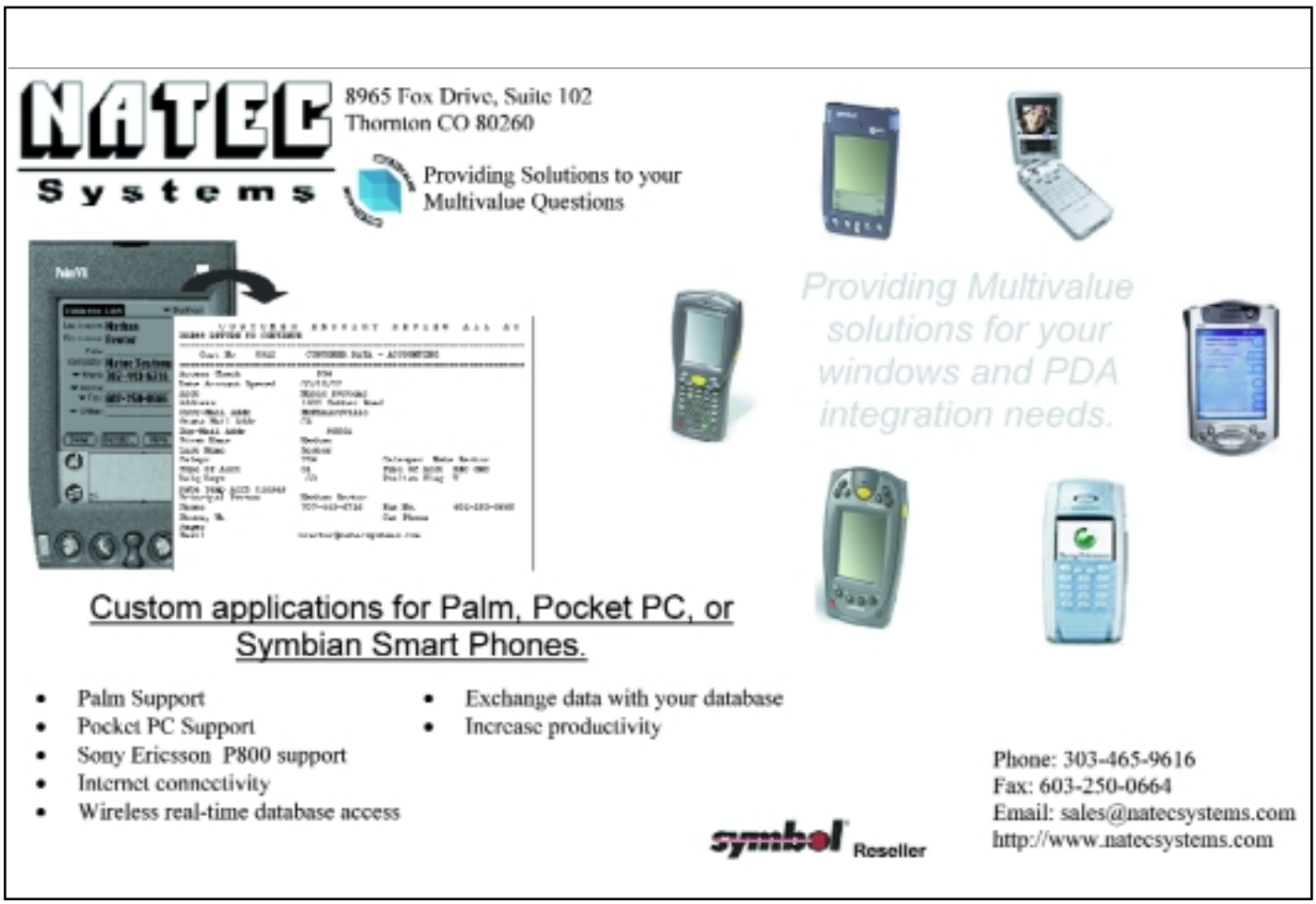

IBM U2 Family
2003 Product Update

IBM's U2 development staff has obviously been busy, with a lot to show for in recent months

UniData - IBM released UniData 6.0 in Q4 of 2002 and is in the final planning stage for UniData 7.1, with an expected release in 1H04. Major enhancements in UniData 6.0 included a JDBC driver, XML, SSL, integration with WebSphere MQ, and replication. IBM is just finalizing content for UniData 7.1, with a planned release date of first half of 2004.

UniVerse - UniVerse 10.1 is currently in beta, with new features that include enhanced XML capabilities with a DOM API, a Basic SOAP API, additional implementation of SSL, integration with WebSphere MQ, and multi-threaded sorting. IBM also completely re-engineered UniVerse ODBC and the new implementation is 40% faster than the old. The release date is September 30 of this year.

RedBack - The open development provided by object abstraction makes RedBack equally suited for use in IBM WebSphere and Microsoft .NET environments. Release v4.2, scheduled for the second half of 2003, continues to build on the performance enhancements and WebSphere interfaces introduced in v4.1. Changes to the U2 back-end state file structures will increase efficiency through a further reduction in disk I/O and will address state file data contention issues. IBM's new WebSphere Application Developer (WSAD) will integrate with RedBack by providing access to RBOs using plug-in technology.

System Builder - IBM released SB+ and SBClient 5.3 in Q1 of this year. Enhancements included improved user and developer interfaces, SAMBA support, faster Grid performance, and a Client session data-reporting tool. In order to be able to better leverage other IBM technology in future development of System Builder and RedBack, engineering for these products is being moved to Denver.

wIntegrate - Version 6.0 of this popular application modernization tool will be released in the second half of this year. Its major new features are a Java applet for Web deployment and support for simplified Chinese. Reynolds & Reynolds Australia has a pilot site deployed at a Ford dealership in China using UniVerse with a wIntegrate front-end in Mandarin.

MITS - IBM resells this product, and continues to believe it is the best BI/OLAP tool for use in the MV arena.

IBM *Continued from page 37*

benefit from the broader IBM DB2 Information Management development teams' efforts, incorporating their XML parser in our upcoming releases, and are always on the lookout for other new technology we can provide in our products.

IS: What are the current competitive issues facing the U2 business unit and the U2 distribution channel? How are you overcoming these issues?

SS: It's frustrating to say that the question of IBM's future commitment to the U2 products continues to be our biggest single issue. Even with the commitment demonstrated through product deliveries over the past two years and the white paper on IBM's future plans for the products that's available on the Web, people keep suggesting that IBM doesn't mean what it says. With almost four million licensed end users worldwide, IBM is very interested both in maintaining the existing customer base and in growing this base. See the white paper updates at http://www-3.ibm.com/software/data/informix/pubs/portfolio/.

IS: Have you had success in positioning U2 as another software product from IBM and not putting it into the niche of "MultiValue"?

SS: IBM recognizes the value of the U2 products and their rapid application development environment. Our strong partner channel delivers leading, industry-focused solutions. The major growth in the IT market

over the next three to four years will be in the Small to Medium Business (SMB) arena, companies with between 500 and 1000 employees. SMB companies will want to buy solutions to solve a business problem. IBM's U2 partners are uniquely positioned to benefit from this IT growth.

IS: Tell us about the state of affairs with your reseller channel. Is it growing? What are your recent VAR success stories?

SS: Our reseller channel continues to grow. As noted above, we've had some major partners move existing applications to our products. However, we've also signed some partners with new applications. The rapid application development that is possible with these products continues to make them attractive to developers requiring fast time-to-market.

As for recent success stories, UK partner Belmin won a major contract with the Office of Government Commerce for their procurement system running on Linux. TCO Ltd, another UK partner, has won at least two major contracts for their new application for the Social Services sector. R&R Australia won the Ford dealership contract for China. Intuit Eclipse and IBM announced a marketing and technology agreement whereby Intuit Eclipse will be optimized for IBM's WebSphere Application Server Express to help customers better manage critical business components, including order processing, inventory control, accounting, purchasing and customer service. This partnership highlights the additional technology and marketing opportunities available to IBM's U2 partners.

IS: What keeps your VARs loyal to IBM and/or the U2 family?

SS: IBM is the leading IT company in the world, and our partners know they can depend on IBM to continue to provide technology enhancements to the U2 products that will allow the partners to continue to develop and deliver industry-leading solutions.

IS: What do you think are the biggest obstacles for U2 VARs today? How are you helping them combat these sales barriers?

SS: The product longevity issue and general name recognition continue to be the major hurdles. Many partners are finding that the IBM name helps them tremendously, and we are working to make sure the products have all the technology that customers might demand. **is**

IBM White Paper

Addresses the Question of its Long-term Product Roadmap for UniVerse and UniData Solutions

Listed below are some brief highlights from IBM's White Paper entitled "IBM Informix Portfolio," updated in May, 2003. You can read the complete IBM White Paper regarding the future of Informix and U2 products at: www-3.ibm.com/software/data/informix/pubs/portfolio/.

> *The IBM Information Management division continues to enhance, support and sell IBM Informix and UniVerse/UniData (U2) products and services as part of its overall strategy to provide the world's leading software infrastructure for e-business on demand. In the past 18 months, customers and partners have demonstrated strong loyalty with continued investment in Informix and U2 technology.*

Long-term product roadmaps and attractive terms and conditions provided by IBM have helped to solidify this loyalty. Informix and U2 customers and partners have experienced our commitment to excellence in caring for our customers. The message that we wish to convey with this summary is that we plan to continue investing in quality and feature enhancements in the key Informix and U2 products for as long as customers require. In parallel, we are combining the unique Informix benefits with those of IBM DB2® information management software to produce a DB2 that provides even broader market leadership.

The unique characteristics of the IBM U2 extended relational database family do not lend themselves to native integration into DB2. To best leverage the combination of U2 and DB2, the U2 databases are evolving to support tightly bound XML- and SQL-based interfaces to enable U2 applications to access, store and retrieve data directly from DB2. ■

BY SEAN FITZSIMONS, REVELATION SOFTWARE

The Revelation Spin On The Web

WITH THE PERVASIVENESS OF THE WORLD WIDE WEB, the requirements for a development environment with more capabilities that enable migrating and deploying applications to the Internet have evolved. MultiValue is perfectly suited for transmission via the Web. MultiValue data is delimited data and the Web uses delimited data, be it tags in HTML or XML documents. Revelation Software, through its flagship product OpenInsight, provides the tools and services necessary to publish and transport data over the Internet.

Using OpenInsight, you can migrate existing and develop new applications that provide static and dynamic publishing of OpenInsight forms and data to the Web in HTML format. OpenInsight's HTML publisher can create rudimentary HTML pages from OpenInsight forms, which can then be enhanced using your favorite Web publishing software. More significantly, OpenInsight provides Web server extensions in the form of CGI (Common Gateway Interface) services, which let you request information from an executing OpenInsight application and deliver that information to a Web browser.

In previous articles we have discussed the general reasons why MultiValue databases in general, and OpenInsight in particular, are such good tools for driving Internet-based interfaces. This article explains what the specific OpenInsight tools and processes are and introduces the technologies involved in bringing your data and applications to the Internet.

"With the trend towards providing business-to-business applications via the Internet, and implementing business-to-business interfaces via delimited data, you will need tools that participate in communication between services. OpenInsight is well suited as the middleware solution for the communication layer."

The HTML Publisher

OpenInsight's HTML publisher allows the developer to create HTML pages based on existing OpenInsight forms. It will create an HTML table based on the x,y coordinates of the controls within the form. The publisher is limited in that each control, which begins at a separate x coordinate or separate y coordinate, is created as new <TD> or <TR> tags within the HTML table. This translates to the developer the need to ensure that the existing OpenInsight form's controls are lined up in the manner that they will appear in HTML.

The HTML publisher is a crude tool from a graphics/publisher perspective, however, it will translate an OpenInsight form into an HTML form with tags containing the same name as the OpenInsight form's controls. The resulting HTML may then be massaged using your favorite HMTL editor. The publisher is intended as a "quick and dirty" tool to create Web pages. One can always choose not to use the HTML publisher and create HTML pages in any of the commercially available Web tools.

The HTML pages that are created in OpenInsight are stored in a repository, which are easily accessible via programming, and OpenInsight can then be used as a library of HTML pages.

OECGI (OpenEngine Common Gateway Interface)

OECGI is Revelation Software's CGI (Common Gateway Interface) engine that allows browser-based interaction with Revelation's Linear Hash data by way of OpenInsight.

For those familiar with OpenInsight's previous CGI program, OICGI, the OpenEngine CGI interface connects directly to an OpenEngine without using the OpenInsight presentation server. OICGI required that the desktop application be running on the Web server, along with an Internet gateway window which handled communication between the Web server and the OpenInsight program. With OECGI, those requirements are no longer necessary and the engine runs in process with OECGI.exe. This means that the Web server only creates one external process, and that the process does not interact with the desktop. OECGI significantly reduces the overhead and security footprint of an OpenInsight Web application while providing increased response time. OECGI uses a System Registry Entry to configure access to the OpenEngine.

The OECGI configuration options provide an advantage in that they allow for different connection configurations based on client needs. OECGI can be configured for persistent or non-persistent processing: The OECGI may be configured so that each Web request gets a unique copy of the engine (non-persistent); the OECGI may start an engine and then leave it running for the next request (persistent); OECGI can connect to an existing instance of OpenInsight using a named engine (persistent); or the OECGI can work in a pure TCP/IP environment (non-persistent).

Alternative to CGI

OpenInsight has a layered architecture whose goal is to let any delimiter-friendly client request data and services. Switching between a CGI approach and an ASP/COM approach is fairly simple and has no impact on the OpenInsight stored procedures or

Continues on page 42

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REVELATION

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functions servicing the Web requests. The OpenInsight engine does not discriminate between Web and traditional Windows clients, so you can service traditional and Web-based business needs from the same code base.

With the trend towards providing business-to-business applications via the Internet, and implementing business-to-business interfaces via delimited data, you will need tools that participate in communication between services. OpenInsight is well suited as the middleware solution for the communication layer. One is able to have OpenInsight push and/or pull Web transactions through an OLE control or COM object.

The INET Functions

Included with OpenInsight is a set of functions that can be executed via the OECGI. Each of these functions were written using Basic+, Revelation's own version of Basic. Included below are the names and a brief description of each of the canned INET functions:

INET_ABORTED(void)

Called when an INET procedure has crashed and the Internet Gateway recovers.

INET_FINALIZE(request)

Finalization response to an HTTP request. This procedure is executed after the execution of each HTTP request and is the last possible chance to intercept the returned information.

INET_FORMLOAD(request)

Retrieves an HTML form from the repository and fills it in with default form values.

INET_FORMREAD(request)

Reads a row from native OpenInsight table(s) and merges the retrieved data with an HTML form.

INET_FORMWRITE(request)

Retrieves data from an HTTP request and writes a row to native OpenInsight table(s).

INET_MSG(Request, MsgRec, MsgId, argv)

Converts an OpenInsight Presentation Server message to HTML format.

INET_QUERYPARAM(Request, ItemName, DefaultValue, NewValue)

Allows you to get or set a specified item in an HTTP request.

INET_REPOS(request)

Retrieves an HTML document from the repository.

INET_RLIST(request,RlistScript)

An Internet procedure that produces an existing OpenInsight RList report in HTML format.

INET_SECURITY(request)

The function that is called by the HTTP request dispatcher before it calls any Internet procedure specified in the HTTP request.

INET_TRACE(request)

An Internet procedure that reflects the incoming request back to the client (used for remote debugging).

With the exception of INET_ABORTED, each INET function takes the HTTP request as its first or only parameter. There are other parameters that need to be passed depending on the function used. Each function will return an HTML page.

There are times, especially when dealing with business rules, when it is necessary to create your own INET functions using Basic+. INET functions are fairly easy to create and have only three requirements:

1. The procedure must start with the prefix INET_.

2. The procedure must accept at least one parameter, named Request.

3. The procedure is a function, and must return an HTML document.

Creating your own INET function is a perfect way to create dynamic Web pages. Your function would consist of the creation of HTML.

The Report Builder

OpenInsight has a number of reporting tools of which one, Report Builder, creates columnar reports. The Report Builder is actually a wrapper for the ever-powerful RList function, Revelation's Linear Hash data selection function. Reports created using Report Builder may be accessed via the Web using the INET_RLIST function, so the same report may be accessed via the Web or through the desktop application, without having to edit the report.

The XML Tools

OpenInsight is an XML-enabled database. XML can be stored in its native format and searches can be per-

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☐ Under $500,000 ☐ $500,000 - $1 million
☐ Over $1 million - $5 million ☐ Over $5 million - $10 million
☐ Over $10 million - $25 million ☐ Over $25 million - $100 million
☐ Over $100 million - $500 million ☐ Over $500 million

IS 7/03

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formed using the data that is imported. We can also convert XML to OpenInsight Linear Hash data fields, as well as publish existing Linear Hash data tables as XML.

Within OpenInsight, there is an XML workspace. The workspace is used to create, import from, or export to XML files. It contains two main tools, the XML Publisher and the XML Importer. It also contains three support tools: the XML Explorer, the XPath window, and XML Configuration tool. In addition to the user interface components, there are two OpenInsight stored procedures, which can be used to import and export XML.

The XML Importer is a front-end to the XML_IMPORTER subroutine. It is used to create templates that are used to import XML data into OpenInsight files. When an XML import template is created, it can either be run, saved to file, or both.

The XML Publisher is a front-end screen to the INET_OI_XML subroutine. It is used to create templates that are used to export data from OpenInsight files to XML files. When an XML Publisher template is created, it can either be run, saved to file, or both.

The XML Explorer window is used to view the hierarchical XML structure of an XML file from within an OI screen.

The XPath window allows users to enter XPath statements and view the results. XPath statements are usually passed into an application via Web requests. This window is provided to let users and developers experiment with and evaluate XPath commands.

The XML Configuration screen is used to enter and/or modify configuration settings for OpenInsight's XML functionality. It contains the datatype mapping that is used by OpenInsight when creating Dictionary items for new files.

The XML Functions

XML_IMPORTER(parent, XML_File, Batch_Flag, Schema_Name, key_tag, target_tags, Dict_Mappings, OI_Data_File, Create_Flag, Template_Name, Storage_Opts)

This function imports XML files into Revelation Linear Hash Tables.

INET_OI_XML(Request, Cmd, Dosfile, Select_Statement, Template_name)

This Internet function will export OpenInsight Linear Hash data as XML.

Examples

For examples and code snippets, visit the following link: http://216.220.99.182/intl-spectrum_article/

Cost/Licensing

The cost and licensing of using OpenInsight's Web capabilities is dependent on your OECGI configuration. Non-persistent configurations utilize existing OpenInsight user counts and therefore require no additional cost or licensing charges as long as there are enough users available on the OpenInsight system. For example, if your OpenInsight system allows for 250-user access, then those 250 users can be drawn from both the desktop environment and the Web environment. A persistent configuration requires that an OpenInsight Web Deployment Pack be purchased. This will provide unlimited OECGI access to OpenInsight.

Conclusion

Because we are delimiter-based, the switch from Web publishing to business-to-business transactions will be a minor change. For many other applications, this involves building the application all over again. Freed from worrying about the presentation format, an OpenInsight developer can focus on the business problem. OpenInsight allows the business problem to shape the solution, rather than forcing the solution into implementation-specific constraints.

The money to be made on the Web is converging on delimiter-encoded business-to-business transactions; exactly the solution that Revelation and other MultiValue tools have been providing for a long time. With this article we hope to provide a greater understanding of OpenInsight's capabilities, and to bring you , the developer, to where the money is by giving access to some Web-based examples. **is**

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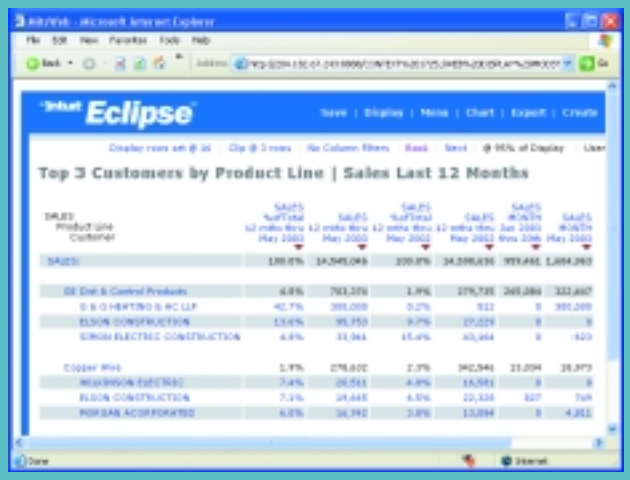
"as well as many of our executives, including the president, vice president of sales, national sales manager and operations manager."

Noe said that the accessibility feature of MITS has been the key to its success within T. Christy. "Our national sales manager travels quite a bit, so needs access to MITS anywhere, anytime. He can literally sit in the parking lot before a meeting with a distributor and download a spreadsheet in just two minutes before he walks in the door. He goes in prepared, with data in his hand to back up his statements."

T. Christy has also given its representatives and distributors across the company access to their data via MITS, so they can log in and check their sales data whenever they feel inclined to do so. "In our industry, it's rare to find a sales rep who is comfortable with a computer," Noe said. "So, finding a reporting package like MITS that they could learn to use and be comfortable with in just a few minutes is amazing!



Intuit Eclipse and MITI created a SALES and EXPENSE data cube for T. Christy

"We now have sales reps that build their own reports in a matter of minutes," he continued. "Sales information is shared more readily, while critical issues are found in a matter of minutes instead of days, weeks, or even months."

MITS is the only OLAP solution with true drill-down capabilities that is native to the MultiValue environment. It leverages the superior flexibility of the extended relational model, delivering analytical processing within the same database used by a company's business applications.

MITS performs native extraction using the data dictionary processing features of UniVerse and other MultiValue implementations, requires no ODBC, and may be hosted on the same computer as the source data. Setting up access to the MITS OLAP data is as simple as any other connection to the MultiValue system.

The Results

Working from a "one-man-band" point of view, Noe is thrilled to report how much time MITS has saved him in his own job. "After installing MITS, I gained at least eight hours per month in time that I used to spend creating and running reports," he said. Moreover, Noe estimates that each of T. Christy's 12 inside sales reps have also saved approximately three to four hours per month in time they used to spend reviewing reports. "That's approximately 48 hours of more time collectively that the sales force can now spend on other activities, including selling," Noe exclaimed.

Because T. Christy is an inventory- and sales-driven company, Noe believes that "MITS is probably the single–best addition we've made to our Eclipse system to date. Eclipse gives us unbelievable control of our inventory, and MITS allows us to view where our inventory is going in a matter of seconds."

Noe also said MITS tops his list technically—from a software development point of view. "It is by far the most impressive product I've seen: you can access MITS from anywhere with a Web connection; it's easy for non-technical users to create their own reports; and it's extremely flexible in its ability to export into different formats, such as an Excel workbook or a text file."

In conclusion, Noe said he firmly believes that "MITS is a must-have addition to any Eclipse install, period.

"MITS is simply the best in-depth sales reporting tool available. I don't think there's a faster or easier way to get an accurate picture of what is happening in sales without MITS. Combining a tool like MITS with Eclipse and putting it into the hands of our sales force gives them better insight into product sales, territory performance, and a customer's purchasing patterns in a few clicks of a mouse." **is**

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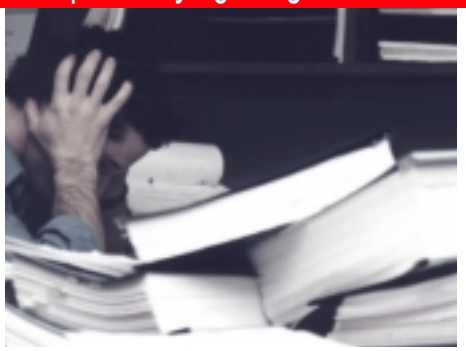

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