

INSIDE! WHY A SOFTWARE MIGRATION CAN FAIL ... AND HOW TO STOP IT!

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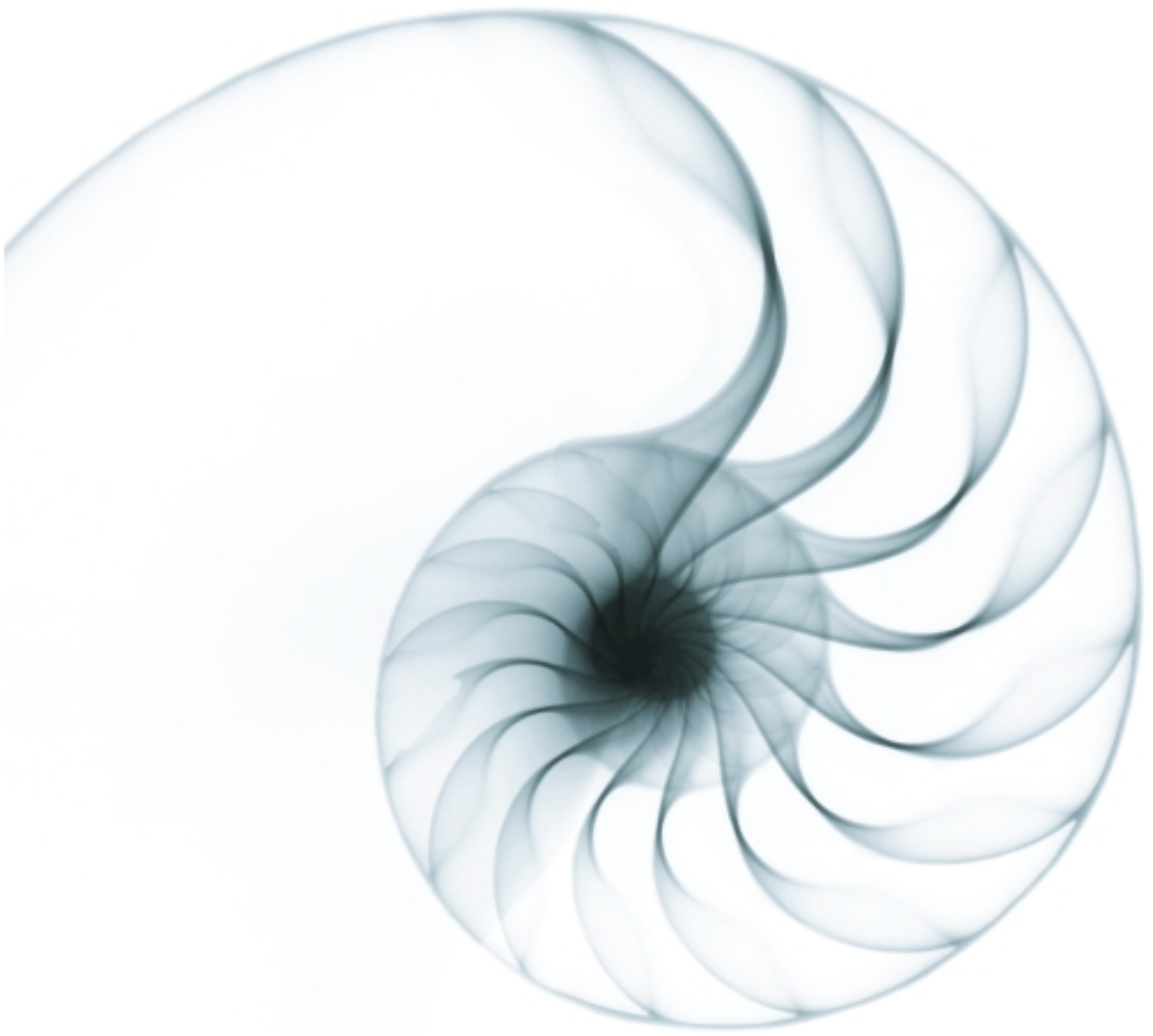
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22 TECHNICAL UPDATE: JBASE INTERNATIONAL ENABLES DATA AT REST ENCRYPTION WITH DREM As demand for data security continues to rise, organizations are starting to require that critical data be encrypted inside corporate databases. jBASE has a new solution with the introduction of the Data at Rest Encryption Module (DREM), which requires no application code changes.

38 HISTORY OF MULTIVALUE: SPECTRUM'S 25TH ANNIVERSARY — THE HALL OF FAME Growing from a user group meeting to a worldwide enterprise with trade shows and conferences in the U.S., London, and Australia, International Spectrum is an event that has covered a lot of ground over the last 25 years. Spectrum looks back at the exhibitors and show events that contributed to the making of the MultiValue industry.

12 TECHNICAL UPDATES FROM MULTIVALUE DBMS PROVIDERS Partners HealthCare Systems goes live with a new system built on InterSystems' CACHE post-relational database. Via Systems adds enhancements and new features to the Quantum VS myViewpoint business intelligence product. Raining Data inks marketing agreements with Sun Microsystems and Stonewall Networks. Northgate Information Solutions lands new deals to provide technology solutions.

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25 Years 94 Shows and Counting...

When we started thinking about the 25th Anniversary Spectrum Show a year ago, we said, "Let's do one article in each issue between now and the show that serves up a nostalgic snapshot of the past." Sort of a "Let's look back to see where we've been; maybe we'll learn something about where we're going."

One of the biggest questions was, "Counting regional shows, how many Spectrum shows altogether have we produced?" We didn't know the answer, but we knew it was a lot. We also wondered how many companies have exhibited at Spectrum shows over the past 25 years and what could be said about them?

So that was the task we took on for this issue. What we found was interesting to say the least.

We first looked at how many Spectrum shows had been produced. We had never done that before, and guessed it would be about 50. We were way off — it turns out that there have been a total of 93 Spectrum shows over the past 24 years. The Long Beach show in March will be the 94th.

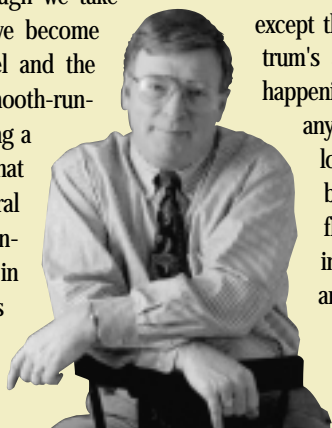
That explains why even though we take them all very seriously, we've become somewhat blasé about travel and the logistics of producing a smooth-running event. I remember having a conversation in Sydney not that many years ago when General Automation wanted us to consider doing a Spectrum show in Singapore. We said, "Well, as

long as we're in the neighborhood, let's go discuss it."

After taking a closer look, "in the neighborhood," in this case, was an eight-hour flight away. I also remember one time flying from San Diego to Heathrow, getting off the plane and going straight to the Olympia Exhibition Centre for setup. We had come a long way from the stomach-turning jitters of booking 200 rooms at Caesar's Lake Tahoe in 1982. I had visions of cement shoes back then if we didn't come up with the goods.

The list of companies that exhibited at Spectrum shows over the years was staggering. We found 550 and at that we're not sure we found them all. When you look at this list, it will conjure up memories. Some comments you'll find yourself muttering are: "Remember that guy — he was a jerk. Remember that company — that was a big company back then. Remember that company — what a stupid name! Remember that company — they should have had it all! Remember that company — I wonder what happened to them?"

There's probably limited value in publishing the data contained in this archival article, except that as I've always said, "Spectrum's activity is a mirror of what's happening in the MultiValue market at any point in time." When we looked at the data, it brought back memories of the ebb and flow of our market as the inevitable waves of prosperity and rough times came along.



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IDBMA's *International Spectrum* is published six (6) times per year at the subscription price of \$40.00 U.S. in the U.S.A.; \$45.00 U.S. in Canada and Mexico; \$50.00 U.S. for other countries. Single copy rates are \$7.00 U.S. in the U.S.A. and Canada, and \$9.00 U.S. in all other countries. *International Spectrum* is published by IDBMA, Inc., 715 J Street, Suite 301; San Diego, CA 92101; Tel: 619/515-9930; Fax: 619/515-9933 **E-Mail:** requests@intl-spectrum.com; **Website:** http://www.intl-spectrum.com. Copyright 2005 International Database Management Association, Inc. All rights reserved. Reproduction in whole or in part, without written permission, is prohibited.

PRINTED IN USA • ART AND DESIGN: CP Design; 619-246-6878; San Diego, CA

NEWS RELEASES/UNSOLICITED ARTICLES

International Spectrum is eager to print your submissions of up-to-the-minute news and feature stories complementary to the MultiValue marketplace. Black and white or color photographs are welcome. Although there is no guarantee a submitted article will be published, every article will be considered. *International Spectrum* retains all reprint rights.

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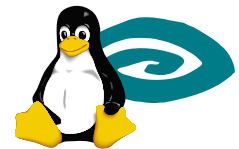
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RFID

Justifying the ROI

BY NATHAN RECTOR

I've been talking about RFID for the past year at the International Spectrum Shows, as well as in my articles, and to those of you who signed up for the Spectrum Webinar in November. During all of these, I've alluded to the costs of implementing an RFID project.

I can't see your faces when you are reading my articles, but when I talk about it at the Spectrum shows, I see a lot of shocked faces. Most people don't believe me until I start adding up the expenses for them.

As IT people, we don't always have to think about ROI other than the project will cost X and the sales it will bring in is Y. RFID is not as simple as $Y - X = \text{profit}$, and I've yet to see a really good formula you can use to generate the ROI of RFID.

Because of this, you have to look at several factors, including the nebulous "soft profit" from personnel savings and efficiency gains, over-stock/out-of-stock savings, and the advantage of the collected data.

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International Spectrum's 2005 Webinar Series



Webinar #7

Thursday, December 1, 2005

Using Excel Pivot Tables to Analyze Your MultiValue Data

Presenter: Jim Paul, President, Northec Consulting

Webinar #8

Thursday, December 8, 2005

Radio Frequency Identification (RFID) – What / Why / How?

Presenter: Nathan Rector, President, Natec Systems

Webinar #9

Thursday, January 12, 2006

Using Your MultiValue Data with Excel and Word

Presenter: Nathan Rector, President, Natec Systems

Webinar #10

Thursday, January 19, 2006

Using Your MultiValue Data with Excel and Word

Presenter: Lee Burstein, President, Dynamic Systems

Webinar #11

Thursday, January 26, 2006

Sarbanes-Oxley After the Rush

Presenter: Susan Joslyn, SJ+ Systems Associates

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The first question you need to ask is do you need an open or closed system?

RFID

Justifying the ROI

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Compliance

If you are looking at RFID due to compliance issues, then you really don't have much choice, and are looking for the least expensive way to implement. All I can say is, take a stepped approach to implementation.

Even though you have to implement it, that doesn't mean you won't see a benefit in doing it. RFID doesn't only help your customers, but also helps you.

Closed or Open System?

The first question you need to ask is do you need an open or closed system? An open system is one where your customers or vendors want to use your RFID tags in their environment. A closed system is when your company will be using RFID in-house for manufacturing and inventory controls.

Closed systems will cost less because you have more control over the environment the tags will be read in. You can find the readers and tagging system that work for you in-house.

When you start with an open system, then you have to deal not only with the tags and readers for your in-house system, but also for how your customers are going to be using the tags.

You also need to decide which tags will work best for your customers. If you need to use EPC tags, then you'll need to sign up for a GTIN number. The registration fees can vary per company.

In my example, I'll use an open system, using EPC tags. I'm also assuming I already have a GTIN number.

The Company

To place this article's information into a more real-world situation, let's create a theoretical small manufacturing company. This company, called "Tracey's Quilts," supplies custom quilts. We'll assume that 100 quilts are made a day, and they are shipped out the next day (five quilts per box).

To top it off, we'll also assume there are no seasonal ups and down, and the company never has supply chain shortages. I know, it's unrealistic—every business has ups and downs and supply chain shortages—but hey, ... this is just theoretical.

Quilt Prices: \$25.00

Quilt Costs

Raw Costs: \$15.00 per Quilt

Manufacturing Costs: \$5.00 per Quilt

Gross Profit: \$5.00 per Quilt

For those purist, business majors, I'm sure you can see a lot of holes in my numbers and assumptions, but bear with me, I'm trying to make this as simple as possible.

If you have made it this far without a glazed over look, and are laughing at my simplistic example, please email me. I wouldn't mind a better real-world example.

Adding It Up

Now comes the scary part for most people ... and where I get most of the shocked looks in my seminars. The initial cost for the RFID hardware.

"Tracey's Quilts" has two warehouse doors and they need to keep track of the location of each quilt in the manufacturing process. Each quilt will go through multiple workstations before it is packaged and shipped.

Workstations:

Cutting:	1
Sewing:	2
QA:	1
Shipping:	1

Dock Doors:

Receiving:	1
Shipping:	1

Each workstation will have a handheld RFID reader, and the shipping door will have an RFID portal. I'm going to assume that none of our vendors are NOT providing RFID systems, and the receiving door will not be used for shipping. This allows me to not require an RFID reader at the receiving door.

I will also NOT be keeping track of my raw materials with RFID tags to start with. I will only keep track of the quilts we are making.

Please keep in mind that these numbers can vary depending on the types of hardware you pick, and where you purchase your hardware.

Once you have the hardware, you have the development costs and testing costs. Let's assume this will take 80 hours at \$25.00 an hour.

Development: \$2000.00
Total Start-Up: \$19,966.00

I'll bet your first response is: "Yeah. I can't afford that." Bear with me for a little bit longer. The next section will help you convince your management that this is required.

Benefits

Most benefits are not seen immediately, but come over time as more data is collected. Obviously, the benefits to one company won't be the same for

another. Let's start with some benefits based on your sample company:

◆ *Production Time Efficiencies*

Since each workstation has a different person working at it, you can keep track of how long a quilt is at a workstation. This allows you to keep track of each employee's efficiency ratings and if specific products or lots require more labor to be charged for them.

As you watch each quilt go through the manufacturing process, you notice that there is a bottleneck at one of the sewing stations. You then look at why, and find out that the person at that station is taking a coffee break every 30 minutes. After a little personnel adjustment, you find you can increase your production from 100 quilts a day to 120 quilts a day.

Another possible bottleneck is found at the cutting station. You find that 40% of time spent on each quilt is at the cutting station. If you add another person to the cutting station, then you can reduce the time by 1/3, increasing the number of quilts by 12.

If you tried to do time estimates using barcodes or time sheets, your production people would spend more time filling out information than doing their actual work.

◆ *Reduction of Data Entry Errors*

Every company has some kind of data entry during the production cycle. Most of the time, the information is collected and passed on to your data entry or accounting department. This means data collection on paper or keyboard which is prone to entry errors by the user.

Not all data entry errors are errors in the data. Sometimes the data is just incomplete.

Dock Doors: \$4000.00 x 1 = \$4000.00

Workstation:

Reader: \$550.00 x 5 = \$2750.00
PC: \$600.00 x 5 = \$3000.00
=====

\$ 5,750.00

Printers:

Cut Station: \$5000 = \$5000.00
Shipping: \$5000 = \$5000.00

=====

\$10,000.00

Tags:

EPC Item Tag: \$0.09 x 2000 = \$180.00 per month
EPC Shipping Tag: \$0.09 x 400 = \$36.00 per box per month

=====

\$216.00

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RFID

Justifying the ROI

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If you assume that 1% of all data entry has errors, how much time would you save?

◆ Shipping Errors

Every company has shipping errors. Either shipped to the wrong place, incomplete orders, or placement on the wrong truck.

This costs time and money, and sometimes customers. By tagging boxes and items in boxes, you can have alert systems in place that will tell the user when a box or item is in the wrong place before it is shipped.

You also now have a guaranteed means of tracking when a shipment was dropped off. This allows you to deal with calls from customers about not getting items.

There have been a few companies that used to have customers that would call them up and say they didn't get an item. The companies would just ship out a replacement since it was cheaper than arguing. With RFID as part of their shipping, they know for sure that something was shipped, when, where, and what truck.

ROI

OK, technology usually lasts for five years, but since RFID is changing so quickly, let's assume three instead. Prorating the initial costs over three years you get:

Initial Cost:	\$6655.00 per year
Tag Costs:	\$2592.00 per year
	=====
Total:	\$9247.00 per year

If I just look at the increase in productivity that I have gained, the numbers change from the following:

Tracey's Quilts

Sales:	\$650,000 per year
COGS:	\$390,000
Labor:	\$130,000

=====

Gross Profit: \$130,000

After performance improvements:

Sales:	\$858,000 per year
COGS:	\$514,000
Labor:	\$171,600

=====

Gross Profit: \$172,400

Summary

Each company will have different benefits, and equate a different value to them. The one thing to remember is that you are not likely to see the immediate ROI, or where you will see the ROI come from.

The main area I have seen ROI come from is productive reports and less shipping errors. If you have already implemented an RFID project, I would like to hear where the ROI is showing up in your company. is

NATHAN RECTOR,



a regular contributor to Spectrum, is owner of Natec Systems, a consulting firm specializing 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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- Jordan McCall, Bratrud Middleton Insurance

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- Joan Anderson, Gustavus Adolphus College

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Technical Update

What's Happening in the World of MultiValue Database Management System Providers



Adds Enhancements and New Features to Quantum VS myViewpoint 1.0.9

Via Systems' Quantum VS myViewpoint is a low-cost, graphical business intelligence solution, delivering the features and the business intelligence you need for tactical decision making.

Automatically monitoring your key business performance metrics, myViewpoint instantly alerts decision makers of any business activity not meeting expectations – via your PC – enabling exceptional data mining to offending transactions.

Following are some of the new features available in Release 1.0.9.

Query Column Heading Title Wrapping

The enhancement permits the user to wrap the description text in a column heading, making it more meaningful. Customizable query column widths have also been added to help manage the overall "look and feel" and usability of queries.

Query Totals Manipulation

The enhancement permits the user the choice of displaying query Totals and Sub Totals at the top of the query. This is particularly useful when there are many rows of data. In these circumstances needing to scroll to the foot of a query to view totals is not user-friendly.

Saving Graphical Output Properties

This enhancement enables graph properties to be saved. The feature also permits more than one graph per query to be opened, enabling the user to toggle between the graphs and the query.

Raining Data Corp.

Signs Two-Year Marketing Agreement With Sun Microsystems

Inks OEM Agreement with Stonewall Networks



Raining Data

Raining Data Corp. has signed a two-year joint marketing agreement with Sun Microsystems. The agreement provides for Raining Data and Sun Microsystems to integrate and jointly sell, market and promote on a worldwide basis the following products: TigerLogic XDMS Enterprise Server, Raining Data's TigerLogic Edge Server, Raining Data's ePharma Application Suite and Sun's Java System RFID Software and other components of the Java Enterprise System.

The company also announced a multiyear OEM Software License Agreement with Stonewall Networks. The agreement provides for Stonewall Networks to embed TigerLogic XML Data Management Server v2.5 for Linux in the Cornerstone Security Policy Server.

Stonewall Network's Cornerstone Security Policy Server offering brings synergy to multivendor network environments by providing a single point, network-wide security policy management. This method allows for a centralized, consistent, and secure application of network security policies to all managed security devices. The Cornerstone Policy Server employs an innovative use of XML to control both inventory and data. Its patented technology uses XML database and XSLT data transformation and SAX-like tag oriented processing.

Stonewall Networks is an IT security product company; its main product, Cornerstone Security Management Platform, provides a total security management vision for enterprises.

Raining Data's Fiscal 2006 Second Quarter Results
Raining Data Corp. also reported its financial results for the second quarter of fiscal year 2006. Net revenues for the three- and six-month periods ended September 30, 2005, were \$4.6 million and \$9.9 million as compared to \$5.1 million and \$10.3 million for the same three and six-month periods in the prior year. The company's quarter and year-to-date operating loss was \$0.5 million and \$0.4 million for the three- and six-month periods ended September 30, 2005, and \$0.3 million and \$0.4 million for the three- and six-month periods ended September 30, 2004, respectively. Loss per share was \$0.04 for the current year quarter as compared to \$0.03 in the prior year quarter and was \$0.05 for the six-month periods ended September 30, 2005 and 2004.

Cash balance was \$10.1 million at September 30, 2005, compared to \$8.6 million at September 30, 2004. Working capital was \$4.3 million at September 30, 2005 up \$0.6 million from \$3.7 million at September 30, 2004. The company computes working capital as total current assets less current liabilities.

Earnings before interest, taxes, depreciation and amortization (EBITDA) for the quarter was negative \$0.5 and negative \$0.3 million for the three and six months ended September 30, 2005, as compared to \$0.5 and \$1.1 million for the same periods in the prior year, primarily as a result of increased R&D expenditures of \$1.1 million in the current year.

Graph Scroll Bars

This enhancement permits the user to invoke vertical and horizontal scrollbars in graphical output. This is applicable when the graphical output cannot be displayed in the selected window and is invoked by the user at runtime.

Fit to Size

This enhancement will re-size the currently selected graph to fit in the available window. This option is invoked by either clicking the "spyglass" icon in the toolbar, or by a "right-mouse" click on the selected graph which displays the menu option.

Output Field Tab Interface

The enhancement to the user interface now incorporates a button to access the table properties in the "Output Fields" tab, eliminating the need to right click.

Output Field Properties

The enhancement provides the user with an "at-a-glance" view of query output field properties. Bold icons or descriptive text are used to display the setting of each field property in the query.

Drill-Down via Graphical Hotspots

Embedded "hotspots" within a graph, enables the user to click and drill-down to underlying data.

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Lands New Deals

High Peak Selects Northgate to Transform Planning and Building Control Service

High Peak Borough Council is working in partnership with Northgate Information Solutions, a leading provider of

software and managed services to the public services and utilities markets, on a project to deliver radical improvements to its planning and building control service.

Northgate is providing new and upgraded technology solutions which, together with new business processes, will deliver a more efficient and effective service for High Peak's citizens and employees alike.

The Council has selected four of Northgate's leading solutions — Planning, E-Planning, Building Control and a Gazetteer — as well as a new Land Charges system. All components will be fully operational by March 2006.

“Our work with High Peak will increase efficiency and deliver a better service to citizens.”

-David Meaden, managing director of Northgate Public Services

Northgate's services and solutions will enable the council's planning department to:

- Streamline its business processes and maximize efficiency;
- Provide simple, relevant and up-to-date planning information to the public;
- Track the progress of all building and planning projects;
- Respond to customer queries more effectively;
- Ensure all new building projects adhere to the latest regulations;
- Manage its address data effectively through a flexible Gazetteer;
- Measure performance in order to focus on Best Value.

Northgate's Land Charges system will also speed up the processing of local land charge searches, allowing users to record enquirer details, review fees received and track the progress of searches across departments.

Mike Morris, Client Programme Manager at High Peak Borough Council, commented:

"We are excited about the transformation our agreement with Northgate will deliver for our customers and staff. Customers will benefit from a faster and more comprehensive service, and staff will benefit from a higher quality working environment."

David Meaden, managing director of Northgate Public Services, added:

"We are delighted to be providing both consultancy and a range of solutions to High Peak Borough Council, demonstrating the range of Northgate's capability in this area. Our work with High Peak will increase efficiency and deliver a better service to citizens."

According to Northgate Information Solutions, its task is to enhance public value through the intelligent use of

people and technology, and to share in the economic and social benefits that this brings.

In the U.K., Northgate works with four out of five local authorities and every police force. Its Gazetteer, Building Control, Planning, E-planning and Land Charges solutions are part of Northgate's leading range of land and housing products used across the U.K. to support councils in delivering a better service to citizens.

Northgate to Provide Durham with Integrated Revenues and Benefits Solution

Northgate Information Solutions also secured a new contract worth over £700,000 to provide a new revenues and benefits system for Durham City Council. The contract, spread over five years, will enable Durham to manage its service more effectively and efficiently.

Northgate's Revenues and Benefits solution provides staff with quicker, more user-friendly systems, enabling them to offer a more streamlined service in calculating council and business taxes, and delivering council tax and housing benefits to citizens.

This project is part of an overall performance upgrade for Durham City Council which includes the opening of the new Cityinfo Centres, the "one stop shops" for information, advice and assistance on a range of matters including revenues and benefits.

Over 89,000 citizens are set to benefit from these performance improvements with advantages such as:

- ◆ Electronic customer services, enabling revenues enquiries and transactions to be handled via the Internet;
- ◆ Providing up-to-the-minute information to staff members quickly and easily,

enabling them to answer queries more efficiently;

- ◆ Automated systems reducing the need for manual intervention in day-to-day processes, enabling more staff to be available to citizens.

Paul Darby, head of financial services at Durham City Council, said:

"We have been steadily working on improving our performance year on year, and we see this upgrade as a big step on the way to achieving the highest levels of customer service. The systems that Northgate are implementing will enable us to spend less time on routine tasks, and more time focusing on citizens' needs within the community."

Continues on page 16

TIRED OF YOUR PRIMITIVE USER INTERFACE?

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Technical Update

Partners HealthCare Rolls Out Enterprise Master Patient Index System Built on InterSystems' CACHE Database

Delivering Major Patient Safety Benefits Across Population of Three Million

InterSystems Corp. announced that Partners HealthCare System Inc. has gone live with a new Enterprise Master Patient Index (EMPI) system built on InterSystems' CACHE post-relational database.

The leading database provider in healthcare, InterSystems develops and markets the CACHE post-relational database and the Ensemble universal integration platform. InterSystems offers a broad set of MultiValue extensions for CACHE, which were introduced at the International Spectrum 2005 trade show. These extensions enable the migration of MultiValue applications to CACHE and bring the full range of CACHE object and SQL development technologies to MultiValue developers.

Recognized worldwide for the ability to leverage innovative information technology, Partners is an integrated delivery system that offers patients a continuum of coordinated high-quality care. The system includes primary care and specialty physicians, community hospitals, the two founding academic medical centers, specialty facilities, community health centers, and other health-related entities.

Maximizing Care Delivery With Advanced Object Technology CACHE delivers high performance, massive scalability and innovative object technology that were key drivers in the decision to build a new EMPI system in-house, according to Steve Flammini, Partners CTO. "Our previous system, built on traditional relational database technology, had been running for about a decade," he explained. "Basically, we took all of the lessons we learned over the life of that system, identified all of the new capabilities we wanted, and the results were the specifications for a new 'dream system,'" he said.

The ability to customize the application for Partners' specific needs was one key element in the decision to bring EMPI system development in-house. In addition, the robust CACHE object technology and capabilities fulfilled criteria based on

an IT strategy calling for the new application to utilize object architecture. The high performance and scalability CACHE is delivering for a wide variety of Partners applications also contributed to the selection of CACHE as the database foundation for the new system. "CACHE is the underlying database for many of our clinical applications," Flammini said. "InterSystems is recognized for technology innovation and our working partnership has been highly successful for more than a decade."

"The EMPI application effectively provides a crosswalk of patient information across multiple sites," Flammini explained. Core patient demographics and information about patient visits is stored in the EMPI database. Because the EMPI establishes a patient's identity across the Partners network, a physician in any location can access critical patient data from multiple institutions seamlessly. "The physi-

cian has complete access to the patient's in-network history. This results in significant benefits in terms of patient safety across a population of about three million that we serve."

The fast performance of the CACHE-based application has proven key to handling the high volume of information requests received on a 24 x 7 basis. Typically, the EMPI system responds to more than 20 million service requests from other applications and more than 100,000 transactions each day.

CACHE delivers high performance, massive scalability and innovative object technology that were key drivers in the decision to build a new EMPI system in-house.

While the system has been running on a production basis for only about three months, "the move from a purchased application to a CACHE-based application developed and maintained in-house

is already perceived as an organizational success," according to Flammini. "Benefits such as more rapid system response, faster access to rich data, the ability to prioritize enhancements and customizations in the most optimal way possible, and having complete control over the development cycle are likely to deliver a rapid return on our technology investment," he added.

"It is well recognized that EMPI systems are central to the realization of a seamless electronic medical record across a healthcare community. EMPI systems are highly complex and extremely challenging to develop and implement," noted Paul Grabscheid, InterSystems vice president of Strategic Planning, "and Partners has set a new standard for healthcare technology innovation with its new CACHÉ-based EMPI implementation. It's been a privi-

lege to work with their IT staff on this initiative."

About InterSystems

Headquartered in Cambridge, Massachusetts, InterSystems Corp. (www. InterSystems.com) has served the needs of IT organizations and independent software vendors for more than two decades. InterSystems' innovative products, the CACHÉ post-relational database and the Ensemble universal integration platform, enable the rapid creation and fast integration of high-performance applications.

Over four million people use mission-critical applications based on InterSystems' software. Twenty five regional offices serve application developers and integrators around the world, and 24 x 7 support is provided for all InterSystems products.

A free, fully functional, no-time-limit copy of CACHÉ can be downloaded or requested on CD from the InterSystems Web site.

About Partners HealthCare
Partners HealthCare System Inc. (www.partners.org) is an integrated healthcare delivery network. Massachusetts General Hospital, Brigham and Women's Hospital, Faulkner Hospital, McLeans Hospital, Newton-Wellesley Hospital, Spaulding Rehabilitation Hospital and North Shore Medical Center are among the major institutions comprising Partners HealthCare. is

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*By Robert Catalano,
Revelation Software*

Converting, Migrating, or Front-ending Applications and Data for Use with **OpenInsight**

At Revelation Software, product development and enhancement is an ongoing, continuous process. Since I began writing this series of articles, we at Revelation Software have developed a Character to OpenInsight (CTO) interface. With this new set of features, built into OpenInsight release 7.2 and above, MultiValue developers will be able to take an account save of their existing application and restore the saved account as an application within OpenInsight. All files will be created in a specified location, all dictionaries will be converted as best as possible, and character-based programs will be able to compile and run “as is” under a VT100 emulation.

In this article we will address converting an existing MultiValue application called MYAPP to OpenInsight using the Character to OpenInsight (CTO) interface as well as using the forms designer to create a graphical interface to that application.

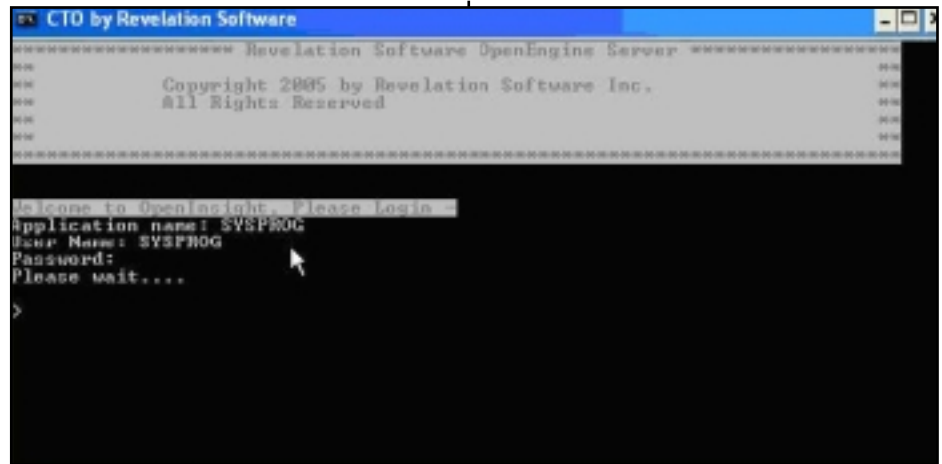
Character to OpenInsight (CTO)

The CTO interface supplements the GUI interface that is synonymous with OpenInsight. Both the GUI and CTO interfaces communicate with the Revelation OpenEngine (the “heart” of the database environment). Therefore both interfaces have access to all the files and programs stored in the database, and can interoperate to some extent. Rather than drawing Windows or Linux Desktop graphical forms, however, the CTO handles the processing of traditional multivalued PRINT, INPUT, etc., statements (including, of course, support for cursor movement and screen attribute control). In addition, the CTO emulates an environment and tools that are familiar to the traditional MultiValue developer and user (including a command line prompt, support for PROCs and Paragraphs, a “master

dictionary,” and system tools like ED, BASIC, LIST/SORT, etc.)

The CTO interface can be invoked from a terminal emulator using telnet, or directly from the Windows command prompt. Figure 1 is a screen shot of the OpenInsight character interface logged in to the SYSPROG application.

As discussed in our previous article, data is stored externally from the application and may exist anywhere on the network. For our sample conversion we will create a folder called MYApp_Data located on our server. The dictionaries and data from our virtual ACCOUNT-SAVE will be restored to this folder. Utilizing the line editor



▲ FIGURE 1

Continues on page 20

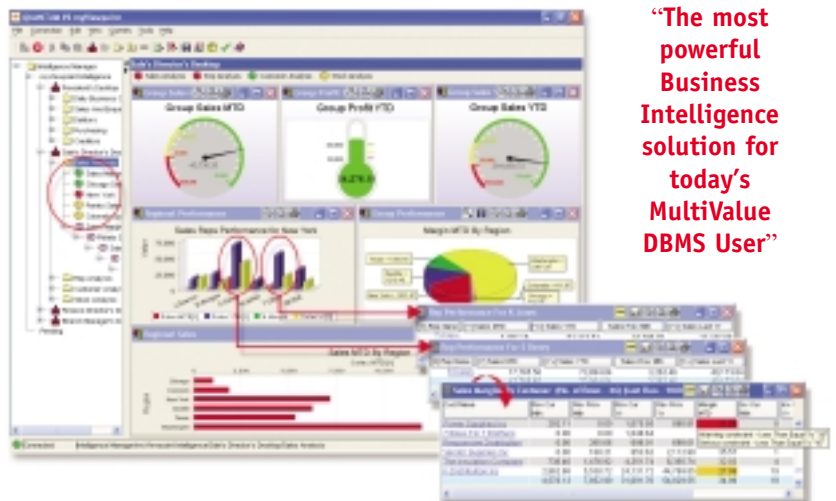
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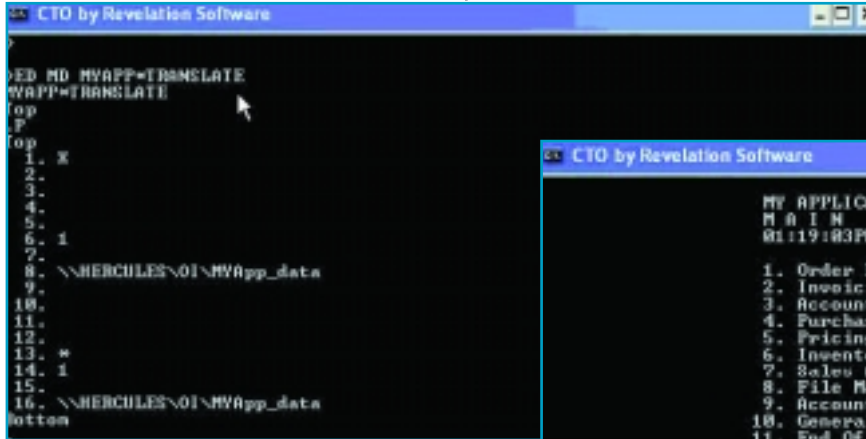
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Continued from page 19

provided by the CTO interface as shown in Figure 2, we create a conversion record called MYAPP*TRANSLATE in the master dictionary table (MD).

how the ACCOUNT-RESTORE process automatically converted correlatives and conversions to OpenInsight calculated columns.

To complete our conversion process, we now need to compile our BASIC programs so that they can run within OpenInsight as a character application. The source code from our original application is passed through a pre-compiler and then compiled for use within OpenInsight. The OpenInsight CTO interface also provides support for PROCs and Paragraphs.

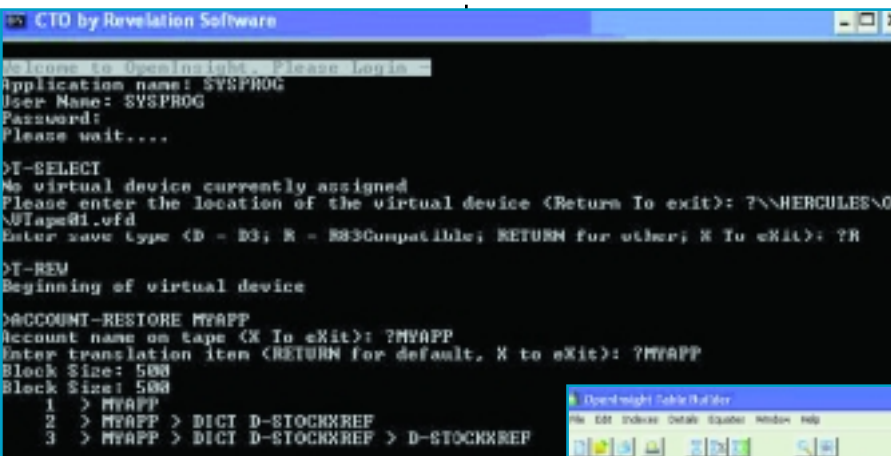


▲ FIGURE 2

Next, as shown in Figure 3, we will select our virtual tape and proceed with the ACCOUNT-RESTORE. The CTO interface supports the multivalued terminal control language (TCL).

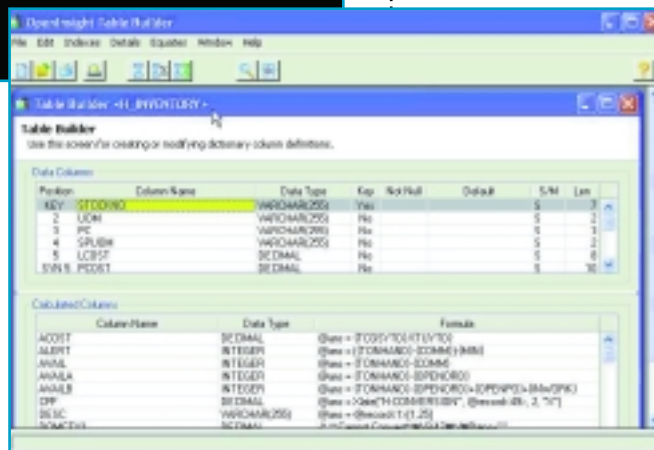


▲ FIGURE 5
Example of PROC output



▲ FIGURE 3

After the restore is completed, our MYAPP application has been created within OpenInsight. Our dictionaries and data have been converted to OpenInsight and are now ready for use with our Form Designer and Report Builder tools. Figure 4 depicts



▲ FIGURE 4

Going GUI

Now that our application has been converted "as is" to OpenInsight, the next step is to convert the existing program to a graphical format. This is accomplished using the form designer tool within OpenInsight. This tool creates graphical forms using the data dictionaries that were converted during

the ACCOUNT-RESTORE process.

```

CTO by Revelation Software
CUSTOMER FILE MAINTENANCE
CUST #      G12345      20. EMAIL ADDRESS:
1. NAME     REVELATION SOFTWARE      21. CREDIT LIMIT  99,999,999.99
2. ADDR 1   99 KINDERKAMACK ROAD  22. TERMS CODE   30 NET 30 DAY
3. ADDR 2   FIRST FLOOR      23. D&B RATING
4. CITY     WESTWOOD          24. COMMENTS
5. ST & ZIP  NJ 07675         25. START DATE   01/01/05
6. PHONE (800) 262-4747  FAX (201) 722-9815  26. FREE FREIGHT
SHIP-TO
7. NAME     REVELATION SOFTWARE      27. MESSAGE CODE
8. ADDR 1   99 KINDERKAMACK ROAD  28. UPS ZONE
9. ADDR 2   FIRST FLOOR      29. WAREHOUSE     1
10. CITY    WESTWOOD          30. SUBSTITUTION  1
11. ST & ZIP NJ 07675         31. BACK ORDER CD 1
12. TYPE    M                  32. DEPT. NO.
13. VENDOR #                                33. HISTORY FLAG  Y
14. SALESREP G801 RAYMOND   PCT- 010  34. BOOKING LIMIT .00
15. SOLD/SHIP SOLD          35. SHIP VIA     UPS
16. PRICE CD 001            36. CONTACT 1   MIKE RUANE
17. REGION   1NJ           37. CONTACT 2   ROBERT CATALANO
18. STMT CODE 3 STMT & INV.  38. CONTACT 3
19. SHIPPING INS            39. A/R ACCT#   G12345
ENTER 'C' TO CHANGE, 'D' TO DELETE, 'P' TO PAGE OR 'E' TO END -

```

▲ FIGURE 6
Example of BASIC output

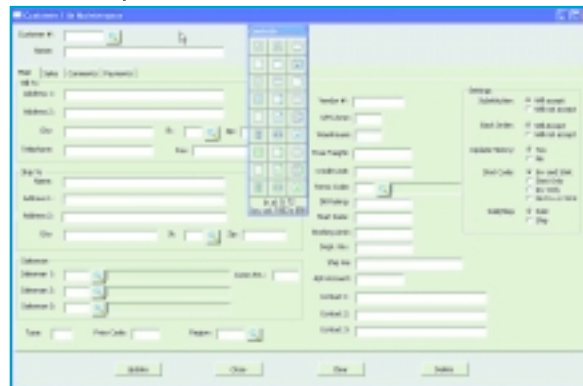
basis. In fact, you can have a mixture of character and graphical forms all within the same application.

In the first article of this series (July/August 2005), we posed the following questions: “What is involved in converting another MultiValue application to OpenInsight?”, “How do I utilize OpenInsight as a graphical front-end to my existing MultiValue application?” and “How can I migrate my data for use within an existing OpenInsight application?”

I hope that this series of articles has answered these questions and demonstrated a clear path to converting, migrating or front-ending your existing application for use within OpenInsight. If you have any questions, please feel free to email me at rcatalano@revelation.com is

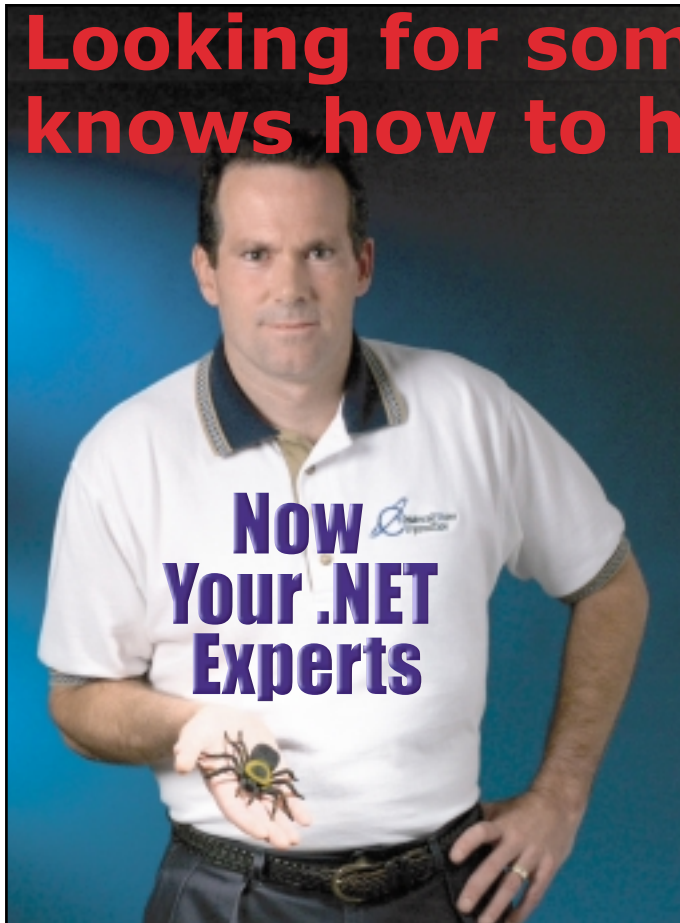
Conclusion

Now, the choice is yours: with OpenInsight’s CTO interface you can run your existing character-based application “as is” and migrate to a graphical interface on an “as needed”



◀ FIGURE 7
Creating a form using the form designer tool

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Demand for Data Security Continues to Rise; jBASE International Enables Data at Rest Encryption with

DREM

jBASE International recently announced the availability of its Data at Rest Encryption Module (DREM), a powerful new jBASE cross-platform facility that supports 128 bit encryption and decryption of data at the file system level without the need for application code changes!

The Problem

As demand for data security continues to increase, organizations are beginning to encrypt critical data inside corporate databases. Industry requirements and the emergence of laws and regulations requiring data protection mean that private information such as medical records, social security and customer credit-card numbers, payroll/benefits data, driver's license numbers and more need to be kept secure.

These requirements for data at rest encryption are driven because of external pressures from:

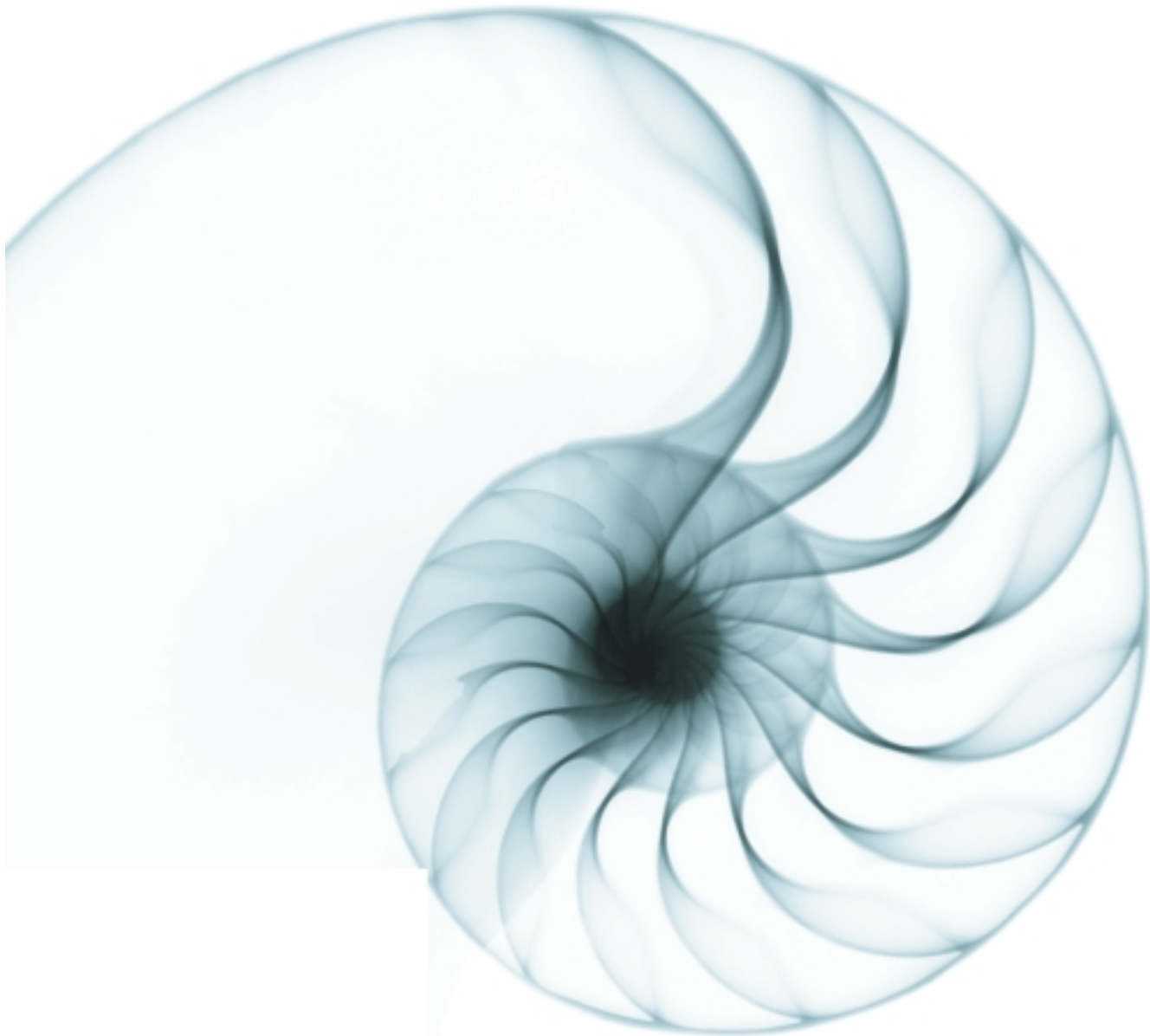
- Government regulations and non-compliance penalties via such laws as HIPAA, Sarbanes-Oxley and the Patriot Act
- Competitive risk to Value Added Resellers (VARs) from other software vendors offering encryption within their application
- Payment card industry and bank requirements for encryption for companies doing business with them

- Unscrupulous employees stealing customer and other valuable data from the installed systems

Prior Solutions and Their Weaknesses

The jBASE jBASIC programming language has for some time had the ability to encrypt data strings using its "encrypt" and "decrypt" functions. However, these have proved inadequate for most VARs. Not because they don't work, but because each and every program that requires encryption and decryption must be changed! Each and every dictionary item that wants to display decrypted data must be altered! Many end-user applications require thousands of changes to program code and dictionary items. This is time consuming and costly and in many instances leads to poor performance as well as costly debugging and quality issues. Then, of course, there are the real-world considerations not addressed by these functions, such as the fact that some users are allowed to see the data in its decrypted state when running ad-hoc queries at TCL while others are not. For example, just because the doctor can view a patient's medical record does not mean that this private information should be open to viewing by a different user (such as the receptionist).

Continues on page 24



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Alan Godby - Product Director - Evolve 360 Pty Ltd



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Technical Update

Continued from page 22

These limitations not only impact jBASE but also affect other MultiValue database vendors that only offer the same capability to encrypt and decrypt strings of data using functions within the programming language. The amount of work required to encrypt and decrypt comprehensively, accurately and efficiently using nothing more than encrypt and decrypt functions will at best be time consuming, costly and disruptive! At worst it could be inadequate and put the company at risk. The impact could possibly be as large as the year 2000 COBOL problems were for mainframes for those users requiring encryption.

The real-world situation is even worse for VARs with large installed bases because not only does the VARs application require change, but each individual customer's customized programs require change.

The DREM Solution

DREM offers an immediate solution that enables organizations to instantly gain the security benefits of encryption while avoiding a massive enhancement project. Developers and users can choose fields within individual files or entire files to be encrypted and decrypted without any involvement from jBASE International. DREM also allows them to choose which users are allowed to see the decrypted data within a given file, no matter which tool is used to view that data.

With DREM your company will not lose customers (and lost customers means lost revenue) because of the inability to encrypt their systems in a timely manner. DREM allows a system to be fully and comprehensively encrypted and compliant within hours. There is no

programming required. There is no ongoing administration.

And how do you encrypt an application if source code for some programs has been lost or destroyed? jBASE's data at rest encryption technology is also the solution to this quickly growing problem. Programs will not need to be recompiled, so the lack of source code is not an issue.

DREM Is Scalable

The algorithms used by DREM include file compression of the encrypted files and the caching of frequently referenced large records. Although a small number of files may increase in size, other files get even smaller. As a matter of fact, we have seen real-world cases where some files shrank to be about 30% smaller because of jBASE's encryption technology. And that means 30% less disk activity for reads and writes.

All encryption and decryption will cause some performance overhead. DREM minimizes this overhead to a far greater degree than just using the encrypt and decrypt functions provided with the MultiValue database.

DREM Is Flexible

DREM offers automatic whole file or field encryption as defined by the user during installation. It also offers selective viewing of encrypted data on a file-by-file basis based on individual users or groups of users.

DREM Deploys Quickly and Easily

In most cases, the entire set of files that needs to be encrypted can be converted within hours without changing any programs or dictionaries. Setting up the policies of which users can see which data within these files takes minutes once user permissions have

been determined and the necessary user groups within the Unix or Windows environment have been created.

DREM Doesn't Need the Program Source Code to Make It Work

This makes DREM particularly appealing to companies that require encryption, yet do not have or have lost the source code. The implementation of data at rest encryption has zero impact on application programming or the modification of dictionary items, and deployment is easy.

With DREM There Is No Ongoing Administration

DREM will not increase administrative overhead. Once the file is encrypted and the access groups are assigned the project is complete.

DREM Requires No User Intervention

There is no need for a user to know anything about encryption. Company management can be secure in the knowledge that they are meeting standards that will pass audit requirements.

DREM Is Developer Friendly

There is no need for a developer to understand the encryption process. All the developer needs to know is the fields and or the files that require encryption and to create those files with the CREATE-EFILE verb.

DREM Allows for Individual and/or Group Designated Users

Companies can choose which users see the decrypted data on a file-by-file basis.

DREM Is Value Priced

End users must compare the cost of changing all programs and dictionary items, delayed new projects, and the use of outside consultants with the competitive price of DREM. It will be easily concluded that DREM is the most cost effective solution by far available on the market today.

DREM Was Created Using jBASE jEDI Technology

This unique jBASE innovation enables developers to achieve seamless integration with foreign databases and external functions. The published interface provides a common set of rules and syntax to access any database or data source. By means of specific jEDI drivers, jBASE BASIC I/O statements can access and manipulate any jBASE file as well as any other database such as Oracle, SQL Server and DB2 as simply as they can access standard jBASE files or other MV database files (UniVerse, UniData, D3, Cache etc). The encryption and decryption of data files is treated by jBASE as a normal read or write to the standard jPLUS (files greater than two gigabytes) or j4 files.

The jEDI system also provides a number of other useful generic facilities to the application developer, such as transaction boundary support across multiple databases and secondary indexing. The Transaction Journaling product uses the jEDI interface to log transactions to just about any device for any and all data sources. All work seamlessly with DREM.

In addition, the jEDI architecture is ideal for sites that require their investment in their application to be maintained while being able to work with DB2, Oracle or other RDBMS and use DREM encryption technology.

The DREM jEDI intercepts the application's open/read/write/delete/clearfile calls to/from the data source and performs the necessary encryption/decryption and security functions at that level. The interface provides a consistent view of all I/O to the calling program and to the rest of the system. DREM works seamlessly to deliver capabilities for securely and efficiently managing data at rest encryption. DREM gives access to the files by using all existing jBASE utilities, verbs, application programs and dictionaries without the need to modify them. Existing records can be encrypted, and encrypted records can be decrypted as easily as creating a new file with the appropriate encryption definitions and using the COPY verb. And DREM requires no changes to the application code, providing the system is jBASE Release 4 compliant.

jBASE Release 4

Interestingly for users of other MultiValue database products, it will often take much less time and be far less costly to migrate an application to jBASE rather than to change the code for encryption capabilities. Migrating to jBASE has been performed successfully and quickly by many users in the past with tools being available to assist in making the migration process easy and effective. The changing, testing and installation of migrated applications on jBASE is an exercise

that normally can be completed in a few weeks rather than months. jBASE International is very price competitive for companies migrating to jBASE as the additional expenditure in acquiring jBASE licenses to replace the incumbent database licenses is taken into consideration. Users will also find that the ongoing support rates are some of the lowest in the industry.

As well as getting access to DREM, there are other advantages to switching to jBASE. jBASE runs on the operating system, not in a virtual environment as do competing products. Basic programs are actually converted to C code and run as native applications on the operating system. Files are stored within the native file system. jBASE provides a flexible, robust and open architecture allowing users to expand into whichever areas of technology they wish without disrupting the core elements of either the application or the data models. With the introduction of the mv.NET product, jBASE has further redefined the boundaries and allows applications to be easily opened to the mainstream world with a complete Microsoft development infrastructure encompassing all the features of Visual Studio (VS2005 compatibility also just released). is

For more information, visit www.jBASE.com

or email sales@jBASE.com. jBASE Interna-

tional will also be showcasing DREM at the

International Spectrum shows throughout the

U.S. Check the jBASE Web site for details.

There is no
need for a
developer to
understand the
encryption process.
All the developer
needs to know is
the fields and or
the files that require
encryption and to
create those
files with the
CREATE-EFILE
verb.

Why the *Migration* to a New Software Application *Fails*

and How to Stop It!

BY ROBERT R. COLTUN

I am compelled to write this article due to a brief encounter I had a few weeks ago. I was walking through a client's office, and I overheard a discussion by several employees that they were extremely unhappy with the new software being installed by the company. It seems that the company had purchased a new application which it felt was superior to the existing application. The existing application had been in use for several years, and the users knew better than anyone the shortcomings of this application. These employees were frustrated because they were the first department designated to use the new application, yet they had never been involved in the selection process.

I really do not take pride in listening to other people's conversations, but I was extremely intrigued by what I was hearing from this group of users. As I listened in, I heard several points being discussed that I just could not believe happened. I was astounded to find out

that upper management had made all the decisions in selecting the software, and users had been largely ignored.

I was astounded to find out that upper management had made all the decisions in selecting the software, and users had been largely ignored.

It seems that neither the employees nor the managers of the department were ever asked what they would like to see in the new application. I even heard that they tried to speak and provide input as to what they needed ...

things that had been lacking in the current application.

What I heard next really shocked me. I heard that upper management stated, "They are going to use whatever the project group says is the best package ... period." In addition, it was stated that the employees would use "whatever we decide, whether they like it or not, and they have absolutely no say-so in the matter at all." I have to tell you that what I really found funny was that later in the day, while in another portion of the office, I overheard the project lead discussing the installation of the new application and how well it was going. I almost choked.

One of the most important functions is the formation of a project team.

There are many tasks that need to be identified and performed once you decide that a software migration is needed in order for a company to expand and adjust to the ever-chang-

ing requirements of the marketplace. In accomplishing these tasks, there are certain critical functions that must be adhered to. I believe that one of the most important functions is the formation of a project team that will oversee the process. The project team for this task needs to be top-notch—they need to be the cream of the crop within the company; and the CEO, CIO and/or CTO must be able to trust the decisions that the project team finally agrees upon. If you don't have the right people for this, you'd better get them. Bad decisions at this stage can make or break your organization.

Let's not forget that there are many functions that this team will have to oversee in order to successfully upgrade/migrate to a new system. The members of this team need to work closely together with one another as well as be liaisons to the different departments that may be affected by this migration. There are many times that higher-level management loses track of the daily functions that are being performed by its employees. This can happen for several reasons, but we won't get into that here.

Secondly, all the departments that will be affected by the new system need to be allowed to supply input as to what their needs really are. If you do not take the time to speak with all the different departments, you may find that you may or may not have made the correct decisions when trying to determine whether the new application has all the functionality necessary for the organization.

Look, no matter how well the process is performed for selecting a new application, you are probably going to find out that the software performs only about 80% of what you really need it to. If you ignore the employees in the organization who will be using the software, you may find that you have purchased a package that may not fit your needs. Costs involved in fixing "unusable" software could be immeasurable. In some instances, the problems may become so large that you can never get the soft-

ware to do what you actually needed it to do in the first place. In this case, you may even have to start from "square one" to fix the problem. I've seen this happen to companies in the past, and have watched these companies spend years trying to get out of this type of mess. Some companies never recover. The snowballing effect could impact owners, employees, and stockholders, as well as other affiliated companies.

There are a myriad of tasks that need to be accomplished.

Once the project team has been formed and the departments consulted, there are a myriad of tasks that need to be accomplished when preparing to upgrade/migrate to a new system. The team needs to address the shortcomings of the current system. It should also review the hardware infrastructure. A hardware and software vendor list needs to be compiled. Vendor requirements should be reviewed. Other companies using the product should be contacted and interviewed as to how the software is performing for them. Knowing the average number of users on these systems will also provide you with some good information. The other companies using the software should be able to supply you with information that reflects the number of transactions that are being entered on these systems on a daily, weekly and monthly basis. If your anticipated numbers exceed those of other users, the software may not be able to actually meet the requirements of your organization.

Once you have narrowed down your selections, you should see if the software vendor would allow you to install a version of the software and test-drive it before actually agreeing to purchase it. If

that does not go over, maybe the vendor will allow you to bring a team in to work on a version of the software in his office. If you take the time to test-drive the product, you may be amazed as to the functionality or lack thereof that the application really has. Commonly known as benchmark testing, it is very important in determining if a software product will perform adequately.

Don't forget the users within your organization.

All I can do is stress is that you don't take anything for granted. Don't forget the users within your organization. The way you believe they are working and doing their jobs may not be what they are actually doing. As an organization grows, its need for new and different software products also expands. Never underestimate your workers and what they can provide in the way of information. Once the decision to upgrade/migrate is made, the ensuing process will be extremely complicated. It is better to take a little extra time when performing the tasks involved than jumping in and pushing it through. If you do push it through without doing your homework, you will find that your organization will pay for it down the road.

One last bit of advice is that you don't put people in charge of the task/project who think they know everything and are unwilling to ask questions and/or take advice from others. Nobody knows everything, and the people involved in this or any project should not be so cocky as to ignore the input of the expected users of the new system as well as their managers. is

This article is dedicated in loving memory to Magnum, my faithful dog and long-time companion, who passed away in September 2005.



ROBERT R. COLTUN is the president and CEO of Mount Olympus Systems Inc., developer of Zeus Data Management software for IT professionals, and a lecturer/vendor at trade conferences throughout the United States, Europe, and Australia. He has been active in the computer industry for over 20 years.

I've avoided it. I've looked away. When it morphed away from its origins, I thought that it exemplified how open-source software can be unreliable and prone to "short-termism."

Microsoft and endorse the OpenOffice software package.

So in the spirit of studying this anti-Microsoft cabal, I've written this column using the OpenOffice package. If you already use it, or you don't mind paying the licensing fees for Microsoft Office, then just move on. You can probably move on as well if you're prone to illicit software piracy. Let me describe to you some of the features of the package and see if it makes sense to you.

OPEN

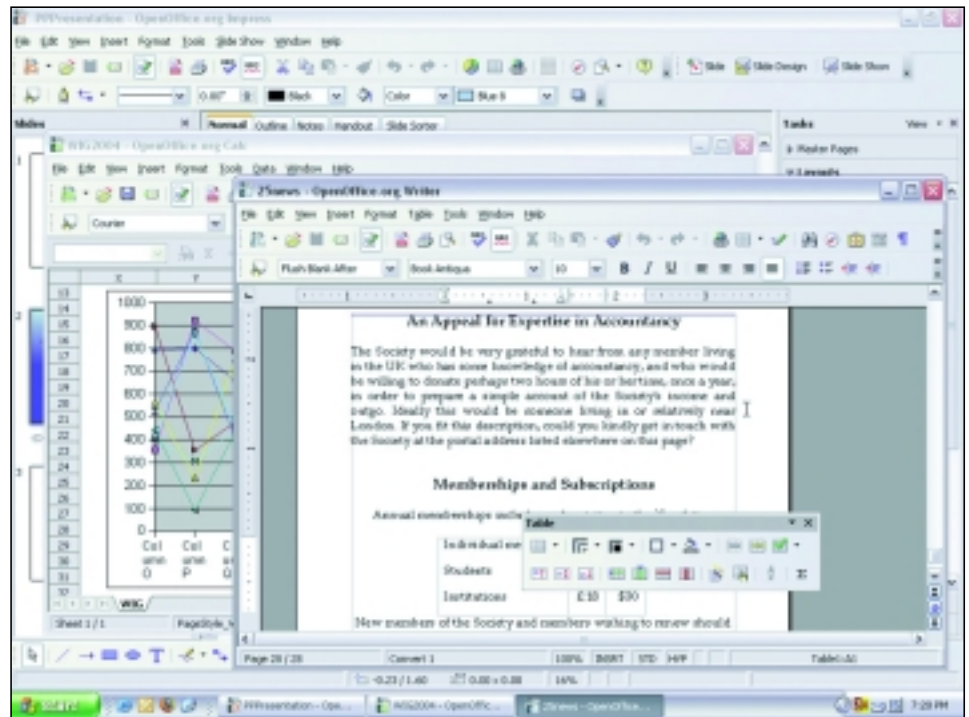
How Does the Open Source OpenOffice Stack Up Against Microsoft Office?

Says Me

BY MELVIN SORIANO

But when a monster company like Google decides to buy some time on its dance card, I figure it's time to return to the floor and check things out. And that's what happened this fall. Google announced a partnership with Sun Microsystems to take on

First of all, it's free. Free as pirated software. Only it's truly open source and you're allowed to use it without coughing up hundreds of dollars per workstation. Of course, that means you don't have a tech support line to call, but if that's not



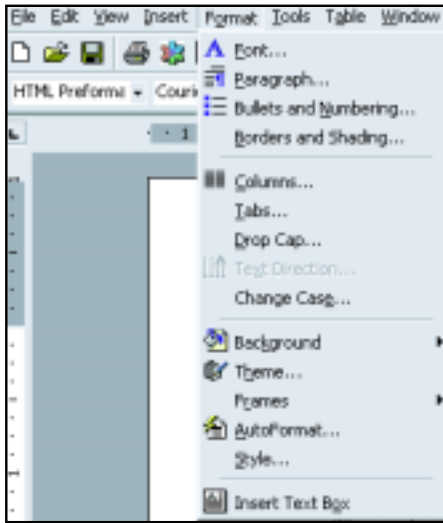


Figure 1

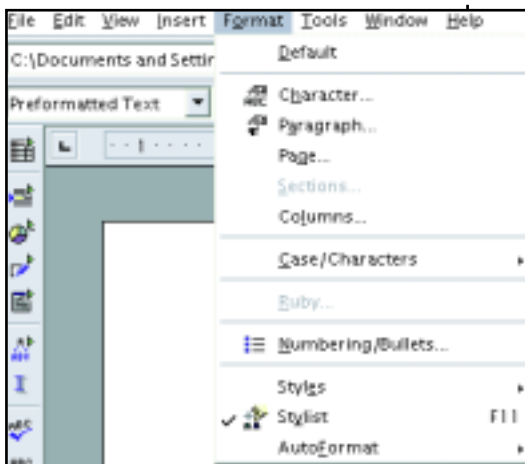


Figure 2

something you usually do anyway, then it's definitely something to consider.

Now that we understand the biggest difference between OpenOffice and Microsoft Office, let's see what features are there or aren't there.

First, to make it easy for you to do your own evaluation, feel free to download a version from www.openoffice.org; the PC version is 73Mb so you'll need either a broadband connection or a lot more patience than me.

Then there are a few components that fluff out the package, but I'll look at the ones usually found in offices: word processing, spreadsheet, and presentations.

Let's take a look at word processing first. The MS Word alternative is called Writer and, yes, it is compatible with Word. As I type this, the automatic spell checker is correcting and suggesting,

though not with the sort of second-guessing attitude that sometimes comes through in Word. For example, that incredibly annoying grammar checker doesn't exist in Writer. 'Nuf said.

The native formats include the various MS Word versions, StarWriter (from SUN), plain text and HTML. You can read and write to these formats rather easily. Going through the toolbar choices and menu options, everything, including mail merge and macros come with this thing.

I haven't seen any of my MS Word documents maligned by Writer. It looks good and performs fairly quickly. I think that if there's one area you may have problems with, it will be the macros. They don't work the same. To be frank, it works better in OpenOffice, but we're talking compatibility here. The only feature that I might miss would be the outlining functionality.

One area that can be frustrating is the keystroke mapping. It's reasonably close to what MS Word does, but the menu looks just different enough to perhaps disturb you or the office assistant. I can hear it now: "I cannot format my font." Well, that's because you format the "Character," not the "Font." See Figures 1 and 2.

Instead of MS Excel, we now look at Calc. Now, I've seen my fair share of serious Excel-heads; they wear ties or pearls and yet probably would look right at home with pocket protectors. I doubt they'll find Calc similar enough. For most people, though, Calc offers a rich grab bag of features that stand up against Excel any day.

Calc opened up my spreadsheets, and except for some occasional formatting issues, the only real problem was in the use of pivot tables. Assuming most people have never heard of that feature, most users will feel comfortable with Calc. The menu navigation actually makes more sense than MS Excel. This really begs a question: who is Microsoft talking to when they spend hundreds of millions on their user interfaces?

Continues on page 30



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OPEN Says Me

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One thing that's really helpful and is built right into Writer and the entire OpenOffice suite is the easy export to Adobe's PDF format. No need to bring in an external product or Adobe tool; just save it out and you're set.

Lastly, the alternative to MS PowerPoint is Impress. It's easy to use and sometimes more intuitive. It's lacking a few minor bells and whistles, but to me they're almost negligible because Impress has a feature which I simply love. It's got an extra export format: Macromedia's Flash. You can take your MS PowerPoint presentation and turn it into a highly attractive Flash animation for your Web site. Slick.

For the most part, considering the price, OpenOffice is an amazingly good product with exceptionally good compatibility. The MS import capabilities are quite good. As an alternative for those who may want to do work on the road or at home but aren't interested in paying large fees to Microsoft, it's easily a strong and effective software package for most people.

On top of that, the beta version has more features coming, including improved speed and new functions. For the tech-minded, OpenOffice is written in C++ and is based on the idea that the functionality is supported through APIs which are transparent and open, and the natively saved file formats are based on XML.

Check it out. You might find a way to save a dime or two. is



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enterprise-wide solutions on most MultiValue platforms and operating systems. HTM-Mel can be contacted at mel@eriscorp.com and visited at www.eriscorp.com. You can always call him directly at ERIS's Pasadena, Calif., offices: (626) 535-9658.

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new products



Management Information Tools Introduces MITS Report—an Intuitive, Interactive Report Generator

Using state-of-the-art technology, MITS Report allows users to view and manipulate reports from their operational systems in seconds, even with large amounts of source data.

Management Information Tools Inc., the developer of MITS, the leading OLAP Business Intelligence Solution for the MultiValue database market, introduces MITS Report, an interactive report generator developed to meet today's organizations' need for flexible, affordable reporting. MITS Report is designed to be fast, resulting in a true interactive reporting experience. Because of the easy to use Web-browser interface even non-technical users can access information quickly and efficiently.

MITS Discover (the new name for the internationally renowned full-featured MITS OLAP Business Intelligence system) continues as the solution for in-depth and dynamic data analysis. MITS Report fills the need to have a simple way to produce basic reports from existing organizational data. With the intuitive

Web browser interface, MITS Report is easy to install, configure and use.

MITS Report includes a user-based security model so that users may access only the appropriate information. This model allows organizational management to set a level of data access security so that individual users may be productive and yet not be exposed to information that is outside of their area of responsibility.

With other basic report generators, modifying an existing report requires that the system repeat the significant time consuming and resource intensive tasks of selecting, retrieving and sorting data from the operational system. Because of the advanced technology of MITS Report, the user can sort, filter and change columns quickly —without the need to re-query the data from the operational system. This removes the repetitive processing burden from the operational system. Plus, with just the click of the mouse, the resulting data can be exported to Microsoft Excel, Adobe PDF and other popular file formats.

MITS Report uses cached data retrieval to optimize

the speed of interactive reporting even against large amounts of data. Multiple reports may be processed against this cached data, resulting in a much lower impact on the day-to-day operational system.

MITS Report is scalable and flexible enough to handle large transaction volumes (millions of source records) and many interactive users. It is possible to deploy MITS Report on the existing operational system or a separate server, whichever best fits the business requirements.

Management Information Tools has nearly 10 years of experience offering enterprise reporting solutions, and thousands of MITS

MITS Report fills the need to have a simple way to produce basic reports from existing organizational data.

OLAP Business Intelligence systems have been installed worldwide. The upcoming release of MITS Report is an exciting time for long-time supporters of MITS and the entire MultiValue market. The product has been well received by early viewers who have provided valuable input.

"Our software engineers are dedicated entirely to developing Advanced Reporting and Business Intelligence tools for the MultiValue market and beyond," comments Pat Gilbrough, president,

Continues on page 32

new products

Continued from page 31

Management Information Tools. "As a result, our clients may confidently implement the most efficient, effective and time proven solutions available. We take pride in our products and have spent a great amount of time working with our resellers and end users to develop our software to provide next-generation technology. We are excited with the positive feedback that we have already been receiving from the early reviews of MITS Report by MITS resellers and end users. Presently engaged with introducing this next-generation report tool's functionality into the marketplace, the company is very encouraged and pleased to receive the strong acknowledgement that this powerful product far exceeds anything they have seen in the marketplace."

Management Information Tools will release MITS Report in early 2006. The product is being introduced at a number of industry forums beginning this month. Interested parties are encouraged to visit the MITS Web site at www.mits.com for more information or contact a MITS representative at 888-700-6487 (888-700-MITS) or by email at info@mits.com.

About Management Information Tools

Management Information Tools Inc., developer of the renowned MITS OLAP Business Intelligence system (now known as "MITS Discover"), is the leading developer of Advanced

Sierra Bravo Expands Features of MultiValue-Integrated Online Store

Sierra Bravo, based in Bloomington, Minn., has expanded the standard feature set of its integrated online store offering to include real-time integrated package tracking and shipping rate calculations with the major carriers. The integration is done using real-time XML Web services that combine information from the existing business system with information provided by the user online to obtain immediate and accurate rate calculations.

"Online shoppers are getting accustomed to having the shipping charges presented to them at the time of purchase," said Luke Bucklin, president of Sierra Bravo Corp. "We developed software to connect to the major carriers directly to provide instant and accurate information online."

"Our clients are always concerned about finding the best way to handle this, so we invested in a solution that works for everyone," said Bill Brakeman, Sierra Bravo's director of business development.

About Sierra Bravo Corp.

Sierra Bravo Corp. is a Web solution developer dedicated to serving businesses using legacy "green screen" systems as well as developing standalone Web solutions using a variety of technologies and environments such as Oracle, SQL Server, PHP, Java and Microsoft .NET. Visit www.sierra-bravo.com for more information. ■

Reporting and Business Intelligence for the Multi-Value database market. Founded in 1996 and headquartered in Seattle, Wash., its products are used by thousands of end user organizations, resellers and systems integrators worldwide. MITS systems are firmly entrenched in a wide range of business areas, including manufacturing, distribution, retail sales and services, education, government, healthcare, insurance as well as many other industries. ■



Wyse Launches Industry's Fastest, Sleekest New Thin Client

Wyse Technology, the global leader in thin computing, has introduced the Wyse S10 thin client, the newest and most powerful thin-client solution designed for the Citrix Access Suite. The Wyse S10 joins the Wyse S-class family of ultra-compact thin clients, designed for cus-

What Would Happen to Your Business in a Disaster?

Hurricane Katrina Causes Businesses to Re-examine Disaster Recovery Options

(ARA) - Imagine losing your computer or PDA and not having any of the information backed up. How long would it take you to reconstruct that information? What would you do in the meantime? Losing your personal information is devastating enough, but now imagine that you are a businessperson whose company has been hit by a natural or man-made disaster, destroying all your records and the ability to process transactions. Your business would grind to a halt, perhaps never to recover.

Smart business executives know that protecting their company's data and the ability to process that data is vital to business success. Unfortunately, it is all too easy to adopt the mentality that "it will never happen to my company" — until it does.



COURTESY OF ARA CONTENT

"The bottom line is how long can you afford to be out of business?" asks Mark Hansen, chief technical officer of MarquisNet, a global provider of disaster recovery services. "For most companies, the answer is 'not very long.'" When a company is out of business, both customers and employees are adversely affected. Hansen cites the example of companies shut down by Hurricane Katrina. "Many of those businesses will never open their doors again," he says. "That means someone has lost a business and a lot of people will be looking for new jobs to support their families."

Having an emergency plan in place gives businesses a competitive edge by ensuring that the company's work is not disrupted during a disaster, and that it always has immediate access to important data. "We can serve as a fully customizable Disaster Recovery Hot Site (DRHS)," explains Hansen. "In the event of a disaster, we provide alternate workspace, telecommunications capabilities and IT resources needed to reconnect employees to critical business information."

Located in Las Vegas, away from natural disasters often experienced on the U.S. coast line, the facility is five minutes from the airport, providing easy access to clients, yet not in the airport's flight path. It is equipped with N+1 redundancy, meaning every system in the facility has a backup, including air conditioning and power sources.

"Although we pride ourselves on our state-of-the-art facility, it is our knowledge base that truly sets us apart from other disaster recovery firms," says company founder and CEO Derek LaFavor. "With more than 20 years of data center experience, we're able to anticipate our clients' needs."

While natural disasters like Hurricane Katrina or technical failures like the recent power outage in Los Angeles are the type of incidents that come to mind when discussing disaster recovery, Hansen knows that it doesn't take an act of nature to shut down a business.

"We recently helped a client whose office lease was terminated early. While that may not sound too bad, the company had just one week's notice from its landlord. They needed a place immediately for computers and staff," says Hansen. "We were able to set up the business temporarily in our facility while they found a new location. Continuity is key in business, and we provide the infrastructure that makes that a reality for our clients." ■

For more information, visit www.marquisnet.com or call (702) 897-1076.

tomers who require simple and straightforward thin computing in a sleek, compact form factor.

By leveraging the new 5.0 version of Wyse Thin OS, formerly known as Wyse Blazer, the Wyse S10 achieves high scores on

performance benchmarks for applications connected to a Citrix Presentation Server. Performance benchmarks suggest that the S10

runs faster than most high-end competitive thin clients and up to 16 times

Continues on page 35

BlueFinity Breaks New Ground With mv.NET for Visual Studio 2005

BlueFinity International announces mv.NET Version 2.1.0 for .NET Framework 2.0/VS2005 beta2, the latest version of its .NET-centric developer's toolset. mv.NET is designed to provide the MultiValue developer with a comprehensive solution to the challenge of creating .NET-based applications requiring access to MultiValue databases. Following the official Microsoft release of VS2005, BlueFinity will release an mv.NET version which is not only fully compatible, but which also leverages many of the new features which VS2005 brings to the .NET developer community.

mv.NET is designed to provide the MultiValue developer with a comprehensive solution to the challenge of creating .NET-based applications requiring access to MultiValue databases.

"VS2005 is a very important release for Microsoft and we believe it will herald the start of mass .NET adoption in the market," states David Cooper, senior developer at BlueFinity. "Given that our business is enabling .NET for the MultiValue developer, it was obviously very important for us to embrace VS2005 from the outset. To that end, we have been working on a VS2005 version of mv.NET for awhile and we are now in a position where we already have customers using mv.NET with VS2005beta2."

Along with the support for VS2005 will come a number of other significant new features, for example, enhanced RAD-oriented drag and drop support within mv.NET's VS add-in component; support for new MultiValue platforms; support for additional controls within the Binding Objects (databinding) component; new back-end database connectivity options and many others.

Cooper feels that the MultiValue market will have an extremely positive reaction. "The MultiValue community is characterized by a measured adoption rate of new technology," he says. "However, .NET has been with us now in a serious way for a good two or three years, so many MultiValue developers are at the stage where .NET is looming large on their technology radar scope. When people see the incredible ease with which .NET combined with mv.NET can boost their development productivity and effectiveness, we believe the argument to adopt this technology will be compelling."

The next release of mv.NET will be the start of a series of releases aimed at introducing a range of additional application development productivity tools built upon the solid, performant foundation that mv.NET already possesses. The VS2005 IDE allows the add-in author to create components which integrate in a much tighter and comprehensive manner than VS2003.

Cooper concludes, "You can bank on mv.NET squeezing out every ounce of benefit from these new capabilities, making the VS2005 IDE an even more natural, effective, productive, and comprehensive application development environment for all MultiValue developers."

For more information, visit www.bluefinity.com.

faster than Linux-based thin clients—at a fraction of the cost.

As a result, end users can utilize the Wyse S10 to access the familiar Microsoft Windows platform with virtually no performance loss, while IT departments gain the security, reliability and control that come with choosing Wyse Thin Clients.

“As more businesses choose the Citrix Access Platform and the power of secure, on-demand access to corporate applications, the demand for higher performance, cost-effective and superbly designed devices is growing strongly,” said David Jones, corporate vice president, Business Development and Corporate Affairs, Citrix. “Wyse Technology, as a long-standing, strategic Citrix partner, offers a complete range of state-of-the-art access devices. The S10 raises the bar to new levels of functionality and value, greatly improving both the user experience and overall ROI model for our mutual customers.”

The new Wyse S10 with the new Wyse Thin OS 5.0 delivers exceptional performance including:

- ◆ Multiple sessions with seamless windows
- ◆ Appliance-like plug-and-play installation and configuration
- ◆ Straightforward client imaging that requires only a standard FTP server

◆ Fully stateless operation with no data stored locally

“Wyse's new S10 thin client is an important advancement for businesses implementing thin computing environments,” said Ricardo Antuna, vice president of Business Line

Management, Wyse Technology. “Our customers are demanding true PC performance and interactivity with the security, manageability, reliability and TCO benefits afforded by traditional thin clients. Using the Wyse model S10 as the access

vehicle to Citrix's Access Suite elegantly achieves this objective.”

Wyse S10 systems are powered by Geode microprocessors from AMD and deliver an optimal balance of cost and performance,

Continues on page 36

The advertisement features a red Swiss Army knife with various tools extended, set against a blue background. The word "Visage" is written in large red letters at the top. Below it, the text reads "The Most Modern and Cost Effective Tool Available in the MultiValue Market". A list of features is provided, including Rapid Application Design, Business Intelligence, Report Generator, email Processor, Forms Generator, and Fax Gateway. A red oval at the bottom right contains the text "Take a FREE Visage Test Drive Today at www.stamina.com.au". The knife handle has a logo that says "MULTIVALUE" and the word "Visage" is written on the blade.

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new products

allowing the S10 to maximize ROI and payback for customers selecting thin clients for their thin computing infrastructure.

"Our long-term collaboration with Wyse is enabling innovative thin computing solutions for users worldwide, providing a range of options for both the enterprise and high-growth nation markets," said Erik Salo, director of marketing, AMD Microprocessor Solutions Sector Embedded Group. "Based on AMD's high-performance, low power AMD Geode GX processors, the Wyse S10 thin client provides users with exceptional computing capabilities and performance."

About Wyse Technology

Wyse is the No. 1 vendor that the world's largest businesses and institutions trust for scalable thin-client computing solutions. Wyse provides the hardware, software, and services that shift computing complexity to the network, reducing cost, liberating IT departments from unnecessary support and maintenance functions, empowering users to be more productive in their jobs, and protecting and improving access to critical information and business applications. Headquartered in San Jose, Calif.,

with offices worldwide, Wyse has been No. 1 in thin-client market share for the last eight years, enjoys a close partnership with Citrix Systems, and has been named Microsoft "Embedded Partner of the Year" for three years. Wyse customers include FedEx, Best Buy (Canada), Quaker Foods, and Gold's Gym.

For more information, visit the Wyse Web site at <http://www.wyse.com> or call 1-800-GET-WYSE.

"Our customers are demanding true PC performance and interactivity with the security, manageability, reliability and TCO benefits afforded by traditional thin clients."

-Ricardo Antuna, vice president of Business Line Management



DesignBais Introduces Cross-browser Compatibility for Public Web Access

DesignBAIS, a functionally rich toolset that allows developers to design and create enterprise-wide Web-based applications, recently added cross-browser compatibility for

public Web access. This capability means that developers can build Web applications for public consumption utilizing the DesignBais forms designer and know that they will work on all well-known browser types. Some of DesignBais's standard features are not supported by all browser types, but the restricted feature set provides more than enough functionality to design and build public-access Web sites. This exciting new development provides a "one-stop" development platform for browser-based business applications and public Web-access requirements. Users still only need to know MultiValue to take advantage of DesignBais's complete Web-development environment.

DesignBAIS supports the creation of design templates. These design templates allow for creation of a standard user interface that can be easily applied throughout an application or its modules. With drop-down top menus and sidebar menus as a standard feature, user navigation is simple and intuitive.

DesignBAIS was developed to create enterprise applications, not only one-off forms. It provides a zero client deployment solution. There are no HTA's, plugins or installs at the client side. Internet Explorer 6 or above is the only requirement for extended functionality, WC3 compliance makes applications available on all compliant browsers.

A conversion toolset from SB+ is provided to make moving applications to the Web even easier.

Other Developments

■ Graph support for forms

This facility enables the designer to add Graphs to forms that are generated from basic code on the server. The Graph controls utilize the browser's standard functionality, so there is no need to install any software on the client to utilize this feature.

■ Hyperlink Buttons

DesignBAIS has introduced a new style of button that provides the designer with a Hyperlink style button. This is a

great feature that helps make DesignBais applications behave the way that Internet users expect.

■ Date Format Controlled by Browser

We have changed DesignBais to extract the preferred date format from the browser. This will particularly help ASP type operations where users may access the DesignBais applications with different date formats.

■ Case Based Form Sections

The DesignBais form section construct has been modified to allow functionality similar to a Case statement. This provides a very powerful way to control the enabling, disabling and even hiding of

fields (or entire sections) on a DesignBais form.

■ Optional Side-Menu Construct

The designer now has the ability to completely hide the side menu on a DesignBais form. This feature has been developed as a result of a number of requests from DesignBais developers. There is now a menu type on the menu definition named "Hidden Side Menu" that governs this function.

■ Multiple Language Support

DesignBais now has multi-language support via its simple-to-use Glossary construct. Terms used on forms can be replaced by language equivalents to help give applications a truly international flavor.

The glossary is linked to a user or user group, so you can have one user on English and another in Chinese on the same system.

Tab Index Navigation

DesignBais now enables the designer to create a Tab or Entry index for every input field on a form. Again this is in response to a number of requests from DesignBais developers. You can now customize the tab/cursor movement to help make data entry easier. This feature helps make DesignBais a useful data entry tool for the "heads-down" user. ■

For more information, please visit www.designbais.com.

mvQB - QuickBooks API for the Multi-Value Database



- Eliminate Double Entry
- Read/Write directly to QuickBooks' database
- Integrate seamlessly with Multi-Value programs

Integrate QuickBooks with Your Multi-Value Applications

RFID - What Does RFID Mean for Your Business?



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Spectrum's 25th Anniversary

The Spectrum

Hall of Fame

25 years

after the first Spectrum show was produced is as good a time as any to take a nostalgic look back at shows past — the various locales and the sheer number of shows that emanated from what began as a user group meeting. Those first few years cemented the show's status as the premier meeting place for the MultiValue industry as well as served as learning experiences. At the first show at Caesar's Lake Tahoe, a huge blizzard trapped all participants at the hotel for the duration of the show, clearing just in time to let delegates go home. The second year, a misunderstanding with the head count for the buffet left many attendees hungry and venting to show management. Learning from past experiences, management moved the show to Reno, Nev., the next year.

Since then, show venues have ranged from Las Vegas to Anaheim — the birthplace of the MultiValue industry — to London and Australia. As the MultiValue market expanded, so did the show, spawning a series of regional shows across the United States, where local companies, developers, VARs and end users could have the opportunity to convene and share the most current MultiValue technology and education.

Continuing the evolution of Spectrum, the conference has recently become even more accessible to end users through the new Spectrum Webinar series, offering up-to-the-minute education on the hottest technologies out there. Just as MultiValue technology has undergone many adaptations to extend the life of legacy systems, Spectrum has kept apace—offering a true reflection of what's happening in the MultiValue market at any given time.

Looking back at the number of exhibitors, it's evident how much the market has changed over the span of 25 years. Many companies are memories, but they are still a part of MultiValue's history and made a contribution in some way. To commemorate the show's 25th year, Spectrum salutes each exhibitor that participated in a Spectrum show and marks the milestone of each show held.

Over 500 companies have exhibited at Spectrum Shows over the past 25 years. Here's the list. How many can you spot that still exist in some form or another? How many names from the past caused you to flash back to a different time?

Have a recollection that stands out in your mind? Email monica@intl-spectrum.com with your recollection and the most interesting might just win a prize at the 25th Anniversary Show in Long Beach in March.

1Mage Software	Automatic Programming Inc.	Computervision Service	Eagle Rock Information Systems
3D Tek Information Systems	Automation Consultants	Control	Easteck
4i Solutions	AWA	Concept Systems	Easy Computing Company
AASD Pty.	Axis Information	Concurrent Computer	Eaton Software
Abacus	Bakken Software	Continental Credit Insurance	Ebeling Associates, Inc.
Abbasoft Technologies	Bantam Computers Inc.	Continuous Cartridge	Edgcore
ABC Computers	Baseline Services	Cornerstone Data	EDI Able
Abest	Best Power Technology	Cosmos	EDP of America
Ability+ Software	Better Results	Courseware Technology	Electro Rent
Accounting Plus	BGL Computers	Creative Integration	EMJAY
Acctex	BHA Systems	Creative Synergy	Encore Computer Corp.
Accusoft Enterprises	.Binary Star Development	Crescendo Wesleyan	Entrinsik Inc.
Active Data	Bluebird Systems	Cromwell Business Systems	Epicor
Adapso	Bryce Data Systems	CTS Network Systems	Ergo-Nomic, Inc.
Addept	Buckles Smith Electronics	CUE-BIC Systems	Escom
ADDS Displays Division	Bull HN Information Systems	Cuebic Systems, Inc.	Esprit
ADDS/NCR	Burns Consulting Group	Dan Eli Consulting	Everex
ADPI	Business Automation, Inc.	Data & Telephone Technologies	Ever-On
ADVALOREM	C. Hoelzle Associates	Data Acquisition	Evolution Computer Systems
AdvancedWare Corp.	C. Itoh Systems	Data General Corp.	Exide Electronics
Advent Online Knowledge	Cableworks	Data Star Software	EZ Software Products
AIFP	Cambex	Database Designs Associates	F. W. Davison
Alcyona Computer Group	Capital Software	Database Trends and Applications	Facts Services
Allerion	Capricorn Data	Datamedia	Fairhurst Computer Systems
Allied Computer	Cargile & Associates	Datatech Depot	Feedback Systems
Alpha Microsystems	Carnation Software	Dataview Corporation	Fenlon Computing Services
Alpine Computer Sales	Catalina Software	Dataworks	First Choice Personnel
Alternative Technology	CCS	Datec	Fisk Communications
Altos	CDBMA	DATEC	Fitzgerald and Long
American Computer Connection	CDI Information Systems	Datel	Fletcher Computer Services
American Computer Technics	Central Data	Deliberate Systems	Flexsys
American Power Conversion	Cherokee Systems	Delsoft/Hamamatsu	Flextech
Anacomp	Chesapeake Software	Deltec Corp.	FMP Systems
Apex Computer	CIE Systems	Dennis & Schwab, Inc.	Fujitsu Microsystems
Apple Computer	Citadel Computer Systems	DesignBais International	Fusionware
Applied Information Systems	Clegg Driscoll	Devcom	GA Services
Apscore International	Clientbase Corp.	Dickens Data Systems	GAeXpress
Apscore North America	Climax Computer	Digicorp	Gardner Limited
Aptron	Cobra Systems	Digilogic	Gates/FA Distributing
Archford	CodeWriter Industries	Digital Equipment Corp.	General Automation
Archon Group	Coffman Systems	Digital Linguistics	GJ Systems
Ardent Software	Cogent Information Systems	Digital Products/IBS	GP Solutions
ARIX	COMP USA	DISC	Greystone Technology
Armascan Technology, Corp.	Compass Computer Solutions	Disc International Ltd.	Group Three Electronics
Aropa Corp.	Comprehensive Computer Services	Discount Laser	Guardian Computer
Ashwood Computer	Compu Dynamics	Diversified Computers	Gull
Associated Computer Solutions P/L	Computech Incorporated	DMCONS	Hall Business Systems Ltd.
Aston Technology Ltd.	Computel	DTR Business Systems	Hall-Mark Electronics
A-Teq Systems	Computer Associates International	Dultch	Hassett & Associates
Atkin Jones Computer Service	Computer Distributors Inc.	Dunhill of Portland	Helios Systems
Aurotech	Computer Factors Ltd.	Duplication Technology	Helix
Autofold	Computer Remarketing Corp.	Eagle Manufacturing and Technology	Hershey Technology

Continues on page 40

Hewlett-Packard	Liberty Integration	Open Systems Accounting Software	Sahen International, Inc.	The Camry Group Inc
Hitech Systems	Liberty Software Corp.	Operating Systems Support	San Diego PICK Users Group	The Computer Clinic
Houston Data Center	Link Technologies, Inc.	OPSYS	Sanderson Computers	The Portable Source
Human Interface Tech.	Loft Systems	Orange County Business Journal	Sandri Technologies	The Software Exchange
I/O Innovations	Lorien Systems	OSR	SANYO/ICON	The Software Firm
IBC Technologies	LPS Computer Service	P&S Software	Scan Net	The Software Group
IBM	Magic Software	Pacific Data Products	Scan Optics	The Systems House
ICL Australia	Mainstream Technologies	Paragon Voice Systems	Seattle Data Systems	The Ultimate Corp.
IMG Consultants Pty.	Management Analysis Corp.	Paul Scott Consulting	Seattle OS	The Very Last Word
Impact Business Systems	Management Information Tools	PC Health	Security Two	Third Coast Technologies
Impact Data Corp	Marquee Systems	PC Specialists	Senertech Information Solutions	THOR Agency, Inc.
In/Sync Data Products	Maverick Systems	Peak Computer	Sequent Computer Systems	Timeslice Ltd.
IN2 Groupe Siemens	MBS	Perelandra	Sequoia Systems, Inc.	Tincat Group Inc.
Infinitivity	McDonnell Douglas Information	Personal Workstations	Sherman Royce Stevens	Tingley Systems, Inc.
Information Access Technology	Systems	Pertec	Silver System	TLC Communications
Information Solutions, Inc.	MECA	Pick Products P/L	Simdell Ltd.	Tokyo Cobra
Informix Software	Meier Business Systems	Pick Professionals, Inc.	SixCESS Software	Toledo & Associates
Ingram Micro	Merisel	Pick Systems	SJ+ Systems Associates	Toltec Systems
Innovative Systems	Merit Digital Systems Corp.	PICKTel	SKP Electronics	Total Computing Solutions
Instant Data Systems	Metron Timeclock	Pioneer Standard	Softac Corp.	Toucan Computers
Integrated Applications	Micro Edge	Pixel Innovations	SoftPac Corp.	Tridata Technologies
Integrated Network Service	Micro Publishing	Pixius	Software Academy	Trilogy
Integris	Micro Seconds	Point Information Network	Software Concepts	Trimdata Corp.
Interactive Data Machines Ltd.	Micro Systems Integration	Power Solutions	Software Consortium	Tristalee P/L
Interactive Inc.	Microage	Powr-Con	Software Co-op, Inc.	Tri-Sys
Interactive Systems	Microdata Corp.	Prelude Systems	Software Exchange	U2 LOGIC
Intermec	Microdyne	Premiere Systems Support	Softwise	UGI Software
International Information Systems	MICROGEN	Price Waterhouse	Solid Logic	UHL Software
Interpac	Millenium Computer Systems	Prime Computer, Inc.	SpeakEasy Software	Ultradata
Interstate Network Services	Millsoft Inc.	Print Control	Specialized Business Solutions	Unidata
InterSystems Corp.	Mini Business Systems	Process Controls	Spectra Logic	UNIXIX Software P/L
Intertechnique	MIPS	Procom-Multi USA	SRP Computer Solutions	Unison Technology Ltd.
IntoX	MISI Company, Ltd.	Professional Recruiting	Stamina Software	Unisys
Intuitive Technology	Modular Information Systems	Program Source	Stauffer Information Systems	Universal Computers Limited
Irvine Computer	Modular Information Systems	Progressive Systems	Sterling Software	UNIWARE PTY LTD
ITT	Modular Software	PROMARK	Strategic Alternatives Inc.	UNIX World
J. Glaser & Company	Modular Software Corp.	Promerica Inc.	Strategy 7	USC Software Systems
JA Computing, Inc.	Monolith	Prosoft-Mein	Stratus Computer	Userbase Systems
Jakus Associates	Motorola, Inc.	Prospectus IT Recruitment	Stride Micro	Valtronix
James B. Thompson & Associates	Mountainside Software	Pro-Tech	Structured Software Solutions	VantagePoint Software
jBASE International	Moxon	Pulsar Systems Inc	Suaro Data Systems	Varmark
JES & Associates	MultiSoft Business Systems	Pyramid Technology	Sun Microsystems	Varsity Computing
JET	MultiSource	Quetzal Systems	Sunergos Software	Vecmar International
JMJ Online	Myers Computing Solutions	Qume Corporation	Sweet Micro-Ware	Vertex Software
Job Match	Natec Systems	R Computer	Symbol Technologies	VIA Systems
Jonas Consulting Ltd.	Nationwide Electronics	R.O. I. Syngineering	Synergetic Data Systems	Visual Pick
Jones Business Systems	NEC	RAG Software	Synex Systems Corp.	Visual Systems
Joyce Fillingham	NEC	Raining Data	Syscomp	Vitek Systems
Kelly/Lloyd Associates	New England Computer Systems	RAM Software	Sysmark Information Systems	Vmark France Ltd.
KEO/SOFT International Corp.	New Horizons Learning Center	Rasmussen Software	System Builder Technologies	VMark Software
KEYNET	NIS	RB Price Company	System Migration Solutions	Vmark UK Ltd.
Keystone Information Systems, Inc.	Nixdorf	RC Electronics	Systems Management, Inc.	V-Systems
Kirkland Information Systems	Norand	Report Manager	Systems Resource Group	Weaver Consulting
KODE Ltd.	NorthEast Data Systems	Repton Data	Systems Support Services	Web Control UK Ltd.
Kore Technologies	Northgate Information Solutions	Reseller Management	T DATA PTY LTD	Weblink USA
Kraft Enterprises	Northtec Consulting	Results	Tandem Computers	Western Automation Labs
KRM Software	Northwest Information Systems	Revelation Software	Target Data, Inc.	Western Telematic
KTS Business Systems	Novadyne	Rexon Business Systems	TAU Engineering	Wicat
LA Cellular	NSA Technologies	Rimage Corporation	TECH SWAP	Windsor Electronics Inc.
Laguna Software	O'Reilly & Associates, Inc.	Robec Distributors	Techcom KSH	Winnix Software
Laser Cycle	Off The Shelf Software	ROI Syngineering	Technical Resource Group	Wizard Software
Laser Plus	OHM Systems	ROI Systems	Teleports Data Systems	WordMARC International
Laser Source	Oliver Sales O/S Tech	Royce Digital Systems, Inc.	Televideo Systems	WPDS
Lazarov	ONgroup	RTW Incorporated	Terminal Choice	WriteSoft
Learning Sciences	Online Data Processing	S & S Software	Texas Instruments	Wyle Laboratories
Learnsoft Corporate Training	On-Line/AAA Power	S.C.O.R.E.	Texsoft	Wyse Technology
LGW Consultants	Opal Software	Sable Associates	The Business Manager	X-Mark
	Open Computing Systems	Saguaro Data Systems	The California Computer	Zumasys, Inc.

25 Years!

Almost **100 Spectrum Shows** have been held over the past 25 years. Here's the list from the beginning until today. How many have you attended?

If you think you may hold the record for the most Spectrum shows attended, email monica@intl-spectrum.com. You might just win a prize at the 25th Anniversary Show in Long Beach in March.

- | | | | | | |
|------|---------------------------------------|------|--|------|--|
| 1982 | Caesar's Palace - Lake Tahoe, NV | 1993 | Red Lion Hotel - Seattle, WA | 2000 | Meadowlands Hotel - Meadowlands, NJ |
| 1983 | Caesar's Palace - Lake Tahoe, NV | 1993 | Convention Center - Anaheim, CA | 2000 | Disneyland Hotel - Anaheim, CA |
| 1984 | MGM Grand - Reno, NV | 1993 | Crowne Plaza Ravinia - Atlanta, GA | 2001 | Meadowlands Hotel - Meadowlands, NJ |
| 1984 | Heathrow Penta Hotel - London, ENG | 1993 | Omni Mandalay - Irving, TX | 2001 | Hyatt Hotel - Cincinnati, OH |
| 1984 | Centerpointe - Sydney, AUS | 1994 | Convention Center - San Diego, CA | 2001 | Hilton Sea-Tac - Seattle, WA |
| 1985 | Marriott - New Orleans, LA | 1994 | Marriott Hotel - Ft. Lauderdale, FL | 2001 | Itasca, IL |
| 1985 | Novotel Hotel - London, ENG | 1994 | Oak Brook Hyatt - Oak Brook, IL | 2001 | Tiara Hotel - Waltham, MA |
| 1985 | Centerpointe - Sydney, AUS | 1994 | Holiday Inn Crowne Plaza - Los Angeles, CA | 2001 | Disneyland Hotel - Anaheim, CA |
| 1986 | MGM Grand - Las Vegas, NV | 1994 | Sheraton - Hasbrouk Heights, NJ | 2002 | Dallas, TX |
| 1986 | Holiday Inn - Paris, France | 1995 | Convention Center - Anaheim, CA | 2002 | Cincinnati, OH |
| 1986 | Novotel Hotel - London, ENG | 1995 | Holiday Inn O'Hare - Chicago, IL | 2002 | Radisson - Berkeley, CA |
| 1986 | Southern Cross Hotel - Melbourne, AUS | 1995 | Hilton Hotel - Meadowlands, NJ | 2002 | Saddle Brook, NJ |
| 1987 | Concorde Plaza - Paris, France | 1995 | Hyatt - San Jose, CA | 2002 | Seattle, WA |
| 1987 | Olympia Centre - London, ENG | 1995 | Meydenbauer Center - Seattle, WA | 2002 | Boston, MA |
| 1987 | Centerpointe - Sydney, AUS | 1996 | Meadowlands, NJ | 2002 | Peachtree Hotel - Atlanta, GA |
| 1987 | Bally's - Las Vegas, NV | 1996 | Crowne Plaza - Natick, MA | 2002 | Oak Brook Hyatt - Oak Brook, IL |
| 1988 | Convention Center - Anaheim, CA | 1996 | Sheraton - Rosemount, IL | 2002 | Hyatt Islandia - San Diego, CA |
| 1989 | Convention Center - Washington D.C. | 1996 | Marriott - St. Louis, MO | 2003 | Norwalk Marriott - Norwalk, CA |
| 1990 | Convention Center - Anaheim, CA | 1996 | Red Lion Inn - Portland, OR | 2003 | Cincinnati, OH |
| 1991 | Convention Center - Anaheim, CA | 1996 | Marriott Airport - San Francisco, CA | 2003 | Red Lion Inn - Bellevue, WA |
| 1992 | Convention Center - Anaheim, CA | 1996 | Westin Peachtree - Atlanta, GA | 2003 | New Jersey |
| 1992 | Red Lion Hotel - San Jose, CA | 1996 | Grand Hyatt - San Diego, CA (3) | 2003 | Thistle Lancaster Gate - London, ENG |
| 1992 | Red Lion Hotel - Bellevue, WA | 1996 | Convention Center - Anaheim, CA | 2003 | Hyatt Islandia - San Diego, CA |
| 1992 | Sheraton Century Center - Atlanta, GA | 1997 | Meadowlands Hotel - Meadowlands, NJ | 2003 | Manley Pacific - Sydney, AUS |
| 1993 | Oak Brook Hyatt - Oak Brook, IL | 1997 | Riviera Hotel - Las Vegas, NV | 2004 | Novotel Hotel - London, ENG |
| 1993 | Sheraton Tara Hotel - Natick, MA | 1998 | Marriott - Philadelphia, PA | 2004 | Star City Casino - Sydney, AUS |
| 1993 | Marriott Hotel - Cincinnati, OH | 1998 | Riviera Hotel - Las Vegas, NV | 2004 | Le Meridien at Rialto - Melbourne, AUS |
| 1993 | Marriott Hotel - Saddle Brook, NJ | 1999 | Crowne Plaza Hotel - Meadowlands, NJ | 2004 | Stardust Hotel - Las Vegas, NV |
| | | 1999 | Dallas, TX | 2005 | Hyatt Regency - Cincinnati, OH |
| | | 1999 | Seattle, WA | 2005 | Holiday Inn Sea-Tac - Seattle, WA |
| | | 1999 | Wyndham Hotel Northwest - Chicago, IL | 2005 | Hyatt Islandia - San Diego, CA |
| | | 1999 | Nugget Hotel - Reno, NV | 2006 | Hilton - Long Beach, CA |

Then and

Now

Then...

Keystone Information Systems has roots going back to the earliest days of the MultiValue market. The company was founded by Judson (Judd) Van Dervort Sr. as a local distributor and value-added reseller of Microdata Reality minicomputers in 1975. Van Dervort was working with a professional services company named Keystone Computer Associates when it signed on as an original Microdata dealer in 1974. When the company wanted out of the dealership, Van Dervort found venture capitalists to put up seed money and founded Keystone Data Systems in 1975 (*International Spectrum*, May/June 2004) as a dealer for the Philadelphia territory.

Keystone:

**30 Years of Delivering MultiValue Applications
to the Public Sector**

In 1980, he sold his exclusive marketing rights back to Microdata, used the money to buy out his partners, and signed on as the first reseller of Prime INFORMATION. He renamed the company Keystone Information Systems and made Maple Shade, N.J. (10 miles outside of Philadelphia), the headquarters. Van Dervort also has the distinction of being one of the co-founders of VMark Software, which put PICK with UNIX, resulting in UniVerse.

The company installed its first financial accounting software for a suburban Philadelphia public school district around 1979. According to Keystone, that was the genesis of the continuously evolving SKOOLS software package. Student administration modules soon followed. In 1981, Keystone established a presence in the local government niche. Its solid fund accounting and human resources software was selected by a New Jersey county government, expanding the company's products into the LOGIC line. In 1987, Keystone's involvement

in local government led to KOPS, a line of integrated public safety dispatch, records management and detention management modules.

Continuing its forward momentum, Keystone acquired the mid-range local government business unit of EDS, which had formerly been a competitor, Infocel Inc. This acquisition increased Keystone's local government clients substantially, as well as its client geography, and added more software products and another office in Raleigh, N.C.

In addition to its software applications, Keystone has always maintained a strong base of non-public sector clients for which it provides technical consulting, hardware and network maintenance services, the company said. Over the years, Keystone has built its reputation as one of the nation's most experienced consulting houses in the areas of MultiValue database management systems, IBM products, and related PICK environments.

Continues on page 44

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The screenshot displays a web browser window with several overlapping e-commerce sites. At the top left is 'LANER Electric Supply' with a navigation menu and product categories. In the center is 'VANCE BALDWIN ELECTRONICS' featuring a login form and a welcome message. On the right is 'epicurious' with a 'DINING OUT' section and restaurant guides. At the bottom left, a shopping cart table is visible:

LI	Model / Part Number	Price*	Quantity	Ext Price	InStock**
1	FD4HVPC2000-48794	\$398.80	1	\$398.80	MQ
	Part Number: 68794				
	Description: Ruggedized PicoDot: Convergent Laser				
2	FD4HVP4LPW/90	\$345.80	1	\$345.80	MQ
	Part Number: 68526				
	Description: Ruggedized PicoDot: Polarized Ratio Laser				
3		\$0.08		\$0.08	YLS

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SIGNATURE	DATE	

(All questions must be answered. Incomplete forms will not be processed. Complimentary subscriptions are limited to U.S. addresses.)

1. What is your job function/title?

- | | |
|---|---|
| <input type="checkbox"/> Principal/Owner | <input type="checkbox"/> Sales/Marketing |
| <input type="checkbox"/> President/GM/CEO | <input type="checkbox"/> Programmer/Analyst |
| <input type="checkbox"/> MIS/DP Manager | <input type="checkbox"/> Purchasing |
| <input type="checkbox"/> Controller/Financial | <input type="checkbox"/> Consultant |
| <input type="checkbox"/> VP/Department Head | <input type="checkbox"/> Other _____ |

2. Is your company a (check one):

- | | | |
|---|---|---|
| <input type="checkbox"/> Computer System Supplier | <input type="checkbox"/> Dealer/OEM/VAR | <input type="checkbox"/> Software House |
| <input type="checkbox"/> Consultant | <input type="checkbox"/> End User | <input type="checkbox"/> Other _____ |

3. What MultiValue Databases does your company use? (check all that apply)

- | | | | |
|--------------------------------|--|-----------------------------------|--------------------------------------|
| <input type="checkbox"/> D3 | <input type="checkbox"/> Native MultiValue | <input type="checkbox"/> Reality | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> jBASE | <input type="checkbox"/> uniData | <input type="checkbox"/> UniVerse | <input type="checkbox"/> uniVision |

5. What major business/industry most clearly describes your company?

- | | | | |
|--|------------------------------------|---|---------------------------------|
| <input type="checkbox"/> Accounting | <input type="checkbox"/> Medical | <input type="checkbox"/> Direct Marketing | <input type="checkbox"/> Legal |
| <input type="checkbox"/> Banking/Finance | <input type="checkbox"/> Dental | <input type="checkbox"/> Construction | <input type="checkbox"/> Retail |
| <input type="checkbox"/> Education | <input type="checkbox"/> Insurance | <input type="checkbox"/> Other _____ | |

6. What are your firm's approximate gross annual sales?

- | | |
|---|--|
| <input type="checkbox"/> Under \$500,000 | <input type="checkbox"/> \$500,000 - \$1 million |
| <input type="checkbox"/> Over \$1 million - \$5 million | <input type="checkbox"/> Over \$5 million - \$10 million |
| <input type="checkbox"/> Over \$10 million - \$25 million | <input type="checkbox"/> Over \$25 million - \$100 million |
| <input type="checkbox"/> Over \$100 million - \$500 million | <input type="checkbox"/> Over \$500 million |

IS 9/05

Then... and Now

Continued from page 43

Now...

30 years after its founding, Keystone is still going strong, finding nationwide success with its public sector software applications. It has more than 200 clients in 21 states, Canada and Puerto Rico.

Keystone offers a turnkey approach to its clients' information solution needs. In addition to a standard set of application software products developed and maintained by Keystone, the company also provides all hardware, network design, network installation, application software modification, data conversion, training, maintenance and support. Training can be conducted on-site or in Keystone's classrooms in Maple Shade or Raleigh.

Backed by Time-Tested U2 To this day, IBM's U2 (UniVerse and UniData) are the foundation of Keystone's applications. Applications and tools such as Microsoft Office and Crystal Reports can be interfaced with Keystone applications through technology standards such as ODBC, SQL and DDE.

In the public education market, Keystone offers SKOOLS, an integrated suite of applications software whose modules include financial management, human resource, and student administration. Addressing the needs of medium to large school districts, SKOOLS is mature, accumulating its business logic over many years from various school districts with a variety of requirements.

The SKOOLS system ties together all departments, district-wide, yet the modules can be implemented in such a way that a district can gradually grow into using the entire suite.

SKOOLS runs centrally, providing real time data integrity and up-to-the-moment information for decision support for district-level personnel. Features include: site-based management in both financial and student administration, with the ability for users to requisition against a school's accounts as a first step in an approval process, and site-based student registration and local management of student data with appropriate district controls. All programs and data relevant to a particular system user are displayed based upon that user's unique system identification.

LOGIC (Local Government Information and Control) is local government administrative soft-



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--	--	---



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ware that was developed for local governments with populations between 10,000 and 1,000,000. The

complete LOGIC system streamlines financial, human resource and municipal administration areas of a government organization. It is designed to allow government organizations to seize and maintain control of their operations by using interactive, transaction-oriented processing. Features include site-based management, user security and centralized control, user-defined function keys and code tables, on-line help, instant editing and data verification. The easy-to-use ad hoc inquiry facility makes an infinite variety of reports available to all users.



Now that Keystone founder Judd Van Dervort has retired, he will be able to spend more time with his 10 grandchildren.

Continues on page 46

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Then... and Now

Continued from page 45

Keystone's On-line Public Safety (KOPS) software is a comprehensive, integrated suite of applications developed to meet the needs of public safety agencies nationwide. It is a true multi-jurisdictional, multi-agency product whose modules include:

- ◆ Computer Aided Dispatch - a versatile dispatch and event tracking system for police, sheriff's department and fire/EMS agencies, incorporating 911 interfaces, status mapping and mobile systems' integration.
- ◆ Records Management System - a summary or incident-based report management system that is fully integrated with CAD and mobile reporting.
- ◆ Fire Information Reporting System (FIRS) - a complete NFIRS 5.0 compliant fire report management system.
- ◆ Keystone's Narcotics/Intelligence Tracking System (KNITS) - a comprehensive undercover operations intelligence tracking system.
- ◆ Civil Process - a complete warrants management system for serving all types of civil papers.
- ◆ JAILS - a state-of-the-art detention management system for both adult and juvenile detention facilities.

The KOPS software interfaces to a number of sub-systems including E-911, NCIC/SCIC, Automatic Vehicle Locator (AVL), Mug Shots, Fingerprinting, Status Mapping, Station Toning, Alpha Pagers, MDT/Laptops (multiple mobile vendors) and Netclock's synchronized clock system.

Happiness is a Mission Statement

Keystone's mission statement is simple: to make its clients happy. Beyond

the surface, in the computer business, that goal can be quite complicated. Nevertheless, Keystone works hard to make it happen every time. Over 75 percent of its new client leads come from existing clients. According to Keystone, it's able to accomplish its mission by integrating state-of-the-art applications software with the very best of breed products and services available in the industry. Another key to its success is partnering with leaders in hardware, operating systems and database software, including IBM, Microsoft, Hewlett Packard and Compaq.

Latest News:

Van Dervort Sr. Steps Down
After 30 years of leading his startup company, Van Dervort Sr. has stepped down, leaving the reins to his son Judson Van Dervort Jr. and assuming the position of chairman of the board. His plans call for being involved in the company as needed for special tasks, but he will not be involved in day-to-day operations. "I started the company just over 30 years ago when I was 35," he commented. "I am now 65 and the time is right for me to retire. I have enjoyed leading Keystone through the many different phases of its existence, but I am looking forward to retirement."

Van Dervort Jr. has been with Keystone for 18 years, holding positions in sales, sales management and business administration. Taking on the responsibility of president, Van Dervort Jr. remarked, "I am looking forward to the challenges ahead with the capable team we have assembled. Keystone will continue to work with our clients to become the premier provider in each of our select market segments and geographies." is

Source: Keystone Information Systems

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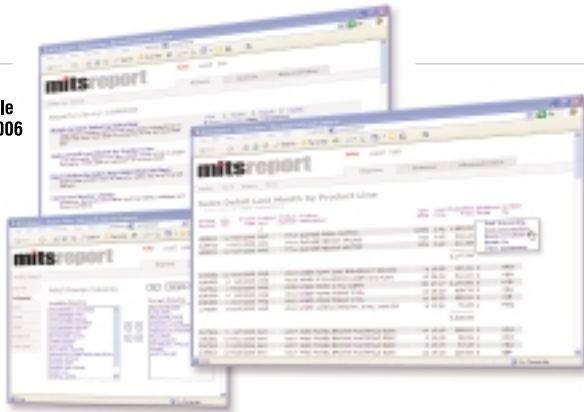
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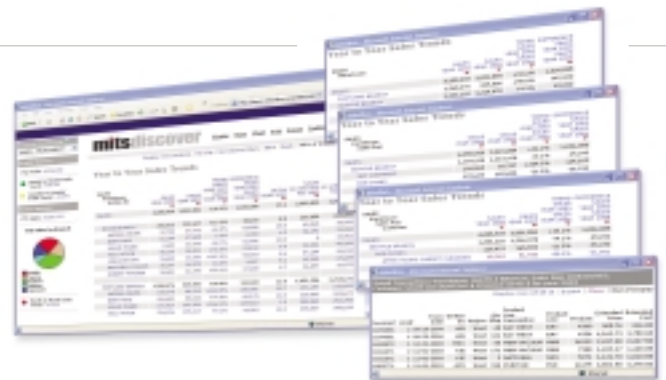
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